Daily Howl
RF21

Oct. 13, 2016 — Day 27

Nuclear Safety

Shutdown Safety Risk Condition:

YELLOW

The plant is **YELLOW** for Shutdown Safety Risk Condition. Electrical power sources are **YELLOW**.

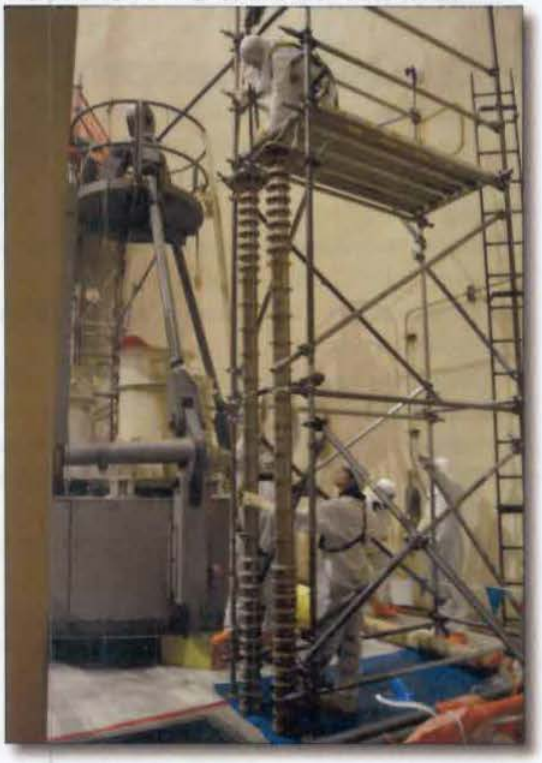
Protected Train "A"

- NB01 — 4.16 kV engineered safety feature (ESF) bus
- XNB02/PA0201 — 4.16 kV ESF transformer and associated stub bus
- NG01/03 — safety-related 480 V switchgear
- NN01/03 — vital 120 V AC power supply
- NK01/03 — vital 120 V DC power supply
- XMR01/MA104D & E, start-up transformer and associated relays & associated stub bus
- West switchyard bus
- A emergency diesel generator
- A spent fuel pool cooling pump
- A component cooling water
- A essential service water
- SGK05A — Class 1E electric equipment HVAC
- SGK04A — control room HVAC

Critical & Important Path Activities Due Next 24 Hours

- Perform non-destruction examination of reactor vessel bottom nozzles and J-welds
- "B" train emergency diesel generator 24-hour loaded run

Team continues work on reactor head



The Emergent Issues Team is working a plan to remove control rod drive mechanism coil stacks and dummy cans on spare penetrations to address the reactor head issues.

The Emergent Issues Team (EIT) is continuing to work through a plan for addressing the reactor vessel head following the leak on the core exit thermocouple nozzle assembly (CETNA). The plan includes removing 14 control rod drive mechanism coil stacks and 13 dummy cans to remove boron accumulation and install canopy seal weld clamps.

The coil stack assemblies are part of the control rod drive mechanism and includes a set of coils that generate magnetic flux. They are delicate and require special care when cleaning. Dummy cans are used to cap spare penetrations on the reactor vessel head not required for operation.

The team will also conduct ultrasonic volumetric testing under the reactor head. The test will look at penetrations which could not be visually inspected from above due to the residue caused by the leak from CETNA #77. This will provide positive confirmation that there is no leakage coming from the reactor vessel head.

Following removal of the coil stacks and the under-head inspection, clamps will be installed on the location of the leaking canopy seal weld, penetration #77, and four additional spare locations. The four spare penetrations being clamped were identified as the most susceptible to future leakage based on internal and external operating experience and vendor recommendations. The plan is to complete these activities within the water jet peening window.

Update on outage activities

The plant is defueled. The safety shutdown risk remains Yellow due to the east switchyard bus being out of service.

Critical path continues through non-destructive examination of the reactor vessel bottom nozzles and j-welds. A total 26 nozzles have been examined as of this morning.

Over the last shift, the "B" train essential service water flow balance and pump tests were completed. Maintenance completed repairs to the "B" emergency diesel generator fuel injector #12. They will make adjustments to injector #7 and the 24-hour loaded run of the diesel will follow.

Also on important path work for today is the switchyard outage #3 and post-

"Update" continued on page 2.

"Update" continued from page 1.

maintenance testing on SGK05B. The "A" train essential service water piping to the containment coolers is more than 60 percent complete. Teams completed installation of the insulation on "B" train overnight. The insulation for the "B" component cooling water heat exchanger is expected to be complete today as well.

RF21 Quality snapshot

Quality Assurance continues to conduct oversight activities in support of RF21. Areas observed during the reporting period from Oct. 4 through Oct. 11 include eddy current testing, material storage, housekeeping, Radiation Protection Controls, temporary equipment, reactor vessel head emergent issues team (EIT) activities, CAP activities, Security activities, an assortment of Maintenance group activities and industrial safety observations.

During this reporting period, QA completed 42 surveillances and initiated 12 condition reports. These activities identified several positive behaviors and deficiencies/weaknesses.

The following are a few of the positive behaviors identified during this period:

- EIT efforts are moving forward with safety and diligence being emphasized and practiced.
- Good use of human performance tools
- Excellent demonstration of Own It in maintaining focus on industrial safety
- Good radiological work practices

There were also several deficiencies/weaknesses identified during this reporting period. Quality identified issues with housekeeping, confined space permit errors, control of temporary equipment, fire impairment permit issues, procedure issues, transient material control and equipment removal tagging.

All identified deficiencies were discussed with the appropriate personnel, with some issues being promptly corrected. The Quality team initiated CRs to document the identified deficiencies.

Wolf Creek WIN chapter to hold bake sale Oct. 14

The Wolf Creek chapter of Women in Nuclear will hold a bake sale on Friday, Oct. 14, for both day shift and night shift. The goods will be available for sale from 11 a.m. to 1 p.m. and 11 p.m. to 1 a.m. in the back of the Heartland Cafe. The proceeds will benefit a charity to be determined at a later date.

The chapter is still accepting volunteers to bring items for the sale. If you would like to donate something, contact Linda Cole via email.

Employees Association store

The Employees Association gift store, located on the first floor of the Edward McCabe Building, will be open from 11 p.m. to 1 a.m. tonight to accommodate those on night shift.

Outage t-shirts (four designs) and hooded sweatshirts (two designs) are now available, in addition to RF21 coffee mugs. We also have a large selection of jackets, shirts, hats and other items.

Refuel 21 Goals	Goal	Actual
Safety		
Personnel		
Recordable or Greater Injuries	0	0
Nuclear (Unplanned Risk Changes)		
Elevating to Orange or Red	0	0
Elevating to Yellow	≤ 2	0
Radiological		
Radiation Exposure	≤ 60 R	50.017 R
PCEs	≤ 3	0
Human Performance		
Site Event Clock Resets		
Site Event Clock Resets	0	0
Foreign Material Exclusion		
Significant Events	0	0
Vulnerabilities	0	0
Conditions	≤ 15	0
Reliability		
Scope Completion	≥ 98%	49.41%
Efficiency (Cost Competitiveness)		
Schedule Duration		
Scheduled Duration	≤ 62 d.	27 d.
Incremental O&M Cost (Excluding Fuel)		
Incremental O&M Cost (actual projected)	≤ $45.7M	$46.9M
Scope Flux		
Scope Flux	≤ 10%	1.1%

WOLF CREEK
NUCLEAR OPERATING CORPORATION

AP 29E-001

PROGRAM PLAN FOR CONTAINMENT LEAKAGE MEASUREMENT

Responsible Manager

MANAGER ENGINEERING PROGRAMS

Revision Number	15
Use Category	Information
Administrative Controls Procedure	No
Management Oversight Evolution	No
Program Number	29E

DC12 10/06/2015

TABLE OF CONTENTS

1.0 PURPOSE

1.1 The purpose of this procedure is to outline the requirements of the type A, B, & C leakage rate tests required by 10CFR50, Appendix J, Option B, and Regulatory Guide 1.163.

2.0 SCOPE

2.1 This procedure supports Technical Specification surveillance requirement 3.6.1.1 and Technical Specification 5.5.16, by denoting the performance, frequency, and acceptance criteria for Type A, B, and C leakage rate testing.

2.2 This procedure supports Technical Specification surveillance requirements 3.6.3.6 and 3.6.3.7 by denoting the performance, frequency and acceptance criteria for the leakage rate testing of the 36-inch containment shutdown purge supply and exhaust isolation valves and the associated flanges.

2.3 This procedure supports Technical Specification 3.6.3.7 by denoting the performance, frequency and acceptance criteria for the leakage rate testing of the 18-inch containment mini-purge supply and exhaust isolation valves.

2.4 This procedure supports Technical Specification surveillance requirements 3.6.2.1 by denoting the performance, frequency and acceptance criteria for the leakage rate testing of the containment air locks.

3.0 REFERENCES AND COMMITMENTS

3.1 References

3.1.1 Code OF Federal Regulations, Title 10, PART 50, Appendix J, Option B, LEAKAGE RATE TESTING OF CONTAINMENT OF LIGHT WATER COOLED NUCLEAR POWER PLANTS.

3.1.2 NEI 94-01, INDUSTRY GUIDELINE FOR IMPLEMENTING PERFORMANCE-BASED OPTION OF 10CFR50, APPENDIX J, REVISION 0

3.1.3 NRC NUREG-1493, PERFORMANCE-BASED LEAK-TEST PROGRAM

3.1.4 Regulatory Guide 1.163, PERFORMANCE-BASED CONTAINMENT LEAK-TEST PROGRAM, September 1995

3.1.5 American National Standard Institute, ANSI N45.4-1972, LEAKAGE RATE TESTING OF CONTAINMENT STRUCTURES FOR NUCLEAR REACTORS.

3.1.6 American National Standard Institute, ANSI/ANS 56.2, 1976/ANSI N271-1970, CONTAINMENT ISOLATION PROVISIONS FOR FLUID SYSTEMS

3.1.7 American National Standards Institute, ANSI/ANS 56.8-1994, CONTAINMENT SYSTEM LEAKAGE TESTING REQUIREMENTS

3.1.8 Updated Safety Analysis Report, Section 6.2

3.1.9 WCGS Technical Specifications

3.1.10 Institute of Electrical and Electronic Engineers, IEEE 317-1976, STANDARD FOR ELECTRIC PENETRATION ASSEMBLIES IN CONTAINMENT STRUCTURES FOR NUCLEAR POWER STATIONS

3.1.11 Project Specification C-153, TECHNICAL SPECIFICATION FOR FURNISHING, FABRICATING AND DELIVERING THE REACTOR BUILDING ACCESS HATCHES FOR THE SNUPPS

3.1.12 AP 21G-001, CONTROL OF LOCKED COMPONENT STATUS

3.1.13 AP 29B-003, SURVEILLANCE TESTING

3.1.14 Letter AD 87-0343, Reportability of Containment Leakage Rates

3.1.15 Letters WO 95-0187, ES 96-0021, ES 96-0028 and ES 96-0058

3.1.16 Licensee Event Report 96-015-01

3.1.17 Calculation GP-M-001

3.1.18 AP 21D-004, CONTROL OF CONTAINMENT PENETRATIONS DURING SHUTDOWN OPERATIONS

3.1.19 AP 23M-001, WCGS MAINTENANCE RULE PROGRAM

3.1.20 WCGS Technical Requirements Manual

3.1.21 STS PE-265, CONTAINMENT STRUCTURE SURFACE INSPECTION

3.1.22 Amendment No. 152

3.1.23 PIR 2007-000743, PMT Requirement Not Clear

3.1.24 PIR 2007-001784, Recommend Lower Administrative Limit

3.1.25 CR 2007-002311, Action 5152, QH Assessment # 1359

3.1.26 CR Action 00021298-02-04, KCV0478 Administrative Limit

3.1.27 CR 00095135-01-02, Align AP 29E-001 with surveillance procedures.

3.2 Commitments

3.2.1 NRC Inspection Report 92-09, (RCMS 92-122)

3.2.2 PIR 97-0379 (LER 97-004), (RCMS 97-060)

3.2.3 PIR TS 87-0255, (RCMS 87-068)

3.2.4 PIR 2001-1869, Addition of KAV0218 to the Program

4.0 DEFINITIONS

4.1 Types of Tests:

4.1.1 Type A Tests:

1. Type A tests measure the containment system overall integrated leakage rate under conditions representing design basis accident containment pressure and systems alignments.

4.1.2 Type B Tests:

1. Type B tests detect or measure leakage across pressure-containing or leakage limiting boundaries other than valves, such as:

   a. Containment penetrations whose design incorporates resilient seals, gaskets, sealant compounds, expansion bellows, or flexible seal assemblies;

   b. Seals, including door operation mechanism penetrations which are part of the primary containment system;

   c. Doors and hatches with resilient seals or gaskets except for seal welded doors.

4.1.3 Type C Tests:

1. Type C tests measure containment isolation valve leakage rates.

4.1.4 Hydrogen Analyzer System Leakage Tests:

1. The hydrogen analyzer system leakage tests detect or measure leakage across the pressure-containing or leakage limiting boundaries of the hydrogen analyzers and the related piping and tubing.

4.2 P_a

4.2.1 The calculated peak containment internal pressure related to the design basis accident (48 pounds per square inch - gauge).

4.3 L_a

4.3.1 The maximum allowable containment leakage rate at pressure P_a (0.20 weight percent per day).

4.4 Containment Operability:

4.4.1 Containment operability exists when the following containment leakage rate limits are met:

1. The overall integrated containment leakage rate shall be less than or equal to 1.0 La (420,000 sccm) at all times when containment operability is required.

2. The combined type B and C as-found leakage rate, determined on a minimum pathway leakage rate basis, shall be less than or equal to 0.6 La (250,000 sccm) at all times when containment operability is required.

4.4.2 Containment operability is required during Modes 1, 2, 3 and 4.

4.5 Containment Closure:

4.5.1 Containment closure exists when the following conditions are met.

1. Penetrations subjected local leak rate testing during periods requiring containment closure must be closed in a manner which prohibits direct access between the containment atmosphere and outside atmosphere.

2. Closure shall be accomplished during local leak rate testing by a closed containment isolation valve, manual valve or an approved functional equivalent.

4.5.2 Containment closure is required during core alterations or movement of irradiated fuel within the containment.

4.6 As-Found Leakage Rate

4.6.1 The leakage rate prior to any repairs, modifications, or adjustments to the leakage barrier being tested.

4.7 As-Found Testing

4.7.1 Leakage rate testing performed after some period of normal service conditions and prior to any repairs, modifications, or adjustments.

4.8 As-Left Leakage Rates

4.8.1 The leakage rate following any repairs, modifications, or adjustments to the leakage barrier being tested.

4.9 As-Left Testing

4.9.1 Leakage rate testing performed following repair, modification, or adjustment.

4.10 Minimum Pathway Leakage Rate (MNPLR)

4.10.1 The minimum leakage rate that can be attributed to a penetration leakage path (e.g., the smaller of either the inboard or outboard barrier's individual leakage rates). The pathway's MNPLR can be determined by one half of the total measured leakage rate when tested by pressurizing between the inboard and outboard barriers.

4.11 Maximum Pathway Leakage Rate (MXPLR)

4.11.1 The maximum leakage rate that can be attributed to a penetration leakage path. The MXPLR is the larger, not the total, leakage of two valves in a series tested individually (e.g., the larger of either the inboard or outboard barrier's individual leakage rate).

5.0 RESPONSIBILITIES

5.1 Manager Engineering Programs is responsible for the Containment Leakage Rate Testing Program.

5.2 Supervisor Predictive is responsible for overseeing that the required containment leakage testing is performed.

5.3 Appendix J Program Owner is responsible for:

5.3.1 Maintaining the Containment Leakage Rate Testing Program.

5.3.2 Determining testing requirements of components subject to type A, B and C testing.

5.3.3 Compiling results from type A, B and C tests and verifying that all leakage rates are within the limits contained in the Containment Leakage Rate Testing Program.

5.3.4 Determining the administrative leakage limits and performance-based testing frequencies utilized in the Containment Leakage Rate Testing Program.

5.3.5 Trending penetration/component leakage rates to determine if testing frequencies or administrative leakage limits should be evaluated.

5.3.6 Planning and scheduling of type A, B and C testing and the related activities.

5.3.7 Ensure contingency evaluations and work orders are in place for high risk tests (LLRT's more likely to fail).

6.0 PROCEDURE

6.1 Refer to the Technical Specification Limiting Condition for Operation listed for the following conditions:

6.1.1 LCO 3.6.1 - Containment operability not maintained.

6.1.2 LCO 3.6.3 and LCO 3.6.1 - Combined type B and C leakage exceeding the allowable.

6.1.3 LCO 3.6.3 and LCO 3.6.1 - Purge valve leakage exceeding the allowable.

6.1.4 LCO 3.9.4 - Containment closure not maintained.

6.1.5 LCO 3.6.2 and LCO 3.6.1 - Containment air lock leakage exceeding the allowable.

6.2 Testing Requirements:

6.2.1 Type A Testing

1. A type A test is required under the performance-based test frequency.

2. A type A test shall be performed after any repair, modification, or adjustment activity, if the activity affected the containment's leak tightness. If the repaired, modified, or adjusted area is able to be type B or C tested then a type B or C test may be performed in lieu of a type A test.

6.2.2 Type B As-Found Testing (Excluding Containment Air Locks)

1. An as-found test is required if any of the following apply:

   a. Testing is required under the performance-based test frequency.

   b. Prior to any repair, modification, or adjustment activity, if the activity would affect the penetration's leak tightness. The opening of type B penetrations such as the equipment hatch or the fuel transfer tube is not considered a repair, modification, or adjustment activity thus as-found testing prior to opening is not required.

6.2.3 Type B As-Left Testing (Excluding Containment Air Locks)

1. An as-left test is required following re-establishment of the pressure-containing or leakage-limiting boundary or after any repair, modification, or adjustment activity, if the activity affected the penetration's leak tightness.

6.2.4 Type C As-Found Testing

1. An as-found test is required if either of the following apply: [3.2.3]

   a. Testing is required under the performance-based test frequency.

   b. Prior to any repair, modification, or adjustment activity, if the activity would affect the valve's leak tightness. Guidelines for maintenance activities that could affect a valve's leak tightness are outlined in ATTACHMENT C. [3.2.3]

6.2.5 Type C As-Left Testing

1. An as-left test is required following any repair, modification or adjustment activity, if the activity affected the valve's leak tightness.

2. Guidelines for post maintenance type C testing are outlined in ATTACHMENT C. [3.2.3]

6.2.5 Containment Air Lock As-Found Testing

   a. As-found testing is required under the performance-based test frequency.

6.2.6 Containment Air Lock As-Left Testing

1. As-left testing is required following repair, modification, or adjustment activity, if the activity affected the air lock's leak tightness.

2. As-left testing at P_a may be performed on the affected area or component in lieu of the overall air lock test (e.g., shaft seals, equalizing valves).

6.2.7 Hydrogen Analyzers System Leakage Testing

1. The hydrogen analyzer system leakage testing shall be performed following repair, modification, or adjustment activity, if the activity affected the hydrogen analyzer system's leak tightness. [3.2.2]

6.3 Administrative Leakage Limits

6.3.1 Performance-based administrative leakage limits shall be established for each type B and C tested component (except for the components noted in Step 6.3.1.5 below) prior to the performance of testing. The administrative limits assigned to each component should be specified such that they are an indicator of potential valve or penetration degradation.

1. Performance-based administrative limits for type B tested components are based on previous historic leakage rates.

2. Performance-based administrative limits for type C tested components are determined by utilizing service factors for each component. A base limit of 60 sccm (80 sccm for check valves) is assigned to each component and a multiplier for each service factor is applied. Starting with the base limit each multiplier is applied to the results of the prior multiplier.

EXAMPLE

(60) (system fluid) (cycle frequency) (valve type) (size) (operator) = Administrative Limit

3. The following table lists the service factors and the associated multiplier.

Service Factor Table					
Multiplier	System Fluid	Cycle Frequency	Valve Type	Size	Operator
1	Nitrogen/Air	None	Ball	Up to 1"	Check
2	Component Cooling Water/Reactor Grade Water	Infrequently	Globe	>1" To 6"	Motor
3	Essential Service Water	Frequently	Gate	>6" to 8"	Solenoid
4	Equipment/Floor Drain/Sump Water, Steam		Diaphragm	>10" to 14"	Air
5			Butterfly	>14"	Manual
6			Check		

4. Performance-based administrative limits are specified in Attachment A of this procedure.

5. The leakage limits for components and/or penetrations which are not eligible for performance-based testing due to Technical Specification limits and/or refueling requirements are also listed in Attachment A and noted as such. The leakage limits listed for these components and/or penetrations are either Technical Specification limits or administrative limits assigned using the performance-based methodology, however, the performance-based testing requirements are not applicable to these components and/or penetrations.

6.3.2 The administrative limits specified in Attachment A for the hydrogen analyzer system leakage testing are based on previous historic leakage rates.

1. The administrative limits for the hydrogen analyzer system leakage tests shall be utilized to adjust the type A test results. [3.2.2]

2. The hydrogen analyzer system leakage rate shall be less than the administrative limit specified in Attachment A prior to the hydrogen analyzer system's return to service.

6.3.3 The administrative limit specified in Attachment A for KCV0478 on Penetration P-67 has been changed, refer to CR Action 00021298-02-04 for details.

6.4 Performance Based Testing Frequencies

6.4.1 Periodic type A test shall be performed at an initial test frequency of at least once per 48 months. Upon completion of two consecutive periodic type A test with leakage within the performance leakage rate the test frequency may be extended to at least once in ten years. Elapsed time between the two consecutive satisfactory tests used to determine performance criteria shall be at least 24 months.

1. The type A test performance leakage rate shall be less than 1.0 La.

2. An extension of the test frequency for up to 15 months is allowed in cases where refueling schedules have been changed to accommodate other factors.

6.4.2 The visual examination of containment concrete surfaces outside containment and steel liner plate inside containment to fulfill the requirements of 10 CFR 50, Appendix J, Option B testing, will be performed in accordance with the requirements and frequency specified by ASME Section XI Code Subsections IWE and IWL, except where relief has been authorized.

6.4.3 The original performance based testing frequencies for type B and C tests were determined by an assessment of containment penetration and valve performance. That assessment considered factors, such as past component performance, maintenance history, service environment, design and safety significance. Form APF 29E-001-01, CONTAINMENT PENETRATION AND VALVE PERFORMANCE ASSESSMENT was used for the assessment and can be used to re-assess testing frequencies.

6.4.4 Nuclear Energy Institute (NEI) 94-01 provides guidance for determining testing frequency of Type B and C tests. Testing frequency changes shall be documented in the Post Outage Report each operating cycle.

6.4.5 Type B test shall be performed at an initial test frequency of at least once per 30 months(except for the containment air locks). Upon completion of two consecutive periodic as-found test within the administrative limit the test frequency for type B test may be extended up to 60 months. Elapsed time between the two consecutive satisfactory test used to determine performance shall be 24 months or the refueling cycle.

1. Type B test frequencies(except for the containment air locks) may be extended up to a maximum of 120 months upon completion of three consecutive periodic as-found test within the administrative limits. Elapsed time between each of the three periodic as-found test used to determine performance shall be 24 months or the refueling cycle. The testing of components with test frequencies greater than 60 months should be scheduled at approximate evenly distributed test frequencies such that a percentage of the components are tested periodically.

2. An extension of up to 25 percent of the test interval (not to exceed 15 months) may be allowed on a limited basis for scheduling purposes only.

6.4.6 Type C test shall be performed at an initial test frequency of at least once per 30 months (except for the containment purge and mini purge isolation valves). Upon completion of two consecutive periodic as-found test within the administrative limit the test frequency for type C test may be extended up to 60 months. Elapsed time between the two consecutive satisfactory test used to determine performance shall be 24 months or the refueling cycle.

1. An extension of up to 25 percent of the test frequency (not to exceed 15 months) may be allowed on a limited basis for scheduling purposes only.

6.4.7 Changes to Type B and C performance based test frequencies shall be reviewed prior to submitting form APF 29-006-03, CHANGE TO SURVEILLANCE TRACKING DATABASE. The person submitting the change form and the reviewer shall both sign form APF 29-006-03.

6.4.8 The overall containment air lock test shall be performed at P_a at least once per 30 months.

1. The air lock door seals may be tested at $\geq$ 10 psig in lieu of the overall air lock test at P_a after entries into containment when containment operability is required and prior to establishing containment operability after periods when containment operability was not required. The door seal test shall not be substituted for the 30 month overall test at P_a.

2. The air lock door seals shall be tested within 7 days after being opened when containment operability is in effect. For periods of multiple entries into containment more frequent than once every 7 days the air lock door seals may be tested once per 30 days.

6.5 Technical Specification Based Frequencies

6.5.1 With the associated blank flange installed, each 36" containment shutdown purge supply and exhaust valve and the associated blank flange shall be tested at least once per 24 months and following each reinstallation of the blank flange.

6.5.2 With the associated blank flange removed, each 36" containment shutdown purge supply and exhaust valve shall be tested at least once per 184 days and within 92 days after opening the valve.

6.5.3 Each 18" containment mini-purge supply and exhaust valve shall be tested at least once per 184 days and within 92 days after opening the valve.

6.6 Type A Test Acceptance criteria

6.6.1 The as-found type A test leakage rate shall be less than 1.0 La (0.20 weight percent per day).

6.6.2 The as-left type A test leakage rate shall be less than 0.75 La (0.15 weight percent per day) prior to entering a mode where containment operability is required.

6.7 Type B and C Test Acceptance Criteria

6.7.1 The combined as-left leakage rates determined on a maximum pathway leakage rate basis for all penetrations and valves subject to type B and C tests, shall be verified to be less than 0.6 L_a, 250,000 standard cubic centimeter per minute (sccm), prior to entering a mode where containment operability is required following an outage or shutdown that included type B and C testing only. This shall be done with the latest leakage rate test data available, and shall be kept as a running summation of the leakage rates.

6.7.2 The as-found leakage rates, determined on a minimum pathway leakage rate basis, for all newly tested penetrations when summed with the as-left minimum pathway leakage rates for all other penetrations and valves subject to type B and C tests, shall be less than 0.6 L_a, 250,000 sccm, at all times when containment operability is required. This shall be done with the latest leakage rate test data available, and shall be kept as a running summation of the leakage rates.

6.7.3 The leakage rate for each 18" containment mini-purge supply and exhaust isolation valve shall be less than 0.05 La, 21,000 sccm.

6.7.4 The leakage rate for the overall air lock test at P_a shall be less than 0.05 La, 21,000 sccm.

6.7.5 The leakage rate for the air lock door seals tested at ≥ 10 psig shall be less than 0.005 La, 2,100 sccm.

6.8 Corrective Action

6.8.1 If the type A test performance leakage rate results are not acceptable, a determination shall be performed in accordance with Step 6.8.7 to identify the cause of the unacceptable performance and determine the appropriate corrective actions. Once the cause determination and corrective actions have been completed, acceptable performance shall be reestablished by performing a type A test within 48 months following the unsuccessful test. Submittal of Form APF 29-006-03, CHANGE TO STS/STN COMPUTER DATABASE, in accordance with AP 29-006, SURVEILLANCE TEST MASTER CROSS-REFERENCE AND REVIEW REQUIREMENTS is required. Following a successful type A test, the test frequency may be returned to 10 years.

6.8.2 If the as-found type A test leakage rate results are not acceptable due to leakage savings additions from the type B and C test, then corrective action shall be deferred to the type B or C test as specified per Step 6.8.4.

6.8.3 If the as-found type A test leakage rate results are not acceptable due to a leakage path that is unable to be type B or C tested, then corrective action shall be as stated in Step 6.8.1.

6.8.4 For performance-based type B and C test that are not acceptable (greater than Attachment A administrative leakage limits), the testing frequency shall be set at the initial test frequency by submittal of Form APF 29-006-03, CHANGE TO STS/STN COMPUTER DATABASE, in accordance with AP 29-006, SURVEILLANCE TEST MASTER CROSS-REFERENCE AND REVIEW REQUIREMENTS. A cause determination in accordance with Step 6.8.7 shall be performed and corrective actions identified to eliminate the identified failure cause and prevent recurrence. Once the cause determination and corrective actions have been completed, acceptable performance may be reestablished and the test frequency returned to the extended frequency in accordance with Step 6.4.4 or 6.4.5.

6.8.5 For non performance-based type B and C test that are not acceptable (greater than Attachment A administrative leakage limits but lower than technical specification limits and lower than the 10,000 sccm limit for any one component and/or penetration), an evaluation of the affect of the leakage on the total combined type B and C leakage rate shall be performed in accordance with Step 6.8.7. If this evaluation concludes that there is no adverse impact to the total combined type B and C leakage rate the leakage may be accepted on an interim basis.

6.8.6 For the purpose of the Inservice Testing Program, which utilizes the Containment Leakage Rate Testing Program to satisfy category A isolation valve leakage test, a maximum allowable leakage rate of 10,000 sccm or the administrative limit, whichever is larger is specified for any single component/penetration. If this maximum allowable leakage rate is exceeded, repair or replacement shall be initiated in accordance with AP 16C-005, MPAC WORK REQUEST. [3.2.1]

6.8.7 Component/Penetration leakage rates that exceed the administrative limits, Technical Specification limits or other limits specified by this procedure shall be evaluated in accordance with AP 28A-100, CONDITION REPORTS.

6.8.8 Component/Penetration leakage rates that exceed the administrative limits, Technical Specification limits or other limits specified by this procedure shall also be evaluated in accordance with the Maintenance Rule performance criteria per AP 23M-001, WCGS MAINTENANCE RULE PROGRAM.

- o The Maintenance Rule requires the following: There shall not be Less than or equal to 5% failures (leakage of 10,000 sccm or admin limit greater of the two) of LLRTs performed per 18 month period or can leakage exceed .5 La.

6.9 Report Requirements

6.9.1 A post-outage report shall be prepared presenting results of the previous cycle's type A, type B, and type C tests. The report shall show that the applicable performance criteria are met, and serve as a record that continuing performance is acceptable.

7.0 RECORDS

7.1 The following QA records are generated per this procedure.

7.1.1 APF 29E-001-01, CONTAINMENT PENETRATION AND VALVE PERFORMANCE ASSESSMENT

7.1.2 Post Outage Report

8.0 FORMS

8.1 APF 29E-001-01, CONTAINMENT PENETRATION AND VALVE PERFORMANCE ASSESSMENT.

- END -

ATTACHMENT A
(Page 1 of 5)
COMPONENT ADMINISTRATIVE LIMITS

Penetration Number, Procedure Number, and Description	**Component Number**	**Administrative Leakage Limit (sccm)**
P-17 STS PE-117 Fuel Transfer Tube Test Flange	O-RINGS	1,000 Note 1
P-22 STS PE-122 B Loop Seal Injection	BBV0148 BBHV8351B	3,840 1,920
P-23 STS PE-123 CVCS Letdown	BGHV8160 BGHV8152	3,840 3,840
P-24 STS PE-124 Seal Water Return	BGHV8112 BGV0135 BGHV8100	1,920 1,920 1,920
P-25 STS PE-125 Reactor Makeup Water	BL8046 BLHV8047	3,840 7,680
P-26 STS PE-126 Reactor Coolant Drain Tk Disch	HBHV7176 HBHV7136	7,680 7,680
P-28 STS PE-128 Essential Service Water to B & D CTMT Coolers	EFHV0032 & EFHV0034	28,800
P-29 STS PE-128 Essential Service Water from B & D CTMT Coolers	EFHV0046 & EFHV0050	28,800
P-30 STS PE-130 Instrument Air Supply	KAV0204 KAFV0029 KAV0218	1,920 1,920 1,200
P-32 STS PE-132 Containment Sump Pump Discharge	LFFV0095 LFFV0096	5,760 7,680
P-34 STS PE-134 ILRT Pressurization Line	FLANGES	1,000
P-36 STS PE-136 ISI Penetration	FLANGE	1,000
P-39 STS PE-139 Loop C Seal Water Injection	BBV0178 BBHV8351C	3,840 1,920
P-40 STS PE-140 Loop D Seal Water Injection	BBV0208 BBHV8351D	3,840 1,920
P-41 STS PE-141 Loop A Seal Water Injection	BBV0118 BBHV8351A	3,840 1,920

ATTACHMENT A
(Page 2 of 5)
COMPONENT ADMINISTRATIVE LIMITS

Penetration Number, Procedure Number, and Description	**Component Number**	**Administrative Leakage Limit (sccm)**
P-43 STS PE-143 Aux Steam (Decontamination)	HDV0017 HDV0016	4,800 4,800
P-44 STS PE-144 Reactor Coolant Drain Tk H_2 Supply & Vent	HBHV7126 HBHV7150	1,920 1,920
P-45 STS P-145 Accumulator N_2 Supply	EPV0046 EPHV8880	960 960
P-51 STS PE-151 ILRT Pressure Sensing Lines	GP-003-HBB-1" GP-005-HBB-1"	500 500
P-53 STS PE-153 Fuel Pool Cooling And Cleanup To Refueling Pool Supply	ECV0084 ECV0083	3,600 3,600
P-54 STS PE-154 Fuel Pool Cooling And Cleanup To Refueling Pool Return	ECV0087 ECV0088	3,600 3,600
P-55 STS PE-155 Fuel Pool Cooling And Cleanup To Refueling Pool Skimmer	ECV0095 ECV0096	3,600 3,600
P-56 STS PE-156 CTMT Atmosphere Monitor Post Accident Hydrogen Analyzer Return	GSHV0009 GSHV0008 GSHV0039 GSHV0038	1,080 1,080 1,080 1,080
P-57 STS PE-157 Nuclear Sampling System -Reactor Coolant Drain Tk	SJV0111 SJHV0131 & SJHV0132	1,920 2,880
P-58 STS PE-158 Accumulator Fill Line From SI Pump PEM01A	EMV0006 EMHV8888	1,920 1,920
P-62 STS PE-162 Pressurizer Relief Tank Nitrogen Supply/Vent	BBHV8026 BBHV8027	1,920 1,920
P-63 STS PE-163 Service Air Supply	KAV0039 KAV0118	1,920 1,200
P-64 STS PE-164 Nuclear Sampling System Loop 3 Hot Leg Sample Pressurizer Liquid Sample	SJHV0128 SJHV0129 & SJHV0130	1,440 2,880

ATTACHMENT A
(Page 3 of 5)
COMPONENT ADMINISTRATIVE LIMITS

Penetration Number, Procedure Number, and Description	**Component Number**	**Administrative Leakage Limit (sccm)**
P-65 STS PE-165 Hydrogen Purge	GSHV0020 & GSHV0021	4,800
P-67 STS PE-167 Fire Protection	KCV0478 KCHV0253	10,000 Note 4 4,320
P-68 STS PE-168 ISI Penetration	FLANGE	1,000
P-69 STS PE-169 Pressurizer Liquid Sample	SJHV0012 SJHV0013	2,160 2,160
P-71 STS PE-171 Essential Service Water Supply to A & C CTMT Coolers	EFHV0031 & EFHV0033	28,800
P-73 STS PE-171 Essential Service Water Supply from A & C CTMT Coolers	EFHV0045 & EFHV0049	28,800
P-74 STS PE-174 Component Cooling Water Supply	EGV0204 EGHV0058 & EGHV0127	7,680 11,520
P-75 STS PE-175 Component Cooling Water Return	EGHV0060 & EGHV0130 EGHV0059 & EGHV0131	11,520 11,520
P-76 STS PE-176 Component Cooling Water Thermal Barrier Return	EGHV0061 & EGHV0133 EGHV0062 & EGHV0132	5,760 5,760
P-78 STS PE-178 Drain Line from S/G's EBB01A,B,C,&D	BMV0045 BMV0046	3,600 3,600
P-80 STS PE-180 CVCS Charging	BG8381 BGHV8105	3,840 2,880
P-92 STS PE-192 ECCS Test Line	EMHV8871 EMHV8964	1,920 1,920

ATTACHMENT A
(Page 4 of 5)
COMPONENT ADMINISTRATIVE LIMITS

Penetration Number, Procedure Number, and Description	**Component Number**	**Administrative Leakage Limit (sccm)**
P-93 STS PE-193 Reactor Coolant Loop A Hot Leg Sample	SJHV0005 SJHV0006 & SJHV0127	1,440 2,880
P-95 STS PE-195 Accumulator Liquid Sample	SJHV0018 SJHV0019	1,440 1,440
P-97 STS PE-197 CTMT Atmosphere Monitor Post Accident Hydrogen Analyzer Return	GSHV0018 GSHV0017 GSHV0033 GSHV0034	1,080 1,080 1,080 1,080
P-98 STS PE-198 Breathing Air Supply	KBV0001 KBV0002	1,200 1,200
P-99 STS PE-199 CTMT Atmosphere Monitor Post Accident Hydrogen Analyzer Sample	GSHV0004 GSHV0005 GSHV0003 GSHV0036 GSHV0037	1,080 1,080 1,080 1,080 1,080
P-101 STS PE-201 CTMT Atmosphere Monitor Post Accident Hydrogen Analyzer Sample	GSHV0013 GSHV0014 GSHV0012 GSHV0032 GSHV0031	1,080 1,080 1,080 1,080 1,080
V-160 STS PE-260 Shutdown Purge Line Exhaust	GTHZ0008 GTHZ0009	12,000 12,000 Note 1
V-161 STS PE-261 Shutdown Purge Line Supply	GTHZ0006 GTHZ0007	12,000 12,000 Note 1
STS PE-263 South Electrical Penetration Bank	All Elec. Pen's In So. Pen Rm.	2,000
STS PE-264 North Electrical Penetration Bank	All Elec. Pen's In No. Pen Rm.	2,000
L-3 STS PE-013 Personnel Air Lock	ZX-03 (Door Seals)	2,100 Note 2

ATTACHMENT A
(Page 5 of 5)
COMPONENT ADMINISTRATIVE LIMITS

Penetration Number, Procedure Number, and Description	**Component Number**	**Administrative Leakage Limit (sccm)**
STS PE-015 Purge Supply	GTHZ0004 GTHZ0005 GTHZ0006 GTHZ0007	21,000 21,000 Notes 1 & 2
STS PE-015 Purge Exhaust	GTHZ0008 GTHZ0009 GTHZ0011 GTHZ0012	21,000 21,000 Notes 1 & 2
L-3 STS PE-014A Personnel Air Lock	ZX-03 (Barrel)	21,000 Note 2
L-1 STS PE-014B Emergency Air Lock	ZX-02 (Barrel)	21,000 Note 2
L-1 STS PE-020 Emergency Air Lock	ZX-02 (Door Seals)	2,100 Note 2
L-3 STS PE-101 Personnel Air Lock	ZX-03 (Shaft Seal and Equalizing Valve)	21,000 Note 3
L-1 STS PE-101 Emergency Air Lock	ZX-02 (Shaft Seal and Equalizing Valve)	21,000 Note 3
L-2 STS PE-102 Equipment Hatch	ZX-01	4,200 Note 1
STS PE-100A STS PE-100B Hydrogen Analyzers	SGS02A SGS02B	2,000 2,000
STS PE-100A STS PE-100B Hydrogen Analyzers Supply and Return Lines	GS-28-HCB-3/4" GS-32-HCB-3/4" GS-27-HCB-3/4" GS-31-HCB-3/4"	1,000 1,000 1,000 1,000
STS PE-251 Fiber Optics Penetration	ZSE251	100

Notes:

1. These penetrations are not eligible for performance based testing due to refueling and/or Technical Specification requirements.
2. Technical Specification leakage limits are specified as administrative limits.
3. Results of this test is summed with the latest overall leakage value of the airlock.
4. Administrative limit changed by CR Action 00021298-02-04 to 10,000 sccm.

- END -

ATTACHMENT B
(Page 1 of 1)
EXCERPTS FROM CALCULATION GP-M-001

B.1 Containment Leakage Acceptance Criteria

B.1.1 Maximum allowable leakage rate, L_a, equals 0.20 weight percent per day of containment air free volume.

B.1.2 $L_A = (0.002/day)(2.5 \times 10^6\ ft^3)[(48\ psi + 14.7\ psi)/14.7\ psi](1\ day/24\ hr)\ (1\ hr/60\ min)(28317\ cm^3/ft^3)$
$L_A = 419,377$ sccm
$L_A \approx 420,000$ sccm

B.1.3 Allowable combined local leakage rate, L_L, 60% of L_a.
$L_L = 0.6\ L_a$
$L_L = (0.6)\ (419,377)$ sccm
$L_L = 251,626$ sccm
$L_L \approx 250,000$ sccm

B.2 Personnel air lock and emergency air lock acceptance criteria

B.2.1 Allowable leakage rate, L_{AL}, $= 0.05(L_a)$
$L_{AL} = (0.05)(419,377)$ sccm
$L_{AL} = 20,969$ sccm (for each airlock)
$L_{AL} \approx 21,000$ sccm

B.3 18 inch supply & exhaust valves

B.3.1 Allowable leakage rate, L_{AL}, $= 0.05(L_a)$
$L_{AL} = (0.05)(419,377$ sccm)
$L_{AL} = 20,969$ sccm
$L_{AL} \approx 21,000$ sccm

- END -

ATTACHMENT C
(Page 1 of 5)
POST MAINTENANCE TESTING LLRT GUIDELINES

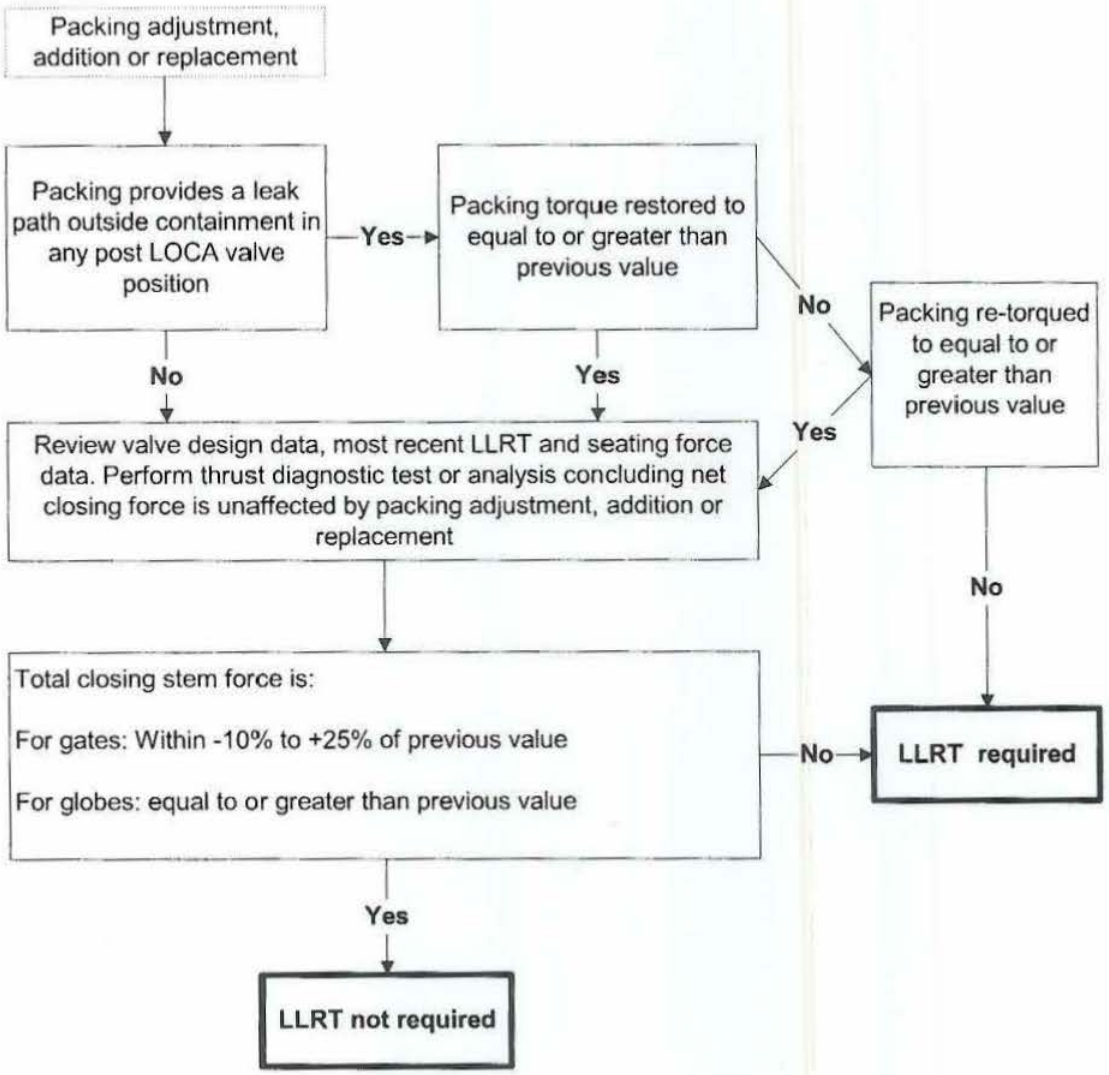
Maintenance Activity	Valve Type	PMT LLRT Required	Comments
1. Solenoid valve removal or replacement (control air to actuator)	AOV	No	If AOV is air assisted close the air function must be verified
2. Disconnect instrument air supply lines	AOV	No	If AOV is air assisted close the air function must be verified
3. Actuator diaphragm removal or replacement (actuator not removed)	AOV	No	Assumes diaphragm is opening mechanism
4. Spring preload adjustment	AOV	See Page 4	
5. Valve diaphragm removal or replacement	AOV, Manual	Yes	
6. Actuator removal or replacement	AOV, MOV	Yes	
7. Remove or replace solenoid assembly	SOV	No	
8. Cutting the seal weld to remove the bonnet.	SOV	Yes	Valve closure spring is under the bonnet.
9. Disconnect electrical leads	AOV, MOV, SOV	No	Stroke test must be verified acceptable
10. Cleaning, adding and replacement of stem grease	MOV	No	
11. Addition of grease to a frozen stem	MOV	See Page 4	
12. Overhaul valve internals (i.e. lap seat, plug, disc or cage replacement)	All	Yes	
13. Motor removal and reinstallation	MOV	No	
14. Replacement of damaged motor	MOV	Yes	
15. Stem nut removal or replacement	MOV	Yes	
16. Motor starter contactor replacement	MOV	No	
17. Declutch assembly adjustment	MOV	No	
18. Packing adjustments or replacements	All	See Page 2 and 3	
19. Limit switch adjustment	AOV, MOV	See Page 5	
19. Torque switch adjustment or replacement	MOV	See Page 4	

ATTACHMENT C
(Page 2 of 5)
POST MAINTENANCE TESTING LLRT GUIDELINES

Maintenance Activity: **Packing Adjustment, Addition Or Replacement**

Actuator Types: **MOV, AOV**

Valve Types: **All**



ATTACHMENT C
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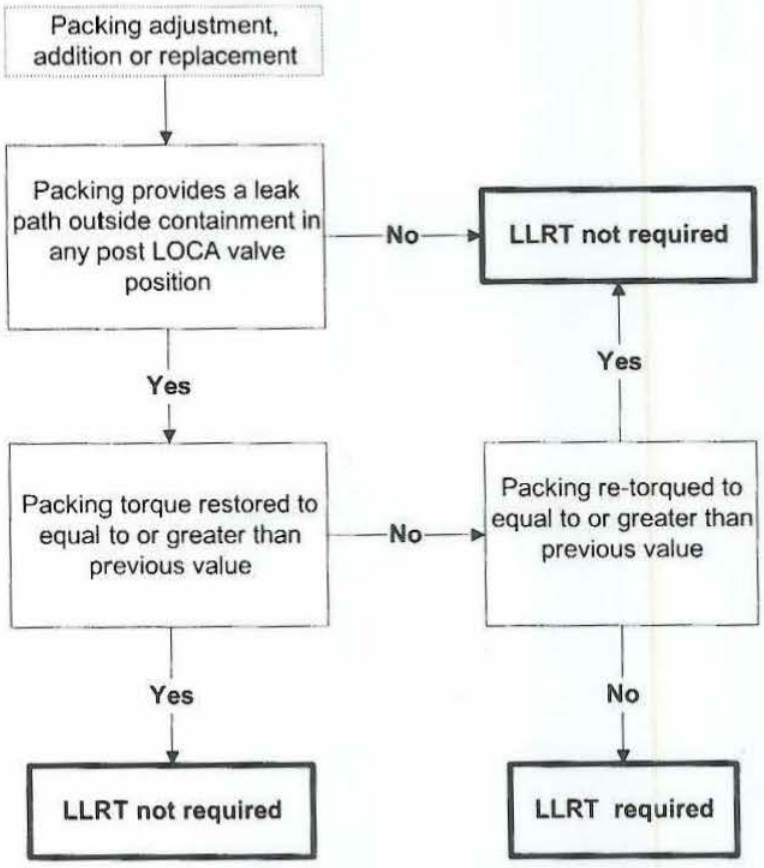
POST MAINTENANCE TESTING LLRT GUIDELINES

Maintenance Activity: **Packing Adjustment Or Replacement**

Actuator Types: **Manual**

Valve Types: **All**

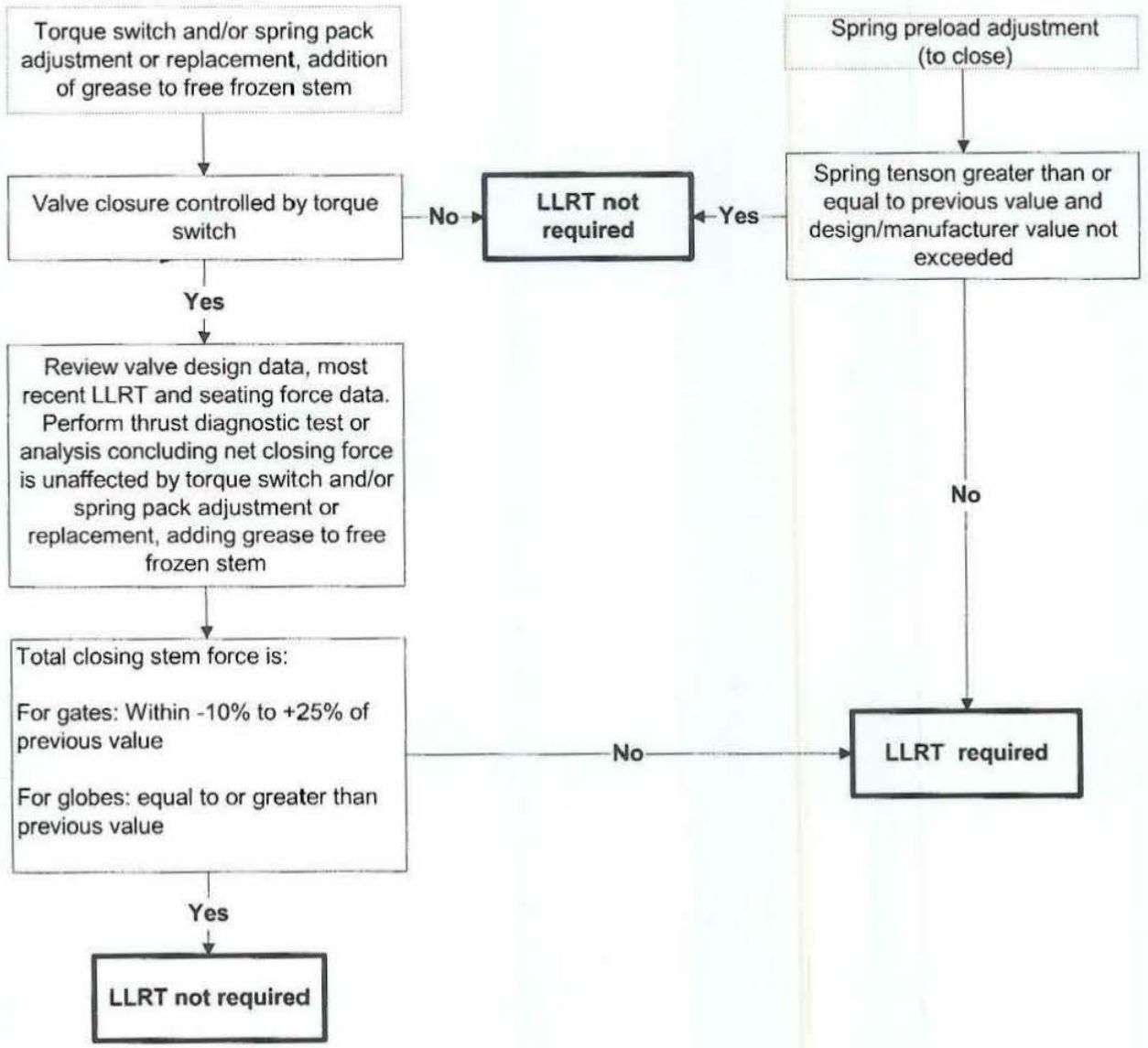


ATTACHMENT C
(Page 4 of 5)
POST MAINTENANCE TESTING LLRT GUIDELINES

Maintenance Activity: **Torque Switch and/or Spring Pack Adjustment Or Replacement, Addition Of Grease To Free Frozen Stem, Spring preload adjustment**

Actuator Types: **AOV, MOV**

Valve Types: **MOV: Gate, Globe, Plug AOV: Globe, Plug**

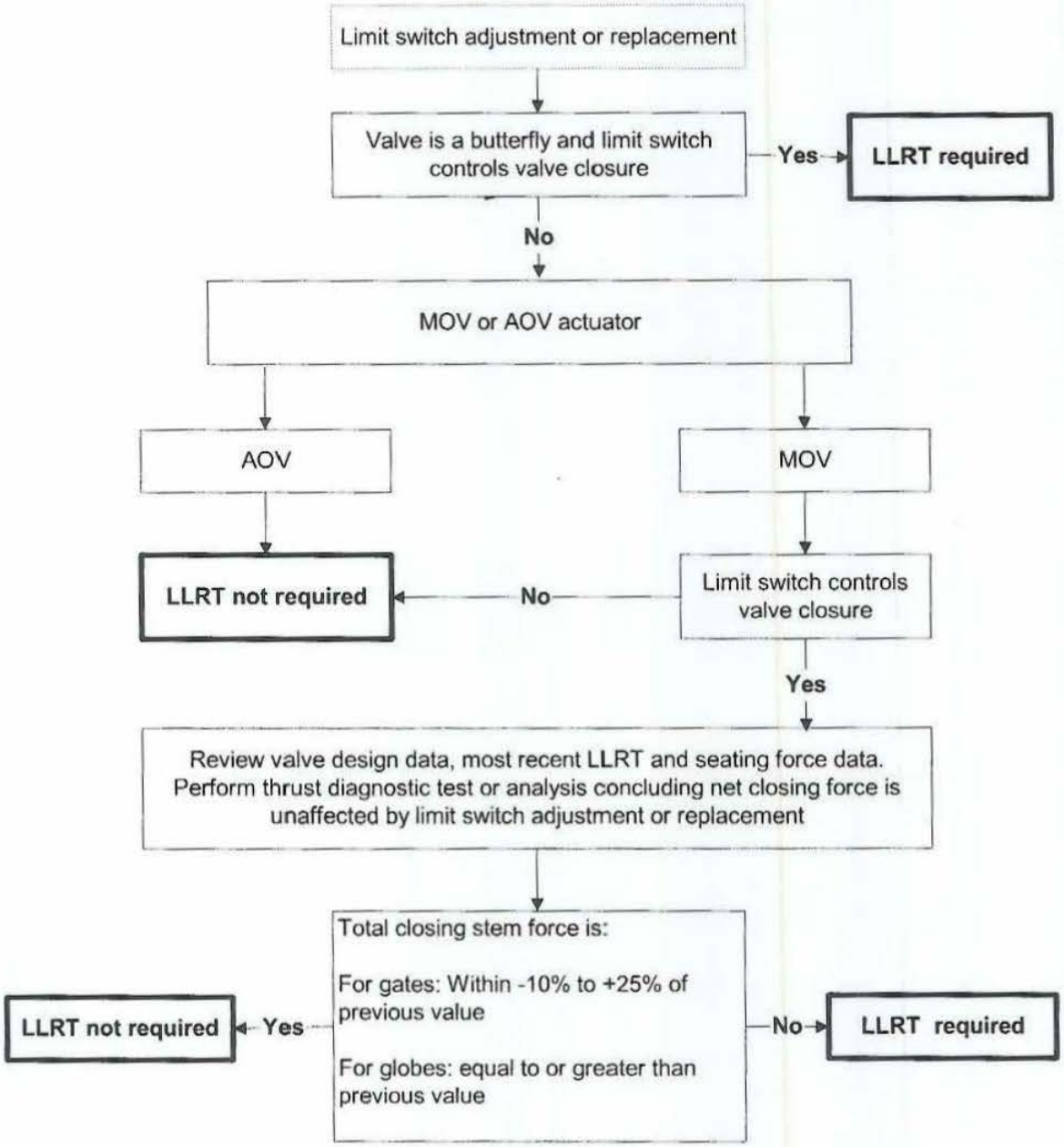


ATTACHMENT C
(Page 5 of 5)
POST MAINTENANCE TESTING LLRT GUIDELINES

Maintenance Activity: **Limit Switch Adjustment Or Replacement**

Actuator Types: **AOV, MOV**

Valve Types: **All**



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LOGDATE	ENTRY	LATEENTRY	ALUSER	SS	USERTYPE
8/29/2016 12:00:00 AM	STS BB-006 results are: 0.040 gpm Total Identified Leakage, 0.042 gpm Total Unidentified Leakage and 0.185 gpm Total T/S Identified Leakage. NCP 95gpm letdown, 2 hours	0	jagrube	mablow	RO
8/29/2016 12:00:00 AM	Continued the Watch Mode: 1, 3561.05 MWt, 1236.8 MWe. Major Equipment Problems: 'B' Train CREVIS is inoperable Major Tech Spec Action Statements in effect: 3.7.10	0	tidunlo	mablow	CRS
8/29/2016 12:01:00 AM	Commenced STS SE-001 "POWER RANGE ADJUSTMENT TO CALORIMETRIC".	0	tidunlo	mablow	CRS
8/29/2016 12:01:00 AM	Commenced STN KC-008 "FIRE ALARM CONTROL PANEL KC-008 DAILY CHECK".	0	tidunlo	mablow	CRS
8/29/2016 12:02:00 AM	Stopped SGG01B, "FUEL BLDG SUPPLY AIR UNIT" iaw SYS GG-200.	0	tidunlo	mablow	CRS
8/29/2016 12:03:00 AM	Stopped SGL01, "AUXILIARY BLDG. SUPPLY AIR UNIT" iaw SYS GG-200.	0	tidunlo	mablow	CRS
8/29/2016 12:04:00 AM	Stopped CGL03A, "AUX/FUEL BLDG NORMAL EXHAUST FAN" iaw SYS GG-200.	0	tidunlo	mablow	CRS
8/29/2016 12:05:00 AM	Completed STS AL-201C "TURBINE DRIVEN AUXILIARY FEEDWATER SYSTEM INSERVICE VALVE TEST" SAT.	0	tidunlo	mablow	CRS
8/29/2016 12:09:00 AM	Started CGG02B, "EMERGENCY EXHAUST FAN"iaw SYS GG-200.	0	tidunlo	mablow	CRS
8/29/2016 12:17:00 AM	Completed STS BB-006 "RCS WATER INVENTORY BALANCE USING THE NPIS COMPUTER" SAT.	0	tidunlo	mablow	CRS
8/29/2016 12:18:00 AM	Commenced STS PE-004 "AUX BUILDING AND CONTROL ROOM PRESSURE TEST".	0	kylaubn	mablow	SE
8/29/2016 12:23:00 AM	Completed STN KC-008 "FIRE ALARM CONTROL PANEL KC-008 DAILY CHECK" SAT.	0	tidunlo	mablow	CRS
8/29/2016 12:31:00 AM	Placed rod control in manual iaw STS SE-001.	0	tidunlo	mablow	CRS
8/29/2016 12:48:00 AM	Restored rod control to auto iaw STS SE-001.	0	tidunlo	mablow	CRS
8/29/2016 12:54:00 AM	Placed GTRE0031 in bypass for filter change, IAW CHS AX-G02. Reference T.S. 3.3.6 Function 3 Condition A and T.S. 3.4.15.b. No actions required GTRE0032 operable.	0	tidunlo	mablow	CRS
8/29/2016 12:54:00 AM	Placed GGRE0028 in bypass for filter change, IAW CHS AX-G02. T.S. 3.3.8 Function 3 Not Applicable - No Fuel Movement in Progress.	0	tidunlo	mablow	CRS
8/29/2016 12:54:00 AM	Placed GTRE0033 in bypass for filter change, IAW CHS AX-G02. Complying with ODCM Table 3-2 Function 2.a Action 41. Containment purge not in progress. This entry was planned.	0	tidunlo	mablow	CRS
8/29/2016 12:54:00 AM	Placed GKRE0004 in bypass for filter change, IAW CHS AX-G02. ****Entered T.S. 3.3.7 Function 3 Condition A~****. 7 days to restore. This entry was planned.	0	tidunlo	mablow	CRS
8/29/2016 12:55:00 AM	Completed STS SE-001 "POWER RANGE ADJUSTMENT TO CALORIMETRIC" SAT.	0	tidunlo	mablow	CRS
8/29/2016 12:58:00 AM	Systems Operations Generation, Greg called with daily totals of 29485 Gross, 836 Aux, and 28649 Net.	0	tidunlo	mablow	CRS
8/29/2016 12:58:00 AM	GERE0092 OOS during the performance of SYS GE-122 with CGV038 open. ****Entered T.R. 3.3.18 Function 1 Condition A.1 and A.2.1~****. This entry was planned.	0	tidunlo	mablow	CRS
8/29/2016 1:01:00 AM	Deborated the RCS using BTRS for 2.5 minutes at a rate of 75 gpm IAW beginning of shift reactivity brief.	0	tidunlo	mablow	CRS
8/29/2016 1:02:00 AM	Stopped CGE01A, "CONDENSER AIR REMOVAL FILTRATION FAN" IAW SYS GE-122.	0	madekat	mablow	RO
8/29/2016 1:20:00 AM	Restored GKRE0004 to service. ****Exited T.S. 3.3.7 Function 3 Condition A~****.	0	tidunlo	mablow	CRS
8/29/2016 1:20:00 AM	Restored GTRE0033 to service.	0	tidunlo	mablow	CRS
8/29/2016 1:20:00 AM	Restored GGRE0028 to service.	0	tidunlo	mablow	CRS
8/29/2016 1:20:00 AM	Restored GGRE0027 to service.	0	tidunlo	mablow	CRS
8/29/2016 1:20:00 AM	Restored GTRE0031 to service.	0	tidunlo	mablow	CRS
8/29/2016 1:21:00 AM	Placed GKRE0005 in bypass for filter change, IAW CHS AX-G02. ****Entered T.S. 3.3.7 Function 3 Condition A~****. 7 days to restore. This entry was planned.	0	tidunlo	mablow	CRS
8/29/2016 1:21:00 AM	Placed GTRE0032 in bypass for filter change, IAW CHS AX-G02. Reference T.S. 3.3.6 Function 3 Condition A and T.S. 3.4.15.b. No actions required GTRE0031 operable.	0	tidunlo	mablow	CRS
8/29/2016 1:21:00 AM	Placed GTRE0022 in bypass for filter change, IAW CHS AX-G02. Complying with ODCM Table 3-2 Function 2.a Action 41. Containment purge not in progress. This entry was planned.	0	tidunlo	mablow	CRS
8/29/2016 1:24:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	0	tidunlo	mablow	CRS
8/29/2016 1:24:00 AM	Stopped SGF01, "MAIN STEAM ENCLOSURE BLDG S. A. UNIT" iaw SYS GF-120.	0	tidunlo	mablow	CRS
8/29/2016 1:25:00 AM	Stopped CGF03A, "MAIN STEAM ENCL. BLDG EXHAUST FAN" iaw SYS GF-120.	0	tidunlo	mablow	CRS
8/29/2016 1:28:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	0	tidunlo	mablow	CRS
8/29/2016 1:30:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	0	tidunlo	mablow	CRS
8/29/2016 1:39:00 AM	Restored GKRE0005 to service. ****Exited T.S. 3.3.7 Function 3 Condition A~****.	0	tidunlo	mablow	CRS
8/29/2016 1:39:00 AM	Restored GTRE0032 to service.	0	tidunlo	mablow	CRS
8/29/2016 1:39:00 AM	Restored GTRE0022 to service.	0	tidunlo	mablow	CRS
8/29/2016 1:42:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	0	tidunlo	mablow	CRS
8/29/2016 2:59:00 AM	Completed STS CR-001 "SHIFT LOG FOR MODES 1 2 AND 3" SAT.	0	tidunlo	mablow	CRS
8/29/2016 3:00:00 AM	Commenced STS CR-001 "SHIFT LOG FOR MODES 1 2 AND 3".	0	tidunlo	mablow	CRS
8/29/2016 3:03:00 AM	Started CKA01B, "INSTRUMENT AND SERVICE AIR COMPRESSOR" iaw SYS KA-121.	0	tidunlo	mablow	CRS
8/29/2016 3:03:00 AM	Stopped CKA01C, "INSTRUMENT AND SERVICE AIR COMPRESSOR".	0	tidunlo	mablow	CRS
8/29/2016 3:23:00 AM	NRC phone check SAT.	0	tidunlo	mablow	CRS
8/29/2016 3:27:00 AM	Depressurized RHR header from 320 PSIG to 50 PSIG IAW SYS EJ-323. Depressurized SI from 300 PSIG to 50 PSIG IAW SYS EM-002.	0	jagrube	mablow	RO
8/29/2016 3:47:00 AM	Diluted the RCS 130 gallons for Tavg control IAW beginning of shift Reactivity Brief.	0	tidunlo	mablow	CRS
8/29/2016 4:24:08 AM	Entry into and exit for 3.3.7 independent SRO verification and bases review completed.	0	mablow	mablow	SM
8/29/2016 4:24:22 AM	Entry into TR 3.3.18. independent SRO verification and bases review completed.	0	mablow	mablow	SM
8/29/2016 4:51:00 AM	GERE0092 OOS for filter change. ****Entered T.R. 3.3.18 Function 1 Condition A.1 and A.2.1~****. This entry was planned.	0	tidunlo	mablow	CRS
8/29/2016 4:56:00 AM	Restored GERE0092 to service. ****Exited T.R. 3.3.18 Function 1 Condition A.1 and A.2.1~****.	0	tidunlo	mablow	CRS

LOGDATE	ENTRY	LATEENTRY	ALUSER	SS	USERTYPE
8/29/2016 5:00:00 AM	****Entered Tech. Spec. 3.7.4-**** Complying with Condition A.1. Equipment taken out of service: 'A' ARV is OOS for planned maintenance. Restore to service in 7 days ref CO # C21 D-AB-N-029. This entry was planned. The current Risk Assessment was reviewed. Current risk management actions are appropriate for the current conditions. No additional actions are needed.	0	tidunlo	mablow	CRS
8/29/2016 5:00:00 AM	Added ABPV0001, SG A ATOMSPHERIC RELIEF VALVE <FR> <CAT 1 AOV PROGRAM VALVE> <AFFECTS CONTAINMENT/CLOSURE INTEGRITY> <LOCATION ON AB226DBB-10 AND AB020EBD-8> <TIME CRITICAL ACTION EQUIPMENT> <FR=FIRE RISK SIGNIFCANT COMPONENT> to the EOL. Reason: 'A' ARV is OOS for planned maintenance. Restore to service in 7 days ref CO # C21 D-AB-N-029, T/S 3.7.4 The Current Risk Assessment was reviewed.	0	tidunlo	mablow	CRS
8/29/2016 5:39:10 AM	"A" Service Water strainer dp is 1.65 psid.	0	japankr	mablow	SITE
8/29/2016 5:42:31 AM	Clearance Order: C21 D-AB-N-029 Tags Verified Hung	0	kylaubn		CO
8/29/2016 5:42:56 AM	Clearance Order: C21 D-KA-A-014 Tags Verified Hung	0	kylaubn		CO
8/29/2016 5:43:46 AM	Clearance Order: C21 D-KA-N-014 Tags Verified Hung	0	kylaubn		CO
8/29/2016 6:05:00 AM	Started CGF03A, "MAIN STEAM ENCL. BLDG EXHAUST FAN" iaw SYS GF-120.	0	tidunlo	mablow	CRS
8/29/2016 6:06:00 AM	Started SGF01, "MAIN STEAM ENCLOSURE BLDG S. A. UNIT" iaw SYS GF-120.	0	tidunlo	mablow	CRS
8/29/2016 6:15:00 AM	Completed STN FP-224 "FIRE DOOR POSITION VERIFICATION - CLOSED UNLOCKED UNALARMED" SAT.	0	tidunlo	mablow	CRS
8/29/2016 6:19:00 AM	Deborated the RCS using BTRS for 2.5 minutes at a rate of 75 gpm IAW beginning of shift reactivity brief.	0	tidunlo	mablow	CRS
8/29/2016 6:29:00 AM	Entry into 3.7.4 independent SRO verification and bases review completed.	0	mablow	mablow	SM
8/29/2016 6:30:00 AM	Assumed Radwaste Watch	0	wihorn1	lahauth	TREAT
8/29/2016 6:30:00 AM	Commenced STS EN-007B "CONTAINMENT SPRAY TRAIN B VOID MONITORING AND VENTING".	0	kylaubn	mablow	SE
8/29/2016 6:30:00 AM	Assumed the Water Treatment Watch.	0	nicrisp	lahauth	TREAT
8/29/2016 7:00:00 AM	Relieved as SM by L Hauth.	0	mablow	mablow	SM
8/29/2016 7:00:00 AM	Assumed the Aux watch.	0	jedoidg	mablow	AUX
8/29/2016 7:00:00 AM	Assumed the Turbine Bldg watch.	0	ruhancy	lahauth	TURB
8/29/2016 7:00:00 AM	Assumed the CRS watch.	0	shafe	lahauth	CRS
8/29/2016 7:00:00 AM	Relieved as SE by Reeves.	0	kylaubn	mablow	SE
8/29/2016 7:00:00 AM	Assumed the BOP watch.	0	kechris	lahauth	RO
8/29/2016 7:00:00 AM	Assumed watch as Work Control SRO, STA, and Crew Challenger.	0	glreeve	lahauth	SE
8/29/2016 7:00:00 AM	Relieved as BOP by Christesen.	0	trtillm	lahauth	RO
8/29/2016 7:00:00 AM	Relieved as CRS by Shafer.	0	tidunlo	lahauth	CRS
8/29/2016 7:00:00 AM	Assumed the Shift Manager watch.	0	lahauth	lahauth	SM
8/29/2016 7:00:00 AM	Assumed the RO watch.	0	roplumm	lahauth	RO
8/29/2016 7:00:00 AM	Assumed the Site watch.	0	jcallen1	lahauth	SITE
8/29/2016 7:00:00 AM	Relieved as RO by Plummer.	0	jagrube	lahauth	RO
8/29/2016 7:14:00 AM	Initiated transfer of FDT 'A' 21% to FDT 'B' @ 70% IAW SYS HB-126	0	wihorn1	lahauth	TREAT
8/29/2016 7:33:00 AM	Started processing RHUT 'B' @ 15% to SLWMT 'A' @ 80% IAW SYS HB-141/HB-145	0	wihorn1	lahauth	TREAT
8/29/2016 7:37:00 AM	Commenced Discharge of LTSDS tanks 'A' @ 36% and 'B' @ 87% to WWT Basins. IAW SYS HF-141; LRP# U1LC 2016-039	0	nicrisp	lahauth	TREAT
8/29/2016 7:45:00 AM	Placed GDT #6 on recirc for chemistry sample @ 46psig IAW SYS HA-200	0	wihorn1	lahauth	TREAT
8/29/2016 7:57:00 AM	Secured the Transfer of FDT 'A' @ 8% to FDT 'B' @ 85%, IAW SYS HB-126. Transferred 1,478 gallons	0	wihorn1	lahauth	TREAT
8/29/2016 7:58:00 AM	Placed FDT 'B' on Recirc @ 85%, IAW SYS HB-126	0	wihorn1	lahauth	TREAT
8/29/2016 7:59:00 AM	Commenced STN FP-211 "DIESEL FIRE PUMP 1FP01PB MONTHLY OPERATION AND FUEL LEVEL CHECK". WO 16-412934-000	0	glreeve	lahauth	SE
8/29/2016 8:00:00 AM	Received alarm 61C, Process Rad Mon Fail. Entered ALR. Source of alarm GTRE31 particulate check source test fail. Performed source check and alarm reset. Exited ALR.	0	shafe	lahauth	CRS
8/29/2016 8:35:00 AM	Commenced Discharge of WWT Basin 'A' @ 83.7 inches. to LSP. LRP# U1LC 2016-039, COAF# 6871, EOF# 105	0	nicrisp	lahauth	TREAT
8/29/2016 8:36:00 AM	Notified Sys Ops-Transmission, Scott, that Site Watch is entering the switchyard.	0	kechris	lahauth	RO
8/29/2016 8:37:00 AM	Placed SLWMT 'B' on service @ 5% and removed SLWMT 'A' from service @ 90% for 1,695 gallons IAW SYS HF-203	0	wihorn1	lahauth	TREAT
8/29/2016 8:57:57 AM	Clearance Order: C21 D-WM-N-009 Tags Verified Hung	0	glreeve		CO
8/29/2016 8:59:00 AM	Due to securing Main Steam Enclosure Exhaust ventillation IAW SYS GF-120 to support STS PE-004, the thermal power program is no longer conservative. Commencing monitoring of thermal power using average of PRNIs and Delta T power less than or equal to 100% RTP for primary monitoring.	0	shafe	lahauth	CRS
8/29/2016 9:04:00 AM	Stopped SGF01, "MAIN STEAM ENCLOSURE BLDG S. A. UNIT" IAW SYS GF-120 to support STS PE-004.	0	shafe	lahauth	CRS
8/29/2016 9:05:00 AM	Stopped CGF03A, "MAIN STEAM ENCL. BLDG EXHAUST FAN" IAW SYS GF-120 to support STS PE-004.	0	shafe	lahauth	CRS
8/29/2016 9:08:00 AM	FDT 'B' pH SAT @ 5.8 per J. Dorsey	0	wihorn1	lahauth	TREAT
8/29/2016 9:10:00 AM	Secured FDT 'B' recirc IAW SYS HB-126	0	wihorn1	lahauth	TREAT
8/29/2016 9:10:11 AM	Clearance Order: C21 D-AN-N-014 Approved to Hang	0	glreeve		CO
8/29/2016 9:23:00 AM	Pumped down RCDT level from 49% to 22% and pressure from 16 psig to 4 psig IAW SYS HB-120	0	wihorn1	lahauth	TREAT
8/29/2016 9:30:00 AM	Stopped CDA01A, "WATER BOX VENTING PUMP".	0	shafe	lahauth	CRS
8/29/2016 9:30:00 AM	Turbine watch found the "A" Condenser Water Box Vent Pump not running with switch in the "Run" position. Reset the supply breaker, and the pump subsequently tripped again. WR# 16-117898.	0	shafe	lahauth	CRS
8/29/2016 9:35:00 AM	Started CDA01B, "WATER BOX VENTING PUMP" IAW SYS DA-110.	0	shafe	lahauth	CRS
8/29/2016 9:36:00 AM	Jarred Luedke, Communications Group, called to indicate that siren WW1, Coffey County Lake South, will be out-of-service for routine maintenance. Reviewed AP 26A-001, REPORTABLE EVENTS - EVALUATION AND DOCUMENTATION, Attachment E, REPORTABILITY FOR LOSS OF SIRENS. One siren being out-of-service does not constitute a major loss of emergency assessment capability.	0	glreeve	lahauth	SE
8/29/2016 9:36:00 AM	Notified Sys Ops-Transmission, Scott that Site Watch is exiting the switchyard.	0	shafe	lahauth	CRS
8/29/2016 9:36:00 AM	Chemistry reports GDT #6 sampled	0	wihorn1	lahauth	TREAT
8/29/2016 10:02:00 AM	Secured WGC 'B' from recirc IAW SYS HA-200	0	wihorn1	lahauth	TREAT
8/29/2016 10:03:00 AM	Deborated the RCS using BTRS for 2.5 minutes at a rate of 75 gpm IAW beginning of shift reactivity brief.	0	shafe	lahauth	CRS

LOGDATE	ENTRY	LATEENTRY	ALUSER	SS	USERTYPE
8/29/2016 10:25:00 AM	Requested a PROMPT Operability determination from Engineering to support restoring the B train CREVS to OPERABLE status. STS PE-004 shows we are able to obtain 0.306 in H20 with the control room missile door (door 36042) closed.	0	lahauth	lahauth	SM
8/29/2016 10:39:00 AM	Completed STS EN-007B "CONTAINMENT SPRAY TRAIN B VOID MONITORING AND VENTING" SAT. WO 16-413018-000	0	glreeve	lahauth	SE
8/29/2016 10:40:00 AM	Secured processing RHUT 'B' @ 7% to SLWMT 'B' @ 20% for 2,543 gallons IAW SYS HB-141/HB-145	0	wihorn1	lahauth	TREAT
8/29/2016 10:57:00 AM	Re: 09:36 entry. M. Pearson, Communications Group, called to indicate that siren WW1, Coffey County Lake South, has been restored to service and tested - SAT.	0	glreeve	lahauth	SE
8/29/2016 11:02:00 AM	Commenced STN SP-122 "CHANNEL CALIBRATION CONTAINMENT PURGE SYSTEM RADIATION MONITOR GT RE-0022". WO 16-412481-000	0	glreeve	lahauth	SE
8/29/2016 11:03:58 AM	Clearance Order: C21 D-AN-N-014 Tags Verified Hung	0	glreeve		CO
8/29/2016 11:13:00 AM	Placed GTRE0022 in bypass for performance of STN SP-122. Referenced ODCM Table 3-2, no ODCM entry required as GTRE033 remains Functional.	0	shafe	lahauth	CRS
8/29/2016 11:42:00 AM	Started CGF01A, "CONDENSER AIR REMOVAL FILTRATION FAN" IAW SYS GE-122.	0	shafe	lahauth	CRS
8/29/2016 11:55:00 AM	Restored GERE0092 to service Functional after opening CGV038 IAW SYS GE-122. ****Exited T.R. 3.3.18 Function 1 Condition A.1 and A.2.1~****.	0	shafe	lahauth	CRS
8/29/2016 11:56:00 AM	Started CGF03A, "MAIN STEAM ENCL. BLDG EXHAUST FAN" IAW SYS GF-120.	0	shafe	lahauth	CRS
8/29/2016 11:56:00 AM	Completed STS CH-033 "PRIMARY TO SECONDARY LEAKAGE DETERMINATION" SAT . Results as follows: Primary to Secondary leakrate: <3.77E-1 gpd Leakrate: <5.90E-3 uCi/min Total Inleakage: 7.5 cfm Air: 1.9 cfm N2: 5.6 cfm	0	shafe	lahauth	CRS
8/29/2016 11:57:00 AM	Secured Discharge of LTDS Tanks 'A' @ 26% and 'B' @ 25% to WWT Basins. IAW SYS HF-141	0	nicrisp	lahauth	TREAT
8/29/2016 11:58:00 AM	Started SGF01, "MAIN STEAM ENCLOSURE BLDG S. A. UNIT".	0	shafe	lahauth	CRS
8/29/2016 12:00:00 PM	The Thermal Power Program is now the primary method of monitoring RTP after start up of Main Steam Enclosure ventillation.	0	shafe	lahauth	CRS
8/29/2016 12:03:00 PM	Depressurized RHR header from 300 PSIG to 55 PSIG IAW SYS EJ-323. Depressurized SI from 290 PSIG to 25 PSIG IAW SYS EM-002.	0	shafe	lahauth	CRS
8/29/2016 12:19:00 PM	Placed WGC 'A' and GDT #4 on service in prep for RHUT 'A' eduction IAW SYS HA-200	0	wihorn1	lahauth	TREAT
8/29/2016 12:21:00 PM	Deborated the RCS using BTRS for 2.5 minutes at a rate of 75 gpm IAW beginning of shift reactivity brief.	0	shafe	lahauth	CRS
8/29/2016 12:22:00 PM	Secured Discharge of WWT Basin 'A' @ 39.8 inches. IAW SYS WT-100. Discharged 87,800 gal.	0	nicrisp	lahauth	TREAT
8/29/2016 12:29:00 PM	Placed Recombiner 'A' on service in prep for RHUT 'A' eduction IAW SYS HA-401	0	wihorn1	lahauth	TREAT
8/29/2016 12:33:00 PM	(ref 10:25 entry) My request for a PROMPT OPERABILITY DETERMINATION from earlier today is cancelled. After discussion, we have determined our best approach to resolving the issue with SGK04B is to repair GKD081 with SGK04B inoperable, then test and restore the unit to operable. Our plan is: 1. Prepare a procedure with instructions for use of a dedicated operator for controlling GKD081 while SGK04A is operable. 2. Start SGK04A, which will OPEN GKHZ0029B, the operator for GKD081. 3. Ensure dedicated operator is in place. 4. Remove power from GKHZ0029B using a Local Control, with the damper open. 5. Secure SGK04A. 6. Repair GKD081. This will require declutching the electric operator from GKHZ0029B. 7. Reclutch and re-engage the operator for GKD081. 8. Restore power to GKHZ0029B. 9. Perform PMT for SGK04A and GKHZ0029B. 10. Perform STS PE-004 for B train CREVS. 11. Perform STS PE-004 for A train CREVS.	0	lahauth	lahauth	SM
8/29/2016 12:36:00 PM	Placed WGC 'B' on service as motive force. Eduction of RHUT 'A' has commenced IAW SYS HA-201	0	wihorn1	lahauth	TREAT
8/29/2016 12:38:00 PM	Started 1FP001PB, "DIESEL DRIVEN FIRE PUMP" IAW STN FP-211.	0	shafe	lahauth	CRS
8/29/2016 12:42:00 PM	RHUT 'A' eduction secured	0	wihorn1	lahauth	TREAT
8/29/2016 12:47:00 PM	Completed STS CH-022 "BORIC ACID TANK A BORON CONCENTRATION DETERMINATION" SAT .	0	shafe	lahauth	CRS
8/29/2016 12:47:00 PM	Completed STS CH-026 "REACTOR COOLANT CHLORIDE FLUORIDE AND DISSOLVED OXYGEN DETERMINATION" SAT .	0	shafe	lahauth	CRS
8/29/2016 12:47:00 PM	Completed STS CH-025 "REACTOR COOLANT DOSE EQUIVILANT IODINE DETERMINATION" SAT .	0	shafe	lahauth	CRS
8/29/2016 12:47:00 PM	Completed STS CH-024 "REACTOR COOLANT DOSE EQUIVALENT XE-133 DETERMINATION" SAT .	0	shafe	lahauth	CRS
8/29/2016 12:48:00 PM	Secured WGC 'B' IAW SYS HA-201	0	wihorn1	lahauth	TREAT
8/29/2016 12:59:00 PM	Completed SYS OPS-001 "WEEKLY EQUIPMENT ROTATION AND READINGS" SAT.	0	shafe	lahauth	CRS
8/29/2016 1:03:00 PM	A BAT boron concentration is 7546 ppm per Chemistry sample taken at 0805 by Royal.	0	shafe	lahauth	CRS
8/29/2016 1:04:00 PM	RCS boron concentration is 174 ppm per Chemistry sample taken at 0810 by Royal.	0	shafe	lahauth	CRS
8/29/2016 1:05:00 PM	Pressurizer Liquid Space boron concentration is 175 ppm per Chemistry sample taken at 1220 by Royal.	0	shafe	lahauth	CRS
8/29/2016 1:08:00 PM	Stopped PBG02A, "BORIC ACID TRANSFER PUMP" IAW skill of the craft.	0	shafe	lahauth	CRS
8/29/2016 1:19:00 PM	Secured SLWMT 'A' recirc IAW SYS HF-203	0	wihorn1	lahauth	TREAT
8/29/2016 1:20:00 PM	Stopped 1FP001PB, "DIESEL DRIVEN FIRE PUMP" IAW STN FP-211.	0	shafe	lahauth	CRS
8/29/2016 1:40:00 PM	Terry Romig is now a dedicated individual while Train B Emergency Exhaust heater breaker is off IAW AP 26C-004.	0	shafe	lahauth	CRS
8/29/2016 1:47:00 PM	Stopped CGG02B, "EMERGENCY EXHAUST FAN" IAW SYS GG-200.	0	shafe	lahauth	CRS
8/29/2016 1:48:00 PM	Terry Romig is no longer a dedicated individual. Ref 1340 log entry.	0	shafe	lahauth	CRS
8/29/2016 1:51:00 PM	Started CGL03B, "AUX/FUEL BLDG NORMAL EXHAUST FAN" IAW SYS GG-200.	0	shafe	lahauth	CRS
8/29/2016 1:57:00 PM	Started SGG01B, "FUEL BLDG SUPPLY AIR UNIT" IAW SYS GG-200.	0	shafe	lahauth	CRS
8/29/2016 1:58:00 PM	Started SGL01, "AUXILIARY BLDG. SUPPLY AIR UNIT" IAW SYS GG-200.	0	shafe	lahauth	CRS
8/29/2016 2:00:00 PM	Notified of an issue affecting Fire Brigade qualification for personnel attending training on two dates in March 2016. One fire brigade member on shift lost his qualification, he has been replaced with a qualified fire brigade member. Reviewing this issue for possible reportability.	0	lahauth	lahauth	SM
8/29/2016 2:15:00 PM	Vendor filled the N2 storage tank to 149 inches per SYS NT-110.	0	kechris	lahauth	RO

LOGDATE	ENTRY	LATEENTRY	ALUSER	SS	USERTYPE
8/29/2016 2:31:00 PM	Mike Prock stationed as a dedicated individual while heater breaker is off for Train B Control Room Pressurization Fan IAW SYS GK-121. Ref AP 26C-004.	0	shafe	lahauth	CRS
8/29/2016 2:34:00 PM	Chemistry reports GDT #4 sampled	0	wihorn1	lahauth	TREAT
8/29/2016 2:37:00 PM	Stopped CGK04B, "CONTROL ROOM PRESSURIZATION FAN" IAW SYS GK-121.	0	shafe	lahauth	CRS
8/29/2016 2:38:00 PM	Started SGK02, "CONTROL-BLDG SUPPLY AIR UNIT" IAW SYS GK-121.	0	shafe	lahauth	CRS
8/29/2016 2:38:00 PM	Started CGK01A, "CONTROL BUILDING EXHAUST FAN" IAW SYS GK-121.	0	shafe	lahauth	CRS
8/29/2016 2:39:00 PM	Mike Prock is no longer dedicated individual after closing heater breaker for Train B Control Room Pressurization Fan.	0	shafe	lahauth	CRS
8/29/2016 2:40:00 PM	(ref 14:00 entry) In discussion with licensing, determined that the issue with Fire Brigade qualification is not reportable to the NRC. An RER will be initiated. The issue is associated with TIN: FB 1231421, course offering 69857 on 3/3/16 and course offering 69858 on 3/10/16.	0	lahauth	lahauth	SM
8/29/2016 2:40:00 PM	Stopped CGK03B, "CONTROL ROOM FILTRATION FAN" IAW SYS GK-121.	0	shafe	lahauth	CRS
8/29/2016 2:42:00 PM	Started CGK02A, "ACCESS CONTROL EXHAUST FAN" IAW SYS GK-121.	0	shafe	lahauth	CRS
8/29/2016 2:48:00 PM	Deborated the RCS using BTRS for 2.5 minutes at a rate of 75 gpm IAW beginning of shift reactivity brief.	0	shafe	lahauth	CRS
8/29/2016 2:49:00 PM	Completed STS CH-009 "WASTE GAS DECAY TANK CURIE CONTENT SURVEILLANCE" SAT.	0	shafe	lahauth	CRS
8/29/2016 2:58:00 PM	Secured WGC 'A' IAW SYS HA-200	0	wihorn1	lahauth	TREAT
8/29/2016 3:19:00 PM	Completed STS PE-004 "AUX BUILDING AND CONTROL ROOM PRESSURE TEST" SAT. (Train B)	0	glreeve	lahauth	SE
8/29/2016 3:37:00 PM	(ref 11:55 entry) Performed independent review of TR 3.3.18 exit	0	lahauth	lahauth	SM
8/29/2016 3:54:00 PM	Commenced STS AB-201D "ATMOSPHERIC RELIEF VALVE INSERVICE VALVE TEST" Partial for return to service of "A" Atmospheric Relief Valve. WO 16-413026-000 and WO 16-411624-001.	0	shafe	lahauth	CRS
8/29/2016 4:06:00 PM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK". Partial in support of Gas Decay Tank Release Permit U1GB2016-100.	0	shafe	lahauth	CRS
8/29/2016 4:26:10 PM	Clearance Order: C21 D-AN-N-014 Tags Verified Removed	0	glreeve		CO
8/29/2016 4:39:00 PM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT. Partial in support of GRP U1GB2016-100	0	shafe	lahauth	CRS
8/29/2016 4:48:00 PM	***Entered Tech. Spec. 3.7.5.~**** Complying with Condition B. Equipment taken out of service: TDAFWP inoperable while AUHV001 has N2 isolated for STS AB-201D. This entry was planned. The Operational Risk Assessment was reviewed. Current risk management actions are appropriate for the current conditions. No additional actions are needed.	0	shafe	lahauth	CRS
8/29/2016 4:53:00 PM	Entry into Tech Spec 3.7.5 Condition B (ref 16:48) independent SRO verification and bases review completed.	0	lahauth	lahauth	SM
8/29/2016 5:00:00 PM	Secured Radwaste Watch	0	wihorn1	lahauth	TREAT
8/29/2016 5:00:00 PM	Late Entry: Secured the Water Treatment Watch.	1	micrisp	mablow	TREAT
8/29/2016 5:00:00 PM	****Exited Tech. Spec. 3.7.5~**** Condition B. N2 has been restored to TDAFW pump. TDAFW pump is Operable.	0	shafe	lahauth	CRS
8/29/2016 5:30:00 PM	Started PEF01A, "ESSENTIAL SERV. WATER PUMP" IAW SYS EF-200 to support PMT WO 16-411708-000..	0	shafe	lahauth	CRS
8/29/2016 5:32:00 PM	Exit from Tech Spec 3.7.5 independent SRO verification completed.	0	lahauth	lahauth	SM
8/29/2016 5:46:00 PM	Diluted the RCS 140 gallons for Tavg control IAW beginning of shift Reactivity Brief.	0	shafe	lahauth	CRS
8/29/2016 5:56:42 PM	"A" Service Water 1.6 psid	0	jeallen1	lahauth	SITE
8/29/2016 5:59:00 PM	Completed STN FP-211 "DIESEL FIRE PUMP 1FP01PB MONTHLY OPERATION AND FUEL LEVEL CHECK" SAT.	0	shafe	lahauth	CRS
8/29/2016 6:21:00 PM	Completed STS AB-201D "ATMOSPHERIC RELIEF VALVE INSERVICE VALVE TEST" SAT.	0	shafe	lahauth	CRS
8/29/2016 6:21:00 PM	****Exited Tech. Spec. 3.7.4~**** Condition A.1. ABPV001 is Operable. All PMTs complete Satisfactorily.	0	shafe	lahauth	CRS
8/29/2016 6:21:00 PM	Returned ABPV0001, "SG A ATOMSPHERIC RELIEF VALVE <FR> <CAT 1 AOV PROGRAM VALVE> <AFFECTS CONTAINMENT/CLOSURE INTEGRITY> <LOCATION ON AB226DBB-10 AND AB020EBD-8> <TIME CRITICAL ACTION EQUIPMENT> <FR=FIRE RISK SIGNIFCANT COMPONENT>", to service. All PMTs completed sat.	0	shafe	lahauth	CRS
8/29/2016 6:28:00 PM	Stopped PAN01A, "DEMINERALIZED WATER TRANSFER PUMP" IAW skill of the craft.	0	shafe	lahauth	CRS
8/29/2016 6:32:43 PM	Clearance Order: C21 D-KA-A-014 Tags Verified Removed	0	glreeve		CO
8/29/2016 6:34:49 PM	Clearance Order: C21 D-KA-N-014 Tags Verified Removed	0	glreeve		CO
8/29/2016 6:35:00 PM	Exit from TS 3.7.4 independent SRO verification completed.	0	lahauth	lahauth	SM
8/29/2016 6:36:41 PM	Clearance Order: C21 D-AB-N-029 Tags Verified Removed	0	glreeve		CO
8/29/2016 7:00:00 PM	Relieved as CRS by T. Dunlop.	0	shafe	lahauth	CRS
8/29/2016 7:00:00 PM	Relieved as RO by Tillman.	0	roplumm	lahauth	RO
8/29/2016 7:00:00 PM	Assumed the Turbine watch.	0	jchudso	lahauth	TURB
8/29/2016 7:00:00 PM	Assumed the extra RO watch.	0	jagrube	mablow	RO
8/29/2016 7:00:00 PM	Reviewed the logs prior to assuming the watch and assumed the CRS watch.	0	tidunlo	mablow	CRS
8/29/2016 7:00:00 PM	Assumed the Site watch.	0	tialexa	lahauth	SITE
8/29/2016 7:00:00 PM	Assumed the Aux watch.	0	rischoe	lahauth	AUX
8/29/2016 7:00:00 PM	Reviewed the logs prior to assuming the watch and assumed the SM watch.	0	mablow	mablow	SM
8/29/2016 7:00:00 PM	Assumed the SE watch.	0	kylaubn	mablow	SE
8/29/2016 7:00:00 PM	Assumed the RO watch.	0	trtillm	mablow	RO
8/29/2016 7:00:00 PM	Assumed the BOP watch.	0	madekat	mablow	RO
8/29/2016 7:00:00 PM	Relieved as BOP by Dekat.	0	kechris	lahauth	RO
8/29/2016 7:00:00 PM	Relieved as Work Control SRO and STA by K. Laubner.	0	glreeve	lahauth	SE
8/29/2016 7:00:00 PM	Relieved as SM by M Blow.	0	lahauth	lahauth	SM
8/29/2016 7:34:49 PM	Clearance Order: C21 D-AB-N-028 Approved to Hang	0	kylauhn		CO
8/29/2016 7:45:00 PM	SM CONCERN: A Air Compressor has a leak on a braised fitting, will require new CO and a weld package repair.	0	mablow	mablow	SM
8/29/2016 7:45:00 PM	Added ABPV0004, SG D ATOMSPHERIC RELIEF VALVE <FR> <CAT 1 AOV PROGRAM VALVE> <AFFECTS CONTAINMENT/CLOSURE INTEGRITY> <LOCATION ON AB229DBB-10 AND AB023EBD-8> <TIME CRITICAL ACTION EQUIPMENT> <FR=FIRE RISK SIGNIFCANT COMPONENT> to the EOL. Reason: 'D' ARV is OOS for planned maintenance. Restore to operable in 7 days. Ref CO C21 D-AB-N-28. Ref T/S 3.7.4. The Current Risk Assessment was reviewed.	0	tidunlo	mablow	CRS

LOGDATE	ENTRY	LATEENTRY	ALUSER	SS	USERTYPE
8/29/2016 7:45:00 PM	****Entered Tech. Spec. 3.7.4~**** Complying with Condition A.1. Equipment taken out of service: 'D' ARV is OOS for planned maintenance. Restore to operable in 7 days. Ref CO C21 D-AB-N-28. This entry was planned. The current Risk Assessment was reviewed. Current risk management actions are appropriate for the current conditions. No additional actions are needed.	0	tidunlo	mablow	CRS
8/29/2016 7:45:00 PM	Commenced STS AL-210C "TDAFW PUMP INSERVICE CHECK VALVE TEST".	0	tidunlo	mablow	CRS
8/29/2016 7:51:03 PM	Clearance Order: C21 D-WM-N-010 Approved to Hang	0	kylaubn		CO
8/29/2016 8:09:00 PM	Deborated the RCS using BTRS for 2.5 minutes at a rate of 75 gpm IAW beginning of shift reactivity brief.	0	tidunlo	mablow	CRS
8/29/2016 8:17:00 PM	Commenced STS MT-018 "WEEKLY INSPECTION OF 125 VDC LEAD-CALCIUM BATTERIES".	0	kylaubn	mablow	SE
8/29/2016 8:21:06 PM	Clearance Order: C21 D-AB-N-028 Tags Verified Hung	0	kylaubn		CO
8/29/2016 8:42:00 PM	IAW AI 22C-013, I have authorized I&C to perform LC on GTRE@@ which is behind protected train signs. Risk was evaluated.	0	mablow	mablow	SM
8/29/2016 8:55:00 PM	Commenced STN AC-002 "WEEKLY TURBINE TEST".	0	tidunlo	mablow	CRS
8/29/2016 9:01:00 PM	Stationed Mike Beard as dedicated operator to maintain TDAFWP operable iaw STS AL-210C section 8.1.	0	tidunlo	mablow	CRS
8/29/2016 9:15:00 PM	Completed STS MT-018 "WEEKLY INSPECTION OF 125 VDC LEAD-CALCIUM BATTERIES" SAT.	0	kylaubn	mablow	SE
8/29/2016 9:18:00 PM	Secured M. Beard as dedicated operator iaw STS AL-210C section 8.1.	0	tidunlo	mablow	CRS
8/29/2016 9:25:00 PM	Stationed M. Beard as dedicated operator to maintain TDAFWP operable iaw STS AL-210C section 8.2.	0	tidunlo	mablow	CRS
8/29/2016 9:30:00 PM	Aux Watch placed the CVCS cation bed in service IAW SYS BG-202.	0	madekat	mablow	RO
8/29/2016 9:37:00 PM	Secured M. Beard as dedicated operator iaw STS AL-210C section 8.2.	0	tidunlo	mablow	CRS
8/29/2016 9:58:00 PM	Commenced STS AB-201D "ATMOSPHERIC RELIEF VALVE INSERVICE VALVE TEST". Partial for AB PV-004, WO#'s 16-411617-001 and 16-411624-001.	0	tidunlo	mablow	CRS
8/29/2016 10:00:00 PM	Commenced STS BB-006 "RCS WATER INVENTORY BALANCE USING THE NPIS COMPUTER".	0	tidunlo	mablow	CRS
8/29/2016 10:00:00 PM	Removed the CVCS cation bed from service, final D/P 15.4 psid IAW SYS BG-202.	0	tidunlo	mablow	CRS
8/29/2016 10:15:00 PM	Depressurized RHR header from 280 PSIG to 50 PSIG IAW SYS EJ-323. Depressurized SI from 210 PSIG to 50 PSIG IAW SYS EM-002.	0	trtillm	mablow	RO
8/29/2016 10:24:00 PM	Deborated the RCS using BTRS for 1.5 minutes at a rate of 75 gpm IAW beginning of shift reactivity brief.	0	tidunlo	mablow	CRS
8/29/2016 10:26:00 PM	Completed STS AL-210C "TDAFW PUMP INSERVICE CHECK VALVE TEST" SAT.	0	tidunlo	mablow	CRS
8/29/2016 10:44:00 PM	Stopped PEF01A, "ESSENTIAL SERV. WATER PUMP" iaw SYS EF-202.	0	tidunlo	mablow	CRS
8/29/2016 10:57:00 PM	Completed STN AC-002 "WEEKLY TURBINE TEST" SAT.	0	tidunlo	mablow	CRS
8/29/2016 11:08:00 PM	***Entered Tech. Spec. 3.7.5.~**** Complying with Condition B. Equipment taken out of service: TDAFWP inoperable while ALHV006 has N2 isolated for STS AB-201D. This entry was planned. The Operational Risk Assessment was reviewed. Current risk management actions are appropriate for the current conditions. No additional actions are needed.	0	tidunlo	mablow	CRS
8/29/2016 11:25:00 PM	Notified Sys Ops-Transmission, Greg that personnel are entering the switchyard.	0	tidunlo	mablow	CRS
8/29/2016 11:28:00 PM	****Exited Tech. Spec. 3.7.5~**** Condition B. N2 has been restored to TDAFW pump. TDAFW pump is Operable.	0	tidunlo	mablow	CRS
8/29/2016 11:37:00 PM	****Exited Tech. Spec. 3.7.4~**** Condition A.1. STS AB-201D and all pmt's have been completed sat for AB PV-0004.	0	tidunlo	mablow	CRS
8/29/2016 11:37:00 PM	Returned ABPV0004, "SG D ATOMSPHERIC RELIEF VALVE <FR> <CAT 1 AOV PROGRAM VALVE> <AFFECTS CONTAINMENT/CLOSURE INTEGRITY> <LOCATION ON AB229DBB-10 AND AB023EBD-8> <TIME CRITICAL ACTION EQUIPMENT> <FR=FIRE RISK SIGNIFCANT COMPONENT>", to service. STS AB-201D and all pmt's have been completed sat.	0	tidunlo	mablow	CRS
8/29/2016 11:44:00 PM	Entry into and exit 3.7.4 and 3.7.5 independent SRO verification and bases review completed.	0	mablow	mablow	SM
8/29/2016 11:50:46 PM	Clearance Order: C21 D-AL-T-006 Approved to Hang	0	kylaubn		CO
8/29/2016 11:57:58 PM	Clearance Order: C21 D-GF-N-020 Approved to Hang	0	kylaubn		CO
8/30/2016 12:00:00 AM	Continued the Watch Mode: 1, 3560.95 MWt, 1234.6 MWe. Major Equipment Problems: 'B' Train CREVIS is OOS. Major Tech Spec Action Statements in effect: T/S 3.7.10	0	tidunlo	mablow	CRS
8/30/2016 12:00:00 AM	Completed STN FP-440 "FIRE DOOR VISUAL INSPECTION" SAT. For 15-439970-001	0	fhthire	jocamp	CRS
8/30/2016 12:01:00 AM	Commenced STS NB-005 "BREAKER ALIGNMENT VERIFICATION".	0	tidunlo	mablow	CRS
8/30/2016 12:01:00 AM	Commenced STN KC-008 "FIRE ALARM CONTROL PANEL KC-008 DAILY CHECK".	0	tidunlo	mablow	CRS
8/30/2016 12:01:00 AM	Commenced STS SE-001 "POWER RANGE ADJUSTMENT TO CALORIMETRIC".	0	tidunlo	mablow	CRS
8/30/2016 12:01:00 AM	Commenced STS RE-012 "QPTR DETERMINATION".	0	tidunlo	mablow	CRS
8/30/2016 12:05:00 AM	Clearance Order: C21 D-KA-N-015 Approved to Hang	0	kylaubn		CO
8/30/2016 12:10:00 AM	Completed STN KC-008 "FIRE ALARM CONTROL PANEL KC-008 DAILY CHECK" SAT.	0	tidunlo	mablow	CRS
8/30/2016 12:15:00 AM	Completed STS RE-012 "QPTR DETERMINATION" SAT.	0	tidunlo	mablow	CRS
8/30/2016 12:34:00 AM	Notified Sys Ops-Transmission, Greg that personnel are exiting the switchyard.	0	tidunlo	mablow	CRS
8/30/2016 12:40:00 AM	STS BB-006 results are: 0.046 gpm Total Identified Leakage, 0.062 gpm Total Unidentified Leakage and 0.191 gpm Total T/S Identified Leakage. NCP, 95 gpm letdown, 2 hrs	0	trtillm	mablow	RO
8/30/2016 12:52:00 AM	Systems Operations Generation, Greg called with daily totals of 29440 Gross, 853 Aux, and 28587 Net.	0	tidunlo	mablow	CRS
8/30/2016 12:57:00 AM	Deborated the RCS using BTRS for 2.5 minutes at a rate of 75 gpm IAW beginning of shift reactivity brief.	0	tidunlo	mablow	CRS
8/30/2016 1:00:00 AM	Completed STS AB-201D "ATMOSPHERIC RELIEF VALVE INSERVICE VALVE TEST" SAT. Partial for AB PV-004, WO#'s 16-411617-001 and 16-411624-001.	0	tidunlo	mablow	CRS
8/30/2016 1:17:00 AM	Placed rod control in manual iaw STS SE-001.	0	tidunlo	mablow	CRS
8/30/2016 1:19:00 AM	Completed STS BB-006 "RCS WATER INVENTORY BALANCE USING THE NPIS COMPUTER" SAT.	0	tidunlo	mablow	CRS
8/30/2016 1:39:00 AM	Removed GTRE0021B from service for filter change. Complying with ODCM Table 3-2 Function 1.a Action 40. ****Entered TR 3.3.3 Function 5 Condition D.~**** 72 hours to restore. This entry was planned.	0	tidunlo	mablow	CRS
8/30/2016 1:49:00 AM	Restored rod control to auto iaw STS SE-001.	0	tidunlo	mablow	CRS
8/30/2016 1:52:00 AM	Restored GTRE0021B to service following filter change. ****Exited TR 3.3.3 Function 5~**** Condition D.	0	tidunlo	mablow	CRS
8/30/2016 1:52:00 AM	Removed GTRE0021A from service for filter change. Complying with ODCM Table 3-2 Function 1.b, 1.c Action 43. This entry was planned.	0	tidunlo	mablow	CRS
8/30/2016 1:53:00 AM	Clearance Order: C21 D-AP-N-006 Approved to Hang	0	kylaubn		CO

LOGDATE	ENTRY	LATEENTRY	ALUSER	SS	USERTYPE
8/30/2016 1:55:00 AM	Completed STS SE-001 "POWER RANGE ADJUSTMENT TO CALORIMETRIC" SAT.	0	tidunlo	mablow	CRS
8/30/2016 1:58:00 AM	Restored GTRE0021A to service following filter change.	0	tidunlo	mablow	CRS
8/30/2016 2:10:00 AM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK". Partial for HF RE-45, COAF U1LB2016-047.	0	tidunlo	mablow	CRS
8/30/2016 2:15:00 AM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT. Partial for HF RE-45, COAF U1LB2016-047.	0	tidunlo	mablow	CRS
8/30/2016 2:32:00 AM	Completed STS CR-001 "SHIFT LOG FOR MODES 1 2 AND 3" SAT.	0	tidunlo	mablow	CRS
8/30/2016 3:00:00 AM	Commenced STS CR-001 "SHIFT LOG FOR MODES 1 2 AND 3".	0	tidunlo	mablow	CRS
8/30/2016 3:00:00 AM	Completed STS NB-005 "BREAKER ALIGNMENT VERIFICATION" SAT.	0	tidunlo	mablow	CRS
8/30/2016 3:33:00 AM	Deborated the RCS using BTRS for 2.5 minutes at a rate of 75 gpm IAW beginning of shift reactivity brief.	0	tidunlo	mablow	CRS
8/30/2016 4:30:00 AM	Commenced STN TCA-001 "MANUAL TIME CRITICAL ACTION TIMING".	0	kylaubn	mablow	SE
8/30/2016 5:00:00 AM	Added ABPV0003, SGC ATOMSPHERIC RELIEF VALVE <FR> <CAT 1 AOV PROGRAM VALVE> <AFFECTS CONTAINMENT/CLOSURE INTEGRITY> <LOCATION ON AB228DBB-10 AND AB022EBD-8> <TIME CRITICAL ACTION EQUIPMENT> <FR=FIRE RISK SIGNIFCANT COMPONENT> to the EOL. Reason: 'C' ARV is OOS for planned maintenance. Restore in 7 days Ref CO C21 D-KA-N015 and T/S 3.7.4. Restore iaw work instructions. The Current Risk Assessment was reviewed.	0	tidunlo	mablow	CRS
8/30/2016 5:00:00 AM	****Entered Tech. Spec. 3.7.5~**** Complying with Condition B.1. Equipment taken out of service: TDAFWP is OOS for planned maintenance. Restore to operable in 72 hours. Ref CO C21 KA-N-15, C21 AL-T-006. This entry was planned. The current Risk Assessment was reviewed. Current risk management actions are appropriate for the current conditions. No additional actions are needed.	0	tidunlo	mablow	CRS
8/30/2016 5:00:00 AM	****Entered Tech. Spec. 3.7.4~**** Complying with Condition A.1. Equipment taken out of service: 'C' ARV is OOS for planned maintenance. Restore in 7 days Ref CO C21 D-KA-N015. This entry was planned. The current Risk Assessment was reviewed. Current risk management actions are appropriate for the current conditions. No additional actions are needed.	0	tidunlo	mablow	CRS
8/30/2016 5:00:00 AM	Added AL, AUXILIARY FEEDWATER SYSTEM to the EOL. Reason: Entered the following valves in the EOL iaw STN TCA-001. ALV0056, ALV0061, ALV0066, ALV0070. The Current Risk Assessment was reviewed.	0	tidunlo	mablow	CRS
8/30/2016 5:00:00 AM	Added PAL02, AUX FEEDWATER PUMP---TURBINE DRIVEN <FR> <TIME CRITICAL ACTION EQUIPMENT> <FR=FIRE RISK SIGNIFCANT COMPONENT> to the EOL. Reason: TDAFWP is OOS for planned maintenance. Restore to operable in 72 hours. Ref CO C21 KA-N-15, C21 AL-T-006. Restoration iaw work instructions. Ref T/S 3.7.5. The Current Risk Assessment was reviewed.	0	tidunlo	mablow	CRS
8/30/2016 5:05:00 AM	"A" Service water strainer DP is 1.6	0	jawyatt	mablow	SITE
8/30/2016 5:23:00 AM	Returned AL, "AUXILIARY FEEDWATER SYSTEM", to service. ALV0056, ALV0061, ALV0066, ALV0070 have been restored to the locked open position.	0	tidunlo	mablow	CRS
8/30/2016 6:01:00 AM	Deborated the RCS using BTRS for 2.5 minutes at a rate of 75 gpm IAW beginning of shift reactivity brief.	0	tidunlo	mablow	CRS
8/30/2016 6:22:00 AM	Clearance Order: C21 D-AB-N-028 Tags Verified Removed	0	mablow		CO
8/30/2016 6:24:00 AM	Clearance Order: C21 D-GF-N-020 Tags Verified Hung	0	mablow		CO
8/30/2016 6:26:00 AM	Clearance Order: C21 D-WM-N-010 Tags Verified Hung	0	kylaubn		CO
8/30/2016 6:27:00 AM	Entry into 3.7.4, 3.7.5 independent SRO verification and bases review completed.	0	mablow	mablow	SM
8/30/2016 6:27:00 AM	IAW AI 22C-013, I have authorized MEL to perform breaker verification which is behind protected train signs. Risk was evaluated.	0	mablow	mablow	SM
8/30/2016 6:30:00 AM	Assumed the Treatment Systems/RW watch.	0	mafeldh	mablow	TREAT
8/30/2016 6:30:00 AM	Assumed the Water Treatment Watch.	0	nicrisp	jocamp	TREAT
8/30/2016 6:30:00 AM	Clearance Order: C21 D-AP-N-006 Tags Verified Hung	0	kylaubn		CO
8/30/2016 6:43:00 AM	Clearance Order: C21 D-AL-T-006 Tags Verified Hung	0	kylaubn		CO
8/30/2016 7:00:00 AM	Assumed the BOP.	0	almeyer1	mablow	RO
8/30/2016 7:00:00 AM	Assumed the Turbine watch.	0	aalucas	mablow	TURB
8/30/2016 7:00:00 AM	Stationed as the extra RO.	0	geturne	jocamp	RO
8/30/2016 7:00:00 AM	Assumed the WCSRO and STA watch.	0	thfairc	jocamp	CRS
8/30/2016 7:00:00 AM	Relieved as Aux Watch by Parsons.	0	rischoe	jocamp	AUX
8/30/2016 7:00:00 AM	Relieved as SE by Faircloth.	0	kylaubn	mablow	SE
8/30/2016 7:00:00 AM	Assumed the CRS watch.	0	daghols	jocamp	CRS
8/30/2016 7:00:00 AM	Relieved as CRS by Gholson.	0	tidunlo	mablow	CRS
8/30/2016 7:00:00 AM	Assumed the SM watch.	0	jocamp	jocamp	SM
8/30/2016 7:00:00 AM	Relieved as SM by Camp.	0	mablow	mablow	SM
8/30/2016 7:00:00 AM	Assumed the aux watch.	0	maparso	jocamp	AUX
8/30/2016 7:00:00 AM	Assumed the RO watch.	0	jostone	mablow	RO
8/30/2016 7:00:00 AM	Relieved as RO by Stone.	0	trtillm	mablow	RO
8/30/2016 7:00:00 AM	Assumed the Site watch.	0	daheyn	mablow	SITE
8/30/2016 7:00:00 AM	Relieved as BOP by A. Meyer.	0	madekat	mablow	RO
8/30/2016 7:46:00 AM	Commenced Discharge of LTDS Tank 'B' @ 71% to WWT Basing. IAW SYS HF-141; LRP# U1LC 2016-039	0	nicrisp	jocamp	TREAT
8/30/2016 7:48:00 AM	Initiated discharge of SLWMT 'A' @ 90% to environs IAW SYS HF-203 U1LB 2016-047	0	mafeldh	jocamp	TREAT
8/30/2016 7:49:00 AM	Commenced STN FP-440 "FIRE DOOR VISUAL INSPECTION". Partial for 15-409970-001	0	thfairc	jocamp	CRS
8/30/2016 7:51:00 AM	Commenced STS PE-004 "AUX BUILDING AND CONTROL ROOM PRESSURE TEST". PMT for "B" train CRVES	0	daghols	jocamp	CRS
8/30/2016 8:00:00 AM	Started processing FDT 'B' @ 85% to SLWMT 'B' @ 21% IAW SYS HB-143/HB-145	0	mafeldh	jocamp	TREAT
8/30/2016 8:02:00 AM	Initiated draining RHUT 'B' @ 8% to WHUT @ 6% IAW SYS HE-206	0	mafeldh	jocamp	TREAT
8/30/2016 8:09:00 AM	Depressurized RHR header from 310 PSIG to 50 PSIG IAW SYS EJ-323. Depressurized SI from 260 PSIG to 50 PSIG IAW SYS EM-002.	0	almeyer1	jocamp	RO

LOGDATE	ENTRY	LATEENTRY	ALUSER	SS	USERTYPE
8/30/2016 8:19:00 AM	Clearance Order: C21 D-KA-N-015 Tags Verified Hung	0	thfairc		CO
8/30/2016 8:28:00 AM	Initiated discharge of GDT #6 @47psig to environs U1GB2016-100 IAW SYS HA-204	0	mafeldh	jocamp	TREAT
8/30/2016 8:31:00 AM	Diluted the RCS 140 gallons for Tavg control IAW beginning of shift Reactivity Brief.	0	daghols	jocamp	CRS
8/30/2016 8:33:00 AM	Notified Sys Ops-Transmission, Scott that Site Watch is entering the switchyard.	0	daghols	jocamp	CRS
8/30/2016 8:39:00 AM	Started CCA01A, "STEAM PACKING EXHAUSTER BLOWER "A" IAW SYS OMT-001.	0	almeyer1	jocamp	RO
8/30/2016 8:40:00 AM	Stopped CCA01B, "STEAM PACKING EXHAUSTER BLOWER "B" IAW SYS OMT-001. Sealing Steam exhaust vacuum stabilized at 17.5 inches water.	0	almeyer1	jocamp	RO
8/30/2016 8:45:00 AM	Commence draining the DDHUT to a Hic/Liner IAW SYS HB-155	0	mafeldh	jocamp	TREAT
8/30/2016 8:55:00 AM	Commenced SYS OMT-001 "OPERATIONS MONTHLY TASKS".	0	daghols	jocamp	CRS
8/30/2016 9:02:00 AM	Notified Sys Ops-Transmission, Scott that Site Watch is exiting the switchyard.	0	daghols	jocamp	CRS
8/30/2016 9:29:00 AM	Commenced STN PE-068 "PERIODIC TESTING OF AIR OPERATED VALVES".	0	thfairc	jocamp	CRS
8/30/2016 9:45:00 AM	Received phone call from aux building that BL-V033 (RMW to CVCS components) located in the VCT valve room has a leak of approximately 90 dpm. It appears that the leakoff in bonnet has been bent downward while scaffolding was being constructed in the area. Scaffolding work has been secured in room and supervisor directed to see shift manager prior to recommencing. Valve has been backseated with info tag attached to valve. Leakage has stopped. CR# 106770, WO 16-417212-000	0	daghols	jocamp	CRS
8/30/2016 9:46:00 AM	Clearance Order: C21 D-KA-A-015 Approved to Hang	0	thfairc		CO
8/30/2016 10:03:00 AM	RCS boron concentration is 171 ppm per Chemistry sample taken at 0815 by Mayes.	0	daghols	jocamp	CRS
8/30/2016 10:03:00 AM	Completed STS CH-023 "BORIC ACID TANK B BORON CONCENTRATION DETERMINATION" SAT . Boron concentration is 7578 ppm.	0	daghols	jocamp	CRS
8/30/2016 10:05:00 AM	Secured SLWMT 'A' @ 5% discharge to the environs IAW SYS HF-203. 14,408 gallons discharged.	0	mafeldh	jocamp	TREAT
8/30/2016 10:22:00 AM	Secured the DDHUT draining to a Hic/Liner IAW SYS HB-155.	0	mafeldh	jocamp	TREAT
8/30/2016 10:34:00 AM	'A' SW strainer d/p is 1.6 psid	0	daheyn	jocamp	SITE
8/30/2016 10:52:00 AM	Deborated the RCS using BTRS for 2.5 minutes at a rate of 75 gpm IAW beginning of shift reactivity brief. 6.9 psid on "A" BTRS.	0	daghols	jocamp	CRS
8/30/2016 11:15:00 AM	Closed DAV098 and 108 for troubleshooting low vacuum on waterbox vent pump skid, will monitor for the next two hours. Placed valves on whiteboard.	0	daghols	jocamp	CRS
8/30/2016 11:29:00 AM	Clearance Order: C21 D-KA-A-015 Tags Verified Hung	0	thfairc		CO
8/30/2016 12:12:00 PM	Clearance Order: C21 D-LE-N-036 Approved to Hang	0	thfairc		CO
8/30/2016 12:50:00 PM	Secured GDT #6 @ 5.6 psig discharge to the environs IAW SYS HA-204.	0	mafeldh	jocamp	TREAT
8/30/2016 12:54:00 PM	Aux steam restoration plan has been added to ops focus sheet OOS/degraded and Jeff Isch is working with maint to accelerate the return dates. The SM concern is closed.	0	jocamp	jocamp	SM
8/30/2016 12:58:00 PM	Clearance Order: C21 D-GF-N-020A Approved to Hang	0	thfairc		CO
8/30/2016 12:58:00 PM	Clearance Order: C21 D-GF-N-020A Tags Verified Hung	0	thfairc		CO
8/30/2016 1:23:00 PM	Clearance Order: C21 D-LE-N-036 Tags Verified Hung	0	thfairc		CO
8/30/2016 1:31:00 PM	Clearance Order: C21 D-GF-N-020 Tags Verified Removed	0	thfairc		CO
8/30/2016 1:32:00 PM	Deborated the RCS using BTRS for 2.5 minutes at a rate of 75 gpm IAW beginning of shift reactivity brief.	0	daghols	jocamp	CRS
8/30/2016 1:41:00 PM	Secured Rhut 'B' draining to CRW Sump IAW SYS HE-206 WHUT @ 56%	0	mafeldh	jocamp	TREAT
8/30/2016 1:43:00 PM	Placed Rhut 'B' @ 0% on service in prep for blended flow IAW SYS HE-201.	0	mafeldh	jocamp	TREAT
8/30/2016 1:45:00 PM	Bypassed the Rhut Demins using the manual valves IAW SYS HE-203.	0	mafeldh	jocamp	TREAT
8/30/2016 1:45:00 PM	Commenced SYS HE-203 "RECYCLE EVAPORATOR FEED DEMIN OPERATIONS". Bypassing Rhut Demins	0	mafeldh	jocamp	TREAT
8/30/2016 2:10:00 PM	Removed DAV098 and 108 from white board, no change in waterbox vent pressure (~5.5" HgA), no other valves indicate leakage, will continue to run 3 pumps and monitor pressure.	0	daghols	jocamp	CRS
8/30/2016 2:14:00 PM	Secured MSE HVAC iaw SYS GF-120 to support WO PMTs 14-396198-006/007.	0	daghols	jocamp	CRS
8/30/2016 2:20:00 PM	Commenced blending to "B" RHUT in preps for outage iaw SYS BG-216 for COAF 6877	0	daghols	jocamp	CRS
8/30/2016 2:38:00 PM	Clearance Order: C21 D-HB-N-049 Approved to Hang	0	thfairc		CO
8/30/2016 2:39:00 PM	Clearance Order: C21 D-HB-N-050 Approved to Hang	0	thfairc		CO
8/30/2016 2:57:00 PM	Started MSE HVAC iaw SYS GF-120 after completion of WO 14-396198-006/007 PMTS.	0	daghols	jocamp	CRS
8/30/2016 3:05:00 PM	Secured FDT 'B' @ 6% processing via the Zero System to SLWMT 'B' @ 63% IAW SYS HB-143 & SYS HB-145. 7,119 gallons processed.	0	mafeldh	jocamp	TREAT
8/30/2016 3:18:00 PM	Flushed Tuf membranes & pumped the contents of Tk-1 to FDT 'A' IAW SYS HB-149.	0	mafeldh	jocamp	TREAT
8/30/2016 3:30:00 PM	Clearance Order: C21 D-BL-N-008 Approved to Hang	0	thfairc		CO
8/30/2016 3:42:00 PM	Clearance Order: C21 D-GF-N-020A Tags Verified Removed	0	thfairc		CO
8/30/2016 3:52:00 PM	Added 7333 gals of blended flow to "B" RHUT iaw SYS BG-216, radwaste indicates ~12% "B" RHUT level, will blend another 2000 gals to achieve ~14% in RHUT.	0	daghols	jocamp	CRS
8/30/2016 3:54:00 PM	Recommenced blended flow to "B" RHUT iaw SYS BG-216.	0	daghols	jocamp	CRS
8/30/2016 3:55:00 PM	Clearance Order: C21 D-BL-N-008 Tags Verified Hung	0	thfairc		CO
8/30/2016 4:11:00 PM	Depressurized RHR header from 310 PSIG to 55 PSIG IAW SYS EJ-323. Depressurized SI from 300 PSIG to 50 PSIG IAW SYS EM-002.	0	jostone	jocamp	RO
8/30/2016 4:13:00 PM	Completed STN PE-068 "PERIODIC TESTING OF AIR OPERATED VALVES" SAT.	0	thfairc	jocamp	CRS
8/30/2016 4:27:00 PM	Placed Rhut 'A' @ 17% on service in prep for the flush IAW SYS HE-201.	0	mafeldh	jocamp	TREAT
8/30/2016 4:35:00 PM	Secured blending to RHUT "B" iaw SYS BG-216.	0	daghols	jocamp	CRS
8/30/2016 4:54:00 PM	Deborated the RCS using BTRS for 2.5 minutes at a rate of 75 gpm IAW beginning of shift reactivity brief.	0	daghols	jocamp	CRS
8/30/2016 5:00:00 PM	Late Entry: Secured the Water Treatment Watch.	1	nicrisp	ermarti1	TREAT
8/30/2016 5:00:00 PM	Secured the Treatment Systems/RW watch.	0	mafeldh	mablow	TREAT
8/30/2016 6:10:00 PM	I am making the control room door latch an SM concern. The door is not reliably unlatching to allow ingress and egress. Door 36043.	0	jocamp	jocamp	SM
8/30/2016 7:00:00 PM	Reviewed the logs prior to assuming the watch and assumed the Work Control SRO watch.	0	edpitt	jocamp	SE
8/30/2016 7:00:00 PM	Assumed the SM watch.	0	ermarti1	ermarti1	SM
8/30/2016 7:00:00 PM	Assumed the watch as CRS and STA.	0	mifulle1	jocamp	CRS
8/30/2016 7:00:00 PM	Assumed the RO watch.	0	jumarch	jocamp	RO
8/30/2016 7:00:00 PM	Relieved as WCSRO by Pitt. Relieved of the STA duties by Fuller.	0	thfairc	jocamp	CRS
8/30/2016 7:00:00 PM	Reviewed the logs prior to assuming the watch and assumed the SM U/I watch.	0	stlink	jocamp	SM
8/30/2016 7:00:00 PM	Relieved as SM by Martinson.	0	jocamp	jocamp	SM
8/30/2016 7:00:00 PM	Secured as the Extra RO.	0	geturne	jocamp	RO

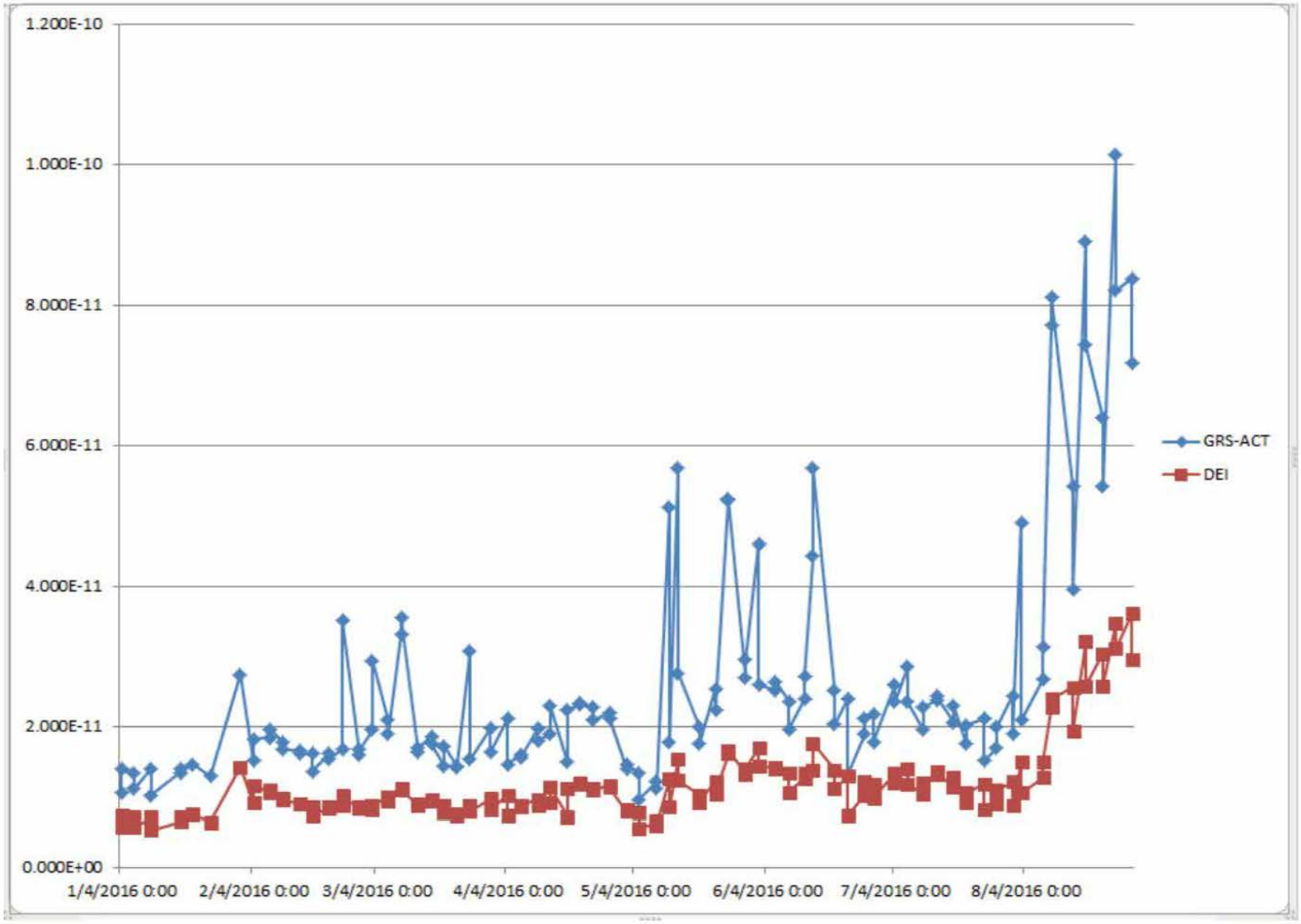
LOGDATE	ENTRY	LATEENTRY	ALUSER	SS	USERTYPE
8/30/2016 7:00:00 PM	Relieved as BOP by Norman.	0	almeyer1	jocamp	RO
8/30/2016 7:00:00 PM	Relieved as RO by Justin Marchant.	0	jostone	jocamp	RO
8/30/2016 7:00:00 PM	Relieved almeyer1, BOP	0	ronorma	jocamp	RO
8/30/2016 7:00:00 PM	Assumed the turb watch.	0	hinguye	jocamp	TURB
8/30/2016 7:00:00 PM	Assumed the Aux watch.	0	brskile	jocamp	AUX
8/30/2016 7:00:00 PM	Assumed the Site watch.	0	juspeer	jocamp	SITE
8/30/2016 7:38:00 PM	Commenced STN TCA-001 "MANUAL TIME CRITICAL ACTION TIMING", partial for As-Left data collection for ALV0056, ALV00o1, ALV0066, and ALV0071.	0	edpitt	ermarti1	SE
8/30/2016 7:49:00 PM	Commenced STS AB-201D "ATMOSPHERIC RELIEF VALVE INSERVICE VALVE TEST", partial for test of 'C' Atmosphere Relief Valve.	0	ermarti1	ermarti1	CRS
8/30/2016 7:52:00 PM	Commenced STS AL-201C "TURBINE DRIVEN AUXILIARY FEEDWATER SYSTEM INSERVICE VALVE TEST".	0	mifulle1	ermarti1	CRS
8/30/2016 7:54:00 PM	Commenced STS AB-201B "TDAFP STEAM ISOLATION INSERVICE VALVE TEST".	0	mifulle1	ermarti1	CRS
8/30/2016 7:55:00 PM	Commenced STN AL-201 "AUXILIARY FEEDWATER SYSTEM VALVE TEST".	0	mifulle1	ermarti1	CRS
8/30/2016 7:56:00 PM	Commenced STN FC-201 "TDAFW PUMP SYSTEM VALVE TEST".	0	mifulle1	ermarti1	CRS
8/30/2016 8:21:00 PM	ALV0056, ALV0061, ALV0066, ALV0071 cycled IAW STN TCA-01, Time Critical Actions testing.	0	mifulle1	ermarti1	CRS
8/30/2016 8:26:00 PM	Clearance Order: C21 D-GB-B-017 Tags Verified Removed	0	edpitt		CO
8/30/2016 8:29:00 PM	ALV0056, ALV0061, ALV0066, ALV0071 returned to locked open position IAW STN TCA-01, Time Critical Actions testing complete.	0	mifulle1	ermarti1	CRS
8/30/2016 9:02:00 PM	Stationed Lance Link as the dedicated as the dedicated operator for fan start, while conducting corrective maintenance on SGK04A discharge damper.	0	mifulle1	ermarti1	CRS
8/30/2016 9:02:00 PM	Stationed Mike Payne as the dedicated individual at the discharge damper for SGK04A, to support repairs.	0	mifulle1	ermarti1	CRS
8/30/2016 9:02:00 PM	Started SGK04A, "CONTROL ROOM A/C UNIT <TIME CRITICAL ACTION EQUIPMENT>", IAW SYS GK-123 for testing.	0	mifulle1	ermarti1	CRS
8/30/2016 9:09:00 PM	Stationed Brad Skiles as the dedicated individual for securing the SGK04A unit, IAW SYS GK-123.	0	mifulle1	ermarti1	CRS
8/30/2016 9:15:00 PM	Stopped SGK04A, "CONTROL ROOM A/C UNIT <TIME CRITICAL ACTION EQUIPMENT>", IAW SYS GK-123.	0	mifulle1	ermarti1	CRS
8/30/2016 9:16:00 PM	Commenced STS AL-103 "TDAFW PUMP INSERVICE PUMP TEST".	0	mifulle1	ermarti1	CRS
8/30/2016 9:19:00 PM	Secured Brad Skiles as the dedicated individual.	0	mifulle1	ermarti1	CRS
8/30/2016 9:29:00 PM	Completed STN TCA-001 "MANUAL TIME CRITICAL ACTION TIMING", partial for As-Found values for ALV0056, ALV0061, ALV0066, 7 ALV0071, SAT.	0	edpitt	ermarti1	SE
8/30/2016 9:31:00 PM	Completed STN TCA-001 "MANUAL TIME CRITICAL ACTION TIMING", partial for As-Left data for ALV0056, ALV0061, ALV0066, & ALV0071, SAT.	0	edpitt	ermarti1	SE
8/30/2016 10:00:00 PM	Received Alarm 97B "COND PIT SUMP LEV HI". Dispatched Turbine Watch to investigate. Performing ALR 97B.	0	mifulle1	ermarti1	CRS
8/30/2016 10:15:00 PM	Upon investigation, one of the East Turbine bldg sump pumps is on CO# D-LE-N-036. The second East Turbine bldg sump tripped on overcurrent. WO# 16-411481-000. There is a temporary pump being used to pump down the sump manually. Alarm 97B Clear.	0	mifulle1	ermarti1	CRS
8/30/2016 10:22:00 PM	Clearance Order: C21 D-AL-T-006 Tags Verified Removed	0	edpitt		CO
8/30/2016 10:23:00 PM	Clearance Order: C21 D-KA-N-015 Tags Verified Removed	0	edpitt		CO
8/30/2016 10:26:00 PM	Clearance Order: C21 D-WM-N-009 Tags Verified Removed	0	edpitt		CO
8/30/2016 10:43:00 PM	Started SGK04A, "CONTROL ROOM A/C UNIT <TIME CRITICAL ACTION EQUIPMENT>", IAW SYS GK-123.	0	mifulle1	ermarti1	CRS
8/30/2016 10:43:00 PM	Stationed Brad Skiles as the dedicated individual for securing the SGK04A unit, IAW SYS GK-123.	0	mifulle1	ermarti1	CRS
8/30/2016 10:55:00 PM	Mike Payne and Lance Link are no longer dedicated individuals.	0	mifulle1	ermarti1	CRS
8/30/2016 10:57:00 PM	Stopped SGK04A, "CONTROL ROOM A/C UNIT <TIME CRITICAL ACTION EQUIPMENT>", IAW SYS GK-123.	0	mifulle1	ermarti1	CRS
8/30/2016 10:59:00 PM	Secured Brad Skiles as the dedicated operator.	0	mifulle1	ermarti1	CRS
8/30/2016 11:11:00 PM	Aux Watch placed the CVCS cation bed in service IAW SYS BG-202.	0	mifulle1	ermarti1	CRS
8/30/2016 11:46:00 PM	Removed the CVCS cation bed from service, final D/P 15.3 psid IAW SYS BG-202.	0	mifulle1	ermarti1	CRS
8/31/2016 12:00:00 AM	Continued the Watch Mode: 1, 3558.49 MWt, 1232.7 MWe. Major Equipment Problems: None Major Tech Spec Action Statements in effect: TS 3.7.4, 3.7.5, 3.7.10	0	mifulle1	ermarti1	CRS
8/31/2016 12:00:00 AM	Commenced STN KC-008 "FIRE ALARM CONTROL PANEL KC-008 DAILY CHECK".	0	mifulle1	ermarti1	CRS
8/31/2016 12:02:00 AM	Reduced Turbine Load by 2 Trim Clicks, for Tave control.	0	mifulle1	ermarti1	CRS
8/31/2016 12:30:00 AM	Commenced STS SE-001 "POWER RANGE ADJUSTMENT TO CALORIMETRIC".	0	mifulle1	ermarti1	CRS
8/31/2016 12:33:00 AM	Depressurized RHR header from 320 PSIG to 50 PSIG IAW SYS EJ-323. Depressurized SI from 310 PSIG to 50 PSIG IAW SYS EM-002.	0	jumarch	ermarti1	RO
8/31/2016 12:37:00 AM	Commenced STN AP-102 "NSAFP FULL FLOW TEST".	0	mifulle1	ermarti1	CRS
8/31/2016 12:49:00 AM	Completed STN KC-008 "FIRE ALARM CONTROL PANEL KC-008 DAILY CHECK" SAT.	0	mifulle1	ermarti1	CRS
8/31/2016 1:05:00 AM	Completed STS SE-001 "POWER RANGE ADJUSTMENT TO CALORIMETRIC" SAT.	0	mifulle1	ermarti1	CRS
8/31/2016 1:24:00 AM	Reduced Turbine Load by 4 Trim Clicks, for Tave control.	0	mifulle1	ermarti1	CRS
8/31/2016 1:26:00 AM	'A' Pzr B/U Htrs energized in anticipation for down power of plant to support STS AL-103, TDAFW INSERVICE PUMP TEST.	0	mifulle1	ermarti1	CRS
8/31/2016 1:45:00 AM	Started PAL02, "AUX FEEDWATER PUMP---TURBINE DRIVEN <FR> <TIME CRITICAL ACTION EQUIPMENT> <FR=FIRE RISK SIGNIFCANT COMPONENT>", IAW STS AL-103.	0	mifulle1	ermarti1	CRS
8/31/2016 1:51:00 AM	Reduced Turbine Load by 4 trim clicks.	0	mifulle1	ermarti1	CRS
8/31/2016 1:53:00 AM	Completed STS AL-201C "TURBINE DRIVEN AUXILIARY FEEDWATER SYSTEM INSERVICE VALVE TEST" SAT, for ALHV012.	0	mifulle1	ermarti1	CRS
8/31/2016 2:11:00 AM	Stopped PAL02, "AUX FEEDWATER PUMP---TURBINE DRIVEN <FR> <TIME CRITICAL ACTION EQUIPMENT> <FR=FIRE RISK SIGNIFCANT COMPONENT>", IAW STS AL-103.	0	mifulle1	ermarti1	CRS
8/31/2016 2:12:00 AM	Completed STS AB-201B "TDAFP STEAM ISOLATION INSERVICE VALVE TEST" SAT.	0	mifulle1	ermarti1	CRS
8/31/2016 2:16:00 AM	****Exited Tech. Spec. 3.7.4~**** Condition A.1.	0	mifulle1	ermarti1	CRS
8/31/2016 2:16:00 AM	Returned ABPV0003, "SGC ATOMSPHERIC RELIEF VALVE <FR> <CAT 1 AOV PROGRAM VALVE> <AFFECTS CONTAINMENT/CLOSURE INTEGRITY> <LOCATION ON AB228DBB-10 AND AB022EBD-8> <TIME CRITICAL ACTION EQUIPMENT> <FR=FIRE RISK SIGNIFCANT COMPONENT>", to service.	0	ermarti1	ermarti1	SM
8/31/2016 2:16:00 AM	Completed STS AB-201D "ATMOSPHERIC RELIEF VALVE INSERVICE VALVE TEST" SAT, partial for 'C' ARV.	0	mifulle1	ermarti1	CRS
8/31/2016 2:20:00 AM	Completed STN AL-201 "AUXILIARY FEEDWATER SYSTEM VALVE TEST" SAT, partial for ALHV-036.	0	mifulle1	ermarti1	CRS

LOGDATE	ENTRY	LATEENTRY	ALUSER	SS	USERTYPE
8/31/2016 2:22:00 AM	Completed STN FC-201 "TDAFW PUMP SYSTEM VALVE TEST" SAT.	0	mifulle1	ermarti1	CRS
8/31/2016 3:00:00 AM	Commenced STS CR-001 "SHIFT LOG FOR MODES 1 2 AND 3".	0	mifulle1	ermarti1	CRS
8/31/2016 3:08:00 AM	Completed STS CR-001 "SHIFT LOG FOR MODES 1 2 AND 3" SAT.	0	mifulle1	ermarti1	CRS
8/31/2016 3:11:00 AM	Systems Operations Generation, Rob called with daily totals of 29433 Gross, 864 Aux, and 28569 Net.	0	mifulle1	ermarti1	CRS
8/31/2016 3:36:00 AM	Started PAL02, "AUX FEEDWATER PUMP---TURBINE DRIVEN <FR> <TIME CRITICAL ACTION EQUIPMENT> <FR=FIRE RISK SIGNIFCANT COMPONENT>", IAW STS AL-103.	0	mifulle1	ermarti1	CRS
8/31/2016 3:43:00 AM	Stopped PAL02, "AUX FEEDWATER PUMP---TURBINE DRIVEN <FR> <TIME CRITICAL ACTION EQUIPMENT> <FR=FIRE RISK SIGNIFCANT COMPONENT>", IAW STS AL-103.	0	mifulle1	ermarti1	CRS
8/31/2016 3:44:00 AM	Clearance Order: C21 D-KJ-N-010 Approved to Hang	0	edpitt		CO
8/31/2016 4:35:00 AM	Commenced Turbine unload at 2.4MW/min, in OPEN LOOP to establish reactor power </=97%, IAW STN AP-102, NSAFP FULL FLOW TEST.	0	mifulle1	ermarti1	CRS
8/31/2016 4:37:00 AM	Placed control rods in MANUAL. CB 'D' is at 228 steps.	0	mifulle1	ermarti1	CRS
8/31/2016 4:40:00 AM	Inserted CB 'D' to 216 steps for Tave control.	0	mifulle1	ermarti1	CRS
8/31/2016 4:47:00 AM	Inserted CB 'D' to 206 steps for Tave control.	0	mifulle1	ermarti1	CRS
8/31/2016 4:52:00 AM	Turbine load decrease is secured. Turbine load is 1196MWe.	0	mifulle1	ermarti1	CRS
8/31/2016 4:52:00 AM	Inserted CB 'D' to 202 steps for Tave control.	0	mifulle1	ermarti1	CRS
8/31/2016 5:00:00 AM	Established Thermal Power at 96.67%, RX PWR TEN MIN MOV AVG is 3445.6MWth.	0	mifulle1	ermarti1	CRS
8/31/2016 5:31:00 AM	Commenced STS CH-032 "CONDENSATE STORAGE TANK TOTAL CURIE CONTENT DETERMINATION".	0	mifulle1	ermarti1	CRS
8/31/2016 5:35:00 AM	Alarm 61C, 'PROCESS RAD MON FAIL', in. Performed ALR 61C, alarm not clear. WO# 15-409963-001.	0	mifulle1	ermarti1	CRS
8/31/2016 5:51:00 AM	Completed STS AL-103 "TDAFW PUMP INSERVICE PUMP TEST" SAT.	0	ermarti1	ermarti1	SM
8/31/2016 5:51:00 AM	Returned PAL02, "AUX FEEDWATER PUMP---TURBINE DRIVEN <FR> <TIME CRITICAL ACTION EQUIPMENT> <FR=FIRE RISK SIGNIFCANT COMPONENT>", to service.	0	ermarti1	ermarti1	SM
8/31/2016 5:51:00 AM	****Exited Tech. Spec. 3.7.5-**** Condition B.1.	0	ermarti1	ermarti1	SM
8/31/2016 5:56:00 AM	****Entered Tech. Spec. 3.7.5-**** Complying with Condition B.1. Equipment taken out of service: TDAFWP is OOS for STN AP-102, NSAFP FULL FLOW TEST . Restore to operable in 72 hours. This entry was planned. The current Risk Assessment was reviewed. Current risk management actions are appropriate for the current conditions. No additional actions are needed.	0	mifulle1	ermarti1	CRS
8/31/2016 6:04:00 AM	Clearance Order: C21 D-AP-N-006 Tags Verified Removed	0	ermarti1		CO
8/31/2016 6:25:00 AM	New SM Concern- The 'B' SBO failed to synch to the bus during the performance of STN AP-102. CR#106804	0	jocamp	jocamp	SM
8/31/2016 6:30:00 AM	Assumed the Treatment Systems/RW watch.	0	mafeldh	ermarti1	TREAT
8/31/2016 6:30:00 AM	Assumed Treatment Systems Water Treatment Watch	0	kidonoh	ermarti1	TREAT
8/31/2016 6:44:00 AM	****Exited Tech. Spec. 3.7.5-**** Condition B.1.	0	mifulle1	ermarti1	CRS
8/31/2016 6:47:00 AM	Entry into and exit from TS 3.7.5 independent SRO verification and bases review completed.	0	ermarti1	ermarti1	SM
8/31/2016 6:47:00 AM	Exit from TS 3.7.4 independent SRO verification completed.	0	ermarti1	ermarti1	SM
8/31/2016 6:55:00 AM	Service Water strainer A differential pressure was 1.6 psid at 2030 and 0500	0	juspeer	ermarti1	SITE
8/31/2016 6:58:00 AM	Controls rods are in auto.	0	mifulle1	ermarti1	CRS
8/31/2016 7:00:00 AM	Assumed the Aux watch.	0	nameffo	ermarti1	AUX
8/31/2016 7:00:00 AM	Assumed the CRS watch.	0	daghols	ermarti1	CRS
8/31/2016 7:00:00 AM	Relieved as SM by Camp.	0	ermarti1	ermarti1	SM
8/31/2016 7:00:00 AM	Assumed the turbine watch.	0	josauer	ermarti1	TURB
8/31/2016 7:00:00 AM	Stationed extra SRO.	0	wabrand	ermarti1	SE
8/31/2016 7:00:00 AM	Relieved as Work Control SRO by Faircloth.	0	edpitt	ermarti1	SE
8/31/2016 7:00:00 AM	Assumed the SM watch.	0	jocamp	jocamp	SM
8/31/2016 7:00:00 AM	Assumed the WCSRO and STA watch.	0	thfairc	ermarti1	CRS
8/31/2016 7:00:00 AM	Assumed the BOP watch.	0	jostone	ermarti1	RO
8/31/2016 7:00:00 AM	Relieved by jostone, BOP	0	ronorma	ermarti1	RO
8/31/2016 7:00:00 AM	Assumed the RO watch.	0	geturne	jocamp	RO
8/31/2016 7:00:00 AM	Relieved as RO by Turner.	0	jumarch	ermarti1	RO
8/31/2016 7:00:00 AM	Secured as the SM U/I.	0	stlink	ermarti1	SM
8/31/2016 7:00:00 AM	Assumed the Site watch.	0	aalucas	ermarti1	SITE
8/31/2016 7:05:00 AM	Raised Main Generator reactive load 20 MVARs per request from Westar Energy Transmission System Operator, Scott	0	mifulle1	ermarti1	CRS
8/31/2016 7:05:00 AM	Added TP-12 sizzling, CR 106785 as an SM concern. The TP has been flagged off.	0	jocamp	jocamp	SM
8/31/2016 7:35:00 AM	Started Discharging LTDS 'B' @ 64% to WT Basin 'B' IAW SYS HF-141	0	kidonoh	ermarti1	TREAT
8/31/2016 8:00:00 AM	Assumed the RO.	0	almeyer1	ermarti1	RO
8/31/2016 8:00:00 AM	Stationed as the extra RO.	0	geturne	jocamp	RO
8/31/2016 8:00:00 AM	Relieved as RO by A Meyer.	0	geturne	jocamp	RO
8/31/2016 8:09:00 AM	Withdrew Control Bank " D " 1.5 steps to 209.5 steps withdrawn for axial offset control IAW beginning of shift Reactivity Brief.	0	daghols	ermarti1	CRS
8/31/2016 8:18:00 AM	Commenced raising power to 100% iaw GEN 00-004.	0	daghols	ermarti1	CRS
8/31/2016 8:18:00 AM	Withdrew 2 steps on CB "D" to 212 steps.	0	daghols	ermarti1	CRS
8/31/2016 8:26:00 AM	Commenced loading turbine at 0.5 MW/min iaw GEN 00-004.	0	daghols	jocamp	CRS
8/31/2016 8:30:00 AM	Placed WT Basin 'A' @ 44 in. On Service Removing WT Basin 'B' @ 110 in. IAW SYS WT-100	0	kidonoh	jocamp	TREAT
8/31/2016 8:36:00 AM	Placed WT Basin 'B' @ 100 in. On Recirc with Mixer On IAW SYS WT-100	0	kidonoh	jocamp	TREAT
8/31/2016 8:40:00 AM	Commenced STN FP-440 "FIRE DOOR VISUAL INSPECTION". Door 36043.	0	wabrand	jocamp	SE
8/31/2016 8:51:00 AM	Control bank "D" is 225 steps.	0	daghols	jocamp	CRS
8/31/2016 8:51:00 AM	Main generator output is 1211.1 MWe.	0	daghols	jocamp	CRS
8/31/2016 8:53:00 AM	Control bank "D" is at parked position of 228 steps.	0	daghols	jocamp	CRS
8/31/2016 9:01:00 AM	Deborated the RCS using BTRS for 3 minutes at a rate of 80 gpm IAW beginning of shift reactivity brief.	0	daghols	jocamp	CRS
8/31/2016 9:01:00 AM	Assumed the extra SRO watch.	0	tidunlo	jocamp	CRS
8/31/2016 9:09:00 AM	Depressurized RHR header from 310 PSIG to 50 PSIG IAW SYS EJ-323. Depressurized SI from 300 PSIG to 50 PSIG IAW SYS EM-002.	0	jostone	jocamp	RO

LOGDATE	ENTRY	LATEENTRY	ALUSER	SS	USERTYPE
8/31/2016 9:10:00 AM	Added 7 gals of Acid to WT Basin 'B' pH @ 9.4 IAW SYS WT-150	0	kidonoh	jocamp	TREAT
8/31/2016 9:12:00 AM	Deborated the RCS using BTRS for 3 minutes at a rate of 80 gpm IAW beginning of shift reactivity brief.	0	daghols	jocamp	CRS
8/31/2016 9:22:00 AM	Sys Ops, Larry, called for status update on raising load.	0	daghols	jocamp	CRS
8/31/2016 9:22:00 AM	Deborated the RCS using BTRS for 4 minutes at a rate of 80 gpm IAW beginning of shift reactivity brief.	0	daghols	jocamp	CRS
8/31/2016 9:23:00 AM	Clearance Order: C21 D-KJ-N-010 Tags Verified Hung	0	tidunlo		CO
8/31/2016 9:30:00 AM	Checked WT Basin 'B' pH @ 7.5. Turned Mixers Off and Call Chemistry Laura Swisher to have them Sample the Basin for Release. IAW SYS WT-100	0	kidonoh	jocamp	TREAT
8/31/2016 9:32:00 AM	Justin from SyS Transmission called for two personnel to enter swyd for drawing reviews/walkdowns.	0	daghols	jocamp	CRS
8/31/2016 9:33:00 AM	Deborated the RCS using BTRS for 4 minutes at a rate of 80 gpm IAW beginning of shift reactivity brief.	0	daghols	jocamp	CRS
8/31/2016 9:40:00 AM	Deborated the RCS using BTRS for 4 minutes at a rate of 80 gpm IAW beginning of shift reactivity brief.	0	daghols	jocamp	CRS
8/31/2016 9:44:00 AM	Clearance Order: C21 D-SR-N-011 Tags Verified Removed	0	tidunlo		CO
8/31/2016 9:48:00 AM	Deborated the RCS using BTRS for 4 minutes at a rate of 80 gpm IAW beginning of shift reactivity brief.	0	daghols	jocamp	CRS
8/31/2016 9:49:00 AM	Communications Group, called to indicate that siren JW1,Jacob Creek, will be out-of-service for routine maintenance. Reviewed AP 26A-001, REPORTABLE EVENTS - EVALUATION AND DOCUMENTATION, Attachment E, REPORTABILITY FOR LOSS OF SIRENS. One siren being out-of-service does not constitute a major loss of emergency assessment capability.	0	tidunlo	jocamp	CRS
8/31/2016 10:00:00 AM	Secured the extra SRO watch.	0	tidunlo	jocamp	CRS
8/31/2016 10:02:00 AM	Completed STN FP-450 "FIRE DAMPER INSPECTION AND DROP TEST" SAT.	0	thfaire	jocamp	CRS
8/31/2016 10:05:00 AM	****Entered TR 3.3.18~**** Complying with Condition A.2.1. Equipment taken out of service: GE RE-92 non-functional to support STS PE-004, Grab samples required once per 24 hours. This entry was planned. The current Risk Assessment was reviewed. Current risk management actions are appropriate for the current conditions. No additional actions are needed.	0	daghols	jocamp	CRS
8/31/2016 10:06:00 AM	Reduce RCDT level from 51% to 22% & pressure from 17 psig to 5 psig IAW SYS HB-120.	0	mafeldh	jocamp	TREAT
8/31/2016 10:06:00 AM	****Entered TR 3.3.18~**** Complying with Condition A.1. Equipment taken out of service: GE RE-92 non-functional to support STS PE-004. Restore in 48 hrs.. This entry was planned. The current Risk Assessment was reviewed. Current risk management actions are appropriate for the current conditions. No additional actions are needed.	0	daghols	jocamp	CRS
8/31/2016 10:06:00 AM	Added GERE0092, COND AIR RMVL SYS RADIATION DETECTOR to the EOL. Reason: GE RE-92 removed from service in accordance with SYS GE-122 to support STS PE-004. TR 3.3.18. 24 grab samples required. The Current Risk Assessment was reviewed.	0	daghols	jocamp	CRS
8/31/2016 10:11:00 AM	Commenced STN IC-245 "CALIBRATION OF RHR/SIS HOT LEG RECIRC FLOW LOOP".	0	thfaire	jocamp	CRS
8/31/2016 10:12:00 AM	Stopped CGE01A, "CONDENSER AIR REMOVAL FILTRATION FAN" IAW SYS GE-122 to support STS PE-004..	0	geturne	jocamp	RO
8/31/2016 10:21:00 AM	Adjusted Turbine Load 4 Trim Clicks Up	0	daghols	jocamp	CRS
8/31/2016 10:22:00 AM	Adjusted Turbine Load 8 Trim Clicks Up	0	daghols	jocamp	CRS
8/31/2016 10:29:00 AM	Adjusted Turbine Load 4 Trim Clicks Up	0	daghols	jocamp	CRS
8/31/2016 10:32:00 AM	Adjusted Turbine Load 4 Trim Clicks Up	0	daghols	jocamp	CRS
8/31/2016 10:33:00 AM	Stopped CGL03B, "AUX/FUEL BLDG NORMAL EXHAUST FAN" IAW STS PE-004.	0	geturne	jocamp	RO
8/31/2016 10:33:00 AM	Stopped SGL01, "AUXILIARY BLDG. SUPPLY AIR UNIT"IAW STS PE-004.	0	geturne	jocamp	RO
8/31/2016 10:34:00 AM	Stopped SGG01B, "FUEL BLDG SUPPLY AIR UNIT" IAW STS PE-004.	0	geturne	jocamp	RO
8/31/2016 10:34:00 AM	Inserted CB "D" one step to 227 steps for Tavg control.	0	daghols	jocamp	CRS
8/31/2016 10:41:00 AM	Commenced STS MT-024A "FUNCTIONAL TEST OF 480 AND 120 VOLT MOLDED CASE CIRCUIT BREAKERS". IAW 15-406641-033 for PG019GDF6.	0	thfaire	jocamp	CRS
8/31/2016 10:41:00 AM	Adjusted Turbine Load 4 Trim Clicks Up	0	daghols	jocamp	CRS
8/31/2016 10:42:00 AM	Commenced STS MT-024A "FUNCTIONAL TEST OF 480 AND 120 VOLT MOLDED CASE CIRCUIT BREAKERS". IAW 15-406641-032 for PG019GDF3.	0	thfaire	jocamp	CRS
8/31/2016 10:43:00 AM	Stopped CGF03A, "MAIN STEAM ENCL. BLDG EXHAUST FAN" IAW STS PE-004.	0	geturne	jocamp	RO
8/31/2016 10:43:00 AM	Stopped SGF01, "MAIN STEAM ENCLOSURE BLDG S. A. UNIT" IAW STS PE-004.	0	geturne	jocamp	RO
8/31/2016 10:44:00 AM	Stopped SGK02, "CONTROL-BLDG SUPPLY AIR UNIT" IAW STS PE-004 .	0	geturne	jocamp	RO
8/31/2016 10:44:00 AM	Stopped CGK01A, "CONTROL BUILDING EXHAUST FAN" STS PE-004.	0	geturne	jocamp	RO
8/31/2016 10:48:00 AM	Stopped CGK02A, "ACCESS CONTROL EXHAUST FAN" STS PE-004.	0	geturne	jocamp	RO
8/31/2016 10:48:00 AM	Clearance Order: C21 D-HB-N-050 Tags Verified Hung	0	thfaire		CO
8/31/2016 10:57:00 AM	Clearance Order: C21 D-HB-N-049 Tags Verified Hung	0	thfaire		CO
8/31/2016 10:58:00 AM	Started CGG02B, "EMERGENCY EXHAUST FAN" IAW STS PE-004.	0	geturne	jocamp	RO
8/31/2016 11:14:00 AM	Notified Sys Ops-Transmission, Justin that Site Watch is entering the switchyard.	0	daghols	jocamp	CRS
8/31/2016 11:20:00 AM	Started CGK04B, "CONTROL ROOM PRESSURIZATION FAN" IAW SYS GK-122 to support STS PE-004.	0	geturne	jocamp	RO
8/31/2016 11:21:00 AM	Started CGK03B, "CONTROL ROOM FILTRATION FAN" IAW SYS GK-122 to support STS PE-004.	0	geturne	jocamp	RO
8/31/2016 11:21:00 AM	Completed STN FP-440 "FIRE DOOR VISUAL INSPECTION" SAT. IAW WO 16-417211-000 partial for 36043.	0	thfaire	jocamp	CRS
8/31/2016 11:31:00 AM	Notified Sys Ops-Transmission, Justin that Site Watch is exiting the switchyard.	0	daghols	jocamp	CRS
8/31/2016 11:36:00 AM	SM Concern UPDATE: The Control Room door has been fixed and is operating properly. SM Concern closed.	0	thfaire	jocamp	CRS
8/31/2016 11:38:00 AM	Adjusted Turbine Load 2 Trim Clicks Up	0	daghols	jocamp	CRS
8/31/2016 11:45:00 AM	Secured extra SRO.	0	wabrand	jocamp	CRS
8/31/2016 12:00:00 PM	CB "D" now at 219 steps; adjusted for Tavg control	0	daghols	jocamp	CRS
8/31/2016 12:14:00 PM	Returned CGK04B, "CONTROL ROOM PRESSURIZATION FAN", to service. "B" train CREVS restored to operable status, acceptance criteria met per STS PE-004.	0	daghols	jocamp	CRS
8/31/2016 12:14:00 PM	****Exited Tech. Spec. 3.7.10~**** Condition A. Acceptance criteria for STS PE-004 has been met for "B" train CREVS.	0	daghols	jocamp	CRS
8/31/2016 12:14:00 PM	Exited emergent work to support B CREVS.	0	jocamp	jocamp	SM
8/31/2016 12:39:00 PM	Added MFP B HPU pump 5B, CR 106786, as an SM concern.	0	jocamp	jocamp	SM
8/31/2016 12:43:00 PM	Completed STS CH-026 "REACTOR COOLANT CHLORIDE FLUORIDE AND DISSOLVED OXYGEN DETERMINATION" SAT .	0	daghols	jocamp	CRS
8/31/2016 12:43:00 PM	RCS boron concentration is 168 ppm per Chemistry sample taken at 0945 by Swisher.	0	daghols	jocamp	CRS
8/31/2016 12:43:00 PM	Completed STS CH-021 "SPENT FUEL POOL BORON CONCENTRATION DETERMINATION" SAT . Boron concentration is 2470 ppm.	0	daghols	jocamp	CRS

LOGDATE	ENTRY	LATEENTRY	ALIASER	SS	USERTYPE
8/31/2016 12:43:00 PM	Completed STS CH-031 "REACTOR MAKEUP WATER STORAGE TANK AND/OR OUTSIDE TEMPORARY TANK TOTAL CURIE CONTENT DETERMINATION" SAT .	0	daghols	jocamp	CRS
8/31/2016 12:44:00 PM	Exit from 3.7.10 independent SRO verification completed.	0	jocamp	jocamp	SM
8/31/2016 12:54:00 PM	Commenced STS BB-006 "RCS WATER INVENTORY BALANCE USING THE NPIS COMPUTER".	0	daghols	jocamp	CRS
8/31/2016 1:04:00 PM	Stationed Matt Parsons as dedicated Operator IAW SYS GG-200.	0	geturne	jocamp	RO
8/31/2016 1:05:00 PM	Stopped CGG02B, "EMERGENCY EXHAUST FAN" IAW SYS GG-200 and restoration section of STS PE-004.	0	geturne	jocamp	RO
8/31/2016 1:10:00 PM	Matt Parson is no longer stationed as Dedicated operator IAW SYS GG-200.	0	geturne	jocamp	RO
8/31/2016 1:20:00 PM	Started SGG01B, "FUEL BLDG SUPPLY AIR UNIT" IAW SYS GG-200 to support STS PE-004.	0	geturne	jocamp	RO
8/31/2016 1:21:00 PM	Started SGL01, "AUXILIARY BLDG. SUPPLY AIR UNIT" IAW SYS GG-200 to support STS PE-004.	0	geturne	jocamp	RO
8/31/2016 1:23:00 PM	Completed STN IC-245 "CALIBRATION OF RHR/SIS HOT LEG RECIRC FLOW LOOP" SAT.	0	thfaire	jocamp	CRS
8/31/2016 1:26:00 PM	Started SGK02, "CONTROL-BLDG SUPPLY AIR UNIT" IAW STS PE-004.	0	geturne	jocamp	RO
8/31/2016 1:28:00 PM	Started 1FP001PA, "MOTOR DRIVEN FIRE PUMP iaw SYS FP-293 to support fire protection PMTs.	0	daghols	jocamp	CRS
8/31/2016 1:30:00 PM	Relieved as Water Treatment by Ryan Gilbert.	0	kidonoh	jocamp	TREAT
8/31/2016 1:30:00 PM	Assumed the Water Treatment Watch	0	rygilbe	jocamp	TREAT
8/31/2016 1:34:00 PM	Started CGF03A, "MAIN STEAM ENCL. BLDG EXHAUST FAN" IAW SYS GF-120 to support STS PE-004.	0	geturne	jocamp	RO
8/31/2016 1:35:00 PM	Started SGF01, "MAIN STEAM ENCLOSURE BLDG S. A. UNIT" IAW SYS GF-120 to support STS PE-004.	0	geturne	jocamp	RO
8/31/2016 1:36:00 PM	Started CGE01A, "CONDENSER AIR REMOVAL FILTRATION FAN" IAW SYS GE-122 to support STS PE-004.	0	geturne	jocamp	RO
8/31/2016 1:37:00 PM	Started CGK01A, "CONTROL BUILDING EXHAUST FAN" IAW STS PE-004.	0	geturne	jocamp	RO
8/31/2016 1:37:00 PM	Started CGK02A, "ACCESS CONTROL EXHAUST FAN" IAW STS PE-004.	0	geturne	jocamp	RO
8/31/2016 1:43:00 PM	Restored GTRE0022 to service. STN SP-122 is complete.	0	daghols	jocamp	CRS
8/31/2016 1:50:00 PM	****Exited TR 3.3.18~**** Condition A.2.1. GERE92 restored iaw SYS GE-122.	0	daghols	jocamp	CRS
8/31/2016 1:50:00 PM	Returned GFRE0092, "COND AIR RMVL SYS RADIATION DETECTOR", to service. Restored per SYS GE-122.	0	daghols	jocamp	CRS
8/31/2016 1:50:00 PM	****Exited TR 3.3.18~**** Condition A.1. GERE92 restored iaw SYS GE-122.	0	daghols	jocamp	CRS
8/31/2016 1:57:00 PM	Completed STN SP-122 "CHANNEL CALIBRATION CONTAINMENT PURGE SYSTEM RADIATION MONITOR GT RE-0022" SAT. WO 16-412481-000	0	thfaire	jocamp	CRS
8/31/2016 2:00:00 PM	Clearance Order: C21 D-FP-N-020 Tags Verified Removed	0	thfaire		CO
8/31/2016 2:19:00 PM	Stationed Matt Parsons as dedicated operator IAW SYS GK-121.	0	geturne	jocamp	RO
8/31/2016 2:19:00 PM	Commenced STS PE-002 "CHARCOAL ADSORBENT SAMPLING FOR NUCLEAR SAFETY RELATED UNITS".	0	thfaire	jocamp	CRS
8/31/2016 2:20:00 PM	Suspended the Recirc of WWT Basin 'B' @ 100", IAW SYS WT-100. Chemistry Reports pH is 7.7	0	rygilbe	jocamp	TREAT
8/31/2016 2:24:00 PM	Clearance Order: C21 D-LE-N-036 Tags Verified Removed	0	thfaire		CO
8/31/2016 2:24:00 PM	Stopped CGK04B, "CONTROL ROOM PRESSURIZATION FAN" IAW SYS GK-121 to support STS PE-004.	0	geturne	jocamp	RO
8/31/2016 2:25:00 PM	Matt Parsons is no longer stationed as dedicated operator IAW SYS GK-121	0	geturne	jocamp	RO
8/31/2016 2:26:00 PM	Stopped CGK03B, "CONTROL ROOM FILTRATION FAN" IAW SYS GK-121 to support STS PE-004.	0	geturne	jocamp	RO
8/31/2016 2:27:00 PM	Communications Group called, JW1, Jacobs Creek, was returned to service.	0	thfaire	jocamp	CRS
8/31/2016 2:32:00 PM	Started CCG01A, "CONDENSER VACUUM PUMP" iaw SYS CG-120 to support SYS OMT-001.	0	daghols	jocamp	CRS
8/31/2016 2:34:00 PM	Stopped CCG01B, "CONDENSER VACUUM PUMP" iaw SYS CG-120.	0	daghols	jocamp	CRS
8/31/2016 2:53:00 PM	Returned SQ064, "LOOSE-PARTS MONITORING PANEL", to service. Retest per STS CR-001 SAT.	0	daghols	jocamp	CRS
8/31/2016 2:53:00 PM	****Exited TR 3.3.13~**** Condition A.1. Loose parts is functional, retest per STS CR-001 is complete.	0	daghols	jocamp	CRS
8/31/2016 3:04:00 PM	Made App R light A-39 an SM concern.	0	jocamp	jocamp	SM
8/31/2016 3:12:00 PM	Completed STN AP-102 "NSAFP FULL FLOW TEST" for no credit, CR #106804	0	daghols	jocamp	CRS
8/31/2016 3:19:00 PM	STS BB-006 results are: 0.061 gpm Total Identified Leakage, 0.227 gpm Total Unidentified Leakage and 0.206 gpm Total T/S Identified Leakage. NCP, 96 gpm letdown, 2 hrs	0	almeyer1	jocamp	RO
8/31/2016 4:14:00 PM	Stopped 1FP001PA, "MOTOR DRIVEN FIRE PUMP" iaw SYS FP-293.	0	daghols	jocamp	CRS
8/31/2016 4:26:00 PM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK". Partial for GRP 2016-102.	0	daghols	jocamp	CRS
8/31/2016 4:55:00 PM	Completed STS PE-004 "AUX BUILDING AND CONTROL ROOM PRESSURE TEST" SAT.	0	thfaire	jocamp	CRS
8/31/2016 5:00:00 PM	Secured the Water Treatment Watch	0	rygilbe	jocamp	TREAT
8/31/2016 5:00:00 PM	Secured the Treatment Systems/RW watch.	0	mafeldh	jocamp	TREAT
8/31/2016 5:03:00 PM	Depressurized RHR header from 300 PSIG to 50 PSIG IAW SYS EJ-323. Depressurized SI from 300 PSIG to 50 PSIG IAW SYS EM-002.	0	jostone	jocamp	RO
8/31/2016 5:13:00 PM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT, partial for GRP 2016-102	0	daghols	jocamp	CRS
8/31/2016 5:13:00 PM	STS BB-006 results are: 0.043 gpm Total Identified Leakage, 0.219 gpm Total Unidentified Leakage and 0.188 gpm Total T/S Identified Leakage. NCP, 96 gpm letdown, 2 hrs, confirmatory.	0	almeyer1	jocamp	RO
8/31/2016 5:23:00 PM	Clearance Order: C21 D-KJ-N-010A Approved to Hang	0	thfaire		CO
8/31/2016 5:30:00 PM	Service water strainer dp checked twice per shift both times dp was 1.6.	0	aalucas	jocamp	SITE
8/31/2016 5:38:00 PM	Diluted the RCS 140 gallons for Tavg control IAW beginning of shift Reactivity Brief.	0	daghols	jocamp	CRS
8/31/2016 5:42:00 PM	Clearance Order: C21 D-KJ-N-010A Tags Verified Hung	0	thfaire		CO
8/31/2016 5:45:00 PM	Started CGT02, "MINI PURGE EXH. FAN" iaw SYS GT-120, commenced purging ctmt per GRP 2016-102.	0	daghols	jocamp	CRS
8/31/2016 5:53:00 PM	Received ALR 61B, "Process Rad Hi", for GTRE22 and 33, both monitors are in ALERT, expected for purging ctmt with higher activity levels due to leakage into ctmt, both monitors are within setpoints for permit.	0	daghols	jocamp	CRS
8/31/2016 5:56:00 PM	Clearance Order: C21 D-KJ-N-010 Tags Verified Removed	0	thfaire		CO
8/31/2016 6:02:00 PM	Completed STS BB-006 "RCS WATER INVENTORY BALANCE USING THE NPIS COMPUTER" SAT. Total Unidentified leakage rate from initial and confirmatory checks is 0.223 gpm. ODMI 2015-07 and CR 106763 have been implemented/written for for identifying leak, isolate,and repair. Aux building walkdown has been completed for this shift. Currently repair scheduled for outage, will continue to monitor with a ctmt walkdown entry scheduled for tomorrow.	0	daghols	jocamp	CRS
8/31/2016 7:00:00 PM	Assumed the Aux Watch	0	adbalze	jocamp	AUX

LOGDATE	ENTRY	LATEENTRY	ALUSER	SS	USERTYPE
8/31/2016 7:00:00 PM	Relieved as WCSRO by Pitt. Relieved of the STA duties by Fuller.	0	thfairc	jocamp	CRS
8/31/2016 7:00:00 PM	Assumed the Turbine watch.	0	juspeer	jocamp	TURB
8/31/2016 7:00:00 PM	Assumed the site watch.	0	hinguye	jocamp	SITE
8/31/2016 7:00:00 PM	Reviewed the logs prior to assuming the watch and assumed the SM U/I watch.	0	stlink	ermarti1	SM
8/31/2016 7:00:00 PM	Reviewed the logs prior to assuming the watch and assumed the Work Control SRO watch.	0	edpitt	jocamp	SE
8/31/2016 7:00:00 PM	Assumed the BOP watch.	0	jumarch	jocamp	RO
8/31/2016 7:00:00 PM	Relieved as BOP by Justin Marchant.	0	jostone	jocamp	RO
8/31/2016 7:00:00 PM	Relieved as SM by Martinson.	0	jocamp	jocamp	SM
8/31/2016 7:00:00 PM	Assumed the Watch as CRS and STA.	0	mifulle1	ermarti1	CRS
8/31/2016 7:00:00 PM	Relieved as RO by Norman.	0	almeyer1	jocamp	RO
8/31/2016 7:00:00 PM	Secured as the Extra RO.	0	getume	jocamp	RO
8/31/2016 7:00:00 PM	Relieved as CRS by Fuller.	0	daghols	jocamp	CRS
8/31/2016 7:00:00 PM	Relieved almeyer1, RO	0	ronorma	jocamp	RO
8/31/2016 7:00:00 PM	Assumed the SM watch.	0	ermarti1	ermarti1	SM
8/31/2016 7:01:00 PM	Stopped CGT02, "MINI PURGE EXH. FAN", IAW SYS GT-120.	0	mifulle1	ermarti1	CRS
8/31/2016 7:41:00 PM	Clearance Order: C21 D-LF-N-022 Approved to Hang	0	edpitt		CO
8/31/2016 8:13:00 PM	Placed GKRE0004 in bypass for Calibration of Power Supplies, IAW INC C-1008. ****Entered T.S. 3.3.7 Function 3 Condition A~****, 7 days to restore. This entry was planned.	0	mifulle1	ermarti1	CRS
8/31/2016 8:29:00 PM	Diluted the RCS 140 gallons for Tavg control IAW beginning of shift Reactivity Brief.	0	mifulle1	ermarti1	CRS
8/31/2016 8:35:00 PM	Clearance Order: C21 D-LF-N-022 Tags Verified Hung	0	edpitt		CO
8/31/2016 8:52:00 PM	Clearance Order: C21 D-FP-N-020A Approved to Hang	0	edpitt		CO
8/31/2016 8:57:00 PM	Clearance Order: C21 D-AB-N-030 Approved to Hang	0	edpitt		CO
8/31/2016 9:07:00 PM	Restored GKRE0004 to service. ****Exited T.S. 3.3.7 Function 3 Condition A~****.	0	mifulle1	ermarti1	CRS
8/31/2016 9:07:00 PM	Placed GGRE0028 in bypass for Calibration of Power Supplies, IAW INC C-1008. T.S. 3.3.8 Function 3 Not Applicable - No Fuel Movement in Progress.	0	mifulle1	ermarti1	CRS
8/31/2016 9:24:00 PM	Clearance Order: C21 D-PS-N-017 Approved to Hang	0	edpitt		CO
8/31/2016 9:26:00 PM	Clearance Order: C21 D-PS-N-017A Approved to Hang	0	edpitt		CO
8/31/2016 9:49:00 PM	Restored GGRE0028 to service.	0	mifulle1	ermarti1	CRS
8/31/2016 9:49:00 PM	Placed GTRE0031 in bypass for Calibration of Power Supplies, IAW INC C-1008. Reference T.S. 3.3.6 Function 3 Condition A and T.S. 3.4.15.b. No actions required GTRE0032 operable.	0	mifulle1	ermarti1	CRS
8/31/2016 10:06:00 PM	Transferred from BAT 'B' to BAT 'A', IAW SYS BG-206. BAT 'A' level was increased from 88% to 93%.	0	mifulle1	ermarti1	CRS
8/31/2016 10:09:00 PM	Started PBG02A, "BORIC ACID TRANSFER PUMP", for placing the 'A' BAT tank on recirculation for chemistry sampling.	0	mifulle1	ermarti1	CRS
8/31/2016 10:17:00 PM	Restored GTRE0031 to service.	0	mifulle1	ermarti1	CRS
8/31/2016 10:20:00 PM	Aux Watch placed the CVCS cation bed in service IAW SYS BG-202.	0	mifulle1	ermarti1	CRS
8/31/2016 10:46:00 PM	Started CGN02B, "CAVITY COOLING FAN", IAW SYS OMT-001.	0	mifulle1	ermarti1	CRS
8/31/2016 10:46:00 PM	Stopped CGN02A, "CAVITY COOLING FAN", IAW SYS OMT-001.	0	mifulle1	ermarti1	CRS
8/31/2016 10:47:00 PM	Commenced STS BB-006 "RCS WATER INVENTORY BALANCE USING THE NPIS COMPUTER".	0	mifulle1	ermarti1	CRS
8/31/2016 10:48:00 PM	Started CGL03A, "AUX/FUEL BLDG NORMAL EXHAUST FAN", IAW SYS OMT-001.	0	mifulle1	ermarti1	CRS
8/31/2016 10:48:00 PM	Secured CGL03B, "AUX/FUEL BLDG NORMAL EXHAUST FAN", IAW SYS OMT-001.	0	mifulle1	ermarti1	CRS
8/31/2016 10:50:00 PM	Stopped SGG01B, "FUEL BLDG SUPPLY AIR UNIT", IAW SYS OMT-001.	0	mifulle1	ermarti1	CRS
8/31/2016 10:51:00 PM	Started SGG01A, "FUEL BLDG SUPPLY AIR UNIT", IAW SYS OMT-001.	0	mifulle1	ermarti1	CRS
8/31/2016 10:54:00 PM	Removed the CVCS cation bed from service, final D/P 15.4 psid IAW SYS BG-202.	0	mifulle1	ermarti1	CRS
8/31/2016 10:57:00 PM	Started CGF03B, "MAIN STEAM ENCL. BLDG EXHAUST FAN", IAW SYS OMT-001.	0	mifulle1	ermarti1	CRS
8/31/2016 10:57:00 PM	Stopped CGF03A, "MAIN STEAM ENCL. BLDG EXHAUST FAN", IAW SYS OMT-001.	0	mifulle1	ermarti1	CRS
8/31/2016 10:58:00 PM	Started CGE01B, "CONDENSER AIR REMOVAL FILTRATION FAN", IAW SYS OMT-001.	0	mifulle1	ermarti1	CRS
8/31/2016 10:58:00 PM	Stopped CGE01A, "CONDENSER AIR REMOVAL FILTRATION FAN", IAW SYS OMT-001.	0	mifulle1	ermarti1	CRS
8/31/2016 10:59:00 PM	Started CGK01B, "CONTROL BUILDING EXHAUST FAN", IAW SYS OMT-001.	0	mifulle1	ermarti1	CRS
8/31/2016 10:59:00 PM	Stopped CGK01A, "CONTROL BUILDING EXHAUST FAN", IAW SYS OMT-001.	0	mifulle1	ermarti1	CRS
8/31/2016 11:00:00 PM	Started CGK02B, "ACCESS CONTROL EXHAUST FAN", IAW SYS OMT-001.	0	mifulle1	ermarti1	CRS
8/31/2016 11:00:00 PM	Started CGH01A, "RADWASTE BLDG EXHAUST FAN", IAW SYS OMT-001.	0	mifulle1	ermarti1	CRS
8/31/2016 11:00:00 PM	Stopped CGK02A, "ACCESS CONTROL EXHAUST FAN", IAW SYS OMT-001.	0	mifulle1	ermarti1	CRS
8/31/2016 11:01:00 PM	Stopped CGH01B, "RADWASTE BLDG. EXHAUST FAN", IAW SYS OMT-001.	0	mifulle1	ermarti1	CRS
8/31/2016 11:11:00 PM	Deborated the RCS using BTRS for 3 minutes at a rate of 50 gpm IAW beginning of shift reactivity brief.	0	mifulle1	ermarti1	CRS
8/31/2016 11:12:00 PM	Placed GTRE0033 in bypass for Calibration of Power Supplies, IAW INC C-1008. Complying with ODCM Table 3-2 Function 2.a Action 41. Containment purge not in progress. This entry was planned.	0	mifulle1	ermarti1	CRS
8/31/2016 11:24:00 PM	Clearance Order: C21 D-BL-N-008 Tags Verified Removed	0	edpitt		CO
8/31/2016 11:26:00 PM	Restored GTRE0033 to service.	0	mifulle1	ermarti1	CRS
8/31/2016 11:41:00 PM	Entry into and exit from TS 3.3.7 independent SRO verification and bases review completed.	0	ermarti1	ermarti1	SM
8/31/2016 11:54:00 PM	A SW strainer DP is 1.6 psid.	0	hinguye	ermarti1	SITE
8/31/2016 11:57:00 PM	Placed GTRE0031 in bypass for filter change, IAW CHS AX-G02. Reference T.S. 3.3.6 Function 3 Condition A and T.S. 3.4.15.b. No actions required GTRE0032 operable.	0	mifulle1	ermarti1	CRS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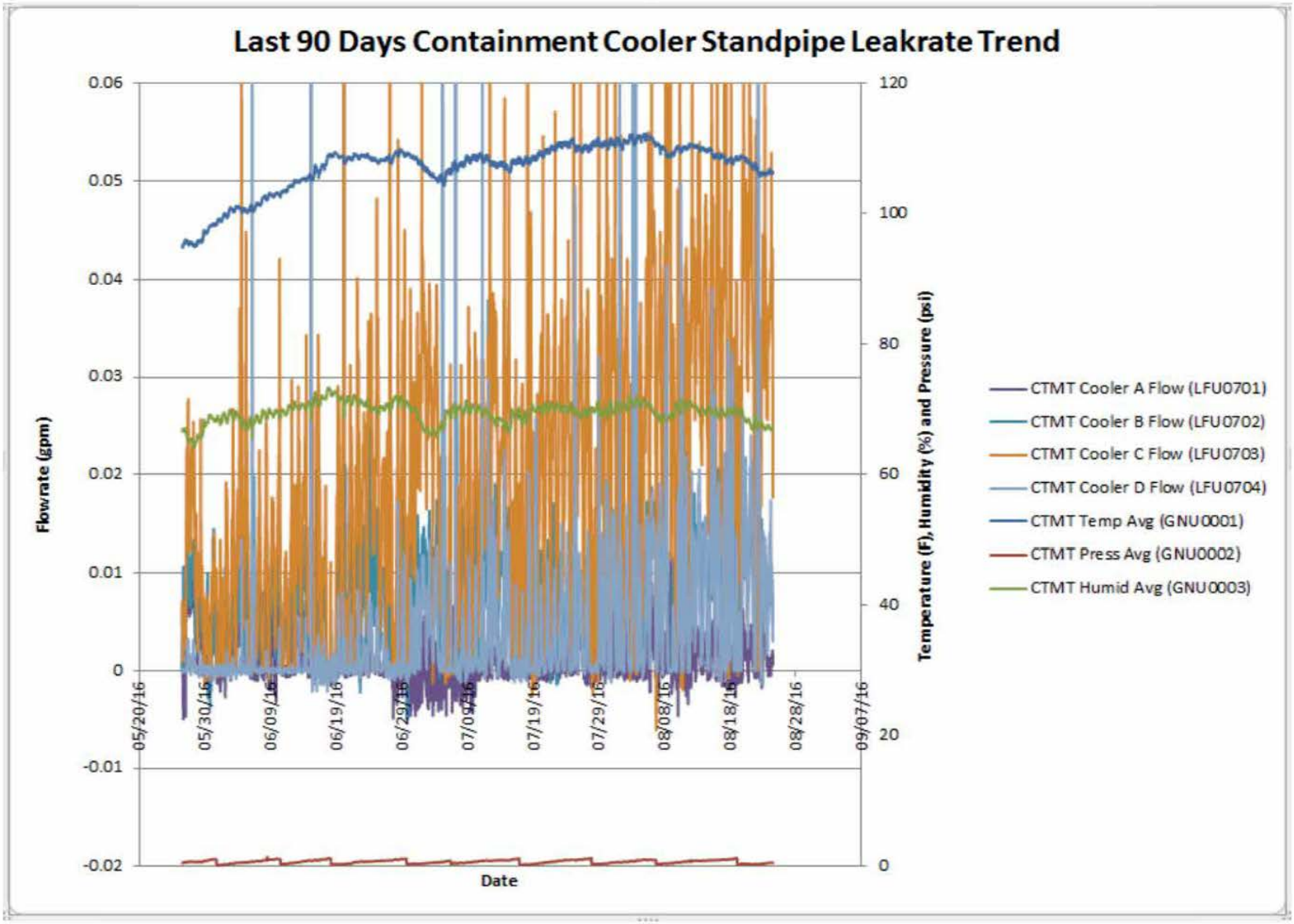
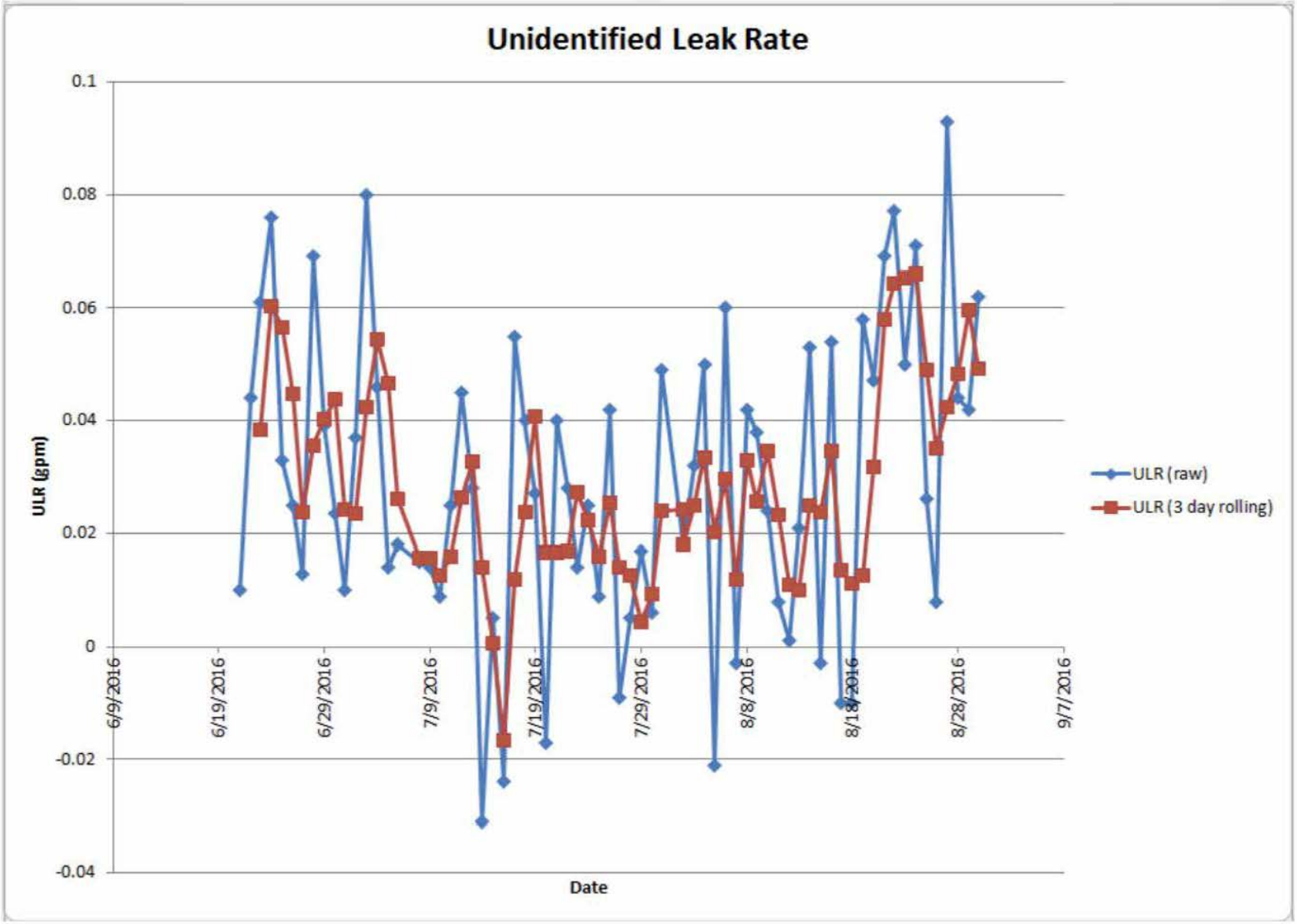
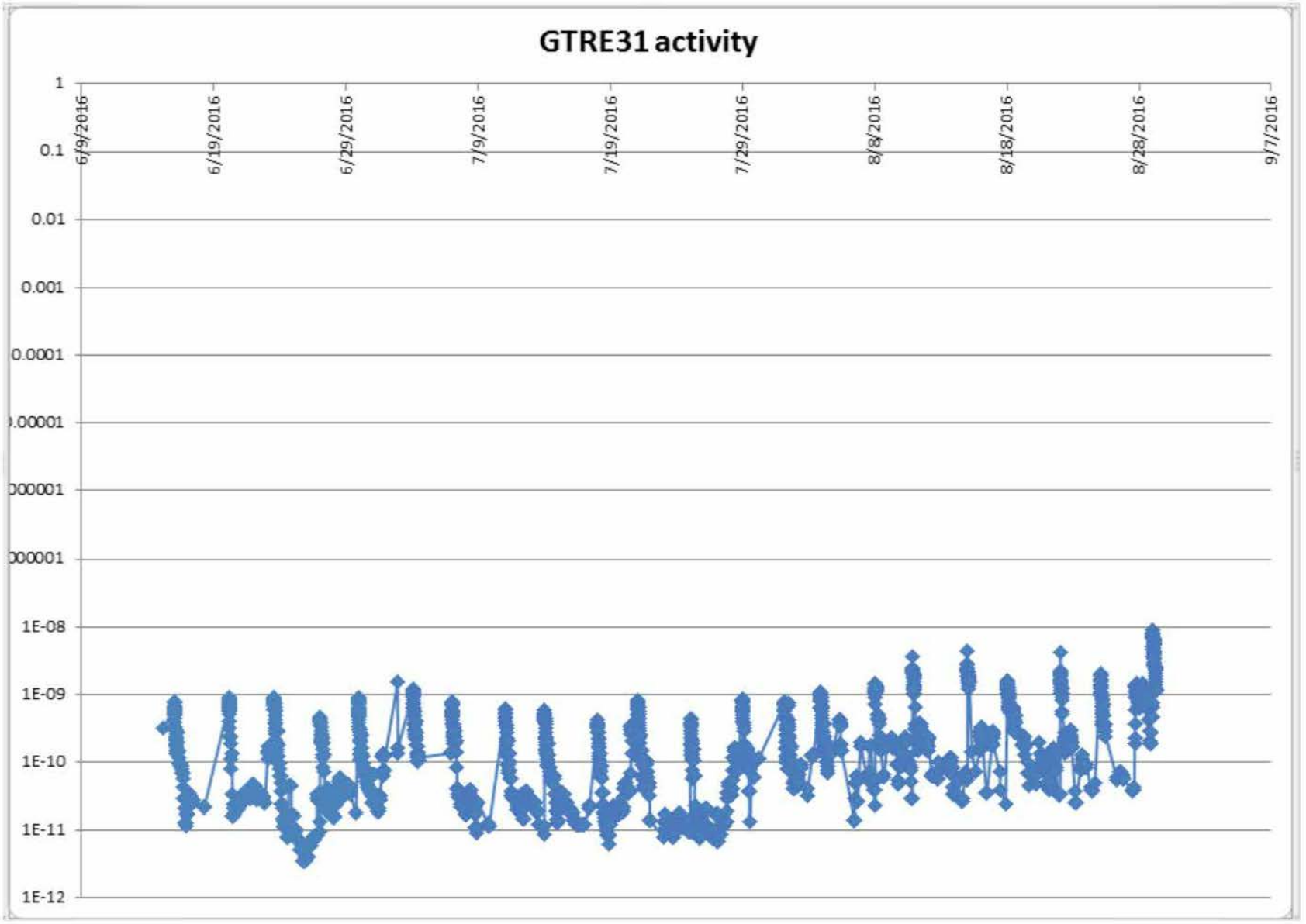
GRS-ACT
DEI


Last 90 Days Containment Cooler Standpipe Leakrate Trend
Flowrate (gpm)
Temperature (F), Humidity (%) and Pressure (psi)
Date
0.06
0.05
0.04
0.03
0.02
0.01
0
-0.01
-0.02
120
100
80
60
40
20
0
05/20/16
05/30/16
06/09/16
06/19/16
06/29/16
07/09/16
07/19/16
07/29/16
08/08/16
08/18/16
08/28/16
09/07/16
CTMT Cooler A Flow (LFU0701)
CTMT Cooler B Flow (LFU0702)
CTMT Cooler C Flow (LFU0703)
CTMT Cooler D Flow (LFU0704)
CTMT Temp Avg (GNU0001)
CTMT Press Avg (GNU0002)
CTMT Humid Avg (GNU0003)


Unidentified Leak Rate
0.1
0.08
0.06
0.04
0.02
0
-0.02
-0.04
ULR (gpm)
6/9/2016
6/19/2016
6/29/2016
7/9/2016
7/19/2016
7/29/2016
8/8/2016
8/18/2016
8/28/2016
9/7/2016
Date
ULR (raw)
ULR (3 day rolling)


GTRE31 activity
1
0.1
0.01
0.001
0.0001
.00001
000001
000001
1E-08
1E-09
1E-10
1E-11
1E-12
6/9/2016
6/19/2016
6/29/2016
7/9/2016
7/19/2016
7/29/2016
8/8/2016
8/18/2016
8/28/2016
9/7/2016

CONTROL ROOM LOG

LogDate	Entry	User	UserType
4/1/2016 1:43:00 PM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK". Partial for HFRE0045 for LRP U1LB2016-017.	styunk	CRS
4/1/2016 3:40:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCRIC385B , channel 381 , No Pulses-Time Out in and clear. WO #15-409963-001.	styunk	CRS
4/2/2016 2:38:00 AM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT. Partial for HFRE0045.	chwoods	CRS
4/2/2016 3:41:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	chwoods	CRS
4/2/2016 4:13:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	chwoods	CRS
4/2/2016 6:23:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	chwoods	CRS
4/2/2016 7:45:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	styunk	CRS
4/2/2016 9:54:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	styunk	CRS
4/2/2016 2:14:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	styunk	CRS
4/2/2016 3:43:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	styunk	CRS
4/2/2016 3:58:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	styunk	CRS
4/2/2016 4:23:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	styunk	CRS
4/2/2016 5:08:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	styunk	CRS
4/2/2016 6:10:00 PM	Received alarm 61B, Process Rad Hi-Hi. GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	styunk	CRS
4/2/2016 6:57:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
4/2/2016 7:28:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
4/2/2016 7:43:00 PM	Received alarm 61B, Process Rad Hi-Hi. GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
4/2/2016 8:26:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
4/3/2016 1:01:00 AM	Received alarm 61A/B, Process Rad Hi-Hi. GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
4/3/2016 4:13:00 AM	Received alarm 61A/B, Process Rad Hi-Hi. GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
4/3/2016 5:34:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
4/3/2016 5:51:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
4/3/2016 6:56:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
4/3/2016 8:34:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
4/3/2016 8:41:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
4/3/2016 8:55:00 AM	Received annunciator 61C, PROCESS RAD MONITOR FAIL. Alarm was GHRE0022, channel 224, loss of flow. Performing ALR. Contacted chemistry to change filter paper.	edpitt	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
4/3/2016 9:34:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
4/3/2016 9:40:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
4/3/2016 9:56:00 AM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor AB RE-111 Channel , No Pulses Time Out. Performed manual Check Source Test SAT. CR #103746 initiated.	edpitt	CRS
4/3/2016 10:59:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
4/3/2016 11:17:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
4/3/2016 12:37:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
4/3/2016 1:02:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
4/3/2016 1:25:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
4/3/2016 2:05:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
4/3/2016 2:27:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
4/3/2016 2:41:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
4/3/2016 3:46:00 PM	Received alarm 61A/B, Process Rad Hi-Hi. GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
4/3/2016 3:50:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
4/3/2016 5:11:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
4/3/2016 6:03:00 PM	Received alarm 61A/B, Process Rad Hi-Hi. GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
4/3/2016 6:05:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
4/3/2016 6:33:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCRIC385B , channel 381 , No Pulses-Time Out. Performed manual Check Source Test . WO #15-409963-001	edpitt	CRS
4/3/2016 7:38:00 PM	Received alarm 61A/B, Process Rad Hi-Hi. GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
4/3/2016 8:07:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
4/3/2016 8:29:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
4/3/2016 9:20:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
4/3/2016 9:54:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
4/3/2016 10:14:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
4/3/2016 11:56:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
4/4/2016 6:20:00 AM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK". Partial for HF RE-045	edwinn	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
4/4/2016 6:26:00 AM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT.	edwinn	CRS
4/4/2016 7:20:00 PM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK". Partial for HF RE-45	edwinn	CRS
4/4/2016 7:27:00 PM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT.	edwinn	CRS
4/4/2016 9:21:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor ABRI0112 Channel , No Pulses Time Out. Performed manual Check Source Test SAT.	edwinn	CRS
4/5/2016 5:53:00 PM	Received alarm 61B, Process Rad Hi, for GTRE31 particulate spike to alert. Immediately reset. ODMI 2015-07.	joweber1	CRS
4/5/2016 10:52:00 PM	Received alarm 61C, Process Rad Mon Fail. Entered ALR 61C. GHRE22 particulate loss of sample flow is the cause of the alarm. Directed Chemistry to change filter. Exited ALR 61C.	shafe	CRS
4/6/2016 1:58:00 AM	Received alarm 61C, Process Rad Mon Fail. Entered ALR 61C. Source of alarm is FCRIC385B, AFW Turbine Exhaust Rad Monitor. Performing check source IAW SYS SP-121 as directed by ALR. Ref WO# 15-409963-001.	shafe	CRS
4/6/2016 4:34:00 AM	Received alarm 61C, Process Rad Mon Fail. Entered ALR 61C. ABRIC111B Steam Line D Rad Monitor no pulses timeout was cause of the alarm, which immediately reset. CR 103796	shafe	CRS
4/6/2016 6:03:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	shafe	CRS
4/6/2016 9:55:00 AM	Received alarm 61B, Process Rad Hi, for GTRE31 particulate spike to alert. Immediately reset. ODMI 2015-07	joweber1	CRS
4/6/2016 10:14:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	joweber1	CRS
4/6/2016 11:49:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	joweber1	CRS
4/7/2016 12:02:00 AM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK".	shafe	CRS
4/7/2016 1:41:00 AM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT.	shafe	CRS
4/8/2016 12:50:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	jestrah	CRS
4/8/2016 1:17:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	jestrah	CRS
4/8/2016 1:30:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	jestrah	CRS
4/8/2016 1:45:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0032 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	jestrah	CRS
4/8/2016 3:02:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	jestrah	CRS
4/8/2016 3:38:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	jestrah	CRS
4/8/2016 5:46:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0032 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	jestrah	CRS
4/8/2016 5:57:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0032 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	jestrah	CRS
4/8/2016 11:15:00 PM	Received alarm 61C, Process Rad Mon Fail. FCRIC385B, AFW Turb Exhaust Rad Monitor no pulses timeout. Alarm immediately reset. WO#409963-001	shafe	CRS
4/9/2016 12:11:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	shafe	CRS
4/9/2016 1:35:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	shafe	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
4/9/2016 1:45:00 AM	Received alarm 61A/B, Process Rad Hi-Hi. GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	shafe	CRS
4/9/2016 1:45:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0032 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	shafe	CRS
4/9/2016 1:46:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	shafe	CRS
4/9/2016 2:03:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	shafe	CRS
4/9/2016 2:45:00 AM	Received alarm 61C, Process Rad Mon Fail. FCRIC385B, AFW Turb Exhaust Rad Monitor no pulses timeout. Alarm immediately reset. WO#409963-001	shafe	CRS
4/9/2016 3:37:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0032 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	shafe	CRS
4/9/2016 4:04:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0032 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	shafe	CRS
4/9/2016 5:20:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	shafe	CRS
4/9/2016 5:29:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0032 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	shafe	CRS
4/9/2016 5:39:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	shafe	CRS
4/9/2016 6:31:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0032 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	shafe	CRS
4/9/2016 6:50:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	edwinn	CRS
4/9/2016 7:09:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	edwinn	CRS
4/9/2016 7:28:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	edwinn	CRS
4/9/2016 7:46:00 AM	Received alarm 61A/B, Process Rad Hi-Hi. GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
4/9/2016 8:06:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	edwinn	CRS
4/9/2016 9:16:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0032 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	edwinn	CRS
4/9/2016 9:45:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0032 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	edwinn	CRS
4/9/2016 10:17:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	edwinn	CRS
4/9/2016 10:35:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0032 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	edwinn	CRS
4/9/2016 10:59:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0032 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	edwinn	CRS
4/9/2016 11:07:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0032 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	edwinn	CRS
4/9/2016 11:21:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	edwinn	CRS
4/9/2016 11:23:00 AM	Received alarm 61A/B, Process Rad Hi-Hi. GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
4/9/2016 12:06:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0032 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	edwinn	CRS
4/9/2016 12:56:00 PM	Received alarm 61A/B, Process Rad Hi-Hi. GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
4/9/2016 12:58:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	edwinn	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
4/9/2016 1:08:00 PM	Received alarm 61A/B, Process Rad Hi-Hi. GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
4/9/2016 1:10:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	edwinn	CRS
4/9/2016 1:52:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	edwinn	CRS
4/9/2016 3:00:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	edwinn	CRS
4/9/2016 3:19:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0032 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	edwinn	CRS
4/9/2016 3:29:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0032 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	edwinn	CRS
4/9/2016 4:40:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	edwinn	CRS
4/9/2016 5:17:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0032 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	edwinn	CRS
4/9/2016 5:24:00 PM	Received alarm 61A/B, Process Rad Hi-Hi. GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
4/9/2016 5:25:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0032 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	edwinn	CRS
4/9/2016 6:30:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0032 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	edwinn	CRS
4/9/2016 7:30:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	chwoods	CRS
4/9/2016 7:31:00 PM	Received alarm 61A/B, Process Rad Hi-Hi. GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	chwoods	CRS
4/9/2016 7:33:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0032 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	chwoods	CRS
4/9/2016 8:15:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0032 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	chwoods	CRS
4/9/2016 8:44:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	chwoods	CRS
4/9/2016 8:45:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	chwoods	CRS
4/10/2016 1:31:00 AM	Received alarm 61A/B, Process Rad Hi-Hi. GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	chwoods	CRS
4/10/2016 1:34:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	chwoods	CRS
4/10/2016 8:41:00 AM	Received alarm 61A/B, Process Rad Hi-Hi. GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
4/10/2016 8:43:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0032 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	trrohlf	CRS
4/10/2016 7:23:00 PM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK".	joweber1	CRS
4/10/2016 7:30:00 PM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" Partial Test for GRP No. U1GB2016-041	joweber1	CRS
4/11/2016 11:17:00 AI	Received annunciator 61C, PROCESS RAD MONITOR FAIL. Alarm was GHRE-10A loss of flow. Performing ALR. Contacted chemistry to change filter paper.	trrohlf	CRS
4/12/2016 1:00:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	joweber1	CRS
4/12/2016 1:54:00 AM	Received alarm 61A/B, Process Rad Hi-Hi. GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	joweber1	CRS
4/12/2016 2:17:00 AM	Received alarm 61A/B, Process Rad Hi-Hi. GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	joweber1	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
4/12/2016 5:08:00 AM	Received alarm 61A/B, Process Rad Hi-Hi. GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	joweber1	CRS
4/12/2016 10:35:00 AI	Received alarm 61C, Process Rad Mon Fail. Entered ALR 61C. FCRIC385B No pulses timeout is the cause of the alarm, which immediately reset. Exited ALR 61C. Ref WO# 15-409963-001.	shafe	CRS
4/12/2016 6:25:00 PM	Received ALR 61A and 61B "Process Rad Hi and Hi Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	pimoore	CRS
4/12/2016 6:27:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	pimoore	CRS
4/13/2016 3:00:00 AM	Received annunciator 61C, PROCESS RAD MONITOR FAIL. Alarm was GH RE-22 loss of flow. Performing ALR. Contacted chemistry to change filter paper.	tidunlo	CRS
4/13/2016 3:08:00 AM	Received ALR 61A "PROCESS RAD HIHI" and ALR 61B "PROCESS RAD HI" on GT RE-31 particulate channel spiked into an Alert state and then returned to normal. ODMI 2015-07.	tidunlo	CRS
4/13/2016 3:10:00 AM	Received ALR 61B "PROCESS RAD HI on GT RE-31 particulate channel spiked into an Alert state and then returned to normal. ODMI 2015-07.	tidunlo	CRS
4/13/2016 6:03:00 AM	Received ALR 61A "PROCESS RAD HIHI" and ALR 61B "PROCESS RAD HI" on GT RE-32 particulate channel spiked into an Alert state and then returned to normal. ODMI 2015-07.	tidunlo	CRS
4/13/2016 6:04:00 AM	Received ALR 61B "PROCESS RAD HI on GT RE-32 particulate channel spiked into an Alert state and then returned to normal. ODMI 2015-07.	tidunlo	CRS
4/13/2016 8:58:00 AM	Received alarm 61C, Process Rad Mon Fail. Entered ALR 61C. FCRIC385B No pulses timeout is the cause of the alarm, which immediately reset. Exited ALR 61C. Ref WO# 15-409963-001.	shafe	CRS
4/13/2016 9:45:00 PM	Received annunciator 61C, PROCESS RAD MONITOR FAIL. Alarm was GK RE-41 loss of flow. Performing ALR. Contacted chemistry to change filter paper.	tidunlo	CRS
4/14/2016 3:50:00 PM	Received alarm 61C, Process Rad Mon Fail. Entered ALR 61C. FCRIC385B No pulses timeout is the cause of the alarm, which immediately reset. Exited ALR 61C. Ref WO# 15-409963-001.	shafe	CRS
4/14/2016 10:19:00 PM	Received alarm 61A, Process Rad HiHi and 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	kylaubn	CRS
4/14/2016 10:31:00 PM	Received alarm 61A, Process Rad HiHi and 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	kylaubn	CRS
4/14/2016 11:12:00 PM	Received alarm 61A, Process Rad HiHi and 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	kylaubn	CRS
4/15/2016 12:14:00 AI	Received alarm 61A, Process Rad HiHi and 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	kylaubn	CRS
4/15/2016 12:16:00 AI	Received alarm 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	kylaubn	CRS
4/15/2016 2:03:00 AM	Received alarm 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	kylaubn	CRS
4/15/2016 4:44:00 AM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	kylaubn	CRS
4/15/2016 5:22:00 AM	Received alarm 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	kylaubn	CRS
4/15/2016 5:31:00 AM	Received alarm 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	kylaubn	CRS
4/15/2016 6:10:00 AM	Received alarm 61A, Process Rad HiHi and 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	kylaubn	CRS
4/15/2016 6:12:00 AM	Received alarm 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	kylaubn	CRS
4/15/2016 6:56:00 AM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	jestrah	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
4/15/2016 7:19:00 AM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	jestrah	CRS
4/15/2016 8:21:00 AM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	jestrah	CRS
4/15/2016 8:55:00 AM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	jestrah	CRS
4/15/2016 9:11:00 AM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	jestrah	CRS
4/15/2016 9:27:00 AM	Received alarm 61A, Process Rad HiHi and 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alarm setpoint, then clearing. ODMI 2015-07.	jestrah	CRS
4/15/2016 9:29:00 AM	Received alarm 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	jestrah	CRS
4/15/2016 11:45:00 AM	Received alarm 61A, Process Rad HiHi and 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alarm setpoint, then clearing. ODMI 2015-07.	jestrah	CRS
4/15/2016 11:46:00 AM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	jestrah	CRS
4/15/2016 11:53:00 AM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	jestrah	CRS
4/15/2016 12:25:00 PM	Received alarm 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	jestrah	CRS
4/15/2016 12:58:00 PM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	jestrah	CRS
4/15/2016 1:06:00 PM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	jestrah	CRS
4/15/2016 1:16:00 PM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	jestrah	CRS
4/15/2016 3:45:00 PM	Received alarm 61A, Process Rad HiHi and 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alarm setpoint, then clearing. ODMI 2015-07.	jestrah	CRS
4/15/2016 4:58:00 PM	Received alarm 61A, Process Rad HiHi and 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alarm setpoint, then clearing. ODMI 2015-07.	jestrah	CRS
4/15/2016 5:00:00 PM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	jestrah	CRS
4/15/2016 5:11:00 PM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	jestrah	CRS
4/16/2016 9:51:00 AM	Received alarm 61A, Process Rad HiHi and 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	joweber1	CRS
4/16/2016 11:34:00 AM	Received alarm 61A, Process Rad HiHi and 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	joweber1	CRS
4/16/2016 12:26:00 PM	Received alarm 61A, Process Rad HiHi and 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	joweber1	CRS
4/16/2016 2:17:00 PM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	joweber1	CRS
4/16/2016 2:58:00 PM	Received alarm 61A, Process Rad HiHi and 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	joweber1	CRS
4/16/2016 3:40:00 PM	Received alarm 61A, Process Rad HiHi and 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	joweber1	CRS
4/16/2016 3:57:00 PM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	joweber1	CRS
4/16/2016 4:37:00 PM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	joweber1	CRS
4/16/2016 5:06:00 PM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	joweber1	CRS
4/16/2016 5:20:00 PM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	joweber1	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
4/16/2016 6:11:00 PM	Received alarm 61A, Process Rad HiHi and 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	joweber1	CRS
4/16/2016 6:48:00 PM	Received alarm 61A, Process Rad HiHi and 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	joweber1	CRS
4/16/2016 7:06:00 PM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/16/2016 7:26:00 PM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/16/2016 9:08:00 PM	Received alarm 61A, Process Rad HiHi and 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alarm setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/16/2016 9:22:00 PM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/17/2016 12:48:00 AI	Received alarm 61A, Process Rad HiHi and 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alarm setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/17/2016 12:49:00 AI	Received alarm 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/17/2016 3:50:00 AM	Received alarm 61A, Process Rad HiHi and 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alarm setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/17/2016 5:02:00 AM	Received the following multiple unexpected alarms: 130E, Gen Aux Trouble; 115D, Manual Action Requested; and 61C, Process Rad Mon Fail. Entered ALR 130E. Alarm 61C was associated with EGRE09 CCW Train A Rad Monitor as indicated on NPIS. Alarms 61C and 115D reset immediately. Dispatched the Turbine Watch to the Gen Aux Panel and acknowledge a Stator Water Cooling Trouble alarm locally, which reset, resetting 130E. All parameters locally and in the Control Room normal with exception of a 100 MWe swing of generator output. Contacted System Ops Transmission (Scott). He indicated that the Rose Hill to Latham line had relayed. System Ops Transmission indicated that the grid is stable at this time. CR 104000	shafe	CRS
4/17/2016 8:23:00 AM	Received alarm 61A, Process Rad HiHi and 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alarm setpoint, then clearing. ODMI 2015-07.	ryfurma	RO
4/18/2016 4:24:00 AM	Received alarm 61C, Process Rad Mon Fail. Entered ALR 61C. FCRIC385B No pulses timeout is the cause of the alarm, which immediately reset. Exited ALR 61C. Ref WO# 15-409963-001.	shafe	CRS
4/21/2016 6:10:00 AM	Annunciator 61C, PROCESS RAD MONITOR FAIL, in and clear. GHRE0022, channel 224 in due to loss of flow. Performing ALR 61C. Contacted Chemistry, Laura, IAW ALR 61C for filter change-out.	mifulle1	CRS
4/22/2016 7:29:00 AM	Received alarm 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/22/2016 7:41:00 AM	Received alarm 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/22/2016 8:15:00 AM	Received alarm 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/22/2016 9:41:00 AM	Received alarm 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/22/2016 11:18:00 AI	Received alarm 61C, Process Rad Mon Fail. Entered ALR 61C. FCRIC385B No pulses timeout is the cause of the alarm, which immediately reset. Exited ALR 61C. Ref WO# 15-409963-001.	shafe	CRS
4/22/2016 1:18:00 PM	Received alarm 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/22/2016 2:17:00 PM	Received alarm 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/22/2016 2:26:00 PM	Received alarm 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/22/2016 3:29:00 PM	Received alarm 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	shafe	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
4/22/2016 4:15:00 PM	Received alarm 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/23/2016 6:42:34 AM	ALR 61B, Process Rad Hi due to GTRE0031 particulate channel, in and clear. ODMI 2015-07.	mifulle1	CRS
4/23/2016 7:16:00 AM	Received alarm 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/23/2016 7:23:00 AM	Received alarm 61C, Process Rad Mon Fail. Entered ALR 61C. ABRIC111B Steam Line D Rad Monitor no pulses timeout was cause of the alarm, which immediately reset. CR 103796	shafe	CRS
4/23/2016 8:08:00 AM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK", partial for GTRE22/33/31/32 in support of U1GB2016-046 release permit.	shafe	CRS
4/23/2016 8:41:00 AM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT.	shafe	CRS
4/23/2016 1:33:00 PM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/23/2016 2:39:00 PM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/23/2016 2:51:00 PM	Received alarm 61A, Process Rad Hi Hi, for GTRE31 particulate channel spiking to Hi setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/23/2016 4:37:00 PM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/23/2016 5:19:00 PM	Received alarm 61C, Process Rad Mon Fail. Entered ALR 61C. FCRIC385B No pulses timeout is the cause of the alarm. Ref WO# 15-409963-001.	shafe	CRS
4/23/2016 5:40:00 PM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/23/2016 6:08:00 PM	Received alarm 61C, Process Rad Mon Fail. Entered ALR 61C. FCRIC385B No pulses timeout is the cause of the alarm. Ref WO# 15-409963-001.	shafe	CRS
4/24/2016 2:26:00 AM	Received ALR 61B "PROCESS RAD HI on GT RE-31 particulate channel spiked into an Alert state and then returned to normal. ODMI 2015-07.	tidunlo	CRS
4/24/2016 4:21:00 AM	Received ALR 61B "PROCESS RAD HI on GT RE-31 particulate channel spiked into an Alert state and then returned to normal. ODMI 2015-07.	tidunlo	CRS
4/24/2016 4:59:00 AM	Received ALR 61B "PROCESS RAD HI on GT RE-31 particulate channel spiked into an Alert state and then returned to normal. ODMI 2015-07.	tidunlo	CRS
4/24/2016 6:26:00 AM	Received ALR 61B "PROCESS RAD HI on GT RE-31 particulate channel spiked into an Alert state and then returned to normal. ODMI 2015-07.	tidunlo	CRS
4/24/2016 6:41:00 AM	Received annunciator 61C, PROCESS RAD MONITOR FAIL. Alarm was GH RE-22 loss of flow. Performing ALR. Contacted chemistry to change filter paper.	tidunlo	CRS
4/24/2016 7:32:00 AM	Alarm 61C, Process Rad Mon Fail reset after filter changeout of GHRE22. Exited ALR 61C.	shafe	CRS
4/24/2016 11:39:00 AM	Received alarm 61A, Process Rad Hi Hi, for GTRE31 particulate channel spiking to Hi setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/24/2016 11:41:00 AM	Received alarm 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/24/2016 1:21:00 PM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/24/2016 3:03:00 PM	Received alarm 61A, Process Rad Hi Hi, for GTRE31 particulate channel spiking to Hi setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/24/2016 3:06:00 PM	Received alarm 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/24/2016 3:47:00 PM	Received alarm 61A, Process Rad Hi Hi, for GTRE32 particulate channel spiking to Hi setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/24/2016 3:49:00 PM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	shafe	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
4/24/2016 5:29:00 PM	Received alarm 61A, Process Rad Hi Hi, for GTRE32 particulate channel spiking to Hi setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/24/2016 5:31:00 PM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	tidunlo	CRS
4/24/2016 6:30:00 PM	Received alarm 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/24/2016 6:32:00 PM	Received alarm 61B, Process Rad Hi, for GTRE31 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/24/2016 6:33:00 PM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	shafe	CRS
4/24/2016 7:27:00 PM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK". Partial for GT RE31/32/22/33 GRP U1GB 2016-046.	tidunlo	CRS
4/24/2016 7:34:00 PM	Received alarm 61B, Process Rad Hi, for GTRE32 particulate channel spiking to alert setpoint, then clearing. ODMI 2015-07.	tidunlo	CRS
4/24/2016 8:28:00 PM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT. Partial for GT RE31/32/22/33 GRP U1GB 2016-046.	tidunlo	CRS
4/25/2016 3:38:00 AM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK". Partial for HF RE-45 LRP U1LB 2016-021.	tidunlo	CRS
4/25/2016 4:02:00 AM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT. Partial for HF RE-45 LRP U1LB 2016-021.	tidunlo	CRS
4/25/2016 11:00:00 AI	Received alarm 61C, Process Rad Mon Fail. Entered ALR 61C. FCRIC385B No pulses timeout is the cause of the alarm, which immediately reset. Exited ALR 61C. Ref WO# 15-409963-001.	shafe	CRS
4/25/2016 3:29:00 PM	Received alarm 61C, Process Rad Mon Fail. Entered ALR 61C. FCRIC385B No pulses timeout is the cause of the alarm, which immediately reset. Exited ALR 61C. Ref WO# 15-409963-001.	shafe	CRS
4/26/2016 8:32:00 AM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCRIC385B , channel 381 , No Pulses-Time Out. Performed manual Check Source Test . WO #15-409963-001	thfairc	CRS
4/26/2016 4:07:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	thfairc	CRS
4/27/2016 9:53:00 AM	Received ALR 61B "Process Rad Hi" on GTRE0032 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	thfairc	CRS
4/27/2016 12:37:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0032 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	thfairc	CRS
4/27/2016 2:00:00 PM	Received ALR 61B "Process Rad Hi" on GTRE0031 particulate channel. Spiked into Alert state and then returned to normal. Refer to ODMI 2015-07.	thfairc	CRS
4/27/2016 9:57:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCRIC385B, channel 381, No Pulses-Time Out. Performed manual Check Source Test . WO #15-409963-001.	edpitt	CRS
4/27/2016 10:00:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCRIC385B, channel 381, Check Source Test Failure. Performed manual Check Source Test . WO #15-409963-001.	edpitt	CRS
5/3/2016 8:57:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCT381 Channel , No Pulses Time Out. Performed manual Check Source Test SAT.	edwinn	CRS
5/4/2016 2:01:00 PM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK". Partial for U1GB2016-050.	brdavis2	CRS
5/4/2016 2:46:00 PM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT.	brdavis2	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
5/4/2016 6:18:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCT381 Channel , No Pulses Time Out. Performed manual Check Source Test SAT.	brdavis2	CRS
5/5/2016 12:05:00 AM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK".	edwinn	CRS
5/5/2016 12:26:00 AM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT.	edwinn	CRS
5/5/2016 1:21:00 AM	Received alarma 61Aand 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
5/5/2016 1:23:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
5/5/2016 4:32:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor ABRIC0112B Channel 112 , No Pulses Time Out. Performed manual Check Source Test SAT.	edpitt	CRS
5/6/2016 10:05:00 PM	Received alarm 61C, Process Rad Mon Fail. Entered ALR 61C. FCRIC385B No pulses timeout is the cause of the alarm, which immediately reset. Exited ALR 61C. Ref WO# 15-409963-001.	shafe	CRS
5/8/2016 11:30:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCRIC385B, channel 381, No Pulses Time Out. Performed manual Check Source Test 5 times and still did not pass. WO #15-409963-001 already initiated to replace the detector in Refuel 21. EOL 2015-0632	edpitt	CRS
5/9/2016 1:08:00 AM	Received ALR 61B "PROCESS RAD HI" on GTRE0032 particulate channel spiked into an Alert state and then returned to normal. ODMI 2015-07.	edpitt	CRS
5/10/2016 5:35:00 AM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK", partial to support GRP #U1GP2016-052.	edpitt	CRS
5/10/2016 6:05:00 AM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK", partial to support GRP #U1GB2016-052, SAT.	edpitt	CRS
5/11/2016 5:22:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	jeriley1	RO
5/11/2016 7:57:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	joweber1	CRS
5/11/2016 8:41:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	joweber1	CRS
5/11/2016 8:54:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	joweber1	CRS
5/11/2016 10:03:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	joweber1	CRS
5/11/2016 10:27:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	joweber1	CRS
5/11/2016 10:37:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	joweber1	CRS
5/11/2016 10:58:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	joweber1	CRS
5/11/2016 11:12:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	joweber1	CRS
5/12/2016 12:10:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	joweber1	CRS
5/12/2016 1:07:00 AM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	joweber1	CRS
5/12/2016 1:08:00 AM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	joweber1	CRS
5/12/2016 1:28:00 AM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	joweber1	CRS
5/12/2016 2:41:00 AM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	joweber1	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
5/12/2016 7:20:00 AM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
5/12/2016 7:22:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
5/13/2016 3:18:00 AM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	joweber1	CRS
5/13/2016 4:31:00 AM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	joweber1	CRS
5/13/2016 12:00:00 PM	Received ANN 61C "PROCESS RAD MON FAILURE "due to loss of communications to GLP604 (GLRE0060). Attempted to acknowledge alarm iaw SYS SP-121 but alarm is locked in. CR 104601 initiated.	styunk	CRS
5/13/2016 4:18:00 PM	Received alarm 61A, Process Rad Hi Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	styunk	CRS
5/13/2016 6:17:00 PM	Received alarm 61A, Process Rad Hi Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	styunk	CRS
5/13/2016 9:16:00 PM	Received alarms 61A, Process Rad HiHi; and 61B, Process Rad Hi. GTRE31 particulate in alert and Hi due to spiking. Alarms immediately reset. ODMI 2015-07	chwoods	CRS
5/13/2016 11:42:00 PM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	chwoods	CRS
5/13/2016 11:43:00 PM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	chwoods	CRS
5/14/2016 1:51:00 AM	Received alarms 61A, Process Rad HiHi; and 61B, Process Rad Hi. GTRE31 particulate in alert and Hi due to spiking. Alarms immediately reset. ODMI 2015-07	chwoods	CRS
5/14/2016 1:53:00 AM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	chwoods	CRS
5/14/2016 2:07:00 AM	Received alarms 61A, Process Rad HiHi; and 61B, Process Rad Hi. GTRE31 particulate in alert and Hi due to spiking. Alarms immediately reset. ODMI 2015-07	chwoods	CRS
5/14/2016 3:22:00 AM	Received alarms 61A, Process Rad HiHi; and 61B, Process Rad Hi. GTRE31 particulate in alert and Hi due to spiking. Alarms immediately reset. ODMI 2015-07	chwoods	CRS
5/14/2016 3:24:00 AM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	chwoods	CRS
5/14/2016 6:03:00 AM	Received alarm 61B, Process Rad Hi GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	chwoods	CRS
5/14/2016 6:46:00 AM	Received alarms 61A, Process Rad HiHi; and 61B, Process Rad Hi. GTRE31 particulate in alert and Hi due to spiking. Alarms immediately reset. ODMI 2015-07	styunk	CRS
5/14/2016 7:45:00 AM	Received alarm 61B, Process Rad Hi GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	styunk	CRS
5/14/2016 8:53:00 AM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	styunk	CRS
5/14/2016 10:25:00 AM	Received alarm 61B, Process Rad Hi GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	styunk	CRS
5/14/2016 12:06:00 PM	Received alarm 61B, Process Rad Hi GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	styunk	CRS
5/14/2016 12:33:00 PM	Received alarm 61B, Process Rad Hi GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	styunk	CRS
5/14/2016 12:39:00 PM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	styunk	CRS
5/16/2016 7:42:00 AM	Received ALR 61A "PROCESS RAD HIHI" and ALR 61B "PROCESS RAD HI" on GT RE-32 particulate channel spiked into an Alarm and Alert state and then returned to normal. ODMI 2015-07.	edpitt	CRS
5/16/2016 8:19:00 AM	Received ALR 61A "PROCESS RAD HIHI" and ALR 61B "PROCESS RAD HI" on GT RE-31 particulate channel spiked into an Alarm and Alert state and then returned to normal. ODMI 2015-07.	edpitt	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
5/16/2016 9:00:00 AM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCRIC385B , channel 381 , No Pulses-Time Out. Performed manual Check Source Test . WO #15-409963-001	edpitt	CRS
5/16/2016 10:28:00 AI	Received ALR 61A "PROCESS RAD HIHI" and ALR 61B "PROCESS RAD HI" on GT RE-31 particulate channel spiked into an Alarm and Alert state and then returned to normal. ODMI 2015-07.	edpitt	CRS
5/16/2016 10:30:00 AI	Received ALR 61B "PROCESS RAD HI on GT RE-31 particulate channel spiked into an Alert state and then returned to normal. ODMI 2015-07.	edpitt	CRS
5/16/2016 11:24:00 AI	Received ALR 61B "PROCESS RAD HI on GT RE-31 particulate channel spiked into an Alert state and then returned to normal. ODMI 2015-07.	edpitt	CRS
5/16/2016 11:47:00 AI	Received ALR 61A "PROCESS RAD HIHI" and ALR 61B "PROCESS RAD HI" on GT RE-32 particulate channel spiked into an Alarm and Alert state and then returned to normal. ODMI 2015-07.	kylaubn	CRS
5/16/2016 12:23:00 PM	Received ALR 61A "PROCESS RAD HIHI" and ALR 61B "PROCESS RAD HI" on GT RE-31 particulate channel spiked into an Alarm and Alert state and then returned to normal. ODMI 2015-07.	edpitt	CRS
5/16/2016 12:25:00 PM	Received ALR 61B "PROCESS RAD HI on GT RE-31 particulate channel spiked into an Alert state and then returned to normal. ODMI 2015-07.	edpitt	CRS
5/16/2016 12:44:00 PM	Received ALR 61B "PROCESS RAD HI on GT RE-31 particulate channel spiked into an Alert state and then returned to normal. ODMI 2015-07.	edpitt	CRS
5/16/2016 1:01:00 PM	Received ALR 61B "PROCESS RAD HI on GT RE-31 particulate channel spiked into an Alert state and then returned to normal. ODMI 2015-07.	edpitt	CRS
5/16/2016 2:21:00 PM	Received ALR 61A "PROCESS RAD HIHI" and ALR 61B "PROCESS RAD HI" on GT RE-32 particulate channel spiked into an Alarm and Alert state and then returned to normal. ODMI 2015-07.	edpitt	CRS
5/16/2016 3:38:00 PM	Received ALR 61B "PROCESS RAD HI on GT RE-31 particulate channel spiked into an Alert state and then returned to normal. ODMI 2015-07.	edpitt	CRS
5/16/2016 5:27:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCRIC385B, channel 381, No Pulses Time Out at 14:09. Performed manual Check Source Test 5 times over the course of the day since that time and still did not pass. WO #15-409963-001 already initiated to replace the detector in Refuel 21. EOL #2015-0632.	edpitt	CRS
5/16/2016 6:37:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor ABS0112 , channel , Check Source Test Failure. Performed manual Check Source Test SAT.	edwinn	CRS
5/16/2016 7:51:00 PM	Received ALR 61B "PROCESS RAD HI on GT RE-32 particulate channel spiked into an Alert state and then returned to normal. ODMI 2015-07.	edwinn	CRS
5/17/2016 7:07:00 PM	Received alarm 61C, Process Rad Mon Fail. Entered ALR. Investigation showed GTRE21A particulate check source fail.	shafe	CRS
5/17/2016 7:33:00 PM	Alarm 61C, Process Rad Mon Fail, cleared. Exited ALR.	shafe	CRS
5/18/2016 1:41:00 AM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCRIC385B, channel 381, No Pulses Time Out. WO #15-409963-001 already initiated to replace the detector in Refuel 21. EOL 2015-0632	shafe	CRS
5/18/2016 6:22:00 AM	Received alarm 61B, Process Rad Hi, 15 times throughout the shift due to GTRE31/32 spiking. Reference ODMI 2015-07.	shafe	CRS
5/18/2016 6:50:00 PM	Received alarm 61B, Process Rad Hi, 13 times throughout the shift due to GTRE31/32 spiking. Reference ODMI 2015-07.	joweber1	CRS
5/18/2016 8:06:00 PM	Received alarm 61C, Process Rad Mon Fail, which immediately cleared. Cause was "no pulses timeout" on ABRIC112B.	shafe	CRS
5/19/2016 1:52:00 AM	Received Annunciator 61C, "Process Rad Mon Fail." which immediately cleared. Monitor FCRIC385B, channel 381, No Pulses Time Out. WO #15-409963-001 already initiated to replace the detector in Refuel 21. EOL 2015-0632	shafe	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
5/21/2016 3:37:00 AM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCRIC385B, channel 381, No Pulses Time Out. WO #15-409963-001 already initiated to replace the detector in Refuel 21. EOL 2015-0632	shafe	CRS
5/21/2016 4:56:00 AM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCRIC385B, channel 381, No Pulses Time Out. WO #15-409963-001 already initiated to replace the detector in Refuel 21. EOL 2015-0632	shafe	CRS
5/22/2016 8:45:00 AM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCT381 Channel , No Pulses Time Out. Performed manual Check Source Test SAT.	edwinn	CRS
5/23/2016 2:39:00 AM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" partial for U1GB2016-057	joweber1	CRS
5/23/2016 2:53:00 AM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT.	joweber1	CRS
5/23/2016 11:30:00 AM	Received annunciator 61C, PROCESS RAD MONITOR FAIL. Alarm was GTRE-22 loss of flow. Performing ALR. Contacted chemistry to change filter paper.	trrohlf	CRS
5/23/2016 7:36:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCT381 Channel , No Pulses Time Out. Performed manual Check Source Test SAT.	joweber1	CRS
5/24/2016 3:52:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." which immediately cleared. Monitor FCRIC385B, channel 381, No Pulses Time Out. WO #15-409963-001 already initiated to replace the detector in Refuel 21. EOL 2015-0632	shafe	CRS
5/26/2016 9:52:00 AM	Received Annunciator 61C, "Process Rad Mon Fail." which immediately cleared. Monitor FCRIC385B, channel 381, No Pulses Time Out. WO #15-409963-001 already initiated to replace the detector in Refuel 21. EOL 2015-0632	shafe	CRS
5/27/2016 3:33:00 AM	Received ALR 61A "PROCESS RAD HIHI" and ALR 61B "PROCESS RAD HI" on GT RE-32 particulate channel spiked into an Alarm and Alert state and then returned to normal. ODMI 2015-07.	kylaubn	CRS
5/27/2016 11:50:00 PM	Received ALR 61A "PROCESS RAD HIHI" and ALR 61B "PROCESS RAD HI" on GT RE-31 particulate channel spiked into an Alarm and Alert state and then returned to normal. ODMI 2015-07.	kylaubn	CRS
5/30/2016 7:19:00 AM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK". for U1LB2016-024	joweber1	CRS
5/30/2016 7:41:00 AM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT.	joweber1	CRS
5/31/2016 2:03:00 PM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK". Partial for GH RE-10B to support GRP # UIGB2016-061.	tidunlo	CRS
5/31/2016 2:25:00 PM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT. Partial for GH RE-10B to support GRP # UIGB2016-061.	tidunlo	CRS
5/31/2016 4:17:00 PM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK". Partial for GT RE-31/32/22/33 and GRP # UIGB2016-062.	tidunlo	CRS
5/31/2016 4:46:00 PM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT. Partial for GT RE-31/32/22/33 and GRP # UIGB2016-062.	tidunlo	CRS
6/1/2016 9:53:00 AM	Received alarm 61A, Process Rad Hi Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	tidunlo	CRS
6/1/2016 11:37:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	tidunlo	CRS
6/1/2016 11:41:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	tidunlo	CRS
6/1/2016 11:52:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	tidunlo	CRS
6/1/2016 1:03:00 PM	Received alarm 61A, Process Rad Hi Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	tidunlo	CRS
6/1/2016 1:04:00 PM	Received alarm 61A, Process Rad Hi Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	tidunlo	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
6/1/2016 2:00:00 PM	Received alarm 61A, Process Rad Hi Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	tidunlo	CRS
6/1/2016 2:43:00 PM	Received alarm 61A, Process Rad Hi Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	tidunlo	CRS
6/1/2016 8:44:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCRIC385B, channel 381, Check Source Test Failure. Performed manual Check Source Test 5 times and still did not pass. WO #15-409963-001 already initiated to replace the detector in Refuel 21.	daghols	CRS
6/1/2016 9:54:00 PM	Received alarm 61A, Process Rad Hi Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	daghols	CRS
6/1/2016 9:56:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	daghols	CRS
6/1/2016 11:10:00 PM	Received alarm 61A, Process Rad Hi Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	daghols	CRS
6/2/2016 12:49:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCRIC385B , channel 381 , No Pulses-Time Out in and clear. WO #15-409963-001.	tidunlo	CRS
6/2/2016 10:57:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	daghols	CRS
6/2/2016 11:05:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	daghols	CRS
6/3/2016 2:55:00 AM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCRIC385B , channel 381 , No Pulses-Time Out in and clear. WO #15-409963-001.	daghols	CRS
6/3/2016 9:28:00 AM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	glreeve	CRS
6/3/2016 10:31:00 AM	Received ann. 061C, PROCESS RAD MON FAIL, for FCRIC0385B, TD AFP STM LINE VENT MONITOR, due to "No pulses time out". WO 15-409963-001 is open for this condition. Target: 9/24/2016	glreeve	CRS
6/3/2016 8:17:00 PM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	thfairc	CRS
6/3/2016 9:20:00 PM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	thfairc	CRS
6/3/2016 11:04:00 PM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	thfairc	CRS
6/3/2016 11:51:00 PM	Received annunciator 61C, PROCESS RAD MONITOR FAIL. Alarm was GKRE0041, channel 414 loss of flow. Performing ALR. Contacted chemistry to change filter paper.	thfairc	CRS
6/4/2016 2:00:00 AM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	thfairc	CRS
6/4/2016 4:04:49 AM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	thfairc	CRS
6/4/2016 5:33:17 AM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	thfairc	CRS
6/4/2016 6:02:36 AM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	thfairc	CRS
6/4/2016 6:57:17 AM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	thfairc	CRS
6/4/2016 7:35:00 AM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	glreeve	CRS
6/4/2016 10:21:00 AM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	glreeve	CRS
6/4/2016 8:31:00 PM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK", Partial to support LRP NO. U1LB2016-026.	kylaubn	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
6/4/2016 8:55:00 PM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT, Partial to support U1LB2016-026.	kylaubn	CRS
6/5/2016 9:37:00 AM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	shafe	CRS
6/5/2016 9:49:00 AM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	shafe	CRS
6/5/2016 9:51:00 AM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	shafe	CRS
6/5/2016 12:10:00 PM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	shafe	CRS
6/5/2016 1:03:00 PM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	shafe	CRS
6/5/2016 2:47:00 PM	Received alarm 61A, Process Rad Hi/Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	shafe	CRS
6/5/2016 4:52:00 PM	Received alarm 61A, Process Rad Hi/Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	shafe	CRS
6/5/2016 9:17:00 PM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	tidunlo	CRS
6/5/2016 10:51:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	tidunlo	CRS
6/5/2016 10:52:00 PM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	tidunlo	CRS
6/6/2016 12:59:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCRIC385B, channel 381, Checksource Test Fail. WO #15-409963-001 already initiated to replace the detector in Refuel 21.	shafe	CRS
6/6/2016 2:30:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Monitor FCRIC385B, channel 381, no pulses timeout, which immediately reset. WO #15-409963-001 already initiated to replace the detector in Refuel 21.	shafe	CRS
6/6/2016 4:50:00 PM	Received alarm 61C, Process Rad Mon Fail, which immediately cleared. Cause was "no pulses timeout" on ABRIC112B.	shafe	CRS
6/6/2016 5:36:00 PM	Received alarm 61C, Process Rad Mon Fail. Found Unit Vent GTRE21B loss of flow. Entered ALR 61C.	shafe	CRS
6/7/2016 4:52:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCT381 Channel , No Pulses Time Out. Performed manual Check Source Test SAT.	thfairc	CRS
6/7/2016 6:45:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCT381 Channel , No Pulses Time Out. Performing Check Sources.	thfairc	CRS
6/9/2016 1:00:00 AM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK".	edpitt	CRS
6/9/2016 1:53:00 AM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT.	edpitt	CRS
6/10/2016 10:29:00 AI	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK", Partial for GTRE0022, GTRE0031, GTRE0032 and GTRE0033.	kylaubn	CRS
6/10/2016 10:58:00 AI	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT, Partial for GTRE0022, GTRE0031, GTRE0032 and GTRE0033.	kylaubn	CRS
6/11/2016 10:31:00 AI	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK". Partial for HFRE0045.	styunk	CRS
6/11/2016 10:57:00 AI	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT. Partial for HFRE0045.	styunk	CRS
6/11/2016 2:15:00 PM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	styunk	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
6/11/2016 2:45:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCT381 Channel , No Pulses Time Out. Performed manual Check Source Test SAT. WR 15-115441 already initiated.	styunk	CRS
6/11/2016 3:49:00 PM	Received alarm 61B, Process Rad Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	styunk	CRS
6/12/2016 12:23:00 AI	Received alarm 61B, Process Rad Hi GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	thfairc	CRS
6/12/2016 12:35:00 AI	Received alarm 61B, Process Rad Hi GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	thfairc	CRS
6/12/2016 3:36:00 AM	Received alarms 61A and 61B, Process Rad Hi Hi GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	thfairc	CRS
6/13/2016 8:25:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	tidunlo	CRS
6/13/2016 11:18:00 AI	Received annunciator 61B 'PROCESS RAD HI' on GG RE-28 following ALR. Chemistry and HP have been contacted to change filter paper and take local gas sample. WR # 16-117094.	tidunlo	CRS
6/13/2016 12:25:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	tidunlo	CRS
6/13/2016 1:42:00 PM	Received alarm 61A, Process Rad Hi Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	tidunlo	CRS
6/13/2016 1:46:00 PM	Received alarm 61A, Process Rad Hi Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07.	tidunlo	CRS
6/13/2016 2:39:00 PM	Received alarm 61A, Process Rad Hi Hi GTRE31 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07.	tidunlo	CRS
6/13/2016 4:33:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	tidunlo	CRS
6/13/2016 4:34:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	tidunlo	CRS
6/13/2016 4:54:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	tidunlo	CRS
6/13/2016 5:56:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	tidunlo	CRS
6/13/2016 7:39:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	thfairc	CRS
6/13/2016 7:59:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	thfairc	CRS
6/13/2016 8:33:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	thfairc	CRS
6/13/2016 8:51:00 PM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK". Partial for HFRE-45.	thfairc	CRS
6/14/2016 1:03:00 AM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT. Partial for HFRE-45.	thfairc	CRS
6/14/2016 5:15:00 AM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	thfairc	CRS
6/14/2016 7:21:00 AM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
6/14/2016 7:23:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	edpitt	CRS
6/14/2016 9:13:00 AM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
6/14/2016 9:15:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	edpitt	CRS
6/14/2016 9:41:00 AM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
6/14/2016 10:52:00 AI	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
6/14/2016 10:54:00 AI	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	edpitt	CRS
6/14/2016 1:33:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
6/14/2016 1:35:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	edpitt	CRS
6/14/2016 1:46:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
6/14/2016 1:47:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	edpitt	CRS
6/14/2016 2:03:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
6/14/2016 2:20:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
6/14/2016 2:22:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	edpitt	CRS
6/14/2016 3:21:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	edpitt	CRS
6/14/2016 3:24:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
6/14/2016 3:26:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	edpitt	CRS
6/14/2016 5:37:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCRIC385B, channel 381, Check Source Test Fail. WO #15-409963-001 already initiated to replace the detector in Refuel 21.	edpitt	CRS
6/14/2016 8:35:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor GTRE 21 , channel 211 , Check Source Test Failure. Performed manual Check Source Test SAT.	edwinn	CRS
6/14/2016 10:36:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
6/15/2016 3:04:00 AM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
6/15/2016 3:06:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
6/15/2016 1:00:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	brdavis2	CRS
6/15/2016 6:11:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	brdavis2	CRS
6/15/2016 7:23:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
6/15/2016 7:25:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
6/16/2016 9:53:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
6/17/2016 10:15:00 AI	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	daghols	CRS
6/17/2016 10:37:00 AI	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCRIC385B, channel 381, Check Source Test Failure. Performed manual Check Source Test 5 times and still did not pass. WO #15-409963-001 already initiated to replace the detector in Refuel 21	daghols	CRS
6/17/2016 11:58:00 AI	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	daghols	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
6/17/2016 5:28:00 PM	Received alarm 61B, Process Rad Hi GTRE32 particulate in alarm due to spiking. Alarms immediately reset. ODMI 2015-07	daghols	CRS
6/17/2016 7:42:00 PM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" partial to support CTMT Purge iaw GRP #U1GB2016-069.	trrohlf	CRS
6/17/2016 7:53:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
6/17/2016 9:42:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
6/18/2016 12:01:00 AI	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
6/18/2016 12:16:00 AI	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
6/18/2016 3:08:00 AM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" Partial Test for GTRE22, GTRE33, GTRE31, & GTRE32 to support GRP# U1GB2016-069.	trrohlf	CRS
6/18/2016 3:30:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
6/18/2016 3:38:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
6/18/2016 6:13:00 AM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
6/18/2016 6:15:00 AM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
6/18/2016 7:54:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
6/18/2016 10:00:00 AI	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
6/18/2016 10:57:00 AI	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
6/18/2016 11:33:00 AI	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
6/18/2016 12:37:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
6/18/2016 12:48:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
6/18/2016 12:53:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
6/18/2016 3:25:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
6/18/2016 5:02:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
6/18/2016 6:59:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	brdavis2	SM
6/18/2016 7:23:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	brdavis2	SE
6/18/2016 7:47:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	brdavis2	SE
6/18/2016 7:58:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCRIC385B, channel 381, Check Source Test Fail. WO #15-409963-001 already initiated to replace the detector in Refuel 21.	brdavis2	SM
6/18/2016 9:56:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	brdavis2	SE
6/18/2016 10:19:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	brdavis2	SE

CONTROL ROOM LOG

LogDate	Entry	User	UserType
6/19/2016 12:16:00 AI	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	brdavis2	SE
6/19/2016 12:27:00 AI	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	brdavis2	SE
6/19/2016 2:49:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	brdavis2	SE
6/19/2016 2:56:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	brdavis2	SE
6/19/2016 3:19:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	brdavis2	SE
6/19/2016 3:44:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	brdavis2	SE
6/19/2016 4:29:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	brdavis2	SE
6/19/2016 5:29:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	brdavis2	SE
6/19/2016 7:10:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	daghols	CRS
6/19/2016 8:21:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	daghols	CRS
6/19/2016 12:17:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	daghols	CRS
6/19/2016 6:07:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	daghols	CRS
6/19/2016 6:08:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	daghols	CRS
6/19/2016 7:02:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
6/19/2016 7:03:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
6/19/2016 10:17:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
6/19/2016 10:19:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
6/19/2016 11:40:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
6/19/2016 11:57:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
6/20/2016 12:08:00 AI	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
6/20/2016 12:09:00 AI	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
6/20/2016 1:20:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edpitt	CRS
6/20/2016 2:48:00 AM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCT381 Channel , No Pulses Time Out. Performed manual Check Source Test SAT. WR 15-115441 already initiated.	edpitt	CRS
6/20/2016 5:54:00 AM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCT381 Channel , No Pulses Time Out. Performed manual Check Source Test SAT. WR 15-115441 already initiated.	edpitt	CRS
6/21/2016 7:23:00 AM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK". Partial for HFRE045 per LRP 2016-029	edwinn	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
6/21/2016 7:38:00 AM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT.	edwinn	CRS
6/21/2016 1:50:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCT381 Channel , No Pulses Time Out. Performed manual Check Source Test SAT.	edwinn	CRS
6/22/2016 11:22:00 AI	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
6/24/2016 8:44:00 AM	ALR 61C "PROCESS RAD MON FAIL" due to ABS 112B no pulses timeout.	mifulle1	CRS
6/25/2016 8:56:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
6/25/2016 3:15:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
6/25/2016 6:04:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
6/26/2016 3:57:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
6/26/2016 4:08:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
6/26/2016 4:21:00 AM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCT381 Channel , No Pulses Time Out. Performed manual Check Source Test SAT. WR 15-115441 already initiated.	trrohlf	CRS
6/26/2016 6:24:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
6/26/2016 7:49:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	thfairc	CRS
6/26/2016 12:42:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	thfairc	CRS
6/27/2016 3:14:00 AM	Received ANN 61C " PROCESS RAD MON FAILURE " due to loss of communications to GTRE0022 Verified that Process Rad Monitors were operating properly at their respective RM-23.	edwinn	CRS
6/28/2016 7:57:00 PM	Received alarm 61C, Process Rad Mon Fail, which immediately cleared. Cause was "no pulses timeout" on ABRIC112B.	shafe	CRS
6/29/2016 5:01:00 AM	Received alarm 61C, Process Rad Mon Fail, due to loss of isokinetic flow for Unit Vent GTRIC21B during hanging of clearance C21 D-GF-N-017. Monitor remains Operable IAW ALR 61C Attachment A. Chemistry notified.	shafe	CRS
6/29/2016 3:07:00 PM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" partial for GT 22/33/31/32 for U1GB2016-073	joweber1	CRS
6/29/2016 3:19:00 PM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" Partial Test. partial for U1GB2016-073	joweber1	CRS
6/30/2016 5:50:00 AM	Received alarm 61C, Process Rad Mon Fail, due to loss of isokinetic flow for Unit Vent GTRIC21B during hanging of clearance C21 D-GF-N-017A. Monitor remains Operable IAW ALR 61C Attachment A. Chemistry notified.	shafe	CRS
7/1/2016 1:33:00 AM	Received alarm 61C, Process Rad Mon Fail, due to loss of isokinetic flow for Unit Vent GTRIC21B during hanging of clearance C21 D-GF-N-018A. Monitor remains Operable IAW ALR 61C Attachment A. Chemistry notified.	shafe	CRS
7/1/2016 7:10:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	styunk	CRS
7/1/2016 2:46:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	styunk	CRS
7/1/2016 3:23:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	styunk	CRS
7/1/2016 5:45:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	styunk	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
7/1/2016 6:36:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	styunk	CRS
7/1/2016 7:02:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	glreeve	CRS
7/1/2016 8:53:00 PM	Received alarm 61C, Process Rad Mon Fail, which immediately cleared. Cause was "no pulses timeout" on ABRIC112B. Initiated CR 00105577.	glreeve	CRS
7/1/2016 9:51:00 PM	Received alarms 61A, Process Rad Hi Hi and 61B, Process Rad Hi. GTRE31 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	glreeve	CRS
7/1/2016 9:53:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	glreeve	CRS
7/1/2016 10:03:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	glreeve	CRS
7/1/2016 10:28:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	glreeve	CRS
7/1/2016 11:50:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	glreeve	CRS
7/2/2016 1:57:00 AM	Received alarms 61A, Process Rad Hi Hi and 61B, Process Rad Hi. GTRE32 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	glreeve	CRS
7/2/2016 2:00:00 AM	Received alarms 61A, Process Rad Hi Hi and 61B, Process Rad Hi. GTRE32 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	glreeve	CRS
7/2/2016 2:02:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarm immediately reset. ODMI 2015-07	glreeve	CRS
7/2/2016 4:49:00 AM	Received alarms 61A, Process Rad Hi Hi and 61B, Process Rad Hi. GTRE31 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	glreeve	CRS
7/2/2016 4:50:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarm immediately reset. ODMI 2015-07	glreeve	CRS
7/2/2016 9:24:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	chwoods	CRS
7/2/2016 9:26:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	chwoods	CRS
7/4/2016 8:04:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
7/4/2016 8:22:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
7/4/2016 12:13:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
7/4/2016 12:31:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
7/4/2016 1:36:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCT381 Channel , No Pulses Time Out. Performed manual Check Source Test SAT.	edwinn	CRS
7/4/2016 1:51:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
7/4/2016 2:47:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
7/4/2016 3:43:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
7/4/2016 4:25:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
7/6/2016 3:54:00 AM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK". Partial for GHRE-10B GRP # U1GB2016-076.	tidunlo	CRS
7/6/2016 4:08:00 AM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT. Partial for GHRE-10B GRP # U1GB2016-076.	tidunlo	CRS
7/6/2016 6:20:00 AM	Received alarms 61A, Process Rad Hi Hi and 61B, Process Rad Hi. GTRE31 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	tidunlo	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
7/6/2016 8:41:00 AM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK".	shafe	CRS
7/6/2016 9:31:00 AM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT. Partial for GTRE31, GTRE32, GTRE22, and GTRE33 in preparation for containment purge.	shafe	CRS
7/7/2016 12:10:00 PM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK".	shafe	CRS
7/7/2016 12:24:00 PM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT. Partial for HFRE-45 in support of release permit U1LB2016-031.	shafe	CRS
7/7/2016 9:47:00 PM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK".	kylaubn	CRS
7/7/2016 10:37:00 PM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT.	kylaubn	CRS
7/8/2016 6:57:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	chwoods	CRS
7/8/2016 7:56:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	chwoods	CRS
7/8/2016 12:06:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	chwoods	CRS
7/8/2016 12:08:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	chwoods	CRS
7/8/2016 1:41:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	chwoods	CRS
7/8/2016 3:56:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	chwoods	CRS
7/8/2016 4:37:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	chwoods	CRS
7/8/2016 6:54:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	kylaubn	CRS
7/8/2016 6:56:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	kylaubn	CRS
7/8/2016 8:53:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	kylaubn	CRS
7/8/2016 8:55:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	kylaubn	CRS
7/8/2016 10:54:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	kylaubn	CRS
7/8/2016 10:55:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	kylaubn	CRS
7/8/2016 11:43:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	kylaubn	CRS
7/8/2016 11:55:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	kylaubn	CRS
7/9/2016 12:43:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	kylaubn	CRS
7/9/2016 1:14:00 AM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	kylaubn	CRS
7/9/2016 1:16:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	kylaubn	CRS
7/9/2016 2:02:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	kylaubn	CRS
7/9/2016 2:32:00 AM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	kylaubn	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
7/9/2016 9:42:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
7/9/2016 10:05:00 AM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
7/9/2016 10:07:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
7/9/2016 10:26:00 AM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
7/9/2016 10:27:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
7/9/2016 10:39:00 AM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
7/9/2016 10:41:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
7/9/2016 11:41:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
7/9/2016 11:54:00 AM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi, GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	roabel	RO
7/9/2016 1:44:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
7/9/2016 3:18:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi, GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
7/9/2016 3:22:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
7/9/2016 3:52:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi, GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
7/9/2016 3:54:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
7/9/2016 4:17:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi, GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
7/9/2016 5:31:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
7/9/2016 7:39:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCT381 Channel, No Pulses Time Out. Performed manual Check Source Test SAT. WO 15-409936-001	glreeve	CRS
7/9/2016 8:20:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi, GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	glreeve	CRS
7/9/2016 8:21:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	glreeve	CRS
7/9/2016 10:31:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	glreeve	CRS
7/9/2016 10:52:00 PM	Received alarm 61A and 61B, Process Rad Hi/Hi-Hi, GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	glreeve	CRS
7/9/2016 10:54:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	glreeve	CRS
7/11/2016 4:09:00 AM	Received alarm 61B, Process Rad Hi, SJRE01 hi alarm, which immediately cleared. Entered ALR 00-061B and performed a Sat purge. Exited ALR.	shafe	CRS
7/11/2016 4:56:00 AM	Received alarm 61C, Process Rad Mon Fail, due to loss of isokinetic flow to Unit Vent GTRE21B, expected for securing Aux Building ventillation. Chemistry (Josh Dorsey) notified. GTRE21B remains Functional.	shafe	CRS
7/12/2016 8:18:00 AM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK". Partial for HF RE-45. LRP UILB 2016-032.	tidunlo	CRS
7/12/2016 8:58:00 AM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT. Partial for HF RE-45. LRP UILB 2016-032.	tidunlo	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
7/13/2016 2:00:00 AM	Received alarm 61C, Process Rad Mon Fail, due to loss of isokinetic flow to Unit Vent GTRE21B, expected for securing Aux Building ventillation. Chemistry notified. GTRE21B remains Functional	daghols	CRS
7/13/2016 3:08:00 PM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK". Partial for HF RE-45 LRP UILB 2016-033.	tidunlo	CRS
7/13/2016 3:09:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	tidunlo	CRS
7/13/2016 3:30:00 PM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT. Partial for HF RE-45 LRP UILB 2016-033.	tidunlo	CRS
7/13/2016 4:09:00 PM	Received annunciator 61C PROCESS RAD MON FAIL. Alarm is loss of communications on GT RE-59 CTMT area rad monitor. Followed ALR. Work request written to correct cause.WR #16-117431.	tidunlo	CRS
7/13/2016 4:53:00 PM	Received annunciator 61C PROCESS RAD MON FAIL. Alarm is loss of communications on GT RE-59 CTMT area rad monitor. Followed ALR. Work request written to correct cause.WR #16-117431.	tidunlo	CRS
7/13/2016 7:41:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	daghols	CRS
7/13/2016 7:56:00 PM	Received alarms 61A, Process Rad Hi Hi and 61B, Process Rad Hi. GTRE32 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	daghols	CRS
7/13/2016 8:49:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	daghols	CRS
7/16/2016 5:20:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	glreeve	CRS
7/16/2016 7:25:00 PM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK". CTMT Purge. GRP U1GB2016-082.	jestrah	CRS
7/16/2016 10:27:00 PM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" partial SAT.	jestrah	CRS
7/17/2016 1:11:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
7/17/2016 5:24:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
7/17/2016 6:15:00 AM	Received alarms 61A, Process Rad Hi Hi and 61B, Process Rad Hi. GTRE31 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
7/17/2016 6:19:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	jestrah	CRS
7/17/2016 5:28:00 PM	During the shift, received alarm 61A, Process Rad HiHi, on 3 occassions due to particulate spiking of GTRE31 and GTRE32, ODMI 2015-07.	shafe	CRS
7/17/2016 5:28:00 PM	During the shift, received alarm 61B, Process Rad Hi, on 14 occassions due to particulate spiking of GTRE31 and GTRE32, ODMI 2015-07.	shafe	CRS
7/18/2016 5:01:00 AM	During the shift, received alarm 61B, Process Rad Hi, on 5 occasions due to particulate spiking of GTRE31 and GTRE32, ODMI 2015-07.	tidunlo	CRS
7/18/2016 5:01:00 AM	During the shift, received alarm 61A, Process Rad HiHi, on 1 occasion due to particulate spiking of GTRE31, ODMI 2015-07.	tidunlo	CRS
7/18/2016 8:07:00 AM	Received alarm 61C, Process Rad Mon Fail. Entered ALR 00-061C. GTRE21A Check Source Test Failure is the cause of the alarm. Performed source check and alarm cleared. Exited ALR.	shafe	CRS
7/20/2016 4:55:00 AM	ALR 61C, "PROCESS RAD MON FAIL" in due to FCRIC385B loss of pulse. Performing ALR 61C.	mifulle1	CRS
7/20/2016 5:10:00 AM	Perform ALR 61C, "PROCESS RAD MON FAIL" due to FCRIC385B loss of pulse. Source Check Unsat. ALR 61C not clear. WR# 15-115441 applies.	mifulle1	CRS
7/20/2016 6:34:00 AM	ALR 61C, "PROCESS RAD MON FAIL" clear. Source check of FCRIC385B, SAT.	mifulle1	CRS
7/20/2016 8:30:00 AM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK". Partial for HF-RE45	thfairc	CRS
7/20/2016 8:43:00 AM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT. Partial for HF-RE45.	thfairc	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
7/22/2016 6:30:00 PM	Received alarm 61B, Process Rad Hi 5 times this shift. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07.	kylaubn	CRS
7/23/2016 3:14:00 AM	Received Alarm 61C "PROCESS RAD MON FAIL", on FBRIC385B. Performing Source Check.	mifulle1	CRS
7/23/2016 4:49:00 AM	Received alarm 61B, Process Rad Hi . GTRE31 particulate in alert due to spiking. Alarm immediately reset. ODMI 2015-07.	mifulle1	CRS
7/23/2016 7:18:00 AM	Received alarm 61B, Process Rad Hi . GTRE31 particulate in alert due to spiking. Alarm immediately reset. ODMI 2015-07.	styunk	CRS
7/23/2016 3:34:00 PM	Received alarm 61B, Process Rad Hi . GTRE32 particulate in alert due to spiking. Alarm immediately reset. ODMI 2015-07.	styunk	CRS
7/23/2016 4:24:00 PM	Received alarm 61B, Process Rad Hi . GTRE31 particulate in alert due to spiking. Alarm immediately reset. ODMI 2015-07. This condition alarmed two additional times at 13:11 and 15:08 during this shift.	styunk	CRS
7/23/2016 6:44:00 PM	Received alarm 61B, Process Rad Hi . GTRE32 particulate in alert due to spiking. Alarm immediately reset. ODMI 2015-07.	thfairc	CRS
7/24/2016 4:37:00 AM	Received alarm 61B, Process Rad Hi . GTRE31 particulate in alert due to spiking. Alarm immediately reset. ODMI 2015-07.	thfairc	CRS
7/24/2016 3:50:00 PM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK". Partial for HF RE-45 LRP # U1LB2016-035.	tidunlo	CRS
7/24/2016 4:27:00 PM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT. Partial for HF RE-45 LRP # U1LB2016-035.	tidunlo	CRS
7/24/2016 10:56:00 PM	Received alarm 61A, Process Rad Hi Hi . GTRE31 particulate in alarm due to spiking. Alarm immediately reset. ODMI 2015-07.	thfairc	CRS
7/25/2016 5:00:00 PM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor FCRIC385B, channel 381, Check Source Test Failure. Performed manual Check Source Test 5 times and still did not pass. WO #15-409963-001 already initiated to replace the detector in Refuel 21.	tidunlo	CRS
7/26/2016 7:28:00 AM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK".	mifulle1	CRS
7/26/2016 8:01:00 AM	Completed Partial STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT.	mifulle1	CRS
7/26/2016 5:00:00 PM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK".	mifulle1	CRS
7/26/2016 5:07:00 PM	Completed Partial STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT.	mifulle1	CRS
7/27/2016 4:03:00 AM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor GK RE-41 , channel , Check Source Test Failure. Performed manual Check Source Test SAT.	edwinn	CRS
7/27/2016 7:44:00 PM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK". Partial to support GRP U1GB2016-087 (CTMT Purge)	edwinn	CRS
7/27/2016 8:02:00 PM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT. Partial completed.	edwinn	CRS
7/28/2016 8:04:00 AM	Commenced partial STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK", for LRP No. U1LB2016-037P. SLWMT 'B' release.	mifulle1	CRS
7/28/2016 8:20:00 AM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT.	mifulle1	CRS
7/28/2016 3:39:00 PM	Received alarm 61C "PROCESS RAD MON FAIL", due to loss of communications. Source check SAT. Exited ALR 61C.	mifulle1	CRS
7/28/2016 7:11:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
7/28/2016 7:21:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
7/28/2016 7:48:00 PM	Received alarms 61A, Process Rad Hi Hi and 61B, Process Rad Hi. GTRE32 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
7/28/2016 7:49:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
7/28/2016 7:53:00 PM	Received alarms 61A, Process Rad Hi Hi and 61B, Process Rad Hi. GTRE31 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
7/28/2016 7:55:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
7/28/2016 8:43:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
7/28/2016 9:32:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
7/28/2016 10:12:00 PM	Received alarms 61A, Process Rad Hi Hi and 61B, Process Rad Hi. GTRE32 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
7/28/2016 10:14:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
7/28/2016 10:21:00 PM	Received alarms 61A, Process Rad Hi Hi and 61B, Process Rad Hi. GTRE32 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
7/28/2016 10:22:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
7/29/2016 4:08:00 AM	Received Annunciator 61C, "Process Rad Mon Fail." Performing ALR. Monitor AB112B No Pulses Time Out. Performed manual Check Source Test SAT.	trrohlf	CRS
7/29/2016 6:22:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	thfairc	CRS
7/29/2016 6:35:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	thfairc	CRS
7/29/2016 7:19:00 PM	Received alarms 61A, Process Rad Hi Hi and 61B, Process Rad Hi. GTRE31 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
7/29/2016 7:43:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
7/29/2016 9:01:00 PM	Received alarms 61A, Process Rad Hi Hi and 61B, Process Rad Hi. GTRE31 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
7/29/2016 9:02:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
7/29/2016 9:05:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
7/29/2016 10:07:00 PM	Received alarms 61A, Process Rad Hi Hi and 61B, Process Rad Hi. GTRE31 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
7/29/2016 11:02:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
7/29/2016 11:24:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
7/30/2016 3:57:00 AM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
7/30/2016 7:51:00 PM	Alarm 61C 'PROCESS RAD MON FAIL' due to Loss of Communications Alarm on RM-11 GTRE0022, in and clear. CR# 00106100/ WR# 16-117572.	mifulle1	CRS
8/2/2016 9:57:00 AM	Received alarms 61A, Process Rad Hi Hi and 61B, Process Rad Hi. GTRE31 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
8/2/2016 1:03:00 PM	Received alarms 61A, Process Rad Hi Hi and 61B, Process Rad Hi. GTRE31 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
8/2/2016 1:05:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
8/2/2016 2:11:00 PM	Received alarms 61A, Process Rad Hi Hi and 61B, Process Rad Hi. GTRE31 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
8/2/2016 2:13:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
8/2/2016 3:50:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
8/2/2016 4:07:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
8/2/2016 5:35:00 PM	Received alarm 61B, Process Rad Hi. GTRE31 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
8/3/2016 7:20:00 AM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK". Partial for HFRE45 for LRP U1LB2016-038	edwinn	CRS
8/3/2016 7:45:00 AM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT. Partial for HFRE45	edwinn	CRS
8/3/2016 10:20:00 AM	Received ANN 61C " PROCESS RAD MON FAILURE " due to loss of communications to GT RE-33 Verified that Process Rad Monitors were operating properly at their respective RM-23.	edwinn	CRS
8/3/2016 10:53:00 AM	Received ANN 61C " PROCESS RAD MON FAILURE " due to loss of communications to GT RE-33 Verified that Process Rad Monitors were operating properly at their respective RM-23.	edwinn	CRS
8/3/2016 1:06:00 PM	Received alarms 61A, Process Rad Hi Hi and 61B, Process Rad Hi. GTRE32 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
8/3/2016 3:39:00 PM	Received ANN 61C " PROCESS RAD MON FAILURE " due to loss of communications to GT RE-33 Verified that Process Rad Monitors were operating properly at their respective RM-23.	edwinn	CRS
8/3/2016 5:08:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
8/4/2016 1:03:00 AM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK".	joweber1	CRS
8/4/2016 3:43:00 AM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" Partial Test. GTRE0022 is OOS	joweber1	CRS
8/4/2016 2:52:00 PM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" partial for HFRE-45 to support LRP #U1LB2016-041.	trrohlf	CRS
8/4/2016 3:08:00 PM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT partial for HFRE-45 to support LRP #U1LB2016-041.	trrohlf	CRS
8/4/2016 5:56:00 PM	Received alarms 61A, Process Rad Hi Hi and 61B, Process Rad Hi. GTRE32 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
8/4/2016 6:21:00 PM	Received alarms 61A, Process Rad Hi Hi and 61B, Process Rad Hi. GTRE32 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
8/4/2016 6:23:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
8/4/2016 6:40:00 PM	Received alarms 61A, Process Rad Hi Hi and 61B, Process Rad Hi. GTRE32 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
8/4/2016 6:41:00 PM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	trrohlf	CRS
8/6/2016 3:29:00 PM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK". Partial for CTMT purge.	jestrah	CRS
8/6/2016 4:51:00 PM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" partial SAT.	jestrah	CRS
8/9/2016 12:31:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	edwinn	CRS
8/9/2016 9:51:00 PM	Received alarm 61C, Process Rad Mon Fail, due to GTRE21B loss of sample flow. This condition reflects a loss of isokinetic flow which is expected during placing B CRVIS in service. GTRE21B remains functional.	shafe	CRS
8/10/2016 5:04:00 AM	Received alarm 61C, Process Rad Mon Fail. Cause of alarm GTRE59 communication failure with RM-20 green operating light extinguished, reading 0.00, and keyboard lockout. WR# 16-117694.	shafe	CRS
8/10/2016 7:35:00 AM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK".	joweber1	CRS

CONTROL ROOM LOG

LogDate	Entry	User	UserType
8/10/2016 7:42:00 AM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" Partial Test for HFRE45 for U1LB2016-042	joweber1	CRS
8/17/2016 7:32:00 AM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" to support THF04B release permit U1LB2016-044.	shafe	CRS
8/17/2016 7:51:00 AM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT.	shafe	CRS
8/18/2016 4:23:00 AM	Received alarms 61A, Process Rad Hi Hi and 61B, Process Rad Hi. GTRE32 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	tidunlo	CRS
8/18/2016 4:25:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	tidunlo	CRS
8/18/2016 2:15:00 PM	Received alarms 61B, Process Rad Hi, and 61A, Process Rad HiHi. Alarm 61A reset immediately. Entered ALR for 61B. Alarms caused by SJRE001, Letdown Rad Monitor. Purged the monitor IAW with the ALR and alarm 61B cleared. Exited ALR. The following was edited for additional information on 8.22.16 by edc. Ref. CR 106588	ercarls	CRS
8/18/2016 10:25:00 PM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK", Partial for GTRE0022, GTRE0033, GTRE0031 and GTRE0032.	kylaubn	CRS
8/18/2016 10:55:00 PM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT, Partial for GTRE0022, GTRE0033, GTRE0031 and GTRE0032..	kylaubn	CRS
8/19/2016 4:13:00 AM	Recieved ALR 61B, PROCESS RAD HI, in and clear for GTRE33 Particulate. Performed ALR, no actions needed. The following was edited for additional information on 8.22.16 by edc. Ref. CR 106589	ercarls	CRS
8/24/2016 4:57:00 AM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK". Partial for LRP 2016-045	daghols	CRS
8/24/2016 5:47:00 AM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT. Partial for LRP 2016-045.	daghols	CRS
8/25/2016 3:34:00 AM	Commenced STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK", partial for LRP 2016-046.	daghols	CRS
8/25/2016 4:30:00 AM	Completed STN SP-001 "PROCESS RADIATION MONITORING SYSTEM SOURCE CHECK" SAT. Partial for LRP 2016-046.	daghols	CRS
8/25/2016 5:53:00 AM	Received alarm 61B, Process Rad Hi. GTRE32 particulate in alert due to spiking. Alarms immediately reset. ODMI 2015-07	daghols	CRS
8/25/2016 6:56:00 AM	Received alarms 61A, Process Rad Hi Hi and 61B, Process Rad Hi. GTRE32 particulate in Alarm due to spiking. Alarms immediately reset. ODMI 2015-07	tidunlo	CRS

00105668 Condition Report

AR #: 00105668 **Severity Type:** CAQ **Level:** FFT **Due Date:** 08/12/2016 **Status:** APPROVED **Status Date:** 07/13/2016

AR Subject: 8818 valve leaking boron in CTMT **Age In Days:** 49

Owed To Name:

Owed To Department: 4050090 - Ferrel Mark

Owed To Alert Group: OPS REVIEW

Origination Date: 07/07/2016

Initiator: CUFFE, GRANT J

Orig Department: 3140030 - Gilliam Ron

Condition Report Summary:

Type	AR#-Assign#-Sub-Assign#	Owed/Assign To	Due Date	Status
CAQ	00105668	OPS REVIEW	08/12/2016	APPROVED
RTFQ	00105668-01	OPS REVIEW		ACC/PRI

Attachments:

CR Detail

Asset/Equip: EP8818B **Work Request:** 16-117383

Description: It appears an 8818 valve approx 12 ft in the overhead behind the RCDT on 2000' CTMT is leaking boron. There is about a cup of boron on the exterior of the mirror insulation that surrounds the valve and approx a 12"by 18" by 1" high area of boron on a piece of mirror insulation directly below the valve. QC guessed it was one of the 8818 valves due to its size and it is also downstream of EJ90.

Immediate Concern: N **SM Notified:** N/A **Init DNC:** N

Immediate Actions:

Notified Shit Engineer, was directed to write a CR

Extent of condition:

N/A

Recommended Resolution:

Clean the boron come outage

Screening Review

Operability:

3 OPER/DNC

By the location noted, and the reference to a nearby valve, this component must be EP8818C.

What is the defect/degraded nonconforming condition? Boron discovered on insulation around valve.

*

What SSC is affected by the deficiency? EP8818C, RHR TO ACCUM INJ. LINE CHECK VLV.

*

What is the design/safety function of the affected SSC? EP8818C is a containment isolation valve in accordance with Tech Spec 3.6.3. The valve provides a flowpath for RHR flow (Tech Spec 3.5.2, 3.5.2, 3.9.5, 3.9.6) to the RCS cold legs. Leakage from the valve will affect RCS operational leakage (Tech Spec 3.4.13).

*

What effect does the deficiency have on the affected SSCs ability to perform its intended design/safety function? None. The boron is dry, indicating that the leak rate is

very low. RCS leak rate is monitored once per day, and is currently well within tech spec limits.
*
The SSC is operable but degraded because? RCS leak rate is well within Tech Spec limits. Although the valve is not visible due to being covered with insulation, the EP system is class 1 stainless, so it is reasonable to assume that there will be no wastage of components. The CR states that there is boron on insulation below. The nearest component below is EPV056, which is also stainless. No other components are affected.
*
Extent of condition? Inspections for boron leaks inside containment are performed when the opportunity arises. Because RCS leak rate is very low, and is monitored daily, no other actions are required at this time.
*
References? Technical Specifications

Reportable:	N
Environmental Issue:	N
Tech Spec Sec 5:	N
Personnel Safety Issue:	N
Reactivity Issue:	N
Impact Risk Assessment:	N
OPS Review:	BRANDT, WARREN C
CR/WR Screening:	LINK, STEPHEN L
Significance Cat:	99 - NOT APPLICABLE
Screen/SRT Notes:	

General Notes:

Other Related Information

Assignment Status Summary:

Total Assigns/Subs:	1 - 0
Open Assigns/Subs:	1 - 0
Overdue Assigns/Subs:	0 - 0

Cross References:

Type	Number	Sub Number
ACTION REQUEST	00105716	
MPAC WORK REQUEST	16-117383	

Status & Due Date History:

Responsible Person	Date Updated	Status	Due Date
CUFFE, GRANT J	07/07/2016	INPROG	
CUFFE, GRANT J	07/07/2016	H/APPR	
DEARINGER, CAROL A	07/13/2016	APPROVED	08/12/2016

LINK, STEPHEN L 07/11/2016 PRE-APRV

Margin Management Issue: N

REFER TO LICENSEE

Wolf Creek Nuclear Operating Corporation

00106763 Condition Report

AR #: 00106763 **Severity Type:** CR **Level:** **Due Date:** **Status:** PRE-APRV **Status Date:** 08/30/2016

AR Subject: Increasing trend in GTRE31/32 activity **Age In Days:** 0

Owed To Name:

Owed To Department:

Owed To Alert Group: WC SRT

Origination Date: 08/30/2016

Initiator: BUSSARD, GRANT W

Orig Department: 4020020 - Crow Bart

Condition Report Summary:

Type	AR#-Assign#-Sub-Assign#	Owed/Assign To	Due Date	Status
CR	00106763	WC SRT		PRE-APRV
RTFQ	00106763-01	OPS REVIEW		ACC/PRI

Attachments:

Type	CR/ASGN No.	Title
CR	00	CR 106763 TRENDS

CR Detail

Asset/Equip: BB **Work Request:**

Description: A review of GTRE31/32 trends over the last two months has identified a slow increase in activity starting around the end of July. Containment sump leakage, containment cooler standpipe leakage, containment pressure/humidity/temperature, unidentified leak rate trends were also reviewed. An upward trend on the 'C' and 'D' containment cooler standpipe leakage was also identified around the same timeframe (late July early August). A slow increase in the unidentified leak rate (ULR) over the last month has not been observed. In the last week, the ULR has been elevated but no action levels have been reached to date. Potential leak sources in the auxiliary building have already been investigated (e.g. RCS/seal injection vent/drains, CVCS demineralizer drains, BTRS locations, etc.) and corrective actions taken, but the ULR still remains elevated. Recommend containment entry to identify the source of GTRE31/32 activity increase.

Immediate Concern: N **SM Notified:** N/A **Init DNC:** N

Immediate Actions:

Discussed trends with Operations and NRC

Extent of condition:

None.

Recommended Resolution:

Perform a containment entry to identify the source of the activity increase.

Screening Review

Operability:

3 OPER/DNC

A review of GTRE31/32 trends over the last two months has identified a slow increase in activity starting around the end of July.

The affected component is the RCS. RCS leakrate is covered by TS 3.4.13.

RCS leakage is determined daily by STS BB-006. Leakrates are slightly elevated but still within surveillance criteria. ODMI 2015-07 is in place to document plant response to the elevated activity levels and RCS leakrate. Trigger points have been established to determine additional actions. This increase in activity will be compared against the trigger points and additional actions taken as necessary.

The RCS is operable because leakage surveillance criteria is met but degraded due to elevated activity and leakrate. This leakage is unique to the RCS in CTMT.

Reportable: N

Environmental Issue: N

Tech Spec Sec 5: N

Personnel Safety Issue: N

Reactivity Issue: N

Impact Risk Assessment: N

OPS Review: CAMP, JOHNNEY W

CR/WR Screening: LINK, STEPHEN L

WR is not applicable to the identified condition

Significance Cat: 99 - NOT APPLICABLE

Screen/SRT Notes:

General Notes:

Other Related Information

Assignment Status Summary:

Total Assigns/Subs:	1 - 0
Open Assigns/Subs:	1 - 0
Overdue Assigns/Subs:	0 - 0

Cross References:

Status & Due Date History:

Responsible Person	Date Updated	Status	Due Date
BUSSARD, GRANT W	08/30/2016	INPROG	
BUSSARD, GRANT W	08/30/2016	H/APPR	
LINK, STEPHEN L	08/31/2016	PRE-APRV	

Margin Management Issue: N

Documents provided

- ODMI 2015-07 Containment Radiation Monitor Spiking
- CR 106763 GTRE31/32 activity increasing trend
- CR106763 trend attachment
    - Page 1 is activity counted on the Containment Radiation Monitor following a filter change. The two trend lines are "GRS-ACT" which stands for Gross Activity Iodine and "DEI" which stands for Dose Equivalent Iodine. The upward trend on both lines starts on 8/3/16.
    - Page 2 is the Trend on Containment Cooler Standpipe Leakrate Trend over the last 90 days. The upward increasing trend for 'D' and 'C' containment cooler standpipe starts around the end of July.
    - Page 3 is the Trend in Unidentified Lea Rate over the last two months. The elevated ULR values around 8/16/16 was around the time the Boron Thermal Regeneration System (BTRS) was placed into service. The accessible portions of CVCS in the Auxiliary building were walked down and two leak path sources were corrected. One was on a drain line (BGV0025) from the 'B' mixed bed demineralizer and required adjustment of the reach rod (CR 106580). The second valve was on an isolated BTRS demineralizer, which only required tightening of the drain valve (BGV293).
    - Page 4 is the trend in GTRE31 activity from the NPIS computer point over the last two months. The data is filter to only include data between 1e-13 and 1e-08. This is done to exclude the points recorded when the rad monitor goes into alarm. Without these points removed any small increase in the trend would not be discernable. Around the first of August, a very subtle step change in the activity can be observed.
- CR 105668 8818 valve leaking boron in CTMT
- CR Logs 4-1-16 to 8-25-16
    - The entries are filtered by "Process Rad". The entries on interest are "Received alarm 61B, Process Rad Hi" or "Received alarm 61A, Process Rad Hi-Hi for GTRE31/32. The number of alarms per day dramatically decreases in the first week of August.

Pen #	Relevant Condition		QC Level III Comments	Brief Evaluation - See Evaluation document for more detail
	Yes	No		
1	X		Slight/minor dry loose particulate dusted around nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
2	X		Slight/minor dry loose particulate dusted around nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
3	X		Dry loose particulate on UH (Up-Hill) side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
4	X		Minor dry loose particulate dusted around nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
5	X		Slight/minor dry particulate at nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
6	X		Dry particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
7	X		Minor dry particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
8	X		Dry particulate at nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
9	X		Dry loose boron particulate, boron staining	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
10	X		Dry loose particulate on UH side	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
11	X		Minor dry loose particulate dusted around nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.

12	X		Dry particulate on nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
13	X		Dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
14	X		Dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
15	X		Dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
16	X		Dry particulate	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
17	X		Boron accumulation on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
18	X		Dry particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
19	X		Minor dry particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
20	X		Dry loose particulate on UH side of nozzle. Rust on DH side of nozzle.	Unable to visually confirm no nozzle leakage (3142.1 (b) and (c), 3142.2, 3130, and 3132.1 (a)) Supplemental Volumetric Examination performed identifying no change in structural characteristics from previous Volumetric exams of all nozzles performed in 2006 and 2013. No degradation was identified that could compromise structural integrity.
21	X		Dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
22	X		Dry loose particulate on UH side	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
23	X		Dry loose particulate on UH side	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.

24	X		Dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
25	X		Slight/minor dry particulate on 90 degree and UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
26	X		Dry particulate on UH side	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
27	X		Dry boron on UH side of nozzle	Unable to visually confirm no nozzle leakage (3142.1 (b) and (c), 3142.2, 3130, and 3132.1 (a)) Supplemental Volumetric Examination performed identifying no change in structural characteristics from previous Volumetric exams of all nozzles performed in 2006 and 2013. No degradation was identified that could compromise structural integrity.
28	X		Dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
29	X		Dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
30	X		Slight/minor dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
31	X		Dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
32	X		Dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
33	X		Dry loose particulate on UH side of nozzle, vacuumed annulus clear	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
34	X		Slight/minor dry particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.

35	X		Dry loose particulate on nozzle	Unable to visually confirm no nozzle leakage (3142.1 (b) and (c), 3142.2, 3130, and 3132.1 (a)) Supplemental Volumetric Examination performed identifying no change in structural characteristics from previous Volumetric exams of all nozzles performed in 2006 and 2013. No degradation was identified that could compromise structural integrity.
36	X		Dry particulate on UH side of penetration	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
37	X		Slight/minor dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
38	X		Dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
39	X		Slight/minor dry particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
40	X		Dry particulate on UH side of nozzle	Unable to visually confirm no nozzle leakage (3142.1 (b) and (c), 3142.2, 3130, and 3132.1 (a)) Supplemental Volumetric Examination performed identifying no change in structural characteristics from previous Volumetric exams of all nozzles performed in 2006 and 2013. No degradation was identified that could compromise structural integrity.
41	X		Dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
42	X		Dry particulate at nozzle interface (small amount)	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
43	X		Dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
44	X		Dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
45	X		Slight/minor dry particulate on 90 degree and UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.

46	X		Dry loose particulate on UH side of nozzle	Unable to visually confirm no nozzle leakage (3142.1 (b) and (c), 3142.2, 3130, and 3132.1 (a)) Supplemental Volumetric Examination performed identifying no change in structural characteristics from previous Volumetric exams of all nozzles performed in 2006 and 2013. No degradation was identified that could compromise structural integrity.
47	X		Significant boron and rust bloom	Unable to visually confirm no nozzle leakage (3142.1 (b) and (c), 3142.2, 3130, and 3132.1 (a)) Supplemental Volumetric Examination performed identifying no change in structural characteristics from previous Volumetric exams of all nozzles performed in 2006 and 2013. No degradation was identified that could compromise structural integrity.
48	X		Slight/minor amount of dry particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
49	X		Slight/minor amount of dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
50	X		Slight/minor amount of dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
51	X		Dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
52	X		Dry Loose particulate on UH side	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
53	X		Dry loose particulate on UH side of penetration	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
54	X		Dry rust colored boron at nozzle to head interface	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
55	X		Dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
56	X		Dry particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.

57	X		Dry particulate on UH side. Annulus clear	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
58	X		Boron accumulation on nozzle. Some discoloration.	Unable to visually confirm no nozzle leakage (3142.1 (b) and (c), 3142.2, 3130, and 3132.1 (a)) Supplemental Volumetric Examination performed identifying no change in structural characteristics from previous Volumetric exams of all nozzles performed in 2006 and 2013. No degradation was identified that could compromise structural integrity.
59	X		Boron accumulation (loose particulate and hard caked boron) on UH side of penetration. Rust on DH (Down-Hill) side.	Unable to visually confirm no nozzle leakage (3142.1 (b) and (c), 3142.2, 3130, and 3132.1 (a)) Supplemental Volumetric Examination performed identifying no change in structural characteristics from previous Volumetric exams of all nozzles performed in 2006 and 2013. No degradation was identified that could compromise structural integrity.
60	X		Very slight/minor dry particulate on UH side of penetration	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
61	X		Slight/minor amount of loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
62	X		Dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
63	X		Dry rust colored boron cake on 90 side of nozzle - Dry loose particulate on UH side of nozzle	Unable to visually confirm no nozzle leakage (3142.1 (b) and (c), 3142.2, 3130, and 3132.1 (a)) Supplemental Volumetric Examination performed identifying no change in structural characteristics from previous Volumetric exams of all nozzles performed in 2006 and 2013. No degradation was identified that could compromise structural integrity.
64	X		Dry particulate on UH side of penetration	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
65	X		Slight/minor amount of dry particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
66	X		Dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
67	X		Dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.

68	X		Dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
69	X		Boron on head adjacent to penetration	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
70	X		Significant boron accumulation (loose particulate and hard caked boron) on nozzle and rust bloom on head	Unable to visually confirm no nozzle leakage (3142.1 (b) and (c), 3142.2, 3130, and 3132.1 (a)) Supplemental Volumetric Examination performed identifying no change in structural characteristics from previous Volumetric exams of all nozzles performed in 2006 and 2013. No degradation was identified that could compromise structural integrity.
71	X		Significant boron accumulation (loose particulate and hard caked boron) and rust bloom on RPV head	Unable to visually confirm no nozzle leakage (3142.1 (b) and (c), 3142.2, 3130, and 3132.1 (a)) Supplemental Volumetric Examination performed identifying no change in structural characteristics from previous Volumetric exams of all nozzles performed in 2006 and 2013. No degradation was identified that could compromise structural integrity.
72	X		Dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
73	X		Slight/minor amount dry loose particulate/rust flakes on UH side of nozzle.	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
74	X		Dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
75	X		Dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
76	X		Dry loose boron on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.
77	X		Leak @ canopy seal weld. Dry hard caked boron and rust bloom on head.	Unable to visually confirm no nozzle leakage (3142.1 (b) and (c), 3142.2, 3130, and 3132.1 (a)) Supplemental Volumetric Examination performed identifying no change in structural characteristics from previous Volumetric exams of all nozzles performed in 2006 and 2013. No degradation was identified that could compromise structural integrity.
78	X		Slight/minor amount dry loose particulate on UH side of nozzle	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.

Vent	X		Vent X Boron on vent line appears to have come from above line	Nothing emanating from the annulus region was confirmed. Leak source - crack in the Canopy Seal weld of Nozzle 77. (3142.1 (1), and 3142.3 (a) Leak was repaired using a clamp assembly to preclude future degradation. Structural integrity NOT compromised by the surface rust form of degradation.

Thomas, Fabian

From: Drake, James
Sent: Saturday, September 17, 2016 9:33 PM
To: Werner, Greg; Alley, David; Taylor, Nick
Cc: Anchondo, Isaac; Dodson, Douglas; Thomas, Fabian; Proulx, David; Lyon, Fred
Subject: Fw: Response to questions on Wolf Creek penetration

Here is the reply to the questions we asked the licensee.

Jim

James F. Drake
Email: James.Drake@nrc.gov
Office phone:817-276-6558
Cell phone: (b)(6)

From: Muilenburg William T <wimuile@WCNOC.com>
Sent: Friday, September 16, 2016 5:59 PM
To: Drake, James
Subject: [External_Sender] Response to questions on Wolf Creek penetration

Jim,
Here are the answers I got on your questions last week.

We could have a call with you at either 10 or 11:00 AM on Monday 9/19. Let me know what works for you please and I'll confirm.

Thanks,
Bill

1. How are we verifying the structural integrity of the joint? His interest here is increased by the size of this leak.
   No verification of the structural integrity of the joint is required. Westinghouse has calculated that the maximum leakage flow for one canopy seal is about 3.5 gpm. The observed leakage was less than the maximum value. The design of the mechanical connection is that the canopy seal weld is a specially designed seal between the housing (i.e. Control Rod Drive Mechanism (CRDM), head adapter plug or CET) and the reactor vessel head adapter flange. The sole function of the canopy seal and seal weld is to provide RSC leakage control. The threaded connection between the adapter flange and the housing, independent of the canopy seal, provides the structural integrity for the pressure boundary items of the connection under all service loadings. With the failed seal weld, the leakage does not affect the threaded connection since the mechanical connection is pressurized by the RCS and leakage past the threads is not a failure of the pressure boundary. With the RCS at normal operating temperature and pressure, water in and around the threads are essentially at the same pressure as the RCS and the leakage from the failed weld flashes to steam once beyond the outer surface of the canopy seal (or across the flaw). In this condition, the water does not flash to steam until the failed surface or beyond so there is no steam cutting of the threads. Therefore, no impact on the structural integrity of the joint will occur.
2. What is our plan to repair the penetration?
   Install a canopy seal clamp on the leaking penetration.
3. If we intend to use the canopy seal clamp again, what is our basis and code that we intend to apply?

The CRDM Seal Clamp Assembly is analyzed to ASME B&PV Code, Section III, Division 1, 1986 Edition (No addenda). The Design Specification for the CRDM Seal Clamp Assembly is certified to ASME B&PV Code, Section III, Division 1, 1971 Ed. up to and including the Winter 1972 Addenda and the 1974 Ed. The Design Report for the CRDM Seal Clamp Assembly is certified to ASME B&PV Code, Section III, Division 1, 1986 Edition (No addenda).

4. Comment on Head Inspection. Jim urged us to use a forensic approach to examining and cleaning the head. He indicated that Ft. Calhoun had had a similar problem and through power washing the head destroyed any evidence that could have contributed to analysis of the defect. Mark Barraclough is aware of the need for this as he is considering the impact on his programmatic inspections.

From:	Drake, James
To:	Anchondo, Isaac
Subject:	FW: Message from R4-KM554-C-2107
Date:	Monday, September 12, 2016 11:22:31 AM
Attachments:	SR4-KM554-C16091210150.pdf

2-page attachment withheld in full under ex 4.

From: r4scan@nrc.gov [mailto:r4scan@nrc.gov]
Sent: Monday, September 12, 2016 12:17 PM
To: Drake, James <James.Drake@nrc.gov>
Subject: Message from R4-KM554-C-2107

M-709-00117
INSTRUCTION MANUAL
FOR
INSTALLATION OF CANOPY SEAL CLAMP ASSEMBLIES AT WOLF CREEK NUCLEAR GENERATION STATION

ENGINEERING REVIEW:
DRAFTER:
CHECKER:
ENGINEER:
SUPERVISOR:

Digitally signed by Jason Pankaskie
Date: 2015.10.26 13:59:37 -05'00'

☒ ELECTRONIC APPROVAL

1. ☒ APPROVED-MFG. MAY PROCEED
2. ☐ NOT APPROVED--RESUBMIT FINAL DOCUMENT/DRAWING-MFG. MAY PROCEED ☐ YES ☐ NO
3. ☐ APPROVED INFORMATION NOT CONTROLLED UNDER DESIGN PROCESS
4. ☐ ACCEPTABLE-MAINTAIN AS RECORD (INFO. ONLY)
5. ☐ RESTRICTED FOR WOLF CREEK PLANNING ONLY-MFG. MAY PROCEED ☐ YES ☐ NO

APPROVAL OF THIS DOCUMENT/DRAWING DOES NOT RELIEVE SUPPLIER/CONTRACTOR FROM FULL COMPLIANCE WITH CONTRACT, SPECIFICATIONS AND/OR PURCHASE ORDER REQUIREMENTS.

COMMENTS:

P.O.#:	VENDOR MANUAL: PAGE:
CHANGE PACKAGE #: **012962**	INCORPORATED CHANGE DOCUMENT(S):

REV. #		DC RELEASED:
W02	WOLF CREEK NUCLEAR OPERATING CORPORATION	Kay L Smith Released by Document Services. Release Date: 2015.10.26 16:11:30 -05'00'

COMPONENT NUMBER(S)

RBB01 & RBB08

COMPONENT NUMBERS ARE FOR INITIAL (REV, W01) DATA LINKING ONLY. ADDITIONAL COMPONENT LINKS ARE MADE IN DATABASE ONLY.

TABLE 2 – Reference Drawings

Penetrations	HOUSING TYPE	WCNOC DRAWINGS	ABB CE (WESTINGHOUSE) DRAWING
Active CRDM, Capped Latch	Active CRDM	M-709-00113/ 114/115/116	E-CSCA-156-004 E-CSCA-156-009 Sheets 1, 2 and 3
		M-709-00081	DWG # removed
		M-709-00082	DWG # removed
Spare CRDM, Capped CET, RVLIS	Spare CRDM	M-709-00073	E-CSCA-156-001, Sh1
		M-709-00073A	E-CSCA-156-001, Sh1
		M-709-00074	E-CSCA-156-001, Sh2
		M-709-00074A	E-CSCA-156-001, Sh2
		M-709-00111	E-CSCA-154-013, Sh1
CET	CET	M-709-00079	E-CSCA-156-002, Sh1
		M-709-00080	E-CSCA-156-002, Sh2

2.0 SPECIFICATIONS and QUALIFICATIONS

The CSCA are designed and fabricated in accordance with the requirements of ASME Code, Section III, Subsection NB (Class 1), 1986 Edition, no addenda. ABB CE (Westinghouse) has provided the ASME Code Section XI reconciliation for the CSCA to the original construction Code of 1971 Edition with Winter 1972 Addenda. The Code reconciliation is provided as Appendix C/Addenda A in the ABB CE (Westinghouse) Design Report (M-709-00089). The CRDM's are designed to the Code year of 1974 Edition through Winter 1974 Addenda (M-709-00049 Pressure Boundary Summary Report). Reconciliation to the 1971 through Winter 1972 Addenda Code is appropriate because the ABB CE analysis did not requalify the CRDM pressure boundary.

ABB CE (Westinghouse) has performed Loss Of Coolant Accident (LOCA) and seismic analysis for the Active, Spare, CET, Capped Latch and Capped CRDM penetrations on the reactor vessel head and has presented the information in Design Report MISC-ME-DR-023, (M-709-00089). The analysis documents that the installation of a CSCA on any CRDM nozzle will not result in an overstress condition and, therefore, the CSCA installation is acceptable.

3.0 INSTALLATION

The CSCA are designed to be installed remotely from above the nozzle housings. The installation can be accomplished with the reactor vessel head located either in the reactor head stand or on the reactor vessel.

5.7 M-709-00074A, Long Version Canopy Seal Clamp Assembly.

5.8 M-709-00079, CET Canopy Seal Clamp Assembly.

5.9 M-709-00080, CET Canopy Seal Clamp Assembly.

5.10 M-709-00081, Canopy Seal Clamp Assembly & Details Active CRDM.

5.11 M-709-00082, Canopy Seal Clamp Assembly & Details Active CRDM.

5.12 M-709-00089, "Design Report, Spare Capped, CET and Active CRDM Nozzles Including Seal Clamp Assemblies for Wolf Creek and Callaway Nuclear Power Plants" ABB CE document No. MISC-ME-DR-023, Rev. 00.

5.13 MCM BB-006, Installation And Removal For Spare Penetration Canopy Seal Clamp (CSCA) And Dummy Can Assemblies.

5.14 MCM BB-007, Installation And Removal For An Active Penetration Canopy Seal Clamp (CSCA) And Dummy Can Assemblies.

5.15 BB-S-018, ASME Code Design Stress Report for Wolf Creek Power Plant Reactor Vessel (RBB01).

5.16 Correspondence letter #15-00350, Westinghouse LTR-ME-08-19 Rev. 0, CSCA Torque Check Elimination Justification.

5.17 Calculation 0720517.01-C-001, WCGS Simplified Head Assembly (SHA) Drop Analysis

From:	Anchondo, Isaac
To:	Collins, Jay
Subject:	FW: WC Call - Item of Note
Date:	Wednesday, October 12, 2016 8:28:00 AM

FYI – He's Ron's response. He took about 20 of them so there are others but I picked the ones showing the masked cavity and/or "relevant indications."

From: Kopriva, Ron
Sent: Wednesday, October 12, 2016 8:21 AM
To: Anchondo, Isaac <Isaac.Anchondo@nrc.gov>
Subject: RE: WC Call - Item of Note

Isaac,

Those are the pictures I took on Saturday. Those were taken after the insulation was removed from the head and some moderate (light – non-intrusive) cleaning performed.

Ron

From: Anchondo, Isaac
Sent: Wednesday, October 12, 2016 8:00 AM
To: Collins, Jay <Jay.Collins@nrc.gov>
Cc: Kopriva, Ron <Ron.Kopriva@nrc.gov>; Drake, James <James.Drake@nrc.gov>
Subject: RE: WC Call - Item of Note

Jay,

Assuming that you got those pictures from WC or us, I will say yes, those pictures are from this outage. I am attaching some additional pictures that I believe were taken after an attempt to clean the head.

Ron,

Do you know if these pictures were taken after any attempt to clean the head? I downloaded them from certrec, item 20, "Reactor Head Pictures from 10/8/16."

Thanks,
Isaac

From: Collins, Jay
Sent: Tuesday, October 11, 2016 3:50 PM
To: Anchondo, Isaac <Isaac.Anchondo@nrc.gov>
Subject: RE: WC Call - Item of Note

Yes.

Hey could you confirm that these are pictures from Wolf Creek this outage?

Jay

From: Anchondo, Isaac
Sent: Tuesday, October 11, 2016 4:43 PM
To: Collins, Jay <Jay.Collins@nrc.gov>
Subject: RE: WC Call - Item of Note

Strictly my opinion (not the branch), I think that if we hold them to the same cleaning limitations as FCS, there doesn't seem to be a way for Cooper to clean it without having "relevant indications" left in place. But isn't this the reason they are performing the volumetric examinations?

From: Collins, Jay
Sent: Tuesday, October 11, 2016 3:35 PM
To: Anchondo, Isaac <Isaac.Anchondo@nrc.gov>
Subject: RE: WC Call - Item of Note

Well I have some pictures, in my mind from the discussion on the phone call, there is some areas of significant masking. The cleanliness that we got at Fort Calhoun seems like it would be difficult, without their power washing.

From: Anchondo, Isaac
Sent: Tuesday, October 11, 2016 4:20 PM
To: Collins, Jay <Jay.Collins@nrc.gov>
Subject: RE: WC Call - Item of Note

I'm not the inspector on-site. Would you like me to ask Ron Kopriva to give you a call sometime tomorrow?

Isaac

From: Collins, Jay
Sent: Tuesday, October 11, 2016 3:16 PM
To: Anchondo, Isaac <Isaac.Anchondo@nrc.gov>; Tsao, John <John.Tsao@nrc.gov>
Subject: RE: WC Call - Item of Note

They are ones that they would have to perform the inspection on. The volumetric leak path is performed on the nozzle above the weld. The limitation to inspection coverage is below the weld. Therefore, not a specific concern for these locations.

I would very much appreciate your impression of the cleanliness of that head though. Any thoughts, or perhaps a conversation tomorrow sometime, would be useful.

Jay

From: Anchondo, Isaac

Sent: Tuesday, October 11, 2016 4:01 PM
To: Tsao, John <John.Tsao@nrc.gov>; Collins, Jay <Jay.Collins@nrc.gov>
Subject: WC Call - Item of Note

Greetings,

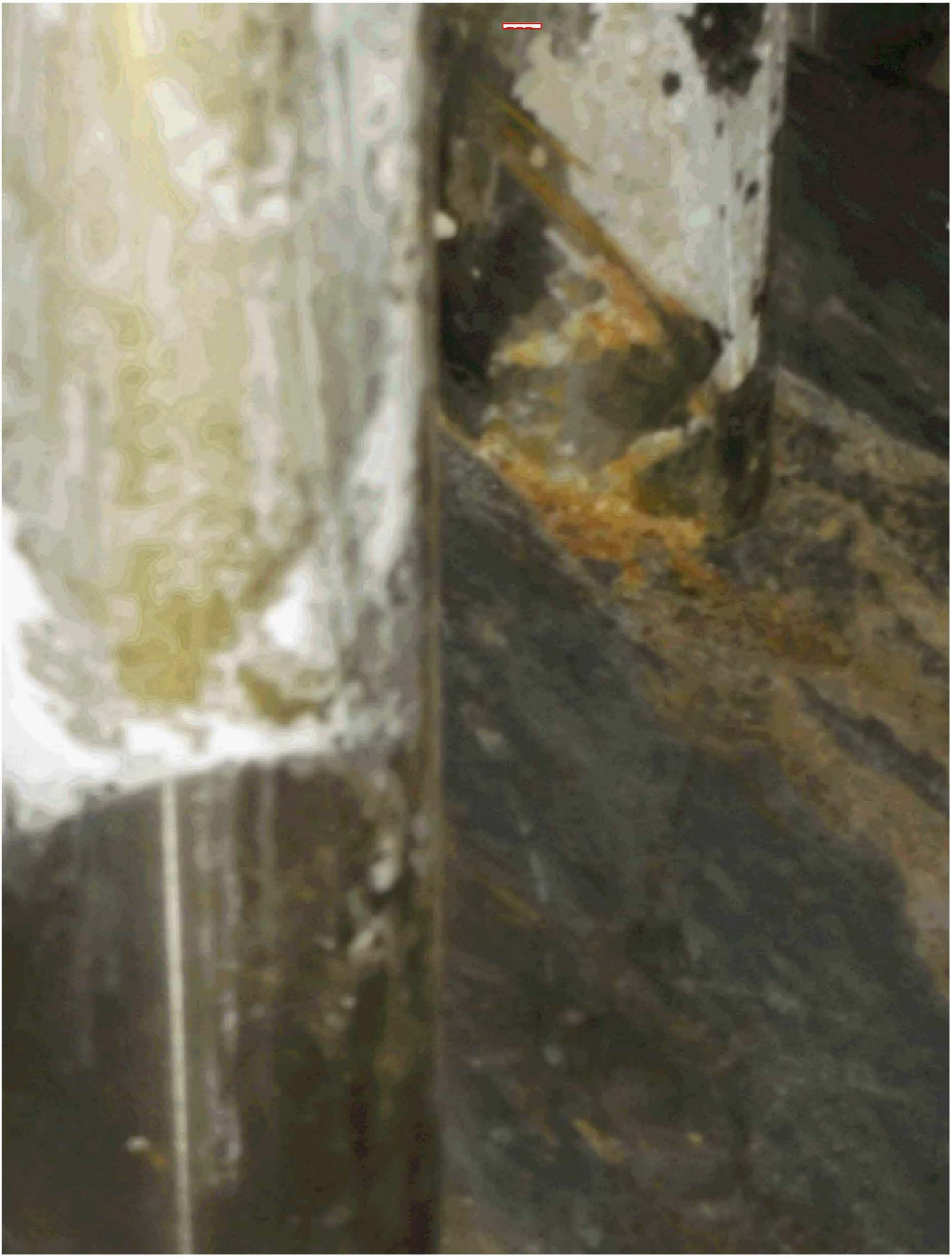
I was just thinking, what happens if Nozzle 77 & 78 are included in the nozzles to be UT/Leakpath given that they are also requesting relief from the examination volume for those two penetrations?

I just wanted to point that out as food for thought since we didn't ask them on the call.

Thanks,

Isaac Anchondo

Reactor Inspector
U.S. Nuclear Regulatory Commission | Region IV
Division of Reactor Safety | Engineering Branch 2
(817) 200-1152




180°
Center

*7111.22
09/22/16

History of BB-006 results shortly around the 9/2/16 time frame and associated log entries: POSSIBLE T.S RETRACTION

Date/Time	Log Entry
9-1-16/01:09	STS BB-006 results are: .043 gpm Total Identified Leakage, .182 gpm Total Unidentified Leakage and .188 gpm Total T/S Identified Leakage.
9-1-16/02:40	STS BB-006 results are: .023 gpm Total Identified Leakage, .188 gpm Total Unidentified Leakage and .168 gpm Total T/S Identified Leakage.
9-1-16/15:50	I am adding a shift manager concern for elevated RCS leakage until the ODMI is updated or a new ODMI is created with new action levels including plant shutdown criteria.
9-1-16/19:40	STS BB-006 results are: 0.040 gpm Total Identified Leakage, 0.542 gpm Total Unidentified Leakage and 0.185 gpm Total T/S Identified Leakage. NCP 96 gpm letdown, 2.0 hours
9-2-16/00:00	Continued the Watch Mode: 1, 3559.8 MWt, 1237.3 MWe. Major Equipment Problems: Continuing attempts to locate and isolate sources of RCS leakage. Current leak rate is calculated at approximately 0.608 gpm. Major Tech Spec Action Statements in effect: None
9-2-16/00:22	STS BB-006 results are: 0.040 gpm Total Identified Leakage, 0.633 gpm Total Unidentified Leakage and 0.185 gpm Total T/S Identified Leakage. NCP 96 gpm letdown, 2.0 hours
9-2-16/01:49	Using SYS BG-208, EXCESS LETDOWN OPERATION, to flush Excess Letdown system piping to the PRT through the 'B'-Train valves.
9-2-16/01:55	Excess Letdown flow to the PRT IAW SYS BG-208 has been secured.
9-2-16/02:01	Initiated Excess Letdown flow to the VCT IAW SYS BG-208 using the 'B'-Train valves.
9-2-16/02:17	Normal Letdown has been isolated IAW SYS BG-310. Charging has been reduced to charge to the seals only.
9-2-16/02:30	Commenced STS BB-006 "RCS WATER INVENTORY BALANCE USING THE NPIS COMPUTER".
9-2-16/04:08	****Entered Tech. Spec. 3.4.13~**** Complying with Condition A. Equipment taken out of service: STS BB-006 indicates RCS leak rate in excess of 1.0 gpm. Reduce leakage to within limits within 4 hours. This entry was unplanned. The current Risk Assessment was reviewed. Current risk management actions are appropriate for the current conditions. No additional actions are needed. STS BB-006 results are: 0.051 gpm Total Identified Leakage,

	1.358 gpm Total Unidentified Leakage and 0.196 gpm Total T/S Identified Leakage. Charging to seals, excess letdown
9-2-16/04:14	Commenced OFN BB-007 "RCS LEAKAGE HIGH", due to Un-Identified RCS calculated leak rate exceeding the T.S. 3.4.13 limit of 1GPM.
9-2-16/04:29	Commenced STN EJ-002 "CONTAINMENT INSPECTION".
9-2-16/04:48	System Operations-Generation, Larry, called for an update on our RCS leakage issue. I informed him that as of 04:08 we were in the Tech Spec and if we do not locate and isolate the leakage we will be commencing down-power of the unit at approximately 07:30-08:00.
9-2-16/05:04	Restored Normal CVCS Letdown to service at ~120 gpm letdown flow and restored normal charging.
9-2-16/05:08	Excess Letdown flow has been isolated.
9-2-16/05:51	Took initial data for confirmatory STS BB-006 following restoration of normal charging/letdown and isolation of Excess Letdown. Personnel remain in Containment attempting to locate/isolate any source of leakage.
9-2-16/06:52	STS BB-006 results are: 0.043 gpm Total Identified Leakage, 0.521 gpm Total Unidentified Leakage and 0.188 gpm Total T/S Identified Leakage. NCP 120 gpm letdown, 61 minutes
9-2-16/08:06	****Entered Tech. Spec. 3.4.13~**** Complying with Condition B.1. Equipment taken out of service: Unidentified leakage is greater than 1 gpm. Be in Mode 3 in 6 hours. This entry was unplanned. The current Risk Assessment was reviewed. Current risk management actions are appropriate for the current conditions. No additional actions are needed. ****Entered Tech. Spec. 3.4.13~**** Complying with Condition B.2. Equipment taken out of service: Unidentified leakage has exceeded 1 gpm. Be in mode 5 in 36 hours. This entry was unplanned. The current Risk Assessment was reviewed. Current risk management actions are appropriate for the current conditions. No additional actions are needed.
9-2-16/11:58	RX trip. Unit is in MODE 3.
9-2-16/14:09	STS BB-006 results are: .042 gpm Total Identified Leakage, .592 gpm Total Unidentified Leakage and .187 gpm Total T/S Identified Leakage. NCP, 125ltdn, 1hr 1min
9-2-16/15:09	STS BB-006 results are: .043 gpm Total Identified Leakage, .614 gpm Total Unidentified Leakage and .188 gpm Total T/S Identified Leakage. NCP, 125 gpm ltdn, 1 hr, confirmatory
9-2-16/15:46	Placed excess letdown in service 'B' train valves iaw SYS BG-208.
9-2-16/15:48	Secured normal letdown iaw SYS BG-310 and reduced charging to the seals only.

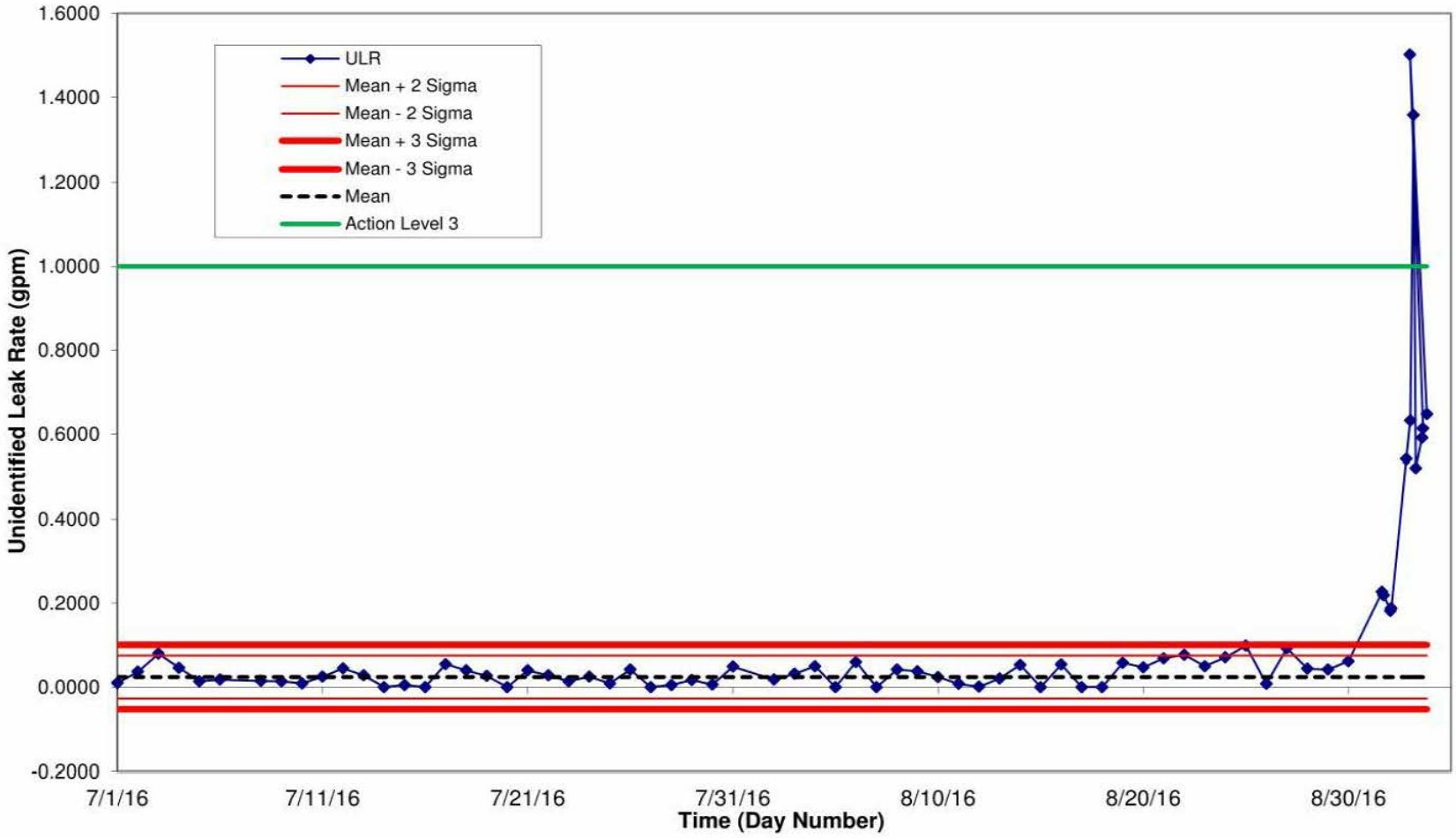
9-2-16/15:51	Commenced STS BB-006 "RCS WATER INVENTORY BALANCE USING THE NPIS COMPUTER". This is with excess letdown in service 'B' train valves.
9-2-16/17:03	STS BB-006 results are: .039 gpm Total Identified Leakage, 1.502 gpm Total Unidentified Leakage and .184 gpm Total T/S Identified Leakage. NCP, Excess letdown, 1 hr
9-2-16/17:35	Placed normal letdown in service at 120 gpm letdown iaw SYS BG-120. Secured excess letdown iaw SYS BG-208.
9-2-16/17:37	Commenced STS BB-006 "RCS WATER INVENTORY BALANCE USING THE NPIS COMPUTER". This is with normal letdown in service.
9-2-16/16:02	Informed by chemistry that there is no activity on the 'A' and 'B' CCW samples taken earlier today.
9-2-16/17:40	Completed STS BB-006 "RCS WATER INVENTORY BALANCE USING THE NPIS COMPUTER" SAT. Performing confirmatory STS BB-006 with normal letdown in service.
9-2-16/18:43	STS BB-006 results are: .034 gpm Total Identified Leakage, .598 gpm Total Unidentified Leakage and .179 gpm Total T/S Identified Leakage. NCP, 125gpm ltdn, 1 hr
9-2-16/19:43	STS BB-006 results are: 0.080 gpm Total Identified Leakage, 0.648 gpm Total Unidentified Leakage and 0.225 gpm Total T/S Identified Leakage. NCP, 126gpm L/D, 1hr
9-2-16/23:32	Placed the Excess Letdown system in service to the VCT IAW SYS BG-208 to support system walk-down to identify any potential leaks.
9-2-16/23:42	Normal Letdown flow has been isolated IAW SYS BG-310.
9-3-16/03:45	****Exited Tech. Spec. 3.4.13~**** Condition A. ****Exited Tech. Spec. 3.4.13~**** Condition B.1. ****Exited Tech. Spec. 3.4.13~**** Condition B.2. Emergent Work update: RBB01 Penetration #77 canopy seal has been identified as the source of increased RCS leakage. This seal weld leak is not considered RCS pressure boundary leakage. The RCS is operable but degraded. IOD contained within CR#106876. Preparations for an orderly entry into Mode 5 will continue to support repairs.
9-3-16/08:37	Secured Steam Generator Blowdown system IAW SYS BM-320. *(possible additional condensed water source in containment)*
9-4-16/01:59	Secured Excess Letdown and Placed Normal Letdown inservice at 120 gpm.
9-4-16/16:00	STS BB-006 results are: 0.027 gpm Total Identified Leakage, 0.576 gpm Total Unidentified Leakage and 0.172 gpm Total T/S Identified Leakage. NCP, 126 gpm letdown, 1 hr
9-4-16/16:16	Upon entry to containment the leak on the head appears to be consistent

	with the video shot at a prior entry. My viewing angle was not the same and I was unable to quantify the leak, but it appears to be constant and not increasing.
9-4-16/17:00	STS BB-006 results are: 0.062 gpm Total Identified Leakage, 0.603 gpm Total Unidentified Leakage and 0.207 gpm Total T/S Identified Leakage. NCP, 126 gpm letdown, 1hr (confirmatory)
9-4-16/18:13	NRC Resident Called for the following information: GTRE0031 Particulate 3.64 E-10 uC/ml GTRE0031 Iodine 5.94 E-11 uC/ml GTRE0031 Gas 1.69 E-06 uC/ml GTRE0032 Particulate 2.69 E-10 uC/ml GTRE0032 Iodine 2.61 E-11 uC/ml GTRE0032 Gas 5.66 E-06 uC/ml Also reported the last STS BB-006 (Reference 1700 Entry) The resident informed me that they we be calling twice a day for this information until we have cooled down.
9-5-16/03:56	STS BB-006 results are: 0.048 gpm Total Identified Leakage, 0.644 gpm Total Unidentified Leakage and 0.193 gpm Total T/S Identified Leakage. NCP 125 gpm Ltdn 2 hrs.
9-5-16/04:56	STS BB-006 results are: 0.076 gpm Total Identified Leakage, 0.581 gpm Total Unidentified Leakage and 0.221 gpm Total T/S Identified Leakage. NCP 125 gpm Ltdn 1 hr.
9-5-16/05:00	Upon entry to Containment the leak on the head appears to be consistent with the video shot at a prior entry. My viewing angle was not the same and I was unable to quantify the leak, but it appears to be constant and not increasing.
9—5-16/05:20	CTMT atmosphere rad monitors GTRE31 and GTRE32 particulate channels are reading in the 10E-16 uCi/ml range however prior to the filter paper change they were reading 8 and 7 E-10 uCi/ml for particulate respectively and I expect them to return to that range in the next few hours. Iodine and gas channels are reading in uCi/ml: GTRE31 Iodine- 1.6E-10 GTRE32 Iodine- 1.2E-10 GTRE31 Gas- 1.5E-6 GTRE32 Gas- 6.1E-6
9-5-16/07:28	NRC Resident Called for the following information: GTRE0031 Particulate 5.89 E-10 uC/ml GTRE0031 Iodine 1.58 E-10 uC/ml GTRE0031 Gas 1.45 E-06 uC/ml GTRE0032 Particulate 6.44 E-16 uC/ml GTRE0032 Iodine 1.15 E-10 uC/ml

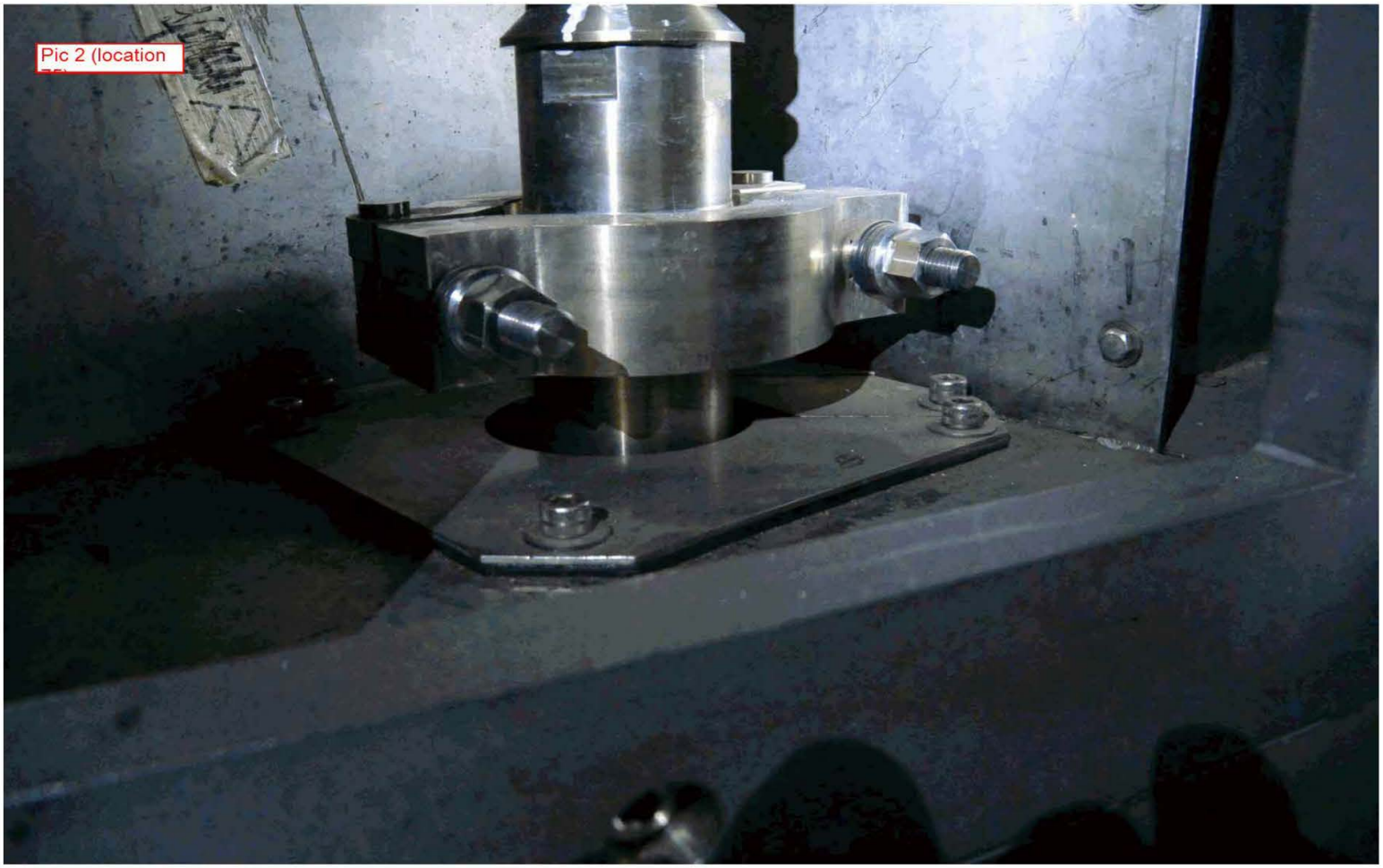
	GTRE0032 Gas 5.88 E-06 uC/ml Also reported the last STS BB-006 (Reference 0456 Entry)
9-5-16/09:41	STS BB-006 results are: .035 gpm Total Identified Leakage, .604 gpm Total Unidentified Leakage and .180 gpm Total T/S Identified Leakage. NCP, 125 ltdn, 1 hour
9-5-16/10:41	STS BB-006 results are: .025 gpm Total Identified Leakage, .675 gpm Total Unidentified Leakage and .170 gpm Total T/S Identified Leakage. NCP, 125gpm ltdn, 1 hour
9-5-16/16:38	Commenced RCS depressurization to 1875 PSIG, IAW GEN 00-006.
9-5-16/17:08	Commenced cooldown to 545 Degrees, IAW GEN 00-006.
9-5-16/17:22	Secure RCS depressurization IAW GEN 00-006.
9-5-16/17:43	Secured RCS Cooldown, IAW GEN 00-006.
9-5-16/17:51	NRC Resident Called for the following information: GTRE0031 Particulate 6.20 E-10 uC/ml GTRE0031 Iodine 1.20 E-4 uC/ml GTRE0031 Gas 1.56 E-06 uC/ml GTRE0032 Particulate 5.50 E-10 uC/ml GTRE0032 Iodine 7.26 E-04 uC/ml GTRE0032 Gas 6.16 E-06 uC/ml Also reported the last STS BB-006 (Reference 1135 Entry)
9-5-16/18:35	RCS Leak at the canopy seal weld appears to be less now with lower RCS pressure. This is based on visual observation of the leak compared with the initial video and descriptions from earlier observers.
9-6-16/03:21	STS BB-006 results are: 0.042 gpm Total Identified Leakage, 0.552 gpm Total Unidentified Leakage and 0.187 gpm Total T/S Identified Leakage. NCP, 86 gpm letdown, 1 hr.
9-6-16/03:47	Reports from the field indicate the spray plume from the leaking canopy seal is noticeably smaller today when compared to this time yesterday. This is to be expected since RCS pressure is 360 psig lower today than it was yesterday.
9-6-16/04:30	STS BB-006 results are: 0.040 gpm Total Identified Leakage, 0.504 gpm Total Unidentified Leakage and 0.185 gpm Total T/S Identified Leakage. NCP, 86 gpm letdown, 1 hr.
9-6-16/13:02	Investigated the spray plume from the leaking canopy seal. The plume is noticeably smaller today when compared to the video of the plume located on the "K" drive. This was my initial inspection of the leak / plume.
9-6-16/13:15	Current CTMT RAD monitor readings: GTRE0031 Particulate 7.06 E-11 uC/ml GTRE0031 Iodine 2.63 E-10 uC/ml

	GTRE0031 Gas 1.60 E-06 uC/ml GTRE0032 Particulate 5.77 E-11 uC/ml GTRE0032 Iodine 2.60 E-10 uC/ml GTRE0032 Gas 6.78 E-06 uC/ml
9-6-16/13:33	STS BB-006 results are: 0.036 gpm Total Identified Leakage, 0.490 gpm Total Unidentified Leakage and 0.181 gpm Total T/S Identified Leakage. NCP 85 letdown, 85 min
9-6-16/14:45	Current CTMT RAD monitor readings: GTRE0031 Particulate 2.64 E-10 uC/ml GTRE0031 Iodine 7.55 E-11 uC/ml GTRE0031 Gas 1.66 E-06 uC/ml GTRE0032 Particulate 6.25 E-10 uC/ml GTRE0032 Iodine 3.56 E-10 uC/ml GTRE0032 Gas 6.91 E-06 uC/ml
9-6-16/15:11	STS BB-006 results are: 0.033 gpm Total Identified Leakage, 0.421 gpm Total Unidentified Leakage and 0.178 gpm Total T/S Identified Leakage. NCP 85 Letdown, 60 min
9-6-16/21:40	STS BB-006 results are: 0.031 gpm Total Identified Leakage, 0.510 gpm Total Unidentified Leakage and 0.176 gpm Total T/S Identified Leakage. NCP, 85 gpm letdown, 1.5 hr test duration
9-6-16/22:29	Current CTMT RAD monitor readings: GTRE0031 Particulate 2.04 E-10 uC/ml GTRE0031 Iodine 7.98 E-11 uC/ml GTRE0031 Gas 1.59 E-06 uC/ml GTRE0032 Particulate 2.27 E-10 uC/ml GTRE0032 Iodine 5.44 E-11 uC/ml GTRE0032 Gas 7.66 E-06 uC/ml
9-6-15/22:40	STS BB-006 results are: 0.031 gpm Total Identified Leakage, 0.395 gpm Total Unidentified Leakage and 0.176 gpm Total T/S Identified Leakage. NCP, 85 gpm letdown, 1 Hr duration
9-7-16/00:29	Increased Letdown flow to 120 GPM.
9-7-16/00:41	Commenced RCS Cooldown per GEN 00-006
	Note- no additional BB-006 performed due to changing plant conditions, and exiting mode of applicability

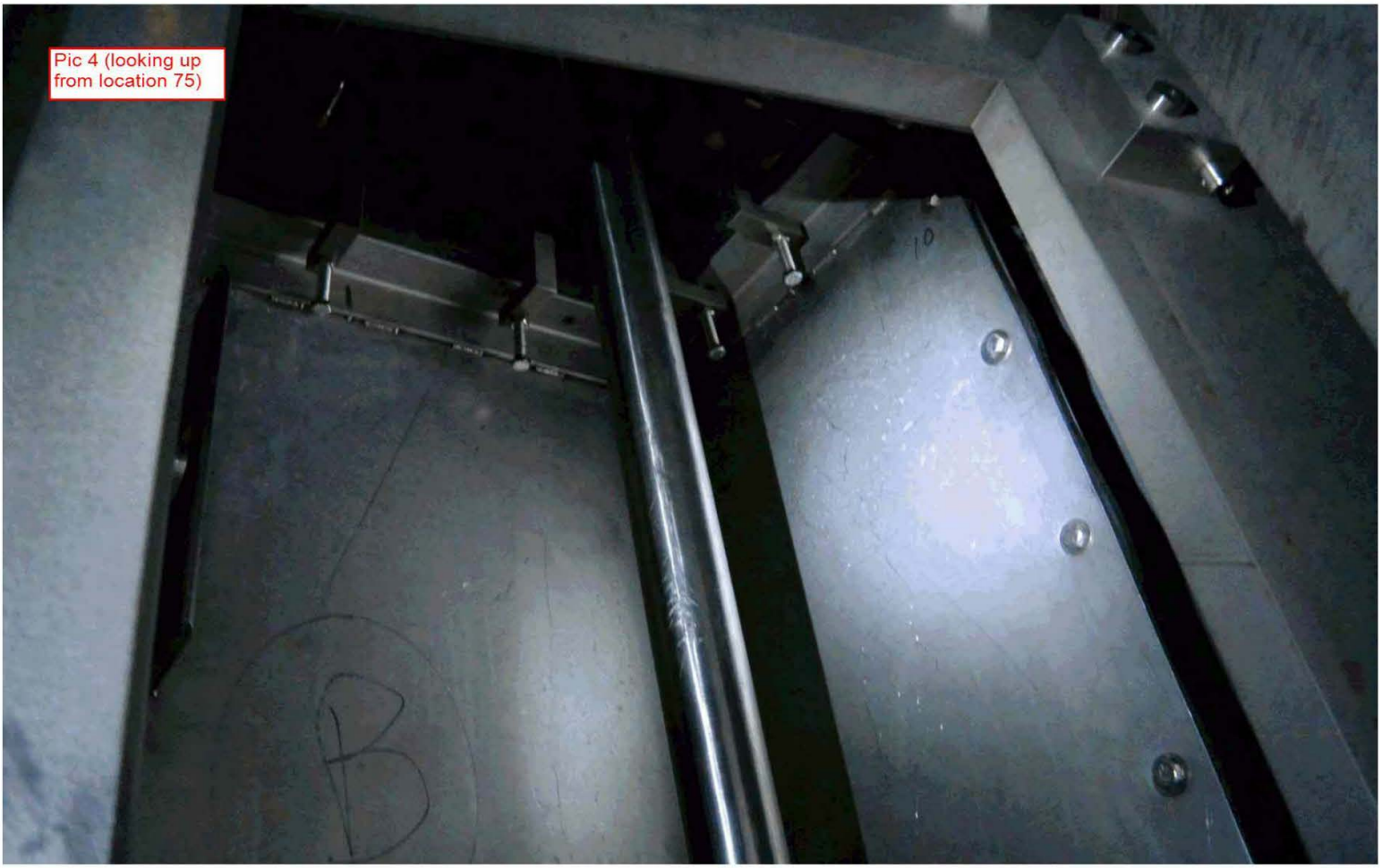
Unidentifed Leak Rate Versus Time for 31 Days



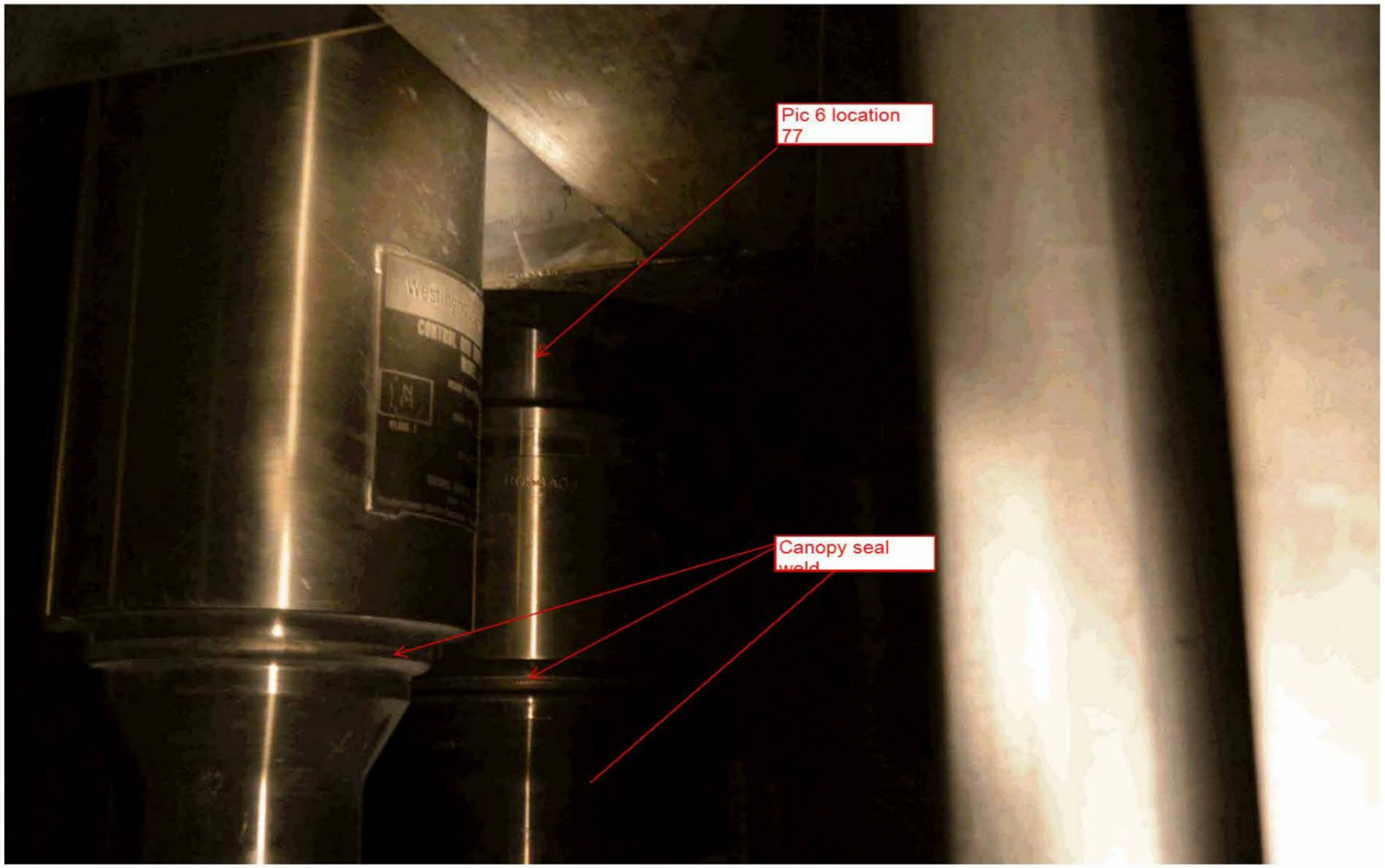

Pic 1
(looking up
at location 7


Pic 2 (location


Pic 3 (location


Pic 4 (looking up
from location 75)


Pic 5 location 77


Pic 6 location
77
Canopy seal
weld

Reference Licensee

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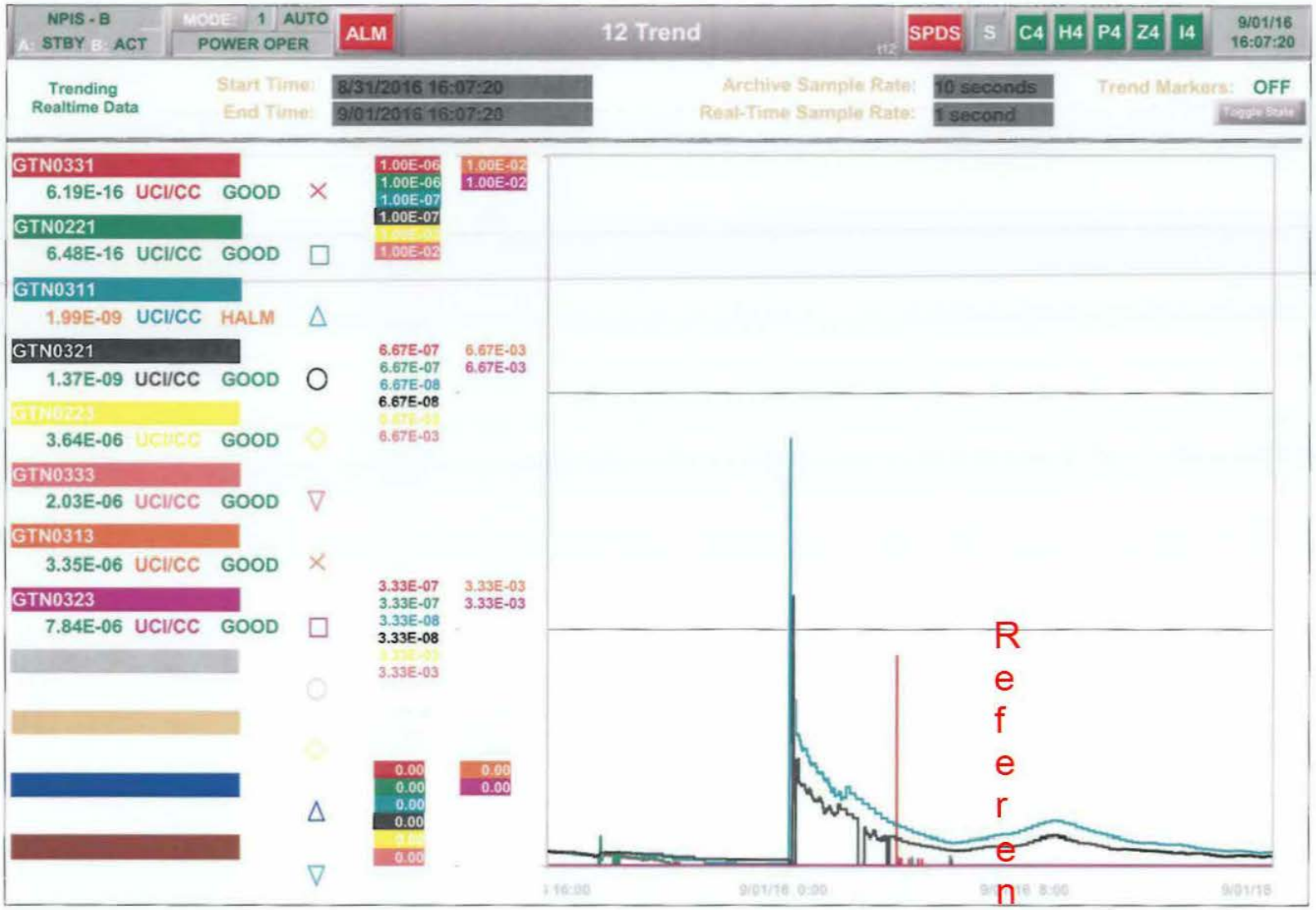

Reference

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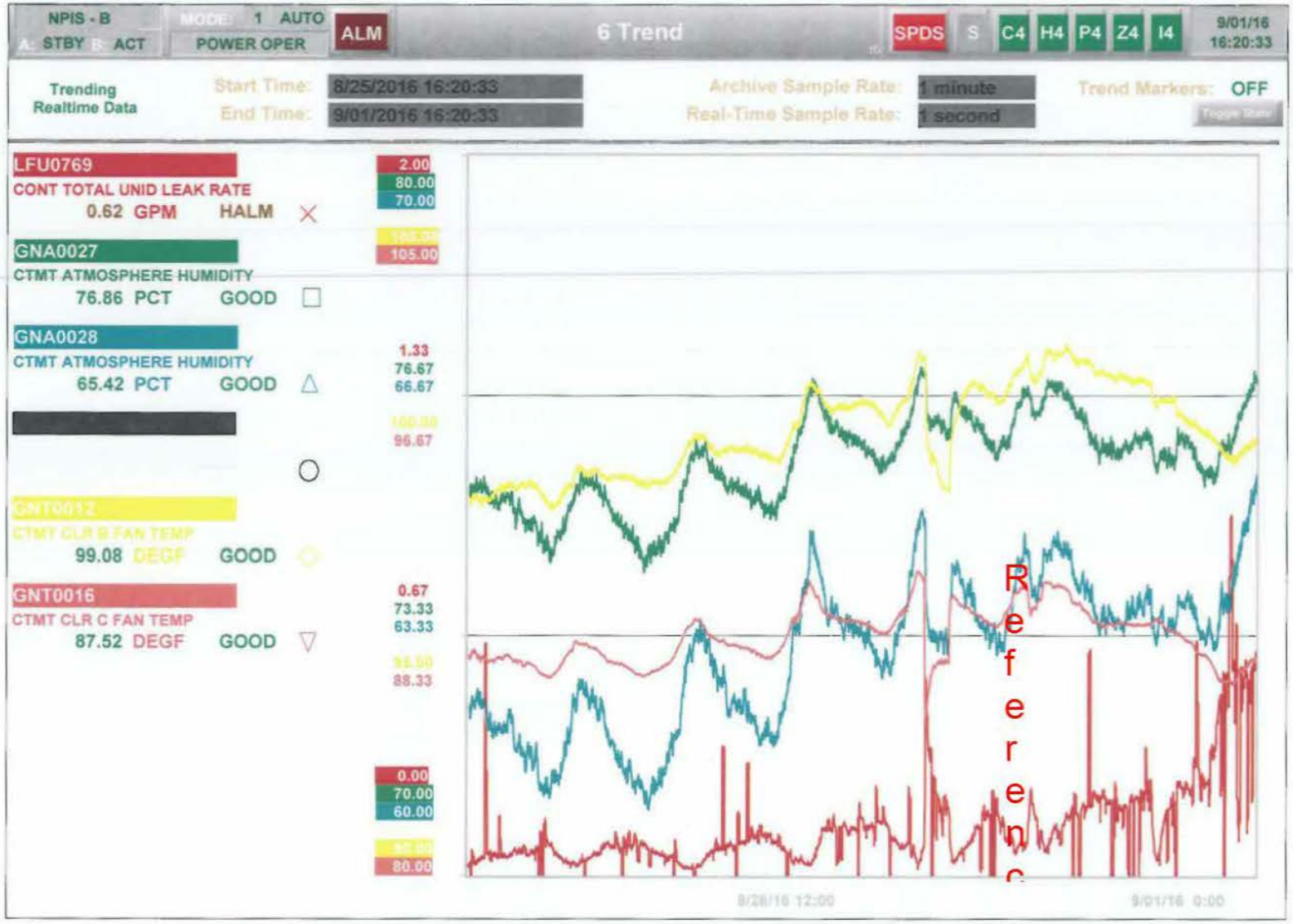
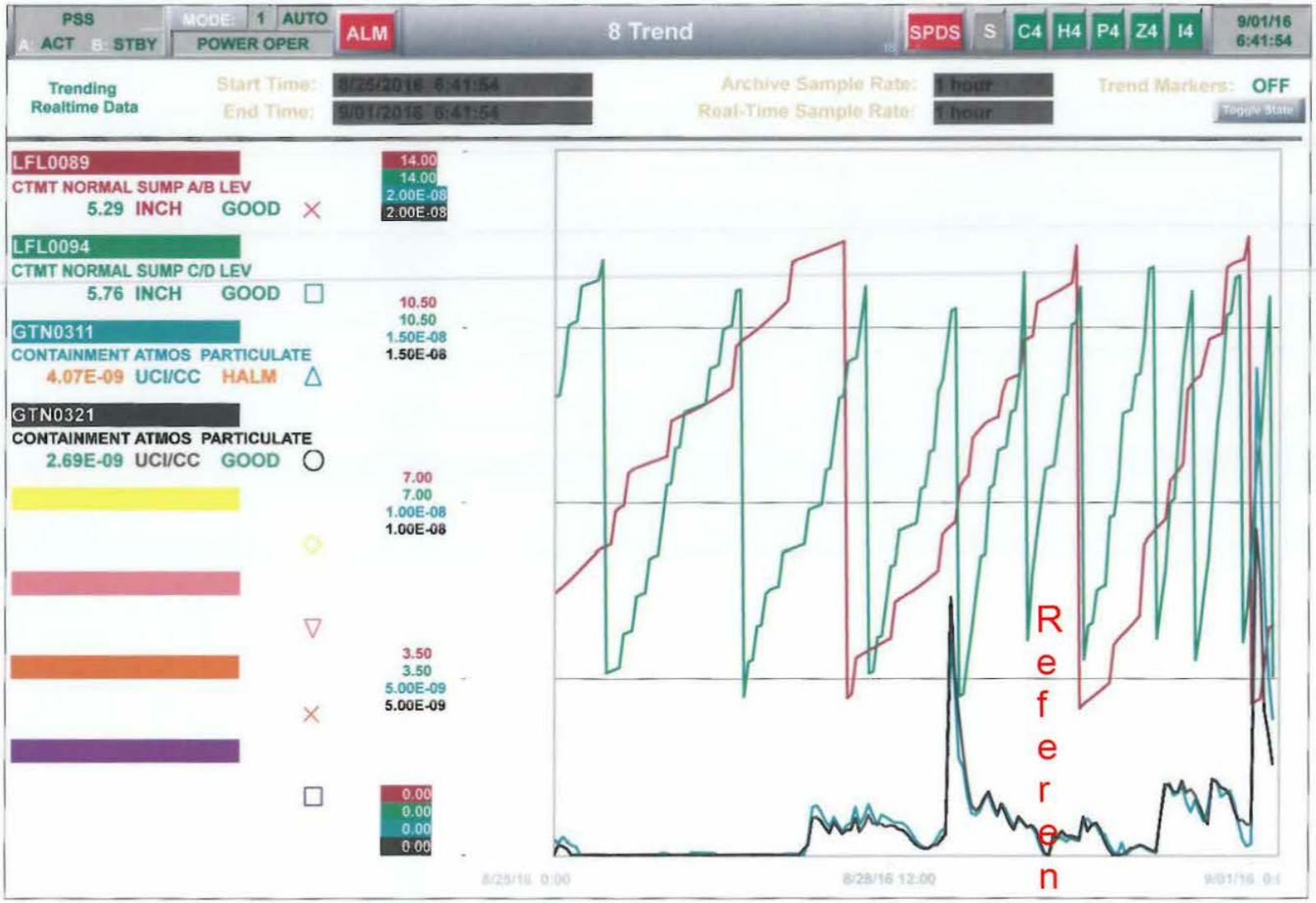


Reference Licensee



ODM DOCUMENTATION FORM

Section I - Identification of the Decision (6.2.1)

ODM Index #2015--07**, Rev.** 0 Reason for Revision: n/a

Date 05/27/15	**CR #** 96542/ 97350	ODMI 1 ☐ 2 ☒ ODMI 1 issues must be reviewed by the PSRC upon approval.

EQUIPMENT RELIABILITY ISSUE YES ☐ NO☒ IF "YES", THEN this ODM must be reviewed by the Plant Health Committee upon approval.

Clearly state the Problem/Scope/Purpose of Plan: Starting 5/21/15, the control room began receiving Activity spikes on containment radiation monitors GTRE 31 and GTRE 32 particulate channels; all actions required by the

ALR are being performed in the control room. Chemistry has been notified and filter changes have been performed.

Local chemistry results for activity were Na(1.0e-11) and Co-58(1.0e-13), both of which are below the alarm set point.

Per a discussion with Chemistry normal activity level in the RCS for Na is 2.3e-3 and Co-58 is 7e-5. A walk down of

containment was performed

Response: The RCS is leaking at a rate too small to be reflected on RCS leak rate data (STS BB-006), but has been detected by chemistry analysis of Rad Monitor filters.

Section II - Formation of the Evaluation Team (6.2.2)

Evaluation Team Lead: Ron Sims **Sponsor:** James Edwards

Team Member	**Expertise**
Ron Sims	Operations SRO
Grant Bussard	Engineering
Chad Carman	Chemistry
Bart Crow and Bill Ketchum	Engineering

Section III – Define Challenges and Evaluate Alternatives (6.2.3)

Specify operational challenges, potential consequences and changing conditions which may prompt additional actions:

RCS leak rate limit is limited by Tech Spec 3.4.13.

Response: A containment entry ocurred on 5/21/15 and again on 5/26/15. Accessible areas were visually inspected. A focused inspection was done in the area near the radiation monitors intake. No leakage was found. The leak therefore remains unidentified, with a Tech Spec limit of 1 gpm.

If the leak increases to greater than 1 gpm unidentified, a plant shutdown will be required.

List alternative solutions	*Discuss Advantages*	*Discuss Disadvantages*
Continue operation and inspect for leak if the plant enters a forced outage.	No loss of generation.	RCS leak continues.

		Possible substantial boron buildup on nearby equipment.
Shutdown and investigate for leak.	Leak becomes identified, and possibly isolable or repaired.	Loss of generation. Leak may be too small to identify.
Perform thorough OE search to determine optimal troubleshooting effort based on industry experience with similar small leaks.	Utilizes past experience. Maximizes efforts to determine leak location with minimal costs.	Troubleshooting effort may still not find the source of the leak. RCS leak continues until found. Possible substantial boron buildup on nearby equipment.

Section IV – Decision Documentation (6.2.4)

Summarize Decision and basis: The indications from radiation monitors is very similar to the issue noted earlier this year. However, in that case the ODMI recommendation was to continue plant operation, monitor the leakage and perform containment walk downs inspecting for leakage once the plant shutdown for RF20. Now the plant has just completed the refueling outage. Monitoring for the remainder of the cycle could permit significant boron buildup even with a very small leak.

Response: Research actions taken by other plants with very small leaks that have not been detected during initial plant walkdowns. Ensure an inspection and possible repair is scoped into the forced outage schedule. Develop an Evidence and Action Matrix to develop a detailed troubleshooting plan to determine the leak location and leak repair plan.

Section V– Implementation Plan (6.2.5) (Pending actions will be tracked as CAP actions under CR listed in Section I.)

ACTION ITEM	OWNER	DUE DATE	STATUS	COMMENTS
1. Develop matrix of possible leak locations.	Bussard	5/28/15	A list was developed in February for the previous ODMI.	Action is complete. List will be sent to team members.
2. Perform a thorough OE search of industry experience of looking for very small RCS leaks.	Crow	6/18/15	Complete	All plants struggle with very small leaks. No information was gained
3. Develop an Evidence and Action Matrix to assist in development of tracking of a troubleshooting plan. Plan should evaluate use of robotics for inspections inside the bioshield.	Bussard/ODMI team	6/18/15	Complete	E&A Matrix completed.
4. Monitor radiation monitor filter activity weekly to determine any activity information that may assist in determining leak location. Ensure longer counts than normal are used to maximize data collection. Also include follow-up counts of 14 and 21 days after the initial 7 day count. Once enough data is available determine a two sigma, standard deviation value for the data.	Chemistry (Carman)	5/31/15 and weekly thereafter.	Complete	Initial actions complete. Additional actions are on-going.
5. Continue to monitor unidentified leak rate (ULR) values looking for an increasing trend.	Bussard/Parks	Perform Biweekly	Current ULR data does not show any kind of trend.	Initial actions complete. Additional actions are on-going.

6. Determine why radiation monitors are seeing spikes well above activity level seen on the filters.	Hatch	6/1/15	Complete	Rad monitors use a K-list than provides an anticipatory alarm and accounts for build-up of activity over time. Spikes are seeing real activity.
7. Follow up with Callaway experience from a similar leak. Names available from a STARS conference. Engineering and Ops to both discuss with counterparts. The discussion should include how they may have addressed rad monitor spiking,	Sims/Bussard	6/4/15	Complete	Callaway small leak was outside containment and provided no additional troubleshooting assistance.
8. Review STS CR-001 to determine if a channel check OOS will drive changing filters sooner than the desired 7 day frequency.	Sims	6/4/15	Complete	STS CR-001 does a channel check. Therefore buildup of one channel may cause the need for changing filters sooner than the 7-day desired frequency.
9.Add containment walkdown, inspection for leak and repair to forced outage list.	Bussard	6/4/15	Complete	Action complete to perform outage and forced outage inspections inside bioshield for location of the leak.
10. Determine how radiation monitoring spiking can be eliminated to reduce control room nuisance alarms.	Garcia	08/20/15	Engineering has identified method to minimize control room nuisance alarms during troubleshooting. Actions are underway to implement permanent modification with vendor assistance.	Action is being tracked on the Shift Manager Operational Focus Out of Service-Degraded list.

Contingencies: Continue to monitor for an increase in RCS leak rate. STS BB-006 is sufficient to ensure proper attention is given to required actions for an RCS leak.

Compensatory Measures: STS BB-006 is already being performed at least once per day.

Trigger Points: Chemistry will analyze containment rad monitor filters weekly. An increase in

Sodium or Iodine isotope of one decade above baseline readings will trigger further action. STS BB-006 already includes proceduralized trigger points with actions for identifying a leak location.

Actions if Trigger Point(s) exceeded: Shift Manager will re-convene focus group to determine desired actions upon reaching the trigger point for rad monitor filter activity. STS BB-006 trigger points are proceduralized, the crew will perform the specified actions according to the ULR program.

Communication Plan: Control Room essential reading. Email ODMI to team members.

Any New/Revised Procedures Needed: (Be specific as to those procedures/rev #'s impacted):

n/a

Ops/Staff Preparation Required (Simulator, Training Fidelity, Use of Mock-ups, etc.):

Chemistry ensure communications to on-shift personnel.

Section VI – Approval (6.2.6)

Approval

Shift Manager / Date: / 5/28/15

Sponsor / Date: /5/28/15

Evaluation Team Lead / Date: /5/28/15

Section VII– Closure (6.2.7)

Additional Comments/Actions Required for Closure/Basis For Closure:

Basis for Closure:

Date Closed: _____

Shift Manager / Date _____ / _____

Sponsor / Date: _____ / _____

Evaluation Team Lead / Date: _____ / _____

FORM APF 29B-003-01 REV 05

SURVEILLANCE TEST ROUTING SHEET (STRS)

DOCUMENT NUMBER: STS BB-006
TEST FREQ. 72 Hours
DUE DATE/TIME:
DOCUMENT TITLE: RCS WATER INVENTORY BALANCE USING THE NPIS COMPUTER
LATE DATE/TIME:
T/S REQUIRED MODE: 1 2 3 4
REQUIRED PLANT MODE:
INITIATING DOCUMENT #(S):
SUPPORTING CLEARANCE ORDER(s) [Commitment Step 3.2.23]
RESPONSIBLE GROUP: OPS
SUPPORT GROUP(S):
PRE-TEST COMMENTS:

1) PROCEDURE VERIFIED TO BE CORRECT REVISION WITH ALL TEMPORARY CHANGES ATTACHED AND INCORPORATED. INIT/DATE 8/31/16

TEST PERFORMERS:

PRINT NAME	INIT/DATE	PRINT NAME	INIT/DATE
[illegible]	8/31/16	A. Moffa	8/31/16
[illegible]	8-31-16		

2) PRE-TEST REVIEWS:

	SIGNATURE	DATE	TIME
SM/CRS/Designee Auth:	[signature]	08/31/16	1254

3) *TEST DEFICIENCY DESCRIPTION:

4) *T/S OR TRM FAILURE? ☐ YES ☐ NO
TP INIT / DATE
SM/CRS/DESIGNEE SIGNATURE DATE
IF NO - JUSTIFICATION:

5) *ACTION TAKEN:
EOL # A WR/WO#
TEST SUSPENDED ☐ YES ☐ NO
SM/CRS/DESIGNEE SIGNATURE DATE

*SECTIONS 3, 4, AND 5 ARE COMPLETED IF A TEST DEFICIENCY OCCURS. OTHERWISE MARK N/A.

6) POST TEST REVIEWS: (GROUP SUP. CHECK ONE) ☑ COMPLETE ☐ PARTIAL ☐ N/A
TOTAL MAN HOURS: 5

	SIGNATURE	DATE	TIME
Test Performer:	[signature]	08/31/16	1742
SM/CRS/Designee Auth:	[signature]	08/31/16	1802
Group Supervisor:			
SC/Surv.Technician:			

7) ADDITIONAL COMMENTS: ODMI 2015-07 has been implemented and CR 106763 written for identifying leak/isolate/repair. Currently scheduled for outage, will continue to monitor with another start w/D scheduled for tomorrow. DMC 8/31/16

WOLF CREEK
NUCLEAR OPERATING CORPORATION

STS BB-006

RCS WATER INVENTORY BALANCE USING THE NPIS COMPUTER

Responsible Manager

Manager Operations

Revision Number	14
Use Category	Continuous
Administrative Controls Procedure	No
Management Oversight Evolution	No
Program Number	21D

DC12 12/23/2014

TABLE OF CONTENTS

1.0 PURPOSE

1.1 This surveillance procedure provides the instructions for performing a Reactor Coolant System inventory balance, using the NPIS Computer to determine RCS leakage.

2.0 SCOPE

2.1 This surveillance satisfies Technical Specification SR 3.4.13.1 to determine RCS leakage.

2.2 This procedure can be used to determine the identified leakage from individual components, such as the NCP, as directed by the Shift Manager/Control Room Supervisor.

2.2.1 Component leakage is determined using data from two successive performances of this procedure: (3.1.4)

- o One with the component isolated
- o One with the component inservice
- o The absolute difference in the unidentified leakage rates between the two tests will be representative of the component identified leakage

2.3 Each valid performance of this test shall be counted as a complete surveillance to ensure that it will be included as a data point for the RCS leakage NRC performance indicator.

3.0 REFERENCES AND COMMITMENTS

3.1 References

3.1.1 Calculation AN 99-023, PIR 1999-1988, RCS Water Inventory Balance Validation For STS BB-004

3.1.2 NEI 99-02, Regulatory Assessment Performance Indicator Guideline

3.1.3 ASME Steam Table 5th Edition, Table 3, Properties Of Superheated Steam And Compressed Water

3.1.4 PIR 1994-0633, Inconsistent Calculations Of PDP Leakage Occurs During STS BB-004 Due To Lack Of Proceduralized Method For Obtaining Leak Rate

3.1.5 PIR 2002-0823, Identification Of Symptoms Of RCS Leakage Inside Containment (NRC IN 2002-13)

3.1.6 PIR 2004-2006, Defining Steady State Conditions

3.1.7 CCP 011501, VCT Modulate Divert Setpoint Change

3.1.8 DCP 9500, Plant Process Computer Replacement

3.1.9 WCAP 16423-NP, Pressurized Water Reactor Owners Group Standard Process And Methods For Calculating RCS Leak Rate For Pressurized Water Reactors

3.1.10 AP 29G-001, RCS UNIDENTIFIED LEAK RATE MONITORING PROGRAM

3.1.11 CR 00018921, Test Duration And Frequency

3.2 Commitments

3.2.1 ET 95-0106, Correspondence To NRC Describing Change To TS 3/4.3.1 To Reflect Deletion Of The Boron Dilution Mitigation System

3.2.2 PIR 2003-0307, NRC Bulletin 2002-01, WCNOC Letter WM 03-0007, Administrative Controls In Leak Rate Calculations For Indeterminate Cause Of RCS Leakage Increase, (RCMS 2003-033)

3.2.3 Letter OG-07-387, Recommendations For Implementation Of Guidelines For PWROG RCS Leak Rate Programs With Respect To NEI-03-08 (PS-OSC-0189 And PS-OSC-0218). (CR 2007-002435)

4.0 PRECAUTIONS/LIMITATIONS

4.1 Report any irregularities to the SM/CRS immediately and reference TS 3.4.13 if any of the following TS limits are not met:

- o Identified leakage shall be limited to less than or equal to 10 gpm.
- o Unidentified leakage shall be limited to less than or equal to 1 gpm.

4.2 Refer to AP 29G-001, RCS UNIDENTIFIED LEAK RATE MONITORING PROGRAM, if any of the following limits are exceeded: [3.2.3]

- o One seven (7) day rolling average of RCS unidentified leakage with a value greater than 0.1 gpm.
- o Two consecutive RCS unidentified leakage values greater than 0.15 gpm.
- o One RCS unidentified leakage value greater than 0.3 gpm.

4.3 In the event that the required computer points are not available, STS BB-004, RCS WATER INVENTORY BALANCE, shall be performed instead of this procedure.

4.4 Operation of the Reactor Coolant makeup system should be avoided if at all possible during the performance of this test. If a makeup is required, consider closing out the test prior to the makeup.

4.5 Diversion of primary water to the Recycle Holdup Tank and pump down of the RCDT shall be suspended during the performance of this test.

4.6 All valid performances of this procedure must be included in the monthly NRC RCS Integrity Cornerstone Report.

4.7 The following requirements must be met while data is collected for the test to be considered a valid test: [3.2.3]

- o Recommended duration for this test is 2 hours. However, any duration of 1 hour or greater will provide sufficient accuracy.

NOTE

Tavg is the average of the four loop NR Tavg values or the four loop WR hot leg temperature values, whichever is applicable.

- o Tave remains constant (± 1°F).
- o Pressurizer Level remains constant (± 0.5%).
- o Reactor Power remains constant (± 0.5%).
- o VCT divert valve remains in position to return letdown to the VCT.
- o Total amount of RCS makeup is limited to 500 gallons.
- o RCP controlled leakoff returns to VCT.
- o No sampling is done on the leak rate control volume.
- o No chemical additions are made to the leak rate control volume.
- o Identified leakage collection tanks are not pumped (PRT, RCDT).
- o No testing, evolutions (i.e.: CTMT Purge, or shifting CTMT fans) or work should be underway that could effect containment temperature and/or pressure during the leak rate surveillance.

5.0 TEST EQUIPMENT

5.1 None

6.0 ACCEPTANCE CRITERIA

6.1 RCS identified leakage shall be less than or equal to 10 gpm.

6.2 RCS unidentified leakage shall be less than or equal to 1 gpm.

INIT/DATE

7.0 PREREQUISITES

7.1 Access NPIS RCS Leak Rate application by going to the Operations page and clicking on the LEAK RATE tab. ☑

NOTE

The minimum number of channels, for those parameters that have more than one channel available, needed for a successful calculation are:
- **One RCS Loop Thot with one RCS Loop Tcold from the same loop or one WR Thot.**
- **One Pressurizer Level.**
- **One Pressurizer Pressure or one RCS WR Pressure.**

Verify that the number of channels blocked or OOS is such that the minimum channels needed will be available for the entire calculation.

7.2 Verify the parameters utilized and required for a successful calculation listed on BB06 DISPLAY indicate GOOD, ALM, HALM, HIHI, LALM, LOLO, HOP or LOP and do not have a ^ symbol next to them. ☑

INIT/DATE

NOTES

- When non-steady state operation precludes performance of this procedure within 90 hours (including 25% grace period) of the last performance, the surveillance shall be performed within 12 hours of establishment of steady state operation.
- The bases for SR 3.4.13.1 defines steady state as stable RCS pressure, temperature, power level, pressurizer and VCT level, makeup and letdown and RCP seal injection and return flows.
- The following conditions should remain stable for the duration of the test. In the event this STS is being used to quantify the magnitude of a leak or following a transient, some of these parameters may not be stable for the test duration.
- The allowable variations in RCS Tavg and RCS/Pressurizer pressure, required by the calculation, are built into the application and will generate error message(s) if the variations fall outside the values listed below. If any one of these error messages are received, the calculation will not be performed. If Rx power, pressurizer level, total RCS make-up is greater than 500 gallons, or RCP seal injection flow vary outside the range listed, the application will still calculate results but the test will not be valid. [3.2.3]

7.3 The plant is being maintained in a steady state condition, as indicated by the following: [3.2.3]

INIT/DATE

NOTE

Tavg is the average of the four loop NR Tavg values or the four loop WR hot leg temperature values, whichever is applicable.

- o RCS Tavg controlled within ± 1°F. ☑
- o RCS/Pressurizer pressure controlled within ± 3 psig. ☑
- o Reactor power stable within ± 1/2%. ☑
- o Pressurizer level controlled within ± 1/2% with charging and letdown flows balanced. ☑
- o RCP seal parameters are normal, as indicated by the following:
  - o Seal Injection flow to each RCP is between 8 and 13 gpm. ☑
  - o Annunciator 00-072A, RCP #1 SEAL FLOW HI is clear. ☑
  - o Annunciator 00-072B, RCP #1 SEAL FLOW LO is clear or #1 seal leakoff flow is in the ACCEPTABLE RANGE of Figure 1, RCP NUMBER 1 SEAL LEAKOFF VERSUS SEAL ΔP of ALR 00-072B, RCP NO.1 SEAL FLOW LO. ☑
  - o Annunciator 00-073A, RCP #2 SEAL FLOW HI is clear. ☑

INIT/DATE

NOTES

- **VCT pressure stabilization is desired for a valid leak rate test to be used as an input to the Engineering RCS Unidentified Leak Rate Monitoring Program.**
- **For surveillance performances to meet time critical Technical Specification actions the pressure stabilization waiting period is not required.**

7.4 IF a VCT Purge is ongoing, THEN PERFORM the following:

7.4.1 SECURE the purge IAW SYS HA-208, GASEOUS RADWASTE SYSTEM VCT PURGE OPERATIONS N/A

7.4.2 IF plant conditions allow, THEN WAIT at least 2 hours for VCT pressure to stabilize. N/A

7.5 No testing, evolutions (i.e.: CTMT Purge, or shifting CTMT fans) or work should be underway that could affect containment temperature and/or pressure during the leak rate surveillance. ☑

7.6 Notify chemistry that RCS sampling will be isolated during this test. ☑

Chemistry Contact Mays

7.7 Circle the as-found position of the following valves:

- PZR VAPOR SAMPLE INNER CTMT ISO VLV.
  - SJ HIS-12 - OPEN/(CLOSED) ☑
- PZR VAPOR SAMPLE OUTER CTMT ISO VLV.
  - SJ HIS-13 - OPEN/(CLOSED) ☑
- HOT LEG 1 SAMPLE INNER CTMT ISO VLV.
  - SJ HIS-3 - OPEN/(CLOSED) ☑
- HOT LEG 3 SAMPLE INNER CTMT ISO VLV.
  - SJ HIS-4 - (OPEN)/CLOSED ☑
- PZR LIQ SAMPLE INNER CTMT ISO VLV.
  - SJ HIS-20 - OPEN/(CLOSED) ☑

INIT/DATE

7.8 Ensure the following valves are closed:

- o PZR VAPOR SAMPLE INNER CTMT ISO VLV.
  - o SJ HIS-12 - CLOSED ☑
- o PZR VAPOR SAMPLE OUTER CTMT ISO VLV.
  - o SJ HIS-13 - CLOSED ☑
- o HOT LEG 1 SAMPLE INNER CTMT ISO VLV.
  - o SJ HIS-3 - CLOSED ☑
- o HOT LEG 3 SAMPLE INNER CTMT ISO VLV.
  - o SJ HIS-4 - CLOSED ☑
- o PZR LIQ SAMPLE INNER CTMT ISO VLV.
  - o SJ HIS-20 - CLOSED ☑

INIT/DATE

8.0 PROCEDURE

8.1 Ensure all Prerequisites have been met. DR 18/31/16

NOTE

It may be desirable to lower RCDT level prior to performance of the next step, as the RCDT discharge flowpath needs to remain isolated for the duration of the test.

8.2 IF desired, THEN lower RCDT level per SYS HB-120, REACTOR COOLANT DRAIN TANK (RCDT) OPERATIONS. N/A

8.3 IF the RCDT containment isolation valves are open, THEN perform the following:

8.3.1 Notify Treatment System Operator/Aux Building Operator that the RCDT will be isolated. N/A

8.3.2 Close RCDT HX OUTLET INNER CTMT ISO VLV.

o HB HIS-7176 - CLOSED

8.3.3 Close RCDT HX OUTLET OUTER CTMT ISO VLV.

o HB HIS-7136 - CLOSED N/A

8.4 Monitor RCDT level (NPIS point HBL1003).

INIT/DATE

NOTES

- **WCAP-16423-NP, Standard RCS Leakage Action Levels and Response Guidelines for Pressurized Water Reactors allows RCS makeup (boration or dilution) during the performance of the test. However, it also recommends that the makeup to the VCT be limited to a certain percentage of the total VCT volume. A level reduction in the VCT to 35% (20 gal/%) will allow for makeup of approximately 500 gallons.**
- **The purpose of the 2-hour duration is to avoid any makeup during the performance of the test if a makeup takes place the data maybe suspect. Makeup to RCS should be planned so as to avoid making up during performance of this test.**

8.5 IF makeup to the VCT is anticipated, THEN perform the following to prepare the VCT for the test:

8.5.1 Estimate the number of gallons of water and/or boric acid that will need to be added to the VCT during the course of the test.

_____ Gallons

8.5.2 Estimate the change in VCT level based on 20 gallons per %.

VCT Level Change _____%

8.5.3 IF required, THEN perform the following to ensure VCT level will be maintained between 30% to 60% for the test duration.

1. Ensure VCT LEV CTRL is in auto.

   o BG LK-149F - AUTO

2. Lower VCT level sufficiently to accommodate the predicted makeup required during the test, by lowering VCT LEV CTRL setpoint, as required.

   o BG LK-149F - LOWERED AS DESIRED

   o Adjust VCT LEV CTRL to 6.0.

     o BG LK-149F - 6.0

8.6 Ensure LTDN DIVERT TO VCT & RHT is selected to VCT.

o BG HIS-112A - VCT

INIT/DATE

CAUTION

If makeup is not in auto, VCT level should be monitored closely, to ensure Charging Pump suction is maintained.

8.7 Place RCS M/U CTRL SEL to auto or off and circle position.

o BG HS-25 - (AUTO) OR OFF ☑

8.8 Record the following information:

o The initial reading from BG FY-111BB, COMBINED M/U & BA FLOW TOTALIZER.

o Totalizer Reading 331022 331022 ☑☑

o HB TI-1058, REACTOR COOLANT DRN TNK TEMP.

o Temperature Reading 94 F 94F ☑☑

o HB PI-1004, REACTOR COOLANT DRN TNK PRESS.

o Pressure Reading 6 psig 6 psig ☑☑

NOTE

If a dilution or boration is required, it should occur such that equilibrium conditions can be established prior to the end of the test. If the test has been running greater than 1 hour consider closing out the test prior to the makeup.

8.9 Record start date and time of test.

o Date/Time Test Started 8/31/16 1306 8/31/16 ~~1307~~ 1507 8/31/16 ☑

INIT/DATE

NOTES

- **Recommended duration for this test is 2 hours. However, a duration of greater than 1 hour will provide sufficient accuracy.**
- **To achieve required accuracy of results, data collection should not coincide with VCT makeup.**

8.10 WHEN the required time has elapsed (nominally 2 hours), THEN perform the following:

8.10.1 Access NPIS RCS Leak Rate application, by going to the Operations page and clicking on the LEAK RATE tab. ☑ ☑

8.10.2 Enter start date and time recorded in step 8.9. ☑ ☑

8.10.3 Enter end date and time. ☑ ☑

8.10.4 Collect data, by clicking on the FETCH DATA button. ☐ ☑

8.10.5 Record the following information:

- Final reading from BG FY-111BB, COMBINED M/U & BA FLOW TOTALIZER.
  - Totalizer Reading 331072 331022 ☐ ☑
- Final reading from HB TI-1058, REACTOR COOLANT DRN TNK TEMP.
  - Temperature Reading 94F 95 ☑ ☑
- Final reading from HB PI-1004, REACTOR COOLANT DRN TNK PRESS.
  - Pressure Reading 6 psig 6 psig ☐ ☑

INIT/DATE

NOTES

- **Refer to ATTACHMENT C, DEFINITIONS FOR RCS WATER BALANCE, as needed, for definitions of the following.**
- **Other added and other removed are still listed as options on the BB06 display but they are not used.**

8.11 Enter the following readings on the BB06 display:

- Initial reading from BG FY-111BB, COMBINED M/U & BA FLOW TOTALIZER at step 8.8.
- Final reading from BG FY-111BB, COMBINED M/U & BA FLOW TOTALIZER at step 8.10.5.
- Initial reading from HB TI-1058, REACTOR COOLANT DRN TNK TEMP at step 8.8.
- Final reading from HB TI-1058, REACTOR COOLANT DRN TNK TEMP at step 8.10.5.
- Initial reading from HB PI-1004, REACTOR COOLANT DRN TNK PRESS at step 8.8.
- Final reading from HB PI-1004, REACTOR COOLANT DRN TNK PRESS at step 8.10.5.

NOTE

Use the actual value of the primary-to-secondary leakage rate provided by Chemistry (i.e., ignore the less than sign).

- Primary-to-secondary leak rate from STS CH-033, PRIMARY TO SECONDARY LEAKAGE DETERMINATION.
- Other Identified RCS Leakage.
- Non-RCS leakage (Non-RCPB Quantified RCS leakage).
- RCS Pressure Isolation Valve estimated leakage (STS PE-019 series).

INIT/DATE

NOTE

If the minimum number of RCS Loop Thot, RCS Loop Tcold, WR Thot, Pressurizer NR Pressure, RCS WR Pressure or Pressurizer Level channels are not available, as required for current plant conditions, an error message will be generated and the calculation will not be performed.

8.12 IF a RCS Loop Thot, RCS Loop Tcold, WR Thot, Pressurizer NR Pressure, RCS WR Pressure or Pressurizer Level channel has failed OR was OOS for testing during the performance of this test, THEN block the affected channel(s) from the calculation, by clicking in the box next to the applicable parameter. N/A N/A

8.13 Perform the following:

8.13.1 Perform RCS Leak Rate calculation, by clicking on the CALCULATE button. ☑ ☑

8.13.2 Enter Test Performer name on the RCS leakage display. ☑ ☑

8.13.3 Generate a report, by clicking on the REPORT button. ☑ ☑

8.13.4 Print report. ☑ ☑

8.13.5 Attach printed report to this procedure. ☑ ☑

8.14 Ensure the following conditions/requirements were met for the entire time data was collected: [3.2.3]

o Test duration was at least one hour. ☑ ☑

INIT/DATE

NOTE

Tavg is the average of the four loop NR Tavg values or the four loop WR hot leg temperature values, whichever is applicable.

- o Tave remained constant (± 1°F).
- o Pressurizer level remained constant (± 0.5%).
- o Reactor power remained constant (± 0.5%).
- o VCT divert valve remained in position to return letdown to the VCT.
- o Total amount of RCS makeup was less than 500 gallons.
- o RCP controlled leakoff returned to VCT and seal flow parameters were normal.
- o No sampling was done on the leak rate control volume.
- o No chemical additions were made to the leak rate control volume.
- o Identified leakage collection tanks were not pumped (PRT, RCDT).
- o No testing, evolutions (i.e.: CTMT Purge, or shifting CTMT fans) or work was performed that could have affected containment temperature and/or pressure.

NOTE

Just because the ULR comes back as suspect this doesn't mean the test need to be reperformed

8.15 IF the test results were valid or suspect, THEN log results from the printed report in the following:

8.15.1 Control Room Log.

INIT/DATE

8.15.2 Enter the Total Unidentified Leakage value (even if the value is negative) into the RCS Unidentified Leak Rate Monitoring Program spreadsheet found at K:\OPS_RCS ULR Program\WCNOC RCS ULR Database.xlsm. [3.2.3]

- o IF a pop-up message stating "You have reached at least one action Level!" is received, THEN refer to ATTACHMENT B, RESPONSE GUIDELINES for required actions. (3.1.5) [3.2.2]

8.16 IF test results were NOT valid, THEN perform the following:

8.16.1 Record the reason why the test was not valid in the Control Room Log and on the STRS cover sheet.

8.16.2 Initiate a Condition Report and include the following: date and time performed and the reason why the test was not valid.

8.16.3 Reperform the test as soon as conditions permit.

8.17 IF individual component leakage is being determined, THEN calculate the leakage, using ATTACHMENT A, COMPONENT LEAKAGE QUANTIFICATION.

- o Make a copy of ATTACHMENT A, COMPONENT LEAKAGE QUANTIFICATION and place in the Control Room RCS Leakage History Notebook.

INIT/DATE

9.0 RESTORATION

9.1 Ensure reactor M/U control is in Auto/Run:

9.1.1 RCS M/U CTRL SEL in auto.

o BG HS-25 - AUTO — 8/31/16

9.1.2 RCS M/U CTRL in run.

o BG HS-26 - RUN — 8/31/16

9.2 IF required, THEN perform the following to restore VCT level back to 60%.

9.2.1 Ensure VCT LEV CTRL is in auto.

o BG LK-149F - AUTO — N/A

9.2.2 Adjust VCT LEV CTRL to 6.0.

o BG LK-149F - 6.0 — 8/31/16 / IV N/A

9.3 Verify LTDN DIVERT TO VCT & RHT is selected to one of the following:

9.3.1 IF in Modes 1 or 2, THEN ensure LTDN DIVERT TO VCT & RHT is in auto.

o BG HIS-112A - AUTO — 8/31/16

IV — 8/31/16

NOTE

While in Modes 1 or 2, step 9.3.2 can be N/A'd without violating commitment 3.2.1.

9.3.2 IF in Modes 3, 4 or 5, THEN ensure LTDN DIVERT TO VCT & RHT is in VCT. [3.2.1]

o BG HIS-112A - VCT — 8/31/16

IV — N/A

INIT/DATE

9.4 Perform the following:

9.4.1 Contact Chemistry for RCS/PZR sample line-up. ☑

Chemistry Contact Swisher

9.4.2 Circle the desired restoration position, then position and verify each valve, as required:

o PZR VAPOR SAMPLE INNER CTMT ISO VLV.

o SJ HIS-12 - OPEN/CLOSED — 8/31/16

IV — 8/31/16

o PZR VAPOR SAMPLE OUTER CTMT ISO VLV.

o SJ HIS-13 - OPEN/CLOSED — 8/31/16

IV — 8/31/16

o HOT LEG 1 SAMPLE INNER CTMT ISO VLV.

o SJ HIS-3 - OPEN/CLOSED — 8/31/16

IV — 8/31/16

o HOT LEG 3 SAMPLE INNER CTMT ISO VLV.

o SJ HIS-4 - OPEN/CLOSED — 8/31/16

IV — 8/31/16

o PZR LIQ SAMPLE INNER CTMT ISO VLV.

o SJ HIS-20 - OPEN/CLOSED — 8/31/16

IV — 8/31/16

9.5 IF the RCDT will be unisolated, THEN perform the following:

9.5.1 Notify Treatment System Operator/Aux Building Operator that the RCDT will be unisolated. 8/31/16

9.5.2 Open RCDT HX OUTLET INNER CTMT ISO VLV.

o HB HIS-7176 - OPEN

IV — N/A

INIT/DATE

9.5.3 Open RCDT HX OUTLET OUTER CTMT ISO VLV.

o HB HIS-7136 - OPEN

8/31/16 IV N/A

9.6 IF a VCT makeup took place during the performance of this surveillance, THEN notify the System Engineer via E-mail that there was a makeup and trending data may be invalid. N/A

9.7 Inform the SM/CRS of completion and the status of this test. 2 8/31/16

10.0 RECORDS

10.1 The following QA records are generated by this procedure:

o Sections 7.0, 8.0 and 9.0 of this test.

o ATTACHMENT A, COMPONENT LEAKAGE QUANTIFICATION (if used)

o ATTACHMENT B, RESPONSE GUIDELINES (if used)

o Printed Summary Report

-END-

INIT/DATE

ATTACHMENT A
(Page 1 of 2)
COMPONENT LEAKAGE QUANTIFICATION

NOTES

- **Component leakage quantification requires data from two successive performances of this procedure, preferably within a 24 hour time period.**
- **One test should contain data with the component isolated and the other tests with the component inservice. The sequence of which test is performed first does not affect performance of this Attachment.**
- **The only data used to determine the component leak rate comes from the two performances of STS BB-006, RCS WATER INVENTORY BALANCE USING NPIS COMPUTER - one with the component-isolated and one with the component inservice. Data from previous performances of ATTACHMENT A, COMPONENT LEAKAGE QUANTIFICATION is not used. (3.1.4)**

A.1 Record component number of equipment being checked for leak rate: _____ ☐

A.2 STS BB-006 data with component isolated:

A.2.1 Record the date and time the data was collected.

o Date/Time _____/_____ ☐

A.2.2 Unidentified leakage from report printed at step 8.13.4.

o _____ gpm ☐

A.3 STS BB-006 data with component inservice:

A.3.1 Record the date and time the data was collected.

o Date/Time _____/_____ ☐

A.3.2 Unidentified leakage from report printed at step 8.13.4.

o _____ gpm ☐

INIT/DATE

ATTACHMENT A
(Page 2 of 2)
COMPONENT LEAKAGE QUANTIFICATION

A.4 Calculate the component leak rate, as follows: (3.1.2)

A.4.1 Subtract the unidentified leakage rate for the test with the component isolated from the leakage rate for the component inservice to obtain the current identified leakage rate for the component.

_____ gpm - _____ gpm = _____ gpm
(A.3.2) (A.2.2) (Component leak rate) ☐

A.5 ATTACHMENT A, COMPONENT LEAKAGE QUANTIFICATION, complete. ____/____

-END-

INIT/DATE

ATTACHMENT B
(Page 1 of 5)
RESPONSE GUIDELINES

NOTES

- **For the first two weeks following a refueling outage, Table 2 is monitored for information only. Actions should be considered but are not required. This is based on the fact that RCS leak rate results for the first week to ten days may not be accurate. It takes time for equipment packing and gaskets to swell and for the leak rate to stabilize.**
- **Makeup to RCS should be planned so as to avoid making up during re-performance of the test.**
- **An action level in one of tables is the same as the corresponding level in either table. The difference between the tables is the entry criteria.**

B.1 Initiate a confirmatory leak test by re-performing steps 8.8 through 8.15 as soon as conditions permit.

TABLE 1: ABSOLUTE UNIDENTIFIED LEAK RATE ACTION LEVELS

Level 1	One seven (7) day rolling average Unidentified RCS Leakage Measurements >0.1 gpm
Level 2	Two consecutive Unidentified RCS Leakage Measurements >0.15 gpm
Level 3	One Unidentified RCS Leakage Measurements >0.3 gpm

INIT/DATE

ATTACHMENT B
(Page 2 of 5)
RESPONSE GUIDELINES

TABLE 2: DEVIATION FROM THE BASELINE MEAN ACTION LEVELS	
Level 1	Nine (9) consecutive Unidentified RCS Leakage Measurements > baseline mean (μ)
Level 2	Two consecutive Unidentified RCS Leakage Measurements $>(\mu + 2\sigma)$ or Short Term (30 day rolling) Total Integrated Unidentified RCS Leakage > 5,000 gallons
Level 3	One Unidentified RCS Leakage Measurement $>(\mu + 3\sigma)$ or Long Term (Operating Cycle) Total Integrated Unidentified RCS Leakage > 50,000 gallons

B.2 IF the re-performance of the leak rate calculation confirms an action level has been reached, THEN ensure a CR is generated and the following individuals have been notified by E-Mail or phone: ☑

o RCS System Engineer ☑

o Operations Surveillance Coordinator ☑

o Superintendent Operations Support ☑

B.3 IF an Action Level One threshold is exceeded, THEN perform the following:

B.3.1 Confirm the pop-up indication is valid, confirm correct data entry on the latest surveillance, review test for obvious errors. ☑

B.3.2 Evaluate input parameters for potential trends. ☑

B.3.3 Check for abnormal trends on other leakage indicators refer to ATTACHMENT D, POTENTIAL SOURCES FOR RCS LEAKAGE. ☑

INIT/DATE

ATTACHMENT B
(Page 3 of 5)
RESPONSE GUIDELINES

B.4 IF an Action Level Two threshold is exceeded, THEN perform the following:

B.4.1 Perform all actions for the Level One response. ☑

B.4.2 Commence a leak investigation

1. Review recent plant evolutions to determine any possible source(s).

   * Check any components or flow paths recently changed or placed in service, shutdown, vented, drained, filled, etc. ☑

   * Checked any maintenance activity that may have resulted in increasing leakage. ☑

   * Check any filters (i.e. seal injection, reactor coolant) recently alternated or changed for leakage from their vents or drains. Inspect filter housing for gasket leakage. ☑

2. Evaluate changes in other leakage detection indication; refer to Attachment D ☑

3. Initiate outside containment walk-down of potentially affected systems. ☑

B.4.3 The Superintendent Operation Support should form a team to address the increased RCS unidentified leakage when threshold is exceeded. ☑

B.4.4 Identify the source of the leak, and if possible quantify the leakage. ☑

B.4.5 IF the leak source is found and isolated or stopped, THEN re-perform RCS leak rate calculation. N/A

B.4.6 IF the source cannot be isolated/stopped, THEN initiate a corrective action to repair the leak. ☑

INIT/DATE

ATTACHMENT B
(Page 4 of 5)
RESPONSE GUIDELINES

B.5 IF an Action Level Three threshold is exceeded, THEN perform the following:

B.5.1 Perform all actions for the Level One and Two response. ☑

B.5.2 IF the increased leak rate is indicated inside containment, THEN perform the following:

1. Begin planning for a containment entry while carrying out other actions. ☑
2. Monitor other containment parameters (temperature, pressure, humidity, etc.) ☑
3. Obtain a containment sump sample (during pump out) and analyze for activity, a larger than expected boric acid concentration and other unexpected chemicals. ☑
4. Evaluate other Non-RCS systems for indications of leakage (i.e. Component Cooling Water Systems Service Water, etc.) ☑
5. Monitor containment airborne4 radiation levels as well as area radiation monitors. Sample containment atmosphere for indications of RCS leakage. Obtain a containment atmosphere sample for isotopic analysis. ☑

INIT/DATE

ATTACHMENT B
(Page 5 of 5)
RESPONSE GUIDELINES

NOTE

These actions should be considered if the source of increased RCS leakage hasn't been located in other locations.

6. IF leakage indications are inside containment, THEN consider the following:

   * Evaluate using remote visual inspections inside the bioshield wall using radiation tolerant cameras. ☑

   * Evaluate if a robot crawler is needed/desired to perform more detailed inspections inside the bioshield. ☑

B.5.3 Identify the source of the leak, if possible and quantify the leak. ☑

B.5.4 IF the leak source is found and isolated or stopped, THEN re-perform RCS leak rate calculation.

B.5.5 IF the source cannot be isolated/stopped, THEN initiate a corrective action to locate and repair the leak. ☑

-END-

ATTACHMENT C
(Page 1 of 1)
DEFINITIONS FOR RCS WATER BALANCE

Definitions:

PRI/SEC LR - Leakage from the RCS into the secondary side of the steam generators.

Other Identified RCS Leakage - The sum of all leakage that is both known and documented, and not accounted for in RCDT Leakage, PRT leakage or Steam Generator leakage.(i.e. fitting or gasket leakage from the Reactor Coolant Pressure Boundary (RCPB) that are collected and measured)

Non-RCS Leakage (Non-RCPB) - The sum of leakage that is both known and documented that impacts the RCS gross leakage calculation but occurs outside the RCPB and therefore, should not be included in Identified Leakage or Unidentified Leakage. (i.e., Charging pump packing leakage, charging pump seal leakage, charging pump relief valve leakage)

Pressure Isolation Leakage (PIV Leakage) - RCS Pressure Isolation Valve Leakage reported on STS PE-019E or any other procedure approved to quantify leakage. This value is added to the "Total Identified Leakage" to obtain "Total T/S Identified Leakage".

-END-

ATTACHMENT D
(Page 1 of 1)
POTENTIAL SOURCES FOR RCS LEAKAGE

NOTE

Level indications or computer points maybe used to monitor indications.

D.1 Primary to Secondary

D.2 VCT Level Trend

D.3 Pressurizer Relief Tank (PRT) in Leakage

- o BB LI-470, PRESSURIZER RELIEF TANK LEV

D.4 Reactor Coolant Drain Tank (RCDT) in Leakage

- o HB LI-1003, REACTOR COOLANT DRN TNK LEV

D.5 Auxiliary Building Sump Levels and Pump-out Frequency

- o LF LI-103, AUX BLD SUMP LEV and LF LI-104, AUX BLD SUMP LEV

D.6 Containment Sump Levels and Pump-out Frequency

- o LF LI-89, CTMT NORM SUMP LEV and LF LI-94, CTMT NORM SUMP LEV

D.7 RCP Seal Leakoff Rates

D.8 Containment Air Cooling Unit Condensation Flow Monitoring

D.9 Containment Atmosphere Gaseous and Particulate Activity

- o GTN0311/GTN0312/GTN0313
- o GTN0321/GTN0322/GTN0323

D.10 Containment Temperature, Pressure, and Humidity

D.11 RCS and SI Check Valve Seat Leakage

- o STS PE-019E, RCS ISOLATION CHECK VALVE LEAK TEST

D.12 Visual Inspections for signs of leakage such as Boric Acid accumulation.

D.13 Recent RCA area surveys and area radiation monitors.

-END-

NPIS-B - ACTIVE

Start Time: 08/31/2016 13:06:00 Test Performer: Alex Meyer
End Time: 08/31/2016 15:06:00
Elapsed Time: 2 hrs 0 min 0 sec

TOTAL RCS LEAKAGE:

	Delta-M (RCWV)	=	25.225	LBM	GOOD
+	Delta-M (PZR)	=	-29.475	LBM	GOOD
+	Delta-M (VCT)	=	-283.330	LBM	GOOD
+	Delta-M (Add/Rem)	=	0.000	LBM	GOOD
=	287.581 LBM	=	34.530	Gal	

Total RCS Leakage is 0.288 GPM GOOD

IDENTIFIED RCS LEAKAGE:

-	Delta-M (RCDT)	=	48.473	LBM	GOOD
-	Delta-M (PRT)	=	-0.160	LBM	GOOD
-	Delta-M (SG)	=	0.262	LBM	GOOD
+	Delta-M (other)	=	11.993	LBM	
=	60.568 LBM	=	7.272	Gal	

Total Identified Leakage is 0.061 GPM GOOD
Total T/S Identified Leakage is 0.206 GPM GOOD

UNIDENTIFIED RCS LEAKAGE:

	Total RCS Leakage	=	0.288	GPM	GOOD
-	Total Identified Leakage	=	0.061	GPM	GOOD
-	Non-RCS Leakage	=	0.000	GPM	

Total UnIdentified Leakage is 0.227 GPM GOOD

NPIS-B - ACTIVE

INPUTS	START	QUAL	END	QUAL	BLK
RC Pump A	1.000	GOOD	1.000	GOOD	
RC Pump B	1.000	GOOD	1.000	GOOD	
RC Pump C	1.000	GOOD	1.000	GOOD	
RC Pump D	1.000	GOOD	1.000	GOOD	
RCL 1 NR Th	620.059	GOOD	619.959	GOOD	
RCL 1 NR Th	614.486	GOOD	613.965	GOOD	
RCL 1 NR Th	618.813	GOOD	619.143	GOOD	
RCL 1 NR Tc	555.557	GOOD	555.572	GOOD	
RCL 2 NR Th	614.966	GOOD	615.126	GOOD	
RCL 2 NR Th	615.016	GOOD	614.986	GOOD	
RCL 2 NR Th	614.926	GOOD	614.696	GOOD	
RCL 2 NR Tc	555.657	GOOD	555.642	GOOD	
RCL 3 NR Th	617.513	GOOD	617.683	GOOD	
RCL 3 NR Th	613.905	GOOD	613.855	GOOD	
RCL 3 NR Th	616.007	GOOD	616.047	GOOD	
RCL 3 NR Tc	555.795	GOOD	555.847	GOOD	
RCL 4 NR Th	614.376	GOOD	614.125	GOOD	
RCL 4 NR Th	616.202	GOOD	616.182	GOOD	
RCL 4 NR Th	613.720	GOOD	613.495	GOOD	
RCL 4 NR Tc	555.347	GOOD	555.302	GOOD	
RCL 1 Tavg	586.672	GOOD	586.631	GOOD	
RCL 2 Tavg	585.313	GOOD	585.289	GOOD	
RCL 3 Tavg	585.802	GOOD	585.854	GOOD	
RCL 4 Tavg	585.057	GOOD	584.951	GOOD	
RCL 1 WR HL	N/A		N/A		
RCL 2 WR HL	N/A		N/A		
RCL 3 WR HL	N/A		N/A		
RCL 4 WR HL	N/A		N/A		
PZR 1 Lvl	57.126	GOOD	57.059	GOOD	
PZR 2 Lvl	57.126	GOOD	57.105	GOOD	
PZR 3 Lvl	57.234	GOOD	57.201	GOOD	
PZR Lvl Avg	57.162	GOOD	57.122	GOOD	
PZR Wtr Temp	653.382	GOOD	653.457	GOOD	
PZR Stm Temp	651.281	GOOD	651.281	GOOD	
PZR Ch 1 Press	2235.688	GOOD	2235.855	GOOD	
PZR Ch 2 Press	2241.124	GOOD	2241.258	GOOD	
PZR Ch 3 Press	2237.589	GOOD	2237.789	GOOD	
PZR Ch 4 Press	2234.487	GOOD	2234.654	GOOD	
PZR Press Avg	2237.222	GOOD	2237.389	GOOD	
WR Ch1 Press	N/A		N/A		
WR Ch4 Press	N/A		N/A		
RCS Press Avg	N/A		N/A		
VCT Level	44.689	GOOD	43.017	GOOD	
VCT Temp	87.591	GOOD	87.566	GOOD	
VCT Press	23.352	GOOD	23.244	GOOD	
PRT Level	74.007	GOOD	74.007	GOOD	
PRT Temp	96.913	GOOD	96.922	GOOD	
PRT Press	2.812	GOOD	2.802	GOOD	
RCDT Level	25.029	GOOD	26.763	GOOD	

USER INPUTS	VALUE	UNITS
MU Initial	331022	Gal
MU Final	331022	Gal
Other Added	0.0	Gal
Other Removed	0.0	Gal
Pri/Sec	0.377	GPD
Other ID Leak	0.012	GPM
RCDT Temp Initial	94.000	DegF
RCDT Temp Final	94.000	DegF
RCDT Press Initial	6.000	PSIG
RCDT Press Final	6.000	PSIG
Non-RCS Leakage	0.000	GPM
PIV Leakage	0.145	GPM

Test Performer: Alex Meyer
08/31/16 15:13:57

*** Leak Rate has GOOD quality ***
*** Acceptance Criteria Met ***

NPIS-B - ACTIVE

Start Time: 08/31/2016 15:07:00 Test Performer: Alex Meyer
End Time: 08/31/2016 17:07:00
Elapsed Time: 2 hrs 0 min 0 sec

TOTAL RCS LEAKAGE:

	Delta-M (RCWV)	=	-29.837	LBM	GOOD
+	Delta-M (PZR)	=	25.138	LBM	GOOD
+	Delta-M (VCT)	=	-268.988	LBM	GOOD
+	Delta-M (Add/Rem)	=	0.000	LBM	GOOD
=	273.686 LBM	=	32.861	Gal	
	Total RCS Leakage is		0.274	GPM	GOOD

IDENTIFIED RCS LEAKAGE:

-	Delta-M (RCDT)	=	47.554	LBM	GOOD
-	Delta-M (PRT)	=	-4.958	LBM	GOOD
-	Delta-M (SG)	=	0.262	LBM	GOOD
+	Delta-M (other)	=	0.000	LBM	
=	42.858 LBM	=	5.146	Gal	
	Total Identified Leakage is		0.043	GPM	GOOD
	Total T/S Identified Leakage is		0.188	GPM	GOOD

UNIDENTIFIED RCS LEAKAGE:

	Total RCS Leakage	=	0.274	GPM	GOOD
-	Total Identified Leakage	=	0.043	GPM	GOOD
-	Non-RCS Leakage	=	0.012	GPM	
	Total UnIdentified Leakage is		0.219	GPM	GOOD

NPIS-B - ACTIVE

INPUTS	START	QUAL	END	QUAL	BLK
RC Pump A	1.000	GOOD	1.000	GOOD	
RC Pump B	1.000	GOOD	1.000	GOOD	
RC Pump C	1.000	GOOD	1.000	GOOD	
RC Pump D	1.000	GOOD	1.000	GOOD	
RCL 1 NR Th	619.929	GOOD	619.759	GOOD	
RCL 1 NR Th	614.741	GOOD	614.941	GOOD	
RCL 1 NR Th	618.828	GOOD	618.558	GOOD	
RCL 1 NR Tc	555.580	GOOD	555.690	GOOD	
RCL 2 NR Th	615.046	GOOD	615.161	GOOD	
RCL 2 NR Th	615.121	GOOD	614.656	GOOD	
RCL 2 NR Th	614.416	GOOD	615.031	GOOD	
RCL 2 NR Tc	555.677	GOOD	555.690	GOOD	
RCL 3 NR Th	617.513	GOOD	617.452	GOOD	
RCL 3 NR Th	613.820	GOOD	613.630	GOOD	
RCL 3 NR Th	616.152	GOOD	616.012	GOOD	
RCL 3 NR Tc	555.780	GOOD	555.975	GOOD	
RCL 4 NR Th	614.281	GOOD	613.795	GOOD	
RCL 4 NR Th	616.067	GOOD	616.172	GOOD	
RCL 4 NR Th	613.220	GOOD	613.680	GOOD	
RCL 4 NR Tc	555.270	GOOD	555.392	GOOD	
RCL 1 Tavg	586.706	GOOD	586.721	GOOD	
RCL 2 Tavg	585.269	GOOD	585.320	GOOD	
RCL 3 Tavg	585.804	GOOD	585.837	GOOD	
RCL 4 Tavg	584.896	GOOD	584.971	GOOD	
RCL 1 WR HL	N/A		N/A		
RCL 2 WR HL	N/A		N/A		
RCL 3 WR HL	N/A		N/A		
RCL 4 WR HL	N/A		N/A		
PZR 1 Lvl	57.076	GOOD	57.151	GOOD	
PZR 2 Lvl	57.122	GOOD	57.197	GOOD	
PZR 3 Lvl	57.226	GOOD	57.284	GOOD	
PZR Lvl Avg	57.141	GOOD	57.211	GOOD	
PZR Wtr Temp	653.382	GOOD	653.432	GOOD	
PZR Stm Temp	651.281	GOOD	651.206	GOOD	
PZR Ch 1 Press	2235.788	GOOD	2236.288	GOOD	
PZR Ch 2 Press	2241.258	GOOD	2241.725	GOOD	
PZR Ch 3 Press	2237.722	GOOD	2238.256	GOOD	
PZR Ch 4 Press	2234.587	GOOD	2235.088	GOOD	
PZR Press Avg	2237.339	GOOD	2237.839	GOOD	
WR Ch1 Press	N/A		N/A		
WR Ch4 Press	N/A		N/A		
RCS Press Avg	N/A		N/A		
VCT Level	42.988	GOOD	41.400	GOOD	
VCT Temp	87.568	GOOD	87.381	GOOD	
VCT Press	23.234	GOOD	23.746	GOOD	
PRT Level	74.011	GOOD	74.007	GOOD	
PRT Temp	96.925	GOOD	96.938	GOOD	
PRT Press	2.802	GOOD	2.792	GOOD	
RCDT Level	26.763	GOOD	28.448	GOOD	

USER INPUTS	VALUE	UNITS
MU Initial	331022	Gal
MU Final	331022	Gal
Other Added	0.0	Gal
Other Removed	0.0	Gal
Pri/Sec	0.377	GPD
Other ID Leak	0.000	GPM
RCDT Temp Initial	94.000	DegF
RCDT Temp Final	95.000	DegF
RCDT Press Initial	6.000	PSIG
RCDT Press Final	6.000	PSIG
Non-RCS Leakage	0.012	GPM
PIV Leakage	0.145	GPM

Test Performer: Alex Meyer
08/31/16 17:10:27

*** Leak Rate has GOOD quality ***
*** Acceptance Criteria Met ***

FORM APF 29B-003-01 REV 05

SURVEILLANCE TEST ROUTING SHEET (STRS)

DOCUMENT NUMBER: STS BB-006

TEST FREQ. 72 Hours

DUE DATE/TIME:

LATE DATE/TIME:

DOCUMENT TITLE: RCS WATER INVENTORY BALANCE USING THE NPIS COMPUTER

T/S REQUIRED MODE: 1 2 3 4

REQUIRED PLANT MODE:

INITIATING DOCUMENT #(S):

SUPPORTING CLEARANCE ORDER(s) [Commitment Step 3.2.23]

RESPONSIBLE GROUP: OPS

SUPPORT GROUP(S):

PRE-TEST COMMENTS:

1) PROCEDURE VERIFIED TO BE CORRECT REVISION WITH ALL TEMPORARY CHANGES ATTACHED AND INCORPORATED. [initials] / 9/2/16 INIT/DATE

TEST PERFORMERS:

PRINT NAME	INIT/DATE	PRINT NAME	INIT/DATE
Tim Dunlop	[initials] / 9/2/16	M. Dekort	MD / 9/2/16
Fuller, Michael	MF / 9/2/16	Justin Marchant	JM / 9/2/16
/ /		Eric Matthews	E / 9/2/16
/ /		Rebecca Abel	RA / 9/2/16

2) PRE-TEST REVIEWS:

	SIGNATURE	DATE	TIME
SM/CRS/Designee Auth:	[signature]	09 / 02 / 16	1737
		/ /	
		/ /	

3) *TEST DEFICIENCY DESCRIPTION: ACTION LEVELS 1, 2, +3 ON TABLE 1 REACHED, AND ACTION LEVELS 2+3 ON TABLE 2. [initials] / 9/2/16 TP INIT / DATE

4) *T/S OR TRM FAILURE? ☐ YES ☑ NO [signature] / 9/2/16

SM/CRS/DESIGNEE SIGNATURE DATE

IF NO - JUSTIFICATION: T.S. LIMITED FOR UNIDENTIFIED RCS LEAKAGE (T.S. 3.4.13) IS 1GPM. LEAK RATES DETERMINE WERE .598GPM INITIAL, .648GPM CONFIRMATORY.

5) *ACTION TAKEN: PLANT IS IN MODE 3 DUE TO RCS LEAKAGE

EOL # N/A WR/WO# CR# 106859

TEST SUSPENDED ☐ YES ☑ NO [signature] / 9/2/16

SM/CRS/DESIGNEE SIGNATURE DATE

*SECTIONS 3, 4, AND 5 ARE COMPLETED IF A TEST DEFICIENCY OCCURS. OTHERWISE MARK N/A.

6) POST TEST REVIEWS: (GROUP SUP. CHECK ONE) ☑ COMPLETE ☐ PARTIAL ☐ N/A

TOTAL MAN HOURS: 4

	SIGNATURE	DATE	TIME
Test Performer:	[signature]	09 / 02 / 16	2026
SM/CRS/Designee Auth:	[signature]	09 / 02 / 16	2038
Group Supervisor:			

SC/Surv.Technician: [signature] 9/2/16

7) ADDITIONAL COMMENTS: ~~Note 1: Leak location suspected on Rx Vessel Head~~

Note 1 - Leak location unknown

NPIS-B - ACTIVE

Start Time: 09/02/2016 17:43:00 Test Performer: Matt Dekat
End Time: 09/02/2016 18:43:00
Elapsed Time: 1 hr 0 min 0 sec

TOTAL RCS LEAKAGE:

	Delta-M (RCWV)	=	81.740	LBM	GOOD
+	Delta-M (PZR)	=	-4.104	LBM	GOOD
+	Delta-M (VCT)	=	-399.254	LBM	GOOD
+	Delta-M (Add/Rem)	=	0.000	LBM	GOOD
=	321.618 LBM	=	38.617	Gal	
	Total RCS Leakage is		0.644	GPM	GOOD

IDENTIFIED RCS LEAKAGE:

-	Delta-M (RCDT)	=	16.837	LBM	GOOD
-	Delta-M (PRT)	=	-0.163	LBM	GOOD
-	Delta-M (SG)	=	0.131	LBM	GOOD
+	Delta-M (other)	=	0.000	LBM	
=	16.805 LBM	=	2.018	Gal	
	Total Identified Leakage is		0.034	GPM	GOOD
	Total T/S Identified Leakage is		0.179	GPM	GOOD

UNIDENTIFIED RCS LEAKAGE:

	Total RCS Leakage	=	0.644	GPM	GOOD
-	Total Identified Leakage	=	0.034	GPM	GOOD
-	Non-RCS Leakage	=	0.012	GPM	
	Total UnIdentified Leakage is		0.598	GPM	GOOD

NPIS-B - ACTIVE

INPUTS	START	QUAL	END	QUAL	BLK
RC Pump A	1.000	GOOD	1.000	GOOD	
RC Pump B	1.000	GOOD	1.000	GOOD	
RC Pump C	1.000	GOOD	1.000	GOOD	
RC Pump D	1.000	GOOD	1.000	GOOD	
RCL 1 NR Th	560.386	GOOD	560.216	GOOD	
RCL 1 NR Th	559.708	GOOD	559.523	GOOD	
RCL 1 NR Th	559.803	GOOD	559.620	GOOD	
RCL 1 NR Tc	558.659	GOOD	558.467	GOOD	
RCL 2 NR Th	559.200	GOOD	559.065	GOOD	
RCL 2 NR Th	559.725	GOOD	559.578	GOOD	
RCL 2 NR Th	559.515	GOOD	559.385	GOOD	
RCL 2 NR Tc	559.270	GOOD	559.057	GOOD	
RCL 3 NR Th	559.385	GOOD	559.295	GOOD	
RCL 3 NR Th	559.730	GOOD	559.640	GOOD	
RCL 3 NR Th	559.127	GOOD	559.057	GOOD	
RCL 3 NR Tc	558.522	GOOD	558.487	GOOD	
RCL 4 NR Th	559.218	GOOD	559.077	GOOD	
RCL 4 NR Th	559.745	GOOD	559.618	GOOD	
RCL 4 NR Th	559.333	GOOD	559.190	GOOD	
RCL 4 NR Tc	558.261	GOOD	558.196	GOOD	
RCL 1 Tavg	559.312	GOOD	559.126	GOOD	
RCL 2 Tavg	559.375	GOOD	559.200	GOOD	
RCL 3 Tavg	558.968	GOOD	558.909	GOOD	
RCL 4 Tavg	558.847	GOOD	558.746	GOOD	
RCL 1 WR HL	N/A		N/A		
RCL 2 WR HL	N/A		N/A		
RCL 3 WR HL	N/A		N/A		
RCL 4 WR HL	N/A		N/A		
PZR 1 Lvl	29.057	GOOD	29.044	GOOD	
PZR 2 Lvl	29.211	GOOD	29.230	GOOD	
PZR 3 Lvl	29.363	GOOD	29.374	GOOD	
PZR Lvl Avg	29.211	GOOD	29.216	GOOD	
PZR Wtr Temp	653.382	GOOD	653.307	GOOD	
PZR Stm Temp	651.180	GOOD	651.055	GOOD	
PZR Ch 1 Press	2236.055	GOOD	2234.887	GOOD	
PZR Ch 2 Press	2241.258	GOOD	2240.157	GOOD	
PZR Ch 3 Press	2237.622	GOOD	2236.488	GOOD	
PZR Ch 4 Press	2233.920	GOOD	2232.786	GOOD	
PZR Press Avg	2237.214	GOOD	2236.080	GOOD	
WR Ch1 Press	N/A		N/A		
WR Ch4 Press	N/A		N/A		
RCS Press Avg	N/A		N/A		
VCT Level	49.742	GOOD	47.395	GOOD	
VCT Temp	108.264	GOOD	109.911	GOOD	
VCT Press	26.275	GOOD	23.707	GOOD	
PRT Level	75.007	GOOD	75.007	GOOD	
PRT Temp	97.016	GOOD	97.025	GOOD	
PRT Press	4.141	GOOD	4.136	GOOD	
RCDT Level	41.130	GOOD	41.688	GOOD	

USER INPUTS	VALUE	UNITS
MU Initial	332785	Gal
MU Final	332785	Gal
Other Added	0.0	Gal
Other Removed	0.0	Gal
Pri/Sec	0.377	GPD
Other ID Leak	0.000	GPM
RCDT Temp Initial	100.000	DegF
RCDT Temp Final	100.000	DegF
RCDT Press Initial	11.000	PSIG
RCDT Press Final	11.000	PSIG
Non-RCS Leakage	0.012	GPM
PIV Leakage	0.145	GPM

Test Performer: Matt Dekat
09/02/16 18:47:53

*** Leak Rate has GOOD quality ***
*** Acceptance Criteria Met ***
*** Unable to determine Rx Power Swing due to quality of RJU158MA. ***

NPIS-B - ACTIVE

Start Time: 09/02/2016 18:43:00 Test Performer: Marchant
End Time: 09/02/2016 19:43:00
Elapsed Time: 1 hr 0 min 0 sec

TOTAL RCS LEAKAGE:

	Delta-M (RCWV)	=	19.702	LBM	GOOD
+	Delta-M (PZR)	=	83.573	LBM	GOOD
+	Delta-M (VCT)	=	-467.084	LBM	GOOD
+	Delta-M (Add/Rem)	=	0.000	LBM	GOOD
=	363.809 LBM	=	43.682	Gal	

Total RCS Leakage is 0.728 GPM GOOD

IDENTIFIED RCS LEAKAGE:

-	Delta-M (RCDT)	=	19.384	LBM	GOOD
-	Delta-M (PRT)	=	14.056	LBM	GOOD
-	Delta-M (SG)	=	0.131	LBM	GOOD
+	Delta-M (other)	=	6.496	LBM	
=	40.068 LBM	=	4.811	Gal	

Total Identified Leakage is 0.080 GPM GOOD
Total T/S Identified Leakage is 0.225 GPM GOOD

UNIDENTIFIED RCS LEAKAGE:

	Total RCS Leakage	=	0.728	GPM	GOOD
-	Total Identified Leakage	=	0.080	GPM	GOOD
-	Non-RCS Leakage	=	0.000	GPM	

Total UnIdentified Leakage is 0.648 GPM GOOD

NPIS-B - ACTIVE

INPUTS	START	QUAL	END	QUAL	BLK
RC Pump A	1.000	GOOD	1.000	GOOD	
RC Pump B	1.000	GOOD	1.000	GOOD	
RC Pump C	1.000	GOOD	1.000	GOOD	
RC Pump D	1.000	GOOD	1.000	GOOD	
RCL 1 NR Th	560.216	GOOD	560.243	GOOD	
RCL 1 NR Th	559.523	GOOD	559.580	GOOD	
RCL 1 NR Th	559.620	GOOD	559.680	GOOD	
RCL 1 NR Tc	558.467	GOOD	558.587	GOOD	
RCL 2 NR Th	559.065	GOOD	559.032	GOOD	
RCL 2 NR Th	559.578	GOOD	559.565	GOOD	
RCL 2 NR Th	559.385	GOOD	559.343	GOOD	
RCL 2 NR Tc	559.057	GOOD	559.097	GOOD	
RCL 3 NR Th	559.295	GOOD	559.215	GOOD	
RCL 3 NR Th	559.640	GOOD	559.553	GOOD	
RCL 3 NR Th	559.057	GOOD	558.960	GOOD	
RCL 3 NR Tc	558.487	GOOD	558.382	GOOD	
RCL 4 NR Th	559.077	GOOD	559.060	GOOD	
RCL 4 NR Th	559.618	GOOD	559.590	GOOD	
RCL 4 NR Th	559.190	GOOD	559.177	GOOD	
RCL 4 NR Tc	558.196	GOOD	558.129	GOOD	
RCL 1 Tavg	559.126	GOOD	559.211	GOOD	
RCL 2 Tavg	559.200	GOOD	559.205	GOOD	
RCL 3 Tavg	558.909	GOOD	558.812	GOOD	
RCL 4 Tavg	558.746	GOOD	558.702	GOOD	
RCL 1 WR HL	N/A		N/A		
RCL 2 WR HL	N/A		N/A		
RCL 3 WR HL	N/A		N/A		
RCL 4 WR HL	N/A		N/A		
PZR 1 Lvl	29.044	GOOD	29.209	GOOD	
PZR 2 Lvl	29.230	GOOD	29.397	GOOD	
PZR 3 Lvl	29.374	GOOD	29.532	GOOD	
PZR Lvl Avg	29.216	GOOD	29.379	GOOD	
PZR Wtr Temp	653.307	GOOD	653.457	GOOD	
PZR Stm Temp	651.055	GOOD	651.155	GOOD	
PZR Ch 1 Press	2234.887	GOOD	2236.355	GOOD	
PZR Ch 2 Press	2240.157	GOOD	2241.625	GOOD	
PZR Ch 3 Press	2236.488	GOOD	2237.923	GOOD	
PZR Ch 4 Press	2232.786	GOOD	2234.187	GOOD	
PZR Press Avg	2236.080	GOOD	2237.522	GOOD	
WR Ch1 Press	N/A		N/A		
WR Ch4 Press	N/A		N/A		
RCS Press Avg	N/A		N/A		
VCT Level	47.395	GOOD	44.618	GOOD	
VCT Temp	109.911	GOOD	109.098	GOOD	
VCT Press	23.707	GOOD	23.854	GOOD	
PRT Level	75.007	GOOD	75.020	GOOD	
PRT Temp	97.025	GOOD	97.025	GOOD	
PRT Press	4.136	GOOD	4.135	GOOD	
RCDT Level	41.688	GOOD	42.328	GOOD	

USER INPUTS	VALUE	UNITS
MU Initial	332785	Gal
MU Final	332785	Gal
Other Added	0.0	Gal
Other Removed	0.0	Gal
Pri/Sec	0.377	GPD
Other ID Leak	0.013	GPM
RCDT Temp Initial	100.000	DegF
RCDT Temp Final	100.000	DegF
RCDT Press Initial	11.000	PSIG
RCDT Press Final	12.000	PSIG
Non-RCS Leakage	0.000	GPM
PIV Leakage	0.145	GPM

Test Performer: Marchant
09/02/16 19:53:45

*** Leak Rate has GOOD quality ***
*** Acceptance Criteria Met ***
*** Unable to determine Rx Power Swing due to quality of RJU158MA. ***

You have reached at least one action level!

Level	
1	7 Day Avg ULR > 0.1 gpm
2	2 Consecutive ULR > 0.15 gpm
3	ULR > 0.3 gpm
2	2 of 3 ULR > Baseline Mean + 2 Std Dev
3	1 ULR > Baseline Mean + 3 Std Dev

Reference AP 29G-001 for appropriate response guidelines.

Print

OK

RF21 OCC Shift Update

Contact Licensee - hand written notes from Fabian Thomas.

Date: 10-17-2016	Update Time: 0500	Shift Outage Manager (SOM): On-coming: Lanny Ratzlaff
Day: 31	Off-going Shift: Night	Off-going: James Edwards

PROTECTED TRAIN B

PLANT STATUS:	PROTECTED EQUIPMENT:	
o Mode: Defueled	NB02, NG02/4, NN02/4, NK02/4	West Switchyard Bus
o RCS Temperature: 99 deg F	"B" EDG	(345-40, 345-70, 345-110, 345-163)
o RCS Pressure: <1 psig	Essential Service Water – "B"	Startup XFMR XMR01 & MA104D & E
o SFP Time to 200 F: 16.9 hrs	Component Cooling Water – "B"	relays
o RCS Time to Boil: N/A	Control Room A/C Unit (SGK04B)	XFMR XNB02 & PA0201 relays
o RCS Time to 200 F: N/A	Class 1E A/C unit (SGK05B)	PA0201 breaker and stub bus
	Spent Fuel Pool Cooling "B"	SL3, SL31, 'B' & 'C' Service Water Pumps

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK:	Yellow	
o Reactivity Management:	Green	
o Core Decay Heat Removal:	N/A	
o SFP Decay Heat Removal:	Yellow	Only one train of SFP cooling available
o RCS Inventory:	N/A	
o Electrical Power Sources:	Yellow	AC sources (XNB01, #7 Xfmr, East Buss OOS)
o Containment Closure:	N/A	
o Rad Monitoring & Ventilation:	Green	

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours
o First Aids: 0
o OSHA Injuries (Recordable, Restricted, LT): 0
o OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: *628*

RADIOLOGICAL PROTECTION:

Date	Dose Goal	Actual
10/17/2016	2.909 REM	
10/16/2016	2.700 REM	2.715 REM
Total to Date	53.246 REM	58.302 REM
Dose from Head in Total to Date		7.031 REM

Contamination Events: PCEs: 0

RAPID TRENDING:

501 DAYS SINCE LAST CLEARANCE ORDER RESET

This accomplishment is something to be proud of and we ***Thank You*** for your commitment in keeping each other safe. This is the result of excellent teamwork.

Keep up the great work!

Page 1 of 2

RF21 OCC Shift Update

OUTAGE WORK STATUS:

Major Activities Completed Last Shift:

- 5 Reactor bottom mounted nozzle non-destructive exams (NDE) completed on nights with 16 remaining
- Completed 'D' cold leg reactor vessel nozzle water jet peening
- Connected to 'D' hot leg nozzle, eddy current complete
- Placed canopy seal clamp on Rx Head penetration #77
- New Excess Letdown Hx placed on PZR doghouse
- SG B & D eddy current are 100% completed

Critical Path Due in Next 12 hours	Due in the Next 72 Hours
○ Perform NDE of reactor vessel bottom nozzles ○ Continue water jet peening on the reactor vessel nozzles	○ Perform NDE of reactor vessel bottom nozzles ○ Water jet peening of the reactor vessel nozzles ○ Water jet peening of the reactor vessel bottom nozzles
Important Path/ Major Work Due in Next 12 hours	**Due in the Next 72 Hours**
○ Perform under reactor head UT testing (days only) ○ 'A' ESW crosstie work – repairs for installation ○ SGK05A Class 1E switchgear room A/C unit replacement ○ Cleaning the last 2 DRPI coil sets and 2 CRDMs	○ Plant secondary work is 47% complete (on schedule) ○ Switchyard outage #3 (East bus, #7 transformer) ○ SGK05A Class 1E switchgear room A/C unit replacement ○ 'A' Train work

Important Decisions Due	•

SHIFT OUTAGE MANAGER COMMENTS

- Containment demobilization has commenced with the removal of SG sludge lance equipment, efforts to move equipment around the hatch will be ramping up over the next week or so. Remember our discussion of lifting and rigging practices while working around these areas.
- Status or work being performed has been lagging the work in a couple of instances. Continue to update your progress and action to ensure successor activities can execute as scheduled.

OCC Action Items/Issues

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority

Issue/Action

Comments

Owner	

RF21 OCC Shift Update

Date: 10-19-2016	Update Time: 0500	Shift Outage Manager (SOM): On-coming: Lanny Ratzlaff
Day: 33	Off-going Shift: Night	Off-going: James Edwards

PROTECTED TRAIN B

PLANT STATUS:	PROTECTED EQUIPMENT:	
o Mode: Defueled o RCS Temperature: 84 deg F o RCS Pressure: <1 psig o SFP Time to 200 F: 17.2 hrs o RCS Time to Boil: N/A o RCS Time to 200 F: N/A	NB02, NG02/4, NN02/4, NK02/4 "B" EDG Essential Service Water – "B" Component Cooling Water – "B" Control Room A/C Unit (SGK04B) Class 1E A/C unit (SGK05B) Spent Fuel Pool Cooling "B"	West Switchyard Bus (345-40, 345-70, 345-110, 345-163) Startup XFMR XMR01 & MA104D & E relays XFMR XNB02 & PA0201 relays PA0201 breaker and stub bus SL3, SL31, 'B' & 'C' Service Water Pumps Benton Line Rose Hill Line

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK:	Yellow	
o Reactivity Management:	Green	
o Core Decay Heat Removal:	N/A	
o SFP Decay Heat Removal:	Yellow	Only one train of SFP cooling available
o RCS Inventory:	N/A	
o Electrical Power Sources:	Yellow	AC sources (XNB01, #7 Xfmr, East Buss OOS)
o Containment Closure:	N/A	
o Rad Monitoring & Ventilation:	Green	

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours
o First Aids: 0
o OSHA Injuries (Recordable, Restricted, LT): 0
o OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: *TBD (pending review of NCP)*

RADIOLOGICAL PROTECTION:

Date	Dose Goal	Actual
10/18/2016	0.832 REM	
10/17/2016	1.900 REM	1.642 REM
Total to Date	58.055 REM	62.389 REM
Dose from Head in Total to Date		8.240 REM

Contamination Events: PCEs: 0

RAPID TRENDING:

JUST THE FACTS

Effective communication improves our efficiency. Is the information clear and accurate? Our documentation will tell the story; ensure it can be understood.

RF21 OCC Shift Update

OUTAGE WORK STATUS:

Major Activities Completed Last Shift:

- Commenced bottom mounted nozzle peening, first nozzle complete by end of shift
- Water Jet Peening 'C' cold leg nozzle complete, tool out to replace nozzle
- SGK05A soldering work completed by end of shift
- 'A' Diesel Generator governor inspection and disassembly completed
- Canopy seal clamp 23 installed
- ESW 30" welds, and 8" weldolets complete and QC inspected

Critical Path Due in Next 12 hours

- Continue water jet peening on the reactor vessel nozzles
- Continue bottom nozzle peening

Due in the Next 72 Hours

- Water jet peening of the reactor vessel nozzles
- Water jet peening of the reactor vessel bottom nozzles

Important Path/ Major Work Due in Next 12 hours

- 'A' Essential Service Water crosstie work (FLEX). Weld out for last two welds to occur today.
- Install canopy seal clamp on penetration 12 and 26
- 'A' Emergency Diesel PM, including rebuild of governor
- SGK05A Class 1E switchgear room A/C unit replacement

Due in the Next 72 Hours

- Plant secondary work is 50% complete (on schedule)
- SGK05A Class 1E switchgear room A/C unit replacement
- 'A' Train work
- Remove penetration 16 CRDM

Important Decisions Due

- While removing the RV water jet peening tool for an expected nozzle change out, it was determined that the eddy current probe is not on the tool.

SHIFT OUTAGE MANAGER COMMENTS

- Crane work in containment using the polar crane and knuckle-boom crane has been suspended due to two crane incidents last night.
- Our housekeeping behaviors have deteriorated over the past week. Let's step up our game in leaving areas as clean or cleaner than when we arrived.
- Please keep up with processing closure documentation on completed work. We have found many activities that have been completed, but not yet to vaulted status. We need to keep up with the paper work now so that we do not have holds waiting to get it done in order to change modes.
- There are a lot of people using the clear "Whirl Pack" bags for the wifi phones, and we are experiencing shortages of the bags for PEDs. Please use the green plastic bags when needing to bring wifi phones into containment.
- When you are done using fall protection harnesses, please hang them up in an appropriate area as opposed to laying them on the floor.

OCC Action Items/Issues

MOM

Item #	*Created On*	*Due by*	*Expected*	*Status*	*Completed*	*Mode Restraint*	*Window Restraint*	*CR#*	*WO#*	*Priority*
110	10/18/16 3:14			Open					5-406675-012, 01	

Issue/Action EDG A Governor shaft oiling issue.

Owner	Chris Grigsby

Comments Mechanical Maintenance identified metal shavings in the upper governor drive while replacing the A-EDG governor actuator. Inspection revealed appearance that gears 125 and 126 have been running dry, without lubrication, resulting in wear on the gears, which produced the metal shavings. OE from Callaway has been considered, where a gasket was cut without the oil passage, resulting in wearing of these gears. Their EDG ran successfully for approximately 650 hours prior to discovery. Held meeting with Mechanical Maintenance Tech and Supv, Eng Room 210, EOM, MOM, Paul Herrman, and Matt Hall, who provided documentation from Callaway. Will remove Governor Actuator housing to perform investigation and inspection in Mechanical shop.

COCK-TIGHT ~~GASKET~~ COVERED FLOW OF LUBE OIL. WHICH GASKET

SR99000916 – 1 Required - 2@ Callaway Stk# 7746443 - SHAFT, DRIVE, ELECTRICAL TACHOMETER, GROUP 505-057, FOR COLT DIESEL GENERATOR, DRAWING P12601919, ITEM 1

SR90701299 – 1 Required - 1@ Callaway Stk# 7746444 - EXTENSION, DRIVE SHAFT, PC 7, COLT GROUP 505-057, FOR COLT DIESEL GENERATOR, DRAWING P12612950, UE STOCK# 7746444

SR90701302 – 1 Required - 2@ Callaway Stk# 7778002 - BAR, ELECTRICAL TACHOMETER DRIVE GROUP 505-057, FOR COLT DIESEL GENERATOR

SR90702423 – 2 Required - 4 In Stock - BUSHING, THRUST, FOR ELECTRICAL TACHOMETER DRIVE GROUP 505-057, FOR COLT DIESEL GENERATOR, DRAWING P12601919-0, ITEM 6

SR90701423 – 4 Required - 2 In Stock – 5@ Callaway Stk# 7862759 - GASKET, ELECTRICAL TACHOMETER DRIVE GROUP 505-057, FOR COLT DIESEL GENERATOR, DRAWING P12601919-0, ITEM 16

SR90702422 – 2 Required - 4 In Stock - SEAL, OIL, 40 X 22 X 7, FOR ELECTRICAL TACHOMETER DRIVE GROUP 505-057, FOR COLT DIESEL GENERATOR, DRAWING P12601919-0, ITEM 5

SR99001084 – 1 Required - 3@ Callaway Stk# 7750443 - PINION, HELICAL, GOVERNOR DRIVE, GROUP 505-060, FOR COLT DIESEL GENERATOR, PARTS LIST P04786-8, ITEM 125

SR99003564 – 1 Required - 3 In Stock - SHIM, GOVERNOR DRIVE, FOR COLT DIESEL GENERATOR, GROUP 505-060

SR99001077 – 1 Possibly Required - 5 In Stock -BLOCK, ADJUSTMENT, GOVERNOR DRIVE GROUP 505-060, FOR COLT DIESEL GENERATOR

RF21 OCC Shift Update

Date: 10-21-2016	Update Time: 0500	Shift Outage Manager (SOM): On-coming: Lanny Ratzlaff
Day: 35	Off-going Shift: Night	Off-going: James Edwards

PROTECTED TRAIN B

PLANT STATUS:	PROTECTED EQUIPMENT:	
o Mode: Defueled	NB02, NG02/4, NN02/4, NK02/4	West Switchyard Bus (345-40, 345-70, 345-110, 345-163)
o RCS Temperature: 84 deg F	"B" EDG	Startup XFMR XMR01 & MA104D & E relays
o RCS Pressure: <1 psig	Essential Service Water – "B"	XFMR XNB02 & PA0201 relays
o SFP Time to 200 F: 17.3 hrs	Component Cooling Water – "B"	PA0201 breaker and stub bus
o RCS Time to Boil: N/A	Control Room A/C Unit (SGK04B)	SL3, SL31, 'B' & 'C' Service Water Pumps
o RCS Time to 200 F: N/A	Class 1E A/C unit (SGK05B)	Benton Line
	Spent Fuel Pool Cooling "B"	Rose Hill Line

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK:	Yellow	
o Reactivity Management:	Green	
o Core Decay Heat Removal:	N/A	
o SFP Decay Heat Removal:	Yellow	Only one train of SFP cooling available
o RCS Inventory:	N/A	
o Electrical Power Sources:	Yellow	AC sources (XNB01, #7 Xfmr, East Buss OOS)
o Containment Closure:	N/A	
o Rad Monitoring & Ventilation:	Green	

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours
o First Aids: 0
o OSHA Injuries (Recordable, Restricted, LT): 0
o OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: *TBD (pending review of NCP)*

RADIOLOGICAL PROTECTION:

Date	Dose Goal	Actual
10/21/2016	0.832 REM	
10/20/2016	1.232 REM	1.333 REM
Total to Date	60.119 REM	64.698 REM
Dose from Head in Total to Date		9.321 REM

Contamination Events: PCEs: 0

RAPID TRENDING:

There is no time for Shortcuts!

Use your Questioning attitude:
Ask What if.... Why is this acceptable....What's the worst that could happen?

Understand the risk and take the time to do it right the first time.

RF21 OCC Shift Update

OUTAGE WORK STATUS:

Major Activities Completed Last Shift:

- Completed peening 3 bottom mounted nozzles – 49 remain to be peened
- Completed "A" ESW fill and vent
- EDG cooling water hydrostatic test
- Removed Heater drain pump
- Torqued Excess letdown heat exchanger

Critical Path Due in Next 12 hours	Due in the Next 72 Hours
○ Continue water jet peening on the reactor vessel nozzles ○ Continue bottom nozzle peening	○ Water jet peening of the reactor vessel nozzles ○ Water jet peening of the reactor vessel bottom nozzles
Important Path/ Major Work Due in Next 12 hours	**Due in the Next 72 Hours**
○ 'A' Emergency Diesel PM's ○ SGK05A Class 1E switchgear room A/C unit replacement ○ Remove #70 CRDM ○ "A" Essential Service Water flow balance test	○ Plant secondary work is 52% complete (on schedule) ○ SGK05A Class 1E switchgear room A/C unit replacement ○ "A" EDG retest ○ 'A' Train work
Important Decisions Due	• Use of Polar Crane with degraded Maintenance Truss • Actions to resolve Water Jet Peening stop work order

SHIFT OUTAGE MANAGER COMMENTS

- Our housekeeping behaviors have deteriorated over the past week. Let's step up our game in leaving areas as clean or cleaner than when we arrived.
- Please keep up with processing closure documentation on completed work. We have found many activities that have been completed, but not yet to vaulted status. We need to keep up with the paper work now so that we do not have holds waiting to get it done in order to change modes.
-

OCC Action Items/Issues

MOM

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority
110	10/18/16 3:14	10/21/16 17:00		Open					5-406675-012, 01	

Issue/Action EDG A Governor shaft oiling issue.

Owner	Chris Grigsby

Comments Mechanical Maintenance identified metal shavings in the upper governor drive while replacing the A-EDG governor actuator. Inspection revealed appearance that gears 125 and 126 have been running dry, without lubrication, resulting in wear on the gears, which produced the metal shavings. OE from Callaway has been considered, where a gasket was cut without the oil passage, resulting in wearing of these gears. Their EDG ran successfully for approximately 650 hours prior to discovery. Held meeting with Mechanical Maintenance Tech and Supv, Eng Room 210, EOM, MOM, Paul Herrman, and Matt Hall, who provided documentation from Callaway. Will remove Governor Actuator housing to perform investigation and inspection in Mechanical shop.

SR99000916 – 1 Required - 2@ Callaway Stk# 7746443 - SHAFT, DRIVE, ELECTRICAL TACHOMETER, GROUP 505-057, FOR COLT DIESEL GENERATOR, DRAWING P12601919, ITEM 1

SR90701299 – 1 Required - 1@ Callaway Stk# 7746444 - EXTENSION, DRIVE SHAFT, PC 7, COLT GROUP 505-057, FOR COLT DIESEL GENERATOR, DRAWING P12612950, UE STOCK# 7746444

SR90701302 – 1 Required - 2@ Callaway Stk# 7778002 - BAR, ELECTRICAL TACHOMETER DRIVE GROUP 505-057, FOR COLT DIESEL GENERATOR

SR90702423 – 2 Required - 4 In Stock - BUSHING, THRUST, FOR ELECTRICAL TACHOMETER DRIVE GROUP 505-057, FOR COLT DIESEL GENERATOR, DRAWING P12601919-0, ITEM 6

SR90701423 – 4 Required - 2 In Stock – 5@ Callaway Stk# 7862759 - GASKET, ELECTRICAL TACHOMETER DRIVE GROUP 505-057, FOR COLT DIESEL GENERATOR, DRAWING P12601919-0, ITEM 16

SR90702422 – 2 Required - 4 In Stock - SEAL, OIL, 40 X 22 X 7, FOR ELECTRICAL TACHOMETER DRIVE GROUP 505-057, FOR COLT DIESEL GENERATOR, DRAWING P12601919-0, ITEM 5

SR99001084 – 1 Required - 3@ Callaway Stk# 7750443 - PINION, HELICAL, GOVERNOR DRIVE, GROUP 505-060, FOR COLT DIESEL GENERATOR, PARTS LIST P04786-8, ITEM 125

SR99003564 – 1 Required - 3 In Stock - SHIM, GOVERNOR DRIVE, FOR COLT DIESEL GENERATOR, GROUP 505-060

SR99001077 – 1 Possibly Required - 5 In Stock -BLOCK, ADJUSTMENT, GOVERNOR DRIVE GROUP 505-060, FOR COLT DIESEL GENERATOR

EOM

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority
112	10/21/16 3:49			Open		6			16-418855-001	2

EOM

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority

Issue/Action Maintenance Truss has identified cracking

Maintenance Planning requests an Engineering Evaluation to provide a repair method for damage found on the Structural Steel Maintenance Truss. Inspection of the Maintenance Truss has identified cracking and tearing of several parts of the mounting structure for the snubber wheels that were added by CP 013349. Damage identified so far is to items 6 & 7 on drawing C-1S2970. Mechanical Maintenance has provided copies of photos taken during this inspection which can be delivered to the assigned Engineer or they can be contacted to provid the digital files for these photos. If this damage becomes any worse the snubber wheels may require removal which could limit the functionality of the polar crane.

Comments | ***Owner*** | Daniel Mawby

111	10/19/16 10:31	10/22/16 18:00		Open						

Issue/Action Determine the resolution for B CCP shaft scoring/marks.

Comments | ***Owner*** | Bussard

10/20 @ 16:00: White paper is in process. Expected completion is by 18:00 on 10/21.
Engineering product: white paper/BED recommendation on shaft, Due: 10/21 @ 18:00
10/20 @ 01:15 - QC has characterized indications and provided info to Engineering (Bussard). Engineering is developing white paper to determine if RF21 replacement is necessary.
10/19 @ 1500 Ready to work - 13-374141-023 QC to characterize the damage to the PBG05B shaft
OCC Issue #111, Determine the resolution for B CCP shaft scoring/marks, is Item ESC #125, Re-assembly for CCP - B. Engineer providing oversight.

Contact Licensee - hand written notes from Fabian Thomas.

RF21 OCC Shift Update

Date: 09-26-2016	Update Time: 0500	Shift Outage Manager (SOM):
		On-coming: Lanny Ratzlaff
Day: 10	Off-going Shift: Night	Off-going: James Edwards

PROTECTED TRAIN A

PLANT STATUS:	PROTECTED EQUIPMENT:	
○ Mode: 6	NB01, NG01/3, NN01/3, NK 01/3	East Bus
○ RCS Temperature: 99 deg F	XNB01 and it MA104F relays	RHR Pump and HX "A"
○ RCS Pressure: <1 psig	"A" EDG	Spent Fuel Pool Cooling "A"
○ SFP Time to 200 F: 67 hrs	"A" CCP	RHR Pump and HX "B"
○ RCS Time to Boil: 10.5 HOURS	Class 1E A/C unit (SGK05A)	Class 1E A/C Unit (SGK05B)
○ RCS Time to 200 F: N/A	Component Cooling Water – "A"	
	Essential Service Water – "A"	
	Control Room A/C Unit (SGK04A)	
	#7 xfmr, 13-48, switch 13-23	

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK:	Green	
○ Reactivity Management:	Green	N/A
○ Core Decay Heat Removal:	Green	N/A
○ SFP Decay Heat Removal:	Green	N/A
○ RCS Inventory:	Green	N/A
○ Electrical Power Sources:	Green	N/A
○ Containment Closure:	Green	N/A
○ Rad Monitoring & Ventilation:	Green	N/A

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours

- ○ First Aids: 3
- ○ OSHA Injuries (Recordable, Restricted, LT): 0
- ○ OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: *607*

RADIOLOGICAL PROTECTION:

- ○ 9/26/16 Dose Goal: 1.350 REM
- ○ 9/25/16 Actual: 1.483 REM (Goal was 1.250 REM)

Contamination Events

- ○ PCEs: 0

The site has accumulated 13.514 REM versus a goal of 11.593 REM

RAPID TRENDING:

High temperatures in your work area make heat stress a particular concern; therefore, we must pre-plan to minimize potential for injury.

Do you know your stay times for the work you are about to perform and your recovery period? You can find stay times in the following ways:

- Talk with your supervisor
- Look on WCNet, Industrial Safety page
- Call Safety Services or OCC representative
- See posting at Access Control or outside containment

Plan Ahead

RF21 OCC Shift Update

OUTAGE WORK STATUS:

Major Activities Completed Last Shift:

○ Commenced Core Offload	○ Completed Rx Head scaffold

Critical Path Due in Next 12 hours	Due in the Next 72 Hours
○ Continue fuel offload	○ Complete fuel offload ○ Lock transfer tube valve ECV0995 closed ○ Install the fuel transfer canal gate ○ Begin water jet peening mobilization
Important Path/ Major Work Due in Next 12 hours	**Due in the Next 72 Hours**
○ Install Knuckle-Boom crane – WATER JET PEENING ○ Remove spectacle flange between EFV113 and EFV116 ○ Begin head inspections – BEGIN TODAY ? SCAFFOLD BUILT.	○ Place CO for ESW B train at ESW pumphose ○ Begin Train B Maintenance Window

Important Decisions Due	• None

SHIFT OUTAGE MANAGER COMMENTS

- Sunday 9/25/16 nightshift, QC will be working with RP performing radiography exams inside the bio-shield from 21:00 to 07:00. There will be no access or other activities in the bio-shield during this time.
- WGBT is 77 degrees

	Light Work	Moderate	Heavy Work	*All **Containment** Work is considered "Heavy Work" if using stairs or ladders.
Single PCs	>240 min.	>240 min.	*135 min.	
Double PCs	>240 min.	175 min.	*90 min.	
Impermeable Suit	155 min.	55 min.	*40 min.	

Regardless of stay times, know your limits. Stay hydrated, pay attention to how you feel and come out if you are feeling ill.

OUTAGE GOALS

Attribute	Goal	Measure	Actual	Attribute	Goal	Measure	Actual
Nuclear Safety				**FME**			
Elevating to Orange/Red	0	Events	0	Significant Events	0	Events	0
Elevating to Yellow	≤ 2	Events	0	Vulnerabilities	0	Events	0
Personnel Safety				Conditions	≤ 15	Events	0
Injuries (≥ Recordable)	0	Events	0	**Reliability**			
				Orig Work Scope Complete	≥98%	Percent	11.23%
Radiological							
Dose (Expected = 60)	<60	REM	13.514	Continuous Run After S/U	≥100	Days	N/A
PCEs	≤ 3	Events	0	**Efficiency**			Projected
				Incremental O&M Cost	<45.7	M	0 M
Human Performance				**Scope/Schedule**			Actual
Site Clock Resets	0	Events	0	Scope Flux	≤ 10	Percent	.2%
Training				Schedule Duration	≤ 62	Days	10
Training Focus		Index	92 (White)				

OCC Action Items/Issues

MOM

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority
98	09/19/16 20:48	09/30/16 16:00		Open		2		107274	15-407165-000	

Issue/Action SF001 MG Rod drive

While performing wo# 15-407165-000, the one minute reading of the resistance test for the stator within the SF001 generator, failed to reach the acceptance criteria. The one minute reading was 88K ohms, instead of the 1260k ohms required per procedure MGE EOOP-05, step 7.5.7.6. The test voltage of 500V also couldn't be reached until approximately two to three minutes into the test. At that point, the test voltage jumped up from 154V to 512V. The final results after ten minutes were 395K ohms, at 512V.

ECS# 7

Comments Resistance Test will be re-performed with temperatures in line with the vendor technical manual (VTM). Maintenance is planning the work package.
Update: 9/ 21 16:45 – The Callaway spare has been determined to be acceptable by engineering (with motor change out). Configuration is correct, no bus work is required. We will initiate a requisition tonight to ship our good motor and Callaway's gen set to vendor to swap motor/test and ship to Wolf Creek. In parallel, we will also be issuing a requisition to refurbish our generator, but priority should be on the Callaway spare as this will be the quicker option (don't have turn around information on refurb).

Service Labor Req 16-81644 has been approved and has been sole-sourced to Flanders. Req was issued on 9/22 and we are waiting on PO from Flanders. We are sending our spare motor so it can be shipped at any time once PO is in place. Callaway will be sending their refurbished MG Set with motor to Flanders where it will be coupled with our sent motor and tested. The req has a 10/17 need date.

A second Req, 16-81645, has been approved which will send out our MG Set (has to get RCA released by HP) to be refurbished and coupled with Callaway motor for their use. This req has a 12/1 need date.

Owner	Randy Boyce

103	09/26/16 2:24	10/23/16 19:30		Open					16-417884	4

Issue/Action PBG04 Normal Charging Pump could not be rotated by hand

Comments Motor megger and AWA testing was sat. Pump could not be rotated by hand.

Owner	

EOM

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority
102	09/24/16 17:29	09/28/16 18:00	09/28/16 18:00	Open						4

Issue/Action Excess Letdown Heat Exchanger (EBG02) – Dose rates are much elevated from estimates. Engineering is requested to review material condition for extending replacement to RF22.

Comments 9/25 03:00 Program owner will review request. Eddy Current data may be needed to justify moving this tube bundle replacement to the next outage.
9/25 16:00: Program owner is to provide rational to keep in outage. At a minimum, if removal from outage is requested, eddy current testing will be required.

Owner	Nathaniel Meyhew

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority
99	09/20/16 1:40	09/30/16 17:00		Open						3

Issue/Action PEM01A - SAFETY INJ. PUMP - Pump Test STS-CV-210A
Perform Pump Test STS-CV-210A to determine if new Westinghouse criteria for PEM01A will be satisfied. This test is presently scheduled for 9/24/16 @ 21:00. Based on test results determine if additional planned contingencies will be needed.
If available incorporate new Westinghouse MOL data in Procedure STS-CV 210A. If not, test can still be run with existing data to determine need for major contingencies such as replacement or the Reasonable Assumed Safe Operation (RASO) option. Pump would need to be ran later with new data if it did not pass but the need for contingencies would be determined early

Comments 9/23 22:00 - Changed Due By date to align with scheduled completion of pump test. Aligned with OCC. Upon completion of test the data will need to be reviewed to determine if pump degradation is evident and if the pump degradation trend allows for satisfactory operation until RF22.
9/25 0200 Engineering will evaluate the data taken during this test and be discussing these results with Westinghouse to determine if any additional actions are needed. Due date is 9/30 @ 17:00
9/25 16:00: CR 107487 initiated for A SI pump test data below MOL curve. A SI pump has been declared inoperable. Requested to provide new date for completion of evaluation of required actions (prior to 9/30). Responsible engineers (IST and system) are off and will return days 9/26. Date to be provided before end of shift 9/26.

Owner	Rob Low

97	09/15/16 11:05	10/07/16 0:00		Open				106176	16-416280-000	5

Issue/Action DPJE01B Resistance to Ground Degrading Trend This CR is to identify a degrading trend in the resistance to ground for the Emergency Fuel Oil Transfer Pump Motor (DPJE01B) and cable run from NG004DDF3 to the motor. 16-416280-000 DNC-Y, CR 106176, Risk Review Complete: Y WABRAND 08/24/2016 Risk Significance: MEDIUM Safety Function: Onsite Electrical Power Distribution, including Emergency Power IOA Conclusion: Resistance readings are above minimum acceptable. Additional monitoring is required to determine the true trend, so that a repair schedule can be recommended.

Issue: No spare Pump, SR90402025 / Both req's are SL's to repair removed pump/motors. 13-70538 is out for quote and 15-78525 is in PE. No inventory exists at Callaway.

Comments ESC Item #3
Update 9/21 15:30: P.O. 778803 issued for SL057303, one motor shipped on 9/20/16 via XPO. Second motor waiting for a Return Material Authorization (RMA).
Update 9/22 17:00: Second motor shipped. Will keep this item open until refurbished motor received back on site to satisfy contingency plan for testing this outage.
Update 9/23 at 0:300 PO 778826 issued for req 13-70538 and PO 778803 issued for req 15-78525. Lead time is 6-8 weeks from receipt by vendor.
Update 9/23 11:45 – if it is desired to test this motor in the B train EDG window, we need to have a contingency plan developed to address the low test reading.
Update 9/24 03:15 - Previous data collected under WO 14-384071-000 on 8/5/16 showed a resistance of 152Mohms. WO 16-412120-000 performed on 8/2/16 as found resistance was 63Mohms. Assuming a loss of 89Mohms over 24 months and a current megohm value of 62Mohms would allow for approximately 14 months of continued degradation at the observed rate to the 10Mohms.
9/25 16:00: A draft contingency plan has been provided by system engineering. Will discuss with the Outage Superintendent on Monday, 9/26.

Owner	Weeks/Staiger

96	09/15/16 10:30	10/15/16 0:00		Open					13-366290, 291	3

EOM

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority

Issue/Action PEM01A and PEM01B - SAFETY INJ. PUMPS – RF21 Quench crack inspection
Revise BED to extend PEM01A and PEM01B internal quench crack inspections past RF21. SWO series 13-366290 and 13-366291. Pump replacement for PEM01A is a contingency so no pump inspections are planned unless the contingency is activated.

Comments System engineer is revising a BED to extend the inspection past RF21. This will be completed with input from predictive engineering and trend data.

Owner	Rob Low

9/23 15:30: Estimated completion for BED is 9/30/16. Three previous revisions have been issued, but revision 3 may not have been attached to any work document. This revision should be revision 4.

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority
95	09/15/16 10:30	11/03/16 18:00		Open		2			16-417557-001	3

Issue/Action CR 107132 SE NI 35B has a blown Control Power Fuse. The SE NI 35B cabinet is warm to the touch at the far left side of NI. WO 16-417557-000 Visual inspection of Transformer T205 has failed and may have caused damage to adjacent transformers T204 and T206. 16-417557-001 planned for repair.

Extent of condition - An evaluation of other NI cabinets needs to be performed to determine if other components are experiencing similar conditions. In addition, other components that might have been damaged within SE NI 35B should be assessed for possible impact.

Comments Update 9/23 @ 03:00 Engineering reviewed the information tonight and determined no more replacements are required for the extent of condition.
Update 9/25 @ 12:30: Evaluation to document no further required work moved from 9/29 to 10/7. The responsible engineer is on the fuel movement team and will complete this after fuel offload.

Owner	Greg Kinn

RF21 OCC Shift Update

Date: 09-27-2016	Update Time: 0500	Shift Outage Manager (SOM): On-coming: Lanny Ratzlaff
Day: 11	Off-going Shift: Night	Off-going: James Edwards

PROTECTED TRAIN A

PLANT STATUS:	PROTECTED EQUIPMENT:	
o Mode: 6	NB01, NG01/3, NN01/3, NK 01/3	Rose Hill line
o RCS Temperature: 99 deg F	XNB01 and it MA104F relays	Benton line
o RCS Pressure: <1 psig	"A" EDG	East Bus
o SFP Time to 200 F: 13 hrs	"A" CCP	RHR Pump and HX "A"
o RCS Time to Boil: 10.7 HOURS	Class 1E A/C unit (SGK05A)	Spent Fuel Pool Cooling "A"
o RCS Time to 200 F: N/A	Component Cooling Water – "A"	RHR Pump and HX "B"
	Essential Service Water – "A"	Class 1E A/C Unit (SGK05B)
	Control Room A/C Unit (SGK04A)	PG19G, NG02A
	#7 xfmr, 13-48, switch 13-23	

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK:	Green	
o Reactivity Management:	Green	N/A
o Core Decay Heat Removal:	Green	N/A
o SFP Decay Heat Removal:	Green	N/A
o RCS Inventory:	Green	N/A
o Electrical Power Sources:	Green	N/A
o Containment Closure:	Green	N/A
o Rad Monitoring & Ventilation:	Green	N/A

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours

- o First Aids: 0
- o OSHA Injuries (Recordable, Restricted, LT): 0
- o OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: 608

RADIOLOGICAL PROTECTION:

- o 9/27/16 Dose Goal: 1.375 REM
- o 9/26/16 Actual: 1.993 REM (Goal was 1.350 REM)

Contamination Events

- o PCEs: 0

The site has accumulated 15.507 REM versus a goal of 12.943 REM

RAPID TRENDING: Housekeeping in Containment

Several major work windows are preparing to open in Containment. Specifically, material to support both the ESW Above Ground Pipe Replacement and Water Jet Peening projects is being staged and laydown space is at a premium. As this work commences it's time to heighten our focus on housekeeping. Remember poor housekeeping contributes to:

- Increased potential for trip hazards, dropped objects, foreign material, and combustible material accumulation
- Potential obstruction of fire protection equipment
- Ineffective use of laydown space
- Inability to manage our inventory of tools, harnesses, and rigging

AP 12-001, Housekeeping Control, states that waste materials shall be removed from work areas at least once per shift during extended work activities. It goes on to state that tools and equipment used in the work performance shall be removed and/or properly stored.

Remember it's each workgroup's responsibility to keep their work areas clean and our leader's responsibility to reinforce our standards.

RF21 OCC Shift Update

OUTAGE WORK STATUS:	
Major Activities Completed Last Shift:	
○ Complete manipulator crane driver replacement activities ○ Install temporary power to charger NK022 ○ Knuckle Boom load testing and functional testing	○ Installed thimble tube restraints ○ 2047' Platforms delivered to containment
Critical Path Due in Next 12 hours	**Due in the Next 72 Hours**
○ Continue fuel offload – 52 assemblies offloaded at 0500	○ Complete fuel offload ○ Lock transfer tube valve ECV0995 closed ○ Install the fuel transfer canal gate ○ Continue water jet peening mobilization
Important Path/ Major Work Due in Next 12 hours	**Due in the Next 72 Hours**
○ Continue head inspections ○ Continue construction of 2047' platforms ○	○ Place CO for ESW B train at ESW pumphouse ○ Begin Train B Maintenance Window
Important Decisions Due	• Retest of SI pump A per STS CV-210A, determine when to schedule.

SHIFT OUTAGE MANAGER COMMENTS

- Radiography inside the bioshield for 9/27 has been delayed. QC will update the schedule today to ensure these activities are on the schedule.
- Multiple important work paths will compete for resources immediately following core offload, now is the time to look ahead and prepare to remove barriers and execute flawlessly.

OUTAGE GOALS							
Attribute	Goal	Measure	Actual	Attribute	Goal	Measure	Actual
Nuclear Safety				**FME**			
Elevating to Orange/Red	0	Events	0	Significant Events	0	Events	0
Elevating to Yellow	≤ 2	Events	0	Vulnerabilities	0	Events	0
Personnel Safety				Conditions	≤ 15	Events	0
Injuries (≥ Recordable)	0	Events	0	**Reliability**			
				Orig Work Scope	≥98%	Percent	11.23%
Radiological				Complete			
Dose (Expected = 60)	<60	REM	15.507	Continuous Run After S/U	≥100	Days	N/A
PCEs	≤ 3	Events	0	**Efficiency**			Projected
				Incremental O&M Cost	<45.7	M	0 M
Human Performance				**Scope/Schedule**			Actual
Site Clock Resets	0	Events	0	Scope Flux	≤ 10	Percent	.2%
Training				Schedule Duration	≤ 62	Days	11
Training Focus		Index	99 (G)				

OCC Action Items/Issues

MOM

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority
98	09/19/16 20:48	09/30/16 16:00		Open		2		107274	15-407165-000	

Issue/Action SF001 MG Rod drive

While performing wo# 15-407165-000, the one minute reading of the resistance test for the stator within the SF001 generator, failed to reach the acceptance criteria. The one minute reading was 88K ohms, instead of the 1260k ohms required per procedure MGE EOOP-05, step 7.5.7.6. The test voltage of 500V also couldn't be reached until approximately two to three minutes into the test. At that point, the test voltage jumped up from 154V to 512V. The final results after ten minutes were 395K ohms, at 512V.

ECS# 7

Comments Resistance Test will be re-performed with temperatures in line with the vendor technical manual (VTM). Maintenance is planning the work package.

Owner	Grover Cleveland

Update: 9/ 21 16:45 – The Callaway spare has been determined to be acceptable by engineering (with motor change out). Configuration is correct, no bus work is required. We will initiate a requisition tonight to ship our good motor and Callaway's gen set to vendor to swap motor/test and ship to Wolf Creek. In parallel, we will also be issuing a requisition to refurbish our generator, but priority should be on the Callaway spare as this will be the quicker option (don't have turn around information on refurb).

Service Labor Req 16-81644 has been approved and has been sole-sourced to Flanders. Req was issued on 9/22 and we are waiting on PO from Flanders. We are sending our spare motor so it can be shipped at any time once PO is in place. Callaway will be sending their refurbished MG Set with motor to Flanders where it will be coupled with our sent motor and tested. The req has a 10/17 need date.

A second Req, 16-81645, has been approved which will send out our MG Set (has to get RCA released by HP) to be refurbished and coupled with Callaway motor for their use. This req has a 12/1 need date.

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority
103	09/26/16 2:24	10/23/16 19:30		Open					16-417884	4

Issue/Action PBG04 Normal Charging Pump could not be rotated by hand.

Comments Motor megger and AWA testing was sat. Pump could not be rotated by hand.

Owner	Randy Birk

EOM

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority
99	09/20/16 1:40	09/30/16 17:00		Open						3

Issue/Action PEM01A - SAFETY INJ. PUMP - Pump Test STS-CV-210A

Perform Pump Test STS-CV-210A to determine if new Westinghouse criteria for PEM01A will be satisfied. This test is presently scheduled for 9/24/16 @ 21:00. Based on test results determine if additional planned contingencies will be needed.

If available incorporate new Westinghouse MOL data in Procedure STS-CV 210A. If not, test can still be run with existing data to determine need for major contingencies such as replacement or the Reasonable Assumed Safe Operation (RASO) option. Pump would need to be ran later with new data if it did not pass but the need for contingencies would be determined early

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority

Comments | **Owner** Rob Low

9/26 15:00: Action plan provided to OCC. Options are:

1. Re-perform STS CV-210A with a lower RWST Level to bring suction pressure back down to a normal pressure at the next available opportunity. Could potentially add ultrasonic flow meters to the line to verify Flow orifice integrity. Perform at the next available opportunity (As soon as fuel is out of the reactor), also include a more accurate flow reading:

a. Have I&C Construct an instrument capable of measuring flow with an accuracy of 0.2% of full scale on a 0-50psid range.

b. Obtain instrumentation from Callaway if available

c. Obtain new instrumentation from Manufacture that can meet a 2-4 week lead time.

2. Perform an evaluation to utilize Charging Pump Margin to show the ECCS System meets the Safety Analysis Requirements. Still have a non-conforming issue with the SI Pump. This is what was done during Cycle 21 when initial issue was identified (Dustin Wirth performed this)

3. Contact Westinghouse to expedite the RASO (Reasonable Assurance of Safe Operation).

4. Expedite Westinghouse and Flowserve to get the new Safety Injection Pump back and installed this RF.

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority
97	09/15/16 11:05	10/07/16 0:00		Open				106176	16-416280-000	5

Issue/Action DPJE01B Resistance to Ground Degrading Trend This CR is to identify a degrading trend in the resistance to ground for the Emergency Fuel Oil Transfer Pump Motor (DPJE01B) and cable run from NG004DDF3 to the motor. 16-416280-000 DNC-Y, CR 106176, Risk Review Complete: Y WABRAND 08/24/2016 Risk Significance: MEDIUM Safety Function: Onsite Electrical Power Distribution, including Emergency Power IOA Conclusion: Resistance readings are above minimum acceptable. Additional monitoring is required to determine the true trend, so that a repair schedule can be recommended.

Issue: No spare Pump, SR90402025 / Both req's are SL's to repair removed pump/motors. 13-70538 is out for quote and 15-78525 is in PE. No inventory exists at Callaway.

Comments | **Owner** Weeks/Staiger

ESC Item #3
9/25 16:00: A draft contingency plan has been provided by system engineering. Will discuss with the Outage Superintendent on Monday, 9/26.
9/26 15:00: Contingency plan given to maintenance. Suggest to move ownership of this item to Maintenance or close.

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority
96	09/15/16 10:30	10/15/16 0:00		Open					13-366290, 291	3

Issue/Action PEM01A and PEM01B - SAFETY INJ. PUMPS – RF21 Quench crack inspection
Revise BED to extend PEM01A and PEM01B internal quench crack inspections past RF21. SWO series 13-366290 and 13-366291. Pump replacement for PEM01A is a contingency so no pump inspections are planned unless the contingency is activated.

Comments | **Owner** Rob Low

System engineer is revising a BED to extend the inspection past RF21. This will be completed with input from predictive engineering and trend data.

9/23 15:30: Estimated completion for BED is 9/30/16. Three previous revisions have been issued, but revision 3 may not have

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority
	been attached to any work document. This revision should be revision 4.									
95	09/15/16 10:30	11/03/16 18:00		Open		2			16-417557-001	3

Issue/Action CR 107132 SE NI 35B has a blown Control Power Fuse. The SE NI 35B cabinet is warm to the touch at the far left side of NI. WO 16-417557-000 Visual inspection of Transformer T205 has failed and may have caused damage to adjacent transformers T204 and T206. 16-417557-001 planned for repair.

Extent of condition - An evaluation of other NI cabinets needs to be performed to determine if other components are experiencing similar conditions. In addition, other components that might have been damaged within SE NI 35B should be assessed for possible impact.

Comments Update 9/23 @ 03:00 Engineering reviewed the information tonight and determined no more replacements are required for the extent of condition.
Update 9/25 @ 12:30: Evaluation to document no further required work moved from 9/29 to 10/7. The responsible engineer is on the fuel movement team and will complete this after fuel offload.
9/26 @ 16:30: Received information from engineering that a card failure may have been responsible for the transformer failure. Additional inpsections may be required. Still expect evaluation to complete by 10/7.

Owner	Greg Kinn

RF21 OCC Shift Update

Date: 09-28-2016	Update Time: 0500	Shift Outage Manager (SOM):
		On-coming: Bill Stucker
Day: 12	Off-going Shift: Night	Off-going: James Edwards

PROTECTED TRAIN A

PLANT STATUS:	PROTECTED EQUIPMENT:	
o Mode: 6	NB01, NG01/3, NN01/3, NK01/3	Rose Hill line
o RCS Temperature: 99 deg F	XNB01 and its MA104F relays	Benton line
o RCS Pressure: <1 psig	"A" EDG	East Bus
o SFP Time to 200 F: 13.2 hrs	"A" CCP	RHR Pump and HX "A"
o RCS Time to Boil: 10.9 HOURS	Class 1E A/C unit (SGK05A)	Spent Fuel Pool Cooling "A"
o RCS Time to 200 F: N/A	Component Cooling Water – "A"	RHR Pump and HX "B"
	Essential Service Water – "A"	Class 1E A/C Unit (SGK05B)
	Control Room A/C Unit (SGK04A)	PG19G, NG02A
	#7 xfmr, 13-48, switch 13-23	SL-3, SL-31, PG20, 'B' & 'C' SW Pump

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK:	Green	
o Reactivity Management:	Green	N/A
o Core Decay Heat Removal:	Green	N/A
o SFP Decay Heat Removal:	Green	N/A
o RCS Inventory:	Green	N/A
o Electrical Power Sources:	Green	N/A
o Containment Closure:	Green	N/A
o Rad Monitoring & Ventilation:	Green	N/A

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours

- o First Aids: 0
- o OSHA Injuries (Recordable, Restricted, LT): 0
- o OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: *609*

RADIOLOGICAL PROTECTION:

- o 9/28/16 Dose Goal: 1.600 REM
- o 9/27/16 Actual: 1.500 REM (Goal was 1.350 REM)

Overage due to scaffold around Rx Head

Contamination Events

- o PCEs: 0

The site has accumulated 17.012 REM versus a goal of 14.293 REM

RAPID TRENDING: **We need to step up our game!**

There have been issues with crane operation and housekeeping in Containment.

A thorough 2-Minute Drill would have helped identify the conditions; use it to help maintain awareness of your surroundings.

RF21 OCC Shift Update

OUTAGE WORK STATUS:

Major Activities Completed Last Shift:

- NK12 duty cycle test complete and on equalizing charge
- NK14 duty cycle test commenced
- DZ removed handrails on 2068'
- Mobilized MHI-01 and MHI-06, both staged on 2068'

Critical Path Due in Next 12 hours

- Continue fuel offload – 178 assemblies offloaded at 0500

(*) NK + NN WORK NEEDS TO STAY ON SCHEDULE; WHY DOES THIS WORK HAVE TO SEQUENCED THIS WAY?

B. Stucker

Due in the Next 72 Hours

- Complete fuel offload
- Lock transfer tube valve ECV0995 closed
- Install the fuel transfer canal gate
- Continue water jet peening mobilization

Important Path/ Major Work Due in Next 12 hours

- Continue water jet peening mobilization activities
- NK14 battery duty cycle testing (~0800) and equalize
- Perform STS CV-210A for the A SI pump
- Begin Train B Maintenance Window
- Remove "A" and "C" cooler braces

EHR ESW + EDG

Due in the Next 72 Hours

- Continue head inspections (day shift)
- Place CO for ESW B train at ESW pumphouse
- NN Inverters clean and inspect

Important Decisions Due

- none

SHIFT OUTAGE MANAGER COMMENTS

- Radiography inside the bioshield will begin Wednesday morning 9/28/16 and last through the end of dayshift. Access into the bioshield will be prohibited during this period of time.
- ***Multiple important work paths will compete for resources immediately following core offload, now is the time to look ahead and prepare to remove barriers and execute flawlessly.***
- Rx Head EIT will need to coordinate with upcoming critical path activities to ensure resources are allocated properly

(*) SI PUMP 'A' RETEST => BETTER INSTRUMENTATION; 'B' SI REFERENCED IN SCHEDULE; WHICH SCHEDULE?

OUTAGE GOALS

Attribute	Goal	Measure	Actual	Attribute	Goal	Measure	Actual
Nuclear Safety				**FME**			
Elevating to Orange/Red	0	Events	0	Significant Events	0	Events	0
Elevating to Yellow	≤ 2	Events	0	Vulnerabilities	0	Events	0
Personnel Safety				Conditions	≤ 15	Events	0
Injuries (≥ Recordable)	0	Events	0	**Reliability**			
				Orig Work Scope Complete	≥98%	Percent	11.23%
Radiological							
Dose (Expected = 60)	<60	REM	*17.012*	Continuous Run After S/U	≥100	Days	N/A
PCEs	≤ 3	Events	0	**Efficiency**			Projected
				Incremental O&M Cost	≤45.7	M	0 M
Human Performance				**Scope/Schedule**			Actual
Site Clock Resets	0	Events	0	Scope Flux	≤ 10	Percent	.2%
Training				Schedule Duration	≤ 62	Days	12
Training Focus		Index	100 (G)				

OCC Action Items/Issues

MOM

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority
98	09/19/16 20:48	09/30/16 16:00		Open		2		107274	15-407165-000	

Issue/Action SF001 MG Rod drive

While performing wo# 15-407165-000, the one minute reading of the resistance test for the stator within the SF001 generator, failed to reach the acceptance criteria. The one minute reading was 88K ohms, instead of the 1260k ohms required per procedure MGE EOOP-05, step 7.5.7.6. The test voltage of 500V also couldn't be reached until approximately two to three minutes into the test. At that point, the test voltage jumped up from 154V to 512V. The final results after ten minutes were 395K ohms, at 512V.

ECS# 7

Comments Resistance Test will be re-performed with temperatures in line with the vendor technical manual (VTM). Maintenance is planning the work package.

Owner	Grover Cleveland

Update: 9/ 21 16:45 – The Callaway spare has been determined to be acceptable by engineering (with motor change out). Configuration is correct, no bus work is required. We will initiate a requisition tonight to ship our good motor and Callaway's gen set to vendor to swap motor/test and ship to Wolf Creek. In parallel, we will also be issuing a requisition to refurbish our generator, but priority should be on the Callaway spare as this will be the quicker option (don't have turn around information on refurb).

Service Labor Req 16-81644 has been approved and has been sole-sourced to Flanders. Req was issued on 9/22 and we are waiting on PO from Flanders. We are sending our spare motor so it can be shipped at any time once PO is in place. Callaway will be sending their refurbished MG Set with motor to Flanders where it will be coupled with our sent motor and tested. The req has a 10/17 need date.

A second Req, 16-81645, has been approved which will send out our MG Set (has to get RCA released by HP) to be refurbished and coupled with Callaway motor for their use. This req has a 12/1 need date.

Scaff 8594 being modified to remove interferences. Expect RCA to be released by dayshift.

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority
103	09/26/16 2:24	10/23/16 19:30		Open					16-417884	4

Issue/Action PBG04 Normal Charging Pump could not be rotated by hand.

Comments Motor megger and AWA testing was sat. Pump could not be rotated by hand.

Owner	Randy Birk

Special tooling utilized during last overhaul has been located and set aside. Last repair required 17 days working 6x12's. MacDougal to create req modeling PO# 717550

Vendor is FlowServe. Limited number of rep's have experience. Request req. been written for unescorted access due to hardships encountered during 2010 repairs with escort.

Eng Maggie Stitzel recommends we do not replace bearings and attempt to rotate by hand. Indication of galling due to overload and locked rotor sufficient to assume damage significant enough to require rebuild. Replacing bearings would likely result in their damage with little to no benefit.

How did this condition come about?

MOM

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority

EOM

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority
99	09/20/16 1:40	09/30/16 17:00		Open						3

Issue/Action PEM01A - SAFETY INJ. PUMP - Pump Test STS-CV-210A
Perform Pump Test STS-CV-210A to determine if new Westinghouse criteria for PEM01A will be satisfied. This test is presently scheduled for 9/24/16 @ 21:00. Based on test results determine if additional planned contingencies will be needed.
If available incorporate new Westinghouse MOL data in Procedure STS-CV 210A. If not, test can still be run with existing data to determine need for major contingencies such as replacement or the Reasonable Assumed Safe Operation (RASO) option. Pump would need to be ran later with new data if it did not pass but the need for contingencies would be determined early

Comments 9/28 @ 04:00: Complete the following actions to perform another test run.

Owner	Rob Low

1) Provide BED to revise STS CV-210A to include the 2nd MOL curve for testing with improved accuracy gauges (maintenance and engineering verified instruments available on site). Complete

2) Revise procedure STS CV-210A (out for comment reviews)

3) Run the pump test after core off load (pump run is expected at approx. 16:00 today)

97	09/15/16 11:05	10/07/16 0:00		Open				106176	16-416280-000	5

Issue/Action DPJE01B Resistance to Ground Degrading Trend This CR is to identify a degrading trend in the resistance to ground for the Emergency Fuel Oil Transfer Pump Motor (DPJE01B) and cable run from NG004DDF3 to the motor. 16-416280-000 DNC-Y, CR 106176, Risk Review Complete: Y WABRAND 08/24/2016 Risk Significance: MEDIUM Safety Function: Onsite Electrical Power Distribution, including Emergency Power IOA Conclusion: Resistance readings are above minimum acceptable. Additional monitoring is required to determine the true trend, so that a repair schedule can be recommended.

Issue: No spare Pump, SR90402025 / Both req's are SL's to repair removed pump/motors. 13-70538 is out for quote and 15-78525 is in PE. No inventory exists at Callaway.

Comments 9/28 04:00: Scope add approved – testing added to R21. Actions remaining for engineering:

Owner	Weeks/Staiger

1) Revise Contingency plan to include trigger points and exact actions to follow. Due 9/30 day shift (work 24hrs). This has been revised, checked and has some minor comments to incorporate then it will be ready to discuss with the plant manager today.

2) Provide engineering support of modification for moisture mitigation. Draft Minor Change Package ready to issue if needed.

96	09/15/16 10:30	10/15/16 0:00		Open					13-366290, 291	3

Issue/Action PEM01A and PEM01B - SAFETY INJ. PUMPS – RF21 Quench crack inspection
Revise BED to extend PEM01A and PEM01B internal quench crack inspections past RF21. SWO series 13-366290 and 13-366291. Pump replacement for PEM01A is a contingency so no pump inspections are planned unless the contingency is activated.

Comments 9/23 15:30: Estimated completion for BED is 9/30/16. Three previous revisions have been issued, but revision 3 may not have been attached to any work document. This revision should be revision 4.

Owner	Rob Low

EOM

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority
	9/27@ 07:00: BED is drafted and now in review.									
95	09/15/16 10:30	11/03/16 18:00		Open		2			16-417557-001	3

Issue/Action CR 107132 SE NI 35B has a blown Control Power Fuse. The SE NI 35B cabinet is warm to the touch at the far left side of NI. WO 16-417557-000 Visual inspection of Transformer T205 has failed and may have caused damage to adjacent transformers T204 and T206. 16-417557-001 planned for repair.

Extent of condition - An evaluation of other NI cabinets needs to be performed to determine if other components are experiencing similar conditions. In addition, other components that might have been damaged within SE NI 35B should be assessed for possible impact.

Comments 9/26 @ 16:30: Received information from engineering that a card failure may have been responsible for the transformer failure. Additional inpsections may be required. Still expect evaluation to complete by 10/7.
9/26 @ 15:30: Engineering direction will be to inspect all bistables and transformers in the IR and SR drawers. We are providing the recommendations via an SWO sub. Will complete by 10/7. Need the SWO number .

Owner	Greg Kinn

Wolf Creek

Safety Meeting

Sept. 28, 2016

Personal Protective Equipment

- Eleven days into the outage and we have identified a trend with low level usage of personal protective equipment (PPE):
  - Gloves (required on person)
  - Hearing protection
  - Safety glasses

Personal Protective Equipment

- How are we going to mitigate this trend?
  - Identify all required PPE in your pre-job brief before you go into the field.
  - Use the 2-Minute Drill at your job location to identify any additional PPE you may need.
  - Coach each other to ensure everyone has the appropriate PPE. Use the Wolf Pack observation program to coach each other and complete a "blue observation card."

Hearing Protection

- During the last eleven days, several locations have been down posted for hearing protection, but the following locations still require hearing protection:
  - 2000' and 2015' elevations in the turbine building
  - 2000' in containment
  - Areas with a posted Hearing Protection sign
- If you have a question about whether you should wear hearing protection or if you have to raise your voice to be heard in certain areas, this is a good indication that Hearing Protection is required for that location.

RF21 Injuries as of 09/17/16

By group, date and type of injury

Actual

0 – OSHA; 8 – First Aid

Outage Goal

0 – OSHA

	Hand/Finger/Arm Cut/Smash Abrasion/Burn	Body Cuts/Puncture	Body Bruise/Abrasion	Strain	Insect Bite	Heat Related	Eye Injury
Security	9/25						
Operations							
Maintenance							
Information Services			9/24				
Financial Services							
Engineering Projects							
Engineering/Fire Protection							
Integrated Plant Scheduling						9/18	
Chemistry							
Supplemental		9/25				9/20, 9/21, 9/22 (2),	

SAFETY MEETING ROSTER

COMPLETION DATE: _____ **PAGE** _____ **OF** _____

MEETING LEADER: _____

(Print) LAST NAME	FIRST	MI	SIGNATURE	ACAD NUMBER

Comments: _____

RF21 OCC Shift Update

Date: 09-29-2016	**Update Time:** 0500	**Shift Outage Manager (SOM):** **On-coming:** Lanny Ratzlaff
Day: 13	**Off-going Shift:** Night	**Off-going:** James Edwards

Boron Conc 2471 PPM

PROTECTED TRAIN A

PLANT STATUS:	**PROTECTED EQUIPMENT:**	
○ Mode: Defueled ○ RCS Temperature: 99 deg F ○ RCS Pressure: <1 psig ○ SFP Time to 200 F: 10.4 hrs ○ RCS Time to Boil: N/A ○ RCS Time to 200 F: N/A	NB01, NG01/3, NN01/3, NK01/3 XNB01 and its MA104F relays "A" EDG Class 1E A/C unit (SGK05A) Component Cooling Water – "A" Essential Service Water – "A" Control Room A/C Unit (SGK04A) Spent Fuel Pool Cooling "A" #7 xfmr, 13-48, switch 13-23	Rose Hill line Benton line East Bus PG19G, NG02A SL-3, SL-31, PG20, 'B' & 'C' SW Pump

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK:	Yellow	
○ Reactivity Management:	Green	N/A
○ Core Decay Heat Removal:	N/A	N/A
○ SFP Decay Heat Removal:	Yellow	Only one train of SFP Cooling Available (CCW "B" drained)
○ RCS Inventory:	N/A	N/A
○ Electrical Power Sources:	Green	N/A
○ Containment Closure:	N/A	N/A
○ Rad Monitoring & Ventilation:	Green	N/A

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours
- First Aids: 2
- OSHA Injuries (Recordable, Restricted, LT): 0
- OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: *610*

RADIOLOGICAL PROTECTION:
- 9/29/16 Dose Goal: 1.600 REM
- 9/28/16 Actual: 1.992 REM (Goal was 1.600 REM)
  Overage due to Rx Head Inspections

Contamination Events
- PCEs: 0

The site has accumulated 19.004 REM versus a goal of 15.893 REM

RAPID TRENDING:

The only dumb question is the one that doesn't get asked

Around the plant we've had great examples of strong Questioning Attitudes. Keep up the good work and continue to use a good Questioning Attitude...

- When you have a gut feeling that something's not right
- When you get results you don't expect
- When plans or conditions change

RF21 OCC Shift Update

OUTAGE WORK STATUS:

Major Activities Completed Last Shift:

- Completed Rx Head Inspection
- Completed STS CV-210A 'A' SI Pump Test
- Pinned ESW spring cans
- Completed LLRT for Pen 28
- Completed LLRT for Pen 92
- NN14 Inverter clean and inspect
- NN12 de-energized
- Drained 'B' ESW

Critical Path Due in Next 12 hours	Due in the Next 72 Hours
○ Water Jet Peening mobilization (estimated to be 12 hrs ahead of schedule)	○ Continue water jet peening mobilization (currently at 28.5% complete)
Important Path/ Major Work Due in Next 12 hours	**Due in the Next 72 Hours**
○ Switchyard reliability upgrade (estimated to be 1.5 days ahead of schedule) ○ NN12 Inverter clean and inspect ○ Manipulator crane Aux Hoist visual inspection for part ID ○ Place CO for ESW B train	○ Determine decon/clean for Rx Head to support repair ○ NB/NG De-energize for maintenance ○ Commence GN piping replacement in containment

Important Decisions Due	• There is an issue with the owners and a Waverly-LaCygne line outage that will potentially require Executive involvement today

SHIFT OUTAGE MANAGER COMMENTS

- Rx Head EIT has progressed to cleaning, the team will need support from multiple groups to make this occur
- EF-V005 (ESW Pump B discharge valve) is misaligned, which will require cutting and welding. Packages are in planning at this time and are being supported by both Maintenance and projects. This will need to be evaluated for impact today
- First aid was received last night due to an abrasion on the abdomen on a scaffold clamp at the ESW screen house.

OUTAGE GOALS

Attribute	Goal	Measure	Actual	Attribute	Goal	Measure	Actual
Nuclear Safety				**FME**			
Elevating to Orange/Red	0	Events	0	Significant Events	0	Events	0
Elevating to Yellow	≤ 2	Events	0	Vulnerabilities	0	Events	0
Personnel Safety				Conditions	≤ 15	Events	0
Injuries (≥ Recordable)	0	Events	0	**Reliability**			
				Orig Work Scope Complete	≥98%	Percent	11.23%
Radiological							
Dose (Expected = 60)	<60	REM	19.004	Continuous Run After S/U	≥100	Days	N/A
PCEs	≤ 3	Events	0	**Efficiency**			Projected
				Incremental O&M Cost	<45.7	M	0 M
Human Performance				**Scope/Schedule**			Actual
Site Clock Resets	0	Events	0	Scope Flux	≤ 10	Percent	.2%
Training				Schedule Duration	≤ 62	Days	13
Training Focus		Index	99 (G)				

OCC Action Items/Issues

MOM

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority
104	09/29/16 4:00			Open		4				2

Issue/Action EFV0005, ESW pump "B" discharge iso, flange alignment issue.

Comments Original work item to restore EFV0005 had 41 hours of float. Preliminary reports is 4 -5 shifts of work to complete work.

Owner	Randy Birk

Engineering Daniel Mawby evaluating points to rig from to support lowering pipe section. Current plan is:
1) cut just above T at Cross-Tie downstream of EFV005
2) lower pipe to floor/floor jack
3) remove approximately 3/8"
4) fit EFV005
5) tack pipe
6) torque EFV005
7) finish weld out

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority
98	09/19/16 20:48	09/30/16 16:00		Open		2		107274	15-407165-000	

Issue/Action SF001 MG Rod drive

While performing wo# 15-407165-000, the one minute reading of the resistance test for the stator within the SF001 generator, failed to reach the acceptance criteria. The one minute reading was 88K ohms, instead of the 1260k ohms required per procedure MGE EOOP-05, step 7.5.7.6. The test voltage of 500V also couldn't be reached until approximately two to three minutes into the test. At that point, the test voltage jumped up from 154V to 512V. The final results after ten minutes were 395K ohms, at 512V.

ECS# 7

Comments Resistance Test will be re-performed with temperatures in line with the vendor technical manual (VTM). Maintenance is planning the work package.

Owner	Grover Cleveland

Update: 9/ 21 16:45 – The Callaway spare has been determined to be acceptable by engineering (with motor change out). Configuration is correct, no bus work is required. We will initiate a requisition tonight to ship our good motor and Callaway's gen set to vendor to swap motor/test and ship to Wolf Creek. In parallel, we will also be issuing a requisition to refurbish our generator, but priority should be on the Callaway spare as this will be the quicker option (don't have turn around information on refurb).

Service Labor Req 16-81644 has been approved and has been sole-sourced to Flanders. Req was issued on 9/22 and we are waiting on PO from Flanders. We are sending our spare motor so it can be shipped at any time once PO is in place. Callaway will be sending their refurbished MG Set with motor to Flanders where it will be coupled with our sent motor and tested. The req has a 10/17 need date.

A second Req, 16-81645, has been approved which will send out our MG Set (has to get RCA released by HP) to be refurbished and coupled with Callaway motor for their use. This req has a 12/1 need date.

Scaff 8594 being modified to remove interferences. Expect RCA to be released by dayshift.

MOM

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority
103	09/26/16 2:24	10/23/16 19:30		Open					16-417884	4

Issue/Action PBG04 Normal Charging Pump could not be rotated by hand.

Comments Motor megger and AWA testing was sat. Pump could not be rotated by hand.

Owner	Randy Birk

Special tooling utilized during last overhaul has been located and set aside. Last repair required 17 days working 6x12's.
MacDougal to create req modeling PO# 717550

Vendor is FlowServe. Limited number of rep's have experience. Request req. been written for unescorted access due to hardships encountered during 2010 repairs with escort.

Eng Maggie Staiger recommends we do not replace bearings and attempt to rotate by hand. Indication of galling due to overload and locked rotor sufficient to assume damage significant enough to require rebuild. Replacing bearings would likely result in their damage with little to no benefit.
UPDATE 9/28/16, Package planning is ongoing expect to be complete the next few days. Estimated start of job is 10/06/16.
Expect rotating assembly to be delivered by 10/03/16.

EOM

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority
97	09/15/16 11:05	10/07/16 0:00		Open				106176	16-416280-000	5

Issue/Action DPJE01B Resistance to Ground Degrading Trend This CR is to identify a degrading trend in the resistance to ground for the Emergency Fuel Oil Transfer Pump Motor (DPJE01B) and cable run from NG004DDF3 to the motor. 16-416280-000 DNC-Y, CR 106176, Risk Review Complete: Y WABRAND 08/24/2016 Risk Significance: MEDIUM Safety Function: Onsite Electrical Power Distribution, including Emergency Power IOA Conclusion: Resistance readings are above minimum acceptable. Additional monitoring is required to determine the true trend, so that a repair schedule can be recommended.

Issue: No spare Pump, SR90402025 / Both req's are SL's to repair removed pump/motors. 13-70538 is out for quote and 15-78525 is in PE. No inventory exists at Callaway.

Comments 9/29 @ 02:30: Engineering provided input for planning of purge to Elec planning (S Boyce). Planning is not yet complete. Planning for pick of vault lid is necessary.
9/28 @ 15:30: Motor tested today at 29 Mohms. Acceptance is 50 Mohms, Minimum is 5 Mohms. Immediate recommendation from Engineering is to purge with nitrogen and retest. Remaining action for engineering:
1) Engineer requested to sit down with planning to assure the SWO to purge is planned as required. Due: Night shift tonight.
2) Determine whether/when to implement modification compensatory measure (silicone oil or desiccant). Due: following retest with nitrogen.

Owner	Weeks/Staiger

96	09/15/16 10:30	10/15/16 0:00		Open					13-366290, 291	3

Issue/Action PEM01A and PEM01B - SAFETY INJ. PUMPS – RF21 Quench crack inspection
Revise BED to extend PEM01A and PEM01B internal quench crack inspections past RF21. SWO series 13-366290 and 13-366291. Pump replacement for PEM01A is a contingency so no pump inspections are planned unless the contingency is activated.

Comments 9/29 @ 02:30: Review is completed with comments to initiator. Initiator - R. Low to incorporate feedback on 9/30 dayshift.
9/28 @ 15:30: Comments from reviewer promised before the end of day shift today. Remaining action from engineering:

Owner	Rob Low

EOM

Item #	Created On	Due by	Expected	Status	Completed	Mode Restraint	Window Restraint	CR#	WO#	Priority
	1) Incorporate reviewer comments and obtain approval/issue BED. Expected completion 9/30.									
95	09/15/16 10:30	11/03/16 18:00		Open		2			16-417557-001	3

Issue/Action CR 107132 SE NI 35B has a blown Control Power Fuse. The SE NI 35B cabinet is warm to the touch at the far left side of NI. WO 16-417557-000 Visual inspection of Transformer T205 has failed and may have caused damage to adjacent transformers T204 and T206. 16-417557-001 planned for repair.

Extent of condition - An evaluation of other NI cabinets needs to be performed to determine if other components are experiencing similar conditions. In addition, other components that might have been damaged within SE NI 35B should be assessed for possible impact.

Comments 9/28 @ 15:30: WO 16-418036-000 has been created to Inspect NI equipment. Remaining action from Engineering:
1) Complete formal inspection recommendations input to SWO – requested to try and limit inspections to SPV bistables/transformers (still may be all of them). Expected to complete 10/7 or sooner.

Owner	Greg Kinn

Reference Licensee

DATE : 8/31/2016	NIGHT SHIFT ☐	DAY SHIFT ☒	MODE: 1

OFF-GOING: (PRINT)			ON-COMING: (PRINT)		
	CRS	Gholson		CRS	Fuller
	RO	Turner		RO	Norman
	BOP	Stone		BOP	Marchant
	WC SRO	Faircloth		WC SRO	Pitt

ON-COMING CRS/WC SRO/RO/BOP REVIEW

EVOLUTIONS IN PROGRESS:

Blended flow to 'B' RHUT at 2450 ppm, currently recirculating for chemistry. 'A' RHUT aligned to service. (8/30/16)

Maintain CST LVL >90%. If <90%Notify the following people to suspend welding prior to reaching 87%.

0600-1600	Wade Anderson	OR	Matt Worley	(This is for floating cover protection)
1600-0300	Ryne Hoskins	OR	Charles Jasper	

MOSS buildup outside ESW floating barriers, monitor.

CTMT ENTRY scheduled for tomorrow. STS BB-006 indicates increased leakage.

MAINTENANCE IN PROGRESS: [Commitment Step 3.2.27]

CST Flex mod - TMO 16-002-AP-00 installed for level indication and N2 sparging

Aux Steam outage

MUSH Battery Charger OOS due to high current, MUSH deenergized.

'A' Instrument air compressor OOS - Water leaking from brazed connection

East Cond Pit Sump - 'A' pump DNO'd, 'B' pump tripped its breaker. Manually pump out using temp pump

WORK CONTROLS:

C.O.'S TO HANG	C.O.'S TO REMOVE	POST MAINT. TESTING	REQUIRED SYSTEM ALIGNMENTS

TESTING IN PROGRESS: [Commitment Step 3.2.27]

CONTROL ROOM TURNOVER CHECKLIST

COMMENTS:

Per OPS Management In Modes 1-4, there will be no planned maintenance on SGK05A/B due to single failure concerns. - See essential reading 13-0101.

'B' MFP disch vlv. AE HV-15 breaker is OPEN, auto close on MFP trip will not function.

XMA01C-cooling fans and pumps in MANUAL per ALR 803 in open procedure book.

#6 transformer fans and pumps in MANUAL due to failed temp. switch. Will be repaired in RF21.

Maintain pressure <350 psig and >40 psig in RHR header IAW ODMI 2015-09 (ref. page 6)

8/15/16 Biocide added to Fire Protection

"A" RHR Boron Concentration 2427ppm. Recirced for sample 8/25/16

"B" RHR Boron Concentration 2469ppm. Recirced for sample 8/28/16

Control Room operator work arounds:

16-OB100 Control Room staff required to perform SYS EJ-323 and SYS EM-002 several times per shift

WORK REQUEST:

FOLLOW-UP BUTTONS:

AP LV-02 blocked open.

PROTECTED EQUIPMENT SIGNS:

IER 11-2: B ESW, B CCW, NB02, B SFP

Class 1E AC: SGK05A/B

CONTROL ROOM TURNOVER CHECKLIST

REACTOR POWER 100 % RCS: 586.5 °F 2235 PSIG

		DATE LAST RUN	BORON CONCENTRATION	VOLUME
ROD CONTROL AUTO ☒	A CCP	8/18/16	219 ppm	72 GAL
MANUAL ☐	B CCP	8/18/16	219 ppm	342 GAL
	COMMON PIPING	8/18/16	219 ppm	70 GAL

(effects of common piping needs to be added to first CCP that is run)

CONTROL BANK D 205 STEPS

RCS BORON (C_b) 168 PPM @ DATE/TIME 8/31/16 0945

PZR BORON (C_b) 175 PPM @ DATE/TIME 8/29/16 1220

LEAK RATE (GPM): TOTAL T/S IDENTIFIED 0.188 T/S UNIDENTIFIED 0.219 @ DATE/TIME 8/31/16 1713

COND. AIR INLEAKAGE (IAW STS CH-033) 1.9 cfm

TANKS **AP** FILLING ☒ **AN** FILLING ☒ **BL** FILLING ☐ **BL** ON RECIRC ☒

CONDENSATE DEMINS IN SERVICE A ☐ B ☐ C ☐ D ☐ E ☐ F ☐

ESF STATUS PANELS AND REACTOR TRIP/BLOCK PANEL

PANEL	COMPONENT/TRIP/BLOCK	REASON
SA066Y	SG B MSIV ABHV17	WR# 15-113138 Card problem, fix at next outage

CONTROL ROOM TURNOVER CHECKLIST

ON-COMING CRS/WC SRO/RO/BOP REVIEW (Check Box)

PRIOR TO ASSUMING WATCH

CRS	WC SRO	RO	BOP	
				CONTROL ROOM LOGS
				ESSENTIAL READING
				EQUIPMENT OUT-OF-SERVICE LOG
	N/A	N/A	N/A	SURVEILLANCE SCHEDULE
N/A		N/A	N/A	FIRE PROTECTION PERMITS
		N/A	N/A	ENSURE KC008 ALARMS AND IMPAIRMENTS ARE REVIEWED **(Reference Step 3.1.17) (all Modes)**
N/A	N/A			ENSURE KC008 ALARMS AND IMPAIRMENTS ARE REVIEWED **(Reference Step 3.1.17) (Mode 1-3 only)**
N/A		N/A	N/A	Record number of KC008 red alarms 0/1 **Mode 1-4 only**
N/A		N/A	N/A	Record number of KC008 yellow trouble alarms 5 **Mode 1-4 only**
	N/A	N/A	N/A	DISCHARGE PERMITS
				MCB WALKDOWN WITH OFF-GOING WATCH
				OPEN PROCEDURES BOOK/OPEN PROCEDURE LOG IN AUTO-LOG (Reference Steps 3.1.14, 3.1.25)
				WORK REQUEST TAG LOG (Reference Step 3.1.9)

AFTER ASSUMING WATCH

CRS	WC SRO	
		OPEN WCGS SUBSTATION WORK AUTHORIZATION FORMS [Commitment Step 3.2.9]
	N/A	DISCUSS COMPLETED DAILY SHUTDOWN RISK ASSESSMENT WITH THE CREW (only applicable during outages)
	N/A	BRIEF RO ON 10% RAPID DOWNPOWER WHEN ≥ 10% RTP
	N/A	REVIEW OSA'S LISTED ON PAGE 5 WITH THOSE ON NPIS (OSA'S) TO ENSURE ALL REQUIRED ITEMS ARE BEING MONITORED

ATTACH ANY ADDITIONAL PAGES NEEDED TO DESCRIBE PLANT CONDITIONS. MARK THE NUMBER OF ADDITIONAL PAGES 0

OFF-GOING		ON-COMING	
CRS	_____	CRS	_____
RO	_____	RO	_____
BOP	_____	BOP	_____
WC SRO	_____ INITIALS	WC SRO	_____ INITIALS

ALARM WINDOW DESCRIPTION

WINDOW	NAME	REASON	WR/WO
001A	MUSH SUPV TROUBLE	MUSH shutdown due to DC battery charger failure	CR 16-106408
003A	MUDS SUPV TROUBLE	In local per the alarm response	WR 16-117730
003D	MUSH BATT TROUBLE	Battery Charger failure	CR 16-106408
009E	AUX BLR FUEL OIL TROUBLE	Fuel oil pump breakers open D-FB-N-007,D-FB-N-008	
020F	SBO DG SYSTEM TROUBLE	SBO EDG 'B' breaker failed to close automatically.	
037B/037C	BA TK B Lev LO/LOLO	BAT B Level is low after blending to 'B' RHUT	
061C	PROCESS RAD MON FAIL	FCRIC385B check source test fail.	WR 15-115441

INTERMITTENT ALARMS

061A/B	PROCESS RAD HI AND HIHI	GRE31 and 32 Particulate channels spiking	ODMI 2015-07
061C	PROCESS RAD MON FAIL	FCRIC385B check source test fail.	WR 15-115441
070A/B	RCP VIB/DANGER/SYS ALERT	RCP D (Temp Mod 16-006-BB installed)/ "D" Frame OK light not lit	WR 16-414924

KC008 ALARMS

		Review impairments IAW page 4	

OSA1 (65F)	
POINT	REASON
BBP0455	2228 psig (DNB)
RJU157MA	3564.5 MW
GBT0016	47F
EAT009	113-118F

OSA2 (66F)	
POINT	REASON
MAT0016	100 deg Celsius 'B' MN XFMR WIND TEMP
HBL1003	RCDT LVL 55% (ODMI2015-11)
SFD0412A/ SFD0412B	Rod steps

OSA3 (67F)	
POINT	REASON
APL0004	80%LO 97%HI
ANL0003	50%
Accumulator pressures	610-645 psig Eng. Calc until CR annunciators updated CR 73420-02-02

ODMI/Action Number	ODMI Trigger/Condition	ODMI Action
2015-06	SGK05A oil pressure monitoring	Monitoring lubricating oil pressure dp as part of building rounds. Trigger points **30 psid** - increase monitoring to four times per shift and notify System Engineer **25 psid** - Notify system engineering and plant management. Initiate plans correct the degraded condition. Declare unit degraded. Implement SYS GK-200. Continue to monitor four times per shift. **20 psid** - Notify engineering and discuss with plant management (Call Superintendent) to determine if the unit should be immediately shut down or ***an expedited repair plan put in place. If the unit is shutdown (nonfunctional) then compensatory measures (SYS GK-200) should be implemented to prevent plant shutdown. An expedited repair will require declaring the unit degraded and also require comp measures.*** Continue to monitor four times per shift. **10 psid** - Notify shift manager and immediately shutdown SGK05A. ***Implement compensatory measures (SYS GK-200) and declare emergent work to get the unit repaired in a timely manner.***
2015-07	GTRE31 AND GTRE32 Spiking	Chemistry will analyze containment rad monitor filters weekly. An increase in Sodium or Iodine isotope of one decade above baseline readings will trigger further action. STS BB-006 already includes proceduralized trigger points with actions for identifying a leak location. **Actions if Trigger Point(s) exceeded:** 1) Shift Manager will re-convene focus group to determine desired actions upon reaching the trigger point for rad monitor filter activity. STS BB-006 trigger points are proceduralized, the crew will perform the specified actions according to the ULR program.
2015-09	Reactor Coolant System (RCS) back leakage is causing pressurization of the Safety Injection (SI) and Residual Heat Removal (RHR) discharge piping **Trigger Points** 1.System Engineering may adjust frequency of void checking based on frequency of RHR Depressurization and/or void check results. This ODMI will be revised if the void checking frequency is changed. 2. Frequency of discharge piping depressurization becomes a control room burden. 3. RHR and/or SI header pressure drops < 40 psig without intentional operator action	**Actions if Trigger Point(s) exceeded:** 1. N/A 2. If frequency of depressurization becomes a control room burden, a plan will be developed and implemented to improve seating the check valve EPV010 by running an SI pump. If individual RHR pump discharge pressure starts to increase, a plan will be developed to run the affected pump to improve seating its discharge check valve. 3. If <40 psig: A. Perform void checks at EJV0088 & EJV0090 (partial STS BG-007B) within 24 hours. B. Perform again 48 hours after 1st performance. C. Can terminate void checks if RHR pressure increases to ≥ 40 psig or if both initial sets of void checks are water solid. D. If voids are found < operability limit, contact eng. To determine new periodicity for void checks based on the observed growth rates of the voiding.
2015-11	**RCDT pump oil leakage.** Monitor RCDT pump oil levels and refill as required, decrease pump run time to conserve oil inventory, develop new plan for single pump operation. **Trigger Points** 1. Oil consumption during monitoring intervals exceeds the capacity of the oiler bulb. 2. Oil consumption during monitoring intervals exceeds the capacity of the oiler bulb when operating the system in manual at all times. 3. RCDT pump oil leaks degrade to a point at which regular monitoring and refilling is no longer practical.	**Actions if Trigger Point(s) exceeded:** 1. If oil consumption exceeds the capacity of the oiler bulb within the 30 day monitoring interval, operate the RCDT pumps in manual only. The control room will then establish an OSA to alarm at 55% level to initiate callout so that RCDT level and pressure is conservatively maintained within band. 2. If oil consumption during monitoring intervals exceeds the capacity of the oiler bulb when operating the system in manual at all times, install temporary camera to monitor pump oil levels continuously. 3. If RCDT pump oil leaks degrade to a point at which regular monitoring and refilling is no longer practical, operate the B RCDT pump in manual only and develop a plan for single pump operation.
2016-001	**Startup transformer fire detection is degraded** **Trigger Points:** 1) KC008 fire detected in the startup transformer. 2) Verbal report of fire in the startup transformer.	**Actions if Trigger Point(s) exceeded:** 1) Respond the fire brigade to determine is actual fire and manually actuate the startup transformer fire suppression if necessary. 2) Respond the fire brigade to determine is actual fire and manually actuate the startup transformer fire suppression if necessary.
2016-03	"A" service water strainer has no auto backwash. Trigger points a. strainer dp >2psid b. strainer dp >4psid	a. Increased monitoring frequency to four times per shift b. Contact Maintenance to hand rotate strainer

K02-001A

Shift Manager Relief Checklist

SHIFT COMPOSITION

8/31/2016 And 09/01/2016 Second Shift

MARTINSON, ERIC W	FULLER, MICHAEL D
SHIFT MANAGER	**CONTROL ROOM SUPERVISOR**
FULLER, MICHAEL D	PITT, EDGAR L
STA	**WORK CONTROL SRO**
NORMAN, ROBERT D	MARCHANT, JUSTIN C
REACTOR OPERATOR	**BALANCE OF PLANT**
SPEER, JUSTIN P	BALZER, ADAM J
TURBINE BUILDING WATCH	**AUXILIARY BUILDING WATCH**

ONNEN, MITCHELL A	NGUYEN, HIEU T	STEFFEN, JOSHUA M
ENS COMMUNICATOR	**SITE WATCH**	**OFF SITE COMMUNICATOR**

PITT, EDGAR L	BALZER, ADAM J	CHRISTESEN, KELVIN D
OFN RP-017 TURB	**OFN RP-017 AUX BLDG**	**OFN KC-016 MANUAL ACTION/ OFN RP-017 Attachment E**

FIRE BRIGADE

SKILES, BRADLEY A

BRIGADE LEADER

CAMERON, JASON E	SPEER, JUSTIN P	MEAD, ANDREW R	HEINS, TYSON D
OPS MEMBER	**OPS MEMBER**	**MEMBER**	**MEMBER**

OTHER

DEES, DAVID L	BORDEN, JOHN A	ANDERSON, TREVOR J
CALL SUPERINTENDENT	**HP CONTROL ROOM TECH**	**SHIFT CHEMIST**
MEAD, ANDREW R	LOWNEY, SHARON M	HEINS, TYSON D
HP SURVEY/JOB COV TECH	**HP JOB COV/SURVEY TECH**	**CHEMISTRY SAMPLER**

Reference Licensee

FORM APF 29B-003-01 REV 05

SURVEILLANCE TEST ROUTING SHEET (STRS)

DOCUMENT NUMBER: STS BB-006

DOCUMENT TITLE: RCS WATER INVENTORY BALANCE USING THE NPIS COMPUTER

TEST FREQ: 72 Hours
DUE DATE/TIME:
LATE DATE/TIME:
T/S REQUIRED MODE: 1 2 3 4
REQUIRED PLANT MODE:

INITIATING DOCUMENT #(s)

SUPPORTING CLEARANCE ORDER(s) [Commitment Step 3.2.29]

RESPONSIBLE GROUP: OPS

SUPPORT GROUP(s):

PRE-TEST COMMENTS:

1) PROCEDURE VERIFIED TO BE CORRECT REVISION WITH ALL TEMPORARY CHANGES ATTACHED AND INCORPORATED — INIT: MC / DATE: 8/31/16

TEST PERFORMERS:

PRINT NAME	INIT	DATE	PRINT NAME	INIT	DATE
			CHRISTESEN	[illegible]	9-1-16
Bob Norman	RN	8-31-16			
FULLER MECHAM	MC	8/31/16	ERIK MATHISEN	E	9/1/16

2) PRE-TEST REVIEWS:

	SIGNATURE	DATE	TIME
SM/CRS/Designee Auth:		08/31/16	2246

3) *TEST DEFICIENCY DESCRIPTION: RCS UNIDENTIFIED LEAKAGE IS ELEVATED

E / 9/1/16
TP INIT / DATE

4) *T/S OR TRM FAILURE? ☐ YES ☒ NO — 9/1/16
SM / CRS / DESIGNEE SIGNATURE / DATE

IF NO - JUSTIFICATION: UNIDENTIFIED LEAKAGE HAS NOT EXCEEDED TS LIMIT * SOURCE OF LEAK NOT IDENTIFIED BUT PERFORMING CONTAINMENT TENTY.

5) *ACTION TAKEN: CR WRITTEN

FORM: N/A WR/WO#: CR 106822

TEST SUSPENDED? ☐ YES ☒ NO — 9/1/16
SM / CRS / DESIGNEE SIGNATURE / DATE

*SECTIONS 3, 4, AND 5 ARE COMPLETED IF A TEST DEFICIENCY OCCURS. OTHERWISE MARK N/A.

6) POST TEST REVIEWS: (GROUP SUP. CHECK ONE) ☒ COMPLETE ☐ PARTIAL ☐ N/A

TOTAL MAN HOURS: 4

	SIGNATURE	DATE	TIME
Test Performer:	Robert Norman	9/1/16	9952
SM/CRS/Designee Auth:		9/1/16	1624
Group Supervisor:			
SC/Surv. Technician:			
SC/Surv. Technician:			

7) ADDITIONAL COMMENTS: ODMI 2015-07 is being revised for conditions requiring SLO

NPIS-B - ACTIVE

Start Time: 08/31/2016 23:00:00 Test Performer: RONORMA
End Time: 09/01/2016 01:00:00
Elapsed Time: 2 hrs 0 min 0 sec

TOTAL RCS LEAKAGE:

	Delta-M (RCWV)	=	-40.428	LBM	GOOD
+	Delta-M (PZR)	=	20.025	LBM	GOOD
+	Delta-M (VCT)	=	-216.300	LBM	GOOD
+	Delta-M (Add/Rem)	=	0.000	LBM	GOOD
=	236.703 LBM	=	28.421	Gal	
	Total RCS Leakage is		0.237	GPM	GOOD

IDENTIFIED RCS LEAKAGE:

-	Delta-M (RCDT)	=	42.892	LBM	GOOD
-	Delta-M (PRT)	=	-0.055	LBM	GOOD
-	Delta-M (SG)	=	0.262	LBM	GOOD
+	Delta-M (other)	=	0.000	LBM	
=	43.099 LBM	=	5.175	Gal	
	Total Identified Leakage is		0.043	GPM	GOOD
	Total T/S Identified Leakage is		0.188	GPM	GOOD

UNIDENTIFIED RCS LEAKAGE:

	Total RCS Leakage	=	0.237	GPM	GOOD
-	Total Identified Leakage	=	0.043	GPM	GOOD
-	Non-RCS Leakage	=	0.012	GPM	
	Total UnIdentified Leakage is		0.182	GPM	GOOD

NPIS-B - ACTIVE

INPUTS	START	QUAL	END	QUAL	BLK
RC Pump A	1.000	GOOD	1.000	GOOD	
RC Pump B	1.000	GOOD	1.000	GOOD	
RC Pump C	1.000	GOOD	1.000	GOOD	
RC Pump D	1.000	GOOD	1.000	GOOD	
RCL 1 NR Th	620.019	GOOD	619.649	GOOD	
RCL 1 NR Th	614.326	GOOD	614.776	GOOD	
RCL 1 NR Th	618.938	GOOD	618.628	GOOD	
RCL 1 NR Tc	555.465	GOOD	555.650	GOOD	
RCL 2 NR Th	615.021	GOOD	615.591	GOOD	
RCL 2 NR Th	614.641	GOOD	614.801	GOOD	
RCL 2 NR Th	614.896	GOOD	614.786	GOOD	
RCL 2 NR Tc	555.547	GOOD	555.717	GOOD	
RCL 3 NR Th	617.357	GOOD	617.357	GOOD	
RCL 3 NR Th	613.840	GOOD	613.780	GOOD	
RCL 3 NR Th	615.831	GOOD	615.656	GOOD	
RCL 3 NR Tc	555.767	GOOD	555.860	GOOD	
RCL 4 NR Th	614.055	GOOD	613.820	GOOD	
RCL 4 NR Th	616.037	GOOD	616.297	GOOD	
RCL 4 NR Th	613.465	GOOD	613.275	GOOD	
RCL 4 NR Tc	555.285	GOOD	555.412	GOOD	
RCL 1 Tavg	586.613	GOOD	586.667	GOOD	
RCL 2 Tavg	585.200	GOOD	585.388	GOOD	
RCL 3 Tavg	585.722	GOOD	585.729	GOOD	
RCL 4 Tavg	584.902	GOOD	584.938	GOOD	
RCL 1 WR HL	N/A		N/A		
RCL 2 WR HL	N/A		N/A		
RCL 3 WR HL	N/A		N/A		
RCL 4 WR HL	N/A		N/A		
PZR 1 Lvl	57.051	GOOD	57.101	GOOD	
PZR 2 Lvl	57.084	GOOD	57.105	GOOD	
PZR 3 Lvl	57.184	GOOD	57.213	GOOD	
PZR Lvl Avg	57.106	GOOD	57.140	GOOD	
PZR Wtr Temp	653.382	GOOD	653.382	GOOD	
PZR Stm Temp	651.206	GOOD	651.256	GOOD	
PZR Ch 1 Press	2234.921	GOOD	2236.655	GOOD	
PZR Ch 2 Press	2240.391	GOOD	2242.125	GOOD	
PZR Ch 3 Press	2236.989	GOOD	2238.790	GOOD	
PZR Ch 4 Press	2233.820	GOOD	2235.588	GOOD	
PZR Press Avg	2236.530	GOOD	2238.290	GOOD	
WR Ch1 Press	N/A		N/A		
WR Ch4 Press	N/A		N/A		
RCS Press Avg	N/A		N/A		
VCT Level	50.655	GOOD	49.380	GOOD	
VCT Temp	87.493	GOOD	87.514	GOOD	
VCT Press	25.490	GOOD	24.122	GOOD	
PRT Level	74.019	GOOD	74.019	GOOD	
PRT Temp	96.959	GOOD	96.963	GOOD	
PRT Press	3.666	GOOD	3.668	GOOD	
RCDT Level	33.109	GOOD	34.568	GOOD	

USER INPUTS	VALUE	UNITS
MU Initial	331302	Gal
MU Final	331302	Gal
Other Added	0.0	Gal
Other Removed	0.0	Gal
Pri/Sec	0.377	GPD
Other ID Leak	0.000	GPM
RCDT Temp Initial	97.000	DegF
RCDT Temp Final	97.000	DegF
RCDT Press Initial	9.000	PSIG
RCDT Press Final	9.000	PSIG
Non-RCS Leakage	0.012	GPM
PIV Leakage	0.145	GPM

Test Performer: RONORMA
09/01/16 01:05:17

*** Leak Rate has GOOD quality ***
*** Acceptance Criteria Met ***

NPIS-B - ACTIVE

Start Time: 09/01/2016 01:30:00 Test Performer: RONORMA
End Time: 09/01/2016 02:31:00
Elapsed Time: 1 hr 1 min 0 sec

TOTAL RCS LEAKAGE:

	Delta-M (RCWV)	=	41.871	LBM	GOOD
+	Delta-M (PZR)	=	1.021	LBM	GOOD
+	Delta-M (VCT)	=	-156.329	LBM	GOOD
+	Delta-M (Add/Rem)	=	0.000	LBM	GOOD
=	113.438 LBM	=	13.620	Gal	
	Total RCS Leakage is		0.223	GPM	GOOD

IDENTIFIED RCS LEAKAGE:

-	Delta-M (RCDT)	=	21.131	LBM	GOOD
-	Delta-M (PRT)	=	-9.516	LBM	GOOD
-	Delta-M (SG)	=	0.133	LBM	GOOD
+	Delta-M (other)	=	0.000	LBM	
=	11.747 LBM	=	1.410	Gal	
	Total Identified Leakage is		0.023	GPM	GOOD
	Total T/S Identified Leakage is		0.168	GPM	GOOD

UNIDENTIFIED RCS LEAKAGE:

	Total RCS Leakage	=	0.223	GPM	GOOD
-	Total Identified Leakage	=	0.023	GPM	GOOD
-	Non-RCS Leakage	=	0.012	GPM	
	Total UnIdentified Leakage is		0.188	GPM	GOOD

NPIS-B - ACTIVE

INPUTS	START	QUAL	END	QUAL	BLK
RC Pump A	1.000	GOOD	1.000	GOOD	
RC Pump B	1.000	GOOD	1.000	GOOD	
RC Pump C	1.000	GOOD	1.000	GOOD	
RC Pump D	1.000	GOOD	1.000	GOOD	
RCL 1 NR Th	619.954	GOOD	619.874	GOOD	
RCL 1 NR Th	613.955	GOOD	614.606	GOOD	
RCL 1 NR Th	618.913	GOOD	618.628	GOOD	
RCL 1 NR Tc	555.477	GOOD	555.467	GOOD	
RCL 2 NR Th	615.171	GOOD	614.966	GOOD	
RCL 2 NR Th	615.256	GOOD	614.616	GOOD	
RCL 2 NR Th	614.406	GOOD	614.581	GOOD	
RCL 2 NR Tc	555.607	GOOD	555.575	GOOD	
RCL 3 NR Th	617.603	GOOD	617.528	GOOD	
RCL 3 NR Th	613.870	GOOD	613.570	GOOD	
RCL 3 NR Th	615.992	GOOD	615.927	GOOD	
RCL 3 NR Tc	555.737	GOOD	555.705	GOOD	
RCL 4 NR Th	613.940	GOOD	614.240	GOOD	
RCL 4 NR Th	616.042	GOOD	615.691	GOOD	
RCL 4 NR Th	613.435	GOOD	613.650	GOOD	
RCL 4 NR Tc	555.267	GOOD	555.240	GOOD	
RCL 1 Tavg	586.542	GOOD	586.585	GOOD	
RCL 2 Tavg	585.276	GOOD	585.148	GOOD	
RCL 3 Tavg	585.779	GOOD	585.690	GOOD	
RCL 4 Tavg	584.870	GOOD	584.883	GOOD	
RCL 1 WR HL	N/A		N/A		
RCL 2 WR HL	N/A		N/A		
RCL 3 WR HL	N/A		N/A		
RCL 4 WR HL	N/A		N/A		
PZR 1 Lvl	57.030	GOOD	57.022	GOOD	
PZR 2 Lvl	57.059	GOOD	57.047	GOOD	
PZR 3 Lvl	57.163	GOOD	57.147	GOOD	
PZR Lvl Avg	57.084	GOOD	57.072	GOOD	
PZR Wtr Temp	653.382	GOOD	653.357	GOOD	
PZR Stm Temp	651.130	GOOD	651.206	GOOD	
PZR Ch 1 Press	2235.021	GOOD	2235.988	GOOD	
PZR Ch 2 Press	2240.524	GOOD	2241.458	GOOD	
PZR Ch 3 Press	2237.222	GOOD	2238.189	GOOD	
PZR Ch 4 Press	2233.953	GOOD	2234.954	GOOD	
PZR Press Avg	2236.680	GOOD	2237.647	GOOD	
WR Ch1 Press	N/A		N/A		
WR Ch4 Press	N/A		N/A		
RCS Press Avg	N/A		N/A		
VCT Level	48.842	GOOD	47.920	GOOD	
VCT Temp	87.485	GOOD	87.598	GOOD	
VCT Press	23.718	GOOD	23.687	GOOD	
PRT Level	74.019	GOOD	74.011	GOOD	
PRT Temp	96.969	GOOD	96.972	GOOD	
PRT Press	3.667	GOOD	3.664	GOOD	
RCDT Level	34.917	GOOD	35.630	GOOD	

USER INPUTS	VALUE	UNITS
MU Initial	331302	Gal
MU Final	331302	Gal
Other Added	0.0	Gal
Other Removed	0.0	Gal
Pri/Sec	0.377	GPD
Other ID Leak	0.000	GPM
RCDT Temp Initial	97.000	DegF
RCDT Temp Final	97.000	DegF
RCDT Press Initial	9.000	PSIG
RCDT Press Final	9.500	PSIG
Non-RCS Leakage	0.012	GPM
PIV Leakage	0.145	GPM

Test Performer: RONORMA
09/01/16 02:36:14

*** Leak Rate has GOOD quality ***
*** Acceptance Criteria Met ***

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Daily POWR RF21

Refer document in its entirety to the licensee.

Sept. 22, 2016 — Day 6

Nuclear Safety

Shutdown Safety Risk Condition:

GREEN

The plant is **GREEN** for Shutdown Safety Risk Condition. All key safety functions are **GREEN**.

Protected Train "A"

- N801 — 4.16 kV engineered safety feature (ESF) bus
- XNB01/MA104F — 4.16 kV ESF transformer and its associated relays
- NG01/03 — safety-related 480 V switchgear
- NN01/03 — vital 120 V AC power supply
- NK01/03 — vital 120 V DC power supply
- #7 transformer, 13-48 breaker & 13-23 disconnect
- Waverly/LaCygne & Benton 345 kV lines and east bus
- A emergency diesel generator
- A and B residual heat removal pumps and heat exchangers
- A centrifugal charging pump
- A spent fuel pool cooling pump
- A component cooling water
- A essential service water
- SGK05B — Class 1E electric equipment HVAC
- SGK04A — control room HVAC

Critical & Important Path Activities Due Next 24 Hours

- Installation of reactor vessel head hoists
- Disassembly of reactor vessel head

Update on outage activities

The plant is in Mode 5 with the loops not filled. Yesterday, teams continued to offload SeaLands in containment and prepare for head disassembly. The reactor coolant system (RCS) was drained to 270 inches.

The head area maintenance (HAM) container, stud tensioners and head hoists were mobilized in containment last shift. Crews are troubleshooting electrical issues with the manipulator crane and upender in preparation for fuel movement.

On critical path for today is installation of the reactor vessel head hoists and head disassembly activities. We expect to remove the core exit thermocouple nozzle assembly (CETNA) clamps later today.

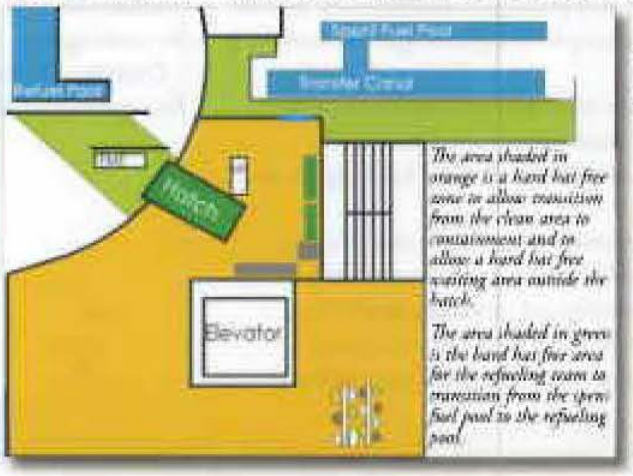
Day & Zimmermann crews work to install a support structure in the essential service water pumphouse for a FLEX modification.

Project work continues with FLEX modifications on the essential service water (ESW) piping in the ESW pumphouse. Crews are also preparing to begin the aboveground ESW piping replacement in early October.

We are assembling the water jet peening bridge on the west side of the plant and preparing equipment to be brought into containment once the reactor is defueled.

Hard hat exemption near personnel hatch

A hard hat exemption area has been designated at the containment personnel hatch to allow transition from the hard hat racks and the personnel hatch. A transition path has been established for the refueling team to move from the manipulator crane over the refueling pool to the spent fuel bridge crane over the spent fuel pool. This allows the team to move from one hard hat exemption zone to another without piling hard hats up along the area on either side. This includes the area outside the personnel hatch to allow workers to wait in a low dose area without hard hats.



The area shaded in orange is a hard hat free zone to allow transition from the clean area to containment and to allow a hard hat free waiting area outside the hatch.

The area shaded in green is the hard hat free area for the refueling team to transition from the spent fuel pool to the refueling pool.

Day & Zimmermann reaches one year with no injuries

Wednesday, the Day & Zimmermann Wolf Creek team marked one year without a first aid injury. The team has been injury free after a concerted effort to improve their safey record.

"This is a great accomplishment by our entire team," said Kevin Crabtree, D&Z site manager. "This is a result of everyone's buy-in and dedication to get our first full year without even a first aid. We had candid conversations, we set individual and group expectations, held interactive morning kick-off meetings and quality 2-minute drills. This is just one step of our journey. We are proud but humble. We will continue to learn and continue to improve."

"As a construction group, our focus is on safety right out of the gate each morning. We give the superintendents time each morning to discuss their work for the day, the potential safety implications and methods they will use to keep their folks safe," said Tim Smith, Project Construction manager. "We continue to push the use of blue cards and management observations. I am proud of what we have accomplished as an organization, but in no way can we get complacent and assume the streak will continue. It is something we have to be diligent with each and every day."

RF21 Quality snapshot

Quality Assurance began oversight activities in support of RF21 on Saturday, Sept. 17, and is providing around the clock coverage of RF21 activities to ensure a safe and quality outage.

During the last week, Quality performed 17 surveillances of work activities and one assessment. Areas observed this week include core exit thermocouple nozzle assembly (CETNA) leak repair planning, industrial safety, radiation worker practices, radiation postings, chemistry sample processing, chemical control, chemical sampling and radiation work permit briefs.

Oversight identified several positive behaviors related to our Problem Solving and Own It principles. Additionally, several examples of line supervision providing oversight and coaching were observed.

Quality identified issues with material staging (missing identification or labels), chemical storage (control of flammables in cabinets) and electrical safety (missing ground connections).

Additionally, communication issues were noted during several meetings, particularly with attendees not being fully prepared for the meeting and providing conflicting information. One item still being investigated concerns the number of task performance failures for supplemental personnel.

When in doubt, write a CR

Having a low threshold for initiating condition reports (CR) is a key element of our safety culture and critical for ensuring we have a safe plant to operate. A simple rule of thumb is, whenever you ask yourself the question, "Should this be a CR?" the answer should be "Yes."

When you identify something that you think might be an issue, write a CR. Doing so ensures that a licensed operator reviews the issue as part of the screening process. This also allows us to identify issues and trends early, so we can fix them before they become bigger problems.

CRs can be initiated electronically or hand written and placed in droboxes located in the Security pre-screening building, William Allen White Skills Training Center and main tool room.

The more detail you provide when writing the CR, the better. This includes a thorough description of the issue; who was involved in the event; when and where the condition occurred; and a description of the gap, which describes the expected behavior versus the current condition. Also, include any immediate actions taken, the extent of the condition, if known, and any recommendations to resolve the issue. If you have appropriately addressed this issue and provide the sufficient details, recommend the CR be closed based on actions taken.

If you see something say something and, when in doubt, write a CR.

Attend Safety and Human Performance training

There are three classes remaining this week for the RF21 Human Performance and Industrial Safety training. Classes are available 1 p.m., 3 p.m. and 7:30 p.m. today.

Any Wolf Creek employee who has not yet attended this training is encouraged to attend the 1 p.m. class today. Registration is not necessary.

The classes are scheduled for 90 minutes and will be held in the east half of the Charles Curtiss Development Center (workout facility). Attendees are not required to bring PPE to the training.

Questions? Contact Christine Fraker, ext. 8060 or Randy Thompson, ext. 4284.

Daily Howl RF21

Sept. 25, 2016 — Day 9

Nuclear Safety

Shutdown Safety Risk Condition:

GREEN

The plant is **GREEN** for Shutdown Safety Risk Condition. All key safety functions are **GREEN**.

Protected Train "A"

- NB01 — 4.16 kV engineered safety feature (ESF) bus
- XNB01/MA104F — 4.16 kV ESF transformer and its associated relays
- NG01/03 — safety-related 480 V switchgear
- NN01/03 — vital 120 V AC power supply
- NK01/03 — vital 120 V DC power supply
- #7 transformer, 13-48 breaker & 13-23 disconnect
- Waverly/LaCygne & Benton 345 kV lines and east bus
- A emergency diesel generator
- A and B residual heat removal pumps and heat exchangers
- A centrifugal charging pump
- A spent fuel pool cooling pump
- A component cooling water
- A essential service water
- SGK05A/B — Class 1E electric equipment HVAC
- SGK04A — control room HVAC

Critical & Important Path Activities Due Next 24 Hours

- Remove upper internals
- Perform refueling machine and fuel transfer system checks
- Begin fuel offload

Update on outage activities

Members of the head area maintenance team prepare for the reactor vessel head lift late yesterday morning. Click on the picture above to view a time-lapse video of the lift.

The plant is now in Mode 6 with the reactor vessel head in the stand and the refueling cavity level at approximately 23 feet above the flange. The head lift was completed around noon yesterday.

The shutdown safety risk condition is back to Green because the reactor coolant system is no longer at a lowered inventory. The risk condition will remain Green until fuel offload is complete later this week and the "B" safety system train work window opens.

Critical path for today is to remove the upper internals and perform the necessary checks to begin fuel offload. Fuel offload is scheduled to begin late on day shift.

Stoplight turned yellow to bring attention to adverse performance trend

Yesterday, Performance Improvement turned the stoplights at the main entrances yellow to draw attention to an adverse performance trend in safety and human performance. In the first few days of the outage, we have had five heat-related first aids, five work-hour violations, four overdue condition reports, three dropped objects, two status control events and multiple schedule challenges.

These challenges point to a lack of engagement in the work we're doing. A refocus on the Own It and Managing Risk competencies is needed. In response to this trend, Wolf Creek leadership received talking points and are required to discuss the information with their work groups as soon as possible (by Monday at the latest).

The bottom line is we need to use the tools available to us to ensure success, particularly a thorough pre-job brief and 2-Minute Drill before the start of work. And we always need to use our questioning attitude. If you're unsure of something, stop.

Inform yard coordinator of material arriving in RCA yard

An increasing amount of material is showing up at the radiological controlled area (RCA) yard boundary unannounced, unlabeled and with no representation. This is contrary to expectation. When this occurs, the yard coordinators have no idea what it is, where it goes and who owns it. In some cases, it is arriving in cardboard or wood containers, which, if at all possible, should not come into the RCA.

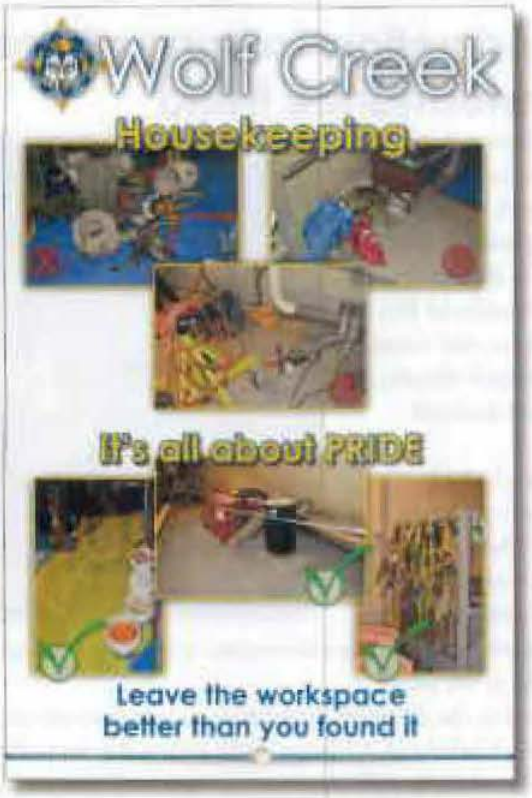
The expectation is that work groups coordinate with the yard coordinator on materials that will be delivered to the RCA yard. Prior to items being delivered, talk to the yard coordinator to inform him of what the material is and where it needs to go. Ensure the material is properly packaged and labeled.

Questions? Contact the Containment Outage Manager, ext. 2409.

Housekeeping needs attention

Housekeeping is declining in the plant, particularly in containment. Poor housekeeping can contribute to accidents by hiding hazards that cause injuries and delay successful completion of tasks because needed tools or supplies aren't where they should be.

Conversely, effective housekeeping can eliminate some workplace hazards and help get a job done safely and efficiently. We need to focus our attention on being tidy when we stage tools and leaving areas cleaner than we found them.



Refuel 21 Goals	Goal	Actual
Safety		
Personnel		
Recordable or Greater Injuries	0	0
Nuclear (Unplanned Risk Changes)		
Elevating to Orange or Red	0	0
Elevating to Yellow	≤ 2	0
Radiological		
Radiation Exposure	≤ 60 R	12.031 R
PCEs	≤ 3	0
Human Performance		
Site Event Clock Resets		
Site Event Clock Resets	0	0
Foreign Material Exclusion		
Significant Events	0	0
Vulnerabilities	0	0
Conditions	≤ 15	0
Reliability		
Scope Completion	≥ 98%	11.23%
Efficiency (Cost Competitiveness)		
Schedule Duration		
Scheduled Duration	≤ 62 d.	9 d.
Incremental O&M Cost (Excluding Fuel)		
Incremental O&M Cost (actual projected)	≤ $45.7M	$46.8
Scope Flux		
Scope Flux	≤ 10%	0.2%

Show ownership for housekeeping, return tools

While we have plenty of tools in inventory, Maintenance is reporting the main tool room is running low on essential tools and is completely out of torque wrenches. Unavailability of tools can impact scheduled work activities.

More importantly, having all of those tools in the field means we're not doing a good job of maintaining our housekeeping standards.

While we need to be looking ahead and ensuring we're prepared for upcoming work, we shouldn't be staging tools too far in advance. We also should return them immediately after the work is finished.

Show you own housekeeping by returning tools to the appropriate tool room.

Daily Howl RF21

Sept. 27, 2016 — Day 11

Nuclear Safety

Shutdown Safety Risk Condition:

GREEN

The plant is **GREEN** for Shutdown Safety Risk Condition. All key safety functions are **GREEN**.

Protected Train "A"

- N801 — 4.16 kV engineered safety feature (ESF) bus
- XNB01/MA104F — 4.16 kV ESF transformer and its associated relays
- NG01/03 — safety-related 480 V switchgear
- NN01/03 — vital 120 V AC power supply
- NK01/03 — vital 120 V DC power supply
- #7 transformer, 13-48 breaker & 13-23 disconnect
- Rose Hill/Benton 345 kV lines and east bus
- A emergency diesel generator
- A and B residual heat removal pumps and heat exchangers
- A centrifugal charging pump
- A spent fuel pool cooling pump
- A component cooling water
- A essential service water
- SGK05A/B — Class 1E electric equipment HVAC
- SGK04A — control room HVAC
- PG19G/NG02A — Low Voltage System 480V

Critical & Important Path Activities Due Next 24 Hours

- Continue core offload

Update on outage activities

Fuel offload resumed overnight. As of this morning, 78 assemblies have been offloaded. Click the image above to view a time lapse video of fuel movement.

The plant is in Mode 6 with the reactor vessel head and reactor upper internals in the stands. The refueling cavity level is at approximately 23 feet above the flange. We worked through an issue with the manipulator crane driver and resumed core offload last night. As of this morning, 78 of 193 assemblies have been offloaded.

Critical path is through core offload. Other important work this shift is inspection of the reactor vessel head and construction of the 2047' elevation platforms. Water jet peening equipment mobilization will continue to support project start once core offload is complete.

During the last shift, teams completed load testing and functional testing on the knuckle boom.

Switchyard upgrades in progress

A series of reliability upgrades for the switchyard began yesterday. Pictured right, crews installed new supports for the LaCygne line and moved the lines to it. By the end of dayshift, the old wooden supports were being demolished.

The LaCygne line is being rerouted and existing transmission structures will be replaced to support the rerouted line. A new motor-operated line disconnect switch will be installed on the LaCygne line. In addition, lightning protection and grounding will be changed to maintain protection of the rerouted line and new support structures.

One of the most significant reliability upgrades is moving the number 7 transformer to a breaker-and-

"Switchyard" continued on page 2.

"Switchyard" continued from page 1.

a-half scheme for increased redundancy. A breaker-and-a-half configuration has two buses that are both energized during normal operation. The revised scheme will allow the number 7 transformer to be supplied by either the east or west bus in the switchyard.

Either supply breaker can be removed for maintenance, without affecting the service on the corresponding exiting feeder, and a fault on either bus can be isolated without interrupting service to the outgoing lines. The loss of an outside breaker would disrupt only one circuit.

OCC recognizes good catches and strong teamwork

Over the weekend, Andy Blattel, meter relay technician, reported a potential status control event when his hard hat came close to contacting a switch in the plant.

Andy was confident he did not come in contact with the switch, but he exhibited the right behavior in reporting it.

Yesterday, Randy Skiles and Kathleen Britt from Radiation Protection and Ron Davis from Security worked together to improve a material staging boundary in the fuel building to alleviate potential status control issues. During Security rounds, officers were required to navigate a narrow walkway near material staging area and plant components, resulting in bumped components. The improved walkpath allows clear travel through the area.

Frank Seeney, Operations outage manager, recognized the clearance order group for maintaining solid performance in clearance orders.

"Yesterday, we had 66 clearance order interactions, which results in hundreds of tags. All of this goes through essentially the two Work Controls people. This is extremely important in keeping people safe, and they've done an excellent job," Frank said.

While 66 clearance interactions is not a large amount of clearances in the full scope of an outage, it takes a significant amount of time to build and verify a clearance order, prepare the clearance order for placement, brief the workers to place the clearance, align the craft personnel to sign on to the clearance to do the actual work and, finally, align the different organizations to remove the clearance and restore the system.

"This is the culmination of many months of work, which comes to a fine point in the end. The members of the clearance order group want to say 'thank you' to all who use our clearances and that we want you to go home safe after your shift," Frank said.

During schedule status on Sunday, Wade Anderson and Ruth Crabtree caught a conflict with the FLEX essential service water cross-tie strut work. A predecessor activity had been completed, allowing work to begin earlier than expected.

Refuel 21 Goals	Goal	Actual
Safety		
Personnel		
Recordable or Greater Injuries	0	0
Nuclear (Unplanned Risk Changes)		
Elevating to Orange or Red	0	0
Elevating to Yellow	≤ 2	0
Radiological		
Radiation Exposure	≤ 60 R	15.507 R
PCEs	≤ 3	0
Human Performance		
Site Event Clock Resets		
Site Event Clock Resets	0	0
Foreign Material Exclusion		
Significant Events	0	0
Vulnerabilities	0	0
Conditions	≤ 15	0
Reliability		
Scope Completion	≥ 98%	14.66%
Efficiency (Cost Competitiveness)		
Schedule Duration		
Scheduled Duration	≤ 62 d.	11 d.
Incremental O&M Cost (Excluding Fuel)		
Incremental O&M Cost (actual projected)	≤ $45.7M	$45.4M
Scope Flux		
Scope Flux	≤ 10%	0.2%

After confirming with the shift engineer and shift manager, the correct sequence of activities was determined. This is a great example of looking ahead and staying in sequence.

Check expiration dates on hard hats and liners

Hard hats should be replaced every five years, sooner if damaged, and hard hat liners should be replaced annually. During a personal protective equipment focus day in January, hundreds of employees checked the dates on their hard hats and liners and had them replaced that day. Some hard hats dated back to the 1990s.

It's easy to forget to change the liner each year, and even easier to let the five-year expiration on hard hats lapse. Check your own PPE and look out for your teammates as well.

Daily Howl RF21

Sept. 28, 2016 — Day 12

Nuclear Safety

Shutdown Safety Risk Condition:

GREEN

The plant is **GREEN** for Shutdown Safety Risk Condition. All key safety functions are **GREEN**.

Protected Train "A"

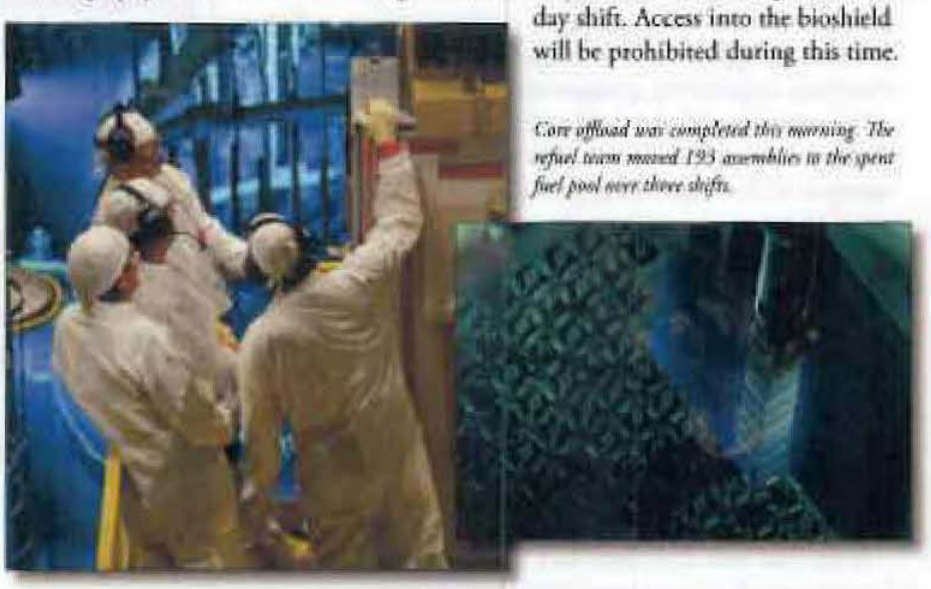
- NB01 — 4.16 kV engineered safety feature (ESF) bus
- XNB01/MA104F — 4.16 kV ESF transformer and its associated relays
- NG01/03 — safety-related 480 V switchgear
- NN01/03 — vital 120 V AC power supply
- NK01/03 — vital 120 V DC power supply
- #7 transformer, 13-48 breaker & 13-23 disconnect
- Rose Hill/Benton 345 kV lines and east bus
- A emergency diesel generator
- A and B residual heat removal pumps and heat exchangers
- A centrifugal charging pump
- A spent fuel pool cooling pump
- A component cooling water
- A essential service water
- SGK05A/B — Class 1E electric equipment HVAC
- SGK04A — control room HVAC
- PG19G/NG02A — Low Voltage System 480 V
- B and C service water pumps and associated power supplies, SL3, SL31 and PG20

Update on outage activities

The plant is defueled. Core offload continued on critical path overnight and was completed at 8:27 a.m. this morning with all 193 fuel assemblies moved to the spent fuel pool. Water jet peening project mobilization will take over critical path. We continue to bring equipment through the hatch and will construct and assemble components in containment over the next several days for the project.

The NK system 120 V DC power supply battery testing will continue on important path work today, as well as a surveillance for the "A" train safety injection pump. The "B" train maintenance window will open on day shift today, which will increase shutdown safety risk to Yellow. The Emergent Issues Response team for the reactor head leak is continuing with head inspections.

Radiography inside the bioshield began this morning and will last through the end of day shift. Access into the bioshield will be prohibited during this time.



Core offload was completed this morning. The refuel team moved 193 assemblies to the spent fuel pool over three shifts.

Return unused Wi-Fi phones, report coverage

Just before the start of RF21, Plant Manager Steve Smith issued new expectations regarding Gai-tronics use. Thanks to your efforts, these new expectations have reduced Gai-tronics use and minimized distractions.

We have deployed 500 Wi-Fi phones and most of the phones are being actively used. However, Information Services (IS) has received requests for additional phones. If you have a phone that you are not actively using, please return the phone to be redistributed and help meet these requests.

IS is also looking for feedback on Wi-Fi phone coverage. Tests show nearly 100 percent coverage in outside areas, the turbine building and containment. If you experience issues with coverage in these areas, or others, please contact IS with the

"Wi-Fi phones" continued on page 2.

"Wi-Fi phones" continued from page 1.
specific location of the dead spot.

If you have an upcoming project in an area that does not have coverage, contact IS to have a mobile hotspot deployed for that area. The Wi-Fi phone system will be made permanent following the outage and coverage will be added to several areas in the auxiliary building, fuel building and rad waste building.

Headsets for the Wi-Fi phones are available for those working in high-noise areas.

If you have questions, have a phone to return or need to request coverage or headsets, contact Paul Clarkson, ext. 8630, or Paul Naab, ext. 8394.

RF21 Quality snapshot

Quality Assurance continues to conduct oversight activities in support of RF21. During the last week, Quality performed 24 surveillances and one assessment. Areas observed this week include industrial safety, radiation worker practices, radiation protection, supplemental training, security, maintenance, chemistry, engineering, projects and fuel movement.

Oversight identified several positive behaviors related to our Problem Solving and Own It principles. Additionally, several examples of line supervision providing oversight and coaching were observed.

Quality identified issues with material storage (storage level and labeling), component labeling (doors and material), compressed gas storage (bottles without safety caps), housekeeping, electrical safety (component grounding) and conflicting procedure direction.

Contact Operations if you bump a plant component

In the past four days there have been four instances of bumping of plant equipment. Only one of these events actually caused plant equipment to be inadvertently manipulated. In all cases, the individuals involved exhibited the correct behavior and promptly reported the issue by contacting Operations.

All plant personnel should maintain awareness of components around them when performing activities in the plant. This includes working in tight places, moving equipment or simply walking through an area. If you bump plant equipment, or even think you may have bumped a component, stop your work activity and contact the Work Control SRO.

Refuel 21 Goals	Goal	Actual
Safety		
Personnel		
Recordable or Greater Injuries	0	0
Nuclear (Unplanned Risk Changes)		
Elevating to Orange or Red	0	0
Elevating to Yellow	≤ 2	0
Radiological		
Radiation Exposure	≤ 60 R	17.012 R
PCEs	≤ 3	0
Human Performance		
Site Event Clock Resets		
Site Event Clock Resets	0	0
Foreign Material Exclusion		
Significant Events	0	0
Vulnerabilities	0	0
Conditions	≤ 15	0
Reliability		
Scope Completion	≥ 98%	14.66%
Efficiency (Cost Competitiveness)		
Schedule Duration		
Scheduled Duration	≤ 62 d.	11 d.
Incremental O&M Cost (Excluding Fuel)		
Incremental O&M Cost (actual projected)	≤ $45.7M	$45.4M
Scope Flux		
Scope Flux	≤ 10%	0.2%

Daily Howl RF21

Oct. 1, 2016 — Day 15

Nuclear Safety

Shutdown Safety Risk Condition:

YELLOW

The plant is **YELLOW** for Shutdown Safety Risk Condition. Spent fuel pool decay heat removal and electrical power sources are **YELLOW**.

Protected Train "A"

- NB01 — 4.16 kV engineered safety feature (ESF) bus
- XNB01/MA104F — 4.16 kV ESF transformer and its associated relays
- NG01/03 — safety-related 480 V switchgear
- NN01/03 — vital 120 V AC power supply
- NK01/03 — vital 120 V DC power supply
- #7 transformer, 13-48 breaker & 13-23 disconnect
- Rose Hill/Benton 345 kV lines and east bus
- A emergency diesel generator
- A spent fuel pool cooling pump
- A component cooling water
- A essential service water
- SGK05A/B — Class 1E electric equipment HVAC
- SGK04A — control room HVAC
- PG19G/NG02A — Low Voltage System 480 V
- B and C service water pumps and associated power supplies, SL3, SL31 and PG20.

Critical & Important Path Activities Due Next 24 Hours

- Quality crane operators
- Continue water jet peening mobilization

Update on outage activities

The plant is defueled. The safety shutdown risk remains Yellow due to only one train of spent fuel pool cooling available and the "B" train electrical power sources outage (NB02).

Steve Smith provides an outage update and discusses the switchyard reliability upgrades with Project Manager Tony Harris and Switchyard Coordinator Warren Brandt.

During the last shift the team completed gross decontamination of the reactor head and reopened the equipment hatch. Crews completed valve work prior to the NG/NB outage. Scaffolding was built for the "A" containment cooler work inside containment and the demolition of GN line piping continues.

The team worked through a solution to continue mobilizing water jet peening equipment into containment. PSC Nuclear and Wolf Creek engineers completed a thorough structural integrity analysis of removing one top brace on the Big Blue support structure. The brace was removed to allow large trusses and containers to be lifted by crane to the equipment hatch and set onto the SPMT, from which they can be driven into containment.

We qualifed two crane operators to support the lifts for resuming water jet peening mobilization, which is the critical path activity. Important path work includes continuing the essential service water piping replacement project inside containment, de-energizing the 4.16 kV engineered safety feature bus and safety-related 480 V switchgear (NB/NG) for maintenance. Additionally, crews will continue with "B" train residual heat removal, component cooling water and essential service water work.

The Emergent Issues Response team continues to determine the right plan to support further decontamination for repairing the reactor vessel head. The switchyard reliability upgrade will resume early next week with installation of the open phase detection cabinets and rerouting the Waverly line to the north end.

Be safe and courteous in parking lots

Recently, multiple observations have shown poor parking lot etiquette, including using cell phones while walking, driving too fast and not using the safe walkways and sidewalks.

Follow the designated safe walk paths and refrain from cutting across the parking lot. They are in place for your safety, and often are a clear pathway to and from buildings and vehicles. Follow posted signs, such as one-way signs, and use caution when entering and exiting parking lots.

Give pedestrians the right of way and slow down through parking lots and on plant access roads. At shift turnovers, be courteous to co-workers exiting parking lots.

Employees Association store

The Employees Association gift store, located on the first floor of the Edward McCabe Building, will be open from 11 a.m. to 1 p.m. on Oct. 4, 6, 8 and 11. It will also be open from 11 p.m. to 1 a.m. on Oct. 6 and 8.

Help with pest management

As cold weather season approaches, we will see more signs of insects and other critters seeking shelter in our structures. While Administrative Services team schedules preventative pest management services for our structures, we can play a part in helping.

When insects, rodents, snakes and other unwanted guests enter a structure, they are searching for food. They will stay if they find food, water and shelter. We don't discourage our team from bringing in snacks and food items, but we do ask that you consider the containers and how the items are stored in your work areas.

Please make every effort to place items in rigid, sealed containers, not in plastic bags. Also, pay close attention to boxes and materials brought into the plant. Mice and other pests will hide in a shoe or box and often make it all the way to your work area before seeking other shelter. Take a few minutes and inspect bags, boxes, shoes and coats, especially if they have been kept in a garage or carport.

Do not bring in pesticides, even if you think a product is harmless. Even botanical pesticide sprays can cause irritation and trigger health issues for some people. If you have an infestation that cannot be managed by housekeeping practices, please contact Administrative Services, ext. 8759, so that we can investigate and deploy professionals to handle the issue.

A few specific reminders:

- Take ripe fruit home or store in a refrigerator. Do not leave fruit on your desk overnight.
- Clean food-soiled dishes, utensils and surfaces by the end of each day.
- Dispose of food in garbage cans that have plastic liners.
- Ensure your personal garbage can is emptied each night if it contains waste food items.
- Reduce clutter in work areas. Store items away from the floor in cabinets, racks or bins.
- Don't overwater potted plants. Take plants home if you notice they're infested with gnats.

Questions? Call Admin Services, ext. 8759.

Refuel 21 Goals	Goal	Actual
Safety		
Personnel		
Recordable or Greater Injuries	0	0
Nuclear (Unplanned Risk Changes)		
Elevating to Orange or Red	0	0
Elevating to Yellow	≤ 2	0
Radiological		
Radiation Exposure	≤ 60 R	23.113 R
PCEs	≤ 3	0
Human Performance		
Site Event Clock Resets		
Site Event Clock Resets	0	0
Foreign Material Exclusion		
Significant Events	0	0
Vulnerabilities	0	0
Conditions	≤ 15	0
Reliability		
Scope Completion	≥ 98%	22%
Efficiency (Cost Competitiveness)		
Schedule Duration		
Scheduled Duration	≤ 62 d.	15 d.
Incremental O&M Cost (Excluding Fuel)		
Incremental O&M Cost (actual projected)	≤ $45.7M	$45.4M
Scope Flux		
Scope Flux	≤ 10%	0.4%

Daily Howl RF21

Oct. 2, 2016 — Day 16

Nuclear Safety

Shutdown Safety Risk Condition:

YELLOW

The plant is **YELLOW** for Shutdown Safety Risk Condition. Spent fuel pool decay heat removal and electrical power sources are **YELLOW**.

Protected Train "A"

- NB01 — 4.16 kV engineered safety feature (ESF) bus
- XNB01/MA104F — 4.16 kV ESF transformer and its associated relays
- NG01/03 — safety-related 480 V switchgear
- NN01/03 — vital 120 V AC power supply
- NK01/03 — vital 120 V DC power supply
- #7 transformer, 13-48 breaker & 13-23 disconnect
- Rose Hill and Benton 345 kV lines and east bus
- A emergency diesel generator
- A spent fuel pool cooling pump
- A component cooling water
- A essential service water
- SGK05A/B — Class 1E electric equipment HVAC
- SGK04A — control room HVAC
- PG19G/NG02A — Low Voltage System 480 V
- B and C service water pumps and associated power supplies, SL3, SL31 and PG20

Critical & Important Path Activities Due Next 24 Hours

- Continue water jet peening mobilization
- Drain down to midloop

Update on outage activities

The plant is defueled. The safety shutdown risk remains Yellow due to only one train of spent fuel pool cooling available and the "B" train electrical power sources outage (NB02).

Yesterday, personnel lifted the self-propelled modular transporter to the deck of the equipment hatch.

Yesterday, we resumed moving items into containment to support the water jet peening project, including the first walkway for the bridge that is being built to support this work.

Also during the last shift, we completed the "D" containment cooler piping demolition, and determinated the XNB02 transformer and placed the grounds to support the safety-related electrical work.

Critical path activities continue to be water jet peening mobilization, as well as reactor coolant system drain down to midloop to support steam generator work. Once we reach midloop, we are able to start work on air-operated valves that require the plant in that condition. Other important work due in the next 12 hours incudes wrapping up "B" residual heat removal, component cooling water, emergency diesel generator and essential service water work.

Looking ahead to next week, the switchyard project team will begin work to re-route the Waverly/LaCygne line and install the new motor-operated line disconnect switch.

EIT continues focus on reactor vessel head

The Emergent Issues Team continues to determine the right plan to resolve the issues associated with the reactor vessel head.

The preliminary reactor vessel head inspections are complete, and the team has identified 11 areas for further inspection. We are pursuing two parallel paths. The first is to pursue inspection relief from the Nuclear Regulatory Commission and the second is to prepare for additional inspections.

We are required to perform a visual inspection of the reactor vessel head every outage to verify there are no leaking penetrations. In a typical outage, we would look at the head and verify there is no

"EIT" continued on page 2.

"EIT" continued from page 1.

boric acid build-up that would indicate a leak. This outage, however, our inspection was impacted by the leaking canopy seal weld at penetration #77. When we performed the visual inspection, we identified 11 locations where we could not conclusively state that the boric acid was from the canopy seal weld leak and not from a leaking penetration. This result prevents us from completing the inspection satisfactory. Therefore, we are pursuing relief from additional inspection for this outage.

If we do not receive relief from the NRC, we need to be prepared to perform the additional inspections, which will require us to look under the head to verify the boric acid is coming from the penetration #77. Therefore, we are also pursuing ultrasonic testing of selected reactor vessel head penetrations.

While the upper plenum is removed, clamps will be installed on the location of the leaking canopy seal weld, penetration #77, and four additional locations. The plan is to complete these activities within the water jet peening window.

Proper storage of radioactive material is important for all

On Friday, a worker notified Radiation Protection of higher than expected dose and peak dose rate when logging out of the radiological controlled area. This is a good example of a questioning attitude and radiation worker behavior.

Upon further investigation, a 15-gallon bottle with an attached HEPA-type filter was found inappropriately stored in room 1405 on the 2026' elevation of the auxiliary building. The bottle was resurveyed by RP and found to have a one foot reading of 20 mRem/hr (meeting the criteria for a Radiation Area) and room 1405 was not posted as such.

Subsequently, the bottle was moved to an appropriately posted storage area (see condition report 107705). We have procedures and processes to ensure that we inform and protect all personnel from any potential hazards, including exposure from radioactive material.

When performing your work duties, please remember that when you place potentially radioactive materials in any container (bottles, bags, boxes, etc.) that it is your responsibility to ensure that RP personnel are notified so that the container can be surveyed, labeled and stored in an appropriate manner.

Your assistance and participation in the proper control of radioactive material is important for everyone's protection.

Card readers important for access control & accountability

Last week, a multiplexer that supports several Security card readers failed, and one of those readers was outside containment. While most card readers do not allow individuals to enter through a door unless you have the appropriate access, the card reader in containment does not control a door. When the card reader in question was out of service, some workers were under the impression that Security had been contacted and that it was acceptable to allow workers to enter without any logging. This was not the case and against expectations.

Workers are required to verify they have access before entering a controlled area. If the card reader is unavailable, then a Security guard is required to manually check your access levels.

Additionally — and most importantly — personnel accountability in containment is managed through card reader records. By bypassing any kind of check-in process, we did not have an accurate record of who was in containment during this time. If evacuation would have been necessary, we would have been challenged to verify that all workers were out of the area.

In the event of a card reader failure, workers are to contact Security and wait for further instruction. Do not enter the area without direct communication from an officer.

Obey warning lights & flagging

Recently, workers have been observed continuing to pass through the southeast turbine building crane bay when the red warning lights were flashing.

The lights are an indicator that the cranes above the north and/or south crane bays are in use. They are a warning to workers that overhead work is in progress and they should use an alternate entrance/exit.

Questions? Ken Thompson, ext. 4033.

Daily Howl RF21

Oct. 4, 2016 — Day 18

Nuclear Safety

Shutdown Safety Risk Condition:

YELLOW

The plant is **YELLOW** for Shutdown Safety Risk Condition. Spent fuel pool decay heat removal and electrical power sources are **YELLOW**.

Protected Train "A"

- N801 — 4.16 kV engineered safety feature (ESF) bus
- XNB02/MA104F — 4.16 kV ESF transformer and its associated relays
- NG01/03 — safety-related 480 V switchgear
- NN01/03 — vital 120 V AC power supply
- NK01/03 — vital 120 V DC power supply
- XMR01/PA002, start-up transformer & associated stub bus
- Rose Hill and Benton 345 kV lines and west bus
- A emergency diesel generator
- A spent fuel pool cooling pump
- A component cooling water
- A essential service water
- SGK05A — Class 1E electric equipment HVAC
- SGK04A — control room HVAC
- B and C service water pumps and associated power supplies, SL3 & SL31

Critical & Important Path Activities Due Next 24 Hours

- Install steam generator nozzle dams
- Complete midloop maintenance (two snubber installations)
- Remove the midloop clearance order

Update on outage activities

The switchyard reliability upgrade team is in the process of moving the Waverly/LaCygne line.

The plant is defueled. The safety shutdown risk remains Yellow due to only one train of spent fuel pool cooling available and the "B" train electrical power sources outage (NB02).

Over the last shift, all steam generator inserts were removed, and the steam generator bowls were pumped out. Surveys have been completed. Critical path work for today is to install steam generator nozzle dams, which is ahead of schedule. We also have completed midloop maintenance, and Operations personnel are in the process of removing the midloop clearance order.

Water jet peening equipment mobilization is now waiting for the lower internals to be removed. That currently is scheduled for early Thursday morning. Mobilization is ahead of schedule. Equipment preparation and testing is in progress for the next window.

Other important work includes continuation of the containment cooler piping replacement on the essential service water supply and return lines, as well as work on the "B" train residual heat removal, component cooling water, emergency diesel generator and essential service water work. All of these are progressing as expected. The safety-related electrical work was halted due to the identification of cracked insulation. That work has restarted to allow further inspections to determine the extent of condition.

The switchyard reliability upgrade is progressing well. Currently, the crews are working on re-routing the Waverly/LaCygne line.

Severe weather expected this week

The National Weather Service has indicated scattered thunderstorms are likely today, with the best chance for severe storms this afternoon and evening. Large hail and damaging wind will be the primary threats, with a few tornadoes possible along with potential for some locally heavy rainfall. There is another chance of severe storms on Thursday as a cold front will move through the area.

Because of the potential for high winds, please check your work areas for any material that may need to be secured. For your personal safety, use caution when walking outside and carrying large items into buildings. Be extra careful when opening and closing doors.

During severe weather conditions, listen to all site-wide plant announcements. If you are told to suspend outside activities and seek appropriate shelter, immediately stop what you are doing, secure items in a safe condition and find the nearest storm shelter. Do not remain outside. This increases your chance for an injury.

When weather conditions present the likelihood of a tornado, seek shelter in designated storms shelters in your work area. Shelter locations are marked with a blue placard that includes a tornado symbol posted on the outside of the room. Your supervisor should ensure you are aware of and understand your responsibilities during severe weather. For more information, see procedure AI 14-006, *Severe Weather*.

RF21 Quality snapshot

Quality Assurance continues to conduct oversight activities in support of Refuel 21. Areas observed during this reporting period from Sept. 26 through Oct. 2 include motor-operated valve (MOV) testing, reactor vessel head emergent issues team (EIT) activities, just-in-time training for midloop transmitter fill/drain and calibration, Security activities, an assortment of Maintenance group activities and industrial safety observations.

During this reporting period, QA completed 29 surveillances and initiated 12 condition reports. These activities identified several positive behaviors and deficiencies/ weaknesses.

The following are a few of the positive behaviors identified during this period:

- EIT efforts are moving forward with safety and diligence being emphasized and practiced.
- MOV technicians were following and updating instructions, and supervision was observed in the field.
- The importance of human performance was covered in just-in-time training.
- Radiation Protection supervision was present in the field.
- RP technicians have been diligent in recommendations to minimize worker exposure and improve radiological work practices.
- Personnel are using the proper personal protective equipment and exhibiting good ALARA methods.

There were also several deficiencies/weaknesses identified during this reporting period. Quality identified a missed Quality Control hold point; a required inspection not identified in a work order (CR 107748); portable generator without proper grounding (CR 107275); and welding without using weld filler metal (CR107646). In addition, the pipe fabrication shop was identified as having several deficiencies, such as improper staging of material, flammable storage cabinet issues, improper storage of compressed gas cylinders, and unsatisfactory housekeeping (CRs 107516, 107517, 107518, and 107519).

All identified deficiencies were discussed with the appropriate personnel. The Quality team initiated CRs to document the identified deficiencies.

Specifically for the missed QC hold point and the welding issue mentioned above, the conditions are the result of lack of attention to detail and a lack of oversight to ensure regulatory requirements and station expectations are being met. It is important that appropriate focus is given to ensuring work is being performed to meet expected quality standards and regulatory requirements.

Refuel 21 Goals	Goal	Actual
Safety		
Personnel		
Recordable or Greater Injuries	0	0
Nuclear (Unplanned Risk Changes)		
Elevating to Orange or Red	0	0
Elevating to Yellow	≤ 2	0
Radiological		
Radiation Exposure	≤ 60 R	29.262 R
PCEs	≤ 3	0
Human Performance		
Site Event Clock Resets		
Site Event Clock Resets	0	0
Foreign Material Exclusion		
Significant Events	0	0
Vulnerabilities	0	0
Conditions	≤ 15	0
Reliability		
Original Scope Completion	≥ 98%	29.78%
Efficiency (Cost Competitiveness)		
Schedule Duration		
Scheduled Duration	≤ 62 d.	18 d.
Incremental O&M Cost (Excluding Fuel)		
Incremental O&M Cost (actual projected)	≤ $45.7M	$45.4M
Scope Flux		
Scope Flux	≤ 10%	0.5%

EMPAC counselor on site today, walk-ins welcome

Wolf Creek's EMPAC counselor is at Wolf Creek for employee and dependent visits on the first Tuesday of each month. Today, the counselor will be meeting with employees at the Dwight D. Eisenhower Learning Center. Check-in is in room 127.

The Employee Assistance Program, which is provided by EMPAC, is available at any time to all employees needing assistance with personal problems. EMPAC offers free and confidential assistance in areas such as mental and emotional illness, alcoholism and/ or chemical dependency, marital problems, financial or family distress, occupational problems and legal problems.

To schedule an appointment, call the toll free number, 800-234-0630. For more information, visit the website at www.empac-eap.com.

Daily Howl
RF21

Oct. 5, 2016 — Day 19

Nuclear Safety

Shutdown Safety Risk Condition:

YELLOW

The plant is **YELLOW** for Shutdown Safety Risk Condition. Spent fuel pool decay heat removal and electrical power sources are **YELLOW**.

Protected Train "A"

- NB01 — 4.16 kV engineered safety feature (ESF) bus
- XNB02/PA002 — 4.16 kV ESF transformer and associated stub bus
- NG01/03 — safety-related 480 V switchgear
- NN01/03 — vital 120 V AC power supply
- NK01/03 — vital 120 V DC power supply
- XMR01/MA104D & E start-up transformer and associated relays & associated stub bus
- Rose Hill and Benton 345 kV lines and west bus
- A emergency diesel generator
- A spent fuel pool cooling pump
- A component cooling water
- A essential service water
- SGK05A — Class 1E electric equipment HVAC
- SGK04A — control room HVAC
- B and C service water pumps and associated power supplies, SL3 & SL31

Critical & Important Path Activities Due Next 24 Hours

- Finish preparations for reactor vessel lower internals removal
- Remove reactor vessel lower internals

Update on outage activities

Equipment, including the special bridge crane, have been staged in containment in preparation for the water jet peening project. Today's core barrel lift is a major milestone leading up to the start of the actual project.

The plant is defueled. The safety shutdown risk remains Yellow due to only one train of spent fuel pool cooling available and the "B" train electrical power sources outage (NB02).

Over the last shift, the steam generator team completed the nozzle dam installation, which allowed Operations to flood the refueling pool to 23 feet above the flange. This clears the way for the lift of the reactor vessel lower internals.

This lift is an infrequently performed activity that requires a significant amount of preparation, including a methodical dry run before the actual lift. The dry run takes about twice as long as the actual lift because they fine tune every move to ensure flawless execution. While the team was initially scheduled to begin the dry run this morning, an issue with the polar crane is causing a delay. Maintenance teams are currently troubleshooting. The expectation is the crew that executes the dry run also executes the actual lift, so if the crane issue is not resolved with enough time to complete both activities, they will move to the next shift. The actual water jet peening activities are scheduled to start on Saturday.

Other important work going on includes the safety-related electrical outage, which is taking longer than initially scheduled due to issues with insulation.

EIT moving forward with plans to test, clean and repair the reactor vessel head

Yesterday, the Emergent Issues Team made several decisions regarding the reactor vessel head. First, the team has determined that the visual inspections of the head are complete, and we are moving forward with the volumetric ultrasonic testing (UT) examination under the head. On Sunday, it was reported that we were pursuing inspection relief from the Nuclear Regulatory Commission for the required inspection. While we have the relief request prepared as a contingency, we have determined that the best course of action is to move forward with the UT exams instead.

We are pursuing the UT exams for a couple of reasons. First, the dose that would be accumulated during the additional visual inspections required to support the

"EIT" continued on page 2.

"EIT" continued from page 1.

relief request would be about 1 Rem, which is the same dose estimate for the UT exams. Second, with the examinations under the head, we will have positive assurance that there is no leakage coming from the J-groove welds.

The Wesdyne personnel who are performing the as-found non-destructive examination on the bottom-mounted instruments in support of the water jet peening project will also perform the under-head inspection.

After the lower internals lift, we will remove the upper plenum from the head assembly, which will give us the opportunity to assess the amount of boron in the upper area of the head assembly, including how much is on and around the coil stacks. A coil stack assembly is a part of the control rod drive mechanism and includes a set of coils that generate magnetic flux. They are delicate and require special care when cleaning. This is one of the reasons the team is still finalizing the cleaning plan for the head. The team also wants to wait until the plenum is removed and we fully understand the extent of boron in the upper ahead of the head before moving ahead with cleaning activities.

After the upper plenum is removed, clamps will be installed on the location of the leaking canopy seal weld, penetration #77, and four additional locations. These additional areas are spare caps, which are most susceptible to cracking based on internal and external operating experience. The plan is to complete these activities within the water jet peening window.

Watch out for deer

Driving defensively during the deer mating season is a must for drivers in Kansas. The reality of driving on Kansas roads and highways this time of year is the possible encounter with a deer. Mid-fall is one of the likely times of the year for deer to be seen on Kansas roadways, because of breeding habits. And, sunrise and sunset are the times that deer are most active.

Following are some tips to help keep you safe:

- Stay alert, always wear your seat belt and drive at a safe, sensible speed for conditions.
- Watch for the reflection of deer eyes and for deer silhouettes on the shoulder of the road.
- When driving at night, use high-beam headlights when there is no opposing traffic. The high beams will illuminate the eyes of deer on or near a roadway.
- Brake firmly when you notice a deer in or near your path, but stay in your lane. Many serious accidents occur when drivers swerve to avoid a deer and hit other vehicles or lose control of their cars. Potentially, you will risk less injury by hitting the deer.
- If you see one deer, it is likely there are more nearby. If the deer stays on the road, stop on the shoulder, put on your hazard lights and wait for the deer to leave the roadway.

Refuel 21 Goals	Goal	Actual
Safety		
Personnel		
Recordable or Greater Injuries	0	0
Nuclear (Unplanned Risk Changes)		
Elevating to Orange or Red	0	0
Elevating to Yellow	≤ 2	0
Radiological		
Radiation Exposure	≤ 60 R	33.221 R
PCEs	≤ 3	0
Human Performance		
Site Event Clock Resets		
Site Event Clock Resets	0	0
Foreign Material Exclusion		
Significant Events	0	0
Vulnerabilities	0	0
Conditions	≤ 15	0
Reliability		
Scope Completion	≥ 98%	31.93%
Efficiency (Cost Competitiveness)		
Schedule Duration		
Scheduled Duration	≤ 62 d.	19 d.
Incremental O&M Cost (Excluding Fuel)		
Incremental O&M Cost (actual projected)	≤ $45.7M	$46.4M
Scope Flux		
Scope Flux	≤ 10%	0.5%

Secondary access open Oct. 6 and 7

Secondary access will remain open Wednesday and Thursday, Oct. 6 and 7.

On Sunday, the *RF21 OCC Shift Update* reported that the facility would be closed; however, Security leadership has decided to keep it open.

Personnel should be aware that there could be delays in processing individuals through main security. Plan ahead and arrive early.

Daily Howl RF21

Oct. 6, 2016 — Day 20

Nuclear Safety

Shutdown Safety Risk Condition:

YELLOW

The plant is **YELLOW** for Shutdown Safety Risk Condition. Spent fuel pool decay heat removal and electrical power sources are **YELLOW**.

Protected Train "A"

- NB01 — 4.16 kV engineered safety feature (ESF) bus
- XNB02/PA201 — 4.16 kV ESF transformer and associated stub bus
- NG01/03 — safety-related 480 V switchgear
- NN01/03 — vital 120 V AC power supply
- NK01/03 — vital 120 V DC power supply
- XMR01/MA104D & E, start-up transformer and associated relays & associated stub bus
- Rose Hill and Benton 345 kV lines and west bus
- A emergency diesel generator
- A spent fuel pool cooling pump
- A component cooling water
- A essential service water
- SGK05A — Class 1E electric equipment HVAC
- SGK04A — control room HVAC
- B and C service water pumps and associated power supplies, SL3 & SL31

Critical & Important Path Activities Due Next 24 Hours

- Finish preparations for reactor vessel lower internals removal
- Remove reactor vessel lower internals
- Install water jet peening alignment beam/shim

Last night's sunset makes a beautiful backdrop to the switchyard reliability upgrade team's work to relocate the Waverly/LaCygne line. That portion of the project is nearing completion but today's inclement weather is impacting their progress.

Update on outage activities

The plant is defueled. The safety shutdown risk remains Yellow due to only one train of spent fuel pool cooling available and the "B" train electrical power sources outage (NB02).

Over the last shift, personnel continued to troubleshoot the issue with the polar crane. The problem was not resolved on night shift, so the lower internals lift did not happen. The polar crane is now functioning, and the dry run started at approximately 9 a.m. After the dry run, the crew will come out of containment for a break and then go back in for the actual lift.

The reactor vessel flange protective ring installation will follow the upper internals lift as the next critical path activity. Also on critical path is the installation of the water jet peening alignment beam/shim.

All issues identified with the NB Class 1E electrical work have been resolved, and the work is expected to complete on schedule. Additionally, essential service water piping replacement to the containment coolers is progressing on schedule, as is work associated with the "B" emergency diesel generator. The only remaining work on the EDG is the post-maintenance testing.

Last night, scaffold builders completed the scaffolding on the head that supports work associated with the Emergent Issue Team. After the lower internals lift, workers will remove the upper plenum from the head assembly, which allow the team to assess the amount of boron in the upper area of the head assembly, including how much is on and around the coil stacks. This is an important discovery activity.

What is the core barrel?

The lower internals assembly includes the core barrel. The core barrel is a stainless steel cylinder that is 2.5 inches thick by approximately 317 inches high. The barrel has a flange at its upper diameter. This flange supports the barrel by resting on the ledge in the vessel flange. The core barrel flange has four flat-sided pins to align the upper internals and head with the vessel.

While the critical path work is all inside containment, there is a lot of important work going on elsewhere, including on the turbine deck.

Electricians make good catch

The Rapid Trending team recently recognized three electricians for their good catch. Ray Phelon, Maintenance supervisor, documented in an observation that while Eric Peterson, Alex Ganger and Matt Coursen were performing work on PN10 inverter, they recognized the fact they were in close proximity of other critical panels in the area. In response, one person was designated as a bump hazard spotter to prevent the possibility of inadvertently coming into contact with or causing an unintended action.

This is an excellent example of risk awareness in the field. They hit all the key behaviors.

- *Situational awareness is key.* Before working in the area, they assessed the situation to make themselves aware of where critical components were located and took actions to mitigate the risk of bumping them.
- *Have a good questioning attitude.* They asked themselves the question, "What can we do to prevent this from happening?" In their case, they assigned one person on the job to spot for them.
- *Watch out for your peers.* They were clearly watching out for each other by assigning a spotter.

Refuel 21 Goals	Goal	Actual
Safety		
Personnel		
Recordable or Greater Injuries	0	0
Nuclear (Unplanned Risk Changes)		
Elevating to Orange or Red	0	0
Elevating to Yellow	≤ 2	0
Radiological		
Radiation Exposure	≤ 60 R	30.501 R
PCEs	≤ 3	0
Human Performance		
Site Event Clock Resets		
Site Event Clock Resets	0	0
Foreign Material Exclusion		
Significant Events	0	0
Vulnerabilities	0	0
Conditions	≤ 15	0
Reliability		
Scope Completion	≥ 98%	33.72%
Efficiency (Cost Competitiveness)		
Schedule Duration		
Scheduled Duration	≤ 62 d.	20 d.
Incremental O&M Cost (Excluding Fuel)		
Incremental O&M Cost (actual projected)	≤ $45.7M	$46.4M
Scope Flux		
Scope Flux	≤ 10%	0.5%

Call ext. 8790, option 8 for stay times

Safety Services is providing stay times on a pre-recorded line. Call ext. 8790 and selection option 8 from any phone on site to hear the latest stay times. You can also find stay times on the Industrial Safety page on WCNet.

Questions? Call Ken Thompson, ext. 2455, or Kim Stapp, ext. 4471.

Daily Howl
RF21

Oct. 9, 2016 — Day 23

Nuclear Safety

Shutdown Safety Risk Condition:

YELLOW

The plant is **YELLOW** for Shutdown Safety Risk Condition. Spent fuel pool decay heat removal and electrical power sources are **YELLOW**.

Protected Train "A"

- N801 — 4.16 kV engineered safety feature (ESF) bus
- XNB02/PA0201 — 4.16 kV ESF transformer and associated stub bus
- NG01/03 — safety-related 480 V switchgear
- NN01/03 — vital 120 V AC power supply
- NK01/03 — vital 120 V DC power supply
- XMR01/MA104D & E, start-up transformer and associated relays & associated stub bus
- Rose Hill and Waverly/LaCygne 345 kV lines and east bus
- A emergency diesel generator
- A spent fuel pool cooling pump
- A component cooling water
- A essential service water
- SGK05A — Class 1E electric equipment HVAC
- SGK04A — control room HVAC
- B and C service water pumps and associated power supplies, SL3 & SL31

Critical & Important Path Activities Due Next 24 Hours

- Perform reactor vessel internal and support exams
- Remove Wesdyne non-destructive examination equipment

Personnel perform non-destructive examination of the cold legs on the reactor vessel. These are the as-found examinations that are required prior to starting water jet peening activities. The crew is working from the water jet peening bridge. Click on the image above to see a time-lapse video of this bridge coming together.

Update on outage activities

The plant is defueled. The safety shutdown risk remains Yellow due to only one train of spent fuel pool cooling available and high-risk activity in the switchyard.

Early on day shift today we completed the non-destructive examinations (NDE) of the reactor vessel nozzle cold legs. Removal of the NDE equipment from the vessel is ongoing. In-service inspection of the reactor vessel and core supports will commence after the equipment is removed.

Also completed last night was the removal of the reactor vessel head plenum to support the Emergent Issues Team work. Personnel are in the process of performing a visual examination, including photos and video, of the coil stacks in preparation for cleaning of the head.

Other important work on the schedule for today is the switchyard reliability upgrade project, which starts Outage 2 today to remove shield wires that are overhead in the switchyard to protect from a direct lightning strike. The Benton line was tagged out this morning, and the crew is in the process of removing wires.

Chemical storage guidance revised

AI 14B-004, *Chemical Storage*, provides guidance regarding storing chemicals at Wolf Creek, and all personnel are expected to comply. This procedure has recently been revised.

Highlights of the procedure change include the addition of a new form, AIF 14B-004-01, *Chemical/Flammable Cabinet Request*, to be used when adding or relocating a flammable/chemical storage cabinet. The procedure also provides cabinet inspection criteria with form AIF 14B-004-2, *Chemical/Flammable Cabinet Inspection*, that may be used as a tool in the field to document inspections.

"Chemicals" continued on page 2.

"Chemicals" continued from page 1.

Devonway was updated to include a chemical control observation card for documenting cabinet inspections for temporary cabinets and cabinets not a part of the work order inspection process. Inspections are part of the process to help ensure chemicals used throughout the plant are stored properly.

Following are some areas to keep in mind when storing chemicals:

- Chemicals with a National Fire Protection Association (NFPA) reactivity rating (yellow box) of greater than 1 may not be stored in a flammable cabinet.
- No compressed gases, including small propane bottles, can be store in a flammable cabinet.
- When storing flammable chemicals in the powerblock, everyone is expected to ensure compliance with AP 10-102, *Control of Combustible Materials*.
- Flammable liquids with NFPA flammability rating of 3 or 4 (red box) must be stored in a flammable storage cabinet.
- When returning chemicals to the flammable storage cabinet, ensure the cabinet door is closed and latched.
- The flammable cabinet should not have material stacked on top of the cabinet.
- All chemicals should be labeled with clearly and legible.

Questions? Contact any of the following individuals in Chemistry: Jon Brady, ext. 8557; Jenny Wilson, ext. 4876; or Clint Gross, ext. 4598. You can also contact any of the following individuals in Fire Protection: Gordon Earhart, ext. 8121; Katie Siebert, ext. 8005; or Jeff Suter, ext. 8268.

Brown's Shoe Store on site hours to support night shift

Brown's Shoe Store will be on site from 10 a.m. to 8 p.m. Wednesday, Oct. 12, at the William Allen White Skills Training Center lobby. The change in normal hours is to accommodate night shift workers.

Be mindful of bringing liquids through Security

So far this outage there have been many instances in which individuals have spilled coffee and other liquids when they've attempted to send open cups through the X-ray machine. These open cups often do not stay upright and spill, making a mess inside the totes and on the belt and X-ray.

If you send liquids through the X-ray machine, make sure the cups are sealed. If they are not, Security officers may ask you to discard it.

Refuel 21 Goals	Goal	Actual
Safety		
Personnel		
Recordable or Greater Injuries	0	0
Nuclear (Unplanned Risk Changes)		
Elevating to Orange or Red	0	0
Elevating to Yellow	≤ 2	0
Radiological		
Radiation Exposure	≤ 60 R	40.557 R
PCEs	≤ 3	0
Human Performance		
Site Event Clock Resets		
Site Event Clock Resets	0	0
Foreign Material Exclusion		
Significant Events	0	0
Vulnerabilities	0	0
Conditions	≤ 15	0
Reliability		
Scope Completion	≥ 98%	40.05%
Efficiency (Cost Competitiveness)		
Schedule Duration		
Scheduled Duration	≤ 62 d.	23 d.
Incremental O&M Cost (Excluding Fuel)		
Incremental O&M Cost (actual projected)	≤ $45.7M	$46.7M
Scope Flux		
Scope Flux	≤ 10%	0.7%

Wolf Creek WIN chapter to hold bake sale Oct. 14

The Wolf Creek chapter of Women in Nuclear will hold a bake sale on Friday, Oct. 14, for both day shift and night shift. The goods will be available for sale from 11 a.m. to 1 p.m. and 11 p.m. to 1 a.m. in the back of the Heartland Cafe. The proceeds will benefit a charity to be determined at a later date.

The chapter is still accepting volunteers to bring items for the sale. If you would like to donate something, contact Linda Cole via email.

Employees Association store

The Employees Association gift store, located on the first floor of the Edward McCabe Building, will be open from 11 a.m. to 1 p.m. on Oct. 11. It will also be open from 11 p.m. to 1 a.m. on Oct. 11, 16, 21, 26 and 31 and Nov. 5, 10 and 15 to accommodate night shift workers.

Daily Howl
RF21

Oct. 11, 2016 — Day 25

Nuclear Safety

Shutdown Safety Risk Condition:

YELLOW

The plant is **YELLOW** for Shutdown Safety Risk Condition. Spent fuel pool decay heat removal and electrical power sources are **YELLOW**.

Protected Train "A"

- NB01 — 4.16 kV engineered safety feature (ESF) bus
- XNB02/PA0201 — 4.16 kV ESF transformer and associated stub bus
- NG01/03 — safety-related 480 V switchgear
- NN01/03 — vital 120 V AC power supply
- NK01/03 — vital 120 V DC power supply
- XMR01/MA104D & E start-up transformer and associated relays & associated stub bus
- West switchyard bus
- A emergency diesel generator
- A spent fuel pool cooling pump
- A component cooling water
- A essential service water
- SGK05A — Class 1E electric equipment HVAC
- SGK04A — control room HVAC
- B and C service water pumps and associated power supplies, SL3 & SL31

Critical & Important Path Activities Due Next 24 Hours

- Perform non-destruction examination of reactor vessel bottom nozzles and J-welds

Update on outage activities

The plant is defueled. The safety shutdown risk remains Yellow due to only one train of spent fuel pool cooling available and the "B" train electrical power sources outage (NB02).

Last shift, the reactor head dummy cans were removed and videos of the head were taken for the Emergent Issues Response team.

The team had issues overnight with the tools for the non-destructive examinations of the reactor vessel bottom nozzles. The team troubleshooting one of the three tools. As of this morning, four of the 58 bottom nozzles had been examined. Completing the NDE of the bottom nozzles will remain critical path, as part of the water jet peening project, for the next few shifts.

Work is progressing well on the essential service water (GN) piping replacement to the containment coolers. Click the image above to view a time lapse video of insulation being installed.

The "B" train essential service water fill and vent began on night shift. The "A" train ESW piping replacement is in progress. The ESW motor operated valve EFHV0038 packing replacement is complete.

Disassembly of the normal charging pump continues. The team will work to cut the split pin in place to allow disassembly.

Did you sign off your clearance order?

Clearance orders are in place to protect workers during testing and other maintenance activities. Operations will not remove clearance order tags and reposition equipment until all workers have signed off.

There have been multiple instances of personnel failing to sign off of clearance orders at the end of the shift. This results in people spending time tracking workers down to get them to sign off so that other work can move forward.

"The final part of each workers' job is to sign off their paperwork. First, the work package and, most importantly, the clearance order," said Frank Seeney, Operations outage manager. "We have seen where personnel are at home and are still signed on to a clearance order. By not signing off, they hold up restoration of clearances."

"Clearance orders" continued on page 2.

"Clearance orders" continued from page 1.

For your own personal safety, sign on to the right clearance order under the right work order before you start your work and sign off the clearance order when you are finished.

BBS observations help ensure safe outage behaviors

The Wolf Pack Behavior Based Safety Program focuses on behaviors that create exposures to injury. By focusing on behaviors while uncovering at-risk conditions that could lead to injuries, the Wolf Pack believes that we can prevent injuries and protect the pack.

When an observation is performed it is conducted with a "**no name, no blame**" concept. The observation is to help you work safer and to provide a peer to peer coaching format that is non-punitive. This is done anonymously with no names documented in an observation. We focus on the behaviors to keep our co-workers safe.

By having the courage to coach, you have made a commitment to yourself and your co-workers. Continue to coach, prevent injuries and protect the pack.

NANTeL blackout dates

A new NANTeL system is being developed and is scheduled to be implemented in late November. To support the rollout of the new system, NANTeL will be unavailable from 8 p.m. Thursday, Nov. 17 through 8 p.m. Sunday, Nov. 20. The new system will go live Nov. 20. Those with training due in late November and early December should plan to complete training early to avoid being affected by the blackout period.

Questions? Contact Robert Neer, ext. 5035.

Wolf Creek WIN chapter to hold bake sale Oct. 14

The Wolf Creek chapter of Women in Nuclear will hold a bake sale on Friday, Oct. 14, for both day shift and night shift. The goods will be available for sale from 11 a.m. to 1 p.m. and 11 p.m. to 1 a.m. in the back of the Heartland Cafe. The proceeds will benefit a charity to be determined at a later date.

The chapter is still accepting volunteers to bring items for the sale. If you would like to donate something, contact Linda Cole via email.

Employees Association store

The Employees Association gift store, located on the first floor of the Edward McCabe Building, will be open from 11 a.m. to 1 p.m. on Oct. 11. It will also be open from 11 p.m. to 1 a.m. Oct. 16, 21, 26 and 31 and Nov. 5, 10 and 15 to accommodate night shift workers.

Electrical Maintenance performed impedance testing on the NK014 battery cells to verify the individual cells are within the tech spec requirement to satisfy operability

Refuel 21 Goals	Goal	Actual
Safety		
Personnel		
Recordable or Greater Injuries	0	0
Nuclear (Unplanned Risk Changes)		
Elevating to Orange or Red	0	0
Elevating to Yellow	≤ 2	0
Radiological		
Radiation Exposure	≤ 60 R	45.826 R
PCEs	≤ 3	0
Human Performance		
Site Event Clock Resets		
Site Event Clock Resets	0	0
Foreign Material Exclusion		
Significant Events	0	0
Vulnerabilities	0	0
Conditions	≤ 15	0
Reliability		
Scope Completion	≥ 98%	45.28%
Efficiency (Cost Competitiveness)		
Schedule Duration		
Scheduled Duration	≤ 62 d.	25 d.
Incremental O&M Cost (Excluding Fuel)		
Incremental O&M Cost (actual projected)	≤ $45.7M	$46.9M
Scope Flux		
Scope Flux	≤ 10%	0.8%

Daily Howl RF21

Oct. 12, 2016 — Day 26

Nuclear Safety

Shutdown Safety Risk Condition:

YELLOW

The plant is **YELLOW** for Shutdown Safety Risk Condition. Electrical power sources are **YELLOW**.

Protected Train "A"

- NB01 — 4.16 kV engineered safety feature (ESF) bus
- XNB02/PA0201 — 4.16 kV ESF transformer and associated stub bus
- NG01/03 — safety-related 480 V switchgear
- NN01/03 — vital 120 V AC power supply
- NK01/03 — vital 120 V DC power supply
- XMR01/MA104D & E start-up transformer and associated relays & associated stub bus
- West switchyard bus
- A emergency diesel generator
- A spent fuel pool cooling pump
- A component cooling water
- A essential service water
- SGK05A — Class 1E electric equipment HVAC
- SGK04A — control room HVAC
- B and C service water pumps and associated power supplies, SL3 & SL31

Critical & Important Path Activities Due Next 24 Hours

- Perform non-destruction examination of reactor vessel bottom nozzles and J-welds
- Continue essential service water testing
- Start SGK05B (class 1E air conditioning unit for post-maintenance testing

Critical path is through the water jet peening for the next couple of weeks. The first part of the project includes non-destructive examination of the vessel nozzles. The team is completing examinations of the bottom nozzles and have completed 15 of 74 examinations.

Update on outage activities

The plant is defueled. The safety shutdown risk remains Yellow due to the "B" train electrical power sources outage (NB02).

Critical path continues through non-destructive examination of the reactor vessel bottom nozzles and j-welds. The team completed more exams overnight for a total of 15 completed to date.

Work continued on the reactor vessel head and three control rod drive mechanism coil stacks were removed and staged.

Yesterday, the "B" train emergency diesel generator would not trip during overspeed testing. Adjustments were made to the governor and the overspeed test was completed satisfactorily overnight.

Additionally, Maintenance was successful in removing the pump head from the normal charging pump.

Crews use long-handled tools to perform the examinations of the vessel nozzles. Tools #2 and #3 are working away, while the team troubleshoots #1.

Important path work today includes continuing the essential service water testing and the switchyard outage #3 for the east bus and the #7 transformer. The SGK05B, class 1E air conditioning unit, will be started for post-maintenance testing today.

Know your fatigue rule limits

The Nuclear Regulatory Commission's Fatigue Rule restricts work hours for risk-significant work in individuals performing or directing covered work. The Fatigue Rule not only defines work-hour limits but also breaks and minimum days off for covered workers.

It is important to understand that covered workers have carefully coordinated outage work schedule. This means that any deviation from their normal outage schedule, such as a hold over or call out, most likely will result in them needing additional time off to ensure they do not violate the fatigue rule. This is why it is important to check covered workers' time before asking them to deviate from their schedule.

Maintain positive control of your Wolf Creek badge

We have seen multiple instances of ACADs (badges) left unattended. In all incidents, individuals purposefully removed their ACAD to perform some action and neglected to retrieve them before leaving the area. There was no failure of a lanyard or dual retention device.

Without your ACAD, Security cannot maintain personnel accountability within the protected area. Another potential with an unattended ACAD is unauthorized use by an unknown individual. Take precautions to maintain positive control of your ACAD.

Questions? Contact Dallas Conley, ext. 4966.

Former KG&E CEO Wilson Cadman dies at 89

Wilson Cadman, 89, who served as chairman, CEO and president of KG&E, the company that first conceived Wolf Creek, passed away Sunday. In May 2013, we dedicated the Wildlife Education Area at Wolf Creek in his honor. The words used at that celebration remain true today: "Wilson Cadman was a leader; a persistent, tough-minded, but kind and thoughtful leader. Without his foresight and tenacity, Kansas would not have a nuclear plant, much less a beautiful nature area. Wolf Creek was the largest and most complex construction project ever undertaken in Kansas. Wilson was key to getting it done." We send our condolences to the Cadman family, and thank him for his leadership and lasting impact on our company and our state.

RF21 videos on WCNet

Any time you see the gray "play" button in *Daily Howl* or WCNet, you know we have another great video product for you. The time lapse videos of major RF21 evolutions and the outage update videos are archived on WCNet. Click the play button to view the archive. Thanks for watching!

NANTeL blackout dates

A new NANTeL system is being developed and is scheduled to be implemented in late November. To support the rollout of the new system, NANTeL will be unavailable from 8 p.m. Thursday, Nov. 17 through 8 p.m. Sunday, Nov. 20. The new system will go live Nov. 20. Those with training due in late November and early December should plan to complete training early to avoid being affected by the blackout period.

Questions? Contact Robert Neer, ext. 5035.

Refuel 21 Goals	Goal	Actual
Safety		
Personnel		
Recordable or Greater Injuries	0	0
Nuclear (Unplanned Risk Changes)		
Elevating to Orange or Red	0	0
Elevating to Yellow	≤ 2	0
Radiological		
Radiation Exposure	≤ 60 R	48.250 R
PCEs	≤ 3	0
Human Performance		
Site Event Clock Resets		
Site Event Clock Resets	0	0
Foreign Material Exclusion		
Significant Events	0	0
Vulnerabilities	0	0
Conditions	≤ 15	0
Reliability		
Scope Completion	≥ 98%	47.09%
Efficiency (Cost Competitiveness)		
Schedule Duration		
Scheduled Duration	≤ 62 d.	26 d.
Incremental O&M Cost (Excluding Fuel)		
Incremental O&M Cost (actual projected)	≤ $45.7M	$46.9M
Scope Flux		
Scope Flux	≤ 10%	1.0%

Daily Howl
RF21

Oct. 13, 2016 — Day 27

Nuclear Safety

Shutdown Safety Risk Condition:

YELLOW

The plant is **YELLOW** for Shutdown Safety Risk Condition. Electrical power sources are **YELLOW**.

Protected Train "A"

- N801 — 4.16 kV engineered safety feature (ESF) bus
- XN802/PA0201 — 4.16 kV ESF transformer and associated stub bus
- NG01/03 — safety-related 480 V switchgear
- NN01/03 — vital 120 V AC power supply
- NK01/03 — vital 120 V DC power supply
- XMR01/MA104D & E, start-up transformer and associated relays & associated stub bus
- West switchyard bus
- A emergency diesel generator
- A spent fuel pool cooling pump
- A component cooling water
- A essential service water
- SGK05A — Class 1E electric equipment HVAC
- SGK04A — control room HVAC

Critical & Important Path Activities Due Next 24 Hours

- Perform non-destruction examination of reactor vessel bottom nozzles and J-welds
- "B" train emergency diesel generator 24-hour loaded run

Team continues work on reactor head

The Emergent Issues Team is working a plan to remove control rod drive mechanism coil stacks and dummy cans on spare penetrations to address the reactor head issues.

The Emergent Issues Team (EIT) is continuing to work through a plan for addressing the reactor vessel head following the leak on the core exit thermocouple nozzle assembly (CETNA). The plan includes removing 14 control rod drive mechanism coil stacks and 13 dummy cans to remove boron accumulation and install canopy seal weld clamps.

The coil stack assemblies are part of the control rod drive mechanism and includes a set of coils that generate magnetic flux. They are delicate and require special care when cleaning. Dummy cans are used to cap spare penetrations on the reactor vessel head not required for operation.

The team will also conduct ultrasonic volumetric testing under the reactor head. The test will look at penetrations which could not be visually inspected from above due to the residue caused by the leak from CETNA #77. This will provide positive confirmation that there is no leakage coming from the reactor vessel head.

Following removal of the coil stacks and the under-head inspection, clamps will be installed on the location of the leaking canopy seal weld, penetration #77, and four additional spare locations. The four spare penetrations being clamped were identified as the most susceptible to future leakage based on internal and external operating experience and vendor recommendations. The plan is to complete these activities within the water jet peening window.

Update on outage activities

The plant is defueled. The safety shutdown risk remains Yellow due to the east switchyard bus being out of service.

Critical path continues through non-destructive examination of the reactor vessel bottom nozzles and j-welds. A total 26 nozzles have been examined as of this morning.

Over the last shift, the "B" train essential service water flow balance and pump tests were completed. Maintenance completed repairs to the "B" emergency diesel generator fuel injector #12. They will make adjustments to injector #7 and the 24-hour loaded run of the diesel will follow.

Also on important path work for today is the switchyard outage #3 and post-

"Update" continued on page 2.

"Update" continued from page 1.

maintenance testing on SGK05B. The "A" train essential service water piping to the containment coolers is more than 60 percent complete. Teams completed installation of the insulation on "B" train overnight. The insulation for the "B" component cooling water heat exchanger is expected to be complete today as well.

RF21 Quality snapshot

Quality Assurance continues to conduct oversight activities in support of RF21. Areas observed during the reporting period from Oct. 4 through Oct. 11 include eddy current testing, material storage, housekeeping, Radiation Protection Controls, temporary equipment, reactor vessel head emergent issues team (EIT) activities, CAP activities, Security activities, an assortment of Maintenance group activities and industrial safety observations.

During this reporting period, QA completed 42 surveillances and initiated 12 condition reports. These activities identified several positive behaviors and deficiencies/weaknesses.

The following are a few of the positive behaviors identified during this period:

- EIT efforts are moving forward with safety and diligence being emphasized and practiced.
- Good use of human performance tools
- Excellent demonstration of Own It in maintaining focus on industrial safety
- Good radiological work practices

There were also several deficiencies/weaknesses identified during this reporting period. Quality identified issues with housekeeping, confined space permit errors, control of temporary equipment, fire impairment permit issues, procedure issues, transient material control and equipment removal tagging.

All identified deficiencies were discussed with the appropriate personnel, with some issues being promptly corrected. The Quality team initiated CRs to document the identified deficiencies.

Wolf Creek WIN chapter to hold bake sale Oct. 14

The Wolf Creek chapter of Women in Nuclear will hold a bake sale on Friday, Oct. 14, for both day shift and night shift. The goods will be available for sale from 11 a.m. to 1 p.m. and 11 p.m. to 1 a.m. in the back of the Heartland Cafe. The proceeds will benefit a charity to be determined at a later date.

The chapter is still accepting volunteers to bring items for the sale. If you would like to donate something, contact Linda Cole via email.

Employees Association store

The Employees Association gift store, located on the first floor of the Edward McCabe Building, will be open from 11 p.m. to 1 a.m. tonight to accommodate those on night shift.

Outage t-shirts (four designs) and hooded sweatshirts (two designs) are now available, in addition to RF21 coffee mugs. We also have a large selection of jackets, shirts, hats and other items.

Refuel 21 Goals	Goal	Actual
Safety		
Personnel		
Recordable or Greater Injuries	0	0
Nuclear (Unplanned Risk Changes)		
Elevating to Orange or Red	0	0
Elevating to Yellow	≤ 2	0
Radiological		
Radiation Exposure	≤ 60 R	50.017 R
PCEs	≤ 3	0
Human Performance		
Site Event Clock Resets		
Site Event Clock Resets	0	0
Foreign Material Exclusion		
Significant Events	0	0
Vulnerabilities	0	0
Conditions	≤ 15	0
Reliability		
Scope Completion	≥ 98%	49.41%
Efficiency (Cost Competitiveness)		
Schedule Duration		
Scheduled Duration	≤ 62 d.	27 d.
Incremental O&M Cost (Excluding Fuel)		
Incremental O&M Cost (actual projected)	≤ $45.7M	$46.9M
Scope Flux		
Scope Flux	≤ 10%	1.1%

Daily Howl
RF21

Oct. 15, 2016 — Day 29

Nuclear Safety

Shutdown Safety Risk Condition:

YELLOW

The plant is **YELLOW** for Shutdown Safety Risk Condition. Spent fuel pool decay heat removal and electrical power sources are **YELLOW.**

Protected Train "B"

- N802 — 4.16 kV engineered safety feature (ESF) bus
- XN802/PA0201 — 4.16 kV ESF transformer and associated stub bus
- NG02/04 — safety-related 480 V switchgear
- NN02/04 — vital 120 V AC power supply
- NK02/04 — vital 120 V DC power supply
- XMR01/MA104D & E, start-up transformer and associated relays & associated stub bus
- West switchyard bus
- B emergency diesel generator
- B spent fuel pool cooling pump
- B component cooling water
- B essential service water
- SGK05B — Class 1E electric equipment HVAC
- SGK04B — control room HVAC

Critical & Important Path Activities Due Next 24 Hours

- Perform non-destruction examination of reactor vessel bottom nozzles and J-welds
- Commence demolition of "A" ESW crosstie

Update on outage activities

The plant is defueled. The safety shutdown risk remains Yellow due to one train of spent fuel pool cooling available and the east switchyard bus being out of service.

The non-destructive examinations of the reactor vessel bottom nozzles continues.

Yesterday, the protected train was swapped from "A" to "B." Observe and comply with the stop signs on protected equipment and ensure you are working on the correct component.

Critical path continues through non-destructive examination (NDE) of the reactor vessel bottom nozzles and j-welds.

Last shift, the "A" essential service water was drained to allow the FLEX crosstie modification work to begin. Quality Control inspections for the "A" ESW GN piping were completed.

The team working on the reactor vessel head removed two more control rod drive mechanisms coil stacks. They will continue to clean those components and restore the head during the water jet peening critical path window.

Crews began unstacking the normal charging pump rotating assembly and tagged the "A" train emergency diesel generator to begin work.

Facilities reopening after power outage

Following today's unexpected power outage to multiple buildings, the Heartland Cafe and Secondary Access were closed. The Heartland is now open and serving on its normal outage schedule. Security is working to reopen Secondary Access now and will make an announcement when the facility is open.

Steve, Lance discuss reactor head work

In this week's outage update video, Steve Smith and Emergent Issues Team Lead Lance Lane discuss the restoration of the reactor vessel head. Steve also provides an overview of the outage work and the a look-ahead to next week.

NANTeL blackout dates

A new NANTeL system is being developed and is scheduled to be implemented in late November. To support the rollout of the new system, NANTeL will be unavailable from 8 p.m. Thursday, Nov. 17 through 8 p.m. Sunday, Nov. 20. The new system will go live Nov. 20. Those with training due in late November and early December should plan to complete training early to avoid being affected by the blackout period.

Questions? Contact Robert Neer, ext. 5035.

Flu shots for Wolf Creek employees available Oct. 28

Starting Friday, Oct. 28, Health Services personnel will administer seasonal flu shots to Wolf Creek employees. You can get vaccinated from 10 a.m. to 2 p.m. on Oct. 28, Nov. 4, Nov. 11 and Nov. 14. They will also be available to Wolf Creek employees who are working night shift on a walk-in basis starting Oct. 28.

Any remaining flu shots will be made available to supplemental personnel on a walk-in basis starting Monday, Nov. 21.

Questions? Call Health Services, ext. 4444 or 4445.

Find outage information and news on Refuel Central page

Refuel Central, on WCNet, is the place to find all the details for RF21. The outage handbook, schedules and reports, Wi-Fi phone directory, outage update videos and the *Daily Howl* can all be found by clicking the Refuel Central button on the WCNet homepage. You can also click the image above to view.

Refuel 21 Goals	Goal	Actual
Safety		
Personnel		
Recordable or Greater Injuries	0	0
Nuclear (Unplanned Risk Changes)		
Elevating to Orange or Red	0	0
Elevating to Yellow	≤ 2	0
Radiological		
Radiation Exposure	≤ 60 R	53.801 R
PCEs	≤ 3	0
Human Performance		
Site Event Clock Resets		
Site Event Clock Resets	0	0
Foreign Material Exclusion		
Significant Events	0	0
Vulnerabilities	0	0
Conditions	≤ 15	0
Reliability		
Scope Completion	≥ 98%	52.65%
Efficiency (Cost Competitiveness)		
Schedule Duration		
Scheduled Duration	≤ 62 d.	29 d.
Incremental O&M Cost (Excluding Fuel)		
Incremental O&M Cost (actual projected)	≤ $45.7M	$46.9M
Scope Flux		
Scope Flux	≤ 10%	1.2%

Daily Howl
RF21

Oct. 16, 2016 — Day 30

Nuclear Safety

Shutdown Safety Risk Condition:

YELLOW

The plant is **YELLOW** for Shutdown Safety Risk Condition. Spent fuel pool decay heat removal and electrical power sources are **YELLOW**.

Protected Train "B"

- NB02 — 4.16 kV engineered safety feature (ESF) bus
- XNB02/PA0201 — 4.16 kV ESF transformer and associated stub bus
- NG02/04 — safety-related 480 V switchgear
- NN02/04 — vital 120 V AC power supply
- NK02/04 — vital 120 V DC power supply
- XMR01/MA104D & E, start-up transformer and associated relays & associated stub bus
- West switchyard bus
- B emergency diesel generator
- B spent fuel pool cooling pump
- B component cooling water
- B essential service water
- SGK05B — Class 1E electric equipment HVAC
- SGK04B — control room HVAC
- B and C service water pumps and associated power supplies, SL3 & SL31

Critical & Important Path Activities Due Next 24 Hours

- Perform non-destruction examination of reactor vessel bottom nozzle
- Begin water jet peening on reactor vessel nozzles
- Perform ultrasonic testing under the reactor head

Update on outage activities

The plant is defueled. The safety shutdown risk remains Yellow due to one train of spent fuel pool cooling available and the east switchyard bus being out of service.

Wes Houston, Jr. walks down the clearance under in preparation to start work on the "A" emergency diesel generator.

Yesterday afternoon, the team performing the non-destructive examinations (NDE) of the bottom-mounted nozzles encountered equipment challenges that stopped progress for several hours. The team restarted the exams early on night shift, and as of 9 a.m., we have 26 remaining to complete. Also last night, functional checks of the first reactor vessel peening tool were completed. The Outage Control Center made the decision to commence water jet peening on the reactor vessel nozzles in parallel with the NDE on the bottom-mounted nozzles. The "D" reactor vessel cold leg nozzle ultrasonic exam is complete, and water jet peening in that location is expected to begin today.

Critical path continues through the NDE of the bottom-mounted nozzles and water jet peening activities.

Last shift, personnel completed the demolition of the "A" essential service water crosstie, which is part of the FLEX modification work, and all eddy current testing on the "A" steam generator.

All digital rod positioning indication assemblies have been removed, and the team working on the reactor vessel head continues to clean those components (pictured left). Additionally, ultrasonic testing under the reactor vessel head is currently underway. The plan is for the cleaning, examination, repair and restoration to occur during the water jet peening critical path window.

"A" train work is progressing and is expected to complete on schedule.

INPO observers share insights with team

Wolf Creek's next Institute of Nuclear Power Operations plant assessment is scheduled for the spring of next year. As part the evaluation process, INPO deploys evaluators to perform observations during refueling outages. Last week, we hosted evaluators who were observing Radiation Protection, Safety, Maintenance and Work Management. After spending a week on site observing work in the field, they provided their feedback during a debrief on Friday.

"INPO" continued on page 2.

"INPO" continued from page 1.

The team observed three areas of positive performance, including strong ownership and teamwork. They observed that when the team was confronted with delays, workers were proactive in finding solutions. They also called out Radiation Protection's use of innovative, smart software that ensures reliable results for dose critical activities.

In addition to the positives, they identified five Maintenance themes. They were rigging, lifting and material handling, work execution readiness, supervisor engagement and maintenance fundamentals.

The most significant gap to excellence was related to our Rigging, Lifting and Material Handling program. As an immediate action, the Shift Outage Manager included talking points for a stand-down brief to refocus personnel on lifting and rigging safety. See below for the information.

Recent lifting and rigging observations indicate a need for us to refocus and raise awareness for the potential of injury to workers and damage to plant equipment. This message will remind us of where we need to take action to protect our co-workers and plant equipment.

Areas where emphasis is needed are:

- Utilizing flagging or personnel to restrict access to areas where lifting and rigging activities are being performed.
- Remaining clear of the areas below a suspended load (Safe Fall Zone, which is defined as the area including, but not limited to, the area directly beneath the load, in which it is reasonably foreseeable that a partially or completely suspended material could fall in the event of an accident). Walking or working under a suspended load is one of the five "Rules To Live By" discussed in the *Wolf Creek Way*.
- Being observant to keep ourselves out of the line of fire when grabbing tag lines or placing hands under suspended loads. This behavior is also identified as walking or working under a suspended load.
- Controlling suspended loads: There have been instances of lifting and rigging activities where the suspended load or rigging material has made contact with other equipment. Please ensure tag lines are adequately utilized to prevent this and control the load.

AI 14-011, *Lifting and Rigging, Wolf Creek Safety Manual* and *Wolf Creek Way* all provide guidelines to properly perform lifting and rigging activities and control suspended loads. These guidelines are in place for the safety of everyone involved and help us make sure we complete the tasks safely and go home when the shift is over.

If you have questions or concerns about any lifting and rigging task, STOP and get the help you need.

Refuel 21 Goals	Goal	Actual
Safety		
Personnel		
Recordable or Greater Injuries	0	0
Nuclear (Unplanned Risk Changes)		
Elevating to Orange or Red	0	0
Elevating to Yellow	≤ 2	0
Radiological		
Radiation Exposure	≤ 60 R	55.587 R
PCEs	≤ 3	0
Human Performance		
Site Event Clock Resets		
Site Event Clock Resets	0	0
Foreign Material Exclusion		
Significant Events	0	0
Vulnerabilities	0	0
Conditions	≤ 15	0
Reliability		
Scope Completion	≥ 98%	54.82%
Efficiency (Cost Competitiveness)		
Schedule Duration		
Scheduled Duration	≤ 62 d.	30 d.
Incremental O&M Cost (Excluding Fuel)		
Incremental O&M Cost (actual projected)	≤ $45.7M	$46.9M
Scope Flux		
Scope Flux	≤ 10%	1.3%

Employees Association store

The Employees Association gift store, located on the first floor of the Edward McCabe Building, will be open from 11 p.m. to 1 a.m. tonight and Oct. 21 to accommodate those on night shift. It will also be open from 11 a.m. to 1 p.m. tomorrow and Oct. 19 and 22.

Outage T-shirts (four designs) and hooded sweatshirts (two designs) are now available, in addition to RF21 coffee mugs. We also have a large selection of jackets, shirts, hats and other items.

Daily Howl
RF21

Oct. 17, 2016 — Day 31

Nuclear Safety

Shutdown Safety Risk Condition:

YELLOW

The plant is **YELLOW** for Shutdown Safety Risk Condition. Spent fuel pool decay heat removal and electrical power sources are **YELLOW**.

Protected Train "B"

- NB02 — 4.16 kV engineered safety feature (ESF) bus
- XNB02/PA0201 — 4.16 kV ESF transformer and associated stub bus
- NG02/04 — safety-related 480 V switchgear
- NN02/04 — vital 120 V AC power supply
- NK02/04 — vital 120 V DC power supply
- XMR01/MA104D & E start-up transformer and associated relays & associated stub bus
- West switchyard bus
- B emergency diesel generator
- B spent fuel pool cooling pump
- B component cooling water
- B essential service water
- SGK05B — Class 1E electric equipment HVAC
- SGK04B — control room HVAC
- B and C service water pumps and associated power supplies, SL3 & SL31

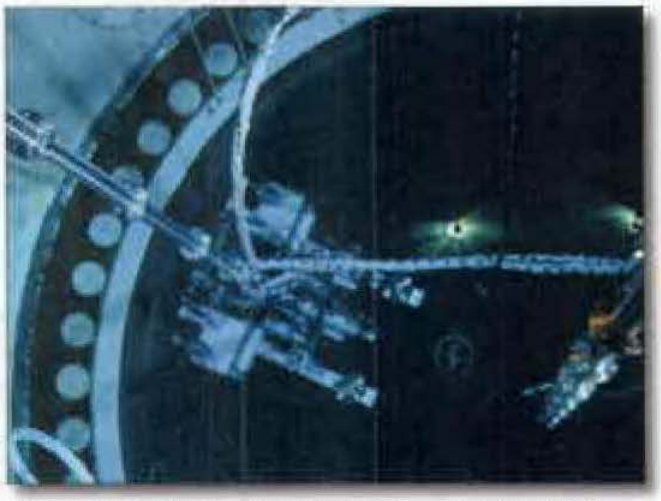
Critical & Important Path Activities Due Next 24 Hours

- Perform non-destruction examination of reactor vessel bottom nozzle
- Continue water jet peening on reactor vessel nozzles
- Perform ultrasonic testing under the reactor head

Update on outage activities

The plant is defueled. The safety shutdown risk remains Yellow due to one train of spent fuel pool cooling available and the east switchyard bus being out of service.

Water jet peening began yesterday and the first reactor vessel nozzle was completed overnight. The "D" cold leg nozzle has been peened and the "D" hot leg was attempted last night. The work was stopped because the tool kept losing its position in the nozzle. The team is moving to the "C" cold leg to determine whether there are issues with the tool or if the issues are related to conditions in the hot leg. Work continues on non-destructive examination of the bottom nozzles and 14 remain as of this morning.



Water jet peening officially got underway yesterday morning on the "D" reactor vessel cold leg nozzle. Below, the lightning mast was installed in the switchyard last week as part of the lightning protection and grounding system changes.

The canopy seal clamp was placed on reactor head penetration #77, the cause of the leak in the reactor coolant system. The team is also working to install additional clamps on other susceptible penetrations as a preventive measure. The Emergent Issues Team is working with Westinghouse to obtain tooling to unstack the #16 control rod drive mechanism (CRDM).

The new excess letdown heat exchanger was placed on the pressurizer doghouse. The eddy current testing on steam generators "B" and "D" were completed.

Over the weekend, the lightning mast was installed in the switchyard and the physical work has been completed. Only testing of installed equipment remains for that scope.

Water jet peening and non-destructive examination on the reactor vessel continue to be critical path. Other important work today includes ultrasonic testing under the reactor head, cleaning the final digital rod positioning indicator coil sets andCRDM, and the SGK05A air conditioning unit replacement.

As jobs wrap up in containment, equipment demobilization has begun. Equipment will continue to be removed from containment and activity will increase near the equipment hatch.

Near miss regarding Quality Control hold point

This weekend, Wolf Creek's Quality organization identified a near miss related to a Quality Control (QC)hold point on the water jet peening project. Upon further review, it was determined that, while the inspection was performed, it was not documented correctly. This lack of attention to detail represents a shot on goal and is a pre-cursor to future missed hold points. Furthermore, the near-miss comes less than a month after a QC hold point was missed on the condensate storage tank project.

With that in mind, both Quality and Engineering Projects took immediate action. First, water jet peening project leadership immediately conducted crew briefings for day shift and night shift staff to talk about the recent event, along with the behavior changes that are needed to prevent recurrence. Additionally, Quality and Engineering Projects personnel worked together to produce briefing materials to support an Engineering Projects-wide "Time-out" (per AP 20-001, *Quality Stop Work*) to cover the importance of QC hold points, along with our standard of compliance. Quality personnel are sitting through these discussions to assess the effectiveness.

"The bottom line is missing a QC hold point is a serious matter, and it's essential that our personnel understand their importance," said Gabe Fugate, Engineering Projects outage manager. "Even though we talk about QC hold points at the beginning of every shift, this incident showed us that we are still vulnerable to missing one. That's why, with Quality's help, we acted swiftly to address this issue before we have another incident."

Engineering Projects isn't the only organization with QC hold points, so this is a good reminder to all station personnel. QC hold points are established to determine the acceptability of attributes that may not be possible after further processing or installation activities have occurred, which is why they must be signed off before work is to proceed.

To make sure you don't miss a QC hold point, be sure to discuss QC hold points during pre-job briefs. Identify the specific steps within the written instruction that require a QC hold point and, if needed, flag these steps to ensure they are not missed. Also, identify when to contact QC for each hold point.

Most importantly, always comply with written instructions. This includes having packages in hand, completing steps in the sequence in which they are written unless otherwise noted and using placekeeping methods for each step. If you do this, you won't miss a QC hold point.

Refuel 21 Goals	Goal	Actual
Safety		
Personnel		
Recordable or Greater Injuries	0	0
Nuclear (Unplanned Risk Changes)		
Elevating to Orange or Red	0	0
Elevating to Yellow	≤ 2	0
Radiological		
Radiation Exposure	≤ 60 R	58.302 R
PCEs	≤ 3	0
Human Performance		
Site Event Clock Resets		
Site Event Clock Resets	0	0
Foreign Material Exclusion		
Significant Events	0	0
Vulnerabilities	0	0
Conditions	≤ 15	0
Reliability		
Scope Completion	≥ 98%	56.69%
Efficiency (Cost Competitiveness)		
Schedule Duration		
Scheduled Duration	≤ 62 d.	31 d.
Incremental O&M Cost (Excluding Fuel)		
Incremental O&M Cost (actual projected)	≤ $45.7M	$46.9M
Scope Flux		
Scope Flux	≤ 10%	1.4%

Employees Association store

The Employees Association gift store, located on the first floor of the Edward McCabe Building, will be open from 11 p.m. to 1 a.m. Friday, Oct. 21 to accommodate those on night shift. It will also be open from 11 a.m. to 1 p.m. today and Oct. 19 and 22.

Outage T-shirts (four designs) and hooded sweatshirts (two designs) are now available, in addition to RF21 coffee mugs. We also have a large selection of jackets, shirts, hats and other items.

Daily Howl RF21

Oct. 18, 2016 — Day 32

Nuclear Safety

Shutdown Safety Risk Condition:

YELLOW

The plant is **YELLOW** for Shutdown Safety Risk Condition. Spent fuel pool decay heat removal and electrical power sources are **YELLOW**.

Protected Train "B"

- NB02 — 4.16 kV engineered safety feature (ESF) bus
- XNB02/PA0201 — 4.16 kV ESF transformer and associated stub bus
- NG02/04 — safety-related 480 V switchgear
- NN02/04 — vital 120 V AC power supply
- NK02/04 — vital 120 V DC power supply
- XMR01/MA104D & E, start-up transformer and associated relays & associated stub bus
- West switchyard bus
- B emergency diesel generator
- B spent fuel pool cooling pump
- B component cooling water
- B essential service water
- SGK05B — Class 1E electric equipment HVAC
- SGK04B — control room HVAC
- B and C service water pumps and associated power supplies, SL3 & SL31

Critical & Important Path Activities Due Next 24 Hours

- Perform non-destruction examination of reactor vessel bottom nozzle
- Continue water jet peening on reactor vessel nozzles

The team today completed ultrasonic volumetric testing of the 12 selected nozzles under the reactor head. Canopy seal clamps #77 and #11 have been installed and #23 is being installed today.

Update on outage activities

The plant is defueled. The safety shutdown risk remains Yellow due to one train of spent fuel pool cooling available and the east switchyard bus being out of service.

Water jet peening remains on critical path. The team is completing the final bottom nozzle remaining for non-destruction examination. Once the NDE is complete on the bottom nozzles, the bottom peening tool will be moved into service. The first and second pass for peening on the "C" cold leg nozzle are complete and the third will begin shortly.

Also on important path for today is the ultrasonic testing under the reactor head, which is nearing completion. The remaining reactor head canopy seal clamps are being installed within the next several shifts. Boric acid removal continues on the reactor head, control rod drive mechanisms and digital rod positioning indicator coil stacks.

Removal of boric acid from the reactor vessel head, CRDM and DRPI coil stacks continues in containment.

"A" emergency diesel preventive maintenance activities are underway. The team found an issue with the governor. Maintenance is troubleshooting and using industry operating experience to work through the issue.

Over the last shift, the team completed all the steam generator eddy current testing. The excess letdown heat exchanger was staged for installation once the polar crane is available.

Reactor head canopy seal clamp #11 was installed overnight.

Station reaches 500 days without clearance order reset

It has been more than 500 days since our last clearance order reset. Clearance order resets are caused by severity level 1 or 2 (SL-1, SL-2) errors.

The difference in severity levels is related to whether the condition is found prior to starting or once work activities have begun. The most significant (SL-1) is when workers have already begun working and are exposed or could be exposed to hazardous energy.

An SL-2 error is when the hazard is found prior to beginning work and prior to the clearance order holder accepting the boundary as adequate for protection.

Wolf Creek's last clearance order reset occurred on June 3, 2015. In the two years prior to that reset, we had eight clearance order resets — two SL-1 errors and six SL-2 errors.

Reaching more than 500 days without a clearance order reset is a significant accomplishment and represents an increased focus on ensuring information in clearance order worksheets and work instructions is accurate.

Security report investigated, unsubstantiated

On Friday evening, Wolf Creek's Human Resources received a credible report from an anonymous source concerning an individual exhibiting aberrant behavior in the parking lot. The report warranted immediate response and Security personnel were contacted. An investigation ultimately determined there was not an immediate threat at the station.

The investigation included bringing in an explosive-detection dog. During the investigation, the south gravel parking lot was closed. It was re-opened early Saturday morning once the investigation confirmed there was no threat.

Complete your training before NANTeL blackout on Nov. 17

A new NANTeL system is being developed and is scheduled to be implemented in late November. To support the rollout of the new system, NANTeL will be unavailable from 8 p.m. Thursday, Nov. 17 through 8 p.m. Sunday, Nov. 20. The new system will go live Nov. 20. Those with training due in late November and early December should plan to complete training early to avoid being affected by the blackout period.

Questions? Contact Robert Neer, ext. 5035.

Refuel 21 Goals	Goal	Actual
Safety		
Personnel		
Recordable or Greater Injuries	0	0
Nuclear (Unplanned Risk Changes)		
Elevating to Orange or Red	0	0
Elevating to Yellow	≤ 2	0
Radiological		
Radiation Exposure	≤ 60 R	60.747 R
PCEs	≤ 3	0
Human Performance		
Site Event Clock Resets		
Site Event Clock Resets	0	0
Foreign Material Exclusion		
Significant Events	0	0
Vulnerabilities	0	0
Conditions	≤ 15	0
Reliability		
Scope Completion	≥ 98%	60.01%
Efficiency (Cost Competitiveness)		
Schedule Duration		
Scheduled Duration	≤ 62 d.	32 d.
Incremental O&M Cost (Excluding Fuel)		
Incremental O&M Cost (actual projected)	≤ $43.7M	$46.6M
Scope Flux		
Scope Flux	≤ 10%	1.4%

Employees Association store

The Employees Association gift store, located on the first floor of the Edward McCabe Building, will be open from 11 p.m. to 1 a.m. Friday, Oct. 21 to accommodate those on night shift. It will also be open from 11 a.m. to 1 p.m. Oct. 19 and 22.

Outage T-shirts (four designs) and hooded sweatshirts (two designs) are now available, in addition to RF21 coffee mugs. We also have a large selection of jackets, shirts, hats and other items.

Daily Howl
RF21

Oct. 19, 2016 — Day 33

Nuclear Safety

Shutdown Safety Risk Condition:

YELLOW

The plant is **YELLOW** for Shutdown Safety Risk Condition. Spent fuel pool decay heat removal and electrical power sources are **YELLOW**.

Protected Train "B"

- NB02 — 4.16 kV engineered safety feature (ESF) bus
- XNB02/PA0201 — 4.16 kV ESF transformer and associated stub bus
- NG02/04 — safety-related 480 V switchgear
- NN02/04 — vital 120 V AC power supply
- NK02/04 — vital 120 V DC power supply
- XMR01/MA104D & E start-up transformer and associated relays & associated stub bus
- West switchyard bus
- B emergency diesel generator
- B spent fuel pool cooling pump
- B component cooling water
- B essential service water
- SGK05B — Class 1E electric equipment HVAC
- SGK04B — control room HVAC
- B and C service water pumps and associated power supplies, SL3 & SL31

Critical & Important Path Activities Due Next 24 Hours

- Continue water jet peening of reactor vessel bottom nozzles
- Continue water jet peening on reactor vessel nozzles

Update on outage activities

The plant is defueled. The safety shutdown risk remains Yellow due to one train of spent fuel pool cooling available and the east switchyard bus being out of service.

Water jet peening remains on critical path. Bottom nozzle peening began on nightshift and the first nozzle was completed this morning. The peening on the "C" cold leg reactor nozzle is complete and the tool is out of the cavity to replace a nozzle before starting the "C" hot leg peening. When the tool was removed, the team discovered the eddy current probe was not on the tool. The piece was found on the bottom of the nozzle being peened. The probe was retrieved and reinstalled on the peening tool.

Maintenance removed the governor from the "A" emergency diesel generator yesterday and has disassembled the component in the shop.

Work continued on the SGK05A class 1E switchgear room air conditioning unit replacement.

During preventive maintenance work on the "A" emergency diesel generator, the team found an issue with the governor. The component was removed and disassembled. The team found that Loctite was blocking the oil port. Preventive maintenance activities continue while we wait for replacement parts to arrive to rebuild the governor.

Welding activities and the Quality Control inspection for the GN piping in containment is complete. On the other end of the essential service water system, the FLEX crosstie work has two welds left to complete today.

On the reactor head, canopy seal clamp #23 was installed and clamps #12 and #16 are expected to be installed today. Boric acid removal continues on the head, control rod drive mechanisms and digital rod positioning indicator coils stacks.

Station stands down after crane events

Last night, two events occurred during operation of the polar crane. No one was injured during the events. Crane operations across the site were suspended until corrective actions are in place. Teams are working to now to ensure the knuckleboom crane is functioning properly.

The first event occurred at about 10:30 p.m. while reinstalling the floor plug for the excess letdown heat exchanger. While moving the plug, the load drifted and made contact with the manipulator crane. No injuries or equipment damage resulted from this event.

The second event occurred at approximately 2 a.m. when the polar crane made contact with the knuckleboom crane. Both cranes were in operation with only the polar crane moving when contact was made. No load was actively suspended from the

"Cranes" continued on page 2.

"Cranes" continued from page 1.

knuckleboom crane, although it was connected to a clamping tool on the Reactor Head. The polar crane had a box suspended that was being moved on the 2068' level.

The risk of contact was identified prior to the activity. The knuckleboom crane was lowered in order to address the threat of contact with the polar crane bridge, but the team failed to recognize the potential for contact with the polar crane cab. This ultimately resulted in the polar crane cab making contact with the knuckleboom crane.

All crane work was stopped on site and stand down meetings were held with all crane operators on days and nights. Prior to returning to work, all crane operators will have had a face-to-face discuss with a member of Wolf Creek management to ensure our standards and expectations are met.

Enhanced two-minute drills are required to be held prior to lifts and should include a discussion of roles and responsibilities and the spotter responsible for full span of crane operation. Additionally, management-designated observations of enhanced two-minute drills and lifts are required until otherwise notified.

Good radworker practices prevent PCIs

As of Oct. 16, we have seen 22 personal contamination incidents (PCIs) during RF21. A trend analysis was conducted and the majority of PCIs are related to poor radworker practices.

Almost 80 percent of the contaminations are related to workers touching their faces, or not taking care while removing protective clothing when leaving a contaminated area.

To better protect yourself, it is important to follow the proper sequence for removing protective clothing to prevent the spread of contamination to clean areas of the plant.

Additionally, it is important that you wear a hood instead of a skull cap when performing physical work in a contaminated area.

If you have any questions, please don't hesitate to ask a member of Radiation Protection for assistance.

Refuel 21 Goals	Goal	Actual
Safety		
Personnel		
Recordable or Greater Injuries	0	0
Nuclear (Unplanned Risk Changes)		
Elevating to Orange or Red	0	0
Elevating to Yellow	≤ 2	0
Radiological		
Radiation Exposure	≤ 60 R	62.389 R
PCEs	≤ 3	0
Human Performance		
Site Event Clock Resets		
Site Event Clock Resets	0	0
Foreign Material Exclusion		
Significant Events	0	0
Vulnerabilities	0	0
Conditions	≤ 15	0
Reliability		
Scope Completion	≥ 98%	61.33%
Efficiency (Cost Competitiveness)		
Schedule Duration		
Scheduled Duration	≤ 62 d.	33 d.
Incremental O&M Cost (Excluding Fuel)		
Incremental O&M Cost (actual projected)	≤ $45.7M	$46.6M
Scope Flux		
Scope Flux	≤ 10%	1.4%

Employees Association store

The Employees Association gift store, located on the first floor of the Edward McCabe Building, will be open from 11 p.m. to 1 a.m. Friday, Oct. 21 to accommodate those on night shift. It will also be open from 11 a.m. to 1 p.m. Oct. 19 and 22.

Outage T-shirts (four designs) and hooded sweatshirts (two designs) are now available, in addition to RF21 coffee mugs. We also have a large selection of jackets, shirts, hats and other items.

Daily Howl

RF21

Oct. 20, 2016 — Day 34

Nuclear Safety

Shutdown Safety Risk Condition:

YELLOW

The plant is **YELLOW** for Shutdown Safety Risk Condition. Spent fuel pool decay heat removal and electrical power sources are **YELLOW**.

Protected Train "B"

- N802 — 4.16 kV engineered safety feature (ESF) bus
- XNB02/PA0201 — 4.16 kV ESF transformer and associated stub bus
- NG02/04 — safety-related 480 V switchgear
- NN02/04 — vital 120 V AC power supply
- NK02/04 — vital 120 V DC power supply
- XMR01/MA104D & E start-up transformer and associated relays & associated stub bus
- West switchyard bus
- B emergency diesel generator
- B spent fuel pool cooling pump
- B component cooling water
- B essential service water
- SGK05B — Class 1E electric equipment HVAC
- SGK04B — control room HVAC
- B and C service water pumps and associated power supplies, SL3 & SL31

Critical & Important Path Activities Due Next 24 Hours

- Continue water jet peening of reactor vessel bottom nozzles
- Continue water jet peening on reactor vessel nozzles

Update on outage activities

The plant is defueled. The safety shutdown risk remains Yellow due to one train of spent fuel pool cooling available and the east switchyard bus being out of service.

Water jet peening remains on critical path. The team is about halfway through peening on the reactor vessel nozzles. Four bottom nozzles have been peened as well.

The team has worked through issues with the water jet peening tools and is now making steady progress with peening the reactor vessel and bottom nozzles.

On the reactor head, canopy seal clamps were installed on penetrations #12 and #26. The control rod drive mechanism at penetration #16 was removed. Boric acid removal continues.

The essential service water crosstie work has been completed and the "A" ESW train is expected to be filled later today. The team continues work on the "A" emergency diesel generator preventive maintenance, including rebuilding the governor. The knuckleboom crane was returned to service today.

Congressman Pompeo tours Wolf Creek

U.S. Congressman Mike Pompeo visited Wolf Creek Wednesday and toured containment, the fuel building and the turbine building.

Congressman Pompeo represents the fourth congressional district of Kansas, made up of south-central Kansas counties surrounding Wichita. He serves on two major committees: Energy and Commerce, which oversees energy, health care, manufacturing and telecommunications, and the House Intelligence Committee, which oversees America's intelligence-gather efforts. He is a West Point valedictorian and former United States Army cavalry officer.

Pictured are, from left: Radiation Protection Manager Mike Skiles; U.S. Congressman Mike Pompeo; President, CEO and CNO Adam Heflin; KEPCo Director of Member Services, Government Affairs and Business Development Phil Wages; and Westar Government Affairs Manager Laura Lutz.

"Tour" continued on page 2.

"Tour" continued from page 1.

"We were happy to host Congressman Pompeo and his legislative assistant, Patrick Fleming. These tours are important in building relationships with elected officials," said Jenny Hageman, Communications director. "It gives us a chance to show them firsthand our contributions to the state of Kansas. Everyone who was involved in this tour represented Wolf Creek very well. Thank you for making this a successful tour."

Mike Skiles, Adam Gilliam and Kevin Colbert from Radiation Protection provided support for the tour in containment. Kenn Tate and Cynthia Glenn in Security facilitated plant access.

Follow station guidance when disposing of old batteries

When changing out batteries in an electronic device or piece of equipment, you should follow station guidance on disposing or recycling the old batteries.

Most dry cell batteries, including non-rechargeable alkaline and lithium D-cell, C-cell, AA, AAA, 9V, 6V and coin (or button), may be thrown away in office trash cans. Before disposing these batteries, the terminals should be covered to prevent the possibility of a short circuit. There are a number of ways to cover the terminals, including using electrical tape or plastic caps, or by placing the battery in a plastic bag or other container.

Most rechargeable batteries can be recycled and should be taken to the battery recycling center in the hallway outside the main tool room. A recyclable rechargeable battery can usually be identified with wording on the battery or a "recycle" symbol. These should be placed individually in plastic bags (available at the battery recycling center) and placed in the collection box. Small sealed lead-acid batteries under 11 pounds can also be placed in this box. Larger lead-acid batteries should be placed on the used battery pallet on the west side of the Electrical Maintenance shop.

There is a poster on the wall above the battery recycling center table to provide guidance on the disposition of used batteries. All used batteries, whether destined for the landfill or for recycling, should have the terminals covered to guard against a short circuit.

Refuel 21 Goals	Goal	Actual
Safety		
Personnel		
Recordable or Greater Injuries	0	0
Nuclear (Unplanned Risk Changes)		
Elevating to Orange or Red	0	0
Elevating to Yellow	≤ 2	0
Radiological		
Radiation Exposure	≤ 60 R	63.386 R
PCEs	≤ 3	0
Human Performance		
Site Event Clock Resets		
Site Event Clock Resets	0	0
Foreign Material Exclusion		
Significant Events	0	0
Vulnerabilities	0	0
Conditions	≤ 15	0
Reliability		
Scope Completion	≥ 98%	61.33%
Efficiency (Cost Competitiveness)		
Schedule Duration		
Scheduled Duration	≤ 62 d.	34 d.
Incremental O&M Cost (Excluding Fuel)		
Incremental O&M Cost (actual projected)	≤ $45.7M	$46.6M
Scope Flux		
Scope Flux	≤ 10%	1.7%

Employees Association store

The Employees Association gift store, located on the first floor of the Edward McCabe Building, will be open from 11 p.m. to 1 a.m. Friday, Oct. 21 to accommodate those on night shift. It will also be open from 11 a.m. to 1 p.m. Oct. 22.

Outage T-shirts (four designs) and hooded sweatshirts (two designs) are now available, in addition to RF21 coffee mugs. We also have a large selection of jackets, shirts, hats and other items.

Daily Howl RF21

Oct. 25, 2016 — Day 39

Nuclear Safety

Shutdown Safety Risk Condition:

GREEN

The plant is **GREEN** for Shutdown Safety Risk Condition.

Protected Train "A"

- NB01/2 — 4.16 kV engineered safety feature (ESF) bus
- XNB01 — 4.16 kV ESF transformer and associated relays
- NG01/03 — safety-related 480 V switchgear
- NN01/03 — vital 120 V AC power supply
- NK01/03 — vital 120 V DC power supply
- XMR01/MA104F; start-up transformer and associated relays
- East switchyard bus
- No. 7 transformer and associated relays
- A emergency diesel generator
- A spent fuel pool cooling pump
- A component cooling water
- A/B essential service water
- SGK05B — Class 1E electric equipment HVAC
- SGK04A — control room HVAC
- SBO diesels

Critical & Important Path Activities Due Next 24 Hours

- Continue water jet peening of reactor vessel bottom nozzles
- Water jet peening of expanded J groove welds
- Service water outage

Update on outage activities

The plant is defueled. The safety shutdown risk is Green with all key safety functions at the lowest risk level.

The water jet peening team has 19 bottom nozzles left to work. Inspections identified 11 nozzles that will require additional peening on expanded J groove welds. The team currently has two tools performing peening. Once there are 14 nozzles remaining to be peened, one tool will be reconfigured to perform the expanded J groove peening simultaneously with the remaining bottom nozzles. A visual inspection will also be conducted on the reactor vessel nozzles as the final step for the hot and cold leg work.

Crews are working to demobilize equipment and scaffolding as work projects wrap up inside containment.

The reactor vessel head shield panels, which were removed for inspections, were decontaminated last shift and five of the eight doors have been reinstalled.

Maintenance completed PG19 load center work ahead of schedule, allowing the polar crane to be returned to service earlier than expected. Jessica Doidge, nuclear station operator, energizes the breaker.

Work on the PG19 load center is ahead of schedule, which allowed the polar crane to return to service sooner than expected. Work will continue on the PG19 related motor control centers.

The "A" train emergency diesel generator 24-hour loaded run was completed satisfactorily yesterday. Maintenance has completed an extent-of-condition inspection on the "B" emergency diesel generator governor with satisfactory results.

The SGK05A class 1E switchgear room air conditioning unit replacement is complete. The team repaired a few line leaks overnight and is preparing to draw a vacuum on the system today.

OCC recognizes teamwork

The Outage Control Center recognized Shannon Walker, Eric Tastove, Dustin Barnett, James Krone and Doug Lewis for providing temporary power when requested.

"These guys have stepped up on numerous requests from the OCC and have always delivered," said Joe Orzel, maintenance outage manager. "Thanks for your hard work."

RF21 Performance Expo tomorrow in Cessna lobby

On Wednesday and Thursday this week, we will hold an RF21 Performance Expo in the Clyde Cessna building lobby from 10 a.m. to 2 p.m. and 10 p.m. to 2 a.m.

"We are taking this opportunity to focus on our gap areas as we get into the back half of the outage," said Lance Lane, Performance Improvement manager. "I encourage you to take a few minutes and come down to check out the displays so we can finish RF21 strong."

The expo will focus on four specific topics to improve performance in the last half of RF21: Proper PPE, Housekeeping, Lifting and Rigging and Quality Control Hold Points.

Entry cards will be given out Wednesday at both Security entrances. Please fill out these cards and bring them with you to the expo to enter drawings for door prizes, which includes Kansas City Chiefs suite tickets.

Don't forget to turn in your 2017 United Way pledge sheet

Just a reminder, If you haven't turned in your 2017 United Way Pledge Sheet, October 27th is the final day they will be accepted. If you wish to contribute, please get them in by Thursday. If you have any questions, please call Travis Wilson at extension 8546.

Women in Nuclear holding Thanksgiving food drive

Wolf Creek's Women in Nuclear chapter will be holding a non-perishable food drive in advance of Thanksgiving. There are drop-off locations in the pre-screening and secondary access facilities. Keep reading *Daily Howl* for more information about the drive.

Refuel 21 Goals	Goal	Actual
Safety		
Personnel		
Recordable or Greater Injuries	0	0
Nuclear (Unplanned Risk Changes)		
Elevating to Orange or Red	0	0
Elevating to Yellow	≤ 2	0
Radiological		
Radiation Exposure	≤ 79 R	68.083 R
PCEs	≤ 3	0
Human Performance		
Site Event Clock Resets		
Site Event Clock Resets	0	0
Foreign Material Exclusion		
Significant Events	0	0
Vulnerabilities	0	0
Conditions	≤ 15	0
Reliability		
Scope Completion	≥ 98%	68.08%
Efficiency (Cost Competitiveness)		
Schedule Duration		
Scheduled Duration	≤ 62 d.	38 d.
Incremental O&M Cost (Excluding Fuel)		
Incremental O&M Cost (actual projected)	≤ $45.7M	$46.7M
Scope Flux		
Scope Flux	≤ 10%	2.0%

Find outage information and news on Refuel Central page

Refuel Central, on WCNet, is the place to find all the details for RF21. The outage handbook, schedules and reports, Wi-Fi phone directory, outage update videos and the *Daily Howl* can all be found by clicking the Refuel Central button on the WCNet homepage. You can also click the image above to view.

Refer document in its entirety to the licensee.

Wolf Creek Nuclear Operating Corporation

00108154 Condition Report

AR #: 00108154 **Severity Type:** CR **Level:** **Due Date:** **Status:** PRE-APRV **Status Date:** 10/09/2016

AR Subject: Wastage on lifting bolts on CRDM vent plugs **Age In Days:** 0

Owed To Name:

Owed To Department:

Owed To Alert Group: WC SRT

Origination Date: 10/09/2016

Initiator: HEFFRON, JASON M

Orig Department: 0060030 - Heffron Jason

Condition Report Summary:

Type	AR#-Assign#-Sub-Assign#	Owed/Assign To	Due Date	Status
CR	00108154	WC SRT		PRE-APRV
RTFQ	00108154-01	OPS REVIEW		ACC/PRI
RACT	00108154-01-01	OPS REVIEW		ACC/PRI

Attachments:

CR Detail

Asset/Equip: RBB01 **Work Request:** 16-118664

Description: During visual inspection under 15-402215-001, rust was identified at the lifting lug to CRDM thread interface. Wastage on grid locations C5 (CRDM 49) and K2 (CRDM 59) was noted for approximately 3-4 threads. There were no signs indicative of boron leakage. A review of RF17 pictures indicates at a minimum that K2 was an existing condition at the time. Pictures stored at K:\Data\NDE\Photos\CRDM Platform and vent plugs and seismic plates. Recommend this CR be issued to engineering for evaluation.

Immediate Concern: N **SM Notified:** N/A **Init DNC:** N

Immediate Actions:
Initiated CR and discussed with engineering.

Extent of condition:
Interfaces where galvanic corrosion could occur.

Recommended Resolution:

Screening Review

Operability: 4 INOPERABLE
During visual inspection under 15-402215-001, rust was identified at the lifting lug to CRDM thread interface. Wastage on grid locations C5 (CRDM 49) and K2 (CRDM 59) was noted for approximately 3-4 threads. There were no signs indicative of boron leakage. Until an engineering evaluation is complete, the SSC is INOPERABLE due to the inability to reasonably assure no leakage was present.
Ref: TS 3.4.13

Reportable: N

Environmental Issue: N

Tech Spec Sec 5: N

Personnel Safety Issue: N

Reactivity Issue: N

Impact Risk Assessment: N

OPS Review:	FAIRCLOTH, THOMAS A
CR/WR Screening:	ISCH, JEFFREY R
Significance Cat:	99 - NOT APPLICABLE

Screen/SRT Notes:

	Updated By	Last Updated
Table for more information	CADEARI	10/12/2016

General Notes:

	Updated By	Last Updated
There is no evidence of through-wall leakage. As such, the	CHSIBLE	10/13/2016
Maintenance Rule function of RCS pressure boundary integrity	CHSIBLE	10/13/2016
was not impacted. There is no MRE needed for this CR. CLS	CHSIBLE	10/13/2016

Other Related Information

Assignment Status Summary:

Total Assigns/Subs:	1 - 1
Open Assigns/Subs:	1 - 1
Overdue Assigns/Subs:	0 - 0

Cross References:

Type	Number	Sub Number
MPAC WORK REQUEST	16-118664	

Status & Due Date History:

Responsible Person	Date Updated	Status	Due Date
HEFFRON, JASON M	10/09/2016	INPROG	
HEFFRON, JASON M	10/09/2016	H/APPR	
ISCH, JEFFREY R	10/10/2016	PRE-APRV	

NON QA Record Information:

Rework Issue:	N
Radiological Occurrence:	N
Potential OE:	N
Training Issue:	N
Site Clock Reset:	N
Division Clock Reset:	N
Discovery Code:	03 - OTHER WC PERSONNEL
Critical Equipment Failure:	N
Maintenance Rule:	N
Outage Issue:	N
Margin Management Issue:	N
Culpable Org:	
Keywords:	
Trend Data:	

Evaluation/Checklist

Assignment #: **Due Date:** **Status:** **Status Date:**

Subject: **Age In Days:** **Total Age:**

Assigned To Name:

Assigned To Organization:

Description:

Condition Statement:

Extent of Condition:

Operating Experience:

Evaluation and Conclusion:

Cause:

Extent of Cause:

Safety Significance:

Actions Taken:

Information Sources:

Review and Approvals

QA Review:

Rad Protection Review:

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extentions

# of Extentions:

Extention Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes: **Updated By** **Last Updated**

References:

EVAL Status & Due Date History:

Plan and Actions

Plan Assignment #: Status: Status Date:

Plan Subject: Age In Days:

Assigned To Name:

Assigned To Organization:

Description:

Action Assignment #: Action Due Date: Status: Status Date:

Action Subject: Age In Days:

Assigned To Name:

Assigned To Organization:

Description:

Action Category:

LTCA:

Schedule Requirement:

RCMS #:

Commitment:

Commit To Agency:

Work Performed:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Plan and Action Information

Plan Assignment Notes: Updated By Last Updated

Action Assignment Notes:

Plan Completion Notes:

Action Completion Notes:

Plan Cross Reference: Type Number Sub Number

Action Cross Reference:

Plan Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Action Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Effectiveness Follow-up

EFU Assignment #: **EFU Due Date:** **Status:** **Status Date:**

EFU Subject: **Age In Days:**

Assigned To Name:

Assigned To Organization:

Description:

EFU Effective:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

# of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes: **Updated By** **Last Updated**

Cross References:

EFU Status and Due Date History:

Restore to Full Qualification

RTFQ 00108154-01

Status: ACC/PRI **Status Date:** 10/09/2016 **WR#:** 16-118664

RTFQ Subject: Wastage on lifting bolts on CRDM vent plugs

RTFQ Description: During visual inspection under 15-402215-001, rust was identified at the lifting lug to CRDM thread interface. Wastage on grid locations C5 (CRDM 49) and K2 (CRDM 59) was noted for approximately 3-4 threads. There were no signs indicative of boron leakage. A review of RF17 pictures indicates at a minimum that K2 was an existing condition at the time. Pictures stored at K:\Data\NDE\Photos\CRDM Platform and vent plugs and seismic plates. Recommend this CR be issued to engineering for evaluation.

Equipment: RBB01

On-Line or Refuel: REFUEL

Operability: 4 INOPERABLE — During visual inspection under 15-402215-001, rust was identified at the lifting lug to CRDM thread interface. Wastage on grid locations C5 (CRDM 49) and K2 (CRDM 59) was noted for approximately 3-4 threads. There were no signs indicative of boron leakage. Until an engineering evaluation is complete, the SSC is INOPERABLE due to the inability to reasonably assure no leakage was present. Ref: TS 3.4.13

Operations Focus List:

Plant System: BB

Risk Impact:

Risk Review Complete: Y ERCARLS 10/13/2016

Risk Significance: HIGH

Safety Function: RCS Integrity

IOA Conclusion:

IOA:

Sources

CAP:

Work Orders:

Margin Management:

Ops Focus List:

Single Point Vulnerability:

System Health Report:

Temporary Modification:

Operational Decision Making:

Maintenance Rule:

MSPI:

PDM Watch List:

Regulatory Commitment:

Other:

Vulnerabilities

Steam Generator Tube Rupture:

Loss of Off-Site Power

Rapid Load Reduction:

Inadvertent Safety Injection:

Fire/Flooding:

Inter-system LOCA:

Loss of RHR:

Loss of Spent Fuel Cooling:

Load Reject:

Steam Line Break:

Loss of ESW:

Measures

Compensatory Measures:

Monitoring Measures:

Mitigations Measures:

RTFQ Actions:

00108154-01-01
Status: ACC/PRI WO#: 16-418571-000 Subject: Wastage on lifting bolts on CRDM vent plugs During visual
Notes:

Reportability Evaluation Report

RER

Status: **Status Date:** **Age:** **Due Date:**

Subject:

Date/Time of Discovery:

Description:

SCREENING/NOTIFICATIONS (Completed by Shift Manager):

Potentially Reportable: **RER Number:**

Per (list applicable reporting criteria met):

Person Contacted:

Corporate Services Notified:

ENS Reportability Determination per 10 CFR 50.72:

ENS Worksheet completed and attached:

Continuous open channel required:

Shift Manager Approval:

Last Updated:

DISPOSITION (Completed by Licensing):

LER #: **Ltr. Number:** **Submittal Date:**

Event Evaluation:

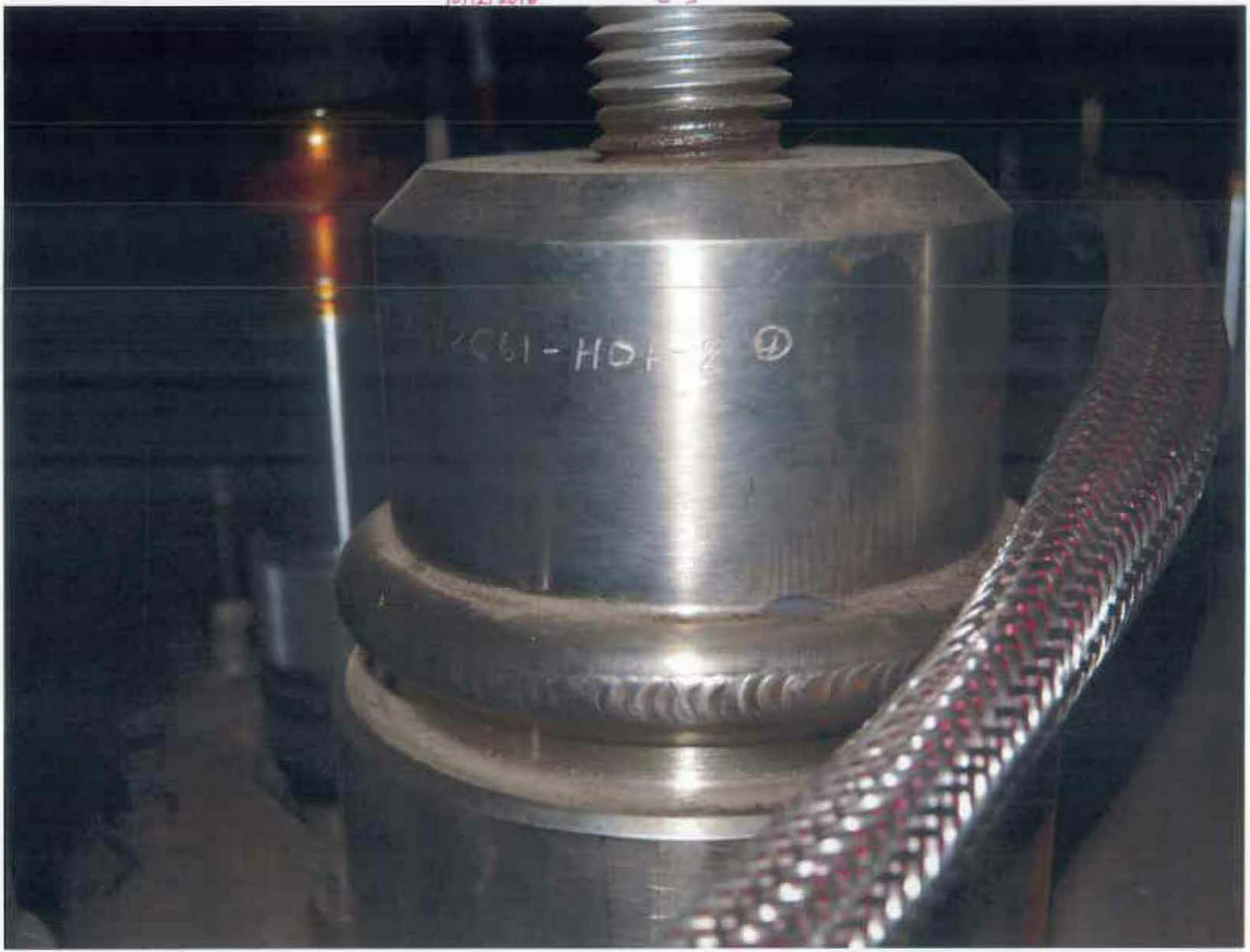
Reportability Evaluation Performed by:

REVIEW and APPROVAL (Non-Reportable Events Only)

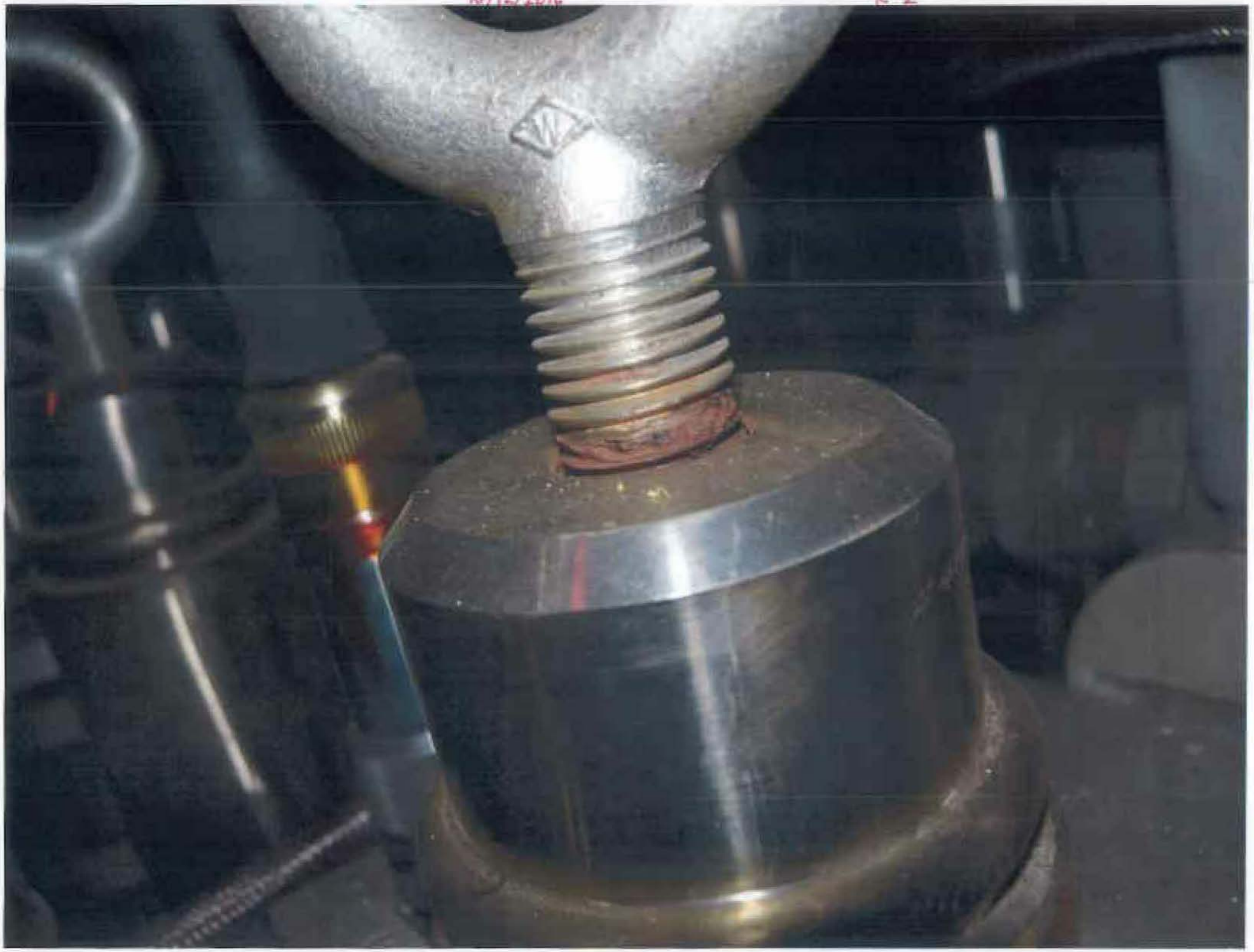
Supervisor Licensing Approval: **Last Updated:**

Manager Regulatory Affairs Approval: **Last Updated:**

ENS Retraction needed:


4C61-HDH-2 ④


07



10/12/2016 K-2

10 CFR 50.55a Request Number I4R-03

Relief Requested
In Accordance with 10 CFR 50.55a(z)(1)

Alternative provides an acceptable level of quality and safety

- ASME Code Component(s) Affected

Component:	Reactor Vessel Closure Head (RVCH) Nozzles
Code Class:	Class 1
Examination Category:	B-P
Code Item Number:	B4.10 (Code Case N-729-1, Alternative Examination Requirements for PWR Reactor Vessel Upper Heads with Nozzles Having Pressure-Retaining Partial-Penetration Welds, Section XI, Division 1)
Description:	Control Rod Drive Mechanism (CRDM) Nozzles Core Exit Thermocouple Nozzle Assy (CETNA) Nozzles
Size:	4.00 Inch (Nominal Outside Diameter)
Material:	RVCH SA533 Grade B, Class 1 Nozzle SB 167 N06600 (Alloy 600) Alloy 82/182 weld material

2. Applicable code Edition and Addenda

   - American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) Section XI, 2007 Edition through 2008 Addenda
   - Code Case N-729-1 as conditioned by 10 CFR 50.55a(g)(6)(ii)(D)

3. Applicable Code Requirement

   10 CFR 50.55a(g)(6)(ii)(D)(1) requires that examinations of the reactor vessel head be performed in accordance with ASME Code Case N-729-1 subject to the conditions specified in paragraphs 10 CFR 50.55a(g)(6)(ii)(D)(2) through (6).

   Paragraph -3200(b) of code Case N-729-1 states:

   > *The supplemental examination performed to satisfy -3142.2 shall include volumetric examination of the nozzle tube and* ***surface examination of the partial-penetration weld,*** *(emphasis added)or surface examination of the nozzle tube inside surface, the partial penetration weld, and nozzle tube outside surface below the weld, in accordance with Fig. 2, or the alternative examination area or volume shall be analyzed to be acceptable in accordance with Appendix I. The supplemental examinations shall be used to determine the extent of the unacceptable conditions and the need for corrective measures, analytical evaluation, or repair / replacement activity.*

4. Reason for Request

   Based on visual examination (VE), deposits resulting from leakage in the canopy seal weld on penetration 77 were found on the Reactor Vessel Head. These deposits were found in locations consistent with leakage from the canopy seal weld traveling down onto the RVCH

Refer document in its entirety to the licensee.

WOLF CREEK NUCLEAR OPERATING CORPORATION

WO # 16-418198-000

Date Required :
Action Code : EN ENGINEERING EVALUATION
WR # : 16-118471 **CCD:**
Requester/Ext : SCHWINGHAMER, F W / 00107838 / 4474

Late Date : N/A
Mode Restraint : TO BE DETERMINED
Date Generated : 10/04/2016
Priority : 2C79

Asset : RBB01

Asset Desc : REACTOR VESSEL
System : BB **Asset Safety Class** : SR
Asset Location : 2201 GENERAL FLOOR AREA -231 RX BLDG ELEV 1998-6 AREA 1
FID : 1 **SPV** : N

EQ Harsh :

Governing Code: **Code Class:** **Program:** **R/R Plan** :

Work Description : **Work Safety Class** : SR

ESC #61 - Reactor stud and Nut failed QC inspection During reactor vessel stud cleaning stud 30 and nut 39 failed the QC inspection. This will need to be evaluated by the engineer.

Assigned Planner : ENGINEERING, ROOM 210

Equipment Operable Re-Evaluation
Equipment Operable(Y/N) _____

Ref:_____
Time Limit:_____

Permission To Start:

_____/_____

_____/_____

Supplemental Work Activity:
Is work activity being performed by Supplemental Worker(s) (e.g. Non WCNOC Employee)?
Yes _____ **No** _____ **If, answered No, then N/A the next two steps.**

IF Yes,
THEN is work activity a qualified task in accordance with WCNOC Training Program?
Yes _____ **No** _____ **N/A** _____ **If, answered Yes, then N/A the next step.**

IF No (not a qualified task),
THEN the Responsible Work Group Supervisor SHALL ensure that the appropriate verifications are identified within the Work Order in accordance with AI 16C-007 Work Order Planning and approve proceeding with this work activity:

_____
Responsible Work Group Supervisor

WOLF CREEK NUCLEAR OPERATING CORPORATION

WO # 16-418198-000

FORMS - APF 22C-008-01 SHEET

Documents Verified latest revision and changes included: _____/_____

WOLF CREEK NUCLEAR OPERATING CORPORATION

WO # 16-418198-000

Step : 1 **Craft :** ENG **Crew :** **Est Persons :** 1 **Est Hrs :** 1.00

Actl Persons : ____ **Actl Hrs :** _____

Work Instructions

Reactor stud and Nut failed QC inspection During reactor vessel stud cleaning stud 30 and nut 39 failed the QC inspection. This will need to be evaluated by the engineer.

WOLF CREEK NUCLEAR OPERATING CORPORATION

WO # 16-418198-000

M&TE No.	Cal Due Date	Range/Scale	M&TE No.	Cal Due Date	Range/Scale

As Found Condition:

Cause of Failure

Work Summary

WOLF CREEK NUCLEAR OPERATING CORPORATION

WO # 16-418198-000

Worker(s) Printed Name:	Worker(s) Signature:	Sig Init:	Date:

Work Completion Date: _____

SM/SE/SFT Notified: _____

Work Group Supervisor : _____

Feedback

Work Order Planning (pick 1):

O 1 - This is a "quality" Work Order

O 2 - Clarification Required

O 3 - Enhancements Suggested

O 4 - Changes Required to Complete the Work

If 2, 3 or 4 are selected, describe what would need to be improved for this to be a "quality" Work Order:

_____

_____

_____ /

Initial and Date

WOLF CREEK NUCLEAR OPERATING CORPORATION

WO # 16-418198-000

Notes

Subject: OPERABILITY **Entered By:** SHAFE **Date:** 10/03/2016

What is the defect/degraded nonconforming condition?

During reactor vessel stud cleaning stud 30 and nut 39 failed the QC inspection.

What SSC is affected by the deficiency?

Reactor Vessel RBB01

What is the design/safety function of the affected SSC?

USAR Section 5.3.3:

The reactor vessel is cylindrical with a welded hemispherical bottom head and a removable, bolted, flanged, and gasketed hemispherical upper head. The reactor vessel flange and head are sealed by two hollow metallic 0-rings. Seal leakage is detected by means of two leakoff connections: one between the inner and outer ring and one outside the outer 0-ring. The vessel contains the core, core support structures, control rods, and other parts directly associated with the core. The reactor vessel closure head contains head adapters. These head adapters are tubular members, attached by partial penetration welds to the

underside of the closure head. The upper end of these adapters contains Acme threads for the assembly of control rod drive mechanisms or instrumentation adapters. The seal arrangement at the upper end of these adapters consists of a welded flexible canopy seal. Inlet and outlet nozzles are located symmetrically around the vessel. Outlet nozzles are arranged on the vessel to facilitate optimum layout of the RCS equipment. The inlet nozzles are tapered from the coolant loop vessel interfaces to the vessel inside wall to reduce loop pressure drop.

The bottom head of the vessel contains penetration nozzles for connection and entry of the nuclear incore instrumentation. Each nozzle consists of a tubular member made of either an Inconel or an Inconel-stainless steel composite tube. Each tube is attached to the inside of the bottom head by a partial penetration weld.

Internal surfaces of the vessel which are in contact with primary coolant are

WOLF CREEK NUCLEAR OPERATING CORPORATION

WO # 16-418198-000

weld overlay with 0.125 inch minimum of stainless steel or Inconel.

The reactor vessel is designed and fab

Subject: OPERABILITY **Entered By:**SHAFE **Date:** 10/03/2016

ricated in accordance with the requirements of the ASME Code, Section III. Principal design parameters of the reactor vessel are given in Table 5.3-2. The reactor vessel is shown in Figure 5.3-1.

What effect/or potential effect does the deficiency have on the affected SSC?s ability to perform its intended design/safety function?

The SSC?s is functional because:

With Stud 30 and Nut 39 failing QC inspection, the Reactor Vessel is INOPERABLE and this condition needs to be evaluated by Engineering for a plan to resolve the issue.

Extent of condition? Where does this condition exist?

Inspection of RV studs and nuts is ongoing and will identify any further deficiencies.

References?

USAR 5.3.3

Subject: RESOLUTION **Entered By:**DAGIEFE1 **Date:** 10/04/2016

RV Stud #30 should be replaced with a spare stud in the warehouse (SR90451141) -

four(4) are available in the warehouse at locations B2110701B and B2110802A. Only one is needed to be moved and placed in the rack currently holding RV Stud #30. The new stud will need to have the number 30 for identification.

RV Nut #39 should be replaced with a spare nut in the warehouse (SR90450362) at location B6130203B. One nut needs to be moved from the warehouse and placed onto RV stud #39. The new nut will need to have the number 39 for identification.

The RV Stud #30 and RV Nut #39 that did not pass inspection should be moved to a storage location. Both items have been cleaned and can be refurbished for later use in the RV, if needed.

[NOTE: There is a ISI Calibration RV nut currently in storage in the locked area of the New Radwaste Building. This is not to be mistakenly used as a replacement nut for the Reactor vessel. It contains calibration slots that are not easily seen.]

Subject: Supervisor Review **Entered By:**CAGARCI **Date:** 10/04/2016

Spare parts are available. Approved.

WOLF CREEK NUCLEAR OPERATING CORPORATION

WO # 16-418198-000

Tool List

Tool Description	Request Number	Tool No	Qty	Tool Room	Row/Bin

*** * * End of Report (1849152) * * ***

Refer document in its entirety to the licensee.

Wolf Creek Nuclear Operating Corporation

00107686 Condition Report

Reportability Evaluation Report

RER 00107686-02

Status: ACC/PRI **Status Date:** 09/29/2016 **Age:** 1 **Due Date:**

Subject: STS PE-040E Relevant Conditions

Date/Time of Discovery: 9/29/16 17:00

Description: During the performance of STS PE-040E, Step 8.2 the following relevant conditions were noted. Penetration Condition 77 Leak located on the north face of the lower canopy seal weld. Significant boron accumulation on housing, nozzle and at the penetration to head interface. Boron at head interface had rust color indicative of corrosion. Rust bloom noted on head adjacent to boron accumulation. 71 Significant boron accumulation on housing, nozzle and at the penetration to head interface. Boron had rust color indicative of corrosion. Rust bloom noted on head adjacent to boron accumulation. 70 Significant boron accumulation on housing, nozzle and at the penetration to head interface. Boron had rust color indicative of corrosion. Rust bloom noted on head adjacent to boron accumulation. 59 Significant boron accumulation on housing, nozzle and at the penetration to head interface. 47 Significant boron accumulation on housing, nozzle and at the penetration to head interface. 46 Significant boron accumulation on housing, nozzle and at the penetration to head interface. 58 Significant boron accumulation on housing, nozzle and at the penetration to head interface. Some boron discoloration noted. 63 Rust colored boron accumulation noted on 90 degree side of nozzle. Recommend the BACC Engineer evaluate for further corrective actions. Boron accumulation also noted on head, CRDM penetration nozzles, canopy seal welds and housings from approximately 50 degrees to 180 degrees. Recommend this area be cleaned to remove boron. Remainder of head should be vacuumed to remove dust/loose boron particles as directed by the BACC Engineer.

SCREENING/NOTIFICATIONS (Completed by Shift Manager):

Potentially Reportable: Y **RER Number:** 2016-039

Per (list applicable reporting criteria met):

Person Contacted: CALL SUPT

Corporate Services Notified: N

ENS Reportability Determination per 10 CFR 50.72:

N/A

ENS Worksheet completed and attached: N/A

Continuous open channel required: N

Shift Manager Approval: APPROVED

Last Updated: LAHAUTH - 09/29/2016

DISPOSITION (Completed by Licensing):

LER #: **Ltr. Number:** **Submittal Date:**

Event Evaluation:

Reportability Evaluation Performed by:

REVIEW and APPROVAL (Non-Reportable Events Only)

Supervisor Licensing Approval: **Last Updated:**

Manager Regulatory Affairs Approval: **Last Updated:**

ENS Retraction needed:

Wolf Creek Nuclear Operating Corporation

00107686 Condition Report

AR #: 00107686 **Severity Type:** CR **Level:** **Due Date:** **Status:** H/APPR **Status Date:** 09/29/2016

AR Subject: STS PE-040E Relevant Conditions **Age In Days:** 0

Owed To Name:

Owed To Department:

Owed To Alert Group: WC SRT

Origination Date: 09/29/2016

Initiator: HALL, JOHN F

Orig Department: 0060030 - Heffron Jason

Condition Report Summary:

Type	AR#-Assign#-Sub-Assign#	Owed/Assign To	Due Date	Status
CR	00107686	WC SRT		H/APPR
RTFQ	00107686-01	OPS REVIEW		ACC/PRI
RER	00107686-02	RER REVIEW		ACC/PRI

Attachments:

CR Detail

Asset/Equip: RBB01 **Work Request:**

Description: During the performance of STS PE-040E, Step 8.2 the following relevant conditions were noted. Penetration Condition 77 Leak located on the north face of the lower canopy seal weld. Significant boron accumulation on housing, nozzle and at the penetration to head interface. Boron at head interface had rust color indicative of corrosion. Rust bloom noted on head adjacent to boron accumulation. 71 Significant boron accumulation on housing, nozzle and at the penetration to head interface. Boron had rust color indicative of corrosion. Rust bloom noted on head adjacent to boron accumulation. 70 Significant boron accumulation on housing, nozzle and at the penetration to head interface. Boron had rust color indicative of corrosion. Rust bloom noted on head adjacent to boron accumulation. 59 Significant boron accumulation on housing, nozzle and at the penetration to head interface. 47 Significant boron accumulation on housing, nozzle and at the penetration to head interface. 46 Significant boron accumulation on housing, nozzle and at the penetration to head interface. 58 Significant boron accumulation on housing, nozzle and at the penetration to head interface. Some boron discoloration noted. 63 Rust colored boron accumulation noted on 90 degree side of nozzle. Recommend the BACC Engineer evaluate for further corrective actions. Boron accumulation also noted on head, CRDM penetration nozzles, canopy seal welds and housings from approximately 50 degrees to 180 degrees. Recommend this area be cleaned to remove boron. Remainder of head should be vacuumed to remove dust/loose boron particles as directed by the BACC Engineer.

Immediate Concern: N **SM Notified:** N/A **Init DNC:** N

Immediate Actions:
Discussed with Engineering

Extent of condition:
Specific to RBB01 closure head

Recommended Resolution:
Clean and evaluate

Screening Review

Operability: 4 INOPERABLE
Based on several indications of rust colored boron from the head, there is insufficient evidence that the head can continue to perform tis function. Ref TS 3.4.13

Reportable: Y RER initiated to evaluate past operability

Environmental Issue: N

Tech Spec Sec 5:	N
Personnel Safety Issue:	N
Reactivity Issue:	N
Impact Risk Assessment:	N
OPS Review:	HAUTH, LARRY W
CR/WR Screening:	
Significance Cat:	99 - NOT APPLICABLE
Screen/SRT Notes:	

General Notes:

Other Related Information

Assignment Status Summary:

Total Assigns/Subs:	2 - 0
Open Assigns/Subs:	2 - 0
Overdue Assigns/Subs:	0 - 0

Cross References:

Status & Due Date History:

Responsible Person	Date Updated	Status	Due Date
HALL, JOHN F	09/29/2016	INPROG	
HALL, JOHN F	09/29/2016	H/APPR	

Margin Management Issue: N

Refer document in its entirety to the licensee.

ODM DOCUMENTATION FORM

Section I - Identification of the Decision (6.2.1)

ODM Index #2016-05, **Rev.** 000 Reason for Revision: ____

Date 9/4/2016	**CR #** 106867	ODMI 1 ☒ 2 ☐ ODMI 1 issues must be reviewed by the PSRC upon approval.

EQUIPMENT RELIABILITY ISSUE YES ☒ NO ☐ IF "YES", THEN this ODM must be reviewed by the Plant Health Committee upon approval.

Clearly state the Problem/Scope/Purpose of Plan: Maintain Plant in Mode 3 NOP/NOT with a leak on the Reactor Head

Response: Evaluate holding the plant at NOP/NOT with leakage present to perform Trevi Testing, or to commence cooldown and depressurization to reduce leakage rate.

Section II - Formation of the Evaluation Team (6.2.2)

Evaluation Team Lead: Edwards **Sponsor:** Edwards

Team Member	**Expertise**
Steve Henry	Previous SRO/IPS Manager
W. Camp, L. Hauth, Adam Faircloth	Senior Reacto Operator
J. Stone, G. Turner, K. Christesen	Reactor Operators

Section III – Define Challenges and Evaluate Alternatives (6.2.3)

Specify operational challenges, potential consequences and changing conditions which may prompt additional actions:

None beyond the trigger points mentioned below

Response:

List alternative solutions	*Discuss Advantages*	*Discuss Disadvantages*
Delay Trevi Testing until plant is returned to NOP/NOT at the end of the refueling outage	Allows cooldown and depressurization now, without delay	A test failure at the end of the outage will cause an additional cycle of the plant back to mode 5 for repair
Maintain plant at NOP/NOT to perform Trevi Testing	Removes an potential plant cycle upon test failure at end of outage Allows ensuring valves are repaired as needed prior to repressurizing the SGs	Leakage continues at the same rate as discovered Potential continued degradation

Section IV – Decision Documentation (6.2.4)

Summarize Decision and basis: Maintain plant at NOP/NOT to perform Trevi Testing but comply with trigger points contingencies, and associated actions.

Response:

Section V– Implementation Plan (6.2.5) (Pending actions will be tracked as CAP actions under CR listed in Section I.)

ACTION ITEM	OWNER	DUE DATE	STATUS	COMMENTS
1. Implement once/shift monitoring of qualitative leakage by visually observing leak	Shift Manager	Shiftly	Ongoing	Log each observation in the Control Room Logs
2. Perform once/shift STS BB-006	Operating Crew	Shiftly	Ongoing	Log each performance in Control Room Logs
3. Evaluate changes in Containment Atmosphere radiation monitors shiftly	Operating Crew	Shiftly	Ongoing	Log readings in the Control Room Logs
4.				
5.				

Contingencies: If at any time, the crew feels that the action to commence cooldown and depressurization of the RCS is necessary, they may take the necessary actions to move the plant to Mode 5

If Trevi Testing is delayed beyond Wednesday 9/7/2016 at 1200, the plant cooldown and depressurization to Mode 5 will commence without completion of Trevi Testing

Compensatory Measures: None

Trigger Points: If RCS leakage reaches 0.8 GPM Unidentified Leakage, or

A significant visible change to leakage characteristics that coincide with a change in VCT levels or PZR levels, or

Containment Atmosphere radiation monitors a sustained increase of one decade coincident with change in VCT level or PZR levels

Actions if Trigger Point(s) exceeded: If time and plant conditions permit, confirm leakage changes using STS BB-006.

When trigger points have been met, commence cooldown and depressurization to Mode 5 IAW plant procedures

Communication Plan: Shift Manager to complete an essential reading for this ODMI.

Any New/Revised Procedures Needed: (Be specific as to those procedures/rev #'s impacted):

None

Ops/Staff Preparation Required (Simulator, Training Fidelity, Use of Mock-ups, etc.):

Outage training for the cooldown will be completed for all personnel performing cooldown and depressurization.

Section VI – Approval (6.2.6)

Approval

Shift Manager / Date: /9/5/16

Sponsor / Date: /9/5/16

Evaluation Team Lead / Date: /9/5/16

Section VII– Closure (6.2.7)

Additional Comments/Actions Required for Closure/Basis For Closure:

Plant is cooled down, ODMI no longer necessary

Basis for Closure: We are no longer in the mode of applicability described by this ODMI

Date Closed: 9/8/16

Shift Manager / Date /8 Sep 2016

Sponsor / Date: /9/12/16

Evaluation Team Lead / Date: /9/12/16

ATTACHMENT #1

Example of ODM Index (WCNet\Document\Operational Decision Making Issues\ODM Index)

ODM # YYYY-xx	Date Initiated	CR #	Title	Closed

NOTE: ODM Index should contain similar information as this example – Not a quality record.

Refer document in its entirety to the licensee.

Wolf Creek Nuclear Operating Corporation

00107847 Condition Report

AR #: 00107847 **Severity Type:** CAQ **Level:** FFAC **Due Date:** 11/04/2016 **Status:** COMP-NA **Status Date:** 10/05/2016

AR Subject: Surface Eddy Current on CETNA Pen. 77 **Age In Days:** 0

Owed To Name:

Owed To Department: 3124020 - Slenker Tim

Owed To Alert Group: WC SRT

Origination Date: 10/03/2016

Initiator: HIGGINS, SARENA A

Orig Department: 3124020 - Slenker Tim

Condition Report Summary:

Type	AR#-Assign#-Sub-Assign#	Owed/Assign To	Due Date	Status
CAQ	00107847	WC SRT	11/04/2016	COMP-NA

Attachments:

CR Detail

Asset/Equip: RBB01 **Work Request:** 16-118481

Description: During performance of the PT for CENTA Penetration 77, QC should perform surface eddy current testing. This eddy current testing should be performed on penetration 77 and on one of the following other penetrations 14, 15 or 16. This should be a sub under the WO series 16-417262, and assigned to G. Hicks as planner

Immediate Concern: N **SM Notified:** N/A **Init DNC:** N

Immediate Actions:
This is part of the EIT actions

Extent of condition:
No where

Recommended Resolution:

Screening Review

Operability:	1 N/A This CR is not describing a new deficiency in an SSC
Reportable:	N
Environmental Issue:	N
Tech Spec Sec 5:	N
Personnel Safety Issue:	N
Reactivity Issue:	N
Impact Risk Assessment:	N
OPS Review:	SHAFER, STUART R
CR/WR Screening:	LINK, STEPHEN L
Significance Cat:	99 - NOT APPLICABLE
Screen/SRT Notes:	

General Notes:

Other Related Information

Assignment Status Summary:

Total Assigns/Subs:	0 - 0
Open Assigns/Subs:	0 - 0
Overdue Assigns/Subs:	0 - 0

Cross References:

Type	Number	Sub Number
ACTION REQUEST	00106867	
MPAC WORK REQUEST	16-118481	

Status & Due Date History:

Responsible Person	Date Updated	Status	Due Date
HIGGINS, SARENA A	10/03/2016	INPROG	
HIGGINS, SARENA A	10/03/2016	H/APPR	
KING, SELENA R	10/05/2016	APPROVED	11/04/2016
KING, SELENA R	10/05/2016	COMP-NA	11/04/2016
LINK, STEPHEN L	10/03/2016	PRE-APRV	

NON QA Record Information:

Rework Issue:	N
Radiological Occurrence:	N
Potential OE:	N
Training Issue:	N
Site Clock Reset:	N
Division Clock Reset:	N
Discovery Code:	03 - OTHER WC PERSONNEL
Critical Equipment Failure:	N
Maintenance Rule:	N
Outage Issue:	Y
Margin Management Issue:	N
Culpable Org:	
Keywords:	
Trend Data:	

Evaluation/Checklist

Assignment #: **Due Date:** **Status:** **Status Date:**

Subject: **Age In Days:** **Total Age:**

Assigned To Name:

Assigned To Organization:

Description:

Condition Statement:

Extent of Condition:

Operating Experience:

Evaluation and Conclusion:

Cause:

Extent of Cause:

Safety Significance:

Actions Taken:

Information Sources:

Review and Approvals

QA Review:

Rad Protection Review:

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extentions

# of Extentions:

Extention Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes:	Updated By	Last Updated

References:

EVAL Status & Due Date History:

Plan and Actions

Plan Assignment #: **Status:** **Status Date:**

Plan Subject: **Age In Days:**

Assigned To Name:

Assigned To Organization:

Description:

Action Assignment #: **Action Due Date:** **Status:** **Status Date:**

Action Subject: **Age In Days:**

Assigned To Name:

Assigned To Organization:

Description:

Action Category:

LTCA:

Schedule Requirement:

RCMS #:

Commitment:

Commit To Agency:

Work Performed:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

# of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Plan and Action Information

Plan Assignment Notes: Updated By Last Updated

Action Assignment Notes:

Plan Completion Notes:

Action Completion Notes:

Plan Cross Reference: Type Number Sub Number

Action Cross Reference:

Plan Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Action Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Effectiveness Follow-up

EFU Assignment #: EFU Due Date: Status: Status Date:

EFU Subject: Age In Days:

Assigned To Name:

Assigned To Organization:

Description:

EFU Effective:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes: Updated By Last Updated

Cross References:

EFU Status and Due Date History:

Refer document in its entirety to the licensee.

Wolf Creek Nuclear Operating Corporation

00107719 Condition Report

AR #: 00107719 **Severity Type:** NCAQ **Level:** OTH **Due Date:** 11/01/2016 **Status:** COMP-NA **Status Date:** 10/02/2016

AR Subject: Clamping Recommendation for Penetration 11 from RCA 106867 **Age In Days:** 0

Owed To Name:

Owed To Department: 4020020 - Crow Bart

Owed To Alert Group: WC SRT

Origination Date: 09/30/2016

Initiator: CHADWICK, CHRISTOPHER N

Orig Department: 4020020 - Crow Bart

Condition Report Summary:

Type	AR#-Assign#-Sub-Assign#	Owed/Assign To	Due Date	Status
NCAQ	00107719	WC SRT	11/01/2016	COMP-NA

Attachments:

Type	CR/ASGN No.	Title
CR	00107719-00	CLAMPING RECOMMENDATION FOR PENETRATION 11 FROM RCA 106867

CR Detail

Asset/Equip: RBB01 **Work Request:** 16-118396

Description: The root cause team for the CETNA #77 penetration leak is recommending additional clamps be installed on lower canopy seal welds for spare capped penetrations near the center of the head in this outage (RF 21). Penetration 11 is a spare location in a more at risk area. Spare capped locations have been shown to be more susceptible to leakage both at Wolf Creek and in industry.

Immediate Concern: N **SM Notified:** N/A **Init DNC:** N

Immediate Actions:
Wrote CR

Extent of condition:
Any canopy seal weld that is not clamped is susceptible to leakage.

Recommended Resolution:
Create WOs to install an additional clamp on the lower canopy seal weld of penetration 11.

Screening Review

Operability: 1 N/A
This is a proactive action taken to prevent a leak similar to that that occurred on CETNA penetration #77. Therefore, this CR does not identify any degraded/nonconforming condition for plant equipment.

Reportable: N

Environmental Issue: N

Tech Spec Sec 5: N

Personnel Safety Issue: N

Reactivity Issue: N

Impact Risk Assessment: N

OPS Review: REEVES, GLENN W

CR/WR Screening: ISCH, JEFFREY R

Significance Cat: 99 - NOT APPLICABLE

Screen/SRT Notes:

General Notes:

Other Related Information

Assignment Status Summary:

Total Assigns/Subs:	0 - 0
Open Assigns/Subs:	0 - 0
Overdue Assigns/Subs:	0 - 0

Cross References:

Type	Number	Sub Number
ACTION REQUEST	00106857	
MPAC WORK REQUEST	16-118396	

Status & Due Date History:

Responsible Person	Date Updated	Status	Due Date
CHADWICK, CHRISTOPHER N	09/30/2016	INPROG	
CHADWICK, CHRISTOPHER N	09/30/2016	H/APPR	
DEARINGER, CAROL A	10/02/2016	APPROVED	11/01/2016
DEARINGER, CAROL A	10/02/2016	COMP-NA	11/01/2016
ISCH, JEFFREY R	09/30/2016	PRE-APRV	

NON QA Record Information:

Rework Issue:	N
Radiological Occurrence:	N
Potential OE:	N
Training Issue:	N
Site Clock Reset:	N
Division Clock Reset:	N
Discovery Code:	03 - OTHER WC PERSONNEL
Critical Equipment Failure:	N
Maintenance Rule:	N
Outage Issue:	N
Margin Management Issue:	N
Culpable Org:	
Keywords:	
Trend Data:	

Evaluation/Checklist

Assignment #: **Due Date:** **Status:** **Status Date:**

Subject: **Age In Days:** **Total Age:**

Assigned To Name:

Assigned To Organization:

Description:

Condition Statement:

Extent of Condition:

Operating Experience:

Evaluation and Conclusion:

Cause:

Extent of Cause:

Safety Significance:

Actions Taken:

Information Sources:

Review and Approvals

QA Review:

Rad Protection Review:

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extentions

# of Extentions:

Extention Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes:	Updated By	Last Updated

References:

EVAL Status & Due Date History:

Plan and Actions

Plan Assignment #: **Status:** **Status Date:**

Plan Subject: **Age In Days:**

Assigned To Name:

Assigned To Organization:

Description:

Action Assignment #: **Action Due Date:** **Status:** **Status Date:**

Action Subject: **Age In Days:**

Assigned To Name:

Assigned To Organization:

Description:

Action Category:

LTCA:

Schedule Requirement:

RCMS #:

Commitment:

Commit To Agency:

Work Performed:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

# of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Plan and Action Information

Plan Assignment Notes: Updated By Last Updated

Action Assignment Notes:

Plan Completion Notes:

Action Completion Notes:

Plan Cross Reference: Type Number Sub Number

Action Cross Reference:

Plan Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Action Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Effectiveness Follow-up

EFU Assignment #: **EFU Due Date:** **Status:** **Status Date:**

EFU Subject: **Age In Days:**

Assigned To Name:

Assigned To Organization:

Description:

EFU Effective:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

# of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes: **Updated By** **Last Updated**

Cross References:

EFU Status and Due Date History:

Refer document in its entirety to the licensee.

Wolf Creek Nuclear Operating Corporation

00107686 Condition Report

AR #: 00107686 **Severity Type:** CAQ **Level:** BSC **Due Date:** 11/01/2016 **Status:** APPROVED **Status Date:** 10/02/2016

AR Subject: STS PE-040E Relevant Conditions **Age in Days:** 3

Owed To Name: FERREL, MARK A **Origination Date:** 09/29/2016

Owed To Department: 4060090 - Ferrel Mark **Initiator:** HALL, JOHN F

Owed To Alert Group: **Orig Department:** 0060030 - Heffron Jason

Condition Report Summary:

Type	AR#-Assign#-Sub-Assign#	Owed/Assign To	Due Date	Status
CAQ	00107686	MAFERRE	11/01/2016	APPROVED
RTFQ	00107686-01	OPS REVIEW		ACC/PRI
RACT	00107686-01-01	OPS REVIEW		ACC/PRI
RER	00107686-02	RER REVIEW		ACC/PRI
BLL	00107686-03	MAFERRE	11/01/2016	NTFY/ASG

Attachments:

CR Detail

Asset/Equip: RBB01 **Work Request:** 16-118401

Description: During the performance of STS PE-040E, Step 8.2 the following relevant conditions were noted. Penetration Condition 77 Leak located on the north face of the lower canopy seal weld. Significant boron accumulation on housing, nozzle and at the penetration to head interface. Boron at head interface had rust color indicative of corrosion. Rust bloom noted on head adjacent to boron accumulation. 71 Significant boron accumulation on housing, nozzle and at the penetration to head interface. Boron had rust color indicative of corrosion. Rust bloom noted on head adjacent to boron accumulation. 70 Significant boron accumulation on housing, nozzle and at the penetration to head interface. Boron had rust color indicative of corrosion. Rust bloom noted on head adjacent to boron accumulation. 59 Significant boron accumulation on housing, nozzle and at the penetration to head interface. 47 Significant boron accumulation on housing, nozzle and at the penetration to head interface. 46 Significant boron accumulation on housing, nozzle and at the penetration to head interface. 58 Significant boron accumulation on housing, nozzle and at the penetration to head interface. Some boron discoloration noted. 63 Rust colored boron accumulation noted on 90 degree side of nozzle. Recommend the BACC Engineer evaluate for further corrective actions. Boron accumulation also noted on head, CRDM penetration nozzles, canopy seal welds and housings from approximately 50 degrees to 180 degrees. Recommend this area be cleaned to remove boron. Remainder of head should be vacuumed to remove dust/loose boron particles as directed by the BACC Engineer.

Immediate Concern: N **SM Notified:** N/A **Init DNC:** N

Immediate Actions:
Discussed with Engineering

Extent of condition:
Specific to RBB01 closure head

Recommended Resolution:
Clean and evaluate.

Screening Review

Operability: 4 INOPERABLE
Based on several indications of rust colored boron from the head, there is insufficient evidence that the head can continue to perform tis function. Ref TS 3.4.13

Reportable: Y RER initiated to evaluate past operability

Environmental Issue:	N
Tech Spec Sec 5:	N
Personnel Safety Issue:	N
Reactivity Issue:	N
Impact Risk Assessment:	N
OPS Review:	HAUTH, LARRY W
CR/WR Screening:	ISCH, JEFFREY R
Significance Cat:	99 - NOT APPLICABLE

Screen/SRT Notes:

	Updated By	Last Updated
RER 2016-039	CADEARI	10/02/2016

General Notes:

	Updated By	Last Updated
The condition identified in this CR represents a materiel	ERMURPH	10/02/2016
condition to be evaluated to the requirements of the Boric	ERMURPH	10/02/2016
Acid control program. It does not represent any challenge	ERMURPH	10/02/2016
to Maintenance Rule performance or condition monitoring	ERMURPH	10/02/2016
goals or performance criteria, as no conditions are	ERMURPH	10/02/2016
identified that represent a loss of or challenge to any	ERMURPH	10/02/2016
Maintenance Rule monitored function. No MRE is required.	ERMURPH	10/02/2016

Other Related Information

Assignment Status Summary:

Total Assigns/Subs:	3 - 1
Open Assigns/Subs:	3 - 1
Overdue Assigns/Subs:	0 - 0

Cross References:

Type	Number	Sub Number
ACTION REQUEST	00106867	
MPAC WORK REQUEST	16-118401	

Status & Due Date History:

Responsible Person	Date Updated	Status	Due Date
HALL, JOHN F	09/29/2016	INPROG	
HALL, JOHN F	09/29/2016	H/APPR	
DEARINGER, CAROL A	10/02/2016	APPROVED	11/01/2016
ISCH, JEFFREY R	09/30/2016	PRE-APRV	

NON QA Record Information:

Rework Issue:	N
Radiological Occurrence:	N
Potential OE:	N
Training Issue:	N

Site Clock Reset:	N
Division Clock Reset:	N
Discovery Code:	03 - OTHER WC PERSONNEL
Critical Equipment Failure:	N
Maintenance Rule:	N
Outage Issue:	Y
Margin Management Issue:	N
Culpable Org:	
Keywords:	RSTRTM5 - MODE 5 RESTRAINT
Trend Data:	

Evaluation/Checklist

BLL **Assignment #:** 00107686-03 **Due Date:** 11/01/2016 **Status:** NTFY/ASG **Status Date:** 10/02/2016

Subject: STS PE-040E Relevant Conditions **Age In Days:** 3 **Total Age:** 0.00

Assigned To Name: FERREL, MARK A

Assigned To Organization: 4050090-RELIABILITY & CODE - FERREL

Description: Perform a basic evaluation in accordance with AP 28A-100 and AI 28A-100. Use form AIF 28A-100-012, Basic Cause Evaluation. If determined this assignment is not needed contact the CAP group to Cancel the Basic assignment.

Condition Statement:

Extent of Condition:

Operating Experience:

Evaluation and Conclusion:

Cause:

Extent of Cause:

Safety Significance:

Actions Taken:

Information Sources:

Review and Approvals

QA Review:

Rad Protection Review:

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extentions

# of Extentions: 0

Extention Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes:

	Updated By	Last Updated

References:

EVAL Status & Due Date History:

CAROL A. DEARINGER	10/02/2016	INPROG	11/01/2016

Plan and Actions

Plan Assignment #: **Status:** **Status Date:**

Plan Subject: **Age In Days:**

Assigned To Name:

Assigned To Organization:

Description:

Action Assignment #: **Action Due Date:** **Status:** **Status Date:**

Action Subject: **Age In Days:**

Assigned To Name:

Assigned To Organization:

Description:

Action Category:

LTCA:

Schedule Requirement:

RCMS #:

Commitment:

Commit To Agency:

Work Performed:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

# of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Plan and Action Information

Plan Assignment Notes: Updated By Last Updated

Action Assignment Notes:

Plan Completion Notes:

Action Completion Notes:

Plan Cross Reference: Type Number Sub Number

Action Cross Reference:

Plan Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Action Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Effectiveness Follow-up

EFU Assignment #: EFU Due Date: Status: Status Date:

EFU Subject: Age In Days:

Assigned To Name:

Assigned To Organization:

Description:

EFU Effective:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes: Updated By Last Updated

Cross References:

EFU Status and Due Date History:

Refer document in its entirety to the licensee.

Wolf Creek Nuclear Operating Corporation

00107904 Condition Report

AR #: 00107904 **Severity Type:** CR **Level:** **Due Date:** **Status:** PRE-APRV **Status Date:** 10/04/2016

AR Subject: Rx Studs 17, 18, 19 rejected during inspection **Age In Days:** 0

Owed To Name:

Owed To Department:

Owed To Alert Group: WC SRT

Origination Date: 10/04/2016

Initiator: HEFFRON, JASON M

Orig Department: 0060030 - Heffron Jason

Condition Report Summary:

Type	AR#-Assign#-Sub-Assign#	Owed/Assign To	Due Date	Status
CR	00107904	WC SRT		PRE-APRV
RTFQ	00107904-01	OPS REVIEW		ACC/PRI

Attachments:

CR Detail

Asset/Equip: RBB01 **Work Request:** 16-118517

Description: During post cleaning visual inspection of the Rx Studs performed under 15-406820-002, Studs 17, 18, and 19 were rejected due to requirements within FHP 02-009C 8.1.7.1.d. Stud 17 was identified with approximately 4 inches of upset metal at approximately 2.375 inches from thread to shank area. Stud 18 was identified with approximately 1 inch of upset metal at approximately 2.45 inches from thread to shank area. Stud 19 was identified with approximately 3.5 inches of upset metal at the 4th thread from the bottom of the stud. Pictures stored at K:\Data\NDE\Photos\BALeaks\BB Components\RV Head\2016 Fall RF21 - Pen 77 Canopy Seal Weld\RV Studs\RPV Studs and Nuts\10-3-16

Immediate Concern: N **SM Notified:** N/A **Init DNC:** N

Immediate Actions:

Initiated CR, notified head crew, and contacted engineering for evaluation.

Extent of condition:

Recommended Resolution:

Screening Review

Operability:

3 OPER/DNC

What is the defect/degraded nonconforming condition?
Stud 17 was identified with approximately 4 inches of upset metal at approximately 2.375 inches from thread to shank area. Stud 18 was identified with approximately 1 inch of upset metal at approximately 2.45 inches from thread to shank area. Stud 19 was identified with approximately 3.5 inches of upset metal at the 4th thread from the bottom of the stud.

What SSC is affected by the deficiency?
RBB01, REACTOR VESSEL

What is the design/safety function of the affected SSC?
Components that contain or transport the coolant to or from the reactor core make up the RCS. Component joints are made by welding, bolting, rolling, or pressure loading. Valves isolate connecting systems from the RCS. During plant life, the joint and valve interfaces can

allow varying amounts of reactor coolant LEAKAGE, through either normal operational wear or mechanical deterioration.
The Reactor Head Closure Studs Aging Management Program document describes the requirements for the implementation of the Reactor Head Closure Studs aging management program. The QC inspections are a part of this program.
The program is credited for the performance of aging management activities that are required by license renewal and are associated with regulatory commitments.
What effect/or potential effect does the non-conforming condition have on the affected SSC's ability to perform its intended design/safety function? No RCS leakage from the reactor vessel head flange has been occurring. The indications are minor and only affect a few threads of the many that are available. Only a few of the 54 total studs/nuts are affected.
This SSC is OPERABLE BUT DEGRADED because the indications are minor and not a sign of aging as much as damage that has occurred from handling.
Extent of condition: All 54 studs are being inspected.
References: TS 3.4.13; WCLR-30, License Renewal Aging Management Plan

Reportable:	N
Environmental Issue:	N
Tech Spec Sec 5:	N
Personnel Safety Issue:	N
Reactivity Issue:	N
Impact Risk Assessment:	N
OPS Review:	REEVES, GLENN W
CR/WR Screening:	JENKINS, MARK A
Significance Cat:	99 - NOT APPLICABLE
Screen/SRT Notes:	

General Notes:

Other Related Information

Assignment Status Summary:

Total Assigns/Subs:	1 - 0
Open Assigns/Subs:	1 - 0
Overdue Assigns/Subs:	0 - 0

Cross References:

Type	Number	Sub Number
MPAC WORK REQUEST	16-118517	

Status & Due Date History:

Responsible Person	Date Updated	Status	Due Date

HEFFRON, JASON M	10/04/2016	INPROG
HEFFRON, JASON M	10/04/2016	H/APPR
JENKINS, MARK A	10/05/2016	PRE-APRV

NON QA Record Information:

Rework Issue:	N
Radiological Occurrence:	N
Potential OE:	N
Training Issue:	N
Site Clock Reset:	N
Division Clock Reset:	N
Discovery Code:	03 - OTHER WC PERSONNEL
Critical Equipment Failure:	N
Maintenance Rule:	N
Outage Issue:	N
Margin Management Issue:	N
Culpable Org:	
Keywords:	
Trend Data:	

Evaluation/Checklist

Assignment #: **Due Date:** **Status:** **Status Date:**

Subject: **Age In Days:** **Total Age:**

Assigned To Name:

Assigned To Organization:

Description:

Condition Statement:

Extent of Condition:

Operating Experience:

Evaluation and Conclusion:

Cause:

Extent of Cause:

Safety Significance:

Actions Taken:

Information Sources:

Review and Approvals

QA Review:

Rad Protection Review:

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extentions

# of Extentions:

Extention Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes: Updated By Last Updated

References:

EVAL Status & Due Date History:

Plan and Actions

Plan Assignment #: **Status:** **Status Date:**

Plan Subject: **Age In Days:**

Assigned To Name:

Assigned To Organization:

Description:

Action Assignment #: **Action Due Date:** **Status:** **Status Date:**

Action Subject: **Age In Days:**

Assigned To Name:

Assigned To Organization:

Description:

Action Category:

LTCA:

Schedule Requirement:

RCMS #:

Commitment:

Commit To Agency:

Work Performed:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

# of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Plan and Action Information

Plan Assignment Notes: Updated By Last Updated

Action Assignment Notes:

Plan Completion Notes:

Action Completion Notes:

Plan Cross Reference: Type Number Sub Number

Action Cross Reference:

Plan Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Action Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Effectiveness Follow-up

EFU Assignment #:	EFU Due Date:	Status:	Status Date:
EFU Subject:			Age In Days:

Assigned To Name:

Assigned To Organization:

Description:

EFU Effective:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes: Updated By Last Updated

Cross References:

EFU Status and Due Date History:

Wolf Creek Nuclear Operating Corporation

00107903 Condition Report

Refer document in its entirety to the licensee.

AR #: 00107903 **Severity Type:** CR **Level:** **Due Date:** **Status:** PRE-APRV **Status Date:** 10/04/2016

AR Subject: Rx Stud 30, Nut 39 rejected during inspection **Age In Days:** 0

Owed To Name:

Owed To Department:

Owed To Alert Group: WC SRT

Origination Date: 10/04/2016

Initiator: HEFFRON, JASON M

Orig Department: 0060030 - Heffron Jason

Condition Report Summary:

Type	AR#-Assign#-Sub-Assign#	Owed/Assign To	Due Date	Status
CR	00107903	WC SRT		PRE-APRV
RTFQ	00107903-01	OPS REVIEW		ACC/PRI

Attachments:

CR Detail

Asset/Equip: RBB01 **Work Request:** 16-118516

Description: During post cleaning visual inspection of the Rx Studs performed under 15-406820-002, Studs 30 and Nut 39 were rejected due to requirements within FHP 02-009C 8.1.7.1.d. Stud 30 was identified with approximately 2 inches of upset metal on the first thread area. Nut 39 was identified with approximately 2 inch band of upset metal at approximately 2 inches from the flat or mating side of the nut. These conditions were noted in CR 107838 which lacked specifics required by engineering. Pictures stored at K:\Data\NDE\Photos\BALeaks\BB Components\RV Head\2016 Fall RF21 - Pen 77 Canopy Seal Weld\RV Studs\RPV Studs and Nuts\10-2-16

Immediate Concern: N **SM Notified:** N/A **Init DNC:** N

Immediate Actions:

Initiated CR, notified head crew, and contacted engineering for evaluation.

Extent of condition:

Recommended Resolution:

Screening Review

Operability:

3 OPER/DNC
What is the defect/degraded nonconforming condition?
Studs 30 and Nut 39 were rejected due to requirements within FHP 02-009C 8.1.7.1.d. Stud 30 was identified with approximately 2 inches of upset metal on the first thread area. Nut 39 was identified with approximately 2 inch band of upset metal at approximately 2 inches from the flat or mating side of the nut.
What SSC is affected by the deficiency?
RBB01, REACTOR VESSEL
What is the design/safety function of the affected SSC?
Components that contain or transport the coolant to or from the reactor core make up the RCS. Component joints are made by welding, bolting, rolling, or pressure loading. Valves isolate connecting systems from the RCS. During plant life, the joint and valve interfaces can allow varying amounts of reactor coolant LEAKAGE, through either normal operational wear or mechanical deterioration.

The Reactor Head Closure Studs Aging Management Program document describes the requirements for the implementation of the Reactor Head Closure Studs aging management program. The QC inspections are a part of this program. The program is credited for the performance of aging management activities that are required by license renewal and are associated with regulatory commitments.
What effect/or potential effect does the non-conforming condition have on the affected SSC's ability to perform its intended design/safety function? No RCS leakage from the reactor vessel head flange has been occurring. The indications are minor and only affect a few threads of the many that are available. Only a few of the 54 total studs/nuts are affected.
This SSC is OPERABLE BUT DEGRADED because the indications are minor and not a sign of aging as much as damage that has occurred from handling.
Extent of condition: All 54 studs are being inspected.
References: TS 3.4.13; WCLR-30, License Renewal Aging Management Plan

Reportable: N

Environmental Issue: N

Tech Spec Sec 5: N

Personnel Safety Issue: N

Reactivity Issue: N

Impact Risk Assessment: N

OPS Review: REEVES, GLENN W

CR/WR Screening: JENKINS, MARK A

Significance Cat: 99 - NOT APPLICABLE

Screen/SRT Notes:

General Notes:

Other Related Information

Assignment Status Summary:

Total Assigns/Subs:	1 - 0
Open Assigns/Subs:	1 - 0
Overdue Assigns/Subs:	0 - 0

Cross References:

Type	Number	Sub Number
MPAC WORK REQUEST	16-118516	

Status & Due Date History:

Responsible Person	Date Updated	Status	Due Date
HEFFRON, JASON M	10/04/2016	INPROG	
HEFFRON, JASON M	10/04/2016	H/APPR	

JENKINS, MARK A 10/05/2016 PRE-APRV

NON QA Record Information:

Rework Issue:	N
Radiological Occurrence:	N
Potential OE:	N
Training Issue:	N
Site Clock Reset:	N
Division Clock Reset:	N
Discovery Code:	03 - OTHER WC PERSONNEL
Critical Equipment Failure:	N
Maintenance Rule:	N
Outage Issue:	N
Margin Management Issue:	N
Culpable Org:	
Keywords:	
Trend Data:	

Evaluation/Checklist

Assignment #: **Due Date:** **Status:** **Status Date:**

Subject: **Age In Days:** **Total Age:**

Assigned To Name:

Assigned To Organization:

Description:

Condition Statement:

Extent of Condition:

Operating Experience:

Evaluation and Conclusion:

Cause:

Extent of Cause:

Safety Significance:

Actions Taken:

Information Sources:

Review and Approvals

QA Review:

Rad Protection Review:

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extentions

# of Extentions:

Extention Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes: Updated By Last Updated

References:

EVAL Status & Due Date History:

Plan and Actions

Plan Assignment #: **Status:** **Status Date:**

Plan Subject: **Age In Days:**

Assigned To Name:

Assigned To Organization:

Description:

Action Assignment #: **Action Due Date:** **Status:** **Status Date:**

Action Subject: **Age In Days:**

Assigned To Name:

Assigned To Organization:

Description:

Action Category:

LTCA:

Schedule Requirement:

RCMS #:

Commitment:

Commit To Agency:

Work Performed:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

# of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Plan and Action Information

Plan Assignment Notes: Updated By Last Updated

Action Assignment Notes:

Plan Completion Notes:

Action Completion Notes:

Plan Cross Reference: Type Number Sub Number

Action Cross Reference:

Plan Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Action Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Effectiveness Follow-up

EFU Assignment #: EFU Due Date: Status: Status Date:

EFU Subject: Age In Days:

Assigned To Name:

Assigned To Organization:

Description:

EFU Effective:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

# of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes: Updated By Last Updated

Cross References:

EFU Status and Due Date History:

00107838 Condition Report

Refer document in its entirety to the licensee.

AR #: 00107838 **Severity Type:** CAQ **Level:** FFT **Due Date:** 11/03/2016 **Status:** APPROVED **Status Date:** 10/04/2016

AR Subject: Reactor stud and Nut failed QC inspection **Age In Days:** 1

Owed To Name:

Owed To Department: 3132000 - Chaney Chris

Owed To Alert Group: OPS REVIEW

Origination Date: 10/03/2016

Initiator: SCHWINGHAMER, FREDRICK W

Orig Department: 3132000 - Chaney Chris

Condition Report Summary:

Type	AR#-Assign#-Sub-Assign#	Owed/Assign To	Due Date	Status
CAQ	00107838	OPS REVIEW	11/03/2016	APPROVED
RTFQ	00107838-01	OPS REVIEW		ACC/PRI
RACT	00107838-01-01	OPS REVIEW		COMPLETE

Attachments:

CR Detail

Asset/Equip: RBB01 **Work Request:** 16-118471

Description: During reactor vessel stud cleaning stud 30 and nut 39 failed the QC inspection. This will need to be evaluated by the engineer.

Immediate Concern: N **SM Notified:** N/A **Init DNC:** N

Immediate Actions:
CR written

Extent of condition:

Recommended Resolution:

Screening Review

Operability:

4 INOPERABLE
What is the defect/degraded nonconforming condition?
During reactor vessel stud cleaning stud 30 and nut 39 failed the QC inspection.
What SSC is affected by the deficiency?
Reactor Vessel RBB01
What is the design/safety function of the affected SSC?
USAR Section 5.3.3:
The reactor vessel is cylindrical with a welded hemispherical bottom head and a removable, bolted, flanged, and gasketed hemispherical upper head. The reactor vessel flange and head are sealed by two hollow metallic O-rings. Seal leakage is detected by means of two leakoff connections: one between the inner and outer ring and one outside the outer O-ring. The vessel contains the core, core support structures, control rods, and other parts directly associated with the core. The reactor vessel closure head contains head adapters. These head

adapters are tubular members, attached by partial penetration welds to the
underside of the closure head. The upper end of these adapters contains Acme
threads for the assembly of control rod drive mechanisms or instrumentation
adapters. The seal arrangement at the upper end of these adapters consists of
a welded flexible canopy seal. Inlet and outlet nozzles are located
symmetrically around the vessel. Outlet nozzles are arranged on the vessel to
facilitate optimum layout of the RCS equipment. The inlet nozzles are tapered
from the coolant loop vessel interfaces to the vessel inside wall to reduce
loop pressure drop
The bottom head of the vessel contains penetration nozzles for connection and
entry of the nuclear incore instrumentation. Each nozzle consists of a tubular
member made of either an Inconel or an Inconel-stainless steel composite tube.
Each tube is attached to the inside of the bottom head by a partial penetration
weld.
Internal surfaces of the vessel which are in contact with primary coolant are
weld overlay with 0.125 inch minimum of stainless steel or Inconel.
The reactor vessel is designed and fabricated in accordance with the
requirements of the ASME Code, Section III. Principal design parameters of the
reactor vessel are given in Table 5.3-2. The reactor vessel is shown in Figure
5.3-1.
What effect/or potential effect does the deficiency have on the affected SSC's ability to perform its intended design/safety function?
The SSC's is functional because:
With Stud 30 and Nut 39 failing QC inspection, the Reactor Vessel is INOPERABLE and this condition needs to be evaluated by Engineering for a plan to resolve the issue.
Extent of condition? Where does this condition exist?
Inspection of RV studs and nuts is ongoing and will identify any further deficiencies.
References?
USAR 5.3.3

Reportable: N

Environmental Issue: N

Tech Spec Sec 5: N

Personnel Safety Issue: N

Reactivity Issue: N

Impact Risk Assessment:	N
OPS Review:	SHAFER, STUART R
CR/WR Screening:	SHAFER, STUART R
Significance Cat:	99 - NOT APPLICABLE
Screen/SRT Notes:	

General Notes:

	Updated By	Last Updated
CR identifies a condition that did not meet QC inspection	CHSIBLE	10/04/2016
requirements. The CR does not conclude that the equipment	CHSIBLE	10/04/2016
was not capable of performing its design function to	CHSIBLE	10/04/2016
maintain RCS pressure integrity. NO MRE required.	CHSIBLE	10/04/2016

Other Related Information

Assignment Status Summary:

Total Assigns/Subs:	1 - 1
Open Assigns/Subs:	1 - 0
Overdue Assigns/Subs:	0 - 0

Cross References:

Type	Number	Sub Number
MPAC WORK REQUEST	16-118471	

Status & Due Date History:

Responsible Person	Date Updated	Status	Due Date
SCHWINGHAMER, FREDRICK W	10/03/2016	INPROG	
SCHWINGHAMER, FREDRICK W	10/03/2016	H/APPR	
KING, SELENA R	10/04/2016	APPROVED	11/03/2016
SHAFER, STUART R	10/03/2016	PRE-APRV	

NON QA Record Information:

Rework Issue:	N
Radiological Occurrence:	N
Potential OE:	N
Training Issue:	N
Site Clock Reset:	N
Division Clock Reset:	N
Discovery Code:	03 - OTHER WC PERSONNEL
Critical Equipment Failure:	N
Maintenance Rule:	N
Outage Issue:	N
Margin Management Issue:	N
Culpable Org:	
Keywords:	RESTR 21 - REFUEL 21 MODE RESTRAINT

Trend Data:

Evaluation/Checklist

Assignment #: **Due Date:** **Status:** **Status Date:**

Subject: **Age In Days:** **Total Age:**

Assigned To Name:

Assigned To Organization:

Description:

Condition Statement:

Extent of Condition:

Operating Experience:

Evaluation and Conclusion:

Cause:

Extent of Cause:

Safety Significance:

Actions Taken:

Information Sources:

Review and Approvals

QA Review:

Rad Protection Review:

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extentions

# of Extentions:

Extention Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes: **Updated By** **Last Updated**

References:

EVAL Status & Due Date History:

Plan and Actions

Plan Assignment #: **Status:** **Status Date:**

Plan Subject: **Age In Days:**

Assigned To Name:

Assigned To Organization:

Description:

Action Assignment #: **Action Due Date:** **Status:** **Status Date:**

Action Subject: **Age In Days:**

Assigned To Name:

Assigned To Organization:

Description:

Action Category:

LTCA:

Schedule Requirement:

RCMS #:

Commitment:

Commit To Agency:

Work Performed:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

# of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Plan and Action Information

Plan Assignment Notes:	Updated By	Last Updated

Action Assignment Notes:

00107838-01-01
Action auto-closed based on work completion for WO 16-418198-000 INDUS 10/04/2016

Plan Completion Notes:

Action Completion Notes:

Plan Cross Reference:	Type	Number	Sub Number

Action Cross Reference:

Plan Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Action Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Effectiveness Follow-up

EFU Assignment #: EFU Due Date: Status: Status Date:

EFU Subject: Age In Days:

Assigned To Name:

Assigned To Organization:

Description:

EFU Effective:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

# of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes: Updated By Last Updated

Cross References:

EFU Status and Due Date History:

Refer document in its entirety to the licensee.

Mode changes

LOGDATE	ENTRY	LATEENTRY	ALUSER	SS	USERTYPE
9/1/2016 12:00:00 AM	Continued the Watch Mode: 1, 3559.7 MWt, 1234.8 MWe. Major Equipment Problems: None Major Tech Spec Action Statements in effect: None	0	mifulle1	ermarti1	CRS
9/1/2016 3:05:00 AM	Commenced STS CR-001 "SHIFT LOG FOR MODES 1 2 AND 3".	0	mifulle1	ermarti1	CRS
9/1/2016 3:06:00 AM	Completed STS CR-001 "SHIFT LOG FOR MODES 1 2 AND 3" SAT.	0	mifulle1	ermarti1	CRS
9/1/2016 1:41:00 PM	**** Entered Tech. Spec. 3.3.2, Table 3.3.2-1, Function 1.a & b, 2.a & b, 3.a.(1), 3.a.(2), 3.a.(3), 3.b.(1), 3.b.(2), 3.b.(3), 4.b, 5.a, 5.d, 6.b, 6.e, 7.a ~**** Complying with Conditions A, B, C, E, & G (Condition C and G, Note allows this condition for testing for up to 4 hours.) SSPS train "B" Mode Selector switch is in TEST to support performance of STS IC-211B. This entry was planned.	0	daghols	jocamp	CRS
9/1/2016 1:41:00 PM	**** Entered Tech. Spec. 3.3.1, Table 3.3.1-1, Function 17, 18.b, 20, & 21 ~**** Complying with Condition A, Q, T, & U. (Condition Q Note allows this condition for testing for up to 4 hours.) (Condition T requires verification of P-7 in proper state within 1 hour.) SSPS train "B" Mode Selector switch is in TEST to support performance of STS IC-211B. This entry was planned.	0	daghols	jocamp	CRS
9/1/2016 2:45:00 PM	**** Exited Tech. Spec. 3.3.2, Table 3.3.2-1, Function 1.a & b, 2.a & b, 3.a.(1), 3.a.(2), 3.a.(3), 3.b.(1), 3.b.(2), 4.b, 5.a, 5.d, 6.b, 6.e, 7.a~**** Conditions A, B, C, E, & G. SSPS train "B" Mode Selector switch is restored to OPERATE during restoration from STS IC-211B.	0	daghols	jocamp	CRS
9/1/2016 10:50:00 PM	System Operations-Generation, Larry, called to advise that their "EMS" is down and they are unable to monitor the Wolf Creek gross or net production. He also asked for and received an update on our RCS leakage issue. I contacted System Operations-Transmission and verified with them that the EMS has no impact upon the Westar Energy or Southwest Power Pool Predictive Model.	0	edpitt	ermarti1	CRS
9/2/2016 12:00:00 AM	Continued the Watch Mode: 1, 3559.8 MWt, 1237.3 MWe. Major Equipment Problems: Continuing attempts to locate and isolate sources of RCS leakage. Current leak rate is calculated at approximately 0.608 gpm. Major Tech Spec Action Statements in effect: None	0	edpitt	ermarti1	CRS
9/2/2016 3:00:00 AM	Commenced STS CR-001 "SHIFT LOG FOR MODES 1 2 AND 3".	0	edpitt	ermarti1	CRS
9/2/2016 3:09:00 AM	Completed STS CR-001 "SHIFT LOG FOR MODES 1 2 AND 3" SAT.	0	edpitt	ermarti1	CRS
9/2/2016 8:08:00 AM	****Entered Tech. Spec. 3.4.13~**** Complying with Condition B.1. Equipment taken out of service: Unidentified leakage is greater than 1 gpm. Be in Mode 3 in 6 hours.. This entry was unplanned. The current Risk Assessment was reviewed. Current risk management actions are appropriate for the current conditions. No additional actions are needed.	0	tidunlo	mablow	CRS
9/2/2016 8:08:00 AM	****Entered Tech. Spec. 3.4.13~**** Complying with Condition B.2. Equipment taken out of service: Unidentified leakage has exceeded 1 gpm. Be in mode 5 in 36 hours.. This entry was unplanned. The current Risk Assessment was reviewed. Current risk management actions are appropriate for the current conditions. No additional actions are needed.	0	tidunlo	mablow	CRS
9/2/2016 11:58:00 AM	Unit is in MODE 3.	0	trlazar	mablow	CRS
9/2/2016 12:06:00 PM	Placed GDT #4 In Service in HP Mode, Using Waste Gas Compressor 'A' and Recombiner 'A', IAW SYS HA-200	0	rygilbe	mablow	TREAT
9/2/2016 12:13:00 PM	Place steam dumps in stm press mode.	0	trlazar	mablow	CRS
9/2/2016 9:50:00 PM	Added SB, REACTOR PROTECTION SYSTEMS to the EOL. Reason: P-4/Lo Tavg FWIS jumpers have been been installed IAW GEN 00-005 Step A.23 & SYS SB-122. Must be removed prior to entering Mode 2. The Current Risk Assessment was reviewed.	0	edpitt	ermarti1	CRS
9/3/2016 12:00:00 AM	Continued the watch Mode 3, RCS Pressure 2235 psig. RCS Temperature 558 degrees Fahrenheit Major Equipment Problems: RCS Leak Rate Major Tech Spec Action Statements in effect: 3.4.13, Condition B.	0	edpitt	ermarti1	CRS
9/3/2016 3:00:00 AM	Commenced STS CR-001 "SHIFT LOG FOR MODES 1 2 AND 3".	0	edpitt	ermarti1	CRS
9/3/2016 3:45:00 AM	Emergent Work update: RBB01 Penetration #77 canopy seal has been identified as the source of increased RCS leakage. This seal weld leak is not considered RCS pressure boundary leakage. The RCS is operable but degraded. IOD contained within CR#106867. Preparations for an orderly entry into Mode 5 will continue to support repairs.	0	ermarti1	ermarti1	SM
9/3/2016 4:11:00 AM	Completed STS CR-001 "SHIFT LOG FOR MODES 1 2 AND 3" SAT.	0	edpitt	ermarti1	CRS
9/4/2016 12:00:00 AM	Continued the watch Mode 3, RCS Pressure 2235 psig. RCS Temperature 558 degrees Fahrenheit Major Equipment Problems: RCS Leakage Major Tech Spec Action Statements in effect: None	0	edwinn	jocamp	CRS
9/4/2016 2:55:00 AM	Completed STS CR-001 "SHIFT LOG FOR MODES 1 2 AND 3" SAT.	0	edwinn	jocamp	CRS
9/4/2016 3:00:00 AM	Commenced STS CR-001 "SHIFT LOG FOR MODES 1 2 AND 3".	0	edwinn	jocamp	CRS
9/5/2016 12:00:00 AM	Continued the watch Mode 3, RCS Pressure 2234 psig. RCS Temperature 558 degrees Fahrenheit Major Equipment Problems: RCS Leakage Major Tech Spec Action Statements in effect: None	0	thfairc	jocamp	CRS
9/5/2016 3:00:00 AM	Commenced STS CR-001 "SHIFT LOG FOR MODES 1 2 AND 3".	0	thfairc	jocamp	CRS
9/5/2016 3:06:00 AM	Completed STS CR-001 "SHIFT LOG FOR MODES 1 2 AND 3" SAT.	0	thfairc	jocamp	CRS
9/5/2016 4:58:00 AM	GERE0092 OOS for filter change. Referenced TR 3.3.18, Mode 3 is not applicable. No actions required.	0	thfairc	jocamp	CRS
9/6/2016 12:00:00 AM	Continued the watch Mode 3, RCS Pressure 1873 psig. RCS Temperature 544 degrees Fahrenheit Major Equipment Problems: RCS Leakage Major Tech Spec Action Statements in effect: none	0	thfairc	jocamp	CRS
9/6/2016 3:00:00 AM	Commenced STS CR-001 "SHIFT LOG FOR MODES 1 2 AND 3".	0	thfairc	jocamp	CRS
9/6/2016 3:00:00 AM	Completed STS CR-001 "SHIFT LOG FOR MODES 1 2 AND 3" SAT.	0	thfairc	jocamp	CRS
9/6/2016 8:39:00 PM	Completed STS BG-001 "BORON INJECTION FLOW PATH VERIFICATION" SAT. Flow path verified for Mode 3 with A BAST level at 82% and B BAST being used to Borate to refuel concentration.	0	edwinn	sebell	CRS

LOGDATE	ENTRY	LATEENTRY	ALUSER	SS	USERTYPE
9/7/2016 12:00:00 AM	Continued the watch Mode 3 , RCS Pressure 1872 psig, RCS Temperature 545.5 degrees Fahrenheit Major Equipment Problems: RCS Leakage on Canopy Seal Weld for Pen 77 Major Tech Spec Action Statements in effect: none	0	edwinn	sebell	CRS
9/7/2016 2:56:00 AM	Shutdown Safety Function Status and Risk Assessment has been approved and briefed for entry to MODE 4 iaw AP 22B-001/GEN 00-006 Attachment M.	0	sebell	sebell	SM
9/7/2016 3:05:00 AM	Commenced STS CR-001 "SHIFT LOG FOR MODES 1 2 AND 3".	0	edwinn	sebell	CRS
9/7/2016 3:05:00 AM	Commenced STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6".	0	edwinn	sebell	CRS
9/7/2016 3:07:00 AM	Completed STS CR-001 "SHIFT LOG FOR MODES 1 2 AND 3" SAT.	0	edwinn	sebell	CRS
9/7/2016 4:51:00 AM	Added EJ, RESIDUAL HEAT REMOVAL SYSTEM to the EOL. Reason: Step M.1.1.2 of Gen 00-006 requires STS EJ-007B to be completed within 12 hrs of reaching mode 4 per SR 3.4.6.4 The Current Risk Assessment was reviewed.	0	edwinn	sebell	CRS
9/7/2016 5:22:00 AM	Commenced STS BG-001 "BORON INJECTION FLOW PATH VERIFICATION" for entry into mode 4	0	edwinn	sebell	CRS
9/7/2016 6:05:00 AM	Completed STS BG-001 "BORON INJECTION FLOW PATH VERIFICATION" SAT. For Mode 4	0	edwinn	sebell	CRS
9/7/2016 6:30:00 AM	****Exited Tech. Spec. 3.3.3~**** Condition A.1. Exited the mode of applicability. Remains a M-3 restraint.	0	ermarti1	ermarti1	SM
9/7/2016 6:30:00 AM	****Exited Tech. Spec. 3.3.3 fun 5~**** Condition A, B, C, D, and F. Exited the mode of applicability. Remains a M-3 restraint.	0	ermarti1	ermarti1	SM
9/7/2016 6:30:00 AM	****Exited Tech. Spec. 3.5.2~**** Condition A.1. Have exited the mode of applicability.	0	edwinn	sebell	CRS
9/7/2016 6:30:00 AM	Plant has entered Mode 4.	0	edwinn	sebell	CRS
9/7/2016 6:30:00 AM	****Entered . SR 3.4.6.4~**** Complying with Condition . Equipment taken out of service: B RHR Train. STS EJ-007B must be completed within 12 Hrs of entry into mode 4. This entry was planned. The current Risk Assessment was reviewed. Current risk management actions are appropriate for the current conditions. No additional actions are needed.	0	edwinn	sebell	CRS
9/7/2016 8:27:00 AM	Started PEJ01B, "RESIDUAL HEAT REMOVAL PUMP" in shutdown cooling mode IAW SYS EJ-120.	0	edpitt	ermarti1	CRS
9/7/2016 12:24:00 PM	Commenced STS BG-001 "BORON INJECTION FLOW PATH VERIFICATION" to establish boration flowpath to be used to satisfy Mode 5 requirements	0	edpitt	ermarti1	CRS
9/7/2016 1:14:00 PM	Completed STS CR-001 "SHIFT LOG FOR MODES 1 2 AND 3", partial for Mode 3 prior to entering Mode 4, SAT.	0	edpitt	ermarti1	CRS
9/7/2016 1:25:00 PM	Added AL, AUXILIARY FEEDWATER SYSTEM to the EOL. Reason: ALV0076 AND ALV0077, Aux Feedwater Pump Discharge Cross-Connect Valves, have been opened. These valves must be locked closed prior to entering Mode 3. The Current Risk Assessment was reviewed.	0	edpitt	ermarti1	CRS
9/7/2016 3:42:00 PM	The Unit has entered Mode 5.	0	ALSCHRA	sebell	TURB
9/7/2016 4:04:00 PM	Added SB, REACTOR PROTECTION SYSTEMS to the EOL. Reason: SSPS disabled for Mode 5 per SYS SB-120. Re-enable prior to mode 4 and prior to Closing Reactor Trip Breakers with Rod Control System capable of rod withdrawal The Current Risk Assessment was reviewed.	0	edwinn	sebell	CRS
9/8/2016 12:00:00 AM	Continued the watch Mode 5 , RCS Pressure 340 psig, RCS Temperature 189 degrees Fahrenheit Major Equipment Problems: RCS leakage Major Tech Spec Action Statements in effect: None	0	edwinn	sebell	CRS
9/8/2016 2:31:00 AM	Completed STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6" SAT.	0	edwinn	sebell	CRS
9/8/2016 3:00:00 AM	Commenced STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6".	0	trrohlf	sebell	CRS
9/8/2016 9:08:00 AM	Placed GTRE0031 in bypass for testing, IAW STS MT-024A. T.S. 3.3.6 Function 3 and T.S. 3.4.15.b not applicable in Mode 5.	0	brdavis2	ermarti1	SM
9/8/2016 9:08:00 AM	Placed GKRE0004 in bypass for testing, IAW STS MT-024A. T.S. 3.3.7 Function 3 Not Applicable in Mode 5.	0	brdavis2	ermarti1	SM
9/9/2016 12:00:00 AM	Continued the watch Mode 5 , RCS Pressure 341 psig, RCS Temperature 188 degrees Fahrenheit Major Equipment Problems: None Major Tech Spec Action Statements in effect: None	0	trrohlf	sebell	CRS
9/9/2016 3:00:00 AM	Commenced STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6".	0	trrohlf	sebell	CRS
9/9/2016 3:30:00 AM	Completed STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6" SAT.	0	trrohlf	sebell	CRS
9/9/2016 3:29:00 PM	Added BB, REACTOR COOLANT SYSTEM to the EOL. Reason: MODE 5 Clearance Order R-AB-N-001, RF21 Secondary Work. Tag#9543. RCS must be maintained in Mode 5 or below. The Current Risk Assessment was reviewed.	0	jestrah	ermarti1	CRS
9/9/2016 4:24:00 PM	Completed OFN BB-007 "RCS LEAKAGE HIGH". No further actions required. Unit is in Mode 5.	0	jestrah	ermarti1	CRS
9/10/2016 12:00:00 AM	Continued the watch Mode 5 , RCS Pressure 345 psig, RCS Temperature 188 degrees Fahrenheit Major Equipment Problems: None Major Tech Spec Action Statements in effect: None	0	trrohlf	jocamp	CRS
9/10/2016 3:00:00 AM	Commenced STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6".	0	trrohlf	jocamp	CRS
9/10/2016 3:30:00 AM	Completed STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6" SAT.	0	trrohlf	jocamp	CRS
9/11/2016 12:00:00 AM	Continued the watch Mode 5 , RCS Pressure 343 psig, RCS Temperature 188.55 degrees Fahrenheit Major Equipment Problems: None Major Tech Spec Action Statements in effect: None	0	thfaire	jocamp	CRS
9/11/2016 3:00:00 AM	Commenced STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6".	0	thfaire	jocamp	CRS
9/11/2016 3:09:00 AM	Completed STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6" SAT.	0	thfaire	jocamp	CRS

LOGDATE	ENTRY	LATEENTRY	ALUSER	SS	USERTYPE
9/11/2016 10:24:00 PM	Added XX, GENERAL/MULTIPLE COMP OR SYS to the EOL. Reason: Perform a Locked Component Audit one shift before entering Mode 4, IAW AP 21G-001. The Current Risk Assessment was reviewed.	0	kylaubn	jocamp	CRS
9/12/2016 12:00:00 AM	Continued the watch Mode 5 , RCS Pressure 340 psig, RCS Temperature 189 degrees Fahrenheit Major Equipment Problems: none Major Tech Spec Action Statements in effect: none	0	kylaubn	jocamp	CRS
9/12/2016 12:15:00 AM	Added PG020PBR1, PG20PA1 DISTRIBUTION PNLBD (LOC @ MCC PG20P) 24 CKTS to the EOL. Reason: PG020PBR1 circuit breakers 11, 12, 15 and 16 have been turned on for the installation of RADS. These breakers need turned off prior to entering Mode 4. The Current Risk Assessment was reviewed.	0	kylaubn	jocamp	CRS
9/12/2016 12:37:00 AM	Placed GKRE0005 in bypass for filter change, IAW CHS AX-G02. T.S. 3.3.7 Function 3 not applicable in Mode 5, no fuel movement in progress.	0	tygreen	jocamp	CRS
9/12/2016 12:37:00 AM	Placed GTRE0032 in bypass for filter change, IAW CHS AX-G02. Reference T.S. 3.3.6 Function 3 and T.S. 3.4.15.b. Not applicable in Mode 5 with no fuel handling in progress.	0	tygreen	jocamp	CRS
9/12/2016 12:55:00 AM	Placed GKRE0004 in bypass for filter change, IAW CHS AX-G02. T.S. 3.3.7 Function 3 not applicable in Mode 5, no fuel movement in progress.	0	tygreen	jocamp	CRS
9/12/2016 12:55:00 AM	Placed GTRE0031 in bypass for filter change, IAW CHS AX-G02. Reference T.S. 3.3.6 Function 3 and T.S. 3.4.15.b. Not applicable in Mode 5 with no fuel handling in progress.	0	tygreen	jocamp	CRS
9/12/2016 3:00:00 AM	Commenced STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6".	0	kylaubn	jocamp	CRS
9/12/2016 3:55:00 AM	Completed STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6" SAT.	0	kylaubn	jocamp	CRS
9/12/2016 8:16:00 PM	Authorized the OCC to allow removal of the RHR encapsulations. Both RHR containment recirculation valves are de-energized and closed. The encapsulations are required during MODE 1-4 when containment integrity is required. Ref. TS 3.6.3, USAR section 5.4, PIR 20003117.	0	ercarls	mablow	RSO
9/13/2016 12:00:00 AM	Continued the watch Mode 5 , RCS Pressure 340 psig, RCS Temperature 190 degrees Fahrenheit Major Equipment Problems: none Major Tech Spec Action Statements in effect: none	0	tygreen	mablow	CRS
9/13/2016 12:07:00 AM	Removed GTRE0021B from service for filter change. Complying with ODCM Table 3-2 Function 1.a Action 40 & 43. TR 3.3.3 Function 5 not applicable in mode 5.	0	tygreen	mablow	CRS
9/13/2016 3:00:00 AM	Commenced STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6".	0	tygreen	mablow	CRS
9/13/2016 3:00:00 AM	Completed STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6" SAT.	0	tygreen	mablow	CRS
9/13/2016 3:49:00 AM	Placed GDT #7 In Service in High Pressure Mode, Using Waste Gas Compressor 'A' and Recombiner 'A', IAW SYS HA-200	0	rygilbe	mablow	TREAT
9/13/2016 1:45:00 PM	Added ABPV0003, SGC ATOMSPHERIC RELIEF VALVE <FR> <CAT 1 AOV PROGRAM VALVE> <AFFECTS CONTAINMENT/CLOSURE INTEGRITY> <LOCATION ON AB228DBB-10 AND AB022EBD-8> <TIME CRITICAL ACTION EQUIPMENT> <FR=FIRE RISK SIGNIFCANT COMPONENT> to the EOL. Reason: A moderate air leak was heard issuing from the controller on ABPV0003 during performance of STS KA-010. This leakage was large enough that the N2 supply check valve test and air supply check valve test could not be performed. Retest: STS KA-010 Reference: CR 00107102 The Current Risk Assessment was reviewed.	0	glreeve	sebell	SE
9/13/2016 1:45:00 PM	Added ABPV0002, SG B ATOMSPHERIC RELIEF VALVE <FR> <CAT 1 AOV PROGRAM VALVE> <AFFECTS CONTAINMENT CLOSURE/ INTEGRITY> <LOCATION ON AB227DBB-10 AND AB021EBD-8> <TIME CRITICAL ACTION EQUIPMENT> <FR=FIRE RISK SIGNIFCANT COMPONENT> to the EOL. Reason: A moderate air leak was heard issuing from the controller on ABPV0002 during performance of STS KA-010. This leakage was large enough that the N2 supply check valve test and air supply check valve test could not be performed. Retest: STS KA-010 Reference: CR 00107103 The Current Risk Assessment was reviewed.	0	glreeve	lahauth	SE
9/13/2016 1:45:00 PM	Added ALHV0010, TD AFWP DISCH TO SG B <FR> <AFFECTS CONTAINMENT CLOSURE/ INTEGRITY> <CAT 1 AOV PROGRAM VALVE> <LOCATION AL038DBB-4 AND AL037DBC-4> <TIME CRITICAL ACTION EQUIPMENT> <FR=FIRE RISK SIGNIFCANT COMPONENT> to the EOL. Reason: A moderate air leak was heard issuing from the controller on ABPV0002 during performance of STS KA-010. This leakage was large enough that the N2 supply check valve test and air supply check valve test could not be performed. This condition affects the nitrogen supply to ABPV0002 and ALHV0010. Retest: STS KA-010 Reference: CR 00107103 The Current Risk Assessment was reviewed.	-1	glreeve	sebell	CRS

LOGDATE	ENTRY	LATEENTRY	ALUSER	SS	USERTYPE
9/13/2016 1:45:00 PM	Added ALHV0012, TD AFWP DISCH TO SG C <FR> <AFFECTS CONTAINMENT CLOSURE/ INTEGRITY> <CAT 1 AOV PROGRAM VALVE> <LOCATION AL048DBB-4 AND AL039DBC-4>> <TIME CRITICAL ACTION EQUIPMENT> <FR=FIRE RISK SIGNIFCANT COMPONENT> to the EOL Reason: A moderate air leak was heard issuing from the controller on ABPV0003 during performance of STS KA-010. This leakage was large enough that the N2 supply check valve test and air supply check valve test could not be performed. This condition affects the nitrogen supply to ABPV0003 and ALHV0012. Retest: STS KA-010 Reference: CR 00107102 The Current Risk Assessment was reviewed.	-1	glreeve	sebell	CRS
9/14/2016 12:00:00 AM	Continued the watch Mode 5 Loops Filled. RCS pressure is 340 psig, RCS temperature is 173 degrees.	0	chwoods	mablow	CRS
9/14/2016 3:00:00 AM	Completed STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6" SAT.	0	chwoods	mablow	CRS
9/14/2016 3:00:00 AM	Commenced STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6".	0	chwoods	mablow	CRS
9/14/2016 10:50:00 AM	Added BB, REACTOR COOLANT SYSTEM to the EOL Reason: Scaffold 16-S6186 installs 3 Yo-Yo's on the Rx Head plenum to support maintenance on CRDM Fans. This is a MODE 4 restraint to have removed. The Current Risk Assessment was reviewed.	0	trrohlf	sebell	CRS
9/14/2016 3:40:00 PM	Requested Prompt Operability evaluation from Engineering to support Immediate Operability Determination for CR 107148 regarding line AL046DBD-3, combined AFW return to CST. Based on current MODE and mode where AFW is required, relaxed time required for the Prompt Op Eval to needed before Mode 3.	0	lahauth	lahauth	SM
9/14/2016 3:40:00 PM	Added AL, AUXILIARY FEEDWATER SYSTEM to the EOL Reason: Line AL046DBD-3, combined AFW recire to CST, has damage due to contact by a drill bit during construction activities for a pipe hanger. CR 107148. PROMPT operability determination requested from ENG, required before Mode 3 (time restriction relaxed by SM). The Current Risk Assessment was reviewed.	0	lahauth	lahauth	SM
9/15/2016 12:00:00 AM	Continued the watch Mode 5 , RCS Pressure 335 psig, RCS Temperature 173 degrees Fahrenheit Major Equipment Problems: none Major Tech Spec Action Statements in effect: none	0	tygreen	jocamp	CRS
9/15/2016 2:48:00 AM	Commenced STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6".	0	tygreen	jocamp	CRS
9/15/2016 3:04:00 AM	Completed STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6" SAT.	0	tygreen	jocamp	CRS
9/15/2016 3:17:00 AM	Added BB, REACTOR COOLANT SYSTEM to the EOL Reason: TSR 16-100 installed under WO 15-402451-026 on the 'A' loop secondary platform. Remove prior to MODE 4. Ref. DCP 09993 The Current Risk Assessment was reviewed.	0	ercarls	jocamp	SM
9/15/2016 3:23:00 AM	Added BB, REACTOR COOLANT SYSTEM to the EOL Reason: TSR 16-101 installed per WO 15-402451-027 on the 'B' loop secondary platform. Remove prior to MODE 4. Ref. DCP 09993 The Current Risk Assessment was reviewed.	0	ercarls	jocamp	SM
9/15/2016 3:25:00 AM	Added BB, REACTOR COOLANT SYSTEM to the EOL Reason: TSR 16-102 installed per WO 15-402451-028 on the C loop secondary platform. Remove prior to MODE 4. Ref. DCP 09993. The Current Risk Assessment was reviewed.	0	ercarls	jocamp	SM
9/15/2016 3:30:00 AM	Added BB, REACTOR COOLANT SYSTEM to the EOL Reason: TSR 16-103 installed per WO 15-402451-029 on the D loop secondary platform. Remove prior to MODE 4. Ref. DCP 09993 The Current Risk Assessment was reviewed.	0	ercarls	jocamp	SM
9/15/2016 3:41:00 AM	Added BB, REACTOR COOLANT SYSTEM to the EOL Reason: TSR 16-131 installed per WO 15-402451-016 on the D loop cross over line 072-BCA-31, Remove prior to MODE 4. The Current Risk Assessment was reviewed.	0	ercarls	jocamp	SM
9/15/2016 3:49:00 AM	Added EBB01D, STEAM GENERATOR *AFFECTS CONTAINMENT CLOSURE / INTEGRITY* to the EOL Reason: TSR 16-274 intstalled per WO 15-402451-072 on the D steam generator. Remove prior to MODE 4. The Current Risk Assessment was reviewed.	0	ercarls	jocamp	SM
9/15/2016 3:59:00 AM	Added EM, HIGH PRESSURE COOLANT INJECTION SYSTEM to the EOL Reason: TSR 16-060 installed per WO 15-402451-022 on EM-087-BCA-1 1/2 SIS BIT to cold leg 4. Remove prior to MODE 4. The Current Risk Assessment was reviewed.	0	ercarls	jocamp	SM
9/15/2016 4:05:00 AM	Added EBB01A, STEAM GENERATOR *AFFECTS CONTAINMENT CLOSURE / INTEGRITY* to the EOL Reason: TSR 16-258 installed per WO 15-402451-069 on the A S/G. Remove prior to MODE 4. The Current Risk Assessment was reviewed.	0	ercarls	jocamp	SM

LOGDATE	ENTRY	LATEENTRY	ALUSER	SS	USERTYPE
9/15/2016 4:07:00 AM	Added Z002, REACTOR BLDG to the EOL. Reason: TSR 16-110 installed per WO 15-402451-034 at the sludge lance platform near the regen HX. Remove prior to MODE 4. The Current Risk Assessment was reviewed.	0	ercarls	jocamp	SM
9/15/2016 4:14:00 AM	Added BB, REACTOR COOLANT SYSTEM to the EOL. Reason: TSR 16-019 installed per WO 15-402451-006 on BB03-BCA-4 and BB23-BCA-4. Remove prior to MODE 4. The Current Risk Assessment was reviewed.	0	ercarls	jocamp	SM
9/15/2016 4:17:00 AM	Added Z002, REACTOR BLDG to the EOL. Reason: TSR 16-045 installed per WO 15-402451-019 at the reactor vessel head stand area. Remove prior to MODE 4. The Current Risk Assessment was reviewed.	0	ercarls	jocamp	SM
9/15/2016 4:19:00 AM	Added BB, REACTOR COOLANT SYSTEM to the EOL. Reason: TSR 16-023 installed per WO 15-402451-010 on BB019-BCA-31. Remove prior to MODE 4. The Current Risk Assessment was reviewed.	0	ercarls	jocamp	SM
9/15/2016 4:21:00 AM	Added BB, REACTOR COOLANT SYSTEM to the EOL. Reason: TSR 16-005 installed per WO 15-402451-005 on BB054-BCA-3 and BB8085. Remove prior to MODE 4. The Current Risk Assessment was reviewed.	0	ercarls	jocamp	SM
9/15/2016 8:59:00 AM	Placed GT RE-31 in bypass for performance of STS IC-250B. LCO not entered due to not being in the mode of applicability.	0	brdavis2	lahauth	SM
9/15/2016 11:05:00 AM	Added BM, STEAM GENERATOR BLOWDOWN SYSTEM to the EOL. Reason: STS BM-001, SGBD SYSTEM VALVE STATUS VERIFICATION, is late. Must be performed before entering Mode 3. The Current Risk Assessment was reviewed.	0	brdavis2	lahauth	SM
9/15/2016 12:22:00 PM	Added BG, CHEMICAL & VOLUME CONTROL SYSTEM to the EOL. Reason: STS BG-008, ECCS VALVE CHECK, is late. Must be performed before entering Mode 3. The Current Risk Assessment was reviewed.	0	brdavis2	lahauth	SM
9/15/2016 5:15:00 PM	Secured recirc of GDT #1 and Waste Gas compressor 'A'. GDT #1 pressure is currently 6.7psig. There was no addition made to the #1 tank. The increase was due to being in high pressure mode in the previous line up and piping being pressed up because of it. IAW SYS HA-200	0	wihorn1	lahauth	TREAT
9/16/2016 12:00:00 AM	Continued the watch Mode 5 , RCS Pressure 343 psig, RCS Temperature 173 degrees Fahrenheit Major Equipment Problems: none Major Tech Spec Action Statements in effect: none	0	tygreen	jocamp	CRS
9/16/2016 2:49:00 AM	Completed STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6" SAT.	0	tygreen	jocamp	CRS
9/16/2016 3:00:00 AM	Commenced STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6".	0	tygreen	jocamp	CRS
9/16/2016 8:00:00 AM	Placed Waste Gas In Service > GDT #1 > REC 'A' > WGC # 1A > Low Pressure Mode IAW SYS HA-200 in prep for PRT Purge	0	kidonoh	lahauth	TREAT
9/16/2016 3:23:00 PM	Added NG004CDF5, BBHV8351A SEAL WATER INJECTION ISOLATION VALVE <TIME CRITICAL ACTION EQUIPMENT> to the EOL. Reason: Breaker closed per GEN 00-006. Remove power from breaker prior to Mode 4 entry. The Current Risk Assessment was reviewed.	0	brdavis2	lahauth	SM
9/16/2016 3:29:00 PM	Added NG004CEF4, BBHV8351B SEAL WTR INJECTION ISOLATION VALVE <TIME CRITICAL ACTION EQUIPMENT> to the EOL. Reason: Breaker closed per GEN 00-006. Remove power from breaker prior to Mode 4 entry. The Current Risk Assessment was reviewed.	0	brdavis2	lahauth	SM
9/16/2016 3:31:00 PM	Added NG004CEF5, BBHV8351C SEAL WTR INJECTION ISOLATION VALVE <TIME CRITICAL ACTION EQUIPMENT> to the EOL. Reason: Breaker closed per GEN 00-006. Remove power from breaker prior to Mode 4 entry. The Current Risk Assessment was reviewed.	0	brdavis2	lahauth	SM
9/16/2016 3:32:00 PM	Added NG004CFF3, BBHV8351D SEAL WTR INJECTION ISOLATION VALVE <TIME CRITICAL ACTION EQUIPMENT> to the EOL. Reason: Breaker closed per GEN 00-006. Remove power from breaker prior to Mode 4 entry. The Current Risk Assessment was reviewed.	0	brdavis2	lahauth	SM
9/17/2016 12:00:00 AM	Continued the watch Mode 5 , RCS Pressure 60 psig, RCS Temperature 103 degrees Fahrenheit Major Equipment Problems: None Major Tech Spec Action Statements in effect: None	0	tidunlo	jocamp	CRS
9/17/2016 2:51:00 AM	Completed STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6" SAT.	0	tidunlo	jocamp	CRS
9/17/2016 3:00:00 AM	Late Entry: Commenced STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6".	1	elwoods	jocamp	CRS
9/17/2016 8:33:00 AM	Added ZX03, REACTOR BUILDING PERSONNEL HATCH <AFFECTS CONTAINMENT/CLOSURE INTEGRITY> to the EOL. Reason: Air lock door Interlocks disabled per WO 15-407046-000. Interlocks must be reinstalled prior to mode 4. The Current Risk Assessment was reviewed.	0	edwinn	ermarti1	CRS

LOGDATE	ENTRY	LATEENTRY	ALUSER	SS	USERTYPE
9/17/2016 8:36:00 AM	Added ZX02, REACTOR BUILDING AUXILIARY ACCESS HATCH <AFFECTS CONTAINMENT/CLOSURE INTEGRITY> to the EOL. Reason: Emergency escape hatch Interlocks disabled per WO 15-407042-000. Must be re-enabled prior to mode 4 The Current Risk Assessment was reviewed.	0	edwinn	ermarti1	CRS
9/18/2016 12:00:00 AM	Continued the watch Mode 5, maintaining RCS pressure 55-65 psig and RCS temperature 95-110 degrees.	0	chwoods	jocamp	CRS
9/18/2016 2:46:00 AM	Completed STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6" SAT.	0	chwoods	jocamp	CRS
9/18/2016 3:00:00 AM	Commenced STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6".	0	chwoods	jocamp	CRS
9/18/2016 7:52:00 AM	Added AB, MAIN STEAM SYSTEM to the EOL. Reason: STS CH-020 is late as of 9/18/16 @ 1850. Must be completed prior to mode 4 The Current Risk Assessment was reviewed.	0	edwinn	wabrand	CRS
9/18/2016 1:13:00 PM	Completed briefing of outage risk and Tech Specs applicable to changing from MODE 5-LOOPS FILLED to MODE 5, LOOPS NOT FILLED.	0	edpitt	wabrand	CRS
9/18/2016 8:02:00 PM	Placed GDT#1 on recirc in low pressure mode through WGC 'A', IAW SYS HA-200, in preparation for PRT Purge	0	mafeldh	mablow	TREAT
9/19/2016 12:00:00 AM	Continued the watch Mode 5, Loops not Filled. RCS is depressurized, maintaining RCS temperature 95-110 degrees.	0	chwoods	mablow	CRS
9/19/2016 12:26:00 AM	Placed GKRE0004 in bypass for filter change, IAW CHS AX-G02. Referenced Tech Spec 3.3.7, not in Mode of applicability.	0	chwoods	mablow	CRS
9/19/2016 12:52:00 AM	Placed GKRE0005 in bypass for filter change, IAW CHS AX-G02. Referenced T.S. 3.3.7, not in Mode of applicability.	0	chwoods	mablow	CRS
9/19/2016 3:00:00 AM	Completed STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6" SAT.	0	chwoods	mablow	CRS
9/19/2016 3:00:00 AM	Commenced STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6".	0	chwoods	mablow	CRS
9/19/2016 2:06:00 PM	Added KKJ01A, STANDBY DIESEL(GENERATOR) <FR> <TIME CRITICAL ACTION EQUIPMENT> <FR=FIRE RISK SIGNIFCANT COMPONENT> to the EOL. Reason: STS KJ-005A completed for Mode 5/6 defueled only per SR 3.8.2.1. STS KJ-005A must be completed in its entirety prior to entering mode 4. The Current Risk Assessment was reviewed.	0	edwinn	lahauth	CRS
9/19/2016 8:32:00 PM	Placed GDT #1 @ 34psig on Recirc in Low Pressure Mode to Recombiner 'A' w/ Compressor 'A' for Sample. IAW SYS HA-200	0	nicrisp	jocamp	TREAT
9/20/2016 12:00:00 AM	Continued the watch Mode 5, Loops not Filled. RCS is depressurized, RCS temperature is 100 degrees, RCS level is 614."	0	chwoods	jocamp	CRS
9/20/2016 3:00:00 AM	Commenced STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6".	0	chwoods	jocamp	CRS
9/20/2016 4:40:00 AM	Completed STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6" SAT.	0	chwoods	jocamp	CRS
9/20/2016 5:40:00 AM	Added BM, STEAM GENERATOR BLOWDOWN SYSTEM to the EOL. Reason: All 4 steam generator recirc spool pieces have been installed. Ref. SYS BM-200A,B,C,D. Remove prior to MODE 4. The Current Risk Assessment was reviewed.	0	ercarls	jocamp	SM
9/21/2016 12:03:00 AM	Continued the watch Mode 5, Loops not Filled. RCS is depressurized, RCS temperature is 100 degrees, RCS level is 608."	0	chwoods	jocamp	CRS
9/21/2016 3:00:00 AM	Commenced STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6".	0	chwoods	jocamp	CRS
9/21/2016 3:00:00 AM	Completed STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6" SAT.	0	chwoods	jocamp	CRS
9/21/2016 5:00:00 AM	Added GGHZ0057, SEP GRP 4 XCON DMPR ACTUATOR (GGD0043) to the EOL. Reason: Actuator brake for GGHZ0057 is degraded and may not hold the damper in position. Repair prior to Mode 4, or fuel handling in fuel building. Ref. LCO 3.7.13 CR 107363 The Current Risk Assessment was reviewed.	0	tygreen	jocamp	CRS
9/22/2016 12:00:00 AM	Continued the watch Mode 5 , RCS Pressure 0 psig, RCS Temperature 102 degrees Fahrenheit Major Equipment Problems: none Major Tech Spec Action Statements in effect: none	0	tygreen	lahauth	CRS
9/22/2016 3:00:00 AM	Completed STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6" SAT.	0	tygreen	lahauth	CRS
9/22/2016 3:00:00 AM	Commenced STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6".	0	tygreen	lahauth	CRS
9/22/2016 7:32:00 AM	Completed STS BG-001 "BORON INJECTION FLOW PATH VERIFICATION" to verify Boron Injection Flow Path requirements for MODE 6, SAT.	0	edpitt	ermarti1	CRS
9/22/2016 3:59:00 PM	Added AL, AUXILIARY FEEDWATER SYSTEM to the EOL. Reason: STS AL-003 will be late as of 09/30/16 @ 1858. Required in Mode 3. The Current Risk Assessment was reviewed.	0	shafe	ermarti1	CRS
9/22/2016 4:03:00 PM	Added EN, CONTAINMENT SPRAY SYSTEM to the EOL. Reason: STS EN-001 will be late as of 9/26/16 @ 1440. Required for Mode 4. The Current Risk Assessment was reviewed.	0	shafe	ermarti1	CRS
9/22/2016 4:12:00 PM	Added GT, CONTAINMENT PURGE HVAC SYSTEM to the EOL. Reason: STS GT-002 will be late as of 9/26/16 @ 1400. Required in Mode 4. The Current Risk Assessment was reviewed.	0	shafe	ermarti1	CRS
9/22/2016 4:17:00 PM	Added EP, ACCUMULATOR SAFETY INJECTION SYSTEM to the EOL. Reason: STS CH-018 will be late as of 9/24/16 @ 1800. Required in Mode 3. The Current Risk Assessment was reviewed.	0	shafe	ermarti1	CRS
9/22/2016 9:00:00 PM	****Tech. Spec. SR 3.9.2.1 becomes applicable in MODE 6~**** Perform SR 3.9.2.1. Verify BGV0178 and BGV0601 are secured in the CLOSED position once per 31 days. Ref. GEN 00-009.	0	tygreen	jocamp	CRS

LOGDATE	ENTRY	LATEENTRY	ALUSER	SS	USERTYPE
9/22/2016 9:00:00 PM	Added BGV0601, RMW TO BA BLENDING FO-10 UPSTREAM ISO to the EOL. Reason: BGV0601 needs to remain locked closed while in MODE 6. Perform SR 3.9.2.1 once per 31 days. The Current Risk Assessment was reviewed.	0	tygreen	jocamp	CRS
9/22/2016 9:00:00 PM	Added BGV0178, RMW TO CHEM MIX TK/BA BLENDING TEE HDR ISO to the EOL. Reason: BGV0178 needs to remain locked closed while in MODE 6. Perform SR 3.9.2.1 once per 31 days. The Current Risk Assessment was reviewed.	0	tygreen	jocamp	CRS
9/22/2016 10:33:00 PM	Entered MODE 6.	0	tygreen	jocamp	CRS
9/23/2016 12:00:00 AM	Continued the watch Mode 6 , RCS Pressure 0 psig, RCS Temperature 101 degrees Fahrenheit Major Equipment Problems: none Major Tech Spec Action Statements in effect: none	0	tygreen	jocamp	CRS
9/23/2016 3:00:00 AM	Completed STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6" SAT.	0	tygreen	jocamp	CRS
9/23/2016 3:00:00 AM	Commenced STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6".	0	tygreen	jocamp	CRS
9/23/2016 12:55:00 PM	Added P-53, FUEL POOL COOLING AND CLEANUP - REFUELING POOL SUPPLY to the EOL. Reason: P-53 and P-54 (refueling pool cleanup flowpath) must be drained prior to mode 4 IAW SYS EC-320. TS 3.6.3 The Current Risk Assessment was reviewed.	0	ermarti1	jocamp	RSO
9/23/2016 10:51:00 PM	Added BB, REACTOR COOLANT SYSTEM to the EOL. Reason: Clarance order tag # C21-10821 requires the RCS to be mode 5 or below and depressurized. The Current Risk Assessment was reviewed.	0	tidunlo	mablow	CRS
9/24/2016 12:00:00 AM	Continued the watch Mode 6. Maintaining RCS level 78-82 inches and RCS temperature 95-105 degrees.	0	chwoods	mablow	CRS
9/24/2016 1:46:00 AM	Added XX, GENERAL/MULTIPLE COMP OR SYS to the EOL. Reason: WIFI in control room needs disconnected prior to mode 4 The Current Risk Assessment was reviewed.	0	mablow	mablow	SM
9/24/2016 3:00:00 AM	Commenced STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6".	0	chwoods	mablow	CRS
9/24/2016 3:00:00 AM	Completed STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6" SAT.	0	chwoods	mablow	CRS
9/24/2016 3:10:00 PM	Added BB, REACTOR COOLANT SYSTEM to the EOL. Reason: CO Tag# C21-10918 placed, requires plant to be in MODE 6 or below The Current Risk Assessment was reviewed.	0	edwinn	lahauth	CRS
9/25/2016 12:00:00 AM	Continued the watch Mode 6. RCS level is 311 inches. RCS temperature is 101 degrees. Control Rod Drive Shaft unlatching in progress.	0	chwoods	jocamp	CRS
9/25/2016 3:00:00 AM	Commenced STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6".	0	chwoods	jocamp	CRS
9/25/2016 3:00:00 AM	Completed STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6" SAT.	0	chwoods	jocamp	CRS
9/25/2016 3:57:00 AM	Completed STS BG-001 "BORON INJECTION FLOW PATH VERIFICATION" SAT. Performed for Mode 6, Head off with RWST unavailable during upcoming STS BN-206.	0	chwoods	jocamp	CRS
9/26/2016 12:00:00 AM	Continued the watch Mode 6, core offload in progress. RCS temperature is 98 degrees, Refuel Pool level is 394 inches.	0	chwoods	jocamp	CRS
9/26/2016 12:12:00 AM	Added BB, REACTOR COOLANT SYSTEM to the EOL. Reason: CO Tag No. 11088 placed, requires plant to be in Mode 5 or below. The Current Risk Assessment was reviewed.	0	chwoods	jocamp	CRS
9/26/2016 1:42:00 AM	Aligned Fuel Building Supply Fan for recirc cooling mode IAW SYS GG-200.	0	chwoods	jocamp	CRS
9/26/2016 3:00:00 AM	Commenced STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6".	0	chwoods	jocamp	CRS
9/26/2016 3:00:00 AM	Completed STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6" SAT.	0	chwoods	jocamp	CRS
9/26/2016 7:30:00 AM	Added EG, COMPONENT COOLING WATER SYSTEM to the EOL. Reason: STS EG-001 Valve Check goes late on 9/29. The procedure applies in modes 1-4. The safety train/trains are available/functional for shutdown risk. The Shutdown Risk Assessment was reviewed.	0	jestrah	lahauth	RSO
9/26/2016 10:39:00 AM	Realigned Fuel Building Supply Ventilation from the "recirc" mode of operation to normal operation IAW SYS GG-200 per request of the Refuel SRO.	0	edpitt	lahauth	CRS
9/27/2016 12:00:00 AM	Continued the watch Mode 6, core offload in progress. RCS temperature is 98 degrees, Refuel Pool level is 394 inches.	0	tygreen	jocamp	CRS
9/27/2016 3:00:00 AM	Completed STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6" SAT.	0	tygreen	jocamp	CRS
9/27/2016 3:00:00 AM	Commenced STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6".	0	tygreen	jocamp	CRS
9/27/2016 10:52:00 AM	Added Z002, REACTOR BLDG to the EOL. Reason: STS GP-007 will be late on 9/30/16. Required modes 1-4. It is on the RF21 Mode 5 to Mode 4 Checklist. SR 3.6.3.3. The Shutdown Risk Assessment was reviewed.	0	jestrah	majenki	RSO
9/28/2016 12:00:00 AM	Continued the watch Mode 6, core offload in progress. RCS temperature is 94 degrees, Refuel Pool level is 394 inches.	0	tygreen	jocamp	CRS
9/28/2016 2:06:00 AM	Added KA, COMPRESSED AIR SYSTEM to the EOL. Reason: KAV0038 and KAV118 are unlocked and open to support refueling activities that require service air in CTMT. Restore prior to MODE 4. The Current Risk Assessment was reviewed.	0	ercarls	jocamp	SM

LOGDATE	ENTRY	LATEENTRY	ALUSER	SS	USERTYPE
9/28/2016 3:00:00 AM	Completed STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6" SAT.	0	tygreen	jocamp	CRS
9/28/2016 3:00:00 AM	Commenced STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6".	0	tygreen	jocamp	CRS
9/28/2016 8:46:00 AM	Completed STS CR-002 "SHIFT LOG FOR MODES 4 5 AND 6" SAT. The unit is "Defueled".	0	edpitt	lahauth	CRS
9/28/2016 12:52:00 PM	Added GTRE0032G, CONTAINMENT ATMOS NOBLE GAS to the EOL. Reason: GTRE0032G, CONTAINMENT ATMOS NOBLE. radiation monitor has been removed from service to support C21-R-GS-A-002. Restore prior to Mode 6 or ensure that GTRE0031 is operable. The Current Risk Assessment was reviewed.	0	edpitt	lahauth	CRS
9/28/2016 3:06:00 PM	Added BB, REACTOR COOLANT SYSTEM to the EOL. Reason: RCS Temperature control for Loop 4 DT and Tavg has been defeated IAW SYS NN-332. Restore to service prior to entering the Mode of Applicability IAW T.S. 3.3.1, Table 3.3.1-1, Functions 6 & 7. The Current Risk Assessment was reviewed.	0	edpitt	lahauth	CRS
9/28/2016 4:40:00 PM	Added NN004, DIST 120 VAC INSTR <FR> <TIME CRITICAL ACTION EQUIPMENT> <FR=FIRE RISK SIGNIFCANT COMPONENT> to the EOL. Reason: NN004, DC 120 VAC INSTR, has been deenergized to support scheduled maintenance. Return to service prior to entering the mode of applicability. The Current Risk Assessment was reviewed.	0	edpitt	lahauth	CRS
9/29/2016 2:59:00 AM	Added SB, REACTOR PROTECTION SYSTEMS to the EOL. Reason: RCS Temperature control for Loop 2 DT and Tavg has been defeated IAW SYS NN-332. Restore to service prior to entering the Mode of Applicability IAW T.S. 3.3.1, Table 3.3.1-1, Functions 6 & 7. The Current Risk Assessment was reviewed.	0	chwoods	mablow	CRS
9/29/2016 7:28:00 AM	Added EM, HIGH PRESSURE COOLANT INJECTION SYSTEM to the EOL. Reason: P114W0021 In BIT room is breached which affects both Trains of High Pressure injection. Penetration must be closed prior ti using BIT for Boration flowpath. (Mode 6) The Current Risk Assessment was reviewed.	0	edwinn	lahauth	CRS
9/29/2016 3:52:00 PM	Added BB, REACTOR COOLANT SYSTEM to the EOL. Reason: TSR 16-300 is placing Temp Shielding around the Rx Vessel Head in the Stand. Shielding must be removed prior to Mode 4. The Current Risk Assessment was reviewed.	0	edwinn	lahauth	CRS
9/30/2016 11:06:00 AM	****Entered TR 3.7.13-**** Complying with Condition A.1. Equipment taken out of service: Train B EES Non-Functional due to Train B Electrical Bus outage. Place Functional EES Train in fuel building ventillation isolation signal (FBVIS) mode of operation immediately. Action is complete.. This entry was planned. The current Risk Assessment was reviewed. Current risk management actions are appropriate for the current conditions. No additional actions are needed.	0	shafe	lahauth	CRS
9/30/2016 2:55:00 PM	Placed GTRE0031 in bypass IAW SYS NG-332 in support of Train B NG outage. Reference T.S. 3.3.6 Function 3 Condition A and T.S. 3.4.15.b. No actions required due to No Mode - Defueled.	0	shafe	lahauth	CRS
9/30/2016 2:55:00 PM	Placed GTRE0032 in bypass IAW SYS NG-332 in support of Train B NG outage. Reference T.S. 3.3.6 Function 3 Condition A and T.S. 3.4.15.b. No actions required due to No Mode - Defueled.	0	shafe	lahauth	CRS
9/30/2016 7:14:00 PM	Placed GKRE0004 in bypass IAW SYS NG-332. Ref Tech Spec 3.3.7, not in Mode of applicability.	0	chwoods	lahauth	CRS
10/1/2016 2:05:00 AM	Added 0000000000014091, INT. DOUBLE / AIRTIGHT / FIRE DOOR to the EOL. Reason: Door Breach 2016-375 needs restored before mode 6 The Current Risk Assessment was reviewed.	0	mablow	jocamp	SM
10/1/2016 9:55:00 AM	Added KC, FIRE PROTECTION SYS - PWR BLK (SEE ALSO SYS "FP" FOR SITE) to the EOL. Reason: South Electric Penetration Room Halon System placed in INHIBIT mode while doors are breached without a boundary watch. Restore prior to A Train Work window.Fire Imp 2016-249 The Current Risk Assessment was reviewed.	0	shafe	lahauth	CRS
10/2/2016 9:55:00 AM	Added SGK05A, CLASS IE ELEC. EQUIP. A/C UNIT <FR> <TIME CRITICAL ACTION EQUIPMENT> <FR=FIRE RISK SIGNIFCANT COMPONENT> to the EOL. Reason: Engineering must issued BED authorizing single unit operation with comp. measures and Operations must revise SYS GK-200 and AP 26C-004 to allow single unit operation prior to entering Mode 4. [Per Plant Manager, S. Smith] References: CR 00107789, CR 00079425, CR 00089251. The Current Risk Assessment was reviewed.	0	ghreeve	majenki	SE
10/3/2016 1:30:00 AM	Added P-78, DRAIN LINE FROM STEAM GENERATORS EBB01 A/B/C & D to the EOL. Reason: Penetration P-78 has been used during RF21 for draining S/G's. Ref. SYS BM-201. Ensure penetration has been drained prior to MODE4. The Current Risk Assessment was reviewed.	0	ercarls	jocamp	SM
10/3/2016 12:53:00 PM	Reviewed Tech Specs 3.3.2, Function 6.f, and 3.8.2 pertaining to the deenergization of the Train 'A' sequencer to support SYS NB-201 transfer of NB001 to its alternate power supply (XNB02). The unit is outside of the Mode of Applicability for these specifications.	0	edpitt	majenki	CRS
10/3/2016 2:04:00 PM	Added EM, HIGH PRESSURE COOLANT INJECTION SYSTEM to the EOL. Reason: STS EM-100B will go late on 10/8/16. Required modes 1-3. This procedure is on the M4-M3 checklist. The Shutdown Risk Assessment was reviewed.	0	jestrah	majenki	RSO

LOGDATE	ENTRY	LATEENTRY	ALUSER	SS	USERTYPE
10/3/2016 2:05:00 PM	Added EN, CONTAINMENT SPRAY SYSTEM to the EOL. Reason: STS EN-100B will go late on 10/8/16. Required modes 1-4. This procedure is on the M5-M4 checklist. The Shutdown Risk Assessment was reviewed.	0	jestrah	majenki	RSO
10/3/2016 10:35:00 PM	Ref 0200 10/1/16 EOL entry: Placed GKRE0004, GTRE0031, and GGRE0028 in bypass. SA036E lower +48 VDC power supply is off and cross trip are blocked. No actuations will be generated from these monitors while they are in operate. Referenced Tech Spec 3.3.6 for GTRE0031, Tech Spec 3.3.7 for GKRE0004, Tech Spec 3.3.8 for GGRE0028--not in Mode of applicability.	0	chwoods	mablow	CRS
10/4/2016 4:42:00 AM	Placed GTRE0032 in bypass for filter change, IAW CHS AX-G02. Reference T.S. 3.3.6 Function 3. Not in Mode of applicability.	0	chwoods	mablow	CRS
10/7/2016 10:32:00 AM	Added SQ, LOOSE PARTS MONITORING SYSTEM to the EOL. Reason: STS IC-830 will go late on 10/15/16. Required modes 1-2. It is on the M3 to M2 checklist. TSR 3.3.13.2. The Shutdown Risk Assessment was reviewed.	0	jestrah	sebell	RSO
10/7/2016 10:33:00 AM	Added EJ, RESIDUAL HEAT REMOVAL SYSTEM to the EOL. Reason: STS EJ-007A will go late on 10/15/16. Required modes 4-6. It is on the Defuel to M6 checklist. SR 3.9.5.2. The Shutdown Risk Assessment was reviewed.	0	jestrah	sebell	RSO
10/7/2016 10:35:00 AM	Added EJ, RESIDUAL HEAT REMOVAL SYSTEM to the EOL. Reason: STS EJ-007B will go late on 10/15/16. Required modes 4-6. It is on the Defuel to M6 checklist. SR 3.9.5.2. The Shutdown Risk Assessment was reviewed.	0	jestrah	sebell	RSO
10/9/2016 4:33:00 PM	Referred to Technical Specifications applicable to STS IC-211B. The unit is not in the mode of applicability.	0	edpitt	lahauth	CRS
10/9/2016 4:51:00 PM	(ref 16:33 entry) Performed independent review of Technical Specifications for STS IC-211B, concur that we are not in the mode of applicability.	0	lahauth	lahauth	SM
10/9/2016 9:43:00 PM	Added SB, REACTOR PROTECTION SYSTEMS to the EOL. Reason: P-4/Lo Tavg FWIS jumpers have been been installed IAW SYS SB-122. Must be removed prior to entering Mode 2. The Current Risk Assessment was reviewed.	0	chwoods	jocamp	CRS
10/9/2016 11:58:00 PM	Placed GKRE0004 in bypass for filter change, IAW CHS AX-G02. Ref T.S. 3.3.7, not in Mode of applicability.	0	chwoods	jocamp	CRS
10/10/2016 12:16:00 AM	Placed GKRE0005 in bypass for filter change, IAW CHS AX-G02. Ref T.S. 3.3.7 Function 3, not in Mode of applicability.	0	chwoods	jocamp	CRS
10/10/2016 2:12:00 PM	Added SB102ABYA, BYPASS BREAKER FOR REACTOR TRIP BREAKER A to the EOL. Reason: During performance of STS IC-215, after closing the 'A' RT Byp Bkr at step 8.5.1.13, voltage readings for the P-4 function were out-of-tolerance. Reference: CR 00108199 Mode Restraint: 1, 2, 3*, 4*, 5*, 6*. *With rod control capable of withdrawal and 'A' Bypass Breaker closed. The Current Risk Assessment was reviewed.	0	glreeve	lahauth	CRS
10/14/2016 7:00:00 PM	Commenced SYS GK-123 "CONTROL BUILDING A/C UNITS STARTUP AND SHUTDOWN" to place SGK04A in fan mode only.	0	geturne	jocamp	RO
10/14/2016 8:00:00 PM	Commenced SYS GK-123 "CONTROL BUILDING A/C UNITS STARTUP AND SHUTDOWN" to place SGK05A in fan mode only.	0	geturne	jocamp	RO

Refer document in its entirety to the licensee.

RF21 OCC Shift Update

Date: 10-12-2016	Update Time: 0500	Shift Outage Manager (SOM):
		On-coming: Lanny Ratzlaff
Day: 26	Off-going Shift: Night	Off-going: James Edwards

PROTECTED TRAIN A

PLANT STATUS:	PROTECTED EQUIPMENT:	
○ Mode: Defueled ○ RCS Temperature: 99 deg F ○ RCS Pressure: <1 psig ○ SFP Time to 200 F: 16.0 hrs ○ RCS Time to Boil: N/A ○ RCS Time to 200 F: N/A	NB01, NG01/3, NN01/3, NK01/3 "A" EDG Essential Service Water – "A" Component Cooling Water – "A" Control Room A/C Unit (SGK04A) Class 1E A/C unit (SGK05A) Spent Fuel Pool Cooling "A" SL-3, SL-31, 'B' & 'C' SW Pump	West Switchyard Bus (345-40, 345-70, 345-110, 345-163) Startup XFMR XMR01 & MA104D & E relays XFMR XNB02 & PA0201 relays PA0201 breaker and stub bus

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK:	Yellow	
○ Reactivity Management:	Green	
○ Core Decay Heat Removal:	N/A	
○ SFP Decay Heat Removal:	Green	
○ RCS Inventory:	N/A	
○ Electrical Power Sources:	Yellow	'B' Elec. pwr sources outage (XNB01, #7 Xfmr, East Buss OOS)
○ Containment Closure:	N/A	
○ Rad Monitoring & Ventilation:	Green	

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours

o First Aids: 1 (cut lip due to air hose separating from fitting)
o OSHA Injuries (Recordable, Restricted, LT): 0
o OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: *623*

RADIOLOGICAL PROTECTION:

Date	Dose Goal	Actual
10/12/2016	2.116 REM	
10/11/2016	2.500 REM	2.424 REM
Total to Date	42.184 REM	48.250 REM
Dose from Head in Total to Date		5.736 REM

Contamination Events: PCEs: 0

RAPID TRENDING:

Written instructions are there to help us, guide us and protect us.

No two situations are exactly alike. Be prepared to verify what's right and recognize what's wrong. Sometimes change is necessary but communication is always key.

RF21 OCC Shift Update

OUTAGE WORK STATUS:	
Major Activities Completed Last Shift:	
○ Eight reactor vessel bottom nozzle NDE's completed, total of 15 completed. ○ 3 Control Rod Drive Mechanisms have been removed from the Rx Head	○ Completed Emergency Diesel Generator B governor repair and overspeed test ○ Removed the discharge pump head from the Normal Charging Pump test
Critical Path Due in Next 12 hours	**Due in the Next 72 Hours**
○ Perform NDE of reactor vessel bottom nozzles	○ Perform NDE of reactor vessel J-welds
Important Path/ Major Work Due in Next 12 hours	**Due in the Next 72 Hours**
○ Continue Essential Service Water testing ○ Complete STS IC-208B, then continue EDG testing sequence ○ Switchyard outage #3 (East bus, #7 transformer) ○ Start SGK05B (class 1E AC unit) and perform post maintenance testing.	○ Plant secondary work is 38.7% complete (on schedule) ○ GN ('A' essential service water supply and return from containment coolers) piping replacement ○ Swap protected trains to 'B' train being protected. ○ Switchyard outage #3 (East bus, #7 transformer)
Important Decisions Due	None

SHIFT OUTAGE MANAGER COMMENTS

- When you are done using fall protection harnesses, please hang them up in an appropriate area as opposed to laying them on the floor.
- Work groups need to return tools to tool room as soon as possible to address tool shortage.
- Nightshift has been holding ALARA sub-committee meetings, many of which are requesting additional dose for Radiation Work Permits. These presentations will need to be completed by the requesting supervisors at future meetings, or the requests for additional dose will be delayed until they can be attended.

RF21 OCC Shift Update

Date: 10-11-2016	Update Time: 0500	Shift Outage Manager (SOM):
		On-coming: Lanny Ratzlaff
Day: 25	Off-going Shift: Night	Off-going: James Edwards

PROTECTED TRAIN A

PLANT STATUS:	PROTECTED EQUIPMENT:	
○ Mode: Defueled ○ RCS Temperature: 99 deg F ○ RCS Pressure: <1 psig ○ SFP Time to 200 F: 15.8 hrs ○ RCS Time to Boil: N/A ○ RCS Time to 200 F: N/A	NB01, NG01/3, NN01/3, NK01/3 "A" EDG Essential Service Water – "A" Component Cooling Water – "A" Control Room A/C Unit (SGK04A) Class 1E A/C unit (SGK05A) Spent Fuel Pool Cooling "A" SL-3, SL-31, 'B' & 'C' SW Pump	West Switchyard Bus (345-40, 345-70, 345-110, 345-163) Startup XFMR XMR01 & MA104D & E relays XFMR XNB02 & PA0201 relays PA0201 breaker and stub bus

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK:	Yellow	
○ Reactivity Management:	Green	N/A
○ Core Decay Heat Removal:	N/A	N/A
○ SFP Decay Heat Removal:	Yellow	Only one train of SFP Cooling Available (CCW "B" drained)
○ RCS Inventory:	N/A	N/A
○ Electrical Power Sources:	Yellow	'B' Electrical power sources outage (NB02)
○ Containment Closure:	N/A	N/A
○ Rad Monitoring & Ventilation:	Green	N/A

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours
o First Aids: 0
o OSHA Injuries (Recordable, Restricted, LT): 0
o OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: *622*

RADIOLOGICAL PROTECTION:

Date	Dose Goal	Actual
10/11/2016	2.500 REM	
10/10/2016	1.998 REM	3.152 REM
Total to Date	39.684 REM	45.826 REM
Dose from Head in Total to Date		5.511 REM

Contamination Events: PCEs: 0

RAPID TRENDING:

KNOWING THE RISK HELPS KEEP EVERYONE SAFE

We have had some really great examples of risk awareness where we have prevented errors or injury.

- Worker identified unattended wrenches on top of duct work and took action to remove the hazard
- Worker coached individual about placing a drill on scaffold without a lanyard. Coaching was received well and hazard was addressed

We do not want to become complacent; however, we have had 3 recent Rad Worker issues.

- Individual touched face while in a contaminated area resulting in a Personal Contamination Incident
- Individuals were using improper techniques during removal of Protective Clothing while exiting Containment

Discuss how you are managing the risks associated with your work activity.

RF21 OCC Shift Update

OUTAGE WORK STATUS:

Major Activities Completed Last Shift:

- EF HV0038, 'B' essential service water return to the ultimate heat sink, actuator installed
- Snubber for GN052HBC (Containment Cooler 10" line) has been installed
- Core barrel baffle bolt inspections completed
- Removed Rx Head dummy cans
- Took Rx Head videos for EIT team
- Water Jet Peening tool #3 inspection and testing, placed in cavity

Critical Path Due in Next 12 hours	Due in the Next 72 Hours
○ Perform NDE of reactor vessel bottom nozzles.	○ Perform NDE of reactor vessel J-welds.

Important Path/ Major Work Due in Next 12 hours	Due in the Next 72 Hours
○ Fill and vent B ESW system (in progress) ○ 'B' Train Residual Heat Removal, Component Cooling Water, Diesel Generator, and Essential Service Water testing ○ Continue disassembly of the normal charging pump	○ 'B' Train Residual Heat Removal, Component Cooling Water, Diesel Generator, and Essential Service Water testing ○ Plant secondary work is 37% complete (on schedule) ○ GN ('A' essential service water supply and return from containment coolers) piping replace

Important Decisions Due	*NCP disassembly is going to require extensive milling work. Need to determine if parts will be sent offsite or arrange for vendor to come to site.* Night shift will attempt to pull the pump head and rotating assembly as one unit.

SHIFT OUTAGE MANAGER COMMENTS

- When you are done using fall protection harnesses, please hang them up in an appropriate area as opposed to laying them on the floor.
- Work groups need to return tools to tool room as soon as possible to address tool shortage.
- SG work, both Primary and Secondary work, are above expected dose for this point in their work. We are seeing dose totals of ~18% higher than expected. OCC Manager and RP will challenge current performance in an effort to improve the trajectory for dose on this work.
-

RF21 OCC Shift Update

Date: 10-09-2016	Update Time: 0500	Shift Outage Manager (SOM):
		On-coming: Lanny Ratzlaff
Day: 23	Off-going Shift: Night	Off-going: Daniel Bowers

PROTECTED TRAIN A

PLANT STATUS:	PROTECTED EQUIPMENT:	
○ Mode: Defueled	NB01, NG01/3, NN01/3, NK01/3	Rose Hill line
○ RCS Temperature: 99 deg F	XNB02	Benton line
○ RCS Pressure: <1 psig	Startup XFMR & MA104D&E relays	West Switchyard Bus
○ SFP Time to 200 F: 11.9 hrs	PA0201 Stub Bus & XNB02 relays	SL-3, SL-31, 'B' & 'C' SW Pump
○ RCS Time to Boil: N/A	"A" EDG	
○ RCS Time to 200 F: N/A	Class 1E A/C unit (SGK05A)	
	Component Cooling Water – "A"	
	Essential Service Water – "A"	
	Control Room A/C Unit (SGK04A)	
	Spent Fuel Pool Cooling "A"	

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK:	Yellow	
○ Reactivity Management:	Green	N/A
○ Core Decay Heat Removal:	N/A	N/A
○ SFP Decay Heat Removal:	Yellow	Only one train of SFP Cooling Available (CCW "B" drained)
○ RCS Inventory:	N/A	N/A
○ Electrical Power Sources:	Yellow	'B' Electrical power sources outage (NB02)
○ Containment Closure:	N/A	N/A
○ Rad Monitoring & Ventilation:	Green	N/A

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours

o First Aids: 0

o OSHA Injuries (Recordable, Restricted, LT): 0

o OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: *620*

RADIOLOGICAL PROTECTION:

Date	Dose Goal	Actual
10/9/2016	1.900 REM	
10/8/2016	1.961 REM	1.974 REM
Total to Date	35.688 REM	40.557 REM
Dose from Head in Total to Date		5.264 REM

Contamination Events: PCEs: 0

RAPID TRENDING:

RF21 OCC Shift Update

OUTAGE WORK STATUS:	
Major Activities Completed Last Shift:	
○ Reactor vessel nozzle examination of 3 cold legs completed. ○ Removal of reactor head plenum	○ Aligned NB01 to XNB01. ○ Reenergized NB02 from XNB02. ○ Commenced disassembly of Normal Charging Pump
Critical Path Due in Next 12 hours	**Due in the Next 72 Hours**
○ Perform reactor vessel internal and support exams ○ Remove Wesdyne NDE equipment.	○ Perform NDE of reactor vessel bottom nozzles and J-welds.
Important Path/ Major Work Due in Next 12 hours	**Due in the Next 72 Hours**
○ Continue GN ('B' essential service water supply and return from containment coolers) piping replace (will be completed prior to end of today) ○ ESW cable vaults 4B and 5B work. ○ EFHV0038, 'B' essential service water return to the ultimate heat sink MOV work. ○ 'B' Train Residual Heat Removal, Component Cooling Water, Diesel Generator, and Essential Service Water work (progressing as scheduled) ○ Switchyard reliability upgrade, Outage 2, shield wire removal (Benton)	○ 'B' Train Residual Heat Removal, Component Cooling Water, Diesel Generator, and Essential Service Water work ○ Plant secondary work is 35% complete (on schedule) ○ GN ('A' essential service water supply and return from containment coolers) piping replace
Important Decisions Due	None

SHIFT OUTAGE MANAGER COMMENTS
○ Refer to the Daily Howl for Outage goal information. ○ Multiple occurences of leaving dosimetry have occurred at the containment step-off pad. Perform self-checks and peer checks for each other to remember your dosimetry.

RF21 OCC Shift Update

Date: 10-07-2016	Update Time: 0500	Shift Outage Manager (SOM):
		On-coming: Lanny Ratzlaff
Day: 21	Off-going Shift: Night	Off-going: Daniel Bowers

PROTECTED TRAIN A

PLANT STATUS:	PROTECTED EQUIPMENT:	
o Mode: Defueled	NB01, NG01/3, NN01/3, NK01/3	Rose Hill line
o RCS Temperature: 99 deg F	XNB02	Benton line
o RCS Pressure: <1 psig	Startup XFMR & MA104D&E relays	West Switchyard Bus
o SFP Time to 200 F: 11.7 hrs	PA0201 Stub Bus & XNB02 relays	SL-3, SL-31, 'B' & 'C' SW Pump
o RCS Time to Boil: N/A	"A" EDG	
o RCS Time to 200 F: N/A	Class 1E A/C unit (SGK05A)	
	Component Cooling Water – "A"	
	Essential Service Water – "A"	
	Control Room A/C Unit (SGK04A)	
	Spent Fuel Pool Cooling "A"	

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK:	Yellow	
o Reactivity Management:	Green	N/A
o Core Decay Heat Removal:	N/A	N/A
o SFP Decay Heat Removal:	Yellow	Only one train of SFP Cooling Available (CCW "B" drained)
o RCS Inventory:	N/A	N/A
o Electrical Power Sources:	Yellow	'B' Electrical power sources outage (NB02)
o Containment Closure:	N/A	N/A
o Rad Monitoring & Ventilation:	Green	N/A

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours

o First Aids: 0
o OSHA Injuries (Recordable, Restricted, LT): 0
o OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: *618*

RADIOLOGICAL PROTECTION:

Date	Dose Goal	Actual
10/7/2016	1.628 REM	
10/6/2016	1.42 REM	1.923 REM
Total to Date	31.962 REM	36.727 REM
Dose from Head in Total to Date		5.264 REM

Contamination Events: PCEs: 0

RAPID TRENDING:

REFOCUS ON DRIVER BEHAVIORS

- Pedestrians have the right away; respect the safewalks
- Slow down, obey posted plant speed limits
- Look around before moving vehicle
- Obey one way signs/arrows

As an example: Teammates were walking in a safewalk and a driver went off the road instead of yielding.

Safety doesn't start and stop at Main Gate North

RF21 OCC Shift Update

OUTAGE WORK STATUS:

Major Activities Completed Last Shift:

- Installed the reactor vessel flange protective ring
- Installed Tri-nuke for Water Jet Peening preparations
- Installed water jet peening alignment beam/shim
- Completed Component Cooling Water Heat Exchanger coating repairs (Cure time started at 2330)
-

Critical Path Due in Next 12 hours	Due in the Next 72 Hours
○ Install the water jet peening bridge walkway sections ○ Install the water jet peening bridge gantry sections	○ Perform reactor vessel hot and cold leg exams ○ Remove equipment from the reactor vessel ○ Perform reactor vessel internal and support exams ○ Remove the reactor head plenum

Important Path/ Major Work Due in Next 12 hours	Due in the Next 72 Hours
○ Continue GN ('B' essential service water supply and return from containment coolers) piping replace (progressing as scheduled) ○ 'B' Train Residual Heat Removal, Component Cooling Water, Diesel Generator, and Essential Service Water work (progressing as scheduled)	○ 'B' Train Residual Heat Removal, Component Cooling Water, Diesel Generator, and Essential Service Water work ○ Plant secondary work is 31% complete (on schedule) ○ GN ('A' essential service water supply and return from containment coolers) piping replace ○ Switchyard reliability upgrade (Waverly line outage 1C post maintenance testing, dayshift only).

Important Decisions Due	None

SHIFT OUTAGE MANAGER COMMENTS

- Refer to the Daily Howl for Outage goal information.
- With minimum Security staffing to support Outage activities for the next few shifts, expect delays at primary and secondary access facilities.
- We had an issue with the isolation valve for "A" train of Containment Coolers EFV0049. Contingency plans are bing made to complete isolation using an alternate valve to get ahead of the next GN piping work.
- Multiple occurences of leaving dosimetry have occurred at the containment step-off pad. Perform self-checks and peer checks for each other to remember your dosimetry.

RF21 OCC Shift Update

Date: 10-06-2016	Update Time: 1700	Shift Outage Manager (SOM): On-coming: James Edwards
Day: 20	Off-going Shift: Day	Off-going: Lanny Ratzlaff

PROTECTED TRAIN A

PLANT STATUS:	PROTECTED EQUIPMENT:	
o Mode: Defueled	NB01, NG01/3, NN01/3, NK01/3	Rose Hill line
o RCS Temperature: 99 deg F	XNB02	Benton line
o RCS Pressure: <1 psig	Startup XFMR & MA104D&E relays	West Switchyard Bus
o SFP Time to 200 F: 11.7 hrs	PA0201 Stub Bus & XNB02 relays	SL-3, SL-31, 'B' & 'C' SW Pump
o RCS Time to Boil: N/A	"A" EDG	
o RCS Time to 200 F: N/A	Class 1E A/C unit (SGK05A)	
	Component Cooling Water – "A"	
	Essential Service Water – "A"	
	Control Room A/C Unit (SGK04A)	
	Spent Fuel Pool Cooling "A"	

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK:	Yellow	
o Reactivity Management:	Green	N/A
o Core Decay Heat Removal:	N/A	N/A
o SFP Decay Heat Removal:	Yellow	Only one train of SFP Cooling Available (CCW "B" drained)
o RCS Inventory:	N/A	N/A
o Electrical Power Sources:	Yellow	'B' Electrical power sources outage (NB02)
o Containment Closure:	N/A	N/A
o Rad Monitoring & Ventilation:	Green	N/A

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours

o First Aids: 0

o OSHA Injuries (Recordable, Restricted, LT): 0

o OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: *617*

RADIOLOGICAL PROTECTION:

Date	Dose Goal	Actual
10/6/2016	1.688 REM	
10/5/2016	1.42 REM	1.574 REM
Total to Date	30.501 REM	34.760 REM
Dose from Head in Total to Date		5.087 REM

Contamination Events: PCEs: 0

RAPID TRENDING:

REFOCUS ON DRIVER BEHAVIORS

- Pedestrians have the right away; respect the safewalks
- Slow down, obey posted plant speed limits
- Look around before moving vehicle
- Obey one way signs/arrows

As an example: Teammates were walking in a safewalk and a driver went off the road instead of yielding.

Safety doesn't start and stop at Main Gate North

RF21 OCC Shift Update

OUTAGE WORK STATUS:

Major Activities Completed Last Shift:

- Removed the reactor vessel lower internals
- Installed the reactor vessel flange protective ring
- Switchyard reliability upgrade (Waverly line outage 1B, re-route to the North end and OPD cabinet install

Critical Path Due in Next 12 hours	Due in the Next 72 Hours
○ Install water jet peening alignment beam/shim ○ Remove the reactor head plenum ○ Install the water jet peening bridge walkway sections	○ Install the water jet peening bridge gantry sections ○ Perform reactor vessel hot and cold leg exams ○ Remove equipment from the reactor vessel ○ Perform reactor vessel internal and support exams
Important Path/ Major Work Due in Next 12 hours	**Due in the Next 72 Hours**
○ Complete Component Cooling Water Heat Exchanger coating repairs ○ Continue GN ('B' essential service water supply and return from containment coolers) piping replace (progressing as scheduled) ○ 'B' Train Residual Heat Removal, Component Cooling Water, Diesel Generator, and Essential Service Water work (progressing as scheduled)	○ 'B' Train Residual Heat Removal, Component Cooling Water, Diesel Generator, and Essential Service Water work ○ Plant secondary work is 31% complete (on schedule) ○ GN ('A' essential service water supply and return from containment coolers) piping replace ○ Switchyard reliability upgrade (Waverly line outage 1C post maintenance testing, dayshift only).

Important Decisions Due	None

SHIFT OUTAGE MANAGER COMMENTS

- Refer to the Daily Howl for Outage goal information.
- With minimum Security staffing for the next few shifts, expect delays at primary and secondary access facilities.

RF21 OCC Shift Update

Date: 10-05-2016	Update Time: 0500	Shift Outage Manager (SOM): On-coming: Lanny Ratzlaff
Day: 19	Off-going Shift: Night	Off-going: Dan Bowers

PROTECTED TRAIN A

PLANT STATUS:	PROTECTED EQUIPMENT:	
○ Mode: Defueled ○ RCS Temperature: 99 deg F ○ RCS Pressure: <1 psig ○ SFP Time to 200 F: 11.4 hrs ○ RCS Time to Boil: N/A ○ RCS Time to 200 F: N/A	NB01, NG01/3, NN01/3, NK01/3 XNB02 Startup XFMR & MA104D&E relays PA0201 Stub Bus & XNB02 relays "A" EDG Class 1E A/C unit (SGK05A) Component Cooling Water – "A" Essential Service Water – "A" Control Room A/C Unit (SGK04A) Spent Fuel Pool Cooling "A"	Rose Hill line Benton line West Switchyard Bus SL-3, SL-31, 'B' & 'C' SW Pump

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK:	Yellow	
○ Reactivity Management:	Green	N/A
○ Core Decay Heat Removal:	N/A	N/A
○ SFP Decay Heat Removal:	Yellow	Only one train of SFP Cooling Available (CCW "B" drained)
○ RCS Inventory:	N/A	N/A
○ Electrical Power Sources:	Yellow	'B' Electrical power sources outage (NB02)
○ Containment Closure:	N/A	N/A
○ Rad Monitoring & Ventilation:	Green	N/A

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours

o First Aids: 0
o OSHA Injuries (Recordable, Restricted, LT): 0
o OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: *616*

RADIOLOGICAL PROTECTION:

- 10/5/16 Dose Goal: 1.42 REM
- 10/4/16 Actual: 3.959 REM (Goal was 4.7 REM)

Contamination Events

- PCEs: 0

The site has accumulated 33.221 REM versus a goal of 26.825 REM

RAPID TRENDING:

DO YOU KNOW YOUR DOCUMENT?

Verify documentation is complete; if it's not documented, it didn't happen.
Documentation is important, so make sure you...

- Understand your responsibilities
- Check appropriate permits before you enter an area
- STOP and ask the question when you see documentation that is incomplete

Have you reviewed *your* work instructions?

RF21 OCC Shift Update

OUTAGE WORK STATUS:

Major Activities Completed Last Shift:

- Completed Nozzle dam installation
- Flooded Refuel pool to 23 ft above Flange
- Commenced draining of "D" Steam Generator
- Closed CTMT equip hatch in prep for lower internal lift
- 30" welds on ESW crosstie accepted by QC
- First of four welds on ESW crosstie weldolets completed and QC accepted.

Critical Path Due in Next 12 hours	Due in the Next 72 Hours
○ Finish preparations for reactor vessel lower internals removal ○ Remove reactor vessel lower internals	○ Continue water jet peening mobilization following reactor vessel lower internals being removed.

Important Path/ Major Work Due in Next 12 hours	Due in the Next 72 Hours
○ Continue GN (essential service water supply and return from containment coolers) piping replace (progressing as scheduled) ○ 'B' Train Residual Heat Removal, Component Cooling Water, Diesel Generator, and Essential Service Water work (progressing as scheduled)	○ 'B' Train Residual Heat Removal, Component Cooling Water, Diesel Generator, and Essential Service Water work ○ Plant secondary work is 28% complete (on schedule) ○ Switchyard reliability upgrade (Waverly line outage 18, re-route to the North end and OPD cabinet install, dayshift only).

Important Decisions Due	
	How and when to start thorough cleaning of the reactor vessel head. The final decision has been made that the RPV head visual inspections are complete. Decision has been made to perform a volumetric UT exam under the head. Twelve areas of interest will be examined.

SHIFT OUTAGE MANAGER COMMENTS

- Refer to the Daily Howl for Outage goal information.
- Personnel will not be allowed in Containment during lift of reactor vessel lower internals, ensure RP instructions are followed.

RF21 OCC Shift Update

Date: 10-04-2016	Update Time: 1700	Shift Outage Manager (SOM): On-coming: Daniel Bowers
Day: 18	Off-going Shift: Day	Off-going: Lanny Ratzlaff

PROTECTED TRAIN A

PLANT STATUS:	PROTECTED EQUIPMENT:	
○ Mode: Defueled ○ RCS Temperature: 99 deg F ○ RCS Pressure: <1 psig ○ SFP Time to 200 F: 11.4 hrs ○ RCS Time to Boil: N/A ○ RCS Time to 200 F: N/A	NB01, NG01/3, NN01/3, NK01/3 XNB02 Startup XFMR & MA104D&E relays PA0201 Stub Bus & XNB02 relays "A" EDG Class 1E A/C unit (SGK05A) Component Cooling Water – "A" Essential Service Water – "A" Control Room A/C Unit (SGK04A) Spent Fuel Pool Cooling "A"	Rose Hill line Benton line West Switchyard Bus SL-3, SL-31, 'B' & 'C' SW Pump SFP Temp - 94 °F

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK:	Yellow	
○ Reactivity Management:	Green	N/A
○ Core Decay Heat Removal:	N/A	N/A
○ SFP Decay Heat Removal:	Yellow	Only one train of SFP Cooling Available (CCW "B" drained)
○ RCS Inventory:	N/A	N/A
○ Electrical Power Sources:	Yellow	'B' Electrical power sources outage (NB02)
○ Containment Closure:	N/A	N/A
○ Rad Monitoring & Ventilation:	Green	N/A

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours

o First Aids: 0
o OSHA Injuries (Recordable, Restricted, LT): 0
o OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: *615*

RADIOLOGICAL PROTECTION:

- 10/3/16 Dose Goal: 4.7 REM
- 10/3/16 Actual: 3.206 REM (Goal was 2.740 REM)

Contamination Events

- PCEs: 0

The site has accumulated 29.262 REM versus a goal of 22.125 REM

RAPID TRENDING:

DO YOU KNOW YOUR DOCUMENT?

Verify documentation is complete; if it's not documented, it didn't happen.
Documentation is important, so make sure you...

- Understand your responsibilities
- Check appropriate permits before you enter an area
- STOP and ask the question when you see documentation that is incomplete

Have you reviewed *your* work instructions?

RF21 OCC Shift Update

OUTAGE WORK STATUS:

Major Activities Completed Last Shift:

- Completed mid-loop maintenance (2 snubbers installed)
- Removed the mid-loop clearance order EM-X-001A
- Steam Generator bowl drain RP surveys completed
- Installed all Steam Generator nozzle dams

Critical Path Due in Next 12 hours	Due in the Next 72 Hours
○ Raise reactor coolant system level to > 23' above the vessel flange. ○ Begin preparations for reactor vessel lower internals removal	○ Continue water jet peening mobilization following reactor vessel lower internals being removed. ○ Remove reactor vessel lower internals

Important Path/ Major Work Due in Next 12 hours	Due in the Next 72 Hours
○ Continue GN (essential service water supply and return from containment coolers) piping replace (progressing as scheduled) ○ 'B' Train Residual Heat Removal, Component Cooling Water, Diesel Generator, and Essential Service Water work (progressing as scheduled) ○ Weld in Essential Service Water x-tie spool piece	○ 'B' Train Residual Heat Removal, Component Cooling Water, Diesel Generator, and Essential Service Water work ○ Plant secondary work is 28% complete (on schedule) ○ Switchyard reliability upgrade (Waverly line outage 1B, re-route to the North end and OPD cabinet install, dayshift only).

Important Decisions Due	*How and when to start thorough cleaning of the reactor vessel head.* The final decision has been made that the RPV head visual inspections are complete. Decision has been made to perform a volumetric UT exam under the head. Twelve areas of interest will be examined.

SHIFT OUTAGE MANAGER COMMENTS

- Refer to the Daily Howl for Outage goal information.
- Chance of inclement whether this evening, consider impact to scheduled work and personnel safety.

RF21 OCC Shift Update

Date: 10-04-2016	Update Time: 0500	Shift Outage Manager (SOM):
		On-coming: Lanny Ratzlaff
Day: 18	Off-going Shift: Night	Off-going: James Edwards

PROTECTED TRAIN A

PLANT STATUS:	PROTECTED EQUIPMENT:	
○ Mode: Defueled ○ RCS Temperature: 99 deg F ○ RCS Pressure: <1 psig ○ SFP Time to 200 F: 11.2 hrs ○ RCS Time to Boil: N/A ○ RCS Time to 200 F: N/A	NB01, NG01/3, NN01/3, NK01/3 XNB02 and its MA104F relays Startup Transformer PA02 Stub Bus "A" EDG Class 1E A/C unit (SGK05A) Component Cooling Water – "A" Essential Service Water – "A" Control Room A/C Unit (SGK04A) Spent Fuel Pool Cooling "A"	Rose Hill line Benton line West Switchyard Bus SL-3, SL-31, 'B' & 'C' SW Pump Out in field / Bob Skidmore Nonyl NB02

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK:	Yellow	
○ Reactivity Management:	Green	N/A
○ Core Decay Heat Removal:	N/A	N/A
○ SFP Decay Heat Removal:	Yellow	Only one train of SFP Cooling Available (CCW "B" drained)
○ RCS Inventory:	N/A	N/A
○ Electrical Power Sources:	Yellow	'B' Electrical power sources outage (NB02)
○ Containment Closure:	N/A	N/A
○ Rad Monitoring & Ventilation:	Green	N/A

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours

o First Aids: 0

o OSHA Injuries (Recordable, Restricted, LT): 0

o OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: *615*

Lanny Ratzlaff 0100

RADIOLOGICAL PROTECTION:

- 10/3/16 Dose Goal: 4.7 REM
- 10/3/16 Actual: 3.206 REM (Goal was 2.740 REM)

Contamination Events

- PCEs: 0

The site has accumulated 29.262 REM versus a goal of 22.125 REM

10/5

RAPID TRENDING:

FOCUS ON KEEPING THE TEAM SAFE

Prior to entering the power block a workgroup stopped and peer checked each other for PPE: this is exactly the behavior we are looking for. With a week filled with high risk activities including **switchyard work, decon of the head, removal of core barrel, mobilization of water jet peening equipment**, and the ***potential for severe weather*** we need to continue to look out for each other and practice good risk awareness.

How will you keep your team safe?

RF21 OCC Shift Update

OUTAGE WORK STATUS:

Major Activities Completed Last Shift:

- All Steam Generator inserts removed
- SG bowls pumped out and surveys completed
- Essential Service Water x-tie spool piece root passes are complete
- 5 WesDyne boxes moved into containment due to pending wind challenges
- Revised clearance boundary and flush plan for NCP
- Completed valve repairs for Midloop work

Critical Path Due in Next 12 hours

- Install Steam Generator nozzle dams
- Complete Midloop Maintenance (2 snubber installations)
- Remove CO EM-X-001A

Due in the Next 72 Hours

- Continue water jet peening mobilization following reactor vessel lower internals being removed.
- Raise reactor coolant system level to > 23' above the vessel flange.
- Remove reactor vessel lower internals

Important Path/ Major Work Due in Next 12 hours

- Continue GN (essential service water supply and return from containment coolers) piping replace (progressing as scheduled)
- 'B' Train Residual Heat Removal, Component Cooling Water, Diesel Generator, and Essential Service Water work (progressing as scheduled)
- Weld in Essential Service Water x-tie spool piece

Due in the Next 72 Hours

- Additional inspection to support code case for Reactor Head to support repair
- 'B' Train Residual Heat Removal, Component Cooling Water, Diesel Generator, and Essential Service Water work
- Plant secondary work is 26% complete (~1 % ahead)
- Switchyard reliability upgrade (Waverly line outage 1B, re-route to the North end and OPD cabinet install, dayshift only).

Important Decisions Due	How and when to start thorough cleaning of the reactor vessel head. Currently considering Westinghouse's input.

SHIFT OUTAGE MANAGER COMMENTS

- ***Refer to Daily Howl for Outage goal information***
- Chance of inclement whether tomorrow, consider impact to scheduled work and personnel safety.
- Great work on SG manways tonight have the potential for improving nozzle dam installation – Thanks SG and RP
- Ownership for NCP work has been transferred to the OCC from room 210. MOM will own NCP progress, Critical path Coordinator will own FME plan

RF21 OCC Shift Update

Date: 10-03-2016	Update Time: 0500	Shift Outage Manager (SOM): On-coming: Bill Stucker
Day: 17	Off-going Shift: Night	Off-going: James Edwards

PROTECTED TRAIN A

PLANT STATUS:	PROTECTED EQUIPMENT:	
○ Mode: Defueled	NB01, NG01/3, NN01/3, NK01/3	Rose Hill line
○ RCS Temperature: 99 deg F	XNB01 and its MA104F relays	Benton line
○ RCS Pressure: <1 psig	"A" EDG	East Bus
○ SFP Time to 200 F: 11.0 hrs	Class 1E A/C unit (SGK05A)	SL-3, SL-31, 'B' & 'C' SW Pump
○ RCS Time to Boil: N/A	Component Cooling Water – "A"	
○ RCS Time to 200 F: N/A	Essential Service Water – "A"	
	Control Room A/C Unit (SGK04A)	
	Spent Fuel Pool Cooling "A"	
	#7 xfmr, 13-48, switch 13-23	

mid-loop maintenance

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK:	Yellow	
○ Reactivity Management:	Green	N/A
○ Core Decay Heat Removal:	N/A	N/A
○ SFP Decay Heat Removal:	Yellow	Only one train of SFP Cooling Available (CCW "B" drained)
○ RCS Inventory:	N/A	N/A
○ Electrical Power Sources:	Yellow	'B' Electrical power sources outage (NB02)
○ Containment Closure:	N/A	N/A
○ Rad Monitoring & Ventilation:	Green	N/A

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours

- ○ First Aids: 1
- ○ OSHA Injuries (Recordable, Restricted, LT): 0
- ○ OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: *614*

Waste dam installation (cont. piping ESW replacement)

RADIOLOGICAL PROTECTION:

- ○ 10/3/16 Dose Goal: 2.740 REM
- ○ 10/2/16 Actual: 1.573 REM (Goal was 1.700 REM)

Delta is due to when the SG people logged out after midnight so the dose will be on today's report

Contamination Events

- ○ PCEs: 0

The site has accumulated 26.056 REM versus a goal of 22.125 REM

RAPID TRENDING:

Swapping XNB02 back & powering NB01

DON'T DISMISS A NEAR MISS

USE A GOOD 2-MINUTE DRILL TO ASSESS THE AREAS AND IDENTIFY POTENTIAL VULNERABILITIES AND TAKE OWNERSHIP.

YOU CAN FIX IT WITH THE FOLLOWING:

- BLUE MATTING
- TOOL LANYARDS
- FLAGGING FOR DROP ZONE
- NETTING AND TOE BOARDS (OTHER THAN IN CONTAINMENT)
- C CLAMPS FOR CART WHEELS
- PERSONAL PROTECTIVE EQUIPMENT
- FME COVERS

Moving phases of electrical equipment

SUPPLIES CAN BE CHECKED OUT AT THE TOOL ROOM

RF21 OCC Shift Update

OUTAGE WORK STATUS:

Major Activities Completed Last Shift:

- A&C SG manways removed
- Completed FCN for replacement of EMV0709
- ESW Spool pup piece added, waiting for final fit up cut
- NB02 grounds removed
- Last large box for WJP was unloaded tonight

Critical Path Due in Next 12 hours	Due in the Next 72 Hours
○ Continue water jet peening mobilization (currently ahead of schedule) ○ Remove SG Manways for C&D, pump out all SG bowls	○ Continue water jet peening mobilization – bring WesDyne boxes into containment ○ Install Steam Generator nozzle dams
Important Path/ Major Work Due in Next 12 hours	**Due in the Next 72 Hours**
○ Continue GN piping replace (progressing as scheduled) ○ 'B' Train RHR, CCW, KJ, and ESW work (progressing as scheduled) ○ Fit-up and tack ESW xite spool piece ○ Energize XNB02, X-fer NB01 to XNB02, De-energize XNB01. ○ Switchyard reliability upgrade (Waverly line outage 18, re-route to the North end and OPD cabinet install, to start tomorrow).	○ Additional inspection to support code case for Rx Head to support repair ○ 'B' Train RHR, CCW, KJ, and ESW work ○ Plant secondary work is 25% complete (~2.5 % ahead)

Important Decisions Due	NB02 NORYL insulation-repair or replace. Engineering working with Electric shop.

SHIFT OUTAGE MANAGER COMMENTS

- Leaders, please discuss the talking points regarding inadvertent bumping, which are attached to the back of today's RF21 OCC Shift Update.
- A SG manway personnel reported feeling over-heated last night, left containment, and was observed by EMTs and Health Services.
- Higher risk activity today: Switchyard – LaCygne A frame removal

OUTAGE GOALS							
Attribute	Goal	Measure	Actual	Attribute	Goal	Measure	Actual
Nuclear Safety				**FME**			
Elevating to Orange/Red	0	Events	0	Significant Events	0	Events	0
Elevating to Yellow	≤ 2	Events	0	Vulnerabilities	0	Events	0
Personnel Safety				Conditions	≤ 15	Events	0
Injuries (≥ Recordable)	0	Events	0	**Reliability**			
				Orig Work Scope Complete	≥98%	Percent	26.18%
Radiological							
Dose (Expected = 60)	<60	REM	26.056	Continuous Run After S/U	≥100	Days	N/A
PCEs	≤ 3	Events	0	**Efficiency**			Projected
				Incremental O&M Cost	<45.7	M	27.99 M
Human Performance				**Scope/Schedule**			Actual
Site Clock Resets	0	Events	0	Scope Flux	≤ 10	Percent	0.4%
Training				Schedule Duration	≤ 62	Days	17
Training Focus		Index	100 (0)				

RF21 OCC Shift Update

Date: 09-30-2016	Update Time: 0500	Shift Outage Manager (SOM): On-coming: Lanny Ratzlaff
Day: 14	Off-going Shift: Night	Off-going: Daniel Bowers

PROTECTED TRAIN A

PLANT STATUS:	PROTECTED EQUIPMENT:	
○ Mode: Defueled ○ RCS Temperature: 99 deg F ○ RCS Pressure: <1 psig ○ SFP Time to 200 F: 10.5 hrs ○ RCS Time to Boil: N/A ○ RCS Time to 200 F: N/A	NB01, NG01/3, NN01/3, NK01/3 XNB01 and its MA104F relays "A" EDG Class 1E A/C unit (SGK05A) Component Cooling Water – "A" Essential Service Water – "A" Control Room A/C Unit (SGK04A) Spent Fuel Pool Cooling "A" #7 xfmr, 13-48, switch 13-23	Rose Hill line Benton line East Bus SL-3, SL-31, 'B' & 'C' SW Pump

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK: Yellow

○ Reactivity Management:	Green	N/A
○ Core Decay Heat Removal:	N/A	N/A
○ SFP Decay Heat Removal:	Yellow	Only one train of SFP Cooling Available (CCW "B" drained)
○ RCS Inventory:	N/A	N/A
○ Electrical Power Sources:	Green	N/A
○ Containment Closure:	N/A	N/A
○ Rad Monitoring & Ventilation:	Green	N/A

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours

- First Aids: 0
- OSHA Injuries (Recordable, Restricted, LT): 0
- OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: 611

RADIOLOGICAL PROTECTION:

- 9/30/16 Dose Goal: 1.3 REM
- 9/29/16 Actual: 2.344 REM (Goal was 1.600 REM)

Overage due to Rx Head Inspections

Contamination Events

- PCEs: 0

The site has accumulated 21.348 REM versus a goal of 17.493 REM

RAPID TRENDING:

Thanks for being part of the solution!

Great job resolving the recently identified safety issues! We can respond to the issues as long as they are reported.

- Trip hazards in the Olive Ann Beech building
- Speed bumps at Main Gate North
- Essential Service Water fence removal

Continue to bring attention to issues as you see them. There are several avenues of reporting: You can fill out a Blue Card, write a Condition Report, contact the Outage Control Center, contact Safety, or simply notify your supervisor.

RF21 OCC Shift Update

OUTAGE WORK STATUS:	
Major Activities Completed Last Shift:	
○ Commenced Demo of "B" ESW crosstie ○ Initial gross decon of RPV head	○ "B" Train MOV work (BBPV8702B, EFHV0032, ENHV0007, EJHV8716B)
Critical Path Due in Next 12 hours	**Due in the Next 72 Hours**
○ Finalize plan for WJP mobilization without Big Blue ○ Evaluate Big Blue with upper brace removed	○ Continue water jet peening mobilization
Important Path/ Major Work Due in Next 12 hours	**Due in the Next 72 Hours**
○ 'B' Train MOV work (EJHV8804B) ○ GN piping replacement ○ 'B' Train RHR, CCW, KJ, and ESW work ○ NB/NG De-energize for maintenance ○	○ Determine decon/clean for Rx Head to support repair ○ Switchyard reliability upgrade (Waverly line outage 1B, re-route to the North end and OPD cabinet install, to start Monday). ○ 'B' Train RHR, CCW, KJ, and ESW work
Important Decisions Due	• Big Blue repairs versus contingency to mobilize water jet peening equipment.
SHIFT OUTAGE MANAGER COMMENTS	
•	

OUTAGE GOALS							
Attribute	Goal	Measure	Actual	Attribute	Goal	Measure	Actual
Nuclear Safety				**FME**			
Elevating to Orange/Red	0	Events	0	Significant Events	0	Events	0
Elevating to Yellow	≤ 2	Events	0	Vulnerabilities	0	Events	0
Personnel Safety				Conditions	≤ 15	Events	0
Injuries (≥ Recordable)	0	Events	0	**Reliability**			
				Orig Work Scope Complete	≥98%	Percent	21%
Radiological							
Dose (Expected = 60)	<60	REM	21.248	Continuous Run After S/U	≥100	Days	N/A
PCEs	≤ 3	Events	0	**Efficiency**			Projected
				Incremental O&M Cost	<45.7	M	0 M
Human Performance				**Scope/Schedule**			Actual
Site Clock Resets	0	Events	0	Scope Flux	≤ 10	Percent	0.4%
Training				Schedule Duration	≤ 62	Days	14
Training Focus		Index	100 (G)				

RF21 OCC Shift Update

Date: 09-28-2016	Update Time: 0500	Shift Outage Manager (SOM):
		On-coming: Bill Stucker
Day: 12	Off-going Shift: Night	Off-going: James Edwards

PROTECTED TRAIN A

PLANT STATUS:	PROTECTED EQUIPMENT:	
○ Mode: 6	NB01, NG01/3, NN01/3, NK01/3	Rose Hill line
○ RCS Temperature: 99 deg F	XNB01 and its MA104F relays	Benton line
○ RCS Pressure: <1 psig	"A" EDG	East Bus
○ SFP Time to 200 F: 13.2 hrs	"A" CCP	RHR Pump and HX "A"
○ RCS Time to Boil: 10.9 HOURS	Class 1E A/C unit (SGK05A)	Spent Fuel Pool Cooling "A"
○ RCS Time to 200 F: N/A	Component Cooling Water – "A"	RHR Pump and HX "B"
	Essential Service Water – "A"	Class 1E A/C Unit (SGK05B)
	Control Room A/C Unit (SGK04A)	PG19G, NG02A
	#7 xfmr, 13-48, switch 13-23	SL-3, SL-31, PG20, 'B' & 'C' SW Pump

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK:	Green	
○ Reactivity Management:	Green	N/A
○ Core Decay Heat Removal:	Green	N/A
○ SFP Decay Heat Removal:	Green	N/A
○ RCS Inventory:	Green	N/A
○ Electrical Power Sources:	Green	N/A
○ Containment Closure:	Green	N/A
○ Rad Monitoring & Ventilation:	Green	N/A

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours

- First Aids: 0
- OSHA Injuries (Recordable, Restricted, LT): 0
- OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: *609*

RADIOLOGICAL PROTECTION:

- 9/28/16 Dose Goal: 1.600 REM
- 9/27/16 Actual: 1.500 REM (Goal was 1.350 REM)
  Overage due to scaffold around Rx Head

Contamination Events

- PCEs: 0

The site has accumulated 17.012 REM versus a goal of 14.293 REM

RAPID TRENDING: **We need to step up our game!**

There have been issues with crane operation and housekeeping in Containment.

A thorough 2-Minute Drill would have helped identify the conditions; use it to help maintain awareness of your surroundings.

RF21 OCC Shift Update

OUTAGE WORK STATUS:	
Major Activities Completed Last Shift:	
○ NK12 duty cycle test complete and on equalizing charge ○ NK14 duty cycle test commenced	○ DZ removed handrails on 2068' ○ Mobilized MHI-01 and MHI-06, both staged on 2068'
Critical Path Due in Next 12 hours	**Due in the Next 72 Hours**
○ Continue fuel offload – 178 assemblies offloaded at 0500	○ Complete fuel offload ○ Lock transfer tube valve ECV0995 closed ○ Install the fuel transfer canal gate ○ Continue water jet peening mobilization
Important Path/ Major Work Due in Next 12 hours	**Due in the Next 72 Hours**
○ Continue water jet peening mobilization activities ○ NK14 battery duty cycle testing (~0800) and equalize ○ Perform STS CV-210A for the A SI pump ○ Begin Train B Maintenance Window ○ Remove "A" and "C" cooler braces	○ Continue head inspections (day shift) ○ Place CO for ESW B train at ESW pumphouse ○ NN Inverters clean and inspect
Important Decisions Due	• none

SHIFT OUTAGE MANAGER COMMENTS

- Radiography inside the bioshield will begin Wednesday morning 9/28/16 and last through the end of dayshift. Access into the bioshield will be prohibited during this period of time.
- ***Multiple important work paths will compete for resources immediately following core offload, now is the time to look ahead and prepare to remove barriers and execute flawlessly.***
- Rx Head EIT will need to coordinate with upcoming critical path activities to ensure resources are allocated properly

OUTAGE GOALS							
Attribute	Goal	Measure	Actual	Attribute	Goal	Measure	Actual
Nuclear Safety				**FME**			
Elevating to Orange/Red	0	Events	0	Significant Events	0	Events	0
Elevating to Yellow	≤ 2	Events	0	Vulnerabilities	0	Events	0
Personnel Safety				Conditions	≤ 15	Events	0
Injuries (≥ Recordable)	0	Events	0	**Reliability**			
				Orig Work Scope Complete	≥98%	Percent	11.23%
Radiological							
Dose (Expected = 60)	<60	REM	*17.012*	Continuous Run After S/U	≥100	Days	N/A
PCEs	≤ 3	Events	0	**Efficiency**			Projected
				Incremental O&M Cost	<45.7	M	0 M
Human Performance				**Scope/Schedule**			Actual
Site Clock Resets	0	Events	0	Scope Flux	≤ 10	Percent	.2%
Training				Schedule Duration	≤ 62	Days	12
Training Focus		Index	100 (5)				

RF21 OCC Shift Update

Date: 09-27-2016	Update Time: 0500	Shift Outage Manager (SOM):
		On-coming: Lanny Ratzlaff
Day: 11	Off-going Shift: Night	Off-going: James Edwards

PROTECTED TRAIN A

PLANT STATUS:	PROTECTED EQUIPMENT:	
○ Mode: 6	NB01, NG01/3, NN01/3, NK 01/3	Rose Hill line
○ RCS Temperature: 99 deg F	XNB01 and it MA104F relays	Benton line
○ RCS Pressure: <1 psig	"A" EDG	East Bus
○ SFP Time to 200 F: 13 hrs	"A" CCP	RHR Pump and HX "A"
○ RCS Time to Boil: 10.7 HOURS	Class 1E A/C unit (SGK05A)	Spent Fuel Pool Cooling "A"
○ RCS Time to 200 F: N/A	Component Cooling Water – "A"	RHR Pump and HX "B"
	Essential Service Water – "A"	Class 1E A/C Unit (SGK05B)
	Control Room A/C Unit (SGK04A)	PG19G, NG02A
	#7 xfmr, 13-48, switch 13-23	

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK:	Green	
○ Reactivity Management:	Green	N/A
○ Core Decay Heat Removal:	Green	N/A
○ SFP Decay Heat Removal:	Green	N/A
○ RCS Inventory:	Green	N/A
○ Electrical Power Sources:	Green	N/A
○ Containment Closure:	Green	N/A
○ Rad Monitoring & Ventilation:	Green	N/A

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours

- First Aids: 0
- OSHA Injuries (Recordable, Restricted, LT): 0
- OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: *608*

RADIOLOGICAL PROTECTION:

- 9/27/16 Dose Goal: 1.375 REM
- 9/26/16 Actual: 1.993 REM (Goal was 1.350 REM)

Contamination Events

- PCEs: 0

The site has accumulated 15.507 REM versus a goal of 12.943 REM

RAPID TRENDING: Housekeeping in Containment

Several major work windows are preparing to open in Containment. Specifically, material to support both the ESW Above Ground Pipe Replacement and Water Jet Peening projects is being staged and laydown space is at a premium. As this work commences it's time to heighten our focus on housekeeping. Remember poor housekeeping contributes to:

- Increased potential for trip hazards, dropped objects, foreign material, and combustible material accumulation
- Potential obstruction of fire protection equipment
- Ineffective use of laydown space
- Inability to manage our inventory of tools, harnesses, and rigging

AP 12-001, Housekeeping Control, states that waste materials shall be removed from work areas at least once per shift during extended work activities. It goes on to state that tools and equipment used in the work performance shall be removed and/or properly stored.

Remember it's each workgroup's responsibility to keep their work areas clean and our leader's responsibility to reinforce our standards.

RF21 OCC Shift Update

OUTAGE WORK STATUS:	
Major Activities Completed Last Shift:	
○ Complete manipulator crane driver replacement activities ○ Install temporary power to charger NK022 ○ Knuckle Boom load testing and functional testing	○ Installed thimble tube restraints ○ 2047' Platforms delivered to containment
Critical Path Due in Next 12 hours	**Due in the Next 72 Hours**
○ Continue fuel offload – 52 assemblies offloaded at 0500	○ Complete fuel offload ○ Lock transfer tube valve ECV0995 closed ○ Install the fuel transfer canal gate ○ Continue water jet peening mobilization
Important Path/ Major Work Due in Next 12 hours	**Due in the Next 72 Hours**
○ Continue head inspections ○ Continue construction of 2047' platforms ○	○ Place CO for ESW B train at ESW pumphouse ○ Begin Train B Maintenance Window
Important Decisions Due	• Retest of SI pump A per STS CV-210A, determine when to schedule.

SHIFT OUTAGE MANAGER COMMENTS

- Radiography inside the bioshield for 9/27 has been delayed. QC will update the schedule today to ensure these activities are on the schedule.
- Multiple important work paths will compete for resources immediately following core offload, now is the time to look ahead and prepare to remove barriers and execute flawlessly.

OUTAGE GOALS							
Attribute	Goal	Measure	Actual	Attribute	Goal	Measure	Actual
Nuclear Safety				**FME**			
Elevating to Orange/Red	0	Events	0	Significant Events	0	Events	0
Elevating to Yellow	≤ 2	Events	0	Vulnerabilities	0	Events	0
Personnel Safety				Conditions	≤ 15	Events	0
Injuries (≥ Recordable)	0	Events	0	**Reliability**			
				Orig Work Scope	≥98%	Percent	11.23%
Radiological				Complete			
Dose (Expected = 60)	<60	REM	15.507	Continuous Run After S/U	≥100	Days	N/A
PCEs	≤ 3	Events	0	**Efficiency**			Projected
				Incremental O&M Cost	<45.7	M	0 M
Human Performance				**Scope/Schedule**			Actual
Site Clock Resets	0	Events	0	Scope Flux	≤ 10	Percent	.2%
Training				Schedule Duration	≤ 62	Days	11
Training Focus		Index	99 (G)				

RF21 OCC Shift Update

Date: 09-26-2016	Update Time: 0500	Shift Outage Manager (SOM): On-coming: Lanny Ratzlaff
Day: 10	Off-going Shift: Night	Off-going: James Edwards

PROTECTED TRAIN A

PLANT STATUS:	PROTECTED EQUIPMENT:	
○ Mode: 6 ○ RCS Temperature: 99 deg F ○ RCS Pressure: <1 psig ○ SFP Time to 200 F: 67 hrs ○ RCS Time to Boil: 10.5 HOURS ○ RCS Time to 200 F: N/A	NB01, NG01/3, NN01/3, NK 01/3 XNB01 and it MA104F relays "A" EDG "A" CCP Class 1E A/C unit (SGK05A) Component Cooling Water – "A" Essential Service Water – "A" Control Room A/C Unit (SGK04A) #7 xfmr, 13-48, switch 13-23	East Bus RHR Pump and HX "A" Spent Fuel Pool Cooling "A" RHR Pump and HX "B" Class 1E A/C Unit (SGK05B)

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK:	Green	
○ Reactivity Management:	Green	N/A
○ Core Decay Heat Removal:	Green	N/A
○ SFP Decay Heat Removal:	Green	N/A
○ RCS Inventory:	Green	N/A
○ Electrical Power Sources:	Green	N/A
○ Containment Closure:	Green	N/A
○ Rad Monitoring & Ventilation:	Green	N/A

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours

- First Aids: 3
- OSHA Injuries (Recordable, Restricted, LT): 0
- OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: 607

RADIOLOGICAL PROTECTION:

- 9/26/16 Dose Goal: 1.350 REM
- 9/25/16 Actual: 1.483 REM (Goal was 1.250 REM)

Contamination Events

- PCEs: 0

The site has accumulated 13.514 REM versus a goal of 11.593 REM

RAPID TRENDING:

High temperatures in your work area make heat stress a particular concern; therefore, we must pre-plan to minimize potential for injury.

Do you know your stay times for the work you are about to perform and your recovery period? You can find stay times in the following ways:

- Talk with your supervisor
- Look on WCNet, Industrial Safety page
- Call Safety Services or OCC representative
- See posting at Access Control or outside containment

Plan Ahead

RF21 OCC Shift Update

OUTAGE WORK STATUS:	
Major Activities Completed Last Shift:	
○ Commenced Core Offload	○ Completed Rx Head scaffold
Critical Path Due in Next 12 hours	**Due in the Next 72 Hours**
○ Continue fuel offload	○ Complete fuel offload ○ Lock transfer tube valve ECV0995 closed ○ Install the fuel transfer canal gate ○ Begin water jet peening mobilization
Important Path/ Major Work Due in Next 12 hours	**Due in the Next 72 Hours**
○ Install Knuckle-Boom crane ○ Remove spectacle flange between EFV113 and EFV116 ○ Begin head inspections	○ Place CO for ESW B train at ESW pumphose ○ Begin Train B Maintenance Window
Important Decisions Due	• None

SHIFT OUTAGE MANAGER COMMENTS

- Sunday 9/25/16 nightshift, QC will be working with RP performing radiography exams inside the bio-shield from 21:00 to 07:00. There will be no access or other activities in the bio-shield during this time.
- WGBT is 77 degrees

	Light Work	Moderate	Heavy Work	*All **Containment** Work is considered "Heavy Work" if using stairs or ladders.
Single PCs	>240 min.	>240 min.	*135 min.	
Double PCs	>240 min.	175 min.	*90 min.	
Impermeable Suit	155 min.	55 min.	*40 min.	

Regardless of stay times, know your limits. Stay hydrated, pay attention to how you feel and come out if you are feeling ill.

OUTAGE GOALS							
Attribute	Goal	Measure	Actual	Attribute	Goal	Measure	Actual
Nuclear Safety				**FME**			
Elevating to Orange/Red	0	Events	0	Significant Events	0	Events	0
Elevating to Yellow	≤ 2	Events	0	Vulnerabilities	0	Events	0
Personnel Safety				Conditions	≤ 15	Events	0
Injuries (≥ Recordable)	0	Events	0	**Reliability**			
				Orig Work Scope Complete	≥98%	Percent	11.23%
Radiological							
Dose (Expected = 60)	<60	REM	13.514	Continuous Run After S/U	≥100	Days	N/A
PCEs	≤ 3	Events	0	**Efficiency**			Projected
				Incremental O&M Cost	<45.7	M	0 M
Human Performance				**Scope/Schedule**			Actual
Site Clock Resets	0	Events	0	Scope Flux	≤ 10	Percent	.2%
Training				Schedule Duration	≤ 62	Days	10
Training Focus		Index	92 (White)				

RF21 OCC Shift Update

Date: 09-23-2016	Update Time: 0500	Shift Outage Manager (SOM):
		On-coming: Bill Stucker
Day: 7	Off-going Shift: Night	Off-going: James Edwards

B APW P/T

PROTECTED TRAIN A

PLANT STATUS:	PROTECTED EQUIPMENT:	
○ Mode: 5 Loops Not Filled ○ RCS Temperature: 99 deg F ○ RCS Pressure: <1 psig ○ SFP Time to 200 F: 67 hrs ○ RCS Time to Boil: 30 minutes ○ RCS Time to 200 F: N/A	NB01, NG01/3, NN01/3, NK 01/3 XNB01 and it MA104F relays "A" EDG "A" CCP Class 1E A/C unit (SGK05A) Component Cooling Water – "A" Essential Service Water – "A" Control Room A/C Unit (SGK04A) #7 xfmr, 13-48, switch 13-23	Waverly/La Cygne Line Benton Line and East Bus RHR Pump and HX "A" Spent Fuel Pool Cooling "A"RHR Pump and HX "B" Class 1E A/C Unit (SGK05B)

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK: Yellow

○ Reactivity Management:	Green	N/A
○ Core Decay Heat Removal:	Yellow	RCS Is in Lowered Inventory
○ SFP Decay Heat Removal:	Green	N/A
○ RCS Inventory:	Yellow	RCS Is in Lowered Inventory
○ Electrical Power Sources:	Green	N/A
○ Containment Closure:	Green	N/A
○ Rad Monitoring & Ventilation:	Green	N/A

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours

- First Aids: 2
- OSHA Injuries (Recordable, Restricted, LT): 0
- OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: 604

RADIOLOGICAL PROTECTION:

- Today's Dose Goal: 1.577 REM

Last 24 hours

- Actual: 1.839 REM (Goal was 1.138 REM)
- PCEs: 0

The site has accumulated 8.555 REM versus a goal of 7.216 and is under the 60 REM (outage) goal by 51.445 REM.

RAPID TRENDING:

Right Now: Look to your neighbor and say,
"If you see any unsafe behavior, please coach me so I can go home safe to my family."
We know you're out there coaching, but remember to document it on a Wolf Pack Blue Card.
We can't fix what we don't know. Choose to be a part of the solution!

RF21 OCC Shift Update

OUTAGE WORK STATUS:

Major Activities Completed Last Shift:

- Detensioned Rx Head bolts
- Manipulator and Upender PMs
- Withdrew incore detector thimbles
- Removed RVLIS spool pieces and supports
- Drained RCS to between 76" – 82"

Critical Path Due in Next 12 hours	Due in the Next 72 Hours
○ Remove head studs and inspect ○ Begin head removal prereq activities	○ Lift the head to the headstand ○ Flood the cavity to 5' above the flange ○ Perform accumulator injection testing ○ Perform charging pump flow balance ○ Adjust cavity level to 23' above the flange
Important Path/ Major Work Due in Next 12 hours	**Due in the Next 72 Hours**
○ Repack B AFW pump PAL01B ○ Fill the lower cavity (in progress) ○ Place RCPs on their backseats	○ Install underwater camera and lights in refuel pool ○ Cross tie NK02 and NK04 batteries ○ Begin Train B 125V DC work window

Important Decisions Due

- Determine if there is a two hour window to finish fit up of the cavity elevator
- Multiple studs are sticking. Engineering war room has been informed to start listing solution options.

SHIFT OUTAGE MANAGER COMMENTS

- We continue to have heat stress illnesses. Self-monitoring and understanding your limitations is important.
- Containment stay times are changing and being updated daily. Current times are as follows:

	Light Work	Moderate	Heavy Work	*All **Containment** stay times are considered heavy work if using stairs or ladders.
Single PCs	>240 min.	175 min.	90min.	
Double PCs	>240 min.	105 min.	65 min.	
Impermeable Suit	120 min.	45 min.	30 min.	

OUTAGE GOALS

Attribute	Goal	Measure	Actual	Attribute	Goal	Measure	Actual
Nuclear Safety				**FME**			
Elevating to Orange/Red	0	Events	0	Significant Events	0	Events	0
Elevating to Yellow	≤ 2	Events	0	Vulnerabilities	0	Events	0
Personnel Safety				Conditions	≤ 15	Events	0
Injuries (≥ Recordable)	0	Events	0	**Reliability**			
				Orig Work Scope	≥98%	Percent	0%
Radiological				Complete			
Dose (Expected = 60)	<60	REM	6.716	Continuous Run After S/U	≥100	Days	N/A
PCEs	≤ 3	Events	0	**Efficiency**			Projected
				Incremental O&M Cost	<45.7	M	0 M
Human Performance				**Scope/Schedule**			Actual
Site Clock Resets	0	Events	0	Scope Flux	≤ 10	Percent	0%
Training				Schedule Duration	≤ 62	Days	7
Training Focus		Index	92				

RF21 OCC Shift Update

Date: 09-21-2016	Update Time: 0500	Shift Outage Manager (SOM): On-coming: Lanny Ratzlaff
Day: 5	Off-going Shift: Night	Off-going: James Edwards

PROTECTED TRAIN A

PLANT STATUS:	PROTECTED EQUIPMENT:	
○ Mode: 5 Loops Not Filled ○ RCS Temperature: 99 deg F ○ RCS Pressure: <1 psig ○ SFP Time to 200 F: 67 hrs ○ RCS Time to Boil: 30 minutes ○ RCS Time to 200 F: N/A	NB01, NG01/3, NN01/3, NK 01/3 XNB01 and it MA104F relays "A" EDG "A" CCP Class 1E A/C unit (SGK05A) Component Cooling Water – "A" Essential Service Water – "A" Control Room A/C Unit (SGK04A) #7 xfmr, 13-48, switch 13-23	Waverly/La Cygne Line Benton Line and East Bus RHR Pump and HX "A" Spent Fuel Pool Cooling "A"RHR Pump and HX "B" Class 1E A/C Unit (SGK05B)

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK: Green

○ Reactivity Management:	Green	N/A
○ Core Decay Heat Removal:	Green	N/A
○ SFP Decay Heat Removal:	Green	N/A
○ RCS Inventory:	Green	N/A
○ Electrical Power Sources:	Green	N/A
○ Containment Closure:	Green	N/A
○ Rad Monitoring & Ventilation:	Green	N/A

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours

- First Aids: 2
- OSHA Injuries (Recordable, Restricted, LT): 0
- OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: 602

RADIOLOGICAL PROTECTION:

- Today's Dose Goal: 1.138 REM

Last 24 hours

- Actual: 1.344 REM (Goal was 1.787 REM)
- PCEs: 0

The site has accumulated 5.177 REM and is <u>under</u> the 60 REM (outage) goal by 54.823 REM.

RAPID TRENDING:

Did you know...What goes up doesn't have to come down?

WHAT IS THE WORST THAT COULD HAPPEN? USE YOUR 2-MINUTE DRILL

Workers *shall* secure hand tools with a lanyard when there is a risk of dropping and it falling 6 feet or more. It is critical that all elevated tools, parts and materials be secured and a "drop zone" be barricaded. A restricted area should always be established beneath suspended objects or work being done at a height.

See 12-1 of the Wolf Creek Safety Manual

RF21 OCC Shift Update

OUTAGE WORK STATUS:	
Major Activities Completed Last Shift:	
○ Polar Crane Maintenance truss work and PMT is complete. ○ SeaLand 1 has been emptied.	○ RTD installations below manways
Critical Path Due in Next 12 hours	**Due in the Next 72 Hours**
○ SeaLand 2 offload is in progress ○ Install manipulator crane console ○ Install cavity elevator for fitup ○ Remove "B" Hydrogen mixing fan ○ RCS drain down ○ Decon stud bolts, power wash	○ Remove "D" Hydrogen mixing fan. ○ Move stud tensioners and head hoists in CTMT ○ Remove CETNA Clamps and remove RVLIS support ○ Detention RPV head
Important Path/ Major Work Due in Next 12 hours	**Due in the Next 72 Hours**
○ Install cavity elevator sway struts. ○ Install six RTDs in cavity.	○ Install cavity elevator and test.
Important Decisions Due	• Determine the proper time to continue with drain down. • Determine if today is proper time to de-energize polar crane to work maintenance truss. • Identify when to repack PAL01B

SHIFT OUTAGE MANAGER COMMENTS

- We need to be looking ahead and be ready for jobs. We've had some last minute hold ups that have caused delays because we did not have tools needed, proper qualifications or batteries charged.
- Containment stay times are changing and being updated daily. Current times are as follows:

	Light Work	Moderate	Heavy Work
Single PCs	>240 min.	175 min.	90 min.
Double PCs	>240 min.	105 min.	65 min.
Permeable Suit	120 min.	45 min.	30 min.

OUTAGE GOALS							
Attribute	Goal	Measure	Actual	Attribute	Goal	Measure	Actual
Nuclear Safety				**FME**			
Elevating to Orange/Red	0	Events	0	Significant Events	0	Events	0
Elevating to Yellow	≤ 2	Events	0	Vulnerabilities	0	Events	0
Personnel Safety				Conditions	≤ 15	Events	0
Injuries (≥ Recordable)	0	Events	0	**Reliability**			
				Orig Work Scope Complete	≥98%	Percent	0%
Radiological							
Dose (Expected = 60)	<60	REM	5.177	Continuous Run After S/U	≥100	Days	N/A
PCEs	≤ 3	Events	0	**Efficiency**			Projected
				Incremental O&M Cost	<45.7	M	0 M
Human Performance				**Scope/Schedule**			Actual
Site Clock Resets	0	Events	0	Scope Flux	≤ 10	Percent	0%
Training				Schedule Duration	≤ 62	Days	5
Training Focus		Index	92(W)				

RF21 OCC Shift Update

Date: 09-20-2016	Update Time: 0500	Shift Outage Manager (SOM):
		On-coming: Lanny Ratzlaff
Day: 4	Off-going Shift: Night	Off-going: Dan Bowers

PROTECTED TRAIN A

PLANT STATUS:	PROTECTED EQUIPMENT:	
○ Mode: 5 Loops Not Filled ○ RCS Temperature: 99 deg F ○ RCS Pressure: <1 psig ○ SFP Time to 200 F: 67 hrs ○ RCS Time to Boil: 30 minutes ○ RCS Time to 200 F: N/A	NB01, NG01/3, NN01/3, NK 01/3 XNB01 and it MA104F relays "A" EDG "A" CCP Class 1E A/C unit (SGK05A) Component Cooling Water – "A" Essential Service Water – "A" Control Room A/C Unit (SGK04A) #7 xfmr, 13-48, switch 13-23 Waverly/La Cygne Line Benton Line and East Bus RHR Pump and HX "A" Spent Fuel Pool Cooling "A"	RHR Pump and HX "B" Class 1E A/C Unit (SGK05B)

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK: Green

○ Reactivity Management:	Green	N/A
○ Core Decay Heat Removal:	Green	N/A
○ SFP Decay Heat Removal:	Green	N/A
○ RCS Inventory:	Green	N/A
○ Electrical Power Sources:	Green	N/A
○ Containment Closure:	Green	N/A
○ Rad Monitoring & Ventilation:	Green	N/A

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours

- First Aids: 1
- OSHA Injuries (Recordable, Restricted, LT): 0
- OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: 601

RADIOLOGICAL PROTECTION:

- Today's Dose Goal: 1.345 REM

Last 24 hours

- Actual: 1.732 REM
- PCEs: 0

The site has accumulated 3.265 REM and is under the 60 REM (outage) goal by 58.467 REM.

RAPID TRENDING:

It is important to focus on the task at hand and uphold standards and expectations that have been set, not rush to complete task. It is imperative to look ahead and prepare to ensure you are ready for upcoming work.

- Do you have the parts and equipment needed and available?
- Have you had the correct Radiation Work Permit briefing?
- Are you qualified for the task?
- Have you identified any risks or potential risks?
- Do you understand your job and the work being performed?

If you cannot answer "YES" to all of these questions, **STOP and get your supervisor involved.**

RF21 OCC Shift Update

OUTAGE WORK STATUS:

Major Activities Completed Last Shift:

- Rx head mirror insulation removed.
- Finished Installation of Big Blue platform
- Drawbridge installed in CTMT equip hatch
- "A" train mini window work
- Received Polor crane parts

Critical Path Due in Next 12 hours	Due in the Next 72 Hours
○ Finish deconning the Rx vessel head ○ Moving equipment into CTMT	○ Remove permanent cavity seal ring access hatches ○ Move stud tensioners and head hoists in CTMT ○ Remove CETNA Clamps and remove RVLIS support ○ Close CRDM ventilation doors ○ Detention RPV head ○ RCS drain down
Important Path/ Major Work Due in Next 12 hours	**Due in the Next 72 Hours**
○ Rx vessel head disassembly including insulation ○ Cavity seal ring access hatches	○ Stage Refuel Machine Control Console ○ Cavity Elevator installation ○ Reactor vessel stud storage rack

Important Decisions Due	• Determine the proper time to continue with drain down. • Determine if today is proper time to de-energize polar crane to work maintenance truss.

SHIFT OUTAGE MANAGER COMMENTS

- We need to be looking ahead and be ready for jobs. We've had some last minute hold ups that have caused delays because we did not have tools needed, proper qualifications or batteries charged.
- Polar crane is available and the current plan is to de-energize the polar crane on Tuesday, 9/20 in support of completing maintenance activity on the maintenance truss.
- Containment stay times are changing and being updated daily. Current times are as follows:

	Light Work	Moderate	Heavy Work
Single PCs	>240 min.	175 min.	90 min.
Double PCs	>240 min.	105 min.	65 min.
Permeable Suite	120 min.	45 min.	30 min.

OUTAGE GOALS

Attribute	Goal	Measure	Actual	Attribute	Goal	Measure	Actual
Nuclear Safety				**FME**			
Elevating to Orange/Red	0	Events	0	Significant Events	0	Events	0
Elevating to Yellow	≤ 2	Events	0	Vulnerabilities	0	Events	0
Personnel Safety				Conditions	≤ 15	Events	0
Injuries (≥ Recordable)	0	Events	0	**Reliability**			
				Orig Work Scope Complete	≥98%	Percent	0%
Radiological							
Dose (Expected = 60)	<60	REM	3.265	Continuous Run After S/U	≥100	Days	N/A
PCEs	≤ 3	Events	0	**Efficiency**			Projected
				Incremental O&M Cost	<45.7	M	0 M
Human Performance				**Scope/Schedule**			Actual
Site Clock Resets	0	Events	0	Scope Flux	≤ 10	Percent	0%
Training				Schedule Duration	≤ 62	Days	4
Training Focus		Index	99 (G)				

RF21 OCC Shift Update

Date: 09-19-2016	Update Time: 0500	Shift Outage Manager (SOM): On-coming: Lanny Ratzlaff
Day: 3	Off-going Shift: NIGHTS	Off-going: James Edwards

PROTECTED TRAIN A

PLANT STATUS:	PROTECTED EQUIPMENT:	
○ Mode: 5 ◇ RCS Temperature: 99 deg F ○ RCS Pressure: <1 psig ○ SFP Time to 200 F: 67 hrs ○ RCS Time to Boil: 30 minutes ○ RCS Time to 200 F: N/A	NB01 "A" Train 4.16 KV BUS NG01/03 "A" Train 480 V Buses NN01/03 "A" 120 V AC Buses NK01/03 "A" 125 V DC Buses No. 7 XFMR, 13-48, Switch 13-23 Waverly/LaCygne & Benton 345 kV lines and East Bus EDG "A" RHR Pumps and Heat Exchangers: A&B	Centrifugal Charging Pump "A" SFP Cooling Pump "A" Class 1E A/C Units (SGK05A & SGK05B) Control Room A/C Unit (SGK04A) Component Cooling Water – "A" Essential Service Water – "A"

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK: Green

○ Reactivity Management:	Green	N/A
○ Core Decay Heat Removal:	Green	N/A
○ SFP Decay Heat Removal:	Green	N/A
○ RCS Inventory:	Green	N/A
◇ Electrical Power Sources:	Green	N/A
◇ Containment Closure:	Green	N/A
○ Rad Monitoring & Ventilation:	Green	N/A

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours

- First Aids: 1 Heat Illness First Aid
- OSHA Injuries (Recordable, Restricted, LT): 0
- OSHA Illnesses (Recordable, Restricted, LT): 0
- Site Clock Resets: 0

Days since last Site Clock Reset: *600*

RADIOLOGICAL PROTECTION:

- Today's Dose Goal: 0.533 REM

Last 24 hours

- Actual: 0.934 REM
- PCEs: 0

The site has accumulated 1.533 REM and is under the 60 REM (outage) goal by 58.467 REM.

RAPID TRENDING:

We are experiencing some issues with work assignments to personnel without qualifications, or discovering a lack of qualifications when preparing to go to work. Effective work preparations will include ensuring personnel are qualified and capable for the tasks we are assigning.

RF21 OCC Shift Update

OUTAGE WORK STATUS:	
Major Activities Completed Last Shift:	
○ RCS depressurized and vented IAW BB 215-4 ○ Equipment hatch open and nightshift closure test complete ○ PZR vented	○ Tygon tube in service ○ RCS Purged with N2
Critical Path Due in Next 12 hours	**Due in the Next 72 Hours**
○ Establish RCS vent path ○ Drain PZR to 365"	○ Reactor Vessel Head Work
Important Path/ Major Work Due in Next 12 hours	**Due in the Next 72 Hours**
○ Continue Installation of Big Blue/Install PSC Bridge ○ Moving equipment into CTMT ○ Rx vessel head disassembly including insulation ○ Cavity seal ring access hatches ○ Rx Vessel Head decon	○ Stage Refuel Machine Control Console ○ Cavity Elevator installation ○ Maintenance Truss Work ○ Reactor vessel stud storage rack ○ Sample RCS for residual H2O2
Important Decisions Due	• None

SHIFT OUTAGE MANAGER COMMENTS

- Polar crane is functional. Minimize moving maintenance truss until repair complete. Current plan is to de-energize the polar crane on Tuesday, 9/20 in support of completing maintenance activity on the maintenance truss.
- Containment stay times: Heavy Work single PC's-105 minutes, double PC's-70 Minutes.

OUTAGE GOALS							
Attribute	Goal	Measure	Actual	Attribute	Goal	Measure	Actual
Nuclear Safety				**FME**			
Elevating to Orange/Red	0	Events	0	Significant Events	0	Events	0
Elevating to Yellow	≤ 2	Events	0	Vulnerabilities	0	Events	0
Personnel Safety				Conditions	≤ 15	Events	0
Injuries (≥ Recordable)	0	Events	0	**Reliability**			
				Orig Work Scope	≥98%	Percent	0%
Radiological				Complete			
Dose (Expected = 60)	<60	REM	0.390	Continuous Run After S/U	≥100	Days	N/A
PCEs	≤ 3	Events	0	**Efficiency**			Projected
				Incremental O&M Cost	<45.7	M	0 M
Human Performance				**Scope/Schedule**			Actual
Site Clock Resets	0	Events	0	Scope Flux	≤ 10	Percent	0%
Training				Schedule Duration	≤ 62	Days	2
Training Focus	100	Index	Green				

Dodson, Douglas

From: Patten Tim D <tipatte@WCNOC.com>
Sent: Monday, September 12, 2016 7:29 AM
To: Dodson, Douglas; Skiles Mike D; Cuffe John T
Subject: [External_Sender] Location of pictures taken by NRC 9-9-2016.

Doug Dodson I will be over to verify you can get to this location.
Location of pictures taken by NRC 9-9-2016.
K:\Apps\WCMENU\MAINT\Locator\AlaraPics\AAA RF-21 Daily Pictures\9-9-2016 NRC Pictures

Shift Manager
Operational Focus Items

Refer to licensee.

Date:	8/31/2016	Work Week	310
Protected Train B			
Awareness Level	1	**Due to:**	No risk significant activities

DUTY TEAM			PLANT STATUS				ALARA		RCS LEAK RATE			
Shift Manager	D	Wade Camp	*Rx Power*	3445 MWth	*RCS Boron*	171 ppm	*YTD Actual Non-Outage*	2707 mRem	*Date*	Today	Previous	
	N	Eric Martinson										
Work Control SRO	D	Adam Faircloth	*Generator Load*	1192 MWe	*SGBD Flow*	98k lbm/hr	*Annual Goal*	5000 mRem	*Total Identified Leakage*	X	0.046	gpm
	N	Ted Pitt										
WWM	Joe Orzel		*Condenser In-leakage*	1.9 cfm	*ODMI*	6	*Weekly Estimate*	109 mRem	*Total Unidentified Leakage*	X	0.062	gpm
Call Supt	Jeff Isch		*Lake Level*	1087.5 ft	*SFP Time to 200°F*	66.7 hrs	*Weekly Goal*	87 mRem	*Total T/S Identified Leakage*	X	0.191	gpm
			Lake temp	83.5 F								
Days Online	485		*H_2 Leakage*	641 cfd								
Days to RF21	24											

Operator Work Around (Green)	0	Control Room Deficiencies (White)	9	Clearance Effectiveness Index (Green)	1.00	Clearance Order Index (White)	455 days since last clearance order reset	Status Control Index (Yellow)	20 days since last status control event	Station Event Rate (Green)	881 days since last SCR	Training Focus Index (Green)	100
Last Site Clock Reset Info:	**The last site clock reset was due to a clearance order error resulting in an unplanned Tech Spec entry on Jan 28, 2015.**												

HUMAN PERFORMANCE / SAFETY ISSUES		
Item #	*Item*	Description
1.	**Industrial Safety**	Kansas weather can be extreme, plan ahead to Protect the Pack. Reference the Wolf Creek Way, Page 26 Weather.
2.	**Status Control Issues**	CR 106354 – Power Supply Breaker to Emergency Light F12 Found Off. – Level 3 (08/11/2016)
3.	**CO Issues**	CR 96745 – 120V Breaker found Tagged and Verified in the "On" Position – Level 2 (06/03/2015)
4.	**Protected Equipment** **Reason:**(protected component)	**IER 11-2:** 'B' ESW, 'B' CCW, NB02, 'B' SFP, SGK05B, SGK05A **B train CREVS** (A Train CREVS – SGK04A, CGK04A, CGK03A).
5.	**Fire Risk Protected Areas**	

Wolf Creek Nuclear Operating Corporation

Most Recently Initiated CRs

CR's Initiated between 08/31/2016 05:00 and 09/01/2016 05:00

CR Number: 00106822 **Status:** PRE-APRV **Initiation Date:** 9/1/2016 2:58:00AM **Initiator :** MARTINSON, ERIC W
Subject: STS BB-006 results- elevated RCS leakage
Description: STS BB-006 results on 9/1/16 indicate an unidentified leak rate of .188 gpm. Table 2 Action Levels 2 and 3 are exceeded.
Equipment : **Equipment Description :**
Operability : 3 OPER/DNC
This condition was previously evaluated by CR#106763 with no indication that the condition has changed. SR 3.4.13.1 requirements are met. TS 3.4.13

CR Number: 00106821 **Status:** PRE-APRV **Initiation Date:** 9/1/2016 2:34:00AM **Initiator :** BALZER, ADAM J
Subject: Door 000000000015012 between CR A/C units will not open
Description: Door 000000000015012 between CR A/C units will not open. The door's lower latch is not releasing. This door has previously been written up for the same condition. (AR#00106264)
Equipment : 000000000015012 **Equipment Description :** INT. DOUBLE / FIRE DOOR
Operability : 3 OPER/DNC
What's defect/degraded nonconforming condition? Door 000000000015012 between CR A/C units will not open What SSC is affected by the deficiency? 000000000015012 INT. DOUBLE / FIRE DOOR What is the design/safety function of the affected SSC? AP 10-104 identifies the subject door as a Fire, Train Operability, Flood, and Fire Risk barrier. What effect/or potential effect does the deficiency have on the affected SSC's ability to perform its intended design/safety function? None The SSC"s is operable but degraded because? The issue with the door is that it sticks in the latched position. Because the door closes and latches it performs all of its required functions iaw AP 10-104. Extent of condition? Unique condition References: Ref AP 10-104, TS 3.7.10, TS 3.7.11

CR Number: 00106820 **Status:** PRE-APRV **Initiation Date:** 8/31/2016 10:06:00PM **Initiator :** PITT, EDGAR L
Subject: Door 13331 will not open
Description: Door 13331, Hot Machine Shop to Aux Building, will not allow access from either side. The strike will not pull to allow the handwheel to rotate. The door is in the closed and secured position and is satisfying it's required safety functions.
Equipment : 000000000013331 **Equipment Description :** INT. DOUBLE / AIRTIGHT / MISSILE FIRE DOOR
Operability : 3 OPER/DNC
Door 13331 is closed/secured and the electric strike will not pull to allow the handwheel to be turned to open the door. Door 13331, Decontamination Room [Hot Machine Shop] to Aux. Bldg Corridor No. 3 MISSILE DOOR. Door 13331 between the Hot Machine Shop and Auxiliary Building is a Fire Barrier, Security Barrier, ABEES Boundary, OFN SG-003 (Natural Event) Barrier, LOCA-1/HELB- 1 Barrier, Rad Barrier, and Fire Risk Barrier in accordance with AP 10-104 "Breach Authorization". With the door currently in the closed and fully latched position it is fully satisfying all of these design safety functions. Another function of this door is to permit personnel and equipment access and with the door currently unable to be opened that function is degraded. Therefore, door 13331 is Operable but Degraded/Nonconforming. Issues with doors are documented and evaluated for operability/functionality when they are identified.
References: AP 10-104 "Breach Authorization" Tech Spec 3.7.13

CR Number: 00106819 **Status:** PRE-APRV **Initiation Date:** 8/31/2016 9:28:00PM **Initiator :** CAMPBELL, JT C
Subject: Light is out on indicator panel at MGN
Description: The green indicator light for barrier #2 is out on the control panel in MGN.
Equipment : CQ **Equipment Description :** SITE SECURITY SYSTEM (SEE ALSO SYS "SK")
Operability : 1 N/A
This SSC is not in the scope of equipment identified in AP 26C-004 that require an operability/functionality evaluation.

CR Number: 00106818 **Status:** PRE-APRV **Initiation Date:** 8/31/2016 5:13:00PM **Initiator :** DOW, JEREMY W
Subject: UPS for security cameras has red flashing battery light
Description: During WO 16-411101-000, found CWSH camera UPS battery light flashing red. This is an indication that the batteries need replaced.

Number of CRs: 28

Wolf Creek Nuclear Operating Corporation

Most Recently Initiated CRs

CR's Initiated between 08/31/2016 05:00 and 09/01/2016 05:00

CR Number: 00106822 **Status:** PRE-APRV **Initiation Date:** 9/1/2016 2:58:00AM **Initiator:** MARTINSON, ERIC W
Subject: STS BB-006 results- elevated RCS leakage
Description: STS BB-006 results on 9/1/16 indicate an unidentified leak rate of .188 gpm. Table 2 Action Levels 2 and 3 are exceeded.
Equipment: **Equipment Description:**
Operability: 3 OPER/DNC
This condition was previously evaluated by CR#106763 with no indication that the condition has changed. SR 3.4.13.1 requirements are met. TS 3.4.13

CR Number: 00106821 **Status:** PRE-APRV **Initiation Date:** 9/1/2016 2:34:00AM **Initiator:** BALZER, ADAM J
Subject: Door 000000000015012 between CR A/C units will not open
Description: Door 000000000015012 between CR A/C units will not open. The door's lower latch is not releasing. This door has previously been written up for the same condition. (AR#00106264)
Equipment: 000000000015012 **Equipment Description:** INT. DOUBLE / FIRE DOOR
Operability: 3 OPER/DNC
What's defect/degraded nonconforming condition? Door 000000000015012 between CR A/C units will not open. What SSC is affected by the deficiency? 000000000015012 INT. DOUBLE / FIRE DOOR. What is the design/safety function of the affected SSC? AP 10-104 identifies the subject door as a Fire, Train Operability, Flood, and Fire Risk barrier. What effect/or potential effect does the deficiency have on the affected SSC's ability to perform its intended design/safety function? None. The SSC"s is operable but degraded because? The issue with the door is that it sticks in the latched position. Because the door closes and latches it performs all of its required functions iaw AP 10-104. Extent of condition? Unique condition. References: Ref AP 10-104, TS 3.7.10, TS 3.7.11

CR Number: 00106820 **Status:** PRE-APRV **Initiation Date:** 8/31/2016 10:06:00PM **Initiator:** PITT, EDGAR L
Subject: Door 13331 will not open
Description: Door 13331, Hot Machine Shop to Aux Building, will not allow access from either side. The strike will not pull to allow the handwheel to rotate. The door is in the closed and secured position and is satisfying it's required safety functions.
Equipment: 000000000013331 **Equipment Description:** INT. DOUBLE / AIRTIGHT / MISSILE FIRE DOOR
Operability: 3 OPER/DNC
Door 13331 is closed/secured and the electric strike will not pull to allow the handwheel to be turned to open the door. Door 13331, Decontamination Room [Hot Machine Shop] to Aux. Bldg Corridor No. 3 MISSILE DOOR. Door 13331 between the Hot Machine Shop and Auxiliary Building is a Fire Barrier, Security Barrier, ABEES Boundary, OFN SG-003 (Natural Event) Barrier, LOCA-1/HELB- 1 Barrier, Rad Barrier, and Fire Risk Barrier in accordance with AP 10-104 "Breach Authorization". With the door currently in the closed and fully latched position it is fully satisfying all of these design safety functions. Another function of this door is to permit personnel and equipment access and with the door currently unable to be opened that function is degraded. Therefore, door 13331 is Operable but Degraded/Nonconforming. Issues with doors are documented and evaluated for operability/functionality when they are identified. References: AP 10-104 "Breach Authorization" Tech Spec 3.7.13

CR Number: 00106819 **Status:** PRE-APRV **Initiation Date:** 8/31/2016 9:28:00PM **Initiator:** CAMPBELL, JT C
Subject: Light is out on indicator panel at MGN
Description: The green indicator light for barrier #2 is out on the control panel in MGN.
Equipment: CQ **Equipment Description:** SITE SECURITY SYSTEM (SEE ALSO SYS "SK")
Operability: 1 N/A
This SSC is not in the scope of equipment identified in AP 26C-004 that require an operability/functionality evaluation.

CR Number: 00106818 **Status:** PRE-APRV **Initiation Date:** 8/31/2016 5:13:00PM **Initiator:** DOW, JEREMY W
Subject: UPS for security cameras has red flashing battery light
Description: During WO 16-411101-000, found CWSH camera UPS battery light flashing red. This is an indication that the batteries need replaced.

Number of CRs: 28

Most Recently Initiated CRs

CR's Initiated between 09/02/2016 05:00 and 09/03/2016 05:00

Description: During the performance of STN PE-040G on 9/2/2016, while performing Mode 3 walk downs, Boron was found on in the packing gland. This boron was white in color and appeared to be dry at this time. Photos located at K:\Data\NDE\Photos\STN PE-040G\2016-9-2. Recommend CR to the Boric acid Engineer for evaluation and entry into the monitoring program.

Equipment : BBHV8000B **Equipment Description :** PORV BLOCK VALVE <TIME CRITICAL ACTION EQUIPMENT>

Operability : 2 OPERABLE

What's defect/degraded nonconforming condition? There is boron residue in the area of the packing Gland. * What SSC is affected by the deficiency? BB HV-8000B "Pressurizer Power Relief PCV-456A Inlet Isolation". * What is the design/safety function of the affected SSC? The reactor coolant is circulated through four loops connected in parallel to the reactor vessel, each containing an SG, a reactor coolant pump (RCP), and appropriate flow and temperature instrumentation for both control and protection. The reactor vessel contains the clad fuel. The SGs provide the heat sink to the isolated secondary coolant. The RCPs circulate the coolant through the reactor vessel and SGs at a sufficient rate to ensure proper heat transfer and prevent fuel damage. This forced circulation of the reactor coolant ensures mixing of the coolant for proper boration and chemistry control. . The pressurizer is equipped with two types of devices for pressure relief: pressurizer safety valves and PORVs. The PORVs are safety-related DC solenoid operated valves that are controlled to open at a specific set pressure when the pressurizer pressure increases and close when the pressurizer pressure decreases. The PORVs may also be manually operated from the control room. Block valves, which are normally open, are located between the pressurizer and the PORVs. The block valves are used to isolate the PORVs in case of excessive leakage or a stuck open PORV. Block valve closure is accomplished automatically below 2185 psig or manually using controls in the control room. A stuck open PORV is, in effect, a small break loss of coolant accident (LOCA). As such, block valve closure terminates the RCS depressurization and coolant inventory loss. Plant operators to depressurize the RCS to recover from certain transients if normal pressurizer spray is not available may use the PORVs and their associated block valves. Additionally, the series arrangement of the PORVs and their block valves permit performance of surveillances on the valves during power operation. The PORVs may also be used for feed and bleed core cooling in the case of multiple equipment failure events that are not within the design basis, such as a total loss of feedwater. The plant has two PORVs, each having a relief capacity of 210,000 lb/hr at 2335 psig. * What effect/or potential effect does the deficiency have on the affected SSC's ability to perform its intended design /safety function? If the boron leak were to increase it could potentially cause a measurable loss of RCS inventory or cause a housekeeping issue with the boron if it were to drip on the floor. * What class piping is it? 2500#, Austenitic Stainless Steel, Class 1. * System pressure during inspection was? 550 psig. * Boron color? Bright white. * Impact to surrounding area if any? The boron is packing gland area not contacting any other equipment in the area. * Are any components carbon steel? The valve body, bonnet and associated bolting are all stainless steel with a minimum of 12% chromium. The adjacent piping is also stainless steel * Leak is or has been coming from where? At the packing gland. * How bad in the leakage? There is no detectable leak rate only dried boron. * The SSC's is operable because? There is no active leak described therefore inventory loss is not of concern. Recent RCS leak rate values have been below TS allowable values. The boric acid is dry, this does not appear to be active. The residue found on the component needs to be monitored by the BACCP but does not pose an immediate operability concern. * Extent of condition? BB HV-8000A was inspected and no boron buildup was identified. * References: T/S 3.4.11 T/S Bases USAR 5.1.2 through 5.1.4 Specification M-1088 Specification M-1088

CR Number: 00106868 **Status:** H/APPR **Initiation Date:** 9/3/2016 12:35:00AM **Initiator :** HEFFRON, JASON M

Subject: BBLT461 Boron buildup on valve

Description: During the performance of STN PE-040G on 9/2/2016, while performing Mode 3 walk downs, Boron was found on in the packing gland. This boron was white in color and appeared to be dry at this time. Buildup was also evident on the floor and conduit below this valve. Photos located at K:\Data\NDE\Photos\STN PE-040G\2016-9-2. Recommend CR go to the Boric Acid Engineer for evaluation and entry into the monitoring program.

Equipment : BBLT0461 **Equipment Description :** PRESS LEVEL (NAROW RANGE)

Operability :

CR Number: 00106867 **Status:** PRE-APRV **Initiation Date:** 9/3/2016 12:19:00AM **Initiator :** HEFFRON, JASON M

Subject: Active leakage identified near canopy seal area of CETNA #77

Description: During the performance of STN PE-040G "Transient Event Walkdown" QC identified an active leak (approximately ½ to 1 gallon per minute) coming from CETNA #77 near Canopy Seal Area

Number of CRs: 25

Most Recently Initiated CRs

CR's Initiated between 09/02/2016 05:00 and 09/03/2016 05:00

Equipment : RBB01 **Equipment Description :** REACTOR VESSEL
Operability : 3 OPER/DNC

What is the defect/degraded nonconforming condition? Active leakage identified near canopy seal area of CETNA #77 What SSC is affected by the deficiency? RBB01 REACTOR VESSEL What is the design/safety function of the affected SSC? The CET Housing is internally threaded and torqued down onto a seating surface at the interface between the housing and the top of the Reactor Head Adapter. This connection is a mechanical joint and leakage via this pathway is not Pressure Boundary LEAKAGE as defined by Technical Specifications. Core exit temperature is a Category 1 variable which provides for verification and long term surveillance of core cooling. An evaluation was made in support of Reference 2 of the minimum number of valid core exit thermocouples (CET) necessary for measuring core cooling. The evaluation determined the reduced complement of CETs necessary to detect initial core recovery and trend the ensuing core heatup. The evaluations account for core nonuniformities, including incore effects of the radial decay power distribution, excore effects of condensate runback in the hot legs, and non-uniform inlet temperatures. Based on these evaluations, adequate core cooling is ensured with two valid core exit temperature channels per quadrant with two CETs per required channel. The CET pairs are oriented radially to permit evaluation of core radial decay power distribution. Core exit temperature is used to determine whether to terminate SI, if still in progress, or to reinitiate SI if it has been stopped. Core exit temperature is also used for unit stabilization and cooldown control. Two OPERABLE channels of core exit temperature are required in each quadrant to provide indication of radial distribution of the coolant temperature rise across representative regions of the core. Reference 6 discusses the conformance of the thermocouple/core cooling monitoring system to NUREG-0737, Section II.F.2, approved by the NRC in Reference 7. Two sets of two thermocouples ensure a single failure will not disable the ability to determine the radial temperature gradient. The WCGS reactor vessel head and CETNA assemblies are classified as ASME Boiler and Pressure Vessel Code Section III Class 1 items. The Reactor Vessel was designed and fabricated to the 1971 Edition through Winter 1972 Addenda and the CETNA housing assemblies were designed and fabricated to the 1974 through Winter 1974 Addenda of Section III of the ASME B&PV Code. Section III paragraph NB-3671.3 states that threaded joints in which threads provide the only seal shall not be used. The seal weld is not a structural part of the pressure boundary and is not required to meet the structural requirements of ASME B &PV Code, Section III, NB-3000. The threads are the load carrying part of the joint design. The industry indications and past operating experience at WCGS of leaks in the subject seal welds are pinholes or small localized cracks. These flaws have resulted in leak rates that are bound by the limits established in Technical Specification 3.4.13. What effect/or potential effect does the deficiency have on the affected SSC's ability to perform its intended design/safety function? A degraded seal weld can cause a loss of RCS inventory. The SSC is operable but degraded because Completed performances of STS BB-006 were reviewed from the last operating cycle and RCS leakage limits were not challenged except on 9/2/16. RCS unidentified leak rates have been elevated since 8/16/16. The latest RCS unidentified leakrates are .598 and .648 gpm. The RCS unidentified leakrate on 9/2/16 at 0408 was 1.358 gpm and 9/2/16 at 1703 was 1.502 gpm. These leak rate tests were both performed in an abnormal CVCS lineup during troubleshooting activities with excess letdown in service and charging aligned to the seals only. The only additional piping in service in this alignment is associated with the excess letdown piping to the seal water return line. No leak rate tests performed with normal charging and letdown in service have exceeded any TS limits. The potential for leakage on the excess letdown flowpath is not pressure boundary leakage and is normally isolated by two closed solenoid operated valves. With this path isolated, no RCS leak rate limits have been exceeded. After reviewing system trends, performing inventory calculations and consulting with system engineering, I am confident that the indications observed with excess letdown in service are related to unstable plant conditions during the CVCS system transient conditions. There is no intersystem leakage or evidence of any external leakage. With excess letdown in service from 2342 on 9/2/16 to 0300 on 9/3/16, both system engineering and the control room staff performed manual leak rate calculations. The observed values trended down while CVCS parameters stabilized. The manual balance from 0200 to 0300 indicated a leak rate of .682gpm, which was confirmed by system engineering. The results of this measurement support that the previous STS BB-006 results were erroneously high due to non-stable conditions. The initiator identified during the performance of a containment walk down evidence of leakage at the canopy seal weld on penetration 77. The leak is active and does not appear to be degrading any adjacent components. There is some minor boron buildup on the housing that is in the path of the leak plume, I did not observe any discoloration or signs of wastage. I have reviewed the pictures and video of the described leak and have determined this leak to be restricted to canopy seal weld. Technical Specifications defines Pressure Boundary LEAKAGE as LEAKAGE through a non-isolable fault in an RCS component body, pipe wall or vessel wall, TS 3.4.13 contains the operating limits for RCS Operational LEAKAGE. In MODES 1 through 4, no pressure boundary is allowed, unidentified LEAKAGE is limited to 1 gallon per minute, identified LEAKAGE is limited to 10 gallons per minute, and primary to secondary LEAKAGE is limited to 150 gallons per day in any one Steam Generator. The reactor vessel closure head contains 78 penetrations. Each head adaptor flange has an identical stainless

Number of CRs: 25

steel flange welded on the top of the penetration. The stainless steel flange has male ACME threads (to mate with an attachment) and a canopy lip. The attachments determine the type of penetration. At WCGS, the attachments are as follows: 13 head adaptor plugs, 4 female flanges, 8 partial length CRDMs and 53 full length CRDMs. Each of the attachments has female ACME threads and a canopy lip. The head adaptor is designed such that when the attachment is threaded onto the stainless steel flange (at original construction), the two canopy lips come together and are seal welded. This seal weld is required because the ASME Section III Code states that threaded joints in which threads provide the only seal shall not be used. Hence the canopy seal weld was provided to seal the ACME thread pressure boundary connection. It is important to note that the ACME threads of the threaded connection provide the structural design strength and pressure boundary of the joint. The canopy seal weld provides leakage control of the threaded connection, but does not provide any of the ASME Code strength of the connection. The Reactor Vessel and the subject CETNA penetration are OPERABLE but degraded due to the flaw in the seal weld. Extent of condition? Where does this condition exist? Unique condition References? TS 1.1, 3.4.13 and Bases; TR 3.4.17 and Bases; NRC Inspection Manual Part 9900; DCP 05017, DCP 12952, M-709- 00089, M-709-00079, M-709-00123; historical STS BB-006 results in Autolog; K:\Refuel_Current\Forced Outage\FO 21-02 RCS Unidentified Leakage\Photos\rcs leak pen 77, STS BB- 006, STN PE-040G

CR Number: 00106866 **Status:** PRE-APRV **Initiation Date:** 9/2/2016 9:10:00PM **Initiator:** ONNEN, MITCHELL A

Subject: PG011JER3

Description: Restoring clearance order. PG011JER3 was restored to on position. No local indication at hand switch for DPGA01A Plant Heating System Hot Water Pump. No power available to run pump.

Equipment: PG011JER3 **Equipment Description:** DPGA01A PLANT HTG SYSTEM HOT WATER PUMP

Operability: 1 N/A

This SSC is not in the scope of equipment identified in AP 28.011 that require an operability/functionality evaluation.

CR Number: 00106865 **Status:** PRE-APRV **Initiation Date:** 9/2/2016 6:10:00PM **Initiator:** DEKAT, MATTHEW L

Subject: VCT pressure change greater than 10 psig

Description: During the plant down power on 09/02/2016, VCT pressure changed by more than 10 psig. CKL ZL-003 requires a CR to be generated requesting void checks be performed.

Equipment: BG **Equipment Description:** CHEMICAL & VOLUME CONTROL SYSTEM

Operability: 1 N/A

This requirement is a corrective action for CR 55014, written to evaluate OE from another plant with a different but similar design that experienced voiding in the suction piping of their high-head injection pumps following a pressure reduction in the VCT. Analysis for Wolf Creek has been done in CR55014, which shows conservatively that at approximately 10 psig pressure change void checks should be performed to ensure no voiding exists. This CR discussion also states that for high VCT level, voids will probably not be noted until at least 12 psig pressure change. There have been no known incidents of voiding caused by this issue. There is no known deficiency, this CR is for performing UT inspections to ensure that the problem does not exist, based on conservative screening criteria.

CR Number: 00106864 **Status:** PRE-APRV **Initiation Date:** 9/2/2016 5:23:00PM **Initiator:** KINN, GREGORY S

Subject: NI-61 Wide Range Off-Scale Low

Description: NPIS point SEN0061B (Post-Accident Wide Range) did not respond as expected following the shutdown for Forced Outage 21-01 on 9/2/16. It is indicating -3.66 E-06 millipercent, flat-lined and off-scale low. It does not compare well with the other channel, SEN0060B, which is indicating 9.72 E-04 and trending with other diverse and redundant shutdown NI indications (NI-31, NI-32, NI-60A, NI-61A).

Equipment: SENY0061B **Equipment Description:** WALLMOUNT SIGNAL PROCESSOR/NEUTRON MONITORING <TIME CRITICAL ACTION EQUIPMENT>

Operability: 4 INOPERABLE

CR Number: 00106863 **Status:** PRE-APRV **Initiation Date:** 9/2/2016 3:21:00PM **Initiator:** BRANDT, WARREN C

Subject: Perform STN PE-040G following manual reactor trip

Description: Perform STN PE-040G due to manual reactor trip performed on 9/2/2016.

Most Recently Initiated CRs

CR's Initiated between 09/02/2016 05:00 and 09/03/2016 05:00

Equipment : XX **Equipment Description :** GENERAL/MULTIPLE COMP OR SYS
Operability : Determined Not in Scope

CR Number: 00106862 **Status:** PRE-APRV **Initiation Date:** 9/2/2016 3:12:00PM **Initiator :** BRANDT, WARREN C
Subject: Manual reactor trip during a shutdown for RCS leakage
Description: On 9/2/2016 at 11:58, the reactor was manually tripped from 30% power in accordance with OFN MA-038 step 22. The unit was being shutdown to comply with Tech Spec 3.4.13 required action B.1 for unidentified RCS leakage greater than one gpm. AP 20-002 requires the Operations CAPCO to review this event for human performance problems.
Equipment : **Equipment Description :**
Operability : Determined Not in Scope

CR Number: 00106861 **Status:** PRE-APRV **Initiation Date:** 9/2/2016 2:16:00PM **Initiator :** GRUBE, JASON A
Subject: AL HK-7A controller for A S/G MDAFW pump discharge valve
Description: While controlling S/G levels using aux feedwater post RX trip on 9/2/16, it was noted that the controller for the A S/G MDAFW pump discharge valve does not respond in a linear fashion. There are large changes in controller output for no change in aux feedwater flow. The controller seems to stick around 100k lbem/hr and then typically goes to 0k flow. To achieve any flow between, the controller must be quickly jogged in the opposite direction while the valve is moving. This makes precise aux feedwater flow control very difficult on the A S/G.
Equipment : ALHK0007A **Equipment Description :** SG A MD AFP AFW REG VLV CTRL <TIME CRITICAL ACTION EQUIPMENT>
Operability : 2 OPERABLE
What is the defect/degraded nonconforming condition? ALHV007 throttling characteristics are less than desired. What SSC is affected by the deficiency? ALHV007 What is the design/safety function of the affected SSC? ALHV007 provides the ability to control flow from the B aux feedwater pump to the A steam generator. The valve must be able to open to provide flow and throttle to limit maximum feedwater flow. What affect does the deficiency have on the affected SSCs ability to perform its intended design/safety function? The condition makes fine control of flow at low flow rates more difficult than it should be, but does not prevent the valve from performing its required design function. The SSC/system is operable because? The valve continues to allow the required aux feedwater flow to reach the A S/G while limiting maximum flow. Extent of condition? This condition was not noticed with the other aux feed flow control valves.

CR Number: 00106860 **Status:** PRE-APRV **Initiation Date:** 9/2/2016 1:39:00PM **Initiator :** ERBE, DAVID L
Subject: Potential work hours violation
Description: In reviewing empcenter, a potential work hours violation occurred. The security officers' schedule was changed to accommodate adversary training. This CR should be assigned to Supt. Security Operations to evaluate if a violation occurred and, if so, the corrective actions necessary to prevent reoccurrence.
Equipment : **Equipment Description :**
Operability : 1 N/A
This CR does not document any deficiency with installed plant Structures, Systems or Components within scope for Operability or Functionality determinations.

CR Number: 00106859 **Status:** PRE-APRV **Initiation Date:** 9/2/2016 6:33:00AM **Initiator :** FULLER, MICHAEL D
Subject: RCS Un-Identified Leak Rate> 1GPM
Description: While performing STS BB-005, crew discovered that RCS leak rate exceeded the T.S. 3.4.13 Limit for Un-Identified leakage of 1 GPM. Crew entered T.S. 3.4.13 and performed OFN BB-007. Containment entry made and walkdowns outside of containment performed. Location of leak not found.
Equipment : BB **Equipment Description :** REACTOR COOLANT SYSTEM
Operability : 4 INOPERABLE
RCS leakage exceeded the 1 gpm limit of Tech Spec 3.4.13 in the STS BB-006 of 04:08 9/2/16.

Number of CRs: 25

Refer to the licensee.

Most Recently Initiated CRs

CR's Initiated between 09/17/2016 05:00 and 09/18/2016 05:00

This CR is written on items not yet installed in the plant. It raises no issue that could impact the current or past operability/ functionality of any TS, TR, ODCM, Maint, Rule, or generation significant SSC.

CR Number: 00107228 **Status:** PRE-APRV **Initiation Date:** 9/17/2016 5:05:00PM **Initiator:** GOULD, RODNEY S
Subject: CDR - DOCUMENT ACTION REQUIRED PER CLAUSE OY002954
Description: CDR - Document that material cannot receive final acceptance until change package 015023 has been released by engineering. HOLD LOCATION: Pallet North of Problem Table.
Equipment: **Equipment Description:**
Operability: 1 N/A
This CR is written on items not yet installed in the plant. It raises no issue that could impact the current or past operability/ functionality of any TS, TR, ODCM, Maint, Rule, or generation significant SSC.

CR Number: 00107227 **Status:** PRE-APRV **Initiation Date:** 9/17/2016 4:52:00PM **Initiator:** TEMPLETON, STEVEN C
Subject: Non-Email Use For Supplemental Work Staff.
Description: This email is being written to address the many problems that we are having by not being able to communicate with supplemental workers. Good precise (COMMUNICATIONS) is one of our Human Performance Tools that is in the Tool Box. It is also in our everyday 2 minute drill that work groups perform before each activity that involves working in the plant and some work outside the plant. Some have also been told the reason why this email took was taken away from Supplemental people and the reason that was told to several in my group was that a Supplemental Employee was using company Email with Company Letter head to negotiate things via-email and that was not either his job or responsibility. This has become a tremendous burden on the Rad Protection Group and I am sure many other groups across the board. I believe for what-ever the reason email was taken away this is the Craziest thing I have ever seen done to either 1. (to punish someone or one's) or 2. (to take the burden off of a work group by not allowing supplemental workers to have email access). Also on top of that we are now limited to using the Gai-Tronics. I have been here at Wolf Creek since 1985 and the first refuel outage and back in the early days all we had for communications in the field was the plant announcement system the (Gai-Tronics) and a few phones that got installed if you were lucky enough to find one because we would only be given about a dozen for the RCA and workers would Hi-jack them and take them to another area they might be working in that had a phone (jack or hub). In writing this CR I am hoping that upper management gets to see it and realizes the level of difficulty this has put on not only the permanent workers, but the supplemental workers as well. This ALARA technician is pleading for someone please re-look at the problems this has caused and give the email system back to the supplemental workers that truly actually need it like (supplemental leads & above). I am also pretty sure that we don't even have enough IP phones to accommodate the supplemental workers that might need one. When Adam Heflin became in-charge, one of his platform speeches was Let's Get Back to Using Common Sense. So I Ask and Challenge is this the right thing to do if so can we get an explanation as to why so rumors are not distracting us from keeping
Equipment: **Equipment Description:**
Operability: 1 N/A
This CR raises no issue that could impact the current or past operability/functionality of any TS, TR, ODCM, Maint, Rule, or generation significant SSC.

CR Number: 00107226 **Status:** PRE-APRV **Initiation Date:** 9/17/2016 4:50:00PM **Initiator:** GOULD, RODNEY S
Subject: CDR - DOCUMENT ACTION REQUIRED PER CLAUSE OY002363
Description: CDR - Document that this material cannot be given final acceptance until P.E. has reviewed and approved the documentation. P.O. 778615, NS40108132, Lot 305869, RN 16- 117673. HOLD LOCATION: Pallet North of Problem Table.
Equipment: **Equipment Description:**
Operability: 1 N/A
This CR is written on items not yet installed in the plant. It raises no issue that could impact the current or past operability/ functionality of any TS, TR, ODCM, Maint, Rule, or generation significant SSC.

CR Number: 00107225 **Status:** H/APPR **Initiation Date:** 9/17/2016 4:48:00PM **Initiator:** MCCRAY, NICHOLAS D
Subject: Boron accumulation on CETNA cable

Number of CRs: 32

Refer to the licensee.

Most Recently Initiated CRs

CR's Initiated between 09/17/2016 05:00 and 09/18/2016 05:00

Description: There is white boron accumulation on the bottom (pressure boundary / vessel side) of CETNA cable A-TVBB07 port 77/A scheme 1BB533AA.
Equipment : **Equipment Description :**
Operability :

CR Number: 00107224 **Status:** PRE-APRV **Initiation Date:** 9/17/2016 4:47:00PM **Initiator :** STORTS, MATTHEW J
Subject: Corrosion and Degraded Fire Proofing Found
Description: While performing the AFW aging management walkdown, heavy rust corrosion and degrading fire proofing material was found on the 1988' level ceiling. The issue was found in the southwest of the rooms 1206/1207 right next to the containment wall. It appears that the plate steel is rusting and causing the fireproofing to delaminate from the ceiling. This has been discussed with the fire protection group and they stated that the structural eyebeam is still fully covered so the 3 hour required fire protection still remains intact. Request the rust corrosion and loose fire protection be addressed to prevent this issue from getting worse and affecting structural steel.
Equipment : FP **Equipment Description :** FIRE PROTECTION SYSTEM - SITE (SEE ALSO SYS "KC" FOR PWRBLK)
Operability : 5 FUNC
Portions of the fireproofing on the 1988' level ceiling in rooms 1206/1207 show corrosion and degradation. This protection is discussed in sections 4.1.2 and 6.2.1 of AP 10-104. Per fire protection, the structural beam that is being protected is still fully covered and will meet the 3 hour time requirement for the fire barrier. A tracking only Breach permit is being issued to track this in the fire protection system. Reference: AP 10-104

CR Number: 00107223 **Status:** H/APPR **Initiation Date:** 9/17/2016 4:07:00PM **Initiator :** SCHROCK, CHRISTIAN A
Subject: Camera #29 in the Aux
Description: Camera in the Aux used for fire watch not working. This is camera #29 in HP
Equipment : **Equipment Description :**
Operability : 1 N/A
This CR raises no issue that could impact the current or past operability/functionality of any TS, TR, ODCM, Maint. Rule, or generation significant SSC.

CR Number: 00107222 **Status:** PRE-APRV **Initiation Date:** 9/17/2016 4:00:00PM **Initiator :** SCHROCK, CHRISTIAN A
Subject: closure on door 13291
Description: Door 13291not closing all the way on its own
Equipment : 000000000013291 **Equipment Description :** INT, PRESSURE FIRE DOOR
Operability : 5 FUNC
AP 10-104 identifies Door 13291, Aux. Feedwater Pump Vestibule to Turbine Bldg, as a FIRE door, a SECURITY door, an ABEES door, an OFN SG-003 door, a LOCA-1 door, and a HELB-2 door. The initiator indicates that the door is still capable of being closed. Therefore, this door can still perform all of its design function. Only the FIRE, OFN SG-003, and security door functions are required in Mode 5. A tracking only breach is being issued to track the repairs in the fire protection system. Reference: AP 10-104, TS 3.7.13

CR Number: 00107221 **Status:** PRE-APRV **Initiation Date:** 9/17/2016 3:55:00PM **Initiator :** SCHROCK, CHRISTIAN A
Subject: door closure
Description: Door 91021 is not closing on its own all the time.
Equipment : 000000000091021 **Equipment Description :** REFUELING WATER STORAGE TANK VALVE HOUSE EXTERIOR DOOR
Operability : 6 FUNC/DNC
What is the defect/degraded nonconforming condition? Door 91021 is not closing on its own all the time. What SSC is affected by the deficiency? 000000000091021 REFUELING WATER STORAGE TANK VALVE HOUSE EXTERIOR DOOR What is the design/safety function of the affected SSC? Per AP 10-104, this door is a security and OFN SG-003 barrier. What effect/or potential effect does the deficiency have on the affected SSC's ability to perform its intended design/safety function? None. The SSC is functional but degraded because: The door latches and closes securely. The auto-closure requires some adjustment/repair. Extent of condition? Where does this condition exist? Unique References? Maintenance Rule, USAR, AP 10-104

Number of CRs: 32

Refer to license e.

Most Recently Initiated CRs

CR's Initiated between 09/15/2016 05:00 and 09/16/2016 05:00

Description: No Reserve, New Receipt, SRSR90702367, LOT 304797, PO 776226, RN 16-116576, Relief Valve ¾" MNPT X 1"FNPT ASME Class 3. Per OY001456 clause, Items on this purchase order shall not receive final acceptance until Engineering documentation has been processed for approval. Documents needing approval are PO items 2 thru 16. Additionally, PO description indicates relief valve to be set at 60 psig with a maximum operating temperature of 150 degrees Fahrenheit. ASME Code Data Report and N Stamp indicate 60 psig at 200 degrees Fahrenheit.
Equipment : **Equipment Description :**
Operability : 1 N/A
Description indicates component not currently installed in the plant. Component is not in the scope of AP 26C-004.

CR Number: 00107195 **Status:** H/APPR **Initiation Date:** 9/15/2016 5:00:00PM **Initiator :** MURPHY, ERICA K
Subject: Need Work Ticket to fix Storm Drains bring Turbine Building
Description: Behind the Turbine building worker identified two storm drains that need new straw wattles. Pictures are attached.
Equipment : **Equipment Description :**
Operability : 1 N/A
Component is not in the scope of AP 26C-004.

CR Number: 00107194 **Status:** H/APPR **Initiation Date:** 9/15/2016 4:44:00PM **Initiator :** ELMORE, DANNY L
Subject: Geared limit switches on HKE13 appear not to be working.
Description: While performing limit switch adjustments on HKE13 polar crane on W.O. 06-264571-000, Limits will not adjust. Gears in switch are not turning. Planner is writing sub work order for troubleshooting.
Equipment : HKE13 **Equipment Description :** CONTAINMENT BLDG POLAR CRANE
Operability : 1 N/A
Component is not in the scope of AP 26C-004.

CR Number: 00107193 **Status:** H/APPR **Initiation Date:** 9/15/2016 4:40:00PM **Initiator :** DAVIS, BRET A
Subject: MUSH Supervisory Trouble Alarm received in Control Room
Description: At 1538 on 9/15/16 the MUSH SUPV TROUBLE alarm was received in the control room. The site watch was dispatched IAW ALR 00-001A and MUSH supervisory transfer switch was placed in local.
Equipment : UUGPL01JADC **Equipment Description :** MUSH SITE SUPV CAB
Operability : 1 N/A
Component is not in the scope of AP 26C-004.

CR Number: 00107192 **Status:** H/APPR **Initiation Date:** 9/15/2016 4:38:00PM **Initiator :** HIGGINS, SARENA A
Subject: Clean Containment Radiation Monitor during RF21
Description: Action required from Root Cause 106867. Based on the RCS leakage found on Penetration #77 on the Reactor Vessel Head prior to RF21, which is believed to have contributed to spiking issues on the Containment Radiation Monitors, the Containment Rad Monitors and any associated sample lines need cleaned prior to the end of outage, so that there is no residual containments that will affect these rad monitors post Refuel outage. This is a corrective action that will help in identifying any new leaks that may develop during Cycle 22. * Outage scope actions will be submitted for this WR
Equipment : GTRE0022 **Equipment Description :** CTMT PURGE EXHAUST RAD MONIT
Operability : 2 OPERABLE
This CR requests a future enhancement/cleaning activity to prevent spurious indications and does not identify any degraded/nonconforming condition for plant equipment. This CR raises no issue that could impact the current or past operability/functionality of any TS, TR, ODCM, Maint. Rule, or generation significant SSC. Ref: ODCM Table 3-2

CR Number: 00107191 **Status:** H/APPR **Initiation Date:** 9/15/2016 4:36:00PM **Initiator :** HIGGINS, SARENA A
Subject: Cleaning Containment Radiation Monitor during RF21

Number of CRs: 42

Refer to license e.

Most Recently Initiated CRs

CR's Initiated between 09/15/2016 05:00 and 09/16/2016 05:00

Description: Action required from Root Cause 106867. Based on the RCS leakage found on Penetration #77 on the Reactor Vessel Head prior to RF21, which is believed to have contributed to spiking issues on the Containment Radiation Monitors, the Containment Rad Monitors and any associated sample lines need cleaned prior to the end of outage, so that there is no residual containments that will affect these rad monitors post Refuel outage. This is a corrective action that will help in identifying any new leaks that may develop during Cycle 22. * Outage scope actions will be submitted for this WR

Equipment : GTRE0033 **Equipment Description :** CTMT PURGE EXHAUST RAD MONIT

Operability : 2 OPERABLE

This CR requests a future enhancement/cleaning activity to prevent spurious indications and does not identify any degraded/nonconforming condition for plant equipment. This CR raises no issue that could impact the current or past operability/functionality of any TS, TR, ODCM, Maint. Rule, or generation significant SSC. Ref: ODCM Table 3-2

CR Number: 00107190 **Status:** H/APPR **Initiation Date:** 9/15/2016 4:34:00PM **Initiator :** HIGGINS, SARENA A

Subject: Cleaning Containment Radiation Monitor during RF21

Description: Action required from Root Cause 106867. Based on the RCS leakage found on Penetration #77 on the Reactor Vessel Head prior to RF21, which is believed to have contributed to spiking issues on the Containment Radiation Monitors, the Containment Rad Monitors and any associated sample lines need cleaned prior to the end of outage, so that there is no residual containments that will affect these rad monitors post Refuel outage. This is a corrective action that will help in identifying any new leaks that may develop during Cycle 22. * Outage scope actions will be submitted for this WR

Equipment : GTRE0032 **Equipment Description :** CTMT ATMOS RAD MONIT

Operability : 2 OPERABLE

This CR requests a future enhancement/cleaning activity to prevent spurious indications and does not identify any degraded/nonconforming condition for plant equipment. This CR raises no issue that could impact the current or past operability/functionality of any TS, TR, ODCM, Maint. Rule, or generation significant SSC. Ref: Tech Spec 3.3.6, 3.4.15

CR Number: 00107189 **Status:** H/APPR **Initiation Date:** 9/15/2016 4:32:00PM **Initiator :** HIGGINS, SARENA A

Subject: Cleaning Containment Radiation Monitors during RF21

Description: Action required from Root Cause 106867. Based on the RCS leakage found on Penetration #77 on the Reactor Vessel Head prior to RF21, which is believed to have contributed to spiking issues on the Containment Radiation Monitors, the Containment Rad Monitors and any associated sample lines need cleaned prior to the end of outage, so that there is no residual containments that will affect these rad monitors post Refuel outage. This is a corrective action that will help in identifying any new leaks that may develop during Cycle 22. * Outage scope form will be submitted for this WR.

Equipment : GTRE0031 **Equipment Description :** CTMT ATMOS RAD MONIT

Operability : 2 OPERABLE

This CR requests a future enhancement/cleaning activity to prevent spurious indications and does not identify any degraded/nonconforming condition for plant equipment. This CR raises no issue that could impact the current or past operability/functionality of any TS, TR, ODCM, Maint. Rule, or generation significant SSC. Ref: Tech Spec 3.3.6, 3.4.15

CR Number: 00107188 **Status:** H/APPR **Initiation Date:** 9/15/2016 4:25:00PM **Initiator :** DAVIS, BRET A

Subject: Loss of power to Blowdown Discharge Structure

Description: At 0555 on 9/15/16 the Control Room received Alarm 3F, BDDS SUPV TROUBLE. The site watch was dispatched and discovered that the Blowdown structure was completely deenergized. The feeder breaker was found closed and there is no obvious reason for the Blowdown structure to be deenergized. Transmission and distribution personnel were contacted and able to confirm that the Greene substation is operational.

Equipment : WL **Equipment Description :** COOLING LAKE MAKEUP WATER AND BLOWDOWN SYSTEM

Operability : 1 N/A

This CR does not document any deficiency with installed plant Structures, Systems or Components within scope for Operability or Functionality determinations.

Number of CRs: 42

Refer to licensee. Potential security related information.

degradation that need to be tracked, monitored, and repaired to continue to provide for system health of the containment building. No condition was observed that would prevent the containment structure from performing its safety function. The ECCS system is equipped with screens to filter debris. There were no occurrences of degraded coatings that were large enough to present a concern for loss of sump recirculation. Inspections such as the one performed which resulted in this CR, as well as general housekeeping practices, prevent an unacceptable aggregate impact to the containment structure or ECCS recirculation capability. Containment and ECCS are Operable but degraded. Ref. LCO 3.5.2, LCO 3.6.1, LCO 3.6.6.

CR Number: 00107724 **Status:** PRE-APRV **Initiation Date:** 9/30/2016 1:06:00PM **Initiator:** COCHRAN, LONNIE D

Subject: QC Identified Minor Bulge on CNMT Liner during IWE Exam

Description: During the performance of WO 15-402450-001, IWE VT-1 Examination of ISI Component 2-3-2, Quality Control identified two bulges in the metallic containment liner near the Emergency Escape Hatch. Location: Azimuth between 69°and 72°_Elevation 2016', two bulges in the liner plate. Photos can be located on the "K" Drive at the following link: K:\Data\NDE\Photos\IWE Inspections\RF 21\ 2-3-2 Pics

Equipment: Z002 **Equipment Description:** REACTOR BLDG

Operability: 2 OPERABLE

What is the defect/degraded nonconforming condition? Two minor bulges were found in the liner plate. What SSC is affected by the deficiency? Z002, REACTOR BUILDING (LINER PLATE). What is the design/safety function of the affected SSC? This Reactor Building houses the reactor, reactor coolant piping, steam generators, pressurizer, reactor coolant pumps, accumulators, the Reactor Building Structural Steel Maintenance Truss (Z002C0S01), four containment equipment hatch missile shield trolleys and concrete missile shield they support, and the containment air coolers. The four containment equipment hatch missile shield trolleys are safety-related and are included within the scoping of this function. The Reactor Building consists of a pre-stressed, reinforced concrete, cylindrical structure with a hemispherical dome and a conventionally reinforced concrete base slab with a central cavity and instrumentation tunnel to house the reactor vessel. The interior of the reactor building is lined with carbon steel plates welded together to form a barrier which is essentially leak tight. What effect/or potential effect does the non-conforming condition have on the affected SSC's ability to perform its intended design/safety function? A review of the photographs found these to be extremely minor anomalies. The containment building successfully passed STS PE-018, CONTAINMENT INTEGRATED LEAKAGE RATE TEST, in April, 2011. This SSC is OPERABLE because the anomalies have no effect on the ability of the CTMT to maintain its leak tight function. References: TS 3.6.1 (Bases); Maintenance Rule Database

Containment Liner Inspection - 71111.20 BIP

CR Number: 00107723 **Status:** PRE-APRV **Initiation Date:** 9/30/2016 12:09:00PM **Initiator:** VALENTINE, MARVIN L

Subject: Need to validate procedure SEC 50-150 for accuracy

Description: On 9/30/16 We need to validate that procedure SEC 50-150 is correct when the plant is de-fueled. This would contain safeguards information and needs to be sent to Superintendent of Security operations for evaluation.

Equipment: XX **Equipment Description:** GENERAL/MULTIPLE COMP OR SYS

Operability: 1 N/A

This CR does not identify any degraded/nonconforming condition for plant equipment.

SEC

CR Number: 00107722 **Status:** PRE-APRV **Initiation Date:** 9/30/2016 12:08:00PM **Initiator:** CHADWICK, CHRISTOPHER N

Subject: Clamping Recommendation for Penetration 26 from RCA 106867

Description: The root cause team for the CETNA #77 penetration leak is recommending additional clamps be installed on lower canopy seal welds for spare capped penetrations near the center of the head in this outage (RF 21). Penetration 26 is a spare location in a more at risk area. Spare capped locations have been shown to be more susceptible to leakage both at Wolf Creek and in industry.

Equipment: RBB01 **Equipment Description:** REACTOR VESSEL

Operability: 1 N/A

This is a proactive action taken to prevent a leak similar to that that occurred on CETNA penetration #77. Therefore, this CR does not identify any degraded/nonconforming condition for plant equipment.

Reactor Head Pens - 71152 BIP

CR Number: 00107721 **Status:** PRE-APRV **Initiation Date:** 9/30/2016 12:06:00PM **Initiator:** CHADWICK, CHRISTOPHER N

Refer to licensee.

Most Recently Initiated CRs

CR's Initiated between 09/30/2016 05:00 and 10/01/2016 05:00

Subject: Clamping Recommendation for Penetration 23 from RCA 106867
Description: The root cause team for the CETNA #77 penetration leak is recommending additional clamps be installed on lower canopy seal welds for spare capped penetrations near the center of the head in this outage (RF 21). Penetration 23 is a spare location in a more at risk area. Spare capped locations have been shown to be more susceptible to leakage both at Wolf Creek and in industry.
Equipment : RBB01 **Equipment Description :** REACTOR VESSEL
Operability : 1 N/A
This is a proactive action taken to prevent a leak similar to that that occurred on CETNA penetration #77. Therefore, this CR does not identify any degraded/nonconforming condition for plant equipment.

- Reactor Head Pens - 71152 BIP

CR Number: 00107720 **Status:** PRE-APRV **Initiation Date:** 9/30/2016 12:05:00PM **Initiator :** CHADWICK, CHRISTOPHER N
Subject: Clamping Recommendation for Penetration 12 from RCA 106867
Description: The root cause team for the CETNA #77 penetration leak is recommending additional clamps be installed on lower canopy seal welds for spare capped penetrations near the center of the head in this outage (RF 21). Penetration 12 is a spare location in a more at risk area. Spare capped locations have been shown to be more susceptible to leakage both at Wolf Creek and in industry.
Equipment : RBB01 **Equipment Description :** REACTOR VESSEL
Operability : 1 N/A
This is a proactive action taken to prevent a leak similar to that that occurred on CETNA penetration #77. Therefore, this CR does not identify any degraded/nonconforming condition for plant equipment.

- Reactor Head Pens - 71152 BIP

CR Number: 00107719 **Status:** PRE-APRV **Initiation Date:** 9/30/2016 12:03:00PM **Initiator :** CHADWICK, CHRISTOPHER N
Subject: Clamping Recommendation for Penetration 11 from RCA 106867
Description: The root cause team for the CETNA #77 penetration leak is recommending additional clamps be installed on lower canopy seal welds for spare capped penetrations near the center of the head in this outage (RF 21). Penetration 11 is a spare location in a more at risk area. Spare capped locations have been shown to be more susceptible to leakage both at Wolf Creek and in industry.
Equipment : RBB01 **Equipment Description :** REACTOR VESSEL
Operability : 1 N/A
This is a proactive action taken to prevent a leak similar to that that occurred on CETNA penetration #77. Therefore, this CR does not identify any degraded/nonconforming condition for plant equipment.

- Reactor Head Pens - 71152 BIP

CR Number: 00107718 **Status:** PRE-APRV **Initiation Date:** 9/30/2016 11:13:00AM **Initiator :** WOOLS, LEONARD A
Subject: Megger Tests of Spare CRDM Coil Stacks
Description: NS80450335 - Need to perform megger test for insulation integrity on spare NS80450335 located in Radwaste building to ensure parts will be available in the event an installed assembly is damaged during the head cleaning process. (We have 1 known good one, and one that was removed in 2013 because it had low resistance, both in rad storage)
Equipment : XXNMAT0000 **Equipment Description :** GENERIC ISSUES ONLY - NOT FOR REFURBs / CANIBALIZING / RIPs (5/31/00)
Operability : 1 N/A
This CR does not identify any degraded/nonconforming condition for plant equipment.

CR Number: 00107717 **Status:** H/APPR **Initiation Date:** 9/30/2016 11:13:00AM **Initiator :** LORSON, JOSEPH W
Subject: Defective labels on new electrical OPD cabinets
Description: During inspection of CCP 14936-related new, Open Phase Detection cabinets SY101A and SY101B in the iMR shop on 9/29/16, Strategic Projects personnel noticed that the factory-installed lamicoid labels OPD7-1 & OPD7-2 had come loose (fell off). SY101A and SY101B are not yet installed. This CR does not effect existing plant equipment or the quality of the cabinets.

Number of CRs: 61

Refer to license e.Potential security related related information.

Most Recently Initiated CRs

CR's Initiated between 10/03/2016 05:00 and 10/04/2016 05:00

Subject: Unapproved Time Sheets – Covered & Non covered Workers
Description: There were 8 time sheets for covered workers and 1 for non- covered in the Security group that were not approved in EmpCenter for the week ending 10/03/16. This is not in accordance with the requirements of AI 09C-001 section 5.2.2, Time Sheets and Payroll Reporting and SOX control 5.1.3. Recommend this CR be assigned to Superintendent of Security.
Equipment : **Equipment Description :**
Operability : 1 N/A
This is an administrative issue. No new deficiency in an SSC has been described.

- Covered workers

CR Number: 00107848 **Status:** PRE-APRV **Initiation Date:** 10/3/2016 12:25:00PM **Initiator :** DENTON, RICHARD L
Subject: Emergency Escape Hatch Inside Tunnel Lights Are Out
Description: The emergency escape hatch tunnel lights inside containment are not working.
Equipment : XXLIGHTS **Equipment Description :** STATION LIGHTS
Operability : 1 N/A
This is normal area lighting (not appendix R) and is not required for the performance of local operator actions needed during an emergency.

CR Number: 00107847 **Status:** PRE-APRV **Initiation Date:** 10/3/2016 11:35:00AM **Initiator :** HIGGINS, SARENA A
Subject: Surface Eddy Current on CETNA Pen. 77
Description: During performance of the PT for CENTA Penetration 77, QC should perform surface eddy current testing. This eddy current testing should be performed on penetration 77 and on one of the following other penetrations 14, 15 or 16. This should be a sub under the WO series 16-417262, and assigned to G. Hicks as planner.
Equipment : RB801 **Equipment Description :** REACTOR VESSEL
Operability : 1 N/A
This CR is not describing a new deficiency in an SSC.

- Pen 77

CR Number: 00107846 **Status:** PRE-APRV **Initiation Date:** 10/3/2016 11:26:00AM **Initiator :** NEWKIRK, MARC A
Subject: When installing fuse PT109/F/FuseA the trip indicator
Description: When installing fuse PT109/F/FuseA the trip indicator doesn't appear to be reset completely. It did ohm ok but I believe it may be suspect. Recommend replacing both fuses.
Equipment : PTNB109/F **Equipment Description :** BUS NB01 ALT FDR PT FOR UV AND SYNC CHECK PROTECT (NB0109PB)
Operability : 2 OPERABLE
What is the defect/degraded nonconforming condition? When installing fuse PT109/F/FuseA the trip indicator doesn't appear to be reset completely. It did ohm ok but I believe it may be suspect. Recommend replacing both fuses. What SSC is affected by the deficiency? PTNB109/F What is the design/safety function of the affected SSC? The fuses in question are associated with the synchronizing ckt for Bus NB01 alt feeder breaker NB0109 which senses voltage and supplies a signal to the synchronizing interlocks. Each 4.16-kV load group is supplied by two preferred power supply feeders and one diesel generator (standby) supply feeder. Each 4.16-kV bus supplies motor loads and 4.0-kV/480-V load center transformers with their associated 480-V busses. What effect/or potential effect does the deficiency have on the affected SSC's ability to perform its function ? After speaking with the originator, the fuses in question are being replaced as a precautionary measure, as the resistance check is satisfactory, but the indications are suspect. The fuses will be replaced. It is reasonably expected that the NB01 bus can perform its function and is OPERABLE. Extent of condition? Where does this condition exist? Fuses are inspected on a regular basis and deficiencies will be discovered as inspections are performed. References? USAR, TS basis

NB0109

CR Number: 00107845 **Status:** PRE-APRV **Initiation Date:** 10/3/2016 10:59:00AM **Initiator :** WALTER, NATHAN J
Subject: Camera loss
Description: At 1033 we lost a security camera.

Number of CRs: 46

Refer to licen see.

Description: During performance of MPM M018Q-01 on 10/03/2016, two main air start check valves were found to make contact with the intake valve guide housing. The interference prevented proper installation of the valves. The remaining 12 air valves installed without issue. Investigation of the cause identified that several of the removed valves had been ground to provide clearance. Fairbanks Morse Engine, the manufacturer of the EDG, was contacted for information on this issue. Per Fairbanks, there is a known potential for interference due to manufacturing tolerances of the various components. At the factory, the valves are cycled through until a fitting combination is found. Fairbanks advised in the field, it is their practice to remove material from the air valve upper casting as required for clearance. Fairbanks provided a letter of the same. This CR is generated to identify the issue, and provide an initiating document for incorporation of this letter in the Vendor Tech Manual by the VETIP program. In addition, a new SWO on series 15-406581 will be needed to remove material from the air valves for fitment.

Equipment : KKJ01B **Equipment Description :** STANDBY DIESEL(GENERATOR) <FR> <TIME CRITICAL ACTION EQUIPMENT> <FR=FIRE RISK SIGNIFCANT CON

Operability : 1 N/A

The interference prevented proper installation of the valves is being addressed by CR 00107907. This CR is for the update of the Vendor Technical Manual. Therefore, this CR does not identify any degraded/nonconforming condition for plant equipment.

CR Number: 00107905 **Status:** PRE-APRV **Initiation Date:** 10/4/2016 12:41:00PM **Initiator :** DALE, MIRIAM J

Subject: DSGE10A COMPUTER RM SUPP FAN MOTOR - WORK REQUEST ONLY

Description: During safety walk down identified that DSGE10A COMPUTER RM SUPP FAN MOTOR is making an unusual noise that sounds like a fan belt rubbing.

Equipment : DSGE10A **Equipment Description :** COMPUTER RM.SUPP.FAN MOTOR DSGE10A

Operability : 1 N/A

This SSC is not safety related, has no safety design basis per USAR Section 9.4.4 or System Description Section 2.1. In addition, this SSC is not directly used to mitigate any accident or transient or explicitly used in the EOPs, neither is the SSCs use implied to provide a significant fraction of the mitigating function of any event. The design purpose of this SSC is to provide outside air to the Turbine Building to maintain temperatures between 60 and 110 degrees F. This area of the turbine building is now essentially office space only, as the BOP computer has been removed.

CR Number: 00107904 **Status:** H/APPR **Initiation Date:** 10/4/2016 12:16:00PM **Initiator :** HEFFRON, JASON M

Subject: Rx Studs 17, 18, 19 rejected during inspection

Description: During post cleaning visual inspection of the Rx Studs performed under 15-406820-002, Studs 17, 18, and 19 were rejected due to requirements within FHP 02-009C 8.1.7.1.d. Stud 17 was identified with approximately 4 inches of upset metal at approximately 2.375 inches from thread to shank area. Stud 18 was identified with approximately 1 inch of upset metal at approximately 2.45 inches from thread to shank area. Stud 19 was identified with approximately 3.5 inches of upset metal at the 4th thread from the bottom of the stud. Pictures stored at K:\Data\NDE\Photos\BALeaks\88 Components\RV Head\2016 Fall RF21 - Pen 77 Canopy Seal Weld\RV Studs\RPV Studs and Nuts\10-3-16

Equipment : RB801 **Equipment Description :** REACTOR VESSEL

Operability : 3 OPER/DNC

Rx Studs

What is the defect/degraded nonconforming condition? Stud 17 was identified with approximately 4 inches of upset metal at approximately 2.375 inches from thread to shank area. Stud 18 was identified with approximately 1 inch of upset metal at approximately 2.45 inches from thread to shank area. Stud 19 was identified with approximately 3.5 inches of upset metal at the 4th thread from the bottom of the stud. What SSC is affected by the deficiency? RB801, REACTOR VESSEL. What is the design/safety function of the affected SSC? Components that contain or transport the coolant to or from the reactor core make up the RCS. Component joints are made by welding, bolting, rolling, or pressure loading. Valves isolate connecting systems from the RCS. During plant life, the joint and valve interfaces can allow varying amounts of reactor coolant LEAKAGE, through either normal operational wear or mechanical deterioration. The Reactor Head Closure Studs Aging Management Program document describes the requirements for the implementation of the Reactor Head Closure Studs aging management program. The QC inspections are a part of this program. The program is credited for the performance of aging management activities that are required by license renewal and are associated with regulatory commitments. What effect/or potential effect does the non-conforming condition have on the affected SSC's ability to perform its intended design/safety function? No RCS leakage from the reactor vessel head flange has been occurring. The indications are minor and only affect a few threads of the many that are available. Only a few of the 54 total studs/nuts are affected. This SSC is OPERABLE BUT DEGRADED because the indications are minor and not a sign of aging as much as damage that has occurred from handling. Extent of condition: All 54 studs

Refer to licen see.

Most Recently Initiated CRs

CR's Initiated between 10/04/2016 05:00 and 10/05/2016 05:00

are being inspected. References: TS 3.4.13; WCLR-30, License Renewal Aging Management Plan

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CR Number: 00107903 **Status:** H/APPR **Initiation Date:** 10/4/2016 12:13:00PM **Initiator:** HEFFRON, JASON M

Subject: Rx Stud 30, Nut 39 rejected during inspection

Description: During post cleaning visual inspection of the Rx Studs performed under 15-406820-002, Studs 30 and Nut 39 were rejected due to requirements within FHP 02-009C 8.1.7.1.d. Stud 30 was identified with approximately 2 inches of upset metal on the first thread area. Nut 39 was identified with approximately 2 inch band of upset metal at approximately 2 inches from the flat or mating side of the nut. These conditions were noted in CR 107838 which lacked specifics required by engineering. Pictures stored at K:\Data\NDE\Photos\BALeaks\BB Components\RV Head\2016 Fall RF21 - Pen 77 Canopy Seal Weld\RV Studs\RPV Studs and Nuts\10-2-16

Equipment: RBB01 **Equipment Description:** REACTOR VESSEL

Operability: 3 OPER/DNC

What is the defect/degraded nonconforming condition? Studs 30 and Nut 39 were rejected due to requirements within FHP 02-009C 8.1.7.1.d. Stud 30 was identified with approximately 2 inches of upset metal on the first thread area. Nut 39 was identified with approximately 2 inch band of upset metal at approximately 2 inches from the flat or mating side of the nut. What SSC is affected by the deficiency? RBB01, REACTOR VESSEL What is the design/safety function of the affected SSC? Components that contain or transport the coolant to or from the reactor core make up the RCS. Component joints are made by welding, bolting, rolling, or pressure loading. Valves isolate connecting systems from the RCS. During plant life, the joint and valve interfaces can allow varying amounts of reactor coolant LEAKAGE, through either normal operational wear or mechanical deterioration. The Reactor Head Closure Studs Aging Management Program document describes the requirements for the implementation of the Reactor Head Closure Studs aging management program. The QC inspections are a part of this program. The program is credited for the performance of aging management activities that are required by license renewal and are associated with regulatory commitments. What effect/or potential effect does the non-conforming condition have on the affected SSC's ability to perform its intended design/safety function? No RCS leakage from the reactor vessel head flange has been occurring. The indications are minor and only affect a few threads of the many that are available. Only a few of the 54 total studs/nuts are effected. This SSC is OPERABLE BUT DEGRADED because the indications are minor and not a sign of aging as much as damage that has occurred from handling. Extent of condition: All 54 studs are being inspected. References: TS 3.4.13; WCLR-30, License Renewal Aging Management Plan

Rx Studs

CR Number: 00107902 **Status:** PRE-APRV **Initiation Date:** 10/4/2016 12:05:00PM **Initiator:** SKIDMORE, ROBERT L

Subject: NB0214 B and C phase bus connection joint not insulated

Description: During inspection of NB00214 cubicle, and upon removal of front panel to expose the bus for inspection both C phase and B phase bus connection joints were not covered (insulated). Both B and C phase need to be booted. It undetermined of how long this condition has existed

Equipment: NB00214 **Equipment Description:** SBO DG BUS

Operability: 3 OPER/DNC

What is the defect/degraded nonconforming condition? Both C phase and B phase bus connection joints were not covered (insulated). The A phase has been taped. This is on the NB02 bus side of the breaker. The initiator indicated that there is no signs of arcing or tracking. What SSC is affected by the deficiency? NB00214, SBO DG BUS What is the design/safety function of the affected SSC? The AC, DC, and AC vital bus electrical power distribution systems are designed to provide sufficient capacity, capability, redundancy, and reliability to ensure the availability of necessary power to ESF systems so that the fuel, Reactor Coolant System, and containment design limits are not exceeded. The OPERABILITY of the minimum AC, DC, and AC vital bus electrical power distribution subsystems during MODES 5 and 6, and during movement of irradiated fuel assemblies, ensures that a. The unit can be maintained in the shutdown or refueling condition for extended periods; b. Sufficient instrumentation and control capability is available for monitoring and maintaining the unit status ; and c. Adequate power is provided to mitigate events postulated during shutdown, such as a fuel handling accident. What effect/or potential effect does the non-conforming condition have on the affected SSC's ability to perform its intended design/safety function? Bus NB01 has been in- service, in this condition, since the SBO diesel modification in Mid-Cycle 20. The bus has satisfactorily passed numerous surveillance tests to demonstrate its ability to perform its specified safety function. This SSC is OPERABLE BUT NONCONFORMING because of the bus remains capable of performing its specified design functions , however, the bus components need to be insulated to bring it into compliance with design specifications. Extent of condition: NB001 was inspected in RF 20

- NB02
- NB02A
- Isolated

Number of CRs: 58

Refer to licensee.

OUTSIDE CTMT ISO VLV What is the design/safety function of the affected SSC? Leakage rate acceptance criteria are containment leakage rate acceptance criterion is <= 1.0 La. Compliance with this LCO will ensure a containment configuration, including equipment hatches, that is structurally sound and that will limit leakage to those leakage rates assumed in the safety analysis. Therefore, leakage rates exceeding these individual limits only result in the containment being inoperable when the leakage results in exceeding the overall acceptance criteria of 1.0 La. The automatic power operated isolation valves are required to have isolation times within limits and to actuate on an automatic isolation signal. What effect/or potential effect does the non-conforming condition have on the affected SSC's ability to perform its intended design/safety function? The leakage exceeds the administrative limit established by the CTMT Leakage Rate Testing Program. However, overall CTMT leakage rate is not exceeded. The cumulative effect of individual Containment Isolation Valve (CIV) leakages are tracked by Engineering. Valve GSHV0037 is OPERABLE BUT DEGRADED because it can close within the required time upon receipt of a CTMT isolation signal. Also, the leakage is not so large that it causes the overall CTMT leakage rate to be exceeded. Extent of condition: Other CTMT isolation valves are being tested. Cumulative effect of the individual CIV leakages is being tracked by Engineering. References: TS 3.6.1, TS 3.6.3, TS 5.5.16, Containment Leakage Rate Testing Program

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CR Number: 00108155 **Status:** PRE-APRV **Initiation Date:** 10/9/2016 6:24:00PM **Initiator:** PHELPS, STEPHEN E

Subject: PSC SPMT (Self Propelled Motorized Transporter) was damaged

Description: On 10/08/16 night shift at approximately 03:00 PSC SPMT (Self Propelled Motorized Transporter) was damaged during the one minute hold time prior to lifting up to the equipment hatch platform. The SPMT was not properly lowered into the lifting configuration prior to lifting which is completely in the down position. When in the lowered position it allows all the axles to become free flowing from the hydraulic pump which takes all pressure from the deck to the axles. Due to not being in the correct position this allowed deck pressure to the axle which in turn caused binding and pressure to the axles which caused damaged one axle cover, sensor and seal. Immediate Actions: The SPMT was lowered back to ground. Damage assessment was performed. Parts were obtained and SPMT was repaired to original configuration. A test run was performed satisfactory and SPMT was declared operational. SPMT was then rigged and taken to the equipment hatch platform with no issues.

Caused

Equipment: **Equipment Description:**

Operability: 1 N/A

This CR does not identify any degraded/nonconforming condition for plant equipment.

CR Number: 00108154 **Status:** H/APPR **Initiation Date:** 10/9/2016 6:03:00PM **Initiator:** HEFFRON, JASON M

Subject: Wastage on lifting bolts on CRDM vent plugs

Description: During visual inspection under 15-402215-001, rust was identified at the lifting lug to CRDM thread interface. Wastage on grid locations C5 (CRDM 49) and K2 (CRDM 59) was noted for approximately 3-4 threads. There were no signs indicative of boron leakage. A review of RF17 pictures indicates at a minimum that K2 was an existing condition at the time. Pictures stored at K:\Data\NDE\Photos\CRDM Platform and vent plugs and seismic plates. Recommend this CR be issued to engineering for evaluation.

Heard Inspector

Equipment: RBB01 **Equipment Description:** REACTOR VESSEL

Operability: 4 INOPERABLE

During visual inspection under 15-402215-001, rust was identified at the lifting lug to CRDM thread interface. Wastage on grid locations C5 (CRDM 49) and K2 (CRDM 59) was noted for approximately 3-4 threads. There were no signs indicative of boron leakage. Until an engineering evaluation is complete, the SSC is INOPERABLE due to the inability to reasonably assure no leakage was present. Ref: TS 3.4.13

CR Number: 00108153 **Status:** H/APPR **Initiation Date:** 10/9/2016 6:02:00PM **Initiator:** GIRAUD, KELLEN M

Subject: Weld Repairs Needed on EAD05B Fairing Walls

Refer to licen see.

Most Recently Initiated CRs

CR's Initiated between 09/08/2016 05:00 and 09/09/2016 05:00

Subject: Individual drove over caution cone blocking lane at MGN
Description: During ingress on 9/8/16 at 0758hrs an individual was stopped at lane one with caution cones. When officer moved out of the lane, the individual turned to go around one of the cones and drove over the other one, dragging it up to the security building. When coached by officer, individual wasn't receptive.
Equipment : **Equipment Description :**
Operability : Determined Not in Scope

CR Number: 00106993 **Status:** PRE-APRV **Initiation Date:** 9/8/2016 9:10:00AM **Initiator :** PARKS, DENNIS K
Subject: Pre-Conditioning on Manual TCA Valves
Description: STN TCA-001 is used to verify stroke times for a number of manual valves that are required to meet Time Critical Actions per AI 21-016. All of these valves have maintenance PMs that perform minor maintenance (such as stem lubrication) and then perform the stroke timing to satisfy the STN TCA-001 requirements. However, because the maintenance PMs perform the minor maintenance before the timed stroke test, this could constitute pre-conditioning. The lock PM for these valves as well as any open work orders for these valves need to be changed to eliminate pre-conditioning (i.e. time stroke the valve prior to as well as following the maintenance). All valves are listed in STN TCA-001. Recommend this CR be assigned to Maintenance Planning to correct this pre-conditioning concern.
Equipment : **Equipment Description :**
Operability : Determined Not in Scope

CR Number: 00106992 **Status:** H/APPR **Initiation Date:** 9/8/2016 9:04:00AM **Initiator :** RIETMANN, RICKY L
Subject: Request from CR 106867 CETNA 77 Leak Root Cause Team
Description: This CR was written to make visible the impact of an action requested by the Root Cause Team for CR 106867 on our reactor head CETNA 77 leak. The action requested is to be executed under SWO 16-417262-005 and is to have Operations, Maintenance or Engineering quantify the liquid leakage coming out of the crack in the seal weld on CETNA 77. Quantify leakage rate, RCS temperature and pressure and report results to the Root Cause Team.
Equipment : RB01 **Equipment Description :** REACTOR VESSEL
Operability : 3 OPER/DNC
This condition has been previously evaluated by CR# 00106867 with no indication that the condition has changed. No new condition identified. The RCS is operable but degraded. TS 3.4.13

CR Number: 00106991 **Status:** H/APPR **Initiation Date:** 9/8/2016 9:01:00AM **Initiator :** RIETMANN, RICKY L
Subject: Request from CR 106867 CETNA 77 Leak Root Cause Team
Description: This CR was written to make visible the impact of an action requested by the Root Cause Team for CR 106867 on our reactor head CETNA 77 leak. The action requested is to be executed under SWO 16-417262-004 and is to have the HAM crew and QC perform STS PE-040 E "RPV Head Visual Inspection" with the use of the STARSs Crawler. A camera on a stick was going to be used for STS PE-040E this outage but the STARS Crawler has been requested and provides for a much better examination of the head.
Equipment : RB01 **Equipment Description :** REACTOR VESSEL
Operability : 3 OPER/DNC
This condition has been previously evaluated by CR# 00106867 with no indication that the condition has changed. No new condition identified. The RCS is operable but degraded. TS 3.4.13

CR Number: 00106990 **Status:** H/APPR **Initiation Date:** 9/8/2016 8:59:00AM **Initiator :** RIETMANN, RICKY L
Subject: Request from CR 106867 CETNA 77 Leak Root Cause Team
Description: This CR was written to make visible the impact of an action requested by the Root Cause Team for CR 106867 on our reactor head CETNA 77 leak. The action requested is to be executed under SWO 16-417262-003 and is to have QC characterize the crack in the CETNA 77 seal weld by NDE examination such as LP Testing. Report results to the Root Cause Team.

Number of CRs: 36

Refer to license e.Potential security related information.

Equipment : RB801 Equipment Description : REACTOR VESSEL
Operability : 3 OPER/DNC
This condition has been previously evaluated by CR# 00106867 with no indication that the condition has changed. No new condition identified. The RCS is operable but degraded. TS 3.4.13

CR Number: 00106989 Status: H/APPR Initiation Date: 9/8/2016 8:23:00AM Initiator : GIRAUD, KELLEN M
Subject: PAD01C Suction Vent Line Leak
Description: During a walkdown, System Engineer identified a leak of approximately 10 drops per minute from a flexible hose on AD062HBD-2, "C" condensate pump suction vent piping line to condenser. During normal operations, this line would be under vacuum and a leak would result in air in-leakage to the condenser. In order to preclude condenser air in- leakage concerns upon unit startup, this flexible hose should be replaced during RF21. The hose is identified as a 2" flexible hose Flexonics Type 101 on drawing M-13AD11. However, there appears to be a stock item for the hose (NS40100124) with the description of a 3" diameter hose that has never actually been used in the plant. This discrepancy needs to be resolved and the proper hose installed one way or the other.
Equipment : AD062HBD-2 Equipment Description : PIPING LINE
Operability : 6 FUNC/DNC
What is the defect/degraded nonconforming condition? PAD01C Suction Vent Line Leak. What SSC is affected by the deficiency? AD062HBD-2 PIPING LINE What is the design/safety function of the affected SSC? The condensate pumps take suction from the condenser hotwell and discharge the condensate into one common header that feeds the condensate demineralizers then MFPs. The condensate demineralizers may be by-passed to send flow directly to the MFPs. Downstream of the condensate demineralizers, the header branches into three parallel trains. Each train contains four stages of low-pressure feedwater heaters. The trains join together at a common header which branches into two lines that go to the suction of the MFPs. The loss of the Condensate Pumps could cause a Plant Trip due to low suction pressure to the Main Feedwater Pumps. The main condenser is the steam cycle heat sink. During normal operation, it receives and condenses main turbine exhaust steam, steam generator feedwater pump turbine exhaust steam, and turbine bypass steam. The main condenser is also a collection point for other steam cycle miscellaneous flows, drains, and vents. The main condenser is utilized as a heat sink in the initial phase of reactor cooldown during a normal plant shutdown. What effect/or potential effect does the deficiency have on the affected SSC s ability to perform its intended design/safety function? A minor suction line leak can contribute to dissolved oxygen concentration elevation in the condensate and feedwater system. The SSC is functional but degraded because: PAD01C is exhibiting no abnormal operating parameters and is supply flow to the suction of the feedwater pumps as required. There have been no abnormal secondary O2 issues with this issue present. Extent of condition? Where does this condition exist? Unique References? Maintenance Rule, USAR

CR Number: 00106988 Status: PRE-APRV Initiation Date: 9/8/2016 8:17:00AM Initiator : MARTINSON, ERIC W
Subject: Loss of ERDS during network outage 9/7/16
Description: ERDS was unavailable from 1500 on 9/7/16 to 0246 on 9/8/16. Reviewed NUREG 1022 for reporting requirements for a loss of ERDS. The loss of ERDS is due to a loss of licensee owned and maintained equipment and is a supplement to the ENS system. This does not constitute a major loss of offsite communication capability. Licensing concurs. If the NRC residents or ops center desire a courtesy notification, then that requirement needs to be added to the communications page or AP 26A-001. The NUREG is concerned with NRC-maintained equipment. Ref: NUREG 1022 pg. 60 and 62
Equipment : Equipment Description :
Operability : 5 FUNC
ERDS is functional following the network outage. Ref: AP 26A-001, NUREG 1022

ERDS

CR Number: 00106987 Status: PRE-APRV Initiation Date: 9/8/2016 8:10:00AM Initiator : WALTER, NATHAN J
Subject: Loss of power to mux
Description: Lost power to ESW mux on 9/7/16 at 1510 hrs.
Equipment : XSK071 Equipment Description : ACCESS SECURITY EQUIPMENT PANEL
Operability : 1 N/A
This SSC is not in the scope of equipment identified in AP 26C-004 that requires an operability/functionality evaluation.

SEC

File K01-003

RER ROUTING SLIP

Refer document in its entirety to the licensee.

TO: L. Hauth (OB-OP)	FROM: Larry Stevens (CC-LI)
Sarah Dekat (CC-PI) David Dees (OB-OP) James Edwards (OB-OP) Shift Manager Control Room Book – (OB-OP) Senior Resident Inspector (OB-NRC) RER File LER File -	DATE: 10/1/2016

SUBJECT: CLOSED REPORTABILITY EVALUATION REQUEST(s)

ATTACHED RER(s):

2016-031

Reportability Evaluation Report

RER 00106859-02

Status: COMPLETE Status Date: 09/06/2016 Age: 4 Due Date:

Subject: RCS Un-Identified Leak Rate> 1GPM

Date/Time of Discovery: 9/2/2016 04:06

Description: While performing STS BB-006, crew discovered that RCS leak rate exceeded the T.S. 3.4.13 Limit for Un-Identified leakage of 1 GPM. Crew entered T.S. 3.4.13 and performed OFN BB-007. Containment entry made and walkdowns outside of containment performed. Location of leak not found

SCREENING/NOTIFICATIONS (Completed by Shift Manager):

Potentially Reportable: Y RER Number: 2016-031

Per (list applicable reporting criteria met):

Person Contacted: CALL SUPT

Corporate Services Notified: N

ENS Reportability Determination per 10 CFR 50.72:

4 HR

ENS Worksheet completed and attached: Y

Continuous open channel required: N

Shift Manager Approval: APPROVED

Last Updated: LAHAUTH - 09/02/2016

DISPOSITION (Completed by Licensing):

LER #: NA Ltr. Number: NA Submittal Date: NA

Event Evaluation:
NOT REPORTABLE

While performing STS BB-006, Operations discovered that RCS leak rate
exceeded the Technical Specification (TS) 3.4.13 Limit for Un-Identified leakage of 1 GPM. Operations entered T.S. 3.4.13 and performed OFN BB-
Reportability Evaluation Performed by Technical Specialist: JERRY STEVENS LASTEVE - 09/03/2016
initiated.
*
Operations was contacted to ensure that the event was fully understood.
The plant shutdown was started at 1000 CDT on September 2, 2016 when a 205
gallon boration commenced.
*
Per 10CFR50.72(b)(2)(i), the initiation of any nuclear plant shutdown required by the plant's Technical Specifications is reportable via the Emergency Notification System to the NRC Operations Center within 4 hours. The shutdown was reported to the NRC at 1047 CDT by ENS 52218.
*
There is no reporting requirement per 10 CFR 50.73. No further notifications are required.

REVIEW and APPROVAL (Non-Reportable Events Only)

Supervisor Licensing Approval: APPROVED **Last Updated:** LASTEVE - 09/03/2016

Manager Regulatory Affairs Approval: APPROVED **Last Updated:** CYHAFEN - 09/03/2016

ENS Retraction needed: N

00106859 Condition Report

AR #: 00106859 Severity Type: CR Level: Due Date: Status:PRE-APRV Status Date: 09/02/2016

AR Subject: RCS Un-Identified Leak Rate> 1GPM Age In Days: 0

Owed To Name:

Owed To Department:

Owed To Alert Group: WC SRT

Origination Date: 09/02/2016

Initiator: FULLER, MICHAEL D

Orig Department: 3122072 - Crew F SE

Condition Report Summary:

Type	AR#-Assign#-Sub-Assign#	Owed/Assign To	Due Date	Status
CR	00106859	WC SRT		PRE-APRV
RTFO	00106859-01	OPS REVIEW		ACC/PRI
RACT	00106859-01-01	OPS REVIEW		COMPLETE
RACT	00106859-01-02	OPS REVIEW		COMPLETE
RER	00106859-02	RER REVIEW		COMPLETE

Attachments:

Type	CR/ASGN No.	Title
RER	02	RER 2016-031

CR Detail

Asset/Equip: BB

Work Request: 16-117957

Description: While performing STS BB-006, crew discovered that RCS leak rate exceeded the T.S. 3.4.13 Limit for Un-Identified leakage of 1 GPM. Crew entered T.S. 3.4.13 and performed OFN BB-007. Containment entry made and walkdowns outside of containment performed. Location of leak not found.

Immediate Concern: Y SM Notified: Y Init DNC: N

Immediate Actions:

Performed STS BB-006 RCS for Leak Rate determination and performed applicable actions of OFN BB-007.

Extent of condition:

Recommended Resolution:

Find RCS leak

Screening Review

Operability: 4 INOPERABLE
RCS leakage exceeded the 1 gpm limit of Tech Spec 3.4.13 in the STS BB-006 of 04 08 9/2/16.

Reportable: Y This will require a Tech Spec required shutdown

Environmental Issue: N

Tech Spec Sec 5: N

Personnel Safety Issue: N

Reactivity Issue: N

Impact Risk Assessment: Y

OPS Review: HAUTH, LARRY W

Tech Spec required shutdown

CR/WR Screening: HAUTH, LARRY W

Significance Cat: 99 - NOT APPLICABLE

Screen/SRT Notes:

General Notes:

Other Related Information

Assignment Status Summary:

Total Assigns/Subs:	2 - 2
Open Assigns/Subs:	1 - 0
Overdue Assigns/Subs:	0 - 0

Cross References:

Type	Number	Sub Number
MPAC WORK REQUEST	16-117957	

Status & Due Date History:

Responsible Person	Date Updated	Status	Due Date
FULLER, MICHAEL D	09/02/2016	INPROG	
FULLER, MICHAEL D	09/02/2016	H/APPR	
HAUTH, LARRY W	09/02/2016	PRE-APRV	

Margin Management Issue: N

File K01-003

RER ROUTING SLIP

TO: J. Isch (OB-OP)	FROM: Larry Stevens (CC-LI)
Sarah Dekat (CC-PI) David Dees (OB-OP) PC Moore (OB-OP) James Edwards (OB-OP) Shift Manager Control Room Book – (OB-OP) ~~Senior Resident Inspector (OB-NRC)~~ RER File LER File -	DATE: 10/26/2016

SUBJECT: CLOSED REPORTABILITY EVALUATION REQUEST(s)

ATTACHED RER(s):

2016-032

Reportability Evaluation Report

RER 00106867-05

Status: COMPLETE Status Date: 10/22/2016 Age: 44 Due Date:

Subject: Completion of a TS required shutdown

Date/Time of Discovery: 9/2/2016 1158

Description:

SCREENING/NOTIFICATIONS (Completed by Shift Manager):

Potentially Reportable: Y RER Number: 2016-032

Per (list applicable reporting criteria met): 10 CFR 50.73(a)(2)(i)(A)

Person Contacted: CALL SUPT

Corporate Services Notified: N

ENS Reportability Determination per 10 CFR 50.72:

N/A

ENS Worksheet completed and attached: N/A

Continuous open channel required: N

Shift Manager Approval: APPROVED

Last Update: This information was copied from the RER assigned to CR for CR 106862. The RER was approved by Jeff Isch. CR 106862 was closed to CR 106867, so the RER was transferred to CR 106867.

DISPOSITION (Completed by Licensing):

LER #: NA Ltr. Number: NA Submittal Date: NA

Event Evaluation:
NOT REPORTABLE

On 9/2/2016 at 11:58, the reactor was manually tripped from 30% power in
accordance with OFN MA-038 step 22. The unit was being shutdown to comply
with Tech Spec 3.4.13 required action B.1 for unidentified RCS leakage

Reportability Evaluation Performed by: OPERATIONS LASTEVE - 10/21/2016

After evaluation by the EIT for the plant shutdown, Operations concluded
that the event was not reportable. Information from the white paper
(attached) was used to make the determination that the event was not
reportable. A retraction to ENS 52216 on the initiation of plant
shutdown, RER 2016-031, was made on 10/21/2016. The information from the
ENS 52218 retraction follows:

* * * EVENT RETRACTED ON 10/21/16 AT 11:01 EDT FROM LARRY HAUTH TO JEFF
HERRERA
Wolf Creek Nuclear Operating Corporation is retracting the 10 CFR 50.72(b)
(2)(i) notification based on subsequent review of the event. The
calculation of unidentified leak rate which triggered entry into the Mode
3 Required Action Statement was performed immediately after placing RCS
Excess Letdown in service. An evaluation of the leak rate calculation
determined that the leak rate was invalid due to performance of the RCS
water inventory balance during non-steady state operating conditions.
This was contrary to the requirements of TS Surveillance Requirement
3.4.13.1, as this test was performed while charging and letdown flows were
being stabilized following the alignment of excess letdown. A walk down
of the Excess Letdown system while inservice determined no leakage.
Subsequent RCS water inventory balances performed with Excess Letdown in
service under steady state operating conditions while in Mode 3 at normal
operating pressure and temperature determined the maximum calculated
unidentified leak rate was 0.675 gpm.

After the plant entered Mode 3 a non-RCS pressure boundary leak was
identified during equipment walk downs on a seal weld from the reactor
vessel head core exit thermocouple nozzle assembly 77.

The leakage did not impact the ability to shut down the unit. No TS limits

were exceeded during this event.
*
Therefore, the plant shutdown to investigate and correct leakage past the
seal weld of a threaded connection does not meet the reporting requirements of 10 CFR 50.72.
*
The NRC Resident Inspector has been notified.
*
Since Operations concluded this event was not reportable as an initiation
of plant shutdown, it is also not reportable as a completion of a plant shutdown required by Technical Specifications. Therefore, this issue is not reportable per 10 CFR 50.73.

REVIEW and APPROVAL (Non-Reportable Events Only)

Supervisor Licensing Approval: APPROVED **Last Updated:** WIMUILE - 10/22/2016

Manager Regulatory Affairs Approval: APPROVED **Last Updated:** CYHAFEN - 10/22/2016

ENS Retraction needed: N

00106867 Condition Report

AR #: 00106867 **Severity Type:** SCAQ **Level:** RCA **Due Date:** 11/03/2016 **Status:** APPROVED **Status Date:** 09/07/2016

AR Subject: Active leakage identified rear canopy seal area of CETNA #77 **Age In Days:** 45

Owed To Name: BABAN, TIFFANY A
Owed To Department: 4020000 - Baban Tiffany
Owed To Alert Group:

Origination Date: 09/03/2016
Initiator: HEFFRON, JASON M
Orig Department: 0060030 - Heffron Jason

Condition Report Summary:

Type	AR#-Assign#-Sub-Assign#	Owed/Assign To	Due Date	Status
SCAQ	00106867	TIBABAN	11/03/2016	APPROVED
RTFQ	00106867-01	OPS REVIEW		ACC/PRI
RACT	00106867-01-01	OPS REVIEW		ACC/PRI
RACT	00106867-01-02	OPS REVIEW		COMPLETE
RACT	00106867-01-03	OPS REVIEW		COMPLETE
RACT	00106867-01-04	OPS REVIEW		ACC/PRI
RACT	00106867-01-05	OPS REVIEW		COMPLETE
RACT	00106867-01-06	OPS REVIEW		COMPLETE
RACT	00106867-01-07	OPS REVIEW		COMPLETE
RACT	00106867-01-08	OPS REVIEW		COMPLETE
RACT	00106867-01-09	OPS REVIEW		ACC/PRI
RACT	00106867-01-10	OPS REVIEW		ACC/PRI
RACT	00106867-01-11	OPS REVIEW		ACC/PRI
RACT	00106867-01-12	OPS REVIEW		ACC/PRI
RACT	00106867-01-13	OPS REVIEW		COMPLETE
RACT	00106867-01-14	OPS REVIEW		ACC/PRI
RACT	00106867-01-15	OPS REVIEW		ACC/PRI
RACT	00106867-01-16	OPS REVIEW		ACC/PRI
RACT	00106867-01-17	OPS REVIEW		ACC/PRI
RACT	00106867-01-18	OPS REVIEW		ACC/PRI
RACT	00106867-01-19	OPS REVIEW		ACC/PRI
RACT	00106867-01-20	OPS REVIEW		ACC/PRI
RACT	00106867-01-21	OPS REVIEW		COMPLETE
RACT	00106867-01-22	OPS REVIEW		ACC/PRI
RACT	00106867-01-23	OPS REVIEW		ACC/PRI
RACT	00106867-01-24	OPS REVIEW		ACC/PRI
RACT	00106867-01-25	OPS REVIEW		ACC/PRI
RACT	00106867-01-26	OPS REVIEW		ACC/PRI
RACT	00106867-01-27	OPS REVIEW		ACC/PRI
RACT	00106867-01-28	OPS REVIEW		COMPLETE
RACT	00106867-01-29	OPS REVIEW		ACC/PRI
RACT	00106867-01-30	OPS REVIEW		COMPLETE
RACT	00106867-01-31	OPS REVIEW		ACC/PRI
RACT	00106867-01-32	OPS REVIEW		ACC/PRI
RACT	00106867-01-33	OPS REVIEW		ACC/PRI
RACT	00106867-01-34	OPS REVIEW		ACC/PRI
RACT	00106867-01-35	OPS REVIEW		ACC/PRI
RACT	00106867-01-36	OPS REVIEW		COMPLETE
RACT	00106867-01-37	OPS REVIEW		ACC/PRI
RACT	00106867-01-38	OPS REVIEW		COMPLETE
RACT	00106867-01-39	OPS REVIEW		COMPLETE

RACT	00106867-01-40	OPS REVIEW		COMPLETE
RACT	00106867-01-41	OPS REVIEW		COMPLETE
RACT	00106867-01-42	OPS REVIEW		COMPLETE
RACT	00106867-01-43	OPS REVIEW		ACC/PRI
RACT	00106867-01-44	OPS REVIEW		COMPLETE
RACT	00106867-01-45	OPS REVIEW		ACC/PRI
RACT	00106867-01-46	OPS REVIEW		ACC/PRI
RACT	00106867-01-47	OPS REVIEW		ACC/PRI
RCA	00106867-02	TIBABAN	11/03/2016	NTFY/ASG
MRE	00106867-03	TIBABAN	09/27/2016	COMPLETE
ICES	00106867-04	TIBABAN	09/27/2016	COMPLETE
RER	00106867-05	RER REVIEW		COMPLETE

Attachments:

Type	CR/ASGN No.	Title
ACT	01	ICES 324454 RCS LEAK CR 106867 R1
MRE	03	EQUIPMENT ASSESSMENT CHECKLIST AIF 28A-100-19
RER	05	EIT WHITE PAPER
RER	05	RER 2016-032

CR Detail

Asset/Equip: RBB01 **Work Request:** 16-117965

Description: During the performance of STN PE-040G "Transient Event Walkdown" QC identified an active leak (approximately ½ to 1 gallon per minute) coming from CETNA #77 near Canopy Seal Area

Immediate Concern: N **SM Notified:** N/A **Init DNC:** N

Immediate Actions:

Contacted OCC and provided video and pictures to Engineering and Operations for evaluation

Extent of condition:

Recommended Resolution:

Screening Review

Operability:

3 OPER/DNC
What is the defect/degraded nonconforming condition?
Active leakage identified near canopy seal area of CETNA #77
What SSC is affected by the deficiency?
RBB01 REACTOR VESSEL
What is the design/safety function of the affected SSC?
The CET Housing is internally threaded and torqued down onto a seating surface at the interface between the housing and the top of the Reactor Head Adapter. This connection is a mechanical joint and leakage via this pathway is not Pressure Boundary LEAKAGE as defined by Technical Specifications. Core exit temperature is a Category 1 variable which provides for verification and long term surveillance of core cooling. An evaluation was made in support of Reference 2 of the minimum number of valid core exit thermocouples (CET) necessary for measuring core cooling. The evaluation determined the reduced

complement of CETs necessary to detect initial core recovery and trend the ensuing core heatup. The evaluations account for core nonuniformities, including incore effects of the radial decay power distribution, excore effects of condensate runback in the hot legs, and non-uniform inlet temperatures. Based on these evaluations, adequate core cooling is ensured with two valid core exit temperature channels per quadrant with two CETs per required channel. The CET pairs are oriented radially to permit evaluation
of core radial decay power distribution. Core exit temperature is used to determine whether to terminate SI, if still in progress, or to reinitiate SI if it has been stopped. Core exit temperature is also used for unit stabilization and cooldown control. Two OPERABLE channels of core exit temperature are required in each quadrant to provide indication of radial distribution of the coolant temperature rise across representative regions of the core. Reference 6 discusses the conformance of the thermocouple/core
cooling monitoring system to NUREG-0737, Section II.F.2, approved by the NRC in Reference 7. Two sets of two thermocouples ensure a single failure will not disable the ability to determine the radial temperature gradient.
The WCGS reactor vessel head and CETNA assemblies are classified as ASME Boiler and Pressure Vessel Code Section III Class 1 items. The Reactor Vessel was designed and fabricated to the 1971 Edition through Winter 1972 Addenda and the CETNA housing assemblies were designed and fabricated to the 1974 through Winter 1974 Addenda of Section III of the ASME B&PV Code. Section III paragraph NB-3671.3 states that threaded joints in which threads provide the only seal shall not be used. The seal weld is not a structural part of the pressure boundary and is not required to meet the structural requirements of ASME B&PV Code, Section III, NB-3000. The threads are the load carrying part of the joint design.
The industry indications and past operating experience at WCGS of leaks in the subject seal welds are pinholes or small localized cracks. These flaws have resulted in leak rates that are bound by the limits established in Technical Specification 3.4.13.
What effect/or potential effect does the deficiency have on the affected SSC's ability to perform its intended design/safety function?
A degraded seal weld can cause a loss of RCS inventory.
The SSC is operable but degraded because:
Completed performances of STS BB-006 were reviewed from the last operating cycle and RCS leakage limits were not challenged except on 9/2/16. RCS unidentified leak rates have been elevated since 8/15/16. The latest RCS unidentified leakrates are .598 and .648 gpm.
The RCS unidentified leakrate on 9/2/16 at 0408 was 1.358 gpm and 9/2/16 at 1703 was 1.502 gpm. These leak rate

tests were both performed in an abnormal CVCS lineup during troubleshooting activities with excess letdown in service and charging aligned to the seals only. The only additional piping in service in this alignment is associated with the excess letdown piping to the seal water return line. No leak rate tests performed with normal charging and letdown in servios have exceeded any TS limits. The potential for leakage on the excess letdown flowpath is not pressure boundary leakage and is normally isolated by two closed solenoid operated valves. With this path isolated, no RCS leak rate limits have been exceeded. After reviewing system trends, performing inventory calculations and consulting with system engineering, I am confident that the indications observed with excess letdown in service are related to unstable plant conditions during the CVCS system transient conditions. There is no intersystem leakage or evidence of any external leakage. With excess letdown in service from 2342 on 9/2/16 to 0300 on 9/3/16, both system engineering and the control room staff performed manual leak rate calculations. The observed values trended down while CVCS parameters stabilized. The manual balance from 0200 to 0300 indicated a leak rate of .682gpm, which was confirmed by system engineering. The results of this measurement support that the previous STS BB-006 results were erroneously high due to non-stable conditions.
The initiator identified during the performance of a containment walk down evidence of leakage at the canopy seal weld on penetration 77. The leak is active and does not appear to be degrading any adjacent components. There is some minor boron buildup on the housing that is in the path of the leak plume. I did not observe any discoloration or signs of wastage. I have reviewed the pictures and video of the described leak and have determined this leak to be restricted to canopy seal weld. Technical Specifications defines Pressure Boundary LEAKAGE as LEAKAGE through a non-isolable fault in an RCS component body, pipe wall or vessel wall. TS 3.4.13 contains the operating limits for RCS Operational LEAKAGE. In MODES 1 through 4, no pressure boundary is allowed, unidentified LEAKAGE is limited to 1 gallon per minute, identified LEAKAGE is limited to 10 gallons per minute, and primary to secondary LEAKAGE is limited to 150 gallons per day in any one Steam Generator.
The reactor vessel closure head contains 78 penetrations. Each head adaptor flange has an identical stainless steel flange welded on the top of the penetration. The stainless steel flange has male ACME threads (to mate with an attachment) and a canopy lip. The attachments determine the type of penetration. At WCGS, the attachments are as follows: 13 head adaptor plugs, 4 female flanges, 8 partial length CRDMs and 53 full length CRDMs. Each of the attachments has female ACME threads and a canopy lip. The head adaptor is designed such that when the attachment

is threaded onto the stainless steel flange (at original construction), the two canopy lips come together and are seal welded. This seal weld is required because the ASME Section III Code states that threaded joints in which threads provide the only seal shall not be used. Hence the canopy seal weld was provided to seal the ACME thread pressure boundary connection. It is important to note that the ACME threads of the threaded connection provide the structural design strength and pressure boundary of the joint. The canopy seal weld provides leakage control of the threaded connection, but does not provide any of the ASME Code strength of the connection.
The Reactor Vessel and the subject CETNA penetration are OPERABLE but degraded due to the flaw in the seal weld.
Extent of condition? Where does this condition exist?
Unique condition
References?
TS 1.1, 3.4.13 and Bases; TR 3.4.17 and Bases; NRC Inspection Manual Part 9900; DCP 05017; DCP 12962; M-709-00089; M-709-00079; M-709-00123; historical STS BB-006 results in Autolog; K:\Refuel_Current\Forced Outage\FO 21-02 RCS Unidentified Leakage\Photos\rcs leak pen 77; STS BB-006; STN PE-040G

Reportable:	N
Environmental Issue:	N
Tech Spec Sec 5:	N
Personnel Safety Issue:	N
Reactivity Issue:	N
Impact Risk Assessment:	N
OPS Review:	MARTINSON, ERIC W
CR/WR Screening:	LINK, STEPHEN L
Significance Cat:	99 - NOT APPLICABLE

Screen/SRT Notes:

	Updated By	Last Updated
Basis A.2.3	CADEARI	09/07/2016

General Notes:

	Updated By	Last Updated
CR 106862 has been closed to this CR. This CR which is the	TIBABAN	09/14/2016
same evaluation level will address the condition described	TIBABAN	09/14/2016
in that CR.	TIBABAN	09/14/2016

Other Related Information

Assignment Status Summary:

Total Assigns/Subs:	5 - 47
Open Assigns/Subs:	2 - 30
Overdue Assigns/Subs:	0 - 0

Cross References:

Type	Number	Sub Number
ACTION REQUEST	00106858	
ACTION REQUEST	00106859	
ACTION REQUEST	00106862	
ACTION REQUEST	00106922	
ACTION REQUEST	00106990	
ACTION REQUEST	00106991	
ACTION REQUEST	00106992	
ACTION REQUEST	00107189	
ACTION REQUEST	00107190	
ACTION REQUEST	00107191	
ACTION REQUEST	00107686	
ACTION REQUEST	00107719	
ACTION REQUEST	00107720	
ACTION REQUEST	00107721	
ACTION REQUEST	00107722	
ACTION REQUEST	00107847	
MPAC WORK REQUEST	16-117965	

Status & Due Date History:

Responsible Person	Date Updated	Status	Due Date
HEFFRON, JASON M	09/03/2016	INPROG	
HEFFRON, JASON M	09/03/2016	H/APPR	
DEARINGER, CAROL A	09/07/2016	APPROVED	10/07/2016
LINK, STEPHEN L	09/03/2016	PRE-APRV	
BABAN, TIFFANY A	10/04/2016		11/03/2016

Margin Management Issue: N

00107720 Condition Report

AR #: 00107720 **Severity Type:** NCAQ **Level:** OTH **Due Date:** 11/01/2016 **Status:** COMP-NA **Status Date:** 10/02/2016

AR Subject: Clamping Recommendation for Penetration 12 from RCA 106867 **Age in Days:** 0

Owed To Name:

Owed To Department: 4020020 - Crow Bart

Owed To Alert Group: WC SRT

Origination Date: 09/30/2016

Initiator: CHADWICK, CHRISTOPHER N

Orig Department: 4020020 - Crow Bart

Condition Report Summary:

Type	AR#-Assign#-Sub-Assign#	Owed/Assign To	Due Date	Status
NCAQ	00107720	WC SRT	11/01/2016	COMP-NA

Attachments:

Type	CR/ASGN No.	Title
CR	00107720-00	CLAMPING RECOMMENDATION FOR PENETRATION 12 FROM RCA 106867

CR Detail

Asset/Equip: RBB01 **Work Request:** 16-118395

Description: The root cause team for the CETNA #77 penetration leak is recommending additional clamps be installed on lower canopy seal welds for spare capped penetrations near the center of the head in this outage (RF 21). Penetration 12 is a spare location in a more at risk area. Spare capped locations have been shown to be more susceptible to leakage both at Wolf Creek and in industry.

Immediate Concern: N **SM Notified:** N/A **Init DNC:** N

Immediate Actions:
Wrote CR

Extent of condition:
Any canopy seal weld that is not clamped is susceptible to leakage.

Recommended Resolution:
Create WOs to install an additional clamp on the lower canopy seal weld of penetration 12.

Screening Review

Operability: 1 N/A
This is a proactive action taken to prevent a leak similar to that that occurred on CETNA penetration #77. Therefore, this CR does not identify any degraded/nonconforming condition for plant equipment.

Reportable: N

Environmental Issue: N

Tech Spec Sec 5: N

Personnel Safety Issue: N

Reactivity Issue: N

Impact Risk Assessment: N

OPS Review: REEVES, GLENN W

CR/WR Screening: ISCH, JEFFREY R

Significance Cat: 99 - NOT APPLICABLE

Screen/SRT Notes:

General Notes:

Other Related Information

Assignment Status Summary:

Total Assigns/Subs:	0 - 0
Open Assigns/Subs:	0 - 0
Overdue Assigns/Subs:	0 - 0

Cross References:

Type	Number	Sub Number
ACTION REQUEST	00106867	
MPAC WORK REQUEST	16-118395	

Status & Due Date History:

Responsible Person	Date Updated	Status	Due Date
CHADWICK, CHRISTOPHER N	09/30/2016	INPROG	
CHADWICK, CHRISTOPHER N	09/30/2016	H/APPR	
DEARINGER, CAROL A	10/02/2016	APPROVED	11/01/2016
DEARINGER, CAROL A	10/02/2016	COMP-NA	11/01/2016
ISCH, JEFFREY R	09/30/2016	PRE-APRV	

NON QA Record Information:

Rework Issue:	N
Radiological Occurrence:	N
Potential OE:	N
Training Issue:	N
Site Clock Reset:	N
Division Clock Reset:	N
Discovery Code:	03 - OTHER WC PERSONNEL
Critical Equipment Failure:	N
Maintenance Rule:	N
Outage Issue:	Y
Margin Management Issue:	N
Culpable Org:	
Keywords:	

Trend Data:

Work Process	Trend 1	Trend 2	Trend 3	Trend 4
PP	PTCNR			

Evaluation/Checklist

Assignment #: Due Date: Status: Status Date:

Subject: Age In Days: Total Age:

Assigned To Name:

Assigned To Organization:

Description:

Condition Statement:

Extent of Condition:

Operating Experience:

Evaluation and Conclusion:

Cause:

Extent of Cause:

Safety Significance:

Actions Taken:

Information Sources:

Review and Approvals

QA Review:

Rad Protection Review:

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extentions

# of Extentions:

Extention Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes: Updated By Last Updated

References:

EVAL Status & Due Date History:

Plan and Actions

Plan Assignment #: Status: Status Date:

Plan Subject: Age In Days:

Assigned To Name:

Assigned To Organization:

Description:

Action Assignment #: Action Due Date: Status: Status Date:

Action Subject: Age In Days:

Assigned To Name:

Assigned To Organization:

Description:

Action Category:

LTCA:

Schedule Requirement:

RCMS #:

Commitment:

Commit To Agency:

Work Performed:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

# of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Plan and Action Information

Plan Assignment Notes: Updated By Last Updated

Action Assignment Notes:

Plan Completion Notes:

Action Completion Notes:

Plan Cross Reference: Type Number Sub Number

Action Cross Reference:

Plan Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Action Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Effectiveness Follow-up

EFU Assignment #: EFU Due Date: Status: Status Date:

EFU Subject: Age In Days:

Assigned To Name:

Assigned To Organization:

Description:

EFU Effective:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

# of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes: Updated By Last Updated

Cross References:

EFU Status and Due Date History:

Reportability Evaluation Report

RER

Status: Status Date: Age: Due Date:

Subject:

Date/Time of Discovery:

Description:

SCREENING/NOTIFICATIONS (Completed by Shift Manager):

Potentially Reportable: RER Number:

Per (list applicable reporting criteria met):

Person Contacted:

Corporate Services Notified:

ENS Reportability Determination per 10 CFR 50.72:

ENS Worksheet completed and attached:

Continuous open channel required:

Shift Manager Approval:

Last Updated:

DISPOSITION (Completed by Licensing):

LER #: Ltr. Number: Submittal Date:

Event Evaluation:

Reportability Evaluation Performed by:

REVIEW and APPROVAL (Non-Reportable Events Only)

Supervisor Licensing Approval: Last Updated:

Manager Regulatory Affairs Approval: Last Updated:

ENS Retraction needed:

00107721 Condition Report

AR #: 00107721 **Severity Type:** NCAQ **Level:** OTH **Due Date:** 11/01/2016 **Status:** COMP-NA **Status Date:** 10/02/2016

AR Subject: Clamping Recommendation for Penetration 23 from RCA 106867 **Age In Days:** 0

Owed To Name:

Owed To Department: 4020020 - Crow Bart

Owed To Alert Group: WC SRT

Origination Date: 09/30/2016

Initiator: CHADWICK, CHRISTOPHER N

Orig Department: 4020020 - Crow Bart

Condition Report Summary:

Type	AR#-Assign#-Sub-Assign#	Owed/Assign To	Due Date	Status
NCAQ	00107721	WC SRT	11/01/2016	COMP-NA

Attachments:

Type	CR/ASGN No.	Title
CR	00107721-00	CLAMPING RECOMMENDATION FOR PENETRATION 23 FROM RCA 106867

CR Detail

Asset/Equip: RB801 **Work Request:** 16-118394

Description: The root cause team for the CETNA #77 penetration leak is recommending additional clamps be installed on lower canopy seal welds for spare capped penetrations near the center of the head in this outage (RF 21). Penetration 23 is a spare location in a more at risk area. Spare capped locations have been shown to be more susceptible to leakage both at Wolf Creek and in industry.

Immediate Concern: N **SM Notified:** N/A **Init DNC:** N

Immediate Actions:
Wrote CR

Extent of condition:
Any canopy seal weld that is not clamped is susceptible to leakage.

Recommended Resolution:
Create WOs to install an additional clamp on the lower canopy seal weld of penetration 23.

Screening Review

Operability:	1 N/A This is a proactive action taken to prevent a leak similar to that that occurred on CETNA penetration #77. Therefore, this CR does not identify any degraded/nonconforming condition for plant equipment.
Reportable:	N
Environmental Issue:	N
Tech Spec Sec 5:	N
Personnel Safety Issue:	N
Reactivity Issue:	N
Impact Risk Assessment:	N
OPS Review:	REEVES, GLENN W
CR/WR Screening:	ISCH, JEFFREY R

Significance Cat: 99 - NOT APPLICABLE

Screen/SRT Notes:

General Notes:

Other Related Information

Assignment Status Summary:

Total Assigns/Subs	0 - 0
Open Assigns/Subs:	0 - 0
Overdue Assigns/Subs	0 - 0

Cross References:

Type	Number	Sub Number
ACTION REQUEST	00106867	
MPAC WORK REQUEST	16-118394	

Status & Due Date History:

Responsible Person	Date Updated	Status	Due Date
CHADWICK, CHRISTOPHER N	09/30/2016	INPROG	
CHADWICK, CHRISTOPHER N	09/30/2016	H/APPR	
DEARINGER, CAROL A	10/02/2016	APPROVED	11/01/2016
DEARINGER, CAROL A	10/02/2016	COMP-NA	11/01/2016
ISCH, JEFFREY R	09/30/2016	PRE-APRV	

NON QA Record Information:

Rework Issue:	N
Radiological Occurrence:	N
Potential QE:	N
Training Issue:	N
Site Clock Reset:	N
Division Clock Reset:	N
Discovery Code:	03 - OTHER WC PERSONNEL
Critical Equipment Failure:	N
Maintenance Rule:	N
Outage Issue:	Y
Margin Management Issue:	N
Culpable Org:	
Keywords:	

Trend Data:

Work Process	Trend 1	Trend 2	Trend 3	Trend 4
PP	PTCNR			

Evaluation/Checklist

Assignment #: Due Date: Status: Status Date:

Subject: Age In Days: Total Age:

Assigned To Name:

Assigned To Organization:

Description:

Condition Statement:

Extent of Condition:

Operating Experience:

Evaluation and Conclusion:

Cause:

Extent of Cause:

Safety Significance:

Actions Taken:

Information Sources:

Review and Approvals

QA Review:

Rad Protection Review:

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extentions

# of Extentions:

Extention Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes: Updated By Last Updated

References:

EVAL Status & Due Date History:

Plan and Actions

Plan Assignment #: Status: Status Date:

Plan Subject: Age In Days:

Assigned To Name:

Assigned To Organization:

Description:

Action Assignment #: Action Due Date: Status: Status Date:

Action Subject: Age In Days:

Assigned To Name:

Assigned To Organization:

Description:

Action Category:

LTCA:

Schedule Requirement:

RCMS #:

Commitment:

Commit To Agency:

Work Performed:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

# of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Plan and Action Information

Plan Assignment Notes: Updated By Last Updated

Action Assignment Notes:

Plan Completion Notes:

Action Completion Notes:

Plan Cross Reference: Type Number Sub Number

Action Cross Reference:

Plan Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Action Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Effectiveness Follow-up

EFU Assignment #: EFU Due Date: Status: Status Date:

EFU Subject: Age In Days:

Assigned To Name:

Assigned To Organization:

Description:

EFU Effective:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

# of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes: Updated By Last Updated

Cross References:

EFU Status and Due Date History:

Reportability Evaluation Report

RER

Status: Status Date: Age: Due Date:

Subject:

Date/Time of Discovery:

Description:

SCREENING/NOTIFICATIONS (Completed by Shift Manager):

Potentially Reportable: RER Number:

Per (list applicable reporting criteria met):

Person Contacted:

Corporate Services Notified:

ENS Reportability Determination per 10 CFR 50.72:

ENS Worksheet completed and attached:

Continuous open channel required:

Shift Manager Approval:

Last Updated:

DISPOSITION (Completed by Licensing):

LER #: Ltr. Number: Submittal Date:

Event Evaluation:

Reportability Evaluation Performed by:

REVIEW and APPROVAL (Non-Reportable Events Only)

Supervisor Licensing Approval: Last Updated:

Manager Regulatory Affairs Approval: Last Updated:

ENS Retraction needed:

00106867 Condition Report

AR #: 00106867 **Severity Type:** SCAQ **Level:** RCA **Due Date:** 11/03/2016 **Status:** APPROVED **Status Date:** 09/07/2016

AR Subject: Active leakage identified near canopy seal area of CETNA #77 **Age In Days:** 50

Owed To Name: BABAN, TIFFANY A **Origination Date:** 09/03/2016

Owed To Department: 4020000 - Baban Tiffany **Initiator:** HEFFRON, JASON M

Owed To Alert Group: **Orig Department:** 0060030 - Heffron Jason

Condition Report Summary:

Type	AR#-Assign#-Sub-Assign#	Owed/Assign To	Due Date	Status
SCAQ	00106867	TIBABAN	11/03/2016	APPROVED
RTFQ	00106867-01	OPS REVIEW		ACC/PRI
RACT	00106867-01-01	OPS REVIEW		ACC/PRI
RACT	00106867-01-02	OPS REVIEW		COMPLETE
RACT	00106867-01-03	OPS REVIEW		COMPLETE
RACT	00106867-01-04	OPS REVIEW		ACC/PRI
RACT	00106867-01-05	OPS REVIEW		COMPLETE
RACT	00106867-01-06	OPS REVIEW		COMPLETE
RACT	00106867-01-07	OPS REVIEW		COMPLETE
RACT	00106867-01-08	OPS REVIEW		COMPLETE
RACT	00106867-01-09	OPS REVIEW		COMPLETE
RACT	00106867-01-10	OPS REVIEW		ACC/PRI
RACT	00106867-01-11	OPS REVIEW		COMPLETE
RACT	00106867-01-12	OPS REVIEW		ACC/PRI
RACT	00106867-01-13	OPS REVIEW		COMPLETE
RACT	00106867-01-14	OPS REVIEW		ACC/PRI
RACT	00106867-01-15	OPS REVIEW		ACC/PRI
RACT	00106867-01-16	OPS REVIEW		ACC/PRI
RACT	00106867-01-17	OPS REVIEW		ACC/PRI
RACT	00106867-01-18	OPS REVIEW		ACC/PRI
RACT	00106867-01-19	OPS REVIEW		ACC/PRI
RACT	00106867-01-20	OPS REVIEW		ACC/PRI
RACT	00106867-01-21	OPS REVIEW		COMPLETE
RACT	00106867-01-22	OPS REVIEW		ACC/PRI
RACT	00106867-01-23	OPS REVIEW		ACC/PRI
RACT	00106867-01-24	OPS REVIEW		ACC/PRI
RACT	00106867-01-25	OPS REVIEW		ACC/PRI
RACT	00106867-01-26	OPS REVIEW		ACC/PRI
RACT	00106867-01-27	OPS REVIEW		ACC/PRI
RACT	00106867-01-28	OPS REVIEW		COMPLETE
RACT	00106867-01-29	OPS REVIEW		ACC/PRI
RACT	00106867-01-30	OPS REVIEW		COMPLETE
RACT	00106867-01-31	OPS REVIEW		ACC/PRI
RACT	00106867-01-32	OPS REVIEW		ACC/PRI
RACT	00106867-01-33	OPS REVIEW		ACC/PRI
RACT	00106867-01-34	OPS REVIEW		ACC/PRI
RACT	00106867-01-35	OPS REVIEW		ACC/PRI
RACT	00106867-01-36	OPS REVIEW		COMPLETE
RACT	00106867-01-37	OPS REVIEW		ACC/PRI
RACT	00106867-01-38	OPS REVIEW		COMPLETE
RACT	00106867-01-39	OPS REVIEW		COMPLETE

RACT	00106867-01-40	OPS REVIEW		COMPLETE
RACT	00106867-01-41	OPS REVIEW		COMPLETE
RACT	00106867-01-42	OPS REVIEW		COMPLETE
RACT	00106867-01-43	OPS REVIEW		COMPLETE
RACT	00106867-01-44	OPS REVIEW		COMPLETE
RACT	00106867-01-45	OPS REVIEW		COMPLETE
RACT	00106867-01-46	OPS REVIEW		ACC/PRI
RACT	00106867-01-47	OPS REVIEW		ACC/PRI
RACT	00106867-01-48	OPS REVIEW		COMPLETE
RCA	00106867-02	TIBABAN	11/03/2016	NTFY/ASG
MRE	00106867-03	TIBABAN	09/27/2016	COMPLETE
ICES	00106867-04	TIBABAN	09/27/2016	COMPLETE
RER	00106867-05	RER REVIEW		COMPLETE

Attachments:

Type	CR/ASGN No.	Title
ACT	01	ICES 324454 RCS LEAK CR 106867 R1
MRE	03	EQUIPMENT ASSESSMENT CHECKLIST AIF 26A-100-19
REPORT	00106867-05	COMPLETION OF A TS REQUIRED SHUTDOWN
RER	05	EIT WHITE PAPER
RER	05	RER 2016-032

CR Detail

Asset/Equip: RBB01 **Work Request:** 16-117965

Description: During the performance of STN PE-040G "Transient Event Walkdown" QC identified an active leak (approximately ½ to 1 gallon per minute) coming from CETNA #77 near Canopy Seal Area

Immediate Concern: N **SM Notified:** N/A **Init DNC:** N

Immediate Actions:

Contacted OCC and provided video and pictures to Engineering and Operations for evaluation.

Extent of condition:

Recommended Resolution:

Screening Review

Operability:

3 OPER/DNC
What is the defect/degraded nonconforming condition?
Active leakage identified near canopy seal area of CETNA #77
What SSC is affected by the deficiency?
RBB01 REACTOR VESSEL
What is the design/safety function of the affected SSC?
The CET Housing is internally threaded and torqued down onto a seating surface at the interface between the housing and the top of the Reactor Head Adapter. This connection is a mechanical joint and leakage via this pathway is not Pressure Boundary LEAKAGE as defined by Technical Specifications. Core exit temperature is a Category 1 variable which provides for verification and long term surveillance of core cooling. An evaluation was made in support of Reference 2 of the minimum number of valid core exit thermocouples (CET) necessary for

measuring core cooling. The evaluation determined the reduced
complement of CETs necessary to detect initial core recovery and trend the ensuing core heatup. The evaluations account for core nonuniformities, including incore effects of the radial decay power distribution, excore effects of condensate runback in the hot legs, and non-uniform inlet temperatures. Based on these evaluations, adequate core cooling is ensured with two valid core exit temperature channels per quadrant with two CETs per required channel. The CET pairs are oriented radially to permit evaluation
of core radial decay power distribution. Core exit temperature is used to determine whether to terminate SI, if still in progress, or to reinitiate SI if it has been stopped. Core exit temperature is also used for unit stabilization and cooldown control. Two OPERABLE channels of core exit temperature are required in each quadrant to provide indication of radial distribution of the coolant temperature rise across representative regions of the core. Reference 6 discusses the conformance of the thermocouple/core
cooling monitoring system to NUREG-0737, Section II.F.2, approved by the NRC in Reference 7. Two sets of two thermocouples ensure a single failure will not disable the ability to determine the radial temperature gradient.
The WCGS reactor vessel head and CETNA assemblies are classified as ASME Boiler and Pressure Vessel Code Section III Class 1 items. The Reactor Vessel was designed and fabricated to the 1971 Edition through Winter 1972 Addenda and the CETNA housing assemblies were designed and fabricated to the 1974 through Winter 1974 Addenda of Section III of the ASME B&PV Code. Section III paragraph NB-3671.3 states that threaded joints in which threads provide the only seal shall not be used. The seal weld is not a structural part of the pressure boundary and is not required to meet the structural requirements of ASME B&PV Code, Section III, NB-3000. The threads are the load carrying part of the joint design.
The industry indications and past operating experience at WCGS of leaks in the subject seal welds are pinholes or small localized cracks. These flaws have resulted in leak rates that are bound by the limits established in Technical Specification 3.4.13.
What effect/or potential effect does the deficiency have on the affected SSC's ability to perform its intended design/safety function?
A degraded seal weld can cause a loss of RCS inventory.
The SSC is operable but degraded because:
Completed performances of STS BB-006 were reviewed from the last operating cycle and RCS leakage limits were not challenged except on 9/2/16. RCS unidentified leak rates have been elevated since 8/16/16. The latest RCS unidentified leakrates are .598 and .648 gpm.

The RCS unidentified leakrate on 9/2/16 at 0408 was 1.358 gpm and 9/2/16 at 1703 was 1.502 gpm. These leak rate tests were both performed in an abnormal CVCS lineup during troubleshooting activities with excess letdown in service and charging aligned to the seals only. The only additional piping in service in this alignment is associated with the excess letdown piping to the seal water return line. No leak rate tests performed with normal charging and letdown in service have exceeded any TS limits. The potential for leakage on the excess letdown flowpath is not pressure boundary leakage and is normally isolated by two closed solenoid operated valves. With this path isolated, no RCS leak rate limits have been exceeded. After reviewing system trends, performing inventory calculations and consulting with system engineering, I am confident that the indications observed with excess letdown in service are related to unstable plant conditions during the CVCS system transient conditions. There is no intersystem leakage or evidence of any external leakage. With excess letdown in service from 2342 on 9/2/16 to 0300 on 9/3/16, both system engineering and the control room staff performed manual leak rate calculations. The observed values trended down while CVCS parameters stabilized. The manual balance from 0200 to 0300 indicated a leak rate of .682gpm, which was confirmed by system engineering. The results of this measurement support that the previous STS BB-006 results were erroneously high due to non-stable conditions.
The initiator identified during the performance of a containment walk down evidence of leakage at the canopy seal weld on penetration 77. The leak is active and does not appear to be degrading any adjacent components. There is some minor boron buildup on the housing that is in the path of the leak plume. I did not observe any discoloration or signs of wastage. I have reviewed the pictures and video of the described leak and have determined this leak to be restricted to canopy seal weld.
Technical Specifications defines Pressure Boundary LEAKAGE as LEAKAGE through a non-isolable fault in an RCS component body, pipe wall or vessel wall. TS 3.4.13 contains the operating limits for RCS Operational LEAKAGE. In MODES 1 through 4, no pressure boundary is allowed, unidentified LEAKAGE is limited to 1 gallon per minute, identified LEAKAGE is limited to 10 gallons per minute, and primary to secondary LEAKAGE is limited to 150 gallons per day in any one Steam Generator.
The reactor vessel closure head contains 78 penetrations. Each head adaptor flange has an identical stainless steel flange welded on the top of the penetration. The stainless steel flange has male ACME threads (to mate with an attachment) and a canopy lip. The attachments determine the type of penetration. At WCGS, the attachments are as follows: 13 head adaptor plugs, 4 female flanges, 8 partial length CRDMs and 53 full length CRDMs. Each of the

attachments has female ACME threads and a canopy lip. The head adaptor is designed such that when the attachment is threaded onto the stainless steel flange (at original construction), the two canopy lips come together and are seal welded. This seal weld is required because the ASME Section III Code states that threaded joints in which threads provide the only seal shall not be used. Hence the canopy seal weld was provided to seal the ACME thread pressure boundary connection. It is important to note that the ACME threads of the threaded connection provide the structural design strength and pressure boundary of the joint. The canopy seal weld provides leakage control of the threaded connection, but does not provide any of the ASME Code strength of the connection.
The Reactor Vessel and the subject CETNA penetration are OPERABLE but degraded due to the flaw in the seal weld.
Extent of condition? Where does this condition exist?
Unique condition
References?
TS 1.1, 3.4.13 and Bases, TR 3.4.17 and Bases, NRC Inspection Manual Part 9900, DCP 05017, DCP 12962, M-709-00089, M-709-00079, M-709-00123, historical STS BB-006 results in Autolog, K:\Refuel_Current\Forced Outage\FO 21-02 RCS Unidentified Leakage\Photos\rcs leak pen 77, STS BB-006, STN PE-040G

Reportable:	N
Environmental Issue:	N
Tech Spec Sec 5:	N
Personnel Safety Issue:	N
Reactivity Issue:	N
Impact Risk Assessment:	N
OPS Review:	MARTINSON, ERIC W
CR/WR Screening:	LINK, STEPHEN L
Significance Cat:	99 - NOT APPLICABLE

Screen/SRT Notes:

	Updated By	Last Updated
Basis A.2.3	CADEARI	09/07/2016

General Notes:

	Updated By	Last Updated
CR 106862 has been closed to this CR. This CR which is the	TIBABAN	09/14/2016
same evaluation level will address the condition described	TIBABAN	09/14/2016
in that CR	TIBABAN	09/14/2016

Other Related Information

Assignment Status Summary:

Total Assigns/Subs:	5 - 48
Open Assigns/Subs:	2 - 26
Overdue Assigns/Subs:	0 - 0

Cross References:

Type	Number	Sub Number
ACTION REQUEST	00106858	
ACTION REQUEST	00106859	
ACTION REQUEST	00106862	
ACTION REQUEST	00106922	
ACTION REQUEST	00106990	
ACTION REQUEST	00106991	
ACTION REQUEST	00106992	
ACTION REQUEST	00107189	
ACTION REQUEST	00107190	
ACTION REQUEST	00107191	
ACTION REQUEST	00107686	
ACTION REQUEST	00107719	
ACTION REQUEST	00107720	
ACTION REQUEST	00107721	
ACTION REQUEST	00107722	
ACTION REQUEST	00107847	
MPAC WORK REQUEST	16-117965	

Status & Due Date History:

Responsible Person	Date Updated	Status	Due Date
HEFFRON, JASON M	09/03/2016	INPROG	
HEFFRON, JASON M	09/03/2016	H/APPR	
DEARINGER, CAROL A	09/07/2016	APPROVED	10/07/2016
LINK, STEPHEN L	09/03/2016	PRE-APRV	
BABAN, TIFFANY A	10/04/2016		11/03/2016

NON QA Record Information:

Rework Issue:	N
Radiological Occurrence:	N
Potential OE:	Y
Training Issue:	N
Site Clock Reset:	N
Division Clock Reset:	N
Discovery Code:	03 - OTHER WC PERSONNEL
Critical Equipment Failure:	N
Maintenance Rule:	Y
Outage Issue:	N
Margin Management Issue:	N
Culpable Org:	
Keywords:	

Trend Data:

Work Process	Trend 1	Trend 2	Trend 3	Trend 4
EQP	EQPT			

Evaluation/Checklist

RCA Assignment #: 00106867-02 **Due Date:** 11/03/2016 **Status:** NTFY/ASG **Status Date:** 09/07/2016

Subject: Active leakage identified near canopy seal area of CETNA #77 **Age In Days:** 50 **Total Age:** 0.00

Assigned To Name: BABAN, TIFFANY A

Assigned To Organization: 4020000-MANAGER SYSTEM ENGINEERING - BABAN

Description: A qualified evaluator will perform an RCA evaluation in accordance with AP 28A-100 and AI 28A-100. Use form AIF 28A-100-011, Cause Analysis (RCA). This RCA requires a presentation of the Problem Statement and Extent of Condition at SLRT, (form AIF 28A-100-20). If determined this assignment is not needed contact the CAP group to Cancel the ACE assignment.

Condition Statement:

Extent of Condition:

Operating Experience:

Evaluation and Conclusion:

Cause:

Extent of Cause:

Safety Significance:

Actions Taken:

Information Sources:

Review and Approvals

QA Review:

Rad Protection Review:

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extentions

# of Extentions:	1
Extention Notes:	Recommend extension to 11/3/16. It is necessary to extend due to the complete extent of condition inspections are not complete, cleaning if the head is not complete and additional information is not available to complete the evaluation. It is acceptable to extend the evaluation as the cause is known and the corrective actions are planned to occur this outage.
Supv. Ext. Approval:	
Supt. Ext. Approval:	
Manager Ext. Approval:	APPROVED TIBABAN - 10/04/2016
V.P. Ext. Approval:	
CEO Ext. Approval:	

Other Related Information

Assignment Notes:	Updated By	Last Updated

References:

EVAL Status & Due Date History:

TIFFANY A. BABAN	10/04/2016		11/03/2016
CAROL A. HEARINGER	09/07/2016	INPROG	10/07/2016

Evaluation/Checklist

MRE Assignment #: 00106867-03 Due Date: 09/27/2016 Status: COMPLETE Status Date: 09/27/2016

Subject: Active leakage identified near canopy seal area of CETNA #77 Age In Days: 20 Total Age: 20.00

Assigned To Name: BABAN, TIFFANY A

Assigned To Organization: 4020000-MANAGER SYSTEM ENGINEERING - BABAN

Description: Perform a Functional Failure evaluation. Refer to form AIF 28A-100-019, Equipment Assessment Checklist. Maintain contact with the OE Program Coordinator, as this evaluation may be included as part of an ICES report submitted to INPO within 30 days based on the results of the evaluation. If determined this assignment is not needed contact the CAP group to Cancel the assignment.

Condition Statement:

Extent of Condition:

Operating Experience:

Evaluation and Conclusion:

Cause:

Extent of Cause:

Safety Significance:

Actions Taken:

An active leak on the canopy seal weld of the Core Exit Thermocouple Nozzle Assembly (CETNA) penetration No. 77 was identified by Quality Control.

According to the functional failure guidance of BB-02, Provides a barrier against release of radioactivity generated within the reactor, "The pressure boundary is considered to always be available. A failure will have occurred when there is RCS pressure boundary leakage. Entry into T. S. 3.4.13 is not a functional failure unless it is determined to be pressure boundary leakage."

No pressure boundary leakage is allowed, being indicative of material deterioration. Leakage of this type is unacceptable as the leak itself could cause further degradation of the Reactor Coolant Pressure Boundary (RCPB).

The sole design function of the canopy seal weld is to provide RCS leakage control, not to prevent leakage. The canopy seal weld is not designed to be a structural part of the pressure boundary and does not meet the code requirements to be classified as a structural part of the design. Typical canopy seal welds are about 0.070" thick. The threaded connection, by design, between the adapter flange and the housing provides the structural integrity for the pressure boundary items of the connection under all service loading conditions.

Because structural integrity of the RCPB is maintained by the threaded connection, the leak on the canopy seal weld of CETNA penetration No. 77 is not considered pressure boundary leakage.

Since the canopy seal weld is not considered pressure boundary leakage, the leakage observed on CETNA Penetration No. 77 does not constitute a functional failure of BB-02.

Information Sources:

Review and Approvals

QA Review:

Rad Protection Review:

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval: APPROVED TIBABAN - 09/27/2016
Approved for closure.

V.P. Approval:

CEO Approval:

Extentions

# of Extentions: 0

Extention Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes: Updated By Last Updated

References:

EVAL Status & Due Date History:

TIFFANY A. BABAN	09/27/2016	COMPLETE	
TIFFANY A. BABAN	09/27/2016	ACC/ASG	
CAROL A. DEARINGER	09/07/2016	INPROG	10/07/2016

Evaluation/Checklist

ICES Assignment #: 00106867-04 Due Date: 09/27/2016 Status: COMPLETE Status Date: 09/25/2016

Subject: Active leakage identified near canopy seal area of CETNA #77 Age In Days: 18 Total Age: 18.00

Assigned To Name: BABAN, TIFFANY A

Assigned To Organization: 4020000-MANAGER SYSTEM ENGINEERING - BABAN

Description: Submit an initial ICES report template within 20 days from the event date to the ICES Coordinator. Reference AI 20E-002, INPO Consolidated Event System (ICES). Ensure this assignment is not closed out until the initial draft report template has been created, reviewed by the ICES Eng. Technician (equipment events only), approved by department supervision and provided to the ICES Coordinator in Performance Improvement. If determined this assignment is not needed contact the ICES Coordinator and CAP group to Cancel the assignment.

Condition Statement:

Extent of Condition:

Operating Experience:

Evaluation and Conclusion:

Cause:

Extent of Cause:

Safety Significance:

Actions Taken: ICES report #324454 has been submitted.
*
No further actions needed.

Information Sources:

Review and Approvals

QA Review:

Rad Protection Review:

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval: APPROVED TIBABAN - 09/25/2016
Approved for closure. ICES report attached.

V.P. Approval:

CEO Approval:

Extentions

# of Extentions: 0

Extention Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes: Updated By Last Updated

References:

EVAL Status & Due Date History:

TIFFANY A. BABAN	09/25/2016	COMPLETE	
TIFFANY A. BABAN	09/25/2016	ACC/ASG	
CAROL A. GEARINGER	09/07/2016	INPROG	09/27/2016

Plan and Actions

Plan Assignment #: Status: Status Date:

Plan Subject: Age In Days:

Assigned To Name:

Assigned To Organization:

Description:

Action Assignment #: Action Due Date: Status: Status Date:

Action Subject: Age In Days:

Assigned To Name:

Assigned To Organization:

Description:

Action Category:

LTCA:

Schedule Requirement:

RCMS #:

Commitment:

Commit To Agency:

Work Performed:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

# of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Plan and Action Information

Plan Assignment Notes:	Updated By	Last Updated

Action Assignment Notes:

00106867-01-02 Action auto-closed based on work completion for WO 16-417262-001.	INDUS	09/03/2016
00106867-01-03 Action auto-closed based on work completion for WO 16-417262-002.	INDUS	09/27/2016
00106867-01-05 Action auto-closed based on work completion for WO 16-417262-004.	INDUS	09/16/2016
00106867-01-06 Action auto-closed based on work completion for WO 16-417262-005.	INDUS	09/17/2016
00106867-01-07 Action auto-closed based on work completion for WO 16-417262-006.	INDUS	09/17/2016
00106867-01-08 Action auto-closed based on work completion for WO 16-417262-007.	INDUS	09/21/2016
00106867-01-09 Action auto-closed based on work completion for WO 16-417262-008.	INDUS	10/24/2016
00106867-01-11 Action auto-closed based on work completion for WO 16-417262-010.	INDUS	10/26/2016
00106867-01-13 Action auto-closed based on work completion for WO 16-417262-012.	INDUS	10/09/2016
00106867-01-21 Action auto-closed based on work completion for WO 16-417262-020.	INDUS	10/18/2016
00106867-01-28 Action auto-closed based on work completion for WO 16-417262-027.	INDUS	10/19/2016
00106867-01-30 Action auto-closed based on work completion for WO 16-417262-029.	INDUS	10/07/2016
00106867-01-36 Action auto-closed based on work completion for WO 16-417262-035.	INDUS	10/12/2016
00106867-01-38 Action auto-closed based on work completion for WO 16-417262-037.	INDUS	10/14/2016
00106867-01-39 Action auto-closed based on work completion for WO 16-417262-038.	INDUS	10/20/2016
00106867-01-40 Action auto-closed based on work completion for WO 16-417262-039.	INDUS	10/20/2016

00106867-01-41		
Action auto-closed based on work completion for WO 16-417262-040	INDUS	10/17/2016
00106867-01-42		
Action auto-closed based on work completion for WO 16-417262-041	INDUS	10/17/2016
00106867-01-43		
Action auto-closed based on work completion for WO 16-417262-042	INDUS	10/27/2016
00106867-01-44		
Action auto-closed based on work completion for WO 16-417262-043	INDUS	10/20/2016
00106867-01-45		
Action auto-closed based on work completion for WO 16-417262-044	INDUS	10/26/2016
00106867-01-48		
Action auto-closed based on work completion for WO 16-417262-047	INDUS	10/26/2016

Plan Completion Notes:

Action Completion Notes:

Plan Cross Reference:	**Type**	**Number**	**Sub Number**

Action Cross Reference:

Plan Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Action Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Effectiveness Follow-up

EFU Assignment #: | EFU Due Date: | Status: | Status Date:

EFU Subject: | Age In Days:

Assigned To Name:

Assigned To Organization:

Description:

EFU Effective:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

# of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes: | Updated By | Last Updated

Cross References:

EFU Status and Due Date History:

Reportability Evaluation Report

RER 00106867-05

Status: ACC/PRI **Status Date:** 09/08/2016 **Age:** 5 **Due Date:**

Subject: Completion of a TS required shutdown

Date/Time of Discovery: 9/2/2016 1158

Description:

SCREENING/NOTIFICATIONS (Completed by Shift Manager):

Potentially Reportable: Y **RER Number:** 2016-032

Per (list applicable reporting criteria met): 10 CFR 50.73(a)(2)(i)(A)

Person Contacted: CALL SUPT

Corporate Services Notified: N

ENS Reportability Determination per 10 CFR 50.72:

N/A

ENS Worksheet completed and attached: N/A

Continuous open channel required: N

Shift Manager Approval: APPROVED **Last Updated:** This information was copied from the RER assignment for CR 106852. The RER was approved by Jeff Isch. CR 106852 was closed to CR 106867, so the RER was transferred to CR 106867.

DISPOSITION (Completed by Licensing):

LER #: 2016-002 **Ltr. Number:** **Submittal Date:**

Event Evaluation:

Reportability Evaluation Performed by:

REVIEW and APPROVAL (Non-Reportable Events Only)

Supervisor Licensing Approval: **Last Updated:**

Manager Regulatory Affairs Approval: **Last Updated:**

ENS Retraction needed:

Report Criteria CR # 00106867 CR Visible: Y EVAL Visible: Y PLAN Visible: Y EFU Visible: Y Non QA Visible: Y RER Visible: Y

00106990 Condition Report

AR #: 00106990 **Severity Type:** CR **Level:** **Due Date:** **Status:** PRE-APRV **Status Date:** 09/08/2016

AR Subject: Request from CR 106867 CETNA 77 Leak Root Cause Team **Age In Days:** 0

Owed To Name:

Owed To Department:

Owed To Alert Group: WC SRT

Origination Date: 09/08/2016

Initiator: RIETMANN, RICKY L

Orig Department: 4020020 - Crow Bart

Condition Report Summary:

Type	AR#-Assign#-Sub-Assign#	Owed/Assign To	Due Date	Status
CR	00106990	WC SRT		PRE-APRV
RTFQ	00106990-01	OPS REVIEW		ACC/PRI

Attachments:

CR Detail

Asset/Equip: RBB01 **Work Request:**

Description: This CR was written to make visible the impact of an action requested by the Root Cause Team for CR 106867 on our reactor head CETNA 77 leak. The action requested is to be executed under SWO 18-417262-003 and is to have QC characterize the crack in the CETNA 77 seal weld by NDE examination such as LP Testing. Report results to the Root Cause Team.

Immediate Concern: N **SM Notified:** N/A **Init DNC:** N

Immediate Actions:

Made all CR reviewers aware of requested information

Extent of condition:

N/A

Recommended Resolution:

Make everyone aware of needed request and ask for their support.

Screening Review

Operability: 3 OPER/DNC
This condition has been previously evaluated by CR# 00106867 with no indication that the condition has changed. No new condition identified. The RCS is operable but degraded.
TS 3.4.13

Reportable: N

Environmental Issue: N

Tech Spec Sec 5: N

Personnel Safety Issue: N

Reactivity Issue: N

Impact Risk Assessment: N

OPS Review: MARTINSON, ERIC W

CR/WR Screening: LINK, STEPHEN L

WR is not applicable to the identified condition. The action requested is to be executed under SWO 16-417262-003 and is to have QC characterize the crack in the CETNA 77 seal weld by NDE examination such as LP Testing.

Significance Cat: 99 - NOT APPLICABLE

Screen/SRT Notes:

General Notes:

	Updated By	Last Updated
x-ref: 106867	ERMURPH	09/12/2016

Other Related Information

Assignment Status Summary:

Total Assigns/Subs:	1 . 0
Open Assigns/Subs:	1 . 0
Overdue Assigns/Subs:	0 . 0

Cross References:

Type	Number	Sub Number
ACTION REQUEST	00106867	

Status & Due Date History:

Responsible Person	Date Updated	Status	Due Date
RIETMANN, RICKY L	09/08/2016	INPROG	
RIETMANN, RICKY L	09/08/2016	H/APPR	
LINK, STEPHEN L	09/12/2016	PRE-APRV	

NON QA Record Information:

Rework Issue:	N
Radiological Occurrence:	N
Potential OE:	N
Training Issue:	N
Site Clock Reset:	N
Division Clock Reset:	N
Discovery Code:	03 - OTHER WC PERSONNEL
Critical Equipment Failure:	N
Maintenance Rule:	N
Outage Issue:	N
Margin Management Issue:	N
Culpable Org:	
Keywords:	
Trend Data:	

Evaluation/Checklist

Assignment #: Due Date: Status: Status Date:

Subject: Age In Days: Total Age:

Assigned To Name:

Assigned To Organization:

Description:

Condition Statement:

Extent of Condition:

Operating Experience:

Evaluation and Conclusion:

Cause:

Extent of Cause:

Safety Significance:

Actions Taken:

Information Sources:

Review and Approvals

QA Review:

Rad Protection Review:

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extentions

# of Extentions:

Extention Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes: Updated By Last Updated

References:

EVAL Status & Due Date History:

Plan and Actions

Plan Assignment #: Status: Status Date:

Plan Subject: Age In Days:

Assigned To Name:

Assigned To Organization:

Description:

Action Assignment #: Action Due Date: Status: Status Date:

Action Subject: Age In Days:

Assigned To Name:

Assigned To Organization:

Description:

Action Category:

LTCA:

Schedule Requirement:

RCMS #:

Commitment:

Commit To Agency:

Work Performed:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Plan and Action Information

Plan Assignment Notes: Updated By Last Updated

Action Assignment Notes:

Plan Completion Notes:

Action Completion Notes:

Plan Cross Reference: Type Number Sub Number

Action Cross Reference:

Plan Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Action Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Effectiveness Follow-up

EFU Assignment #: EFU Due Date: Status: Status Date:

EFU Subject: Age In Days:

Assigned To Name:

Assigned To Organization:

Description:

EFU Effective:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

# of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes: Updated By Last Updated

Cross References:

EFU Status and Due Date History:

Reportability Evaluation Report

RER

Status: Status Date: Age: Due Date:

Subject:

Date/Time of Discovery:

Description:

SCREENING/NOTIFICATIONS (Completed by Shift Manager):

Potentially Reportable: RER Number:

Per (list applicable reporting criteria met):

Person Contacted:

Corporate Services Notified:

ENS Reportability Determination per 10 CFR 50.72:

ENS Worksheet completed and attached:

Continuous open channel required:

Shift Manager Approval:

Last Updated:

DISPOSITION (Completed by Licensing):

LER #: Ltr. Number: Submittal Date:

Event Evaluation:

Reportability Evaluation Performed by:

REVIEW and APPROVAL (Non-Reportable Events Only)

Supervisor Licensing Approval: Last Updated:

Manager Regulatory Affairs Approval: Last Updated:

ENS Retraction needed:

00106991 Condition Report

AR #: 00106991 **Severity Type:** CR **Level:** **Due Date:** **Status:** PRE-APRV **Status Date:** 09/08/2016

AR Subject: Request from CR 106867 CETNA 77 Leak Root Cause Team **Age In Days:** 0

Owed To Name:

Owed To Department:

Owed To Alert Group: WC SRT

Origination Date: 09/08/2016

Initiator: RIETMANN, RICKY L

Orig Department: 4020020 - Crow Bart

Condition Report Summary:

Type	AR#-Assign#-Sub-Assign#	Owed/Assign To	Due Date	Status
CR	00106991	WC SRT		PRE-APRV
RTFQ	00106991-01	OPS REVIEW		ACC/PRI

Attachments:

CR Detail

Asset/Equip: RBB01 **Work Request:**

Description: This CR was written to make visible the impact of an action requested by the Root Cause Team for CR 106867 on our reactor head CETNA 77 leak. The action requested is to be executed under SWO 16-417262-004 and is to have the HAM crew and QC perform STS PE-040E "RPV Head Visual Inspection" with the use of the STARSs Crawler. A camera on a stick was going to be used for STS PE-040E this outage but the STARS Crawler has been requested and provides for a much better examination of the head.

Immediate Concern: N **SM Notified:** N/A **Init DNC:** N

Immediate Actions:

Made all CR reviewers aware of requested information

Extent of condition:

N/A

Recommended Resolution:

Make everyone aware of needed request and ask for their support.

Screening Review

Operability: 3 OPER/DNC
This condition has been previously evaluated by CR# 00106867 with no indication that the condition has changed. No new condition identified. The RCS is operable but degraded
TS 3.4.13

Reportable: N

Environmental Issue: N

Tech Spec Sec 5: N

Personnel Safety Issue: N

Reactivity Issue: N

Impact Risk Assessment: N

OPS Review: MARTINSON, ERIC W

CR/WR Screening: LINK, STEPHEN L

WR is not applicable to the identified condition. The action requested is to be executed under SWO 16-417262-004 and is to have the HAM crew and QC perform STS PE-040E "RPV Head Visual Inspection" with the use of the STARSs Crawler.

Significance Cat: 99 - NOT APPLICABLE

Screen/SRT Notes:

General Notes:

	Updated By	Last Updated
x-ref: 106867	ERMURPH	09/12/2016

Other Related Information

Assignment Status Summary:

Total Assigns/Subs:	1 - 0
Open Assigns/Subs:	1 - 0
Overdue Assigns/Subs:	0 - 0

Cross References:

Type	Number	Sub Number
ACTION REQUEST	00106867	

Status & Due Date History:

Responsible Person	Date Updated	Status	Due Date
RIETMANN, RICKY L	09/08/2016	INPROG	
RIETMANN, RICKY L	09/08/2016	H/APPR	
LINK, STEPHEN L	09/12/2016	PRE-APRV	

NON QA Record Information:

Rework Issue:	N
Radiological Occurrence:	N
Potential OE:	N
Training Issue:	N
Site Clock Reset:	N
Division Clock Reset:	N
Discovery Code:	03 - OTHER WC PERSONNEL
Critical Equipment Failure:	N
Maintenance Rule:	N
Outage Issue:	N
Margin Management Issue:	N
Culpable Org:	
Keywords:	
Trend Data:	

Evaluation/Checklist

Assignment #: Due Date: Status: Status Date:

Subject: Age In Days: Total Age:

Assigned To Name:

Assigned To Organization:

Description:

Condition Statement:

Extent of Condition:

Operating Experience:

Evaluation and Conclusion:

Cause:

Extent of Cause:

Safety Significance:

Actions Taken:

Information Sources:

Review and Approvals

QA Review:

Rad Protection Review:

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extentions

# of Extentions:

Extention Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes: Updated By Last Updated

References:

EVAL Status & Due Date History:

Plan and Actions

Plan Assignment #: Status: Status Date:

Plan Subject: Age In Days:

Assigned To Name:

Assigned To Organization:

Description:

Action Assignment #: Action Due Date: Status: Status Date:

Action Subject: Age In Days:

Assigned To Name:

Assigned To Organization:

Description:

Action Category:

LTCA:

Schedule Requirement:

RCMS #:

Commitment:

Commit To Agency:

Work Performed:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

# of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Plan and Action Information

Plan Assignment Notes: Updated By Last Updated

Action Assignment Notes:

Plan Completion Notes:

Action Completion Notes:

Plan Cross Reference: Type Number Sub Number

Action Cross Reference:

Plan Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Action Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Effectiveness Follow-up

EFU Assignment #: EFU Due Date: Status: Status Date:

EFU Subject: Age In Days:

Assigned To Name:

Assigned To Organization:

Description:

EFU Effective:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

# of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes: Updated By Last Updated

Cross References:

EFU Status and Due Date History:

Reportability Evaluation Report

RER

Status: Status Date: Age: Due Date:

Subject:

Date/Time of Discovery:

Description:

SCREENING/NOTIFICATIONS (Completed by Shift Manager):

Potentially Reportable: RER Number:

Per (list applicable reporting criteria met):

Person Contacted:

Corporate Services Notified:

ENS Reportability Determination per 10 CFR 50.72:

ENS Worksheet completed and attached:

Continuous open channel required:

Shift Manager Approval:

Last Updated:

DISPOSITION (Completed by Licensing):

LER #: Ltr. Number: Submittal Date:

Event Evaluation:

Reportability Evaluation Performed by:

REVIEW and APPROVAL (Non-Reportable Events Only)

Supervisor Licensing Approval: Last Updated:

Manager Regulatory Affairs Approval: Last Updated:

ENS Retraction needed:

00106992 Condition Report

AR #: 00106992 **Severity Type:** CR **Level:** **Due Date:** **Status:** PRE-APRV **Status Date:** 09/08/2016

AR Subject: Request from CR 106857 CETNA 77 Leak Root Cause Team **Age In Days:** 0

Owed To Name:

Owed To Department:

Owed To Alert Group: WC SRT

Origination Date: 09/08/2016

Initiator: RIETMANN, RICKY L

Orig Department: 4020020 - Crow Bart

Condition Report Summary:

Type	AR#-Assign#-Sub-Assign#	Owed/Assign To	Due Date	Status
CR	00106992	WC SRT		PRE-APRV
RTFQ	00106992-01	OPS REVIEW		ACC/PRI

Attachments:

CR Detail

Asset/Equip: RB801 **Work Request:**

Description: This CR was written to make visible the impact of an action requested by the Root Cause Team for CR 106857 on our reactor head CETNA 77 leak. The action requested is to be executed under SWO 16-417282-005 and is to have Operations, Maintenance or Engineering quantify the liquid leakage coming out of the crack in the seal weld on CETNA 77. Quantify leakage rate, RCS temperature and pressure and report results to the Root Cause Team.

Immediate Concern: N **SM Notified:** N/A **Init DNC:** N

Immediate Actions:

Made all CR reviewers aware of requested information
leak. The action requested is to be executed under SWO 16-417282-005 and is to have Operations, Maintenance or Engineering quantify the liquid leakage coming out of the crack in the seal weld on CETNA 77. Quantify leakage rate, RCS temperature and pressure and report results to the Root Cause Team.

Extent of condition:

N/A

Recommended Resolution:

Make everyone aware of needed request and ask for their support.

Screening Review

Operability: 3 OPER/DNC
This condition has been previously evaluated by CR# 00106867 with no indication that the condition has changed. No new condition identified. The RCS is operable but degraded.
TS 3.4.13

Reportable: N

Environmental Issue: N

Tech Spec Sec 5: N

Personnel Safety Issue:	N
Reactivity Issue:	N
Impact Risk Assessment:	N
OPS Review:	MARTINSON, ERIC W
CR/WR Screening:	LINK, STEPHEN L WR is not applicable to the identified condition. The action requested is to be executed under SWO 18-417262-005 and is to have Operations, Maintenance or Engineering quantify the liquid leakage coming out of the crack in the seal weld on CETNA 77.
Significance Cat:	99 - NOT APPLICABLE
Screen/SRT Notes:	

General Notes:

	Updated By	Last Updated
x-ref: 106867	ERMURPH	09/12/2016

Other Related Information

Assignment Status Summary:

Total Assigns/Subs:	1 - 0
Open Assigns/Subs:	1 - 0
Overdue Assigns/Subs:	0 - 0

Cross References:

Type	Number	Sub Number
ACTION REQUEST	00106867	

Status & Due Date History:

Responsible Person	Date Updated	Status	Due Date
RIETMANN, RICKY L	09/08/2016	INPROG	
RIETMANN, RICKY L	09/08/2016	H/APPR	
LINK, STEPHEN L	09/12/2016	PRE-APRV	

NON QA Record Information:

Rework Issue:	N
Radiological Occurrence:	N
Potential OE:	N
Training Issue:	N
Site Clock Reset:	N
Division Clock Reset:	N
Discovery Code:	03 - OTHER WC PERSONNEL
Critical Equipment Failure:	N
Maintenance Rule:	N
Outage Issue:	N
Margin Management Issue:	N
Culpable Org:	

Keywords:

Trend Data:

Evaluation/Checklist

Assignment #: Due Date: Status: Status Date:

Subject: Age In Days: Total Age:

Assigned To Name:

Assigned To Organization:

Description:

Condition Statement:

Extent of Condition:

Operating Experience:

Evaluation and Conclusion:

Cause:

Extent of Cause:

Safety Significance:

Actions Taken:

Information Sources:

Review and Approvals

QA Review:

Rad Protection Review:

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extentions

# of Extentions:

Extention Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes: Updated By Last Updated

References:

EVAL Status & Due Date History:

Plan and Actions

Plan Assignment #: Status: Status Date:

Plan Subject: Age In Days:

Assigned To Name:

Assigned To Organization:

Description:

Action Assignment #: Action Due Date: Status: Status Date:

Action Subject: Age In Days:

Assigned To Name:

Assigned To Organization:

Description:

Action Category:

LTCA:

Schedule Requirement:

RCMS #:

Commitment:

Commit To Agency:

Work Performed:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

# of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Plan and Action Information

Plan Assignment Notes: Updated By Last Updated

Action Assignment Notes:

Plan Completion Notes:

Action Completion Notes:

Plan Cross Reference: Type Number Sub Number

Action Cross Reference:

Plan Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Action Status and Due Date History:

Responsible Person	Date Updated	Status	Due Date

Effectiveness Follow-up

EFU Assignment #: | EFU Due Date: | Status: | Status Date:

EFU Subject: | Age In Days:

Assigned To Name:

Assigned To Organization:

Description:

EFU Effective:

Review and Approvals

Independent Review:

CARB Review:

CAP Liaison:

Supv. Approval:

Supt. Approval:

Manager Approval:

V.P. Approval:

CEO Approval:

Extensions

# of Extensions:

Extension Notes:

Supv. Ext. Approval:

Supt. Ext. Approval:

Manager Ext. Approval:

V.P. Ext. Approval:

CEO Ext. Approval:

Other Related Information

Assignment Notes: | Updated By | Last Updated

Cross References:

EFU Status and Due Date History:

Reportability Evaluation Report

RER

Status: Status Date: Age: Due Date:

Subject:

Date/Time of Discovery:

Description:

SCREENING/NOTIFICATIONS (Completed by Shift Manager):

Potentially Reportable: RER Number:

Per (list applicable reporting criteria met):

Person Contacted:

Corporate Services Notified:

ENS Reportability Determination per 10 CFR 50.72:

ENS Worksheet completed and attached:

Continuous open channel required:

Shift Manager Approval:

Last Updated:

DISPOSITION (Completed by Licensing):

LER #: Ltr. Number: Submittal Date:

Event Evaluation:

Reportability Evaluation Performed by:

REVIEW and APPROVAL (Non-Reportable Events Only)

Supervisor Licensing Approval: Last Updated:

Manager Regulatory Affairs Approval: Last Updated:

ENS Retraction needed:

Refer document in its entirety to the licensee.

RF21 OCC Shift Update

Date: 10-19-2016	Update Time: 0500	Shift Outage Manager (SOM): On-coming: Lanny Ratzlaff
Day: 33	Off-going Shift: Night	Off-going: James Edwards

PROTECTED TRAIN B

PLANT STATUS:	PROTECTED EQUIPMENT:	
○ Mode: Defueled ○ RCS Temperature: 84 deg F ○ RCS Pressure: <1 psig ○ SFP Time to 200 F: 17.2 hrs ○ RCS Time to Boil: N/A ○ RCS Time to 200 F: N/A	NB02, NG02/4, NN02/4, NK02/4 "B" EDG Essential Service Water – "B" Component Cooling Water – "B" Control Room A/C Unit (SGK04B) Class 1E A/C unit (SGK05B) Spent Fuel Pool Cooling "B"	West Switchyard Bus (345-40, 345-70, 345-110, 345-163) Startup XFMR XMR01 & MA104D & E relays XFMR XNB02 & PA0201 relays PA0201 breaker and stub bus SL3, SL31, 'B' & 'C' Service Water Pumps Benton Line Rose Hill Line

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK:	Yellow	
○ Reactivity Management:	Green	
○ Core Decay Heat Removal:	N/A	
○ SFP Decay Heat Removal:	Yellow	Only one train of SFP cooling available
○ RCS Inventory:	N/A	
○ Electrical Power Sources:	Yellow	AC sources (XNB01, #7 Xfmr, East Buss OOS)
○ Containment Closure:	N/A	
○ Rad Monitoring & Ventilation:	Green	

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours
o First Aids: 0
o OSHA Injuries (Recordable, Restricted, LT): 0
o OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: *TBD (pending review of NCP)*

RADIOLOGICAL PROTECTION:

Date	Dose Goal	Actual
10/18/2016	0.832 REM	1.642 REM
10/17/2016	1.900 REM	1.642 REM
Total to Date	58.055 REM	62.389 REM
Dose from Head in Total to Date		8.240 REM

Contamination Events: PCEs: 0

RAPID TRENDING:

JUST THE FACTS

Effective communication improves our efficiency. Is the information clear and accurate? Our documentation will tell the story; ensure it can be understood.

RF21 OCC Shift Update

OUTAGE WORK STATUS:	
Major Activities Completed Last Shift:	
○ Commenced bottom mounted nozzle peening, first nozzle complete by end of shift ○ Water Jet Peening 'C' cold leg nozzle complete, tool out to replace nozzle ○ SGK05A soldering work completed by end of shift	○ 'A' Diesel Generator governor inspection and disassembly completed ○ Canopy seal clamp 23 installed ○ ESW 30" welds, and 8" weldolets complete and QC inspected
Critical Path Due in Next 12 hours	**Due in the Next 72 Hours**
○ Continue water jet peening on the reactor vessel nozzles ○ Continue bottom nozzle peening	○ Water jet peening of the reactor vessel nozzles ○ Water jet peening of the reactor vessel bottom nozzles
Important Path/ Major Work Due in Next 12 hours	**Due in the Next 72 Hours**
○ 'A' Essential Service Water crosstie work (FLEX). Weld out for last two welds to occur today. ○ Install canopy seal clamp on penetration 12 and 26 ○ 'A' Emergency Diesel PM, including rebuild of governor ○ SGK05A Class 1E switchgear room A/C unit replacement	○ Plant secondary work is 50% complete (on schedule) ○ SGK05A Class 1E switchgear room A/C unit replacement ○ 'A' Train work ○ Remove penetration 16 CRDM
Important Decisions Due	• While removing the RV water jet peening tool for an expected nozzle change out, it was determined that the eddy current probe is not on the tool.

SHIFT OUTAGE MANAGER COMMENTS

- Crane work in containment using the polar crane and knuckle-boom crane has been suspended due to two crane incidents last night.
- Our housekeeping behaviors have deteriorated over the past week. Let's step up our game in leaving areas as clean or cleaner than when we arrived.
- Please keep up with processing closure documentation on completed work. We have found many activities that have been completed, but not yet to vaulted status. We need to keep up with the paper work now so that we do not have holds waiting to get it done in order to change modes.
- There are a lot of people using the clear "Whirl Pack" bags for the wifi phones, and we are experiencing shortages of the bags for PEDs. Please use the green plastic bags when needing to bring wifi phones into containment.
- When you are done using fall protection harnesses, please hang them up in an appropriate area as opposed to laying them on the floor.

RF21 OCC Shift Update

Date: 10-20-2016	**Update Time**: 0500	**Shift Outage Manager (SOM)**: **On-coming**: Lanny Ratzlaff
Day: 34	**Off-going Shift**: Night	**Off-going**: Daniel Bowers

PROTECTED TRAIN B

PLANT STATUS:	PROTECTED EQUIPMENT:	
○ Mode: Defueled ○ RCS Temperature: 84 deg F ○ RCS Pressure: <1 psig ○ SFP Time to 200 F: 17.3 hrs ○ RCS Time to Boil: N/A ○ RCS Time to 200 F: N/A	NB02, NG02/4, NN02/4, NK02/4 "B" EDG Essential Service Water – "B" Component Cooling Water – "B" Control Room A/C Unit (SGK04B) Class 1E A/C unit (SGK05B) Spent Fuel Pool Cooling "B"	West Switchyard Bus (345-40, 345-70, 345-110, 345-163) Startup XFMR XMR01 & MA104D & E relays XFMR XNB02 & PA0201 relays PA0201 breaker and stub bus SL3, SL31, 'B' & 'C' Service Water Pumps Benton Line Rose Hill Line

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK:	Yellow	
○ Reactivity Management:	Green	
○ Core Decay Heat Removal:	N/A	
○ SFP Decay Heat Removal:	Yellow	Only one train of SFP cooling available
○ RCS Inventory:	N/A	
○ Electrical Power Sources:	Yellow	AC sources (XNB01, #7 Xfmr, East Buss OOS)
○ Containment Closure:	N/A	
○ Rad Monitoring & Ventilation:	Green	

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours
o First Aids: 0
o OSHA Injuries (Recordable, Restricted, LT): 0
o OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: *TBD (pending review of NCP)*

RADIOLOGICAL PROTECTION:

Date	Dose Goal	Actual
10/20/2016	1.232 REM	
10/19/2016	0.832 REM	0.977 REM
Total to Date	58.055 REM	63.386 REM
Dose from Head in Total to Date		9.321 REM

Contamination Events: PCEs: 0

RAPID TRENDING:

Stop, THINK, Act, Review

Self-Check (STAR) is used to prevent execution errors. This tool helps us think about the intended action and understand the expected outcome before acting. In the last 24hrs we have had issues with the following:

- Crane activities
- Material handling
- Chemical control
- Work order placekeeping
- Communication

Think before you Act!!

RF21 OCC Shift Update

OUTAGE WORK STATUS:	
Major Activities Completed Last Shift:	
○ Completed peening 3 bottom mounted nozzles – 54 remain to be peened ○ Installed canopy seal clamp on penetration 12 and 26 ○ CRDM at penetration #16 has been removed	○ Completed peening "C" hot leg nozzle ○ ESW crosstie work has been completed ○ EFV0039 work has been completed
Critical Path Due in Next 12 hours	**Due in the Next 72 Hours**
○ Continue water jet peening on the reactor vessel nozzles ○ Continue bottom nozzle peening	○ Water jet peening of the reactor vessel nozzles ○ Water jet peening of the reactor vessel bottom nozzles
Important Path/ Major Work Due in Next 12 hours	**Due in the Next 72 Hours**
○ 'A' Emergency Diesel PM, including rebuild of governor ○ SGK05A Class 1E switchgear room A/C unit replacement ○ Fill "A" ESW train ○ Return knuckle boom to service	○ Plant secondary work is 50% complete (on schedule) ○ SGK05A Class 1E switchgear room A/C unit replacement ○ 'A' Train work
Important Decisions Due	None

SHIFT OUTAGE MANAGER COMMENTS

- Our housekeeping behaviors have deteriorated over the past week. Let's step up our game in leaving areas as clean or cleaner than when we arrived.
- Please keep up with processing closure documentation on completed work. We have found many activities that have been completed, but not yet to vaulted status. We need to keep up with the paper work now so that we do not have holds waiting to get it done in order to change modes.
- When you are done using fall protection harnesses, please hang them up in an appropriate area as opposed to laying them on the floor.

RF21 OCC Shift Update

Date: 10-16-2016	Update Time: 0500	Shift Outage Manager (SOM):
		On-coming: Lanny Ratzlaff
Day: 30	Off-going Shift: Night	Off-going: James Edwards

PROTECTED TRAIN B

PLANT STATUS:	PROTECTED EQUIPMENT:	
○ Mode: Defueled ○ RCS Temperature: 99 deg F ○ RCS Pressure: <1 psig ○ SFP Time to 200 F: 16.5 hrs ○ RCS Time to Boil: N/A ○ RCS Time to 200 F: N/A	NB02, NG02/4, NN02/4, NK02/4 "B" EDG Essential Service Water – "B" Component Cooling Water – "B" Control Room A/C Unit (SGK04B) Class 1E A/C unit (SGK05B) Spent Fuel Pool Cooling "B"	West Switchyard Bus (345-40, 345-70, 345-110, 345-163) Startup XFMR XMR01 & MA104D & E relays XFMR XNB02 & PA0201 relays PA0201 breaker and stub bus SL3, SL31, 'B' & 'C' Service Water Pumps

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK:	Yellow	
○ Reactivity Management:	Green	
○ Core Decay Heat Removal:	N/A	
○ SFP Decay Heat Removal:	Yellow	Only one train of SFP cooling available
○ RCS Inventory:	N/A	
○ Electrical Power Sources:	Yellow	AC sources (XNB01, #7 Xfmr, East Buss OOS)
○ Containment Closure:	N/A	
○ Rad Monitoring & Ventilation:	Green	

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours

o First Aids: 0
o OSHA Injuries (Recordable, Restricted, LT): 0
o OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: *627*

RADIOLOGICAL PROTECTION:

Date	Dose Goal	Actual
10/16/2016	2.7 REM	
10/15/2016	1.945 REM	1.775 REM
Total to Date	50.546 REM	55.587 REM
Dose from Head in Total to Date		6.914 REM

Contamination Events: PCEs: 0

RAPID TRENDING:

WHAT'S THE WORST THAT CAN HAPPEN?

Do you understand the risk and consequences of the following?

- Fuel valve mispositioned resulting in critical path delay
- Not following the correct process for entering into a High Radiation Area, could have resulted in unintended exposure
- Unsearched material at Warehouse, which could have resulted in contraband being brought on site

Discuss which Human Performance Tools should have been used to minimize risk.

RF21 OCC Shift Update

OUTAGE WORK STATUS:

Major Activities Completed Last Shift:

- Nozzles 2, 30, 42, 30 and 34 non-destructive exams (NDE) on the reactor bottom mounted nozzles complete on nights with 27 remaining
- CCP B bearing belzona work package is ready to work
- All Eddy current testing is complete for SG A
- All DRPI coils for EIT have been removed
- 'A' ESW X-tie demolition complete

Critical Path Due in Next 12 hours	Due in the Next 72 Hours
○ Perform NDE of reactor vessel bottom nozzles ○ Begin water jet peening on the reactor vessel nozzles ○ Perform under Rx Head UT testing	○ Perform NDE of reactor vessel bottom nozzles ○ Water jet peening of the reactor vessel nozzles ○ Water jet peening of the reactor vessel bottom nozzles
Important Path/ Major Work Due in Next 12 hours	**Due in the Next 72 Hours**
○ 'A' ESW crosstie work – repairs for installation ○ SGK05A Class 1E switchgear room A/C unit replacement ○ In-situ pressure test of 'C' steam generator tube ○ Cleaning the last 2 DRPI coil sets and 2 CRDMs	○ Plant secondary work is 45% complete (on schedule) ○ Switchyard outage #3 (East bus, #7 transformer) ○ SGK05A Class 1E switchgear room A/C unit replacement ○ 'A' Train work

Important Decisions Due	• We need schedule dates for Excess Letdown Hx replacement and NCP rebuild

SHIFT OUTAGE MANAGER COMMENTS

STAND DOWN BRIEF - Refocusing on Lifting and Rigging Safety

Recent lifting and rigging observations indicate a need for us to refocus and raise awareness for the potential of injury to workers and damage to plant equipment. This Stand-Down message will remind us of where we need to take action to protect our co-workers and plant equipment.

Areas where emphasis is needed are:

- Utilizing flagging or personnel to restrict access to areas where lifting and rigging activities are being performed.
- Remaining clear of the areas below a suspended load (Safe Fall Zone - which is defined as the area including, but not limited to, the area directly beneath the load, in which it is reasonably foreseeable that a partially or completely suspended material could fall in the event of an accident). Walking or working under a suspended load is one of the five "Rules To Live By" discussed in the Wolf Creek Way.
- Being observant to keep ourselves out of the line of fire when grabbing tag lines or placing hands under suspended loads. This behavior is also identified as walking or working under a suspended load.
- Controlling suspended loads: There have been instances of lifting and rigging activities where the suspended load or rigging material has made contact with other equipment. Please ensure tag lines are adequately utilized to prevent this and control the load.

AI 14-011, *Lifting and Rigging*, *The Wolf Creek Safety Manual* and *The Wolf Creek Way* all provide guidelines to properly perform lifting and rigging activities and control suspended loads. These guidelines are in place for the safety of everyone involved and help us make sure we complete the tasks safely and go home when the shift is over.

If you have questions or concerns about any lifting and rigging task, STOP and get the help you need.

RF21 OCC Shift Update

Date: 10-17-2016	Update Time: 0500	Shift Outage Manager (SOM):
		On-coming: Lanny Ratzlaff
Day: 31	Off-going Shift: Night	Off-going: James Edwards

PROTECTED TRAIN B

PLANT STATUS:	PROTECTED EQUIPMENT:	
○ Mode: Defueled ○ RCS Temperature: 99 deg F ○ RCS Pressure: <1 psig ○ SFP Time to 200 F: 16.9 hrs ○ RCS Time to Boil: N/A ○ RCS Time to 200 F: N/A	NB02, NG02/4, NN02/4, NK02/4 "B" EDG Essential Service Water – "B" Component Cooling Water – "B" Control Room A/C Unit (SGK04B) Class 1E A/C unit (SGK05B) Spent Fuel Pool Cooling "B"	West Switchyard Bus (345-40, 345-70, 345-110, 345-163) Startup XFMR XMR01 & MA104D & E relays XFMR XNB02 & PA0201 relays PA0201 breaker and stub bus SL3, SL31, 'B' & 'C' Service Water Pumps

HIGH RISK ACTIVITIES: None

KEY SAFETY FUNCTIONS HIGHEST RISK:	Yellow	
○ Reactivity Management:	Green	
○ Core Decay Heat Removal:	N/A	
○ SFP Decay Heat Removal:	Yellow	Only one train of SFP cooling available
○ RCS Inventory:	N/A	
○ Electrical Power Sources:	Yellow	AC sources (XNB01, #7 Xfmr, East Buss OOS)
○ Containment Closure:	N/A	
○ Rad Monitoring & Ventilation:	Green	

SAFETY/HUMAN PERFORMANCE:

Last 24 Hours

○ First Aids: 0
○ OSHA Injuries (Recordable, Restricted, LT): 0
○ OSHA Illnesses (Recordable, Restricted, LT): 0

Days since last Site Clock Reset: *628*

RADIOLOGICAL PROTECTION:

Date	Dose Goal	Actual
10/17/2016	2.909 REM	
10/16/2016	2.700 REM	2.715 REM
Total to Date	53.246 REM	58.302 REM
Dose from Head in Total to Date		7.031 REM

Contamination Events: PCEs: 0

RAPID TRENDING:

501 DAYS SINCE LAST CLEARANCE ORDER RESET

This accomplishment is something to be proud of and we ***Thank You*** for your commitment in keeping each other safe. This is the result of excellent Teamwork.

Keep up the great work!

RF21 OCC Shift Update

OUTAGE WORK STATUS:	
Major Activities Completed Last Shift:	
○ 5 Reactor bottom mounted nozzle non-destructive exams (NDE) completed on nights with 16 remaining ○ Completed 'D' cold leg reactor vessel nozzle water jet peening ○ Connected to 'D' hot leg nozzle, eddy current complete	○ Placed canopy seal clamp on Rx Head penetration #77 ○ New Excess Letdown Hx placed on PZR doghouse ○ SG B & D eddy current are 100% completed
Critical Path Due in Next 12 hours	**Due in the Next 72 Hours**
○ Perform NDE of reactor vessel bottom nozzles ○ Continue water jet peening on the reactor vessel nozzles	○ Perform NDE of reactor vessel bottom nozzles ○ Water jet peening of the reactor vessel nozzles ○ Water jet peening of the reactor vessel bottom nozzles
Important Path/ Major Work Due in Next 12 hours	**Due in the Next 72 Hours**
○ Perform under reactor head UT testing (days only) ○ 'A' ESW crosstie work – repairs for installation ○ SGK05A Class 1E switchgear room A/C unit replacement ○ Cleaning the last 2 DRPI coil sets and 2 CRDMs	○ Plant secondary work is 47% complete (on schedule) ○ Switchyard outage #3 (East bus, #7 transformer) ○ SGK05A Class 1E switchgear room A/C unit replacement ○ 'A' Train work
Important Decisions Due	•

SHIFT OUTAGE MANAGER COMMENTS
○ Containment demobilization has commenced with the removal of SG sludge lance equipment, efforts to move equipment around the hatch will be ramping up over the next week or so. Remember our discussion of lifting and rigging practices while working around these areas. ○ Status or work being performed has been lagging the work in a couple of instances. Continue to update your progress and action to ensure successor activities can execute as scheduled.

From:	Anchondo, Isaac
To:	Werner, Greg
Cc:	Drake, James
Subject:	WC Head Adapter Canopy Leakage Summary Report
Date:	Wednesday, September 21, 2016 3:06:00 PM

Greg,

So the report does provide a value of 3.5 GPM (0.486 lbm/sec) as the maximum leakage from one canopy. The report states:

> "The excessive pressure boundary leakage issue has been address bases on the potential maximum pressure boundary leakage from all or large number of canopy seals compared to the maximum makeup capability. A maximum leakage flow form one canopy seal of 0.486 lbm/sec has been calculated for plant operating conditions of 2200 psia and 560 degrees F based on a Moody two-phase leak model. The makeup system capacity and the number of leaking canopy seals must be evaluated by WCNOC.
>
> Wolf Creek, of course, has 78 head adapters with appurtenances equipped with canopy seals installed on each one. Assuming all 78 lower canopy seals fail grossly during one cycle is very unrealistic. The maximum number of leaks reported by any one operating plant during its history to date is only six. Furthermore, no reported failures has resulted in leakage which approached the maximum calculated leakage flow rate. All of the failures have been relatively small holes and cracks."

Contrary to the above, Appendix B of the report titled, "Generic Aspects of Canopy Seal Leaks Evaluations," Westinghouse recommends that a quantitative evaluation should be performed in the future.

> "In addition to the information recorded to date, the determination of a leak rate per canopy seal leak along with a quantitative evaluation of any associated corrosion/wastage experienced could aid in the determination of a more comprehensive leakage criteria."

Therefore, the value provided does not address the structural integrity of the threaded connection but rather states the allowed leakage for makeup capability purposes. So the question, in my opinion, is still valid and the licensee should further address the structural integrity of the threads.

P.S. The report is located in Certrec and I have requested the licensee to give you access to it.

Isaac Anchondo

Reactor Inspector
U.S. Nuclear Regulatory Commission | Region IV
Division of Reactor Safety | Engineering Branch 2
(817) 200-1152


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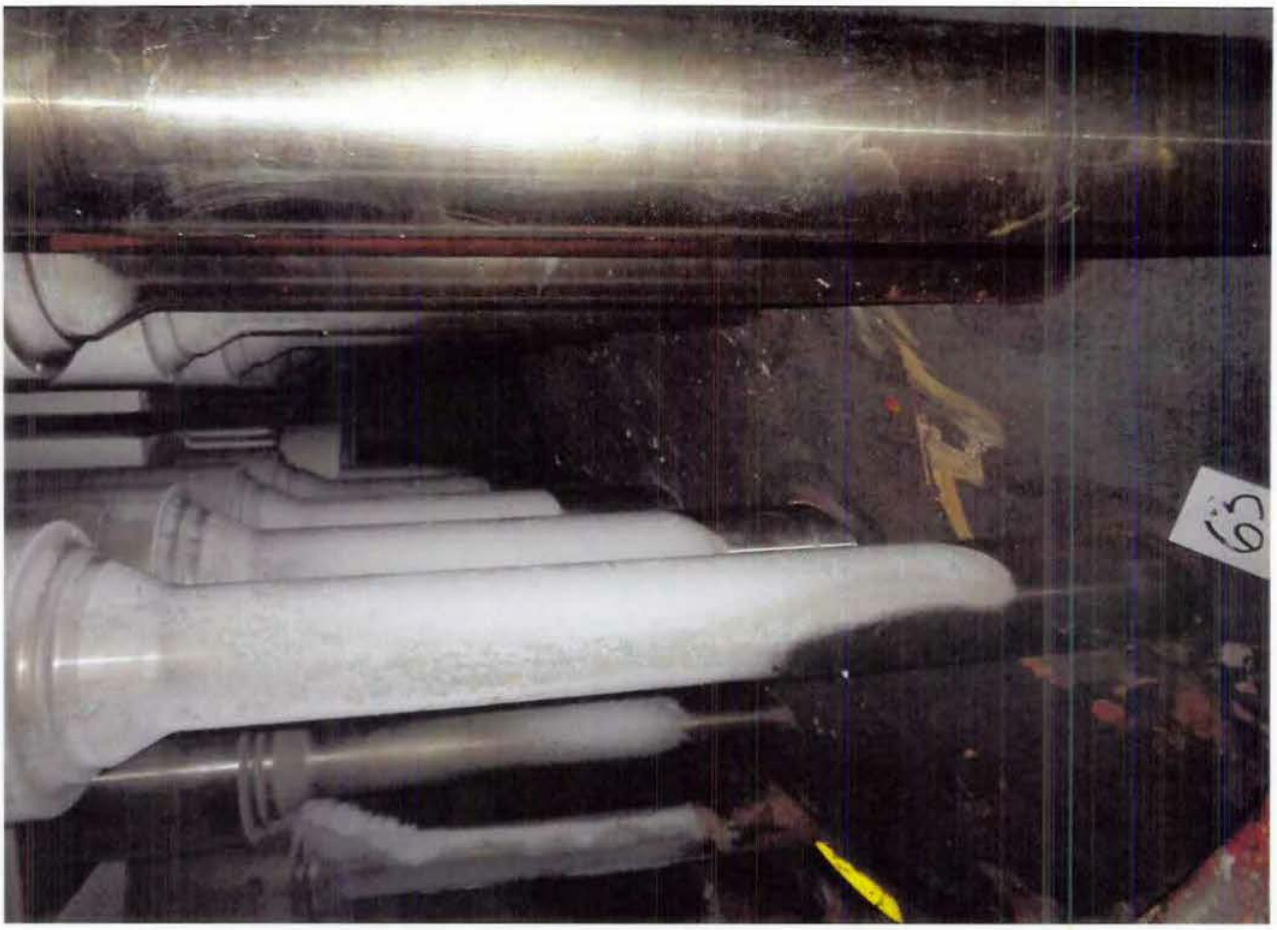
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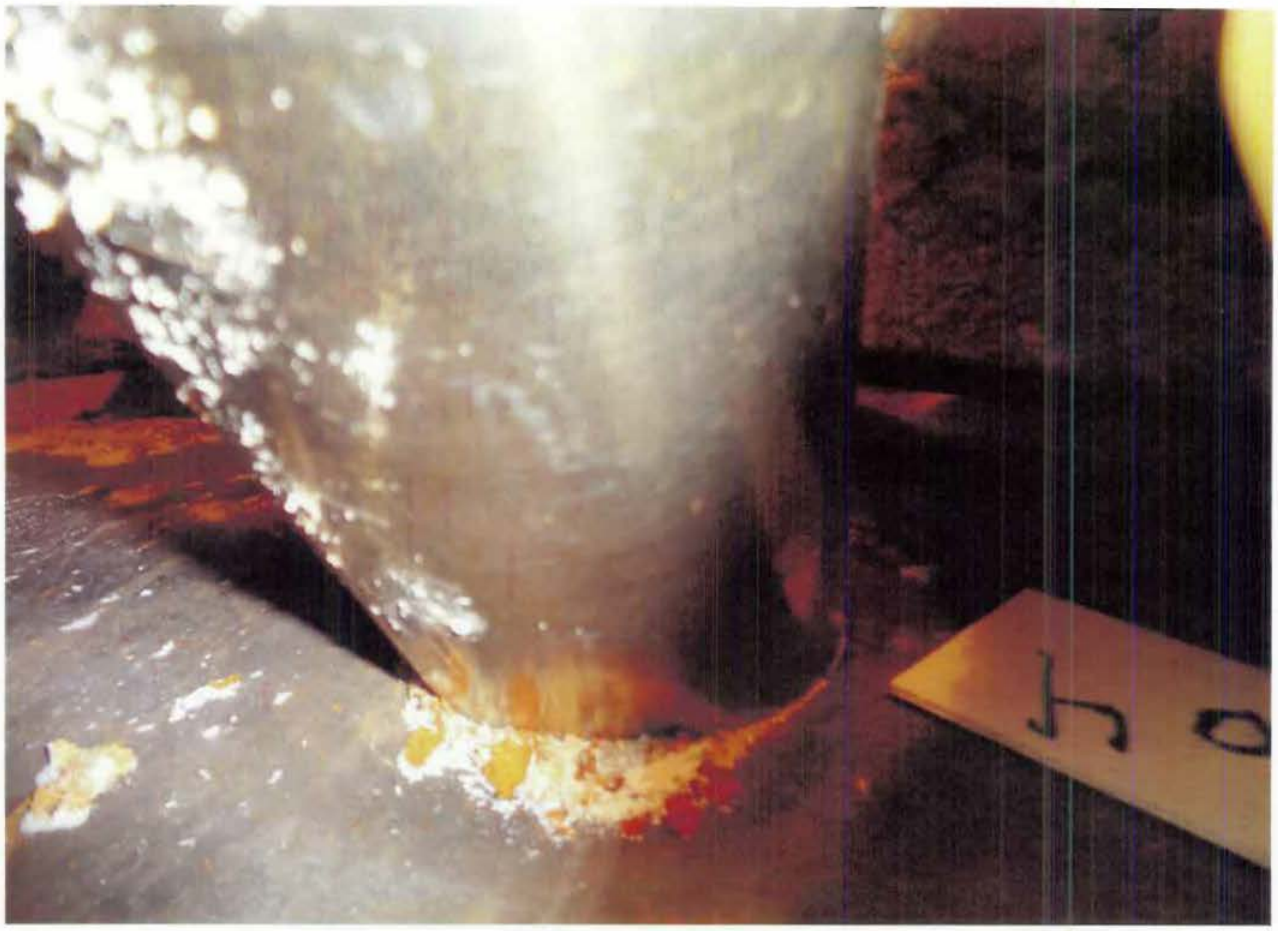
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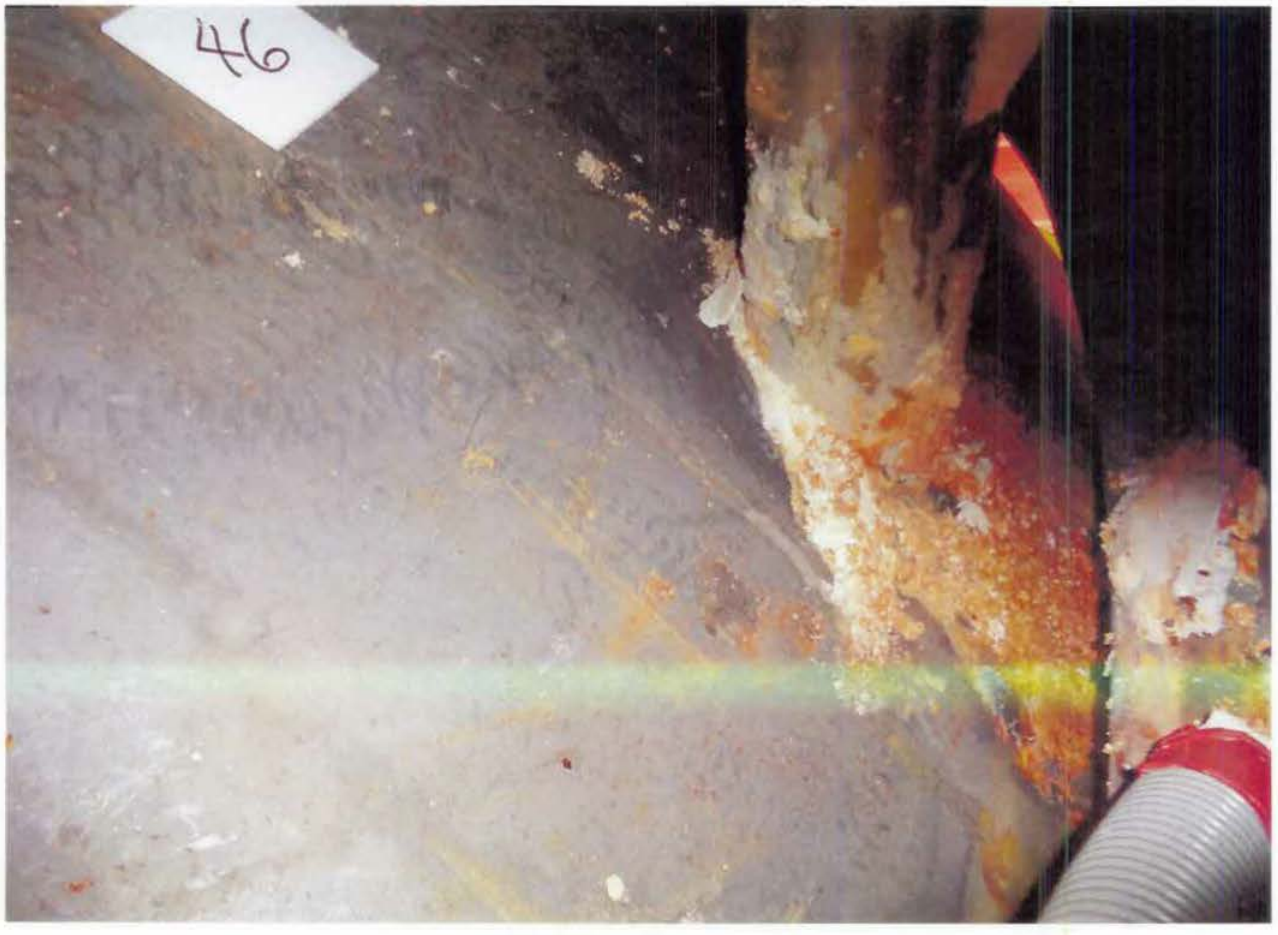
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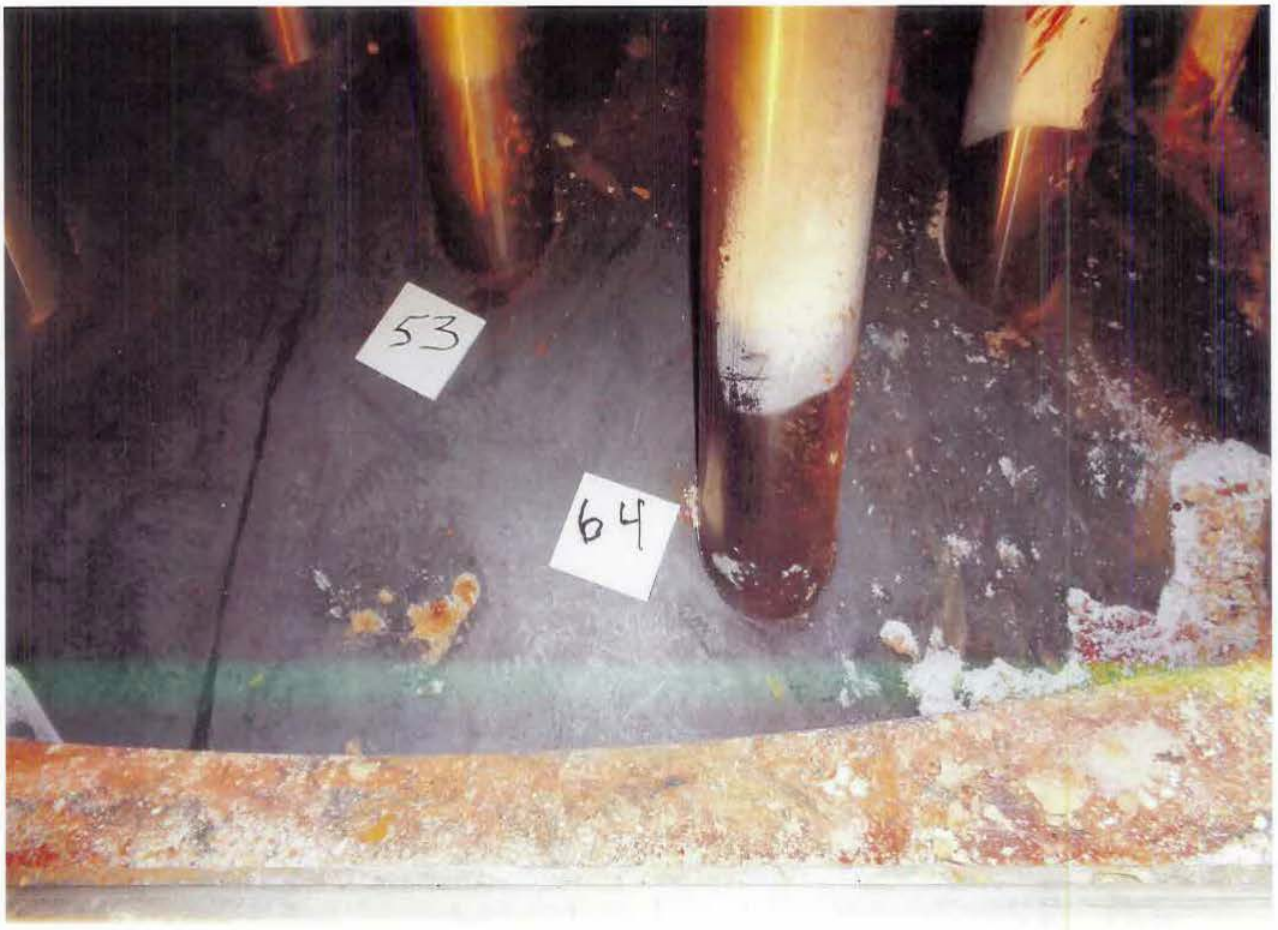
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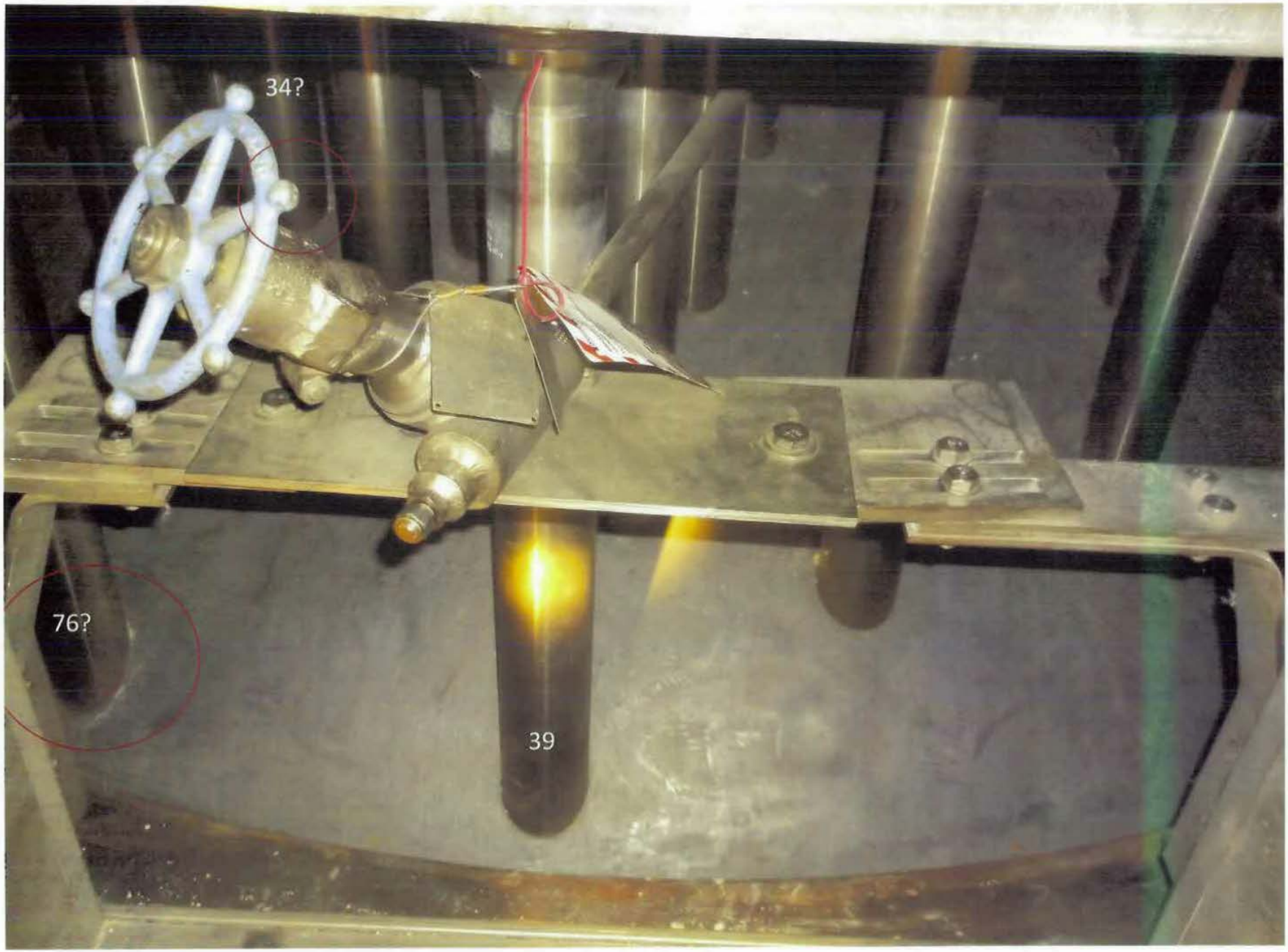
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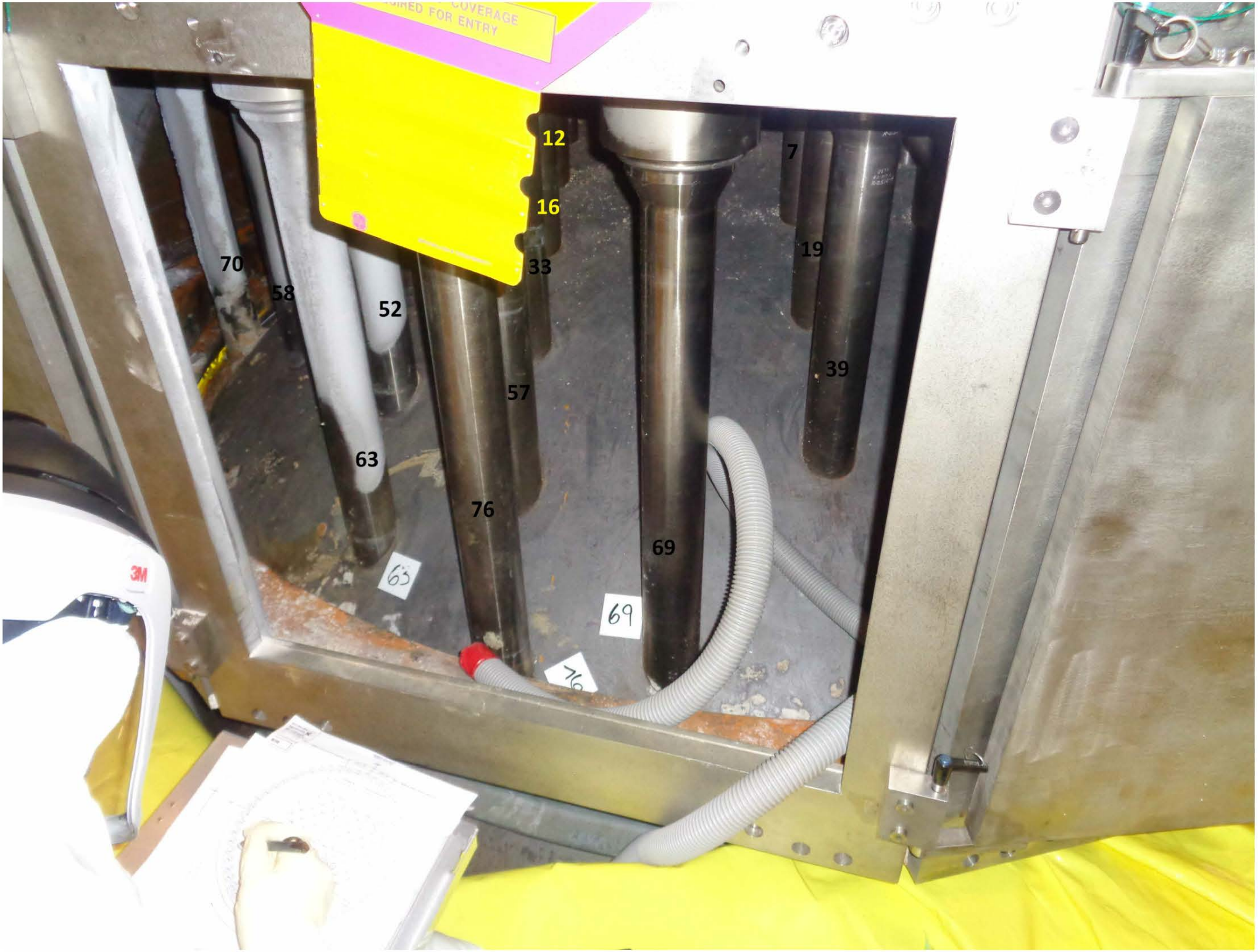
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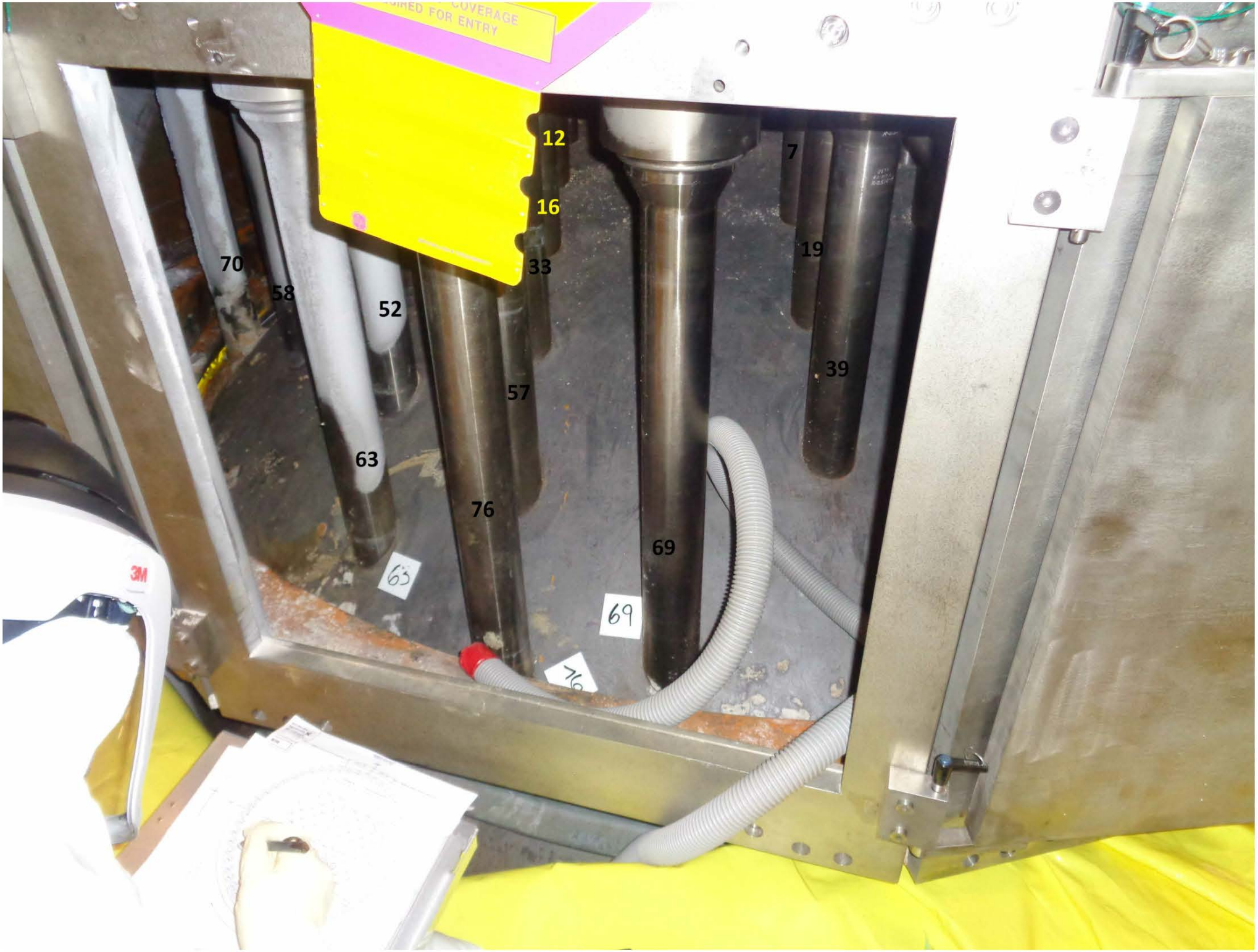
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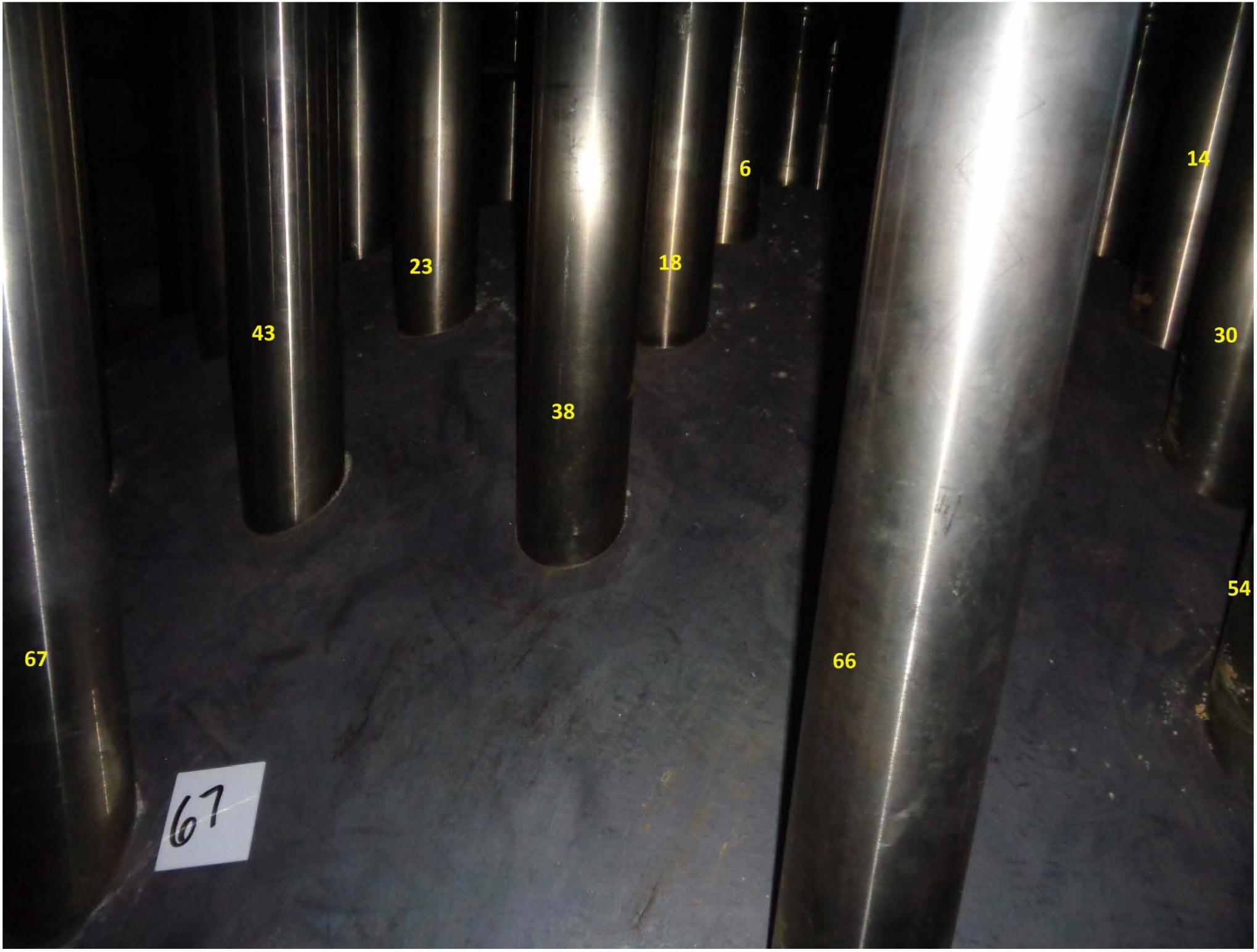
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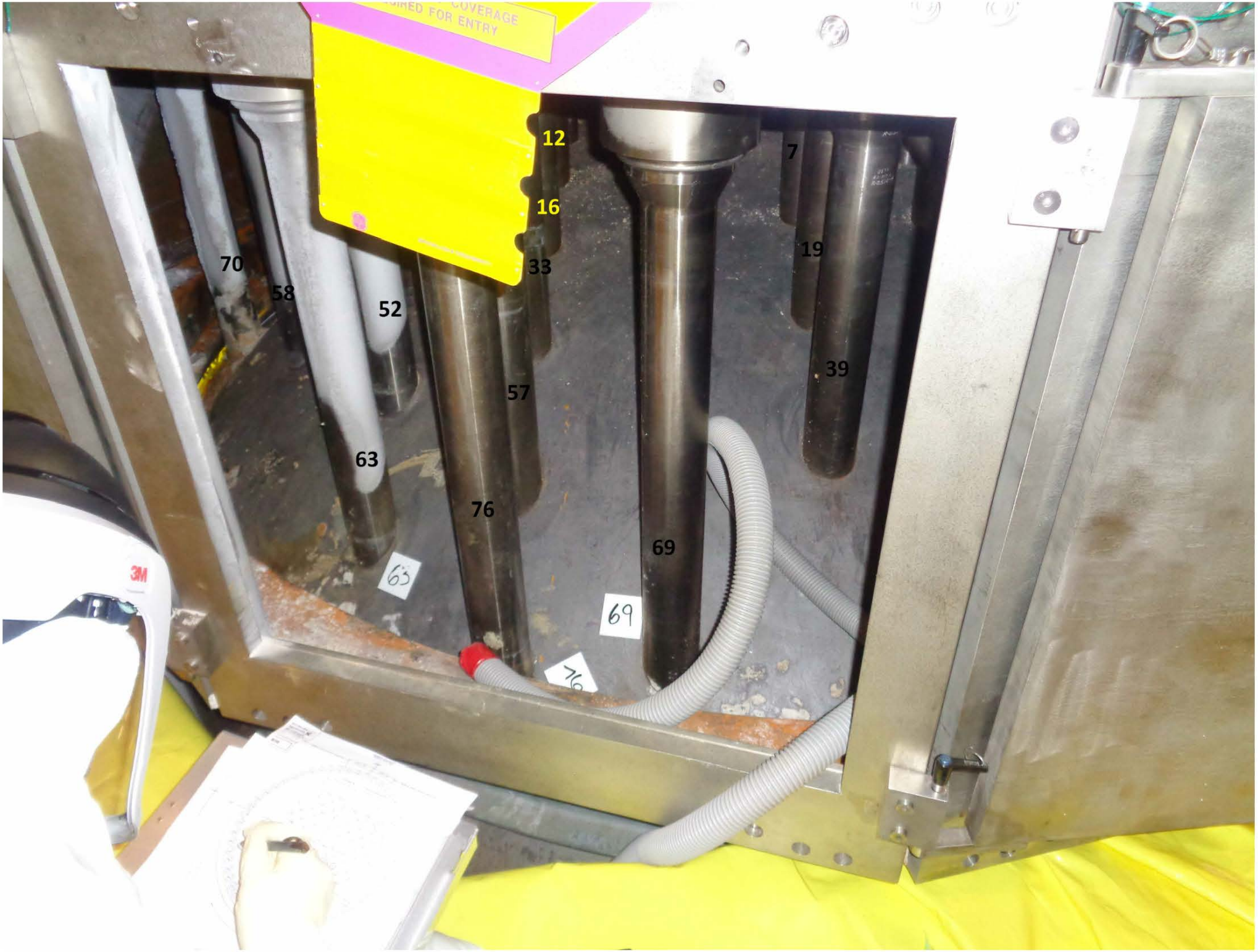
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