



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION IV
1600 E. LAMAR BLVD.
ARLINGTON, TX 76011-4511

July 24, 2015

Mr. Dennis L. Koehl
President and CEO/CNO
STP Nuclear Operating Company
P.O. Box 289
Wadsworth, TX 77483

**SUBJECT: SOUTH TEXAS PROJECT UNITS 1 AND 2 – NRC EVALUATIONS OF
CHANGES, TESTS, AND EXPERIMENTS AND PERMANENT PLANT
MODIFICATIONS BASELINE INSPECTION REPORT 05000498/2015007 and
05000499/2015007**

Dear Mr. Koehl:

On June 18, 2015, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at the South Texas Project, Units 1 and 2. On June 18, 2015, the NRC inspectors discussed the initial results of this inspection with Mr. Gerald Timothy Powell, Site Vice President, and other members of your staff. On July 7, 2015, the final results of this inspection were discussed with Mr. Jim Connolly, General Manager, Engineering, and other members of your staff. Inspectors documented the results of this inspection in the enclosed inspection report.

The NRC inspectors did not identify any findings or violations during this inspection.

In accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Thomas R. Farnholtz, Chief
Engineering Branch 1
Division of Reactor Safety

Dockets: 50-498; 50-499
Licenses: NPF-76; NPF-80

Enclosure: Inspection Report 05000498/2015007
and 05000499/2015007

w/Attachment: Supplemental Information

U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket(s): 50-498; 50-499

License(s): NPF-76; NPF-80

Report(s): 05000498/2015007; 05000499/2015007

Licensee: STP Nuclear Operating Company

Facility: South Texas Project, Units 1 and 2

Location: Wadsworth, TX

Dates: June 1, 2015 to July 7, 2015

Inspectors: G. George, Senior Reactor Inspector, Engineering Branch 1, Region IV, DRS
W. Sifre, Senior Reactor Inspector, Engineering Branch 1, Region IV, DRS
J. Braisted, Reactor Inspector, Engineering Branch 1, Region IV, DRS
I. Khan, Reactor Inspector, Engineering Branch 3, Region III, DRS

Approved By: T. Farnholtz, Chief, Engineering Branch 1
Division of Reactor Safety, Region IV

SUMMARY

IR 05000498/2015007; 05000499/2015007; 06/01/2015 – 06/19/2015; South Texas Project Units 1 and 2; Evaluations of Changes, Tests, and Experiments and Permanent Plant Modifications.

This report covers a two-week announced baseline inspection on evaluations of changes, tests, and experiments and permanent plant modifications. The inspection was conducted by Region IV based engineering inspectors. No findings of more-than-minor significance were identified. The significance of most findings is indicated by their color (i.e., greater than Green, or Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Cross-cutting aspects were determined using IMC 0310, "Aspects Within the Cross-Cutting Areas." Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy, dated February 4, 2015. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 5, dated February 2014.

A. NRC-Identified Findings and Self-Revealed Findings

No findings were identified.

B. Licensee-Identified Violations

No findings were identified.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, and Emergency Preparedness

1R17 Evaluations of Changes, Tests, and Experiments and Permanent Plant Modifications (71111.17T)

.1 Evaluations of Changes, Tests, and Experiments

a. Inspection Scope

The inspectors reviewed 7 evaluations performed pursuant to Title 10, Code of Federal Regulations (CFR), Part 50, Section 59, to determine whether the evaluations were adequate and that prior NRC approval was obtained as appropriate. The inspectors also reviewed 25 screenings, where licensee personnel had determined that a 10 CFR 50.59 evaluation was not necessary. The inspectors reviewed these documents to determine if:

- the changes, tests, and experiments performed were evaluated in accordance with 10 CFR 50.59 and that sufficient documentation existed to confirm that a license amendment was not required;
- the safety issue requiring the change, tests and experiment was resolved;
- the licensee conclusions for evaluations of changes, tests, and experiments were correct and consistent with 10 CFR 50.59; and
- the design and licensing basis documentation was updated to reflect the change.

The inspectors used, in part, Nuclear Energy Institute (NEI) 96-07, "Guidelines for 10 CFR 50.59 Implementation," Revision 1, to determine acceptability of the completed evaluations and screenings. The NEI document was endorsed by the NRC in Regulatory Guide 1.187, "Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments," dated November 2000. The list of evaluations, screenings and/or applicability determinations reviewed by the inspectors is included as an Attachment to this report.

This inspection constituted 7 samples of evaluations and 25 samples of screenings and/or applicability determinations as defined in IP 71111.17-04.

b. Findings

No findings were identified.

.2 Permanent Plant Modifications

a. Inspection Scope

The inspectors reviewed 11 permanent plant modifications that had been installed in the plant during the last three years. The modifications were selected based upon risk significance, safety significance, and complexity. The inspectors reviewed the modifications selected to determine if:

- the supporting design and licensing basis documentation was updated;
- the changes were in accordance with the specified design requirements;
- the procedures and training plans affected by the modification have been adequately updated;
- the test documentation as required by the applicable test programs has been updated; and
- post-modification testing adequately verified system operability and/or functionality.

The inspectors also used applicable industry standards to evaluate acceptability of the modifications. The list of modifications and other documents reviewed by the inspectors is included as an Attachment to this report.

This inspection constituted 11 permanent plant modification samples as defined in IP 71111.17 04.

.2.1 Replacement of Unit 1 and 2 Reactor Water Storage Tank Level Transmitters

The inspectors reviewed design change package 11-194-27, implemented to replace the refueling water storage tank level transmitter B2SILT0932. The refueling water storage tank level transmitter's design function is to provide post-accident monitoring of tank level, setpoint alarms for the control room, and an interlock for emergency core cooling recirculation mode. The previous Barton level transmitter was subject to abnormal drift. This design change package involved replacing the previous level transmitter with an environmentally and seismically qualified Rosemount transmitter. Finally, the change included an evaluation of the instrument uncertainty of the Rosemount transmitter's effect on the level setpoints of the system. The inspectors did not identify any concerns with the design change package.

.2.2 Unit 2, Train A, Safety Injection Test Header Air Operated Valve Replacement

The inspectors reviewed design change package 03-14479, implemented to replace the train A safety injection header air operated valve. The existing valve was prone to leaking resulting in significant maintenance and operational burden. The valve was

required to be leak tight to maintain the train A safety injection accumulators operable. The licensee determined that repair of the valve was not a viable option because the valve was no longer manufactured. The engineering change involved replacing the air operated valve with a simpler, more reliable, manually operated valve. The change included an evaluation for the effects of the change in actuator on the accident analyses as well as normal operations. The licensee determined that there was no effect on the accident analyses and that the new more leak-tight valve resulted in a reduction in operator burden. The inspectors did not identify any concerns with the design change package.

.2.3 Replace Unit 1 and 2 Train B Emergency Safety Feature Transformers with New Load Tap Changing Transformers and Voltage Regulating Controllers

The inspectors reviewed design change package 04-11502, implemented to replace the Unit 1 and 2 Train B emergency safety feature transformers with load tap changing transformers with voltage regulating controllers. The load tap changers were introduced to ensure that the safety bus voltages would be maintained within their required band regardless of variations in switchyard voltages. This modification was implemented to address potential tripping of the primary source by the degraded voltage relays. The inspectors reviewed the analyses associated with the modification. The licensee determined that failure modes associated with the load tap changer were bounded by the failure modes associated with the original transformers with analog controllers. The evaluation also verified that no new operator actions were required. The inspectors did not identify any concerns with the design change package.

.2.4 Steam Generator Power Operated Relief Valves (PORVs) Fail Closed Modification

The inspectors reviewed design change package 08-9595, implemented to ensure that the steam generator PORVs close on a loss of power as described in the final safety analysis report (as updated). Upon review, in response to Regulatory Issue Summary 2005-29, "Anticipated Transients That Could Develop into More Serious Events," the licensee determined that the steam generator PORVs would continue to operate following a loss of Class 1E power event until the operator hydraulic pressure decreased to 1500 psi. At this pressure, the PORV would fail "as-is". In order to address this issue, the licensee modified the PORV control circuit to ensure that the PORV would close on a loss of Class 1E power. This modification required the reconfiguration of a control solenoid such that the PORV would automatically close on a loss of power as described in the final safety analysis report (as updated). The inspectors reviewed the analyses and post-modification verification and testing associated with this change. The inspectors did not identify any concerns associated with the design change package.

.2.5 Replacement of Residual Heat Removal Pump 2B Motor

The inspectors reviewed design change package 11-8615, implemented to replace the residual heat removal pump 2B motor. The licensee identified a reduction in insulation resistance in the installed residual heat removal pump 2B motor and elected to replace the motor in refueling outage 2RE15. The replacement motor was made by a different

vendor and had slightly different full load current, locked rotor current, and locked rotor torque. The replacement motor also had different physical characteristics, smaller and lighter. The licensee determined that the replacement motor specification were bounded by the existing analyses. The inspectors reviewed the motor replacement analysis. The inspectors did not identify any concerns associated with the design change package.

.2.6 Update of Calculations Affecting Auxiliary Feedwater Storage Tank Volume

The inspectors reviewed design change package 10-23767-5, implemented to update design basis information based on changes made to multiple calculations affecting the auxiliary feedwater storage tank volume. The licensee identified that a calculation had incorrectly incorporated volume requirements for the steam generators and had failed to include a portion of the volume required from the decay heat load. The auxiliary feedwater storage tank supplies water to the auxiliary feedwater pumps and must contain a minimum volume of water equivalent to maintain the plant in hot standby for at least four hours and cooldown the primary system to the residual heat removal cut-in temperature with or without onsite power and an assumed single-failure. The inspectors reviewed the affected calculations, which included the long term cooling analysis, auxiliary feedwater storage tank volume and setpoints, and the auxiliary feedwater storage tank level instrument loop uncertainty calculation. The affected calculations did not result in changes to the related technical specification and emergency operating procedure setpoints. Additionally, the inspectors interviewed the engineers responsible for the change. The inspectors did not identify any concerns with the design change package.

.2.7 Replacement of Auxiliary Feedwater Turbine Trip and Throttle Valve Body-to-Bonnet Gasket

The inspectors reviewed design change package 13-13224-31, implemented to replace the auxiliary feedwater turbine trip and throttle valve body-to-bonnet gasket. The licensee identified that the original gasket was not rated for the temperatures experienced during turbine operation. The design change package DCP provided the technical justification, critical design attributes, design inputs, and margin impacts for use of the new gasket, which the inspectors reviewed. Additionally, the inspectors reviewed vendor documentation and the implementing work order and interviewed the engineers responsible for the change. The inspectors did not identify any concerns with the design change package.

.2.8 Update of Calculations Affecting Spent Fuel Pool Level Indication Instrumentation

The inspectors reviewed a supplement to design change package 12-12320-10, implemented to install reliable spent fuel pool level indication that can be used in responding to beyond design basis external events. Supplement 1 to design change package 12-12320-10, specifically involved the revision of calculations to add conduit attachment loads as a result of rerouting the conduits, the revision of another calculation to update the methodology used to calculate the effect of the horn cover for the sloshing loads on the horn support, and the installation of a resistor to convert the analog input

from the spent fuel pool level indication instrumentation to a voltage signal for the plant computer. The inspectors reviewed the affected calculations and installation work orders. Additionally, the inspectors walked-down the spent fuel pool level indication system and interviewed the engineers responsible for the change. The inspectors did not identify any concerns with this supplement to the design change package.

.2.9 Adjustment of High Range Radiation Monitor Loss-of-Counts Time Delay

The inspectors reviewed a supplement to design change package 04-8245-33, implemented to replace the original high range radiation monitor cables with cables less susceptible to the effects of thermally induced current. Supplement 2 to design change package 04-8245-33, involved the adjustment of the high range radiation monitor's loss-of-counts time delay, which was necessary due to how the new cables affected the response of the high range radiation monitors during certain plant conditions. Specifically, the change eliminated a false indication of a common-mode failure of the high range radiation monitors during a high energy line break. Additionally, the inspectors reviewed the change's 10 CFR 50.59 evaluation, emergency operating procedures and basis documents, reactor containment building thermally induced current analysis, operator training on thermally induced current effects, and interviewed the engineers responsible for the change. The inspectors did not identify any concerns with this supplement to the design change package.

.2.10 Replace Safety Related Inverters EIV001 and 002

The inspectors reviewed design change package 05-10905-4, implemented to replace 25 kVA safety-related inverters/rectifiers. The inverters/rectifiers provide 120 Vac power for vital instrumentation and control loads. The existing inverters were obsolete and replaced with replacement Class 1E qualified inverters. This design change involved replacement of the existing inverter/rectifier with a Class 1E replacement and installation of a static transfer switch. The inspectors did not identify any concerns with the design change package.

.2.11 Eliminate Relay and Contact Race Issue for D1AFMOV0143

The inspectors reviewed design change package 14-6074-1, implemented to eliminate a timing issue associated with the operation of the auxiliary feedwater steam admission valve and auxiliary feedwater steam admission bypass valve. The contacts used for control of the two valves were located on different limit switch rotors, which resulted in a timing issue caused by the rotors and contacts operating at slightly different times. This design change moved the contacts used for control of the two valves to the same rotor to eliminate the timing issue. The inspectors did not identify any concerns with the design change package.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA2 Problem Identification and Resolution

.1 Review of Corrective Action Program Documents

a. Inspection Scope

The inspectors reviewed corrective action program documents that identified or were related to 10 CFR 50.59 program and permanent plant modifications. The inspectors reviewed these documents to evaluate the effectiveness of corrective actions related to permanent plant modifications and evaluations of changes, tests, and experiments. In addition, corrective action documents written on issues identified during the inspection were reviewed to verify adequate problem identification and incorporation of the problems into the corrective action system. The list of specific corrective action documents that were sampled and reviewed by the inspectors are listed in the Attachment to this report.

b. Findings

No findings were identified.

4OA6 Meetings

.1 Exit Meeting Summary

On June 18, 2015, the inspectors presented the initial inspection results to Mr. Gerald Timothy Powell, Site Vice President, and other members of the licensee's staff. On July 7, 2015, the inspectors presented the final inspection results to Mr. Jim Connolly, General Manager, Engineering, and other members of the licensee's staff. The licensee acknowledged the results as presented. While some proprietary information was reviewed during this inspection, no proprietary information was included in this report.

SUPPLEMENTAL INFORMATION
KEY POINTS OF CONTACT

Licensee Personnel

C. Pham, Quality Assurance Assessor
D. Chamberlain, Supervisor, Civil Design Engineering
D. Gore, Supervisor, Reactor Analysis
D. Rencurrel, Senior Vice President Operations
G. E. Shinzel, Supervising Engineer
G. Jones, I&C Engineer, Design Engineering
G.T. Powell, Site Vice President
H. Le, Engineer Licensing Consultant
J. Connolly, General Manager, Engineering
J. Cook, Coordinator, Design Engineering
L. Sterling, Supervisor, Licensing
M. Berg, Manager, Design Engineering, Test, and Programs
P. Travis, Environmental Supervisor
Q. Huynh, Mechanical Engineer, Design Engineering
R. D. Savage, Engineer Specialist Licensing Consultant
R. Dunn, Manager, Nuclear Fuel & Analysis
R. Engen, Manager, Engineering Projects
R. Gonzalez, Engineer Senior
R. Kersey, Supervisor, Design Engineering
R. Lane, Operations
T. Jacobs, Design Engineering

NRC Personnel

A. Sanchez, Senior Resident Inspector
N. Hernandez, Resident Inspector
S. Janicki, Project Engineer
D. Rahn, Senior Electronic Engineer, Instrumentation and Controls Branch, NRR
M. Watford, General Engineer, Plant Licensing Branch – 4, NRR

LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety, but rather, that selected sections of portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

10 CFR 50.59 Screenings

00-5014-5	04-8245-33	06-15147-46	10-23767-5	11-24175-36	11-24175-36
11-24175-37	11-24175-37	11-4057-1	11-5003-3	12-12320-10	13-13224-31
13-15128-5	14-10629-2	14-23082-2	14-6074-1	14-8780-1	15-3800-2

10 CFR 50.59 Evaluations

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
04-1238-88	Replace the Class 1E NSSS Inverter Systems (Westinghouse)	0
04-8245-60	High Radiation Monitor Equipment Failure Setpoint Change	0
04-8245-60	High Radiation Monitor Equipment Failure Setpoint Change	0
09-15306-5	South Texas Unit 1 and Unit 2 – Leak Before Break Analysis on Pressurizer Surge Line	0
09-18620-8	Steam Line Break Containment Pressure Temperature Analysis	0
11-12726-8	Change to COLR Figure 1 and UFSAR Table 4.4-1	0
11-30675-90	Methodology Change from Phoenix-P Computer Code to NEXUS/PARAGON Computer Codes	0
13-3393-3	Insufficiently Annealed Strip Material in Westinghouse ZIRLO® Grids	0

Design Change Package Permanent Plant Mods

<u>Number</u>	<u>Description or Title</u>	<u>Revision/Date</u>
00-5014-4	Replacement of the Rm-11 Computer System	0
04-8245-33	Replace RCB HRRM Cables with Cables Less Susceptible to TIC	0
04-8245-33, Supplement 2	Replace RCB HRRM Cables with Cables Less Susceptible to TIC	0
05-10905-4	Replace Safety Related Inverters EIV001 and EIV002	0

Design Change Package Permanent Plant Mods

<u>Number</u>	<u>Description or Title</u>	<u>Revision/Date</u>
06-15147-46	Replace Essential Cooling Water Pump 2C	0
10-23767-5	Update Design Basis Information for the Auxiliary Feedwater Storage Tank Volume Requirements	0
11-194-27	Replace RWST Level Transmitter B2SILT0932	April 8, 2011
11-4057-1	Abandon in Place EAB Air Supply Heater 8V111VHX009 (11A)	0
12-12320-10, Supplement 1	Unit 1 Spent Fuel Pool Level Indication Installation	0
13-13224-31	Provide a Replacement Body-to-Bonnet Gasket for the Aux Feedwater Turbine Trip and Throttle MOV in Unit 2	0
13-15128-5	RHR Low Flow Trip Energize to Actuate Modification	0
14-6074-1	Eliminate Relay and Contact Race Issue for D1AFMOV0143	0

Miscellaneous

<u>Number</u>	<u>Description or Title</u>	<u>Revision/Date</u>
	Training Bulletin: Steam Generator (SG) Power Operated Relief Valve (PORV) Fail Closed Modification Implementation	
51-9202556-004	Qualification Analysis of VEGAPULS 62 ER Through Air Radar	4
51-9230745-000	Through Air Radar Spent Fuel Pool Level Instrument (SFPLI) Factory Acceptance Test (FAT) Report for South Texas Project Unit 2	0
5Z010Z51003	EOP Setpoint Document	7
5Z529ZB01024	EOP Setpoint Basis Document	3
66-9237503-001	Through Air Radar Spent Fuel Pool Level Instrument (SFPLI) Site Acceptance Test (SAT) Report for South Texas Project Unit 2	1
EM-1-02000004	Unit 1 Auxiliary Transformer Inspect/Lube/Test	3
LOT 202.02	Main Steam	11
LOT202.41	Radiation Monitoring System	15
NLO 200.25	Main Steam System	9
STPNOC- STRIDE05-IDE	RCP U/V TADOT SFCP STI Change Instrument Drift Evaluation	0

Miscellaneous

<u>Number</u>	<u>Description or Title</u>	<u>Revision/Date</u>
STPNOC-STRIDE06-IDE	RCP U/F TADOT SFCP STI Change Instrument Drift Evaluation	0
STRIDE TS-E-0034	Undervoltage RCP Relay Channel TADOT	0
STRIDE TS-E-0035	Underfrequency RCP Relay TADOT	0
VTB-A363-0045	Instruction/Technical Manual 25KVA Inverter/Rectifier	2
VTD-R369-0013	Model 1153 Series B Alphaline® Pressure Transmitter for Nuclear Service	May 1993
WCAP-16045-P-A	Qualification of the Two-Dimensional Transport Code PARAGON	0
WCAP-16045-P-A, Addendum 1-A	Qualification of the NEXUS Nuclear Data Methodology	0

Corrective Action Program Documents (Reviewed)

06-1404	10-17147	10-23767	11-20342	11-10205	15-2736
15-5797	15-5798	15-13365			

Corrective Action Program Documents (Issued)

15-14072	15-14074	15-14152	15-14153	15-14198	15-15117
15-15210	15-15289				

Calculations

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
CC 09973	Qualification of Horn and Transmitter Supports for Spent Fuel Pool Level Indicator	0
CN-NFPE-13-16	Product Performance Assessment of Insufficiently Annealed Strip Condition	2
EC 06068	Load Tap Changer (LTC) Control Relay Setting Calculations	4
MC 05044	Flooding Calculation for the DGB	3
MC 06082	Auxiliary Feedwater Storage Tank (AFST) Volume and Setpoints	9

Calculations

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
MC 0610, DCN 1400445	Lower Limit Acceptance Criteria for SI Pump Full Flow Tests	0
MC 06220	SI & CS Pump NPSH	5
MC 06510	Lower Limit Acceptance Criteria for SI Pump Full Flow Tests	0
MC 05037	RWST Volumes and Limits	9
NC 07065	Containment HRRM TIC Analysis - MSLB and LOCA	1
NC 07081	Long Term Cooling Analysis	0
NC 07007	MSLB Containment Pressure and Temperature Analysis	10
WCAP-12067	Pressurizer Surge Line and Residual Heat Removal Line Stratification	0
WCAP-12067	Evaluation of Thermal Stratification, Pressurizer Surge Line	1
ZC 07022	Steam Generator High-High Level Turbine Trip/Feedwater Isolation Low-Low Level Reactor Trip Setpoints and Allowable Values Calculation	4
ZC 07023	Loop Uncertainty Calculation for AFWST Level Monitoring Instrumentation	6
ZC 07056	Uncertainty Calculation for Reactor Coolant Pump Undervoltage and Underfrequency Reactor Protection Instrumentation	2
ZC 07024	Loop Uncertainty Calculation for RWST Level Monitoring Instrumentation	4

Procedures

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
0ERP01-ZV-IN01	Emergency Classification	9
0PAP01-ZA-0103	License Compliance Review	12
0PGP03-ZE-0056	Instrumentation Installation	6
0PGP03-ZP-0014	Safety/Quality Classification and Dedication of Parts	5
0PGP04-ZA-0307	Preparation of Calculations	6
0PGP04-ZA-0328	Engineering Document Processing	13
0PGP04-ZA-0328	Engineering and Vendor Document Processing	14
0PGP04-ZE-0309	Design Change Package	34

Procedures

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
0PGP04-ZE-0310	Plant Modifications and Minor Change Enhancements	7
0PGP02-ZA-0063	Surveillance Test Interval Evaluation Process	2
0PGP04-ZE-0312	Design Change Implementation	7
0PGP04-ZE-0317	Digital Design Change	0
0PGP04-ZE-0318	Non-Design Configuration Change	0
0PGP05-ZA-0002	10 CFR 50.59 Evaluations	16
0PGP05-ZN-0004	Changes to Licensing Basis Documents and Amendments to the Operation License	23
0PLP01-ZA-0004	Control of the 10 CFR 50.59 Resource Manual	1
0PMP04-AF-0003	Auxiliary Feedwater Turbine Trip Throttle Valve Maintenance	28
0POP02-SP-0001	Solid State Protection System	15, 18, and 19
0POP04-RA-0001	RT-8050 and RT-8051, RCB Digital High Range Area Monitor	31
0POP05-EO-FO05	Containment Critical Safety Function Status Tree	2
0PSP05-FW-0517L	Steam Generator Narrow Range Level Loop Calibration	22
0PSP05-SI-0931T	RWST Level Transmitter Calibration	18
5Z689ZS1027	Specification for Instrumentation Construction	14

Drawings

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
00009E0NZ13#1 Sheet 1	Elementary Diagram Aux Feedwater Turbine Steam Inlet MOV-0143 & FW-0143	14
4Z019Z45080 Sht. 190	Rosemount 1151, 1153, 1154, & 3051 Instrument Assembly	8
5C269F05060	Piping Diagram Personnel Air Lock Sealing Air System	12
5N129F05013 #2	Piping and Instrument Diagram – Safety Injection System	34
5Q159F00045#1, Sheet 1	Standby Diesel Generator Fuel Oil Storage and Transfer System	33
5Q159F22540#1	Standby Diesel Jacket Water	21
5Q159F22542#1	Standby Diesel Lube Oil	19

Drawings

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
5R289F05038#1, Sheet 1	Essential Cooling Water System Train 1A	17
5S109F00016#1	Piping and Instrumentation Diagram Main Steam	33
5S141F00024, Sheet 1	Piping and Instrumentation Diagram Auxiliary Feedwater	12
5S141F00024, Sheet 2	Piping and Instrumentation Diagram Auxiliary Feedwater	5
5S149Z40132#1	AFW Turbine Steam Inlet System: AF	12
7Q271F00046	Fire Protection Loop	39
9212215 C	VEGA Waveguide Isometric (Northwest)	2
9212216 C	VEGA Waveguide Isometric (Northeast)	2
F-1329-D-5412	Unit Auxiliary Transformer OLTC Schematic Diagram	6
F-1370-D-5645	Westinghouse UVT 2000	5
F-2112-B-2736	Unit Auxiliary Transformer OLTC Nameplate	6
SL31337-04	ONAN/ONAF XFMR W/ABB UZERT 200/600 LTC Schematic Wiring Diagram	2

Work Authorization Numbers

414389	445632	445636	445641	446954	446958
448473	448485	448486	448486	448651	448672
448673	448674	448675	448675	448676	448676
448677	448677	453715	453717	453725	453725
453727	457687	457688	457688	470534	470535
472951	476721	484743	506823	525417	525418
541804	552001				

ADDITIONAL INFORMATION REQUESTED DURING THE INSPECTION

PAPERWORK REDUCTION ACT STATEMENT

This letter does not contain new or amended information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing information collection requirements were approved by the Office of Management and Budget, Control Number 3150-0011. The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid Office of Management and Budget control number.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Requests sent on May 28, 2015

SCREENS:

- | | |
|------------|---|
| 09-5680 | EVALUATE DC BREAKERS (TYPE AK AND AKR) FOR IMPROVEMENTS / ENHANCEMENTS TO CURRENT MAINTENANCE PRACTICES BASED UPON THE ISSUES IDENTIFIED UNDER CONDITION REPORTS 09-5662, 09-5446 AND 09-5071. WRITE 50.59 EVALUATION TO SUPPORT CLASS 1E BATTERY BREAKER REPLACEMENT PER DCP'S 09-5680-5 & 11. EVALUATION I&C DESIGN |
| 13-2789 | PERFORM A 10CFR50.59 REVIEW OF THE 345 KV WA PARRISH SUBSTATION BUS MODIFICATION PROJECT. THESE MODIFICATIONS AT THE WA PARRISH SUB ALSO REQUIRE RELAY WIRING MODIFICATIONS AT STP. THE RELAY MODIFICATIONS AT STP WERE COMPLETED THE WEEK OF 02/11/2013 AT S PERFORM A 10CFR50.59 SCREEN OF THE 345 KV W.A. PARISH SUBSTATION BUS MODIFICATION PROJECT. THESE MODIFICATIONS AT THE W.A. PARISH SUBSTATION ALSO REQUIRE RELAY WIRING MODIFICATIONS AT STP. THE RELAY MODIFICATIONS AT STP WERE COMPLETED THE WEEK OF 02/11/ SCREENING ELECTRICAL DESIGN |
| 98-687-97 | REPLACE OVERLOAD HEATERS AND BREAKER SETTINGS FOR STANDBY DIESEL GENERATOR #12 FUEL OIL TRANSFER PUMP |
| 15-217-2 | MITIGATE EROSION ON 10"MS-1035-HC7 BY INCREASING SIZE OF 4.5"MD-1117-HC9 AND REPLACING WITH FLOW RESISTANT MATERIAL |
| 15-1180-1 | PROVIDE ALTERNATE GASKET MATERIAL AND REPAIR OPTIONS FOR THE TURBOCHARGER INTERCOOLER COVER |
| 14-4842-2 | PROVIDE A REPLACEMENT BODY-TO-BONNET GASKET FOR THE AUX FEEDWATER TURBINE TRIP AND THROTTLE MOV |
| 14-23544-1 | INSTALL CALIBRATION VALVES AND TEST TEES ON PERSONNEL AIR LOCK (PAL) DOORS |

14-13030-7 PROVIDE MACHINING ALLOWANCES FOR HHSI 1B AUXILIARY GLAND/
SHAFT SLEEVE
13-955-4 IVC TEMPERATURE CONTROL
13-955-5 IVC TEMPERATURE CONTROL
13-13224-31 PROVIDE A REPLACEMENT BODY-TO-BONNET GASKET FOR THE AUX
FEEDWATER TURBINE TRIP AND THROTTLE MOV IN UNIT 2
13-11669-2 REPLACE ECW PUMP 2C DISCHARGE STRAINER BACK FLUSH THROTTLE
VALVE 3R282TEW0190
12-31926-3 TSC DG OUTPUT CIRCUIT BREAKER REPLACEMENT
00-5014-4 REPLACEMENT OF THE RM-11 COMPUTER SYSTEM
14-6074-1 ELIMINATE RELAY AND CONTACT RACE ISSUE FOR D1AFMOV0143
0POP02SP0001 SOLID STATE PROTECTION SYSTEM Revision 14 – 19
ZC07056 UNCERTAINTY CALCULATION FOR REACTOR COOLANT PUMP
UNDERVOLTAGE AND UNDERFREQUENCY REACTOR PROTECTION
INSTRUMENTATION
04-8245-60 High Radiation Monitor Equipment Failure Setpoint Change Rev 0

Permanent Plant Modifications (need applicability determinations, screenings, condition reports, change packages, calculations, drawings, etc.)

<u>Document Number</u>	<u>Submittal Supplement No</u>	<u>Title Description</u>	<u>Process Status Date</u>	<u>Unit Code</u>	
Mc05044		Flooding Calculation for the DGB	08/06/12	9	
Mc06082		Auxiliary Feedwater Storage Tank (AFST) Volume and Setpoints	10/03/11	9	
Mc06220		SI & CS Pump NPSH	11/19/14	9	
Mc06510		Lower Limit Acceptance Criteria for SI Pump Full Flow Tests	11/20/13	9	
Zc07022		Steam Generator High-High Level Turbine Trip/Feedwater Isolation & Low-Low Level Reactor Trip Setpoints and Allowable Values Calculation	05/03/11	9	
<u>Document Number</u>	<u>Document Subtype</u>	<u>Submittal Supplement No</u>	<u>Title Description</u>	<u>Process Status Date</u>	<u>Unit Code</u>
06-15147-46	MAJMOD	01	Replace Essential Cooling Water Pump 2c	05/23/14	2

<u>Document Number</u>	<u>Document Subtype</u>	<u>Submittal Supplement No</u>	<u>Title Description</u>	<u>Process Status Date</u>	<u>Unit Code</u>
06-15147-40	MAJMOD	01	Replace Essential Cooling Water Pump 2a	04/30/14	2
12-12320-10	MAJMOD	01	Spent Fuel Pool Level Indication Installation	12/02/14	1
50181785	CGI		Technical Evaluation - Commercial Grade Item	10/23/13	0
50154157	CGI		Technical Evaluation - Commercial Grade Item	01/20/15	-
11-194-27	MINCHG	00	Replace RWST Level Transmitter B2SIL70932	10/03/12	2
04-1796-11	MAJMOD	01	U2 SSPS Turbine Trip	10/19/11	2
09-809-26	MAJMOD	02	Replace Obsolete RCS Wide Range Pressure Transmitters	02/13/13	1
03-14479-11	MAJMOD	02	Unit 2, Train "C" Si Test Header AOV Replacement	07/17/14	
03-14479-4	MAJMOD	02	Unit 1, Train "A" Si Test Header AOV Replacement	04/24/12	
03-14479-5	MAJMOD	01	Unit 2, Train 'A' Si Test Header AOV Replacement	05/01/12	
04-11502-224	MAJMOD	00	Revising UAT, ESF Transformer, ESF L/C Transformer Tap Settings And LTC Settings	12/17/12	
04-11502-225	MAJMOD	00	Revising UAT, ESF Transformer, ESF L/C Transformer Tap Settings and LTC Settings	06/25/12	
04-11502-63	MAJMOD	01	13.8 KV/4.16 KV ESF Transformer E1C Replacement	04/14/15	

<u>Document Number</u>	<u>Document Subtype</u>	<u>Submittal Supplement No</u>	<u>Title Description</u>	<u>Process Status Date</u>	<u>Unit Code</u>
08-9595-11	MAJMOD	00	Steam Generator Power Operated Relief Valves Fail Closed Modification	03/01/12	
08-9595-11	MAJMOD	01	Steam Generator Power Operated Relief Valves Fail Closed Modification	03/01/12	
08-9595-11	MAJMOD	02	Steam Generator Power Operated Relief Valves Fail Closed Modification	03/01/12	
08-9595-11	MAJMOD	03	Steam Generator Power Operated Relief Valves Fail Closed Modification	03/01/12	
11-8615-10	MAJMOD	00	Replacement of RHR 2B Motor	05/16/13	
11-8615-10	MAJMOD	01	Replacement of RHR 2B Motor	05/16/13	
11-8615-10	MAJMOD	02	Replacement of RHR 2B Motor	05/16/13	
11-8615-10	MAJMOD	03	Replacement of RHR 2B Motor	05/16/13	
00-5014-4			Replacement of the RM-11 Computer System		
14-6074-1			Eliminate Relay and Contact Race Issue for D1AFMOV0143		

50.59 Evaluations (need applicability determinations, screenings, evaluations, condition reports, change packages, calculations, drawings, etc.)

<u>CR Action Number</u>	<u>Title</u>	<u>PORC Meeting Number</u>
11-30675	UFSAR CN-3082 – Methodology change from Phoenix-P computer code to the NEXUSPARAGON computer codes	13-017
04-8245-60	High Radiation Monitor Equipment Failure Setpoint Change Rev 0	14-007

Requests sent on June 9, 2015

1. DCP #11-4057-1
2. DCP #13-15128-5
3. Procedure 0POP02SP0001 Revisions 15, 18, and 19 (The provided documents did not include the actual procedure)
4. DCP #04-8245-33
5. DCP #04-8245-34
6. 50.59 Screening or Evaluation for Calculation ZC07056 Rev. 2 (The provided document included only the calculation, not the 50.59)
7. Calculation ZC07056 Rev. 0
8. DCP 05-10905-4, REPLACE SAFETY RELATED INVERTERS EIV001 AND EIV002

Requests sent on June 11, 2015

1. CR 15-14198
2. CR for as-found out of tolerance transmitter Unit 2 LT-932 associated with WAN 33580909, date of calibration is July 2012
3. Was a CR written for the as-found OOT condition for the calibration in WAN 445632
4. In IMS - ID 53, I do not see a DCN or EQ design criteria of LT-931 for the Rosemount 1153DB5PB. The DCN's I received are for different model numbers. Was the EQ database updated for the Rosemounts use on the RWST? Also, please explain the comments.
5. Full flow/min flow test procedures for HHSI and LHSI and results from last test of each pump in Unit 2
6. Trip setpoint calibration procedures for low-low SG Narrow Range level trip, and high-high SG Level Turbine trip. Also include the results from last calibration on Unit 1.

Mr. Dennis L. Koehl
President and CEO/CNO
STP Nuclear Operating Company
P.O. Box 289
Wadsworth, TX 77483

SUBJECT: SOUTH TEXAS PROJECT UNITS 1 AND 2 – NRC EVALUATIONS OF CHANGES,
TESTS, AND EXPERIMENTS AND PERMANENT PLANT MODIFICATIONS
BASELINE INSPECTION REPORT 05000498/2015007 and 05000499/2015007

Dear Mr. Koehl:

On June 18, 2015, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at the South Texas Project, Units 1 and 2. On June 18, 2015, the NRC inspectors discussed the initial results of this inspection with Mr. Gerald Timothy Powell, Site Vice President, and other members of your staff. On July 7, 2015, the final results of this inspection were discussed with Mr. Jim Connolly, General Manager, Engineering, and other members of your staff. Inspectors documented the results of this inspection in the enclosed inspection report.

The NRC inspectors did not identify any findings or violations during this inspection.

In accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Thomas R. Farnholtz, Chief
Engineering Branch 1
Division of Reactor Safety

Dockets: 50-498; 50-499
Licenses: NPF-76; NPF-80

Enclosure: Inspection Report 05000498/2015007
and 05000499/2015007

w/Attachment: Supplemental Information

Distribution

See next page

ADAMS ACCESSION NUMBER: ML15205A370

<input checked="" type="checkbox"/> SUNSI Review by: GAG	ADAMS: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<input checked="" type="checkbox"/> Non-Sensitive <input type="checkbox"/> Sensitive		<input checked="" type="checkbox"/> Publicly Available <input type="checkbox"/> Non-Publicly Available		Keyword: NRC-002
OFFICE	SRI:EB1/R4	RI:EB1/R4	RI:EB3/R3	SRI:EB1/R4	C:PBB/R4	C:EB1/R4	
NAME	WSifre	JBraisted	IKhan	GGeorge	DProulx	TFarnholtz	
SIGNATURE	/RA/	/RA/	/RA/	/RA/	/RA/	/RA/	
DATE	7/22/15	7/13/15	7/15/15	7/22/15	7/24/15	7/24/15	

OFFICIAL RECORD COPY

Letter to Dennis L. Koehl from Thomas R. Farnholtz, dated July 24, 2015

SUBJECT: SOUTH TEXAS PROJECT UNITS 1 AND 2 – NRC EVALUATIONS OF CHANGES,
TESTS, AND EXPERIMENTS AND PERMANENT PLANT MODIFICATIONS
BASELINE INSPECTION REPORT 05000498/2015007 and 05000499/2015007

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