SALEM/MAINTENANCE
SC.MD-GP.SW-0001(Q) - REV. 5

SERVICE WATER SILT SURVEY

USE CATEGORY : II

REVISION SUMMARY

- Revised procedure from Category III to Category II
- Deleted former Step 3.2: Inform diving contractor desilting discharge hose shall be connected to hose fitting on sea wall
- Added Step 3.2: Desilting discharge is pumped through piping to designated area determined by Site Services
- Added Step 5.2.1: If desilting/defouling is required from previous survey and data, go to Step 5.3
- Added Note to Step 5.2.3: Maximum silt buildup of 3 ft. allowable between pump suction and approximately 6 ft. forward (river side) of stop log guide
- Added Note to Step 5.2.5: Coverage factor is thickness of growth on walls in inches X percentage of coverage. Example: 0.50 in. growth x 50% coverage equals .25 coverage factor
- Deleted former Step 5.2.5: Contact Service Water System Engineer to review data to determine if desilting/defouling is required
- Revised Step 5.2.6: If biofouling ≥ .25 coverage factor, defouling is required
- Added Step 5.2.7: If silt level ≥ 3 ft., desilting is required
- Added Step 5.2.8: If desilting/defouling is required, obtain desilting permit and schedule job
- Added Step 5.3.1: Diver(s) should verify designated bay to be entered
- Added Step 5.3.5: Forward copy of Attachments 2 and 3 to Service Water System Engineer

IMPLEMENTATION REQUIREMENTS

- None

11/8 3

APPROVED: [signature] for John Summers
Maintenance Manager - Salem

10/23/96
Date

(1)

SERVICE WATER SILT SURVEY

TABLE OF CONTENTS

1.0 PURPOSE

1.1 To provide instructions for desilting and wall cleaning/biofouling removal of service water bays.

1.2 This procedure is to determine and document condition of silt buildup and biofouling C0297 in service water bay areas.

2.0 PREREQUISITES

( ) 2.1 The individual assigned to perform this procedure is qualified IAW NC.NA-AP.ZZ-0014(Q), Training, Qualification and Certification.

( ) 2.2 VERIFY tagging is complete IAW NC.NA-AP.ZZ-0015(Q), Safety Tagging Program.

( ) 2.3 NOTIFY Licensing approximately two weeks prior to desilting to allow sufficient time to obtain required pumping permit from Army Corps of Engineers.

( ) 2.4 ADVISE diving contractor of required services.

( ) 2.5 ENSURE proper equipment is available for silt and biofouling removal.

( ) 2.6 VERIFY SNSS/NSS has signed Work Activity Sheet authorizing work to start.

3.0 PRECAUTIONS AND LIMITATIONS

( ) 3.1 If required, desilting is to be performed between Sept. 1 and March 1. If desilting is required at any other time after March 1 to Sept. 1, it will require an Emergency Desilting Permit.

( ) 3.2 Desilting discharge is pumped through piping to designated area determined by Site Services.

( ) 3.3 Maximum silt buildup of 3 ft. allowable between pump suction and approximately 6 ft. forward (river side) of stop log guide.

( ) 3.4 Diver(s) should ENSURE they are entering designated bay tagged IAW NC.NA-AP.ZZ-0015(Q).

4.0 EQUIPMENT/MATERIAL REQUIRED

4.1 Additional Tools and Equipment

- ♦ supplied by diving contractor

5.0 **PROCEDURE**

5.1 Prerequisites, Precautions and Limitations Review

( ) 5.1.1 VERIFY all prerequisites required to start job have been met.

( ) 5.1.2 VERIFY all precautions and limitations have been reviewed.

5.2 Silt and Biological Fouling Survey

( ) 5.2.1 If desilting/defouling is required from previous survey and data, GO TO Step 5.3.

NOTE

Attachment 1 contains description of area to be surveyed.

( ) 5.2.2 Diver(s) should VERIFY they are entering designated bay tagged IAW NC.NA-AP.ZZ-0015(Q).

NOTE

Maximum silt buildup of 3 ft. allowable between pump suction and approximately 6 ft. forward (river side) of stop log guide.

( ) 5.2.3 Supervisor Notification

OBTAIN profile information to nearest 1/2 ft. **RECORD survey data on Attachment 2.**

( ) 5.2.4 INSPECT pump bay for additional sediment, damage or corrosion. **RECORD in Comments Section of Attachment 3.**

NOTE

Coverage factor is thickness of growth on walls in inches X percentage of coverage.

Example: 0.50 in. growth X 50% coverage equals .25 coverage factor.

( ) 5.2.5 Supervisor Notification

INSPECT pump bay walls for biological growth coverage factor (i.e., shells). **RECORD on Attachment 3.**

( ) 5.2.6 If biofouling ≥ .25 coverage factor, defouling is required. **RECORD on Attachment 3.**

( ) 5.2.7 If silt level ≥ 3 ft., desilting is required. **RECORD on Attachment 3.**

( ) 5.2.8 Supervisor Notification

If desilting/defouling is required, OBTAIN desilting permit and SCHEDULE job. **RECORD on Attachment 3.**

5.3 Removal of Silt and Biological Fouling

( ) 5.3.1 Diver(s) should VERIFY designated bay to be entered.

( ) 5.3.2 ENSURE desilting permit has been obtained prior to commencing desilting operation.

( ) 5.3.3 PROVIDE support for diving contractor in setting up for desilting/defouling.

NOTE

Cleaning of biofouling (i.e. shells) on pump bay walls should be done immediately prior to scheduled desilting.

( ) 5.3.4 If wall cleaning has been scheduled or is required based on survey, CLEAN as follows:

( ) A. CLEAN bay walls with scrapers, hydrolasers or other suitable tooling.

( ) B. ALLOW shell and marine growth to settle to bottom of bay.

( ) 5.3.5 Supervisor Notification

FORWARD copy of Attachments 2 and 3 to Service Water System Engineer. **RECORD on Attachment 3.**

( ) 5.3.6 PERFORM desilting operation removing silt and any material removed from bay walls.

END OF PROCEDURE SECTION

6.0 RECORDS

6.1 Retain the following IAW NC.NA-AP.ZZ-0011(Q), Records Management Program:

Attachment 2

Attachment 3

7.0 REFERENCES

7.1 Commitments

7.1.1 C0297 - GL 89-13

7.2 Drawings

7.2.1 211612-A8860, Service Water Intake Arrangement, Mechanical

7.3 Cross-References

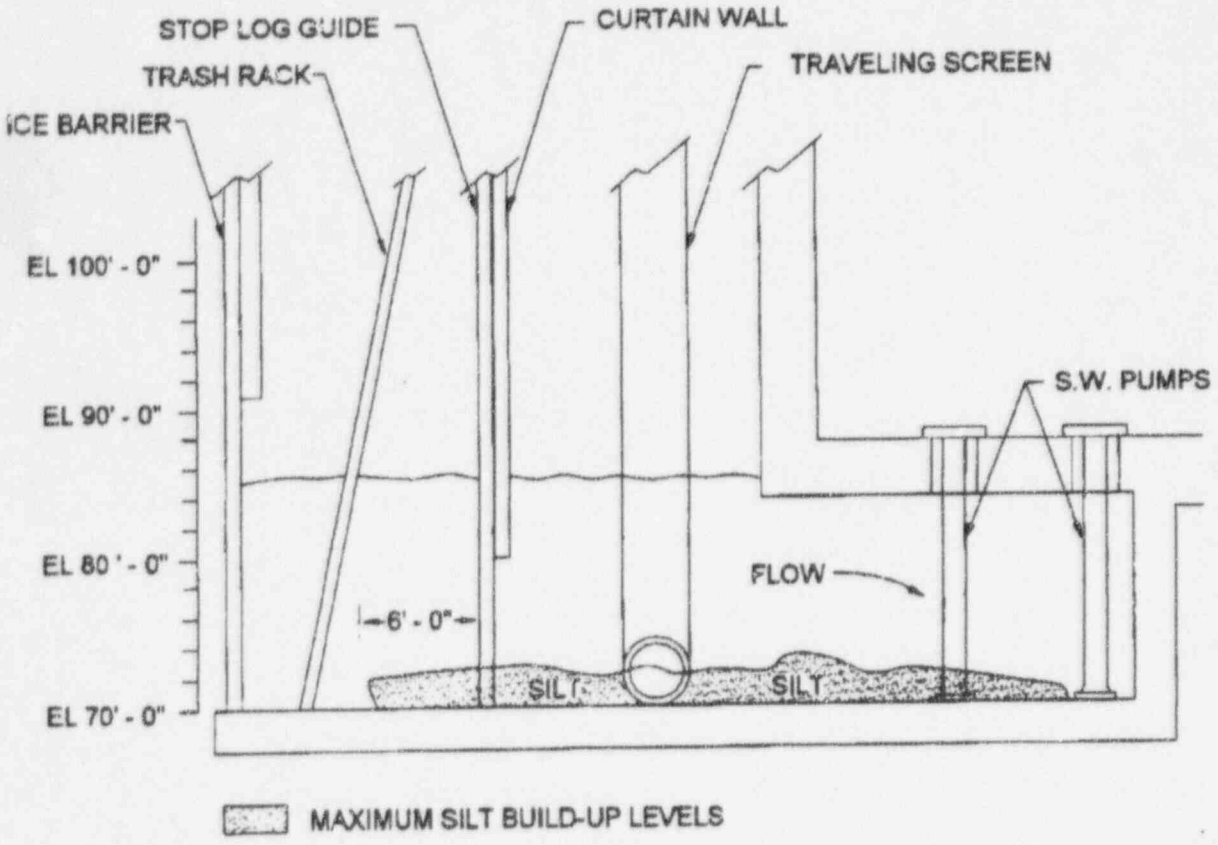
7.3.1 NC.NA-AP.ZZ-0011(Q), Record Management Program

7.3.2 NC.NA-AP.ZZ-0014(Q), Training, Qualification and Certification

7.3.3 NC.NA-AP.ZZ-0015(Q), Safety Tagging Program

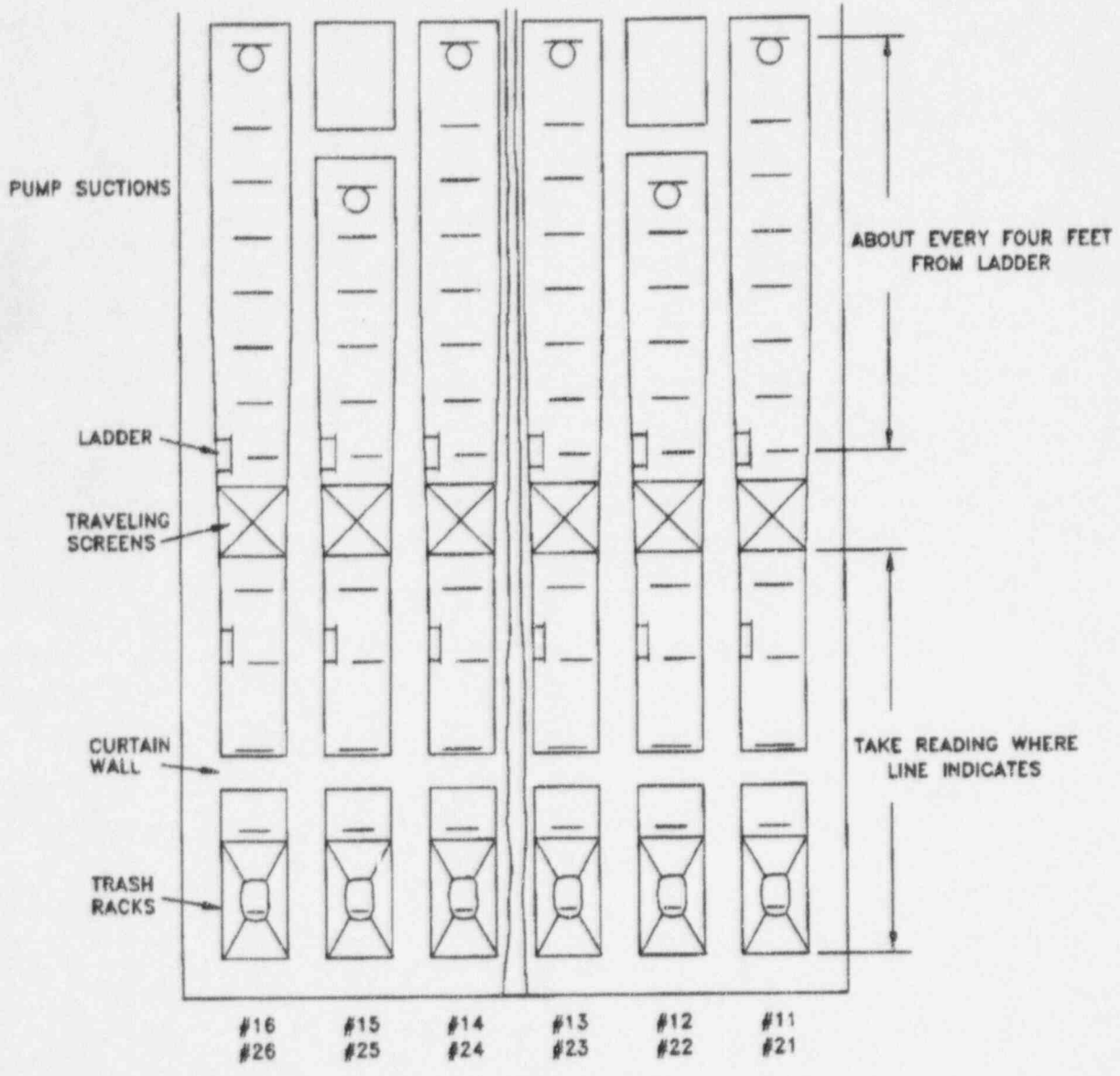
ATTACHMENT 1

SERVICE WATER BAY SECTIONAL VIEW



ATTACHMENT 2

SERVICE WATER SILT SURVEY MAP



ATTACHMENT 3

DATA SHEET

1.0 **JOB DATA:**

Work Order No._____ Activity No._____

Service Water Bay No._____

2.0 **SERVICE WATER SILT REMOVAL DATA:**

STEP	DESCRIPTION	DATA	CALCULATION	COMPLETED BY/DATE
5.2.5	Biofouling	___in. thick ___% Coverage	Inches thick X coverage equals coverage factor	_____/___ SN _____/___

STEP	DESCRIPTION	DATA	ACCEPTANCE CRITERIA	COMPLETED BY/ DATE
5.2.5	Inspect walls for biological growth	Sat___Unsat___	≥ .25 Coverage factor	_____/___ SN _____/___
5.2.6	Biofouling inspection	Sat___Unsat___	≥ .25 Coverage factor	_____/___
5.2.7	Inspect silt level	Sat___Unsat___	Silt level ≥ 3 ft.	_____/___
5.2.8	Desilting/Defouling permit required	Yes___No___	Permit obtained Job scheduled	_____/___ SN _____/___
5.3.5	Supervisor to forward a copy of Attachment 2 and 3 to Service Water System Engineer	Yes___No___	Forward Attachments 2 and 3 to Service Water Engineer for review and evaluation	_____/___ SN _____/___

ATTACHMENT 3 (Cont'd)

4.0 **COMPLETION SUMMARY:**

Comments: _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Individuals Performing Work:

Print Name	Signature	Date
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

This procedure has been reviewed to ensure all required data and signatures have been recorded. The procedure was completed in its entirety unless noted in the Comments Section.

_____

Maintenance Supervisor / Date

INSPECT Single Record Report - NRC

5/4/95 8:39:35 AM

ITEM NUMBER: SIT-072

NRC INSPECTOR: P. ESELGROTH

DATE ISSUED: 5/3/95

DESCRIPTION: If there is an observable problem in the plant, should it have an EMIS tag and how does an operator know if an EMIS tag should or should not be hung.

LR SPONSOR: P. MOELLER

RESPONSIBLE DEPT: LIC

PS SPONSOR: W. GRAU

STATUS: C

CLOSURE DESCRIPTION: Answer IAW NAP-9 was provided to P. Eselgroth by W. Grau. Observable plant problems should have an EMIS tag unless it is a new problem. If an operator observes a problem and does not see an existing EMIS tag, a tag should be written and hung.

CLOSURE DATE: 5/3/95

SUBMITTED DATE: 5/3/95

INSPECT Single Record Report - PSEG

5/2/95 2:49:43 PM

ITEM NUMBER: SIT-051

NRC INSPECTOR: P. ESELGROTH

DATE ISSUED: 5/2/95

DESCRIPTION: What is the appropriate action when a deficiency is observed and no EMIS tag is attached? At what point does the EMIS tag get pulled?

LR SPONSOR: W. GRAU

RESPONSIBLE DEPT: TBD

PS SPONSOR: TBD

STATUS: C

STATUS UPDATE: Wayne reviewing NAP - 9.

CLOSURE DESCRIPTION: An EMIS tag should be hung if one is not observed (refer to NAP - 9, P.11, Attached.). The EMIS tag is removed after performing the required work (See NAP - 9, P.21). The specific item observed (22-CCW pump) has an EMIS tag in the system (060675).

CLOSURE DATE: 5/2/95

SUBMITTED DATE: 5/2/95

m/45

EXHIBIT 1
SAMPLE EMIS TAG/INSTRUCTIONS

002999

COMPONENT ID AND PROBLEM SUMMARY (1) (2)

(3) ORIGINATOR (4) DATE (5) BADGE NO.

COMPONENT ID (1) 002999

(6) CONTROL ROOM INSTRUMENT YES ☐ NO ☐

COMPONENT DESCRIPTION (7)

(8) BLDG (9) ELEV (10) LOCATION

PROBLEM SUMMARY (2)

TAG MUNG TAG

Y ☐ N ☐ LOCATION

ORIGINATOR (3) BADGE NO. (5)

DATE (4) DEPARTMENT/PHONE #

FRONT

002999

NPRD DATA: CIRCLE ONE FROM EACH CATEGORY FOR PLANT EQUIPMENT FAILURES

(11) FAILURE DETECTION

A-Operational Abnormality
B-Inservice Inspection
C-Surveillance Testing
D-Preventive Maintenance
E-Special Inspection
F-Audio Visual Alarm
H-Routine Observation
J-Incidental Observation
K-Corrective Maintenance

(12) STATUS AT TIME OF FAILURE

E. Component/channel in-service (Operating/standby)
F. Component/channel in test
G. Component/channel in maint.
H. Component/channel out-of-service (Not at maintenance)

Has this condition placed the plant in a T/S Action Statement? YES ☐ NO ☐

(13) If yes, Date ☐☐☐☐☐☐ Time ☐☐☐☐ (14)

Applicable Tech Spec. (15)

Priority ☐ (16)

Approval Authority

BACK

11/86

EXHIBIT 1 (Continued)

4. Date EMIS Tag is written.

5. Badge No. of EMIS Tag originator.

6. Control Rm. Instrument Yes or No.

7. 22 component Cooling Pump, etc.

8. Component Bldg. location.

9. Elevation/floor.

10. I.E., 6 ft. west of wall, etc.

11. Failure Detection - Select category that best suits situation.

12. Status at Time of Failure - Select category that best suits situation.

13. Date Unit entered T/S.

14. Time Unit entered T/S.

15. T/S number.

16. Initiator's Supervisor.

2. Separate the top and bottom portions of the tag.

3. Hang the top portion of the tag on or near the malfunctioning component. Do not obscure plant indications. If the tag is not hung on the component, indicate on the AR/WR where the tag was hung.

4. Return the bottom portion to your Supervisor.

INSPECT Single Record Report - NRC

5/4/95 8:23:18 AM

Pete - FYI

ITEM NUMBER: SIT-056

NRC INSPECTOR: P. ESELGROTH

DATE ISSUED: 5/2/95

DESCRIPTION: How do we prioritize system windows (for on-line maintenance)?

LR SPONSOR: W. GRAU

RESPONSIBLE DEPT: PLAN

PS SPONSOR: W. O' BRIEN

STATUS: C

CLOSURE DESCRIPTION: Tracy Walker will get together with W. O' Brien to discuss this item.

CLOSURE DATE: 5/4/95

SUBMITTED DATE: 5/4/95

5/1/87

INSPECT Single Record Report - NRC

5/3/95 2:51:03 PM

ITEM NUMBER: SIT-011

NRC INSPECTOR: P. ESELGROTH

DATE ISSUED: 4/24/95

DESCRIPTION: PROVIDE A LIST WHERE OPERATORS INTERVENED TO PREVENT AN EVENT (E.G., A NEAR MISS) FOR THE LAST 6 MONTHS.

LR SPONSOR: W. MCTIGUE

RESPONSIBLE DEPT: OPS

PS SPONSOR: V. LOWENSTEN

STATUS: C

CLOSURE DESCRIPTION: Approximately (3) weeks ago, the operations department began more rigorously documenting near misses via incident reports. Several examples of near misses (e.g., IR's 95-130, 95-275 and 95-439) in the list of IR's from 2/1/95 to 4/30/95, which was provided to NRC (SIT-024).

CLOSURE DATE: 5/3/95

SUBMITTED DATE: 5/3/95

INSPECT Single Record Report - NRC

5/3/95 9:27:08 AM

ITEM NUMBER: SIT-057

NRC INSPECTOR: P. ESELGROTH

DATE ISSUED: 5/2/95

DESCRIPTION: Provide copies of system walkdown notes/results for the following systems: 125vdc, 4kv, D/G's and Service Water.

LR SPONSOR: W. GRAU

RESPONSIBLE DEPT: PLAN

PS SPONSOR: G. MADSSEN

STATUS: O

CLOSURE DESCRIPTION:

CLOSURE DATE:

SUBMITTED DATE:

5/1/89

INSPECT Single Record Report - NRC

01-May-95

ITEM NUMBER: SIT-019

NRC INSPECTOR: P. ESELGROTH

DATE ISSUED: 4/27/95

DESCRIPTION: PROVIDE ALL OPERABILITY DETERMINATIONS SINCE 4/11/95. PROVIDE ON A CONTINUING BASIS UNTIL END OF INSPECTION.

LR SPONSOR: W. MCTIGUE

RESPONSIBLE DEPT: OPS

PS SPONSOR: V. LOWENSTEN

STATUS: C ✓

CLOSURE DESCRIPTION: Provided operability determinations since 4/11 and will be provided daily in the future.

CLOSURE DATE: 5/1/95

SUBMITED DATE: 5/1/95

5/1/95

INSPECT Single Record Report - NRC

01-May-95

ITEM NUMBER: SIT-022

NRC INSPECTOR: P. ESELGROTH

DATE ISSUED: 4/27/95

DESCRIPTION: PROVIDE A COPY OF THE TS INTERPRETATIONS.

LR SPONSOR: W. GRAU

RESPONSIBLE DEPT: OPS

PS SPONSOR: V. LOWENSTEN

STATUS: C ✓

CLOSURE DESCRIPTION: Copy of the Tech Spec interpretations were provided to the NRC.

CLOSURE DATE: 4/28/95

SUBMITED DATE: 4/28/95

5/1/95

INSPECT Single Record Report - NRC

5/2/95 4:21:24 PM

ITEM NUMBER: SIT-023

NRC INSPECTOR: P. ESELGROTH

DATE ISSUED: 4/27/95

DESCRIPTION: WHAT ACTIONS HAVE BEEN TAKEN IN THE LAST MONTH TO IMPROVE SYSTEM ENGINEERING SUPPORT OF SYSTEM RELIABILITY. ALSO WHAT IS THE DEGREE OF INVOVLEMENT BY SYSTEMS ENGINEERING.

LR SPONSOR: K. DZIUBELA

RESPONSIBLE DEPT: TECH

PS SPONSOR: J. RANALLI

STATUS: C

CLOSURE DESCRIPTION: Interview was held on 5/2 with J Ranalli, G. Madsen and Eselgroth.

CLOSURE DATE: 5/2/95

SUBMITTED DATE: 5/2/95

5/1/92

INSPECT Single Record Report

01-May-95

ITEM NUMBER: SIT-016

NRC INSPECTOR: P. ESELGROTH

DATE ISSUED: 4/27/95

DESCRIPTION: Provide a list of all ad-hoc teams for near term improvement, with points of contact.

LR SPONSOR: K. DZIUBELA

RESPONSIBLE DEPT: VAR

PS SPONSOR: VAR

STATUS: C ✓

CLOSURE DESCRIPTION: All ad hoc plans have been incorporated into the IMPACT Plan. Confirmed with R. Brown

CLOSURE DATE: 5/1/95

SUBMITED DATE: 5/1/95

5/1/93

INSPECT Single Record Report - NRC

5/12/95 9:06:55 AM

ITEM NUMBER: SIT-123

NRC INSPECTOR: P.ESELGROTH

DATE ISSUED: 5/11/95

DESCRIPTION: Reliability Services (Nichols) has corrective maintenance trend graphs by system/component. The data supporting the graphs has been available for some time (i.e., MMIS). It appears to the NRC team that these data have not been used (i.e., integrated into the work prioritization process) by station management to date. This was apparent from interviews/questions about performance indicators, during which no managers referred to the data. How does station management respond to this observation?

LR SPONSOR: W.MCTIGUE

RESPONSIBLE DEPT: VAR

PS SPONSOR: VARIOUS

STATUS: C

CLOSURE DESCRIPTION: Morroni met with P. Eselgroth reviewed and provided copies of PI reports on 5/11. This item is closed per P. Eselgroth. Appropriate interviews have been conducted to obtain the required information.

CLOSURE DATE: 5/12/95

SUBMITTED DATE: 5/12/95

M/94

INSPECT Single Record Report - NRC

5/10/95 5:13:26 PM

ITEM NUMBER: SIT-117

NRC INSPECTOR: P. ESELGROTH

DATE ISSUED: 5/9/95

DESCRIPTION: Please provide training handouts used at NTC relative to the April 7 event and the Turbine Generator failure.

LR SPONSOR: P. MOELLER

RESPONSIBLE DEPT: NTC

PS SPONSOR: A ORTICELLE

STATUS: C

CLOSURE DESCRIPTION: Lesson Plans 305S-000.00S-UNIT1E-00 (April 7 event) and 300S-000.00S-EHCONT-07 (includes Turbine Overspeed event) were provided to NRC.

CLOSURE DATE: 5/10/95

SUBMITTED DATE: 5/10/95

5/10/95

INSPECT Single Record Report - NRC

5/10/95 6:27:56 PM

ITEM NUMBER: SIT-120

NRC INSPECTOR: P.ESELGROTH

DATE ISSUED: 5/10/95

DESCRIPTION: Is there a program in place to review the Bills of Material and correct discrepancies, other than fixing them on a case-by-case basis?

LR SPONSOR: W.MCTIGUE

RESPONSIBLE DEPT: NE

PS SPONSOR: SANTONASTASO

STATUS: O

CLOSURE DESCRIPTION: Project description of Purchase Class 4 [i.e., items procured without QA provisions] - classification validation effort was provided to NRC. Lou Santonastaso x1909 is a contact for followup.

CLOSURE DATE:

SUBMITTED DATE:

11/96

Items procured 581
without QA provisions
[NAP-19 § 6.18]

PROJECT TITLE: MMIS PURCHASE CLASS "4" CLASS CODES - CLASSIFICATION VALIDATION TECHNICAL SPECIFICATION

PURPOSE:

In August 1994, the NRC questioned the procurement classification of a rheostat used in the 1E battery chargers at the Salem plant. A follow up investigation determined that the rheostat was improperly classified for the associated application. Subsequently, a Bill of Material (BOM) validation effort was initiated and completed by PSE&G employees in November 1994. This project is a continuation of that validation effort. This project is necessary to assure that an acceptable level of accuracy exists concerning the BOM's in MMIS.

SCOPE:

The successful bidder will, from the list of class codes provided:

1) Retrieve the Procurement Classification records for each class code from microfilm. This will entail the use of Aquarius (Stairs) to obtain the microfilm reel and frame number where the microfilm can be found.

2) Review the procurement classification obtained during Step 1, and determine if the classification is acceptable by the definitions used today. This will require an understanding of the history of the forms used by PSE&G and an understanding of the current procurement methods utilized by the Nuclear Industry. If the procurement classification does not exist on microfilm or the classification that was found must be revised, then a classification will be developed utilizing the forms and methodologies currently in use by PSE&G's Procurement Engineering Group (reference NC.DE-AP.ZZ-0016(Q)). All work associated with this project will be reviewed by the PSE&G Procurement Engineering Group. At the option of the QA Planning for Procurement Group, all packages reviewed or developed by this project will be reviewed by the Quality Assurance organization. The resolution of any questions either by the Procurement Engineering Group or the QA Planning for Procurement Group is the responsibility of the successful bidder.

11/97

To perform this scope of work, the current MMIS database of BOM's, the Aquarius database, and the Component ID database must be utilized. There will be a minimum of 400 and a maximum of 663 class codes that must have their Procurement Classification Justifications reviewed or developed.

WORK TO BE PERFORMED BY PSE&G:

PSE&G will provide a listing on hard copy, as well as a dBase III file, if requested, detailing all the class codes that need to be reviewed. PSE&G will review and sign off on all packages developed as part of this task. Guidance will be provided in the usage of all the databases discussed and the history of Procurement at the Nuclear Business Unit. PSE&G will initiate any Problem Reports or Deficiency Reports required as part of the outcome of this project.

DOCUMENT SUBMITTAL:

The successful bidder of this project will provide to PSE&G a completed cover sheet with sign off for each class code(an example of a previous cover sheet as well as completed packages from the previous project are attached). If a Procurement Classification justification is developed, the classification will be signed by the successful bidder, PEER reviewed by PSE&G, and attached to the cover sheet. The purpose of the cover sheet is to document that a review has been performed of each class code. This package will then be submitted for microfilming.

A bi-weekly status report shall be provided to the PSE&G Project Manager and will include as a minimum:

- A list of the class codes completed.
- Project implementation problem identification and resolution.

Project meetings:

Bi-weekly project meetings shall be conducted as requested by the PSE&G Project Manager.

SCHEDULE:

All work is to be completed by June 30, 1995.

The key Salem safety review/oversight personnel are highlighted on the attached.

John Summers (Station GM) is SORC Chairman.

Jeff Benjamin (Director- QA/NSR) is Nuclear Review Board (NRB) Chairman.

Bruce Hall (Manager - Nuclear Safety Review) is responsible for:

Offsite Safety Review (OSR) - Carolyn Taylor is Salem's OSR supervisor.

Safety Review Group (SRG), aka Onsite Safety Review - Fernando Ricart is Salem's Onsite Safety Review Engineer.

Focus info for inspecting to our Team Charter

Given all that Salem has on their plate - in terms of past problem corrective actions/new initiatives/plans to do better - WHAT CAN WE SAY ABOUT HOW THEY'RE PRESENTLY:

DECIDING WHAT TO DO

IN WHAT ORDER

HOW THEY'RE DOING AT IT

HOW THEY'RE DEALING WITH DAILY EMERGENT ISSUES

Since the April 1st time frame, WHAT ACTIONS HAVE THEY TAKEN TO IMPROVE THINGS (some of these may have measureable results, others may be steps they took to do something in a better way and they don't have negative results that disprove it, but they took the step)

In all that's going on at Salem, WHAT DO YOU SEE in your area of responsibility, for which you have data/info indicating that SALEM MAY BE MISSING, OR NOT DEALING WITH EFFECTIVELY.

M/98

INTERVIEW SCHEDULE

	NAME	SYSTEM	DATE	TIME	INTERVIEWER
1	Dom Shea	SEC's	5/1	1500	Pete Eselgroth
2	Bob Swartzwelder	Circulators	5/2	1000	"
3	Steve Robitski	Feedwater Heaters	5/2	1500	"
4	John Wiedemann	Boric Acid Xfer Pump	5/3	1500	"
5	Mike Mortarulo	Station Power Xformers fuse control	5/4	1000	"
6	Mike Mealey & Matt Orticelle	Heater Drain Pumps & MSR drain tank level control	5/4	1400	"

All interviews will be in the Operations Conference Room (ext. 2660) unless otherwise noted.

May 1, 1995 (1:43pm)

4/:5

8(

SALEM SIT ONSITE TEAM SCHEDULE

Day	W	T	F	M	T	W	T	F	M	T	W	T	F	M	T	W	T	F		
Date	26	27	28	1	2	3	4	5	8	9	10	11	12	15	16	17	18	19		
Greg	X	X	X	X	X	X	X	X	X	X	X	X	X							
Tracy		X		X	5am 2pm	10am 8pm	X	X	X	X	X	KIP	L	L						
Steve				X	X	X	X	X	X	X	X	X	X							
Michele	X		X	X	X	X	X	X	X	X	X	X	L	L						
Peter	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓							

Tracy Sunday ~4pm

SALEM STATION MEETINGS

Group	Time	Freq.	Location	Purpose
Sr. Supr.	6:30am	Daily	Lobby Conf.Rm.	Review equip.OOS
	1:00pm	Daily	Lobby Conf.Rm.	scheduled work,
	6:30pm	Daily	Cont.Rm.Area (Corridor)	Tech.Spec.Action Statements, Ops. priority work, Ops. concerns
Mgrs.	8:00am	Daily	Admin.Conf.Rm.	Mgmt. Issues
Engineers	8:30am	Daily	Lobby Conf.Rm.	Plant Status, Incident Reports, Issues
SORC	1:30pm - 3:30pm	Wed	Admin.Conf.Rm.	SORC items
SNSS	6-8am 6-8pm	Daily	SNSS Office	Turnover
Controls	7:30am	M,W,F	Controls Shop	Standup mtg.on issues
	12-2pm	Th(5/4)	Processing Ctr.	Focus mtg.
Chem.	7:00am	Daily	Chem. Shop	Morning mtg.
	7:15am	Daily	Chem. Shop	Sr. Supv. for days activities
	12:30pm	Thur	Chem. Shop	Focus mtg.
RP	7:30am	Daily	RP Area	Morning mtg.
	12:30pm	Daily	RP Area	Sr. Supr. for days activities
	12:00pm	Thur	RP Area	Focus mtg.
Planning	11:00am	Daily	Plan.Mgr.Office	Daily update
	12:15pm	Wed	Admin.Conf.Rm.	Mgr.direct rpt.
	-----	Thur	--------	Focus mtg.
Outage Team	11:00am	5/1/95	B Bldg.Conf.Rm.	Elect.Dist. HIT
	10:00am	5/3/95	B Bldg.Conf.Rm.	Stm.Generator HIT Team
	9:30am	5/11/95	B Bldg.Conf.Rm.	EDG HIT Team
	11:30am	5/18/95	Lobby Conf.Rm.	Pre-outage Mtg.
Technical	9:00am	Daily	Tech.Dept.Area	Plant Status
	11:00am	Tues	Mgr.Office	Direct Reports
	10:00am	Thur	Mgr.Office	Direct Reports
	12:30pm	Thur	Tech.Dept.Area	Focus Mtg. (IF NECESSARY)

Mech.Maint.	7:30am	M,W,F	Maint. Shop	Standup Mtg. on various issues
	12:15pm	Wed	B Bldg.Conf.Rm.	Mgr. Direct Rpts.
	10:00am	Thur	Lobby Conf.Rm.	Supv.Staff Mtg.
	10:30am	M,Tu,W,F	Sr.Supv.Area	Sr.Supv./Supv.Mtg.
NRB	Morning	4/26/95	Salem Plant	Tours
	Afternoon	4/26/95	Exec.Conf.Rm.	Discussions
	All Day	4/27/95	Exec.Conf.Rm.	Discussions

Learn Blossom Conf Rm
TB2 2nd Floor South East Corner

PSE&G

Public Service Electric and Gas Company P.O. Box 236 Hancocks Bridge, New Jersey 08038-0236

Nuclear Business Unit

TO: All QA/NSR Associates

FROM: J. A. Benjamin
Director - QA/NSR

SUBJECT: QA/NSR REORGANIZATION

OUR REF: NQS 95-051

DATE: March 31, 1995

A 10CFR50.59 safety evaluation for the reorganization of QA functions in our department has been approved by SORC at Salem and Hope Creek. Revisions to the procedures for implementation of our structure will be completed to support an effective date of April 10, 1995.

An additional organizational change to improve efficiency of operations has been adopted. The Procurement Assessment group will merge into the Corrective Action and QA Programs group and will be known as Corrective Action and Quality Services.

Attached are organization charts showing individual assignments. Postings for open positions commenced March 29, 1995. If you have any questions regarding these assignments, please discuss them with your (new) manager. If after that discussion, you still have questions, please bring them to my attention, individually or at the next department meeting.

With your support and our working as a team, we will use this new structure to significantly increase our effectiveness as an independent assessment organization and increase our value to the Nuclear Business Unit.

Attachments

W:\DATA\NQS9561.WP

m/121

FUNCTIONAL ORGANIZATION CHART

MANAGER QUALITY ASSESSMENT SALEM	MANAGER QUALITY ASSESSMENT HOPE CREEK	MANAGER CORRECTIVE ACTION & QUALITY SERVICES	MANAGER EMPLOYEE CONCERNS	MANAGER NUCLEAR SAFETY REVIEW

Plant Assessment

- Operations
- Maintenance
- Technical
- Rad Pro/Chemistry
- P/Schedule

Plant Support Assessments

- Nuclear Engg.
- Licensing & Regulation
- Training
- OEF & CA
- Environ Srvcs. & EP
- Site Support
- Materials Mgmt.

Quality Verification

- Independent Inspection
- Welding/Code activities
- Modification & Construction Verification
- Materiel Condition Monitoring
- Rad/HAZMAT Monitoring
- Doc/Records Assessment

Plant Assessment

- Operations
- Maintenance
- Technical
- Rad Pro/Chemistry

Plant Support Assessments

- Nuclear Engg.
- Licensing & Regulation
- Training
- OEF & Corrective Action
- Site Support
- FP, Security, Access Control

Quality Verification

- Independent Inspection
- Welding/Code activities
- Modification & Construction Verification
- Materiel Condition Monitoring
- Rad/HAZMAT Monitoring
- Doc/Records Assessment

Supplier Assessment

- Supplier Evaluation
- SWAQS Listing
- Fuel Procurement Specialist
- 10CFR21 Interface
- NUPIC

Material Compliance

- Material Evaluation and Dedication
- Procurement Assessments:
  - Classification, Purchasing, Storage, Handling

Corrective Action

- Administer the Corrective Action Program
- Trend Analysis & Reporting
- Performance Assessment

QA Programs

- Maintain NBU Quality Assurance Programs
- QA Training & Certification
- Administrative & Financial Services
- Administer the Nuclear Repair Program
- Coordinate CMAP & Tech Specialist Exchange
- Records Retention

- Process Employee Concerns
- Conduct or coordinate investigations of allegations
- Provide training to site supervisors

Safety Review Group Function

- Independent Review of selected plant opns. characteristics, NRC Issuances, indust. advis., facility features, equip.
- Surv. of Plant Opn/Maint.
- Advise Mgmt. of overall Quality/Safety of operations & recommend improvements

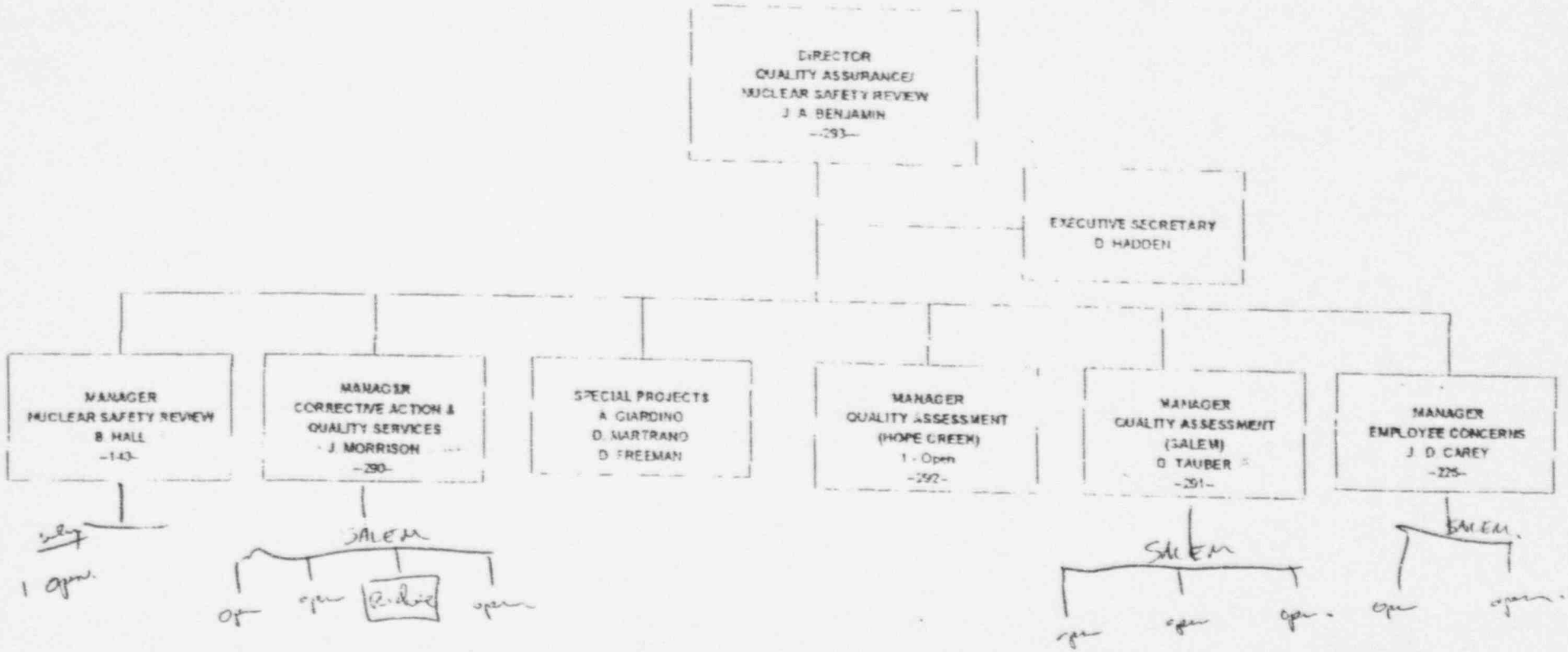
Offsite Safety Review

- Nuclear Review Board Support
- Staff Support for Nuclear Committee of the Board
- Specialized Assmts i.e. SSFR
- Independent Review
  - Safety evaluations for USQ verification
  - Tech Spec Changes
  - Opn. Lic. Chngs Violations
  - Reportable Events
  - SORC minutes
  - Signif. anomalies
  - Tech Spec Rev/ Audits
  - Lic. Event Reports

W:\DATA\ASSESS.WP

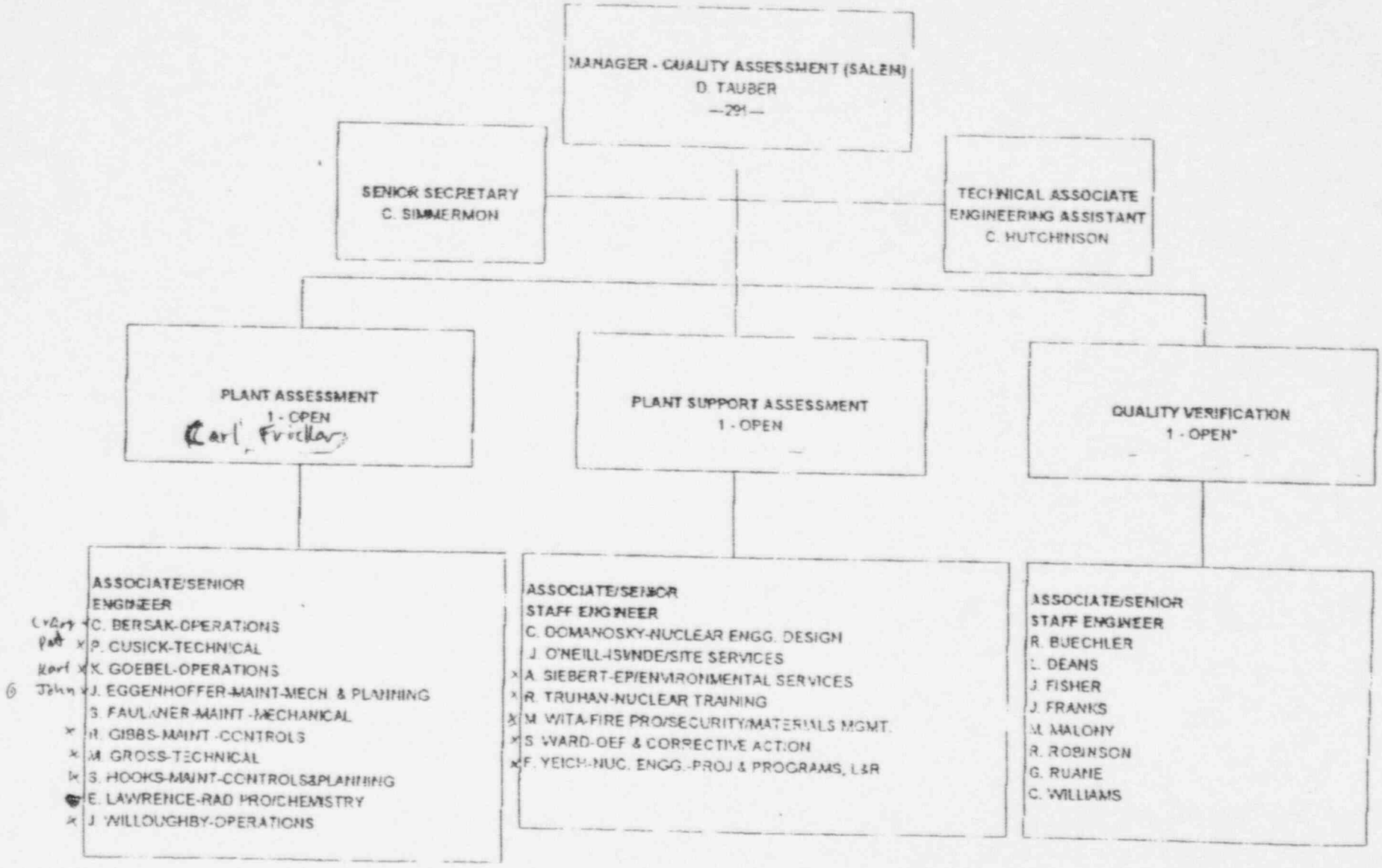
3/28/95

NUCLEAR BUSINESS UNIT
QA/NSR



W:\DATA\293.MF2

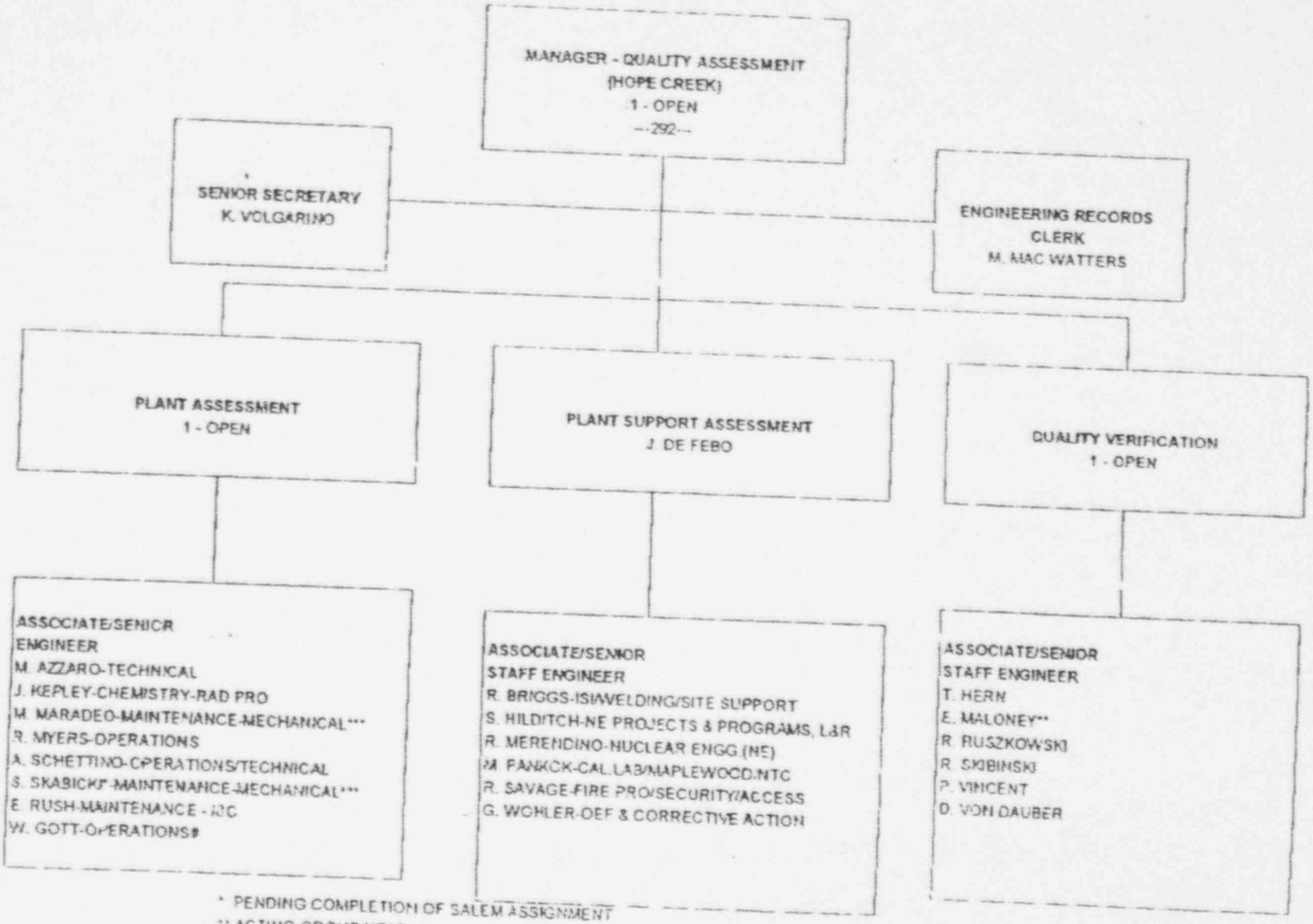
QA/NSR
QUALITY ASSESSMENT (SALEM)



*S. Skalicki Interim Supervisor

W:\DATA\291AF2

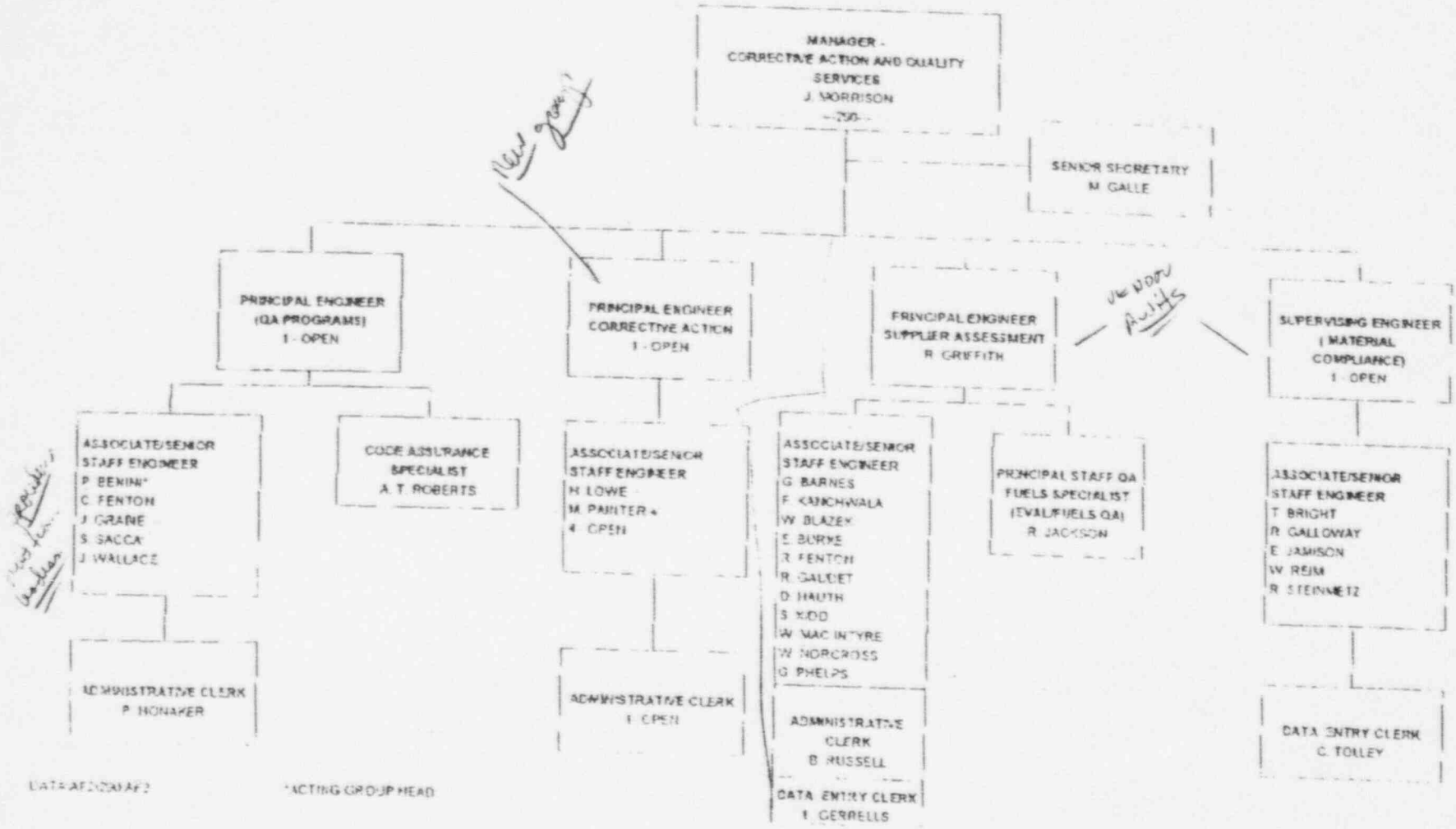
QA/NSR
QUALITY ASSESSMENT (HOPE CREEK)



* PENDING COMPLETION OF SALEM ASSIGNMENT
** ACTING GROUP HEAD
***INCLUDES ASSESSMENT OF PLANNING AND SCHEDULE
MCG-SALEM

W:\DATA\202.AF2

QA/NSR
CORRECTIVE ACTION AND QUALITY SERVICES

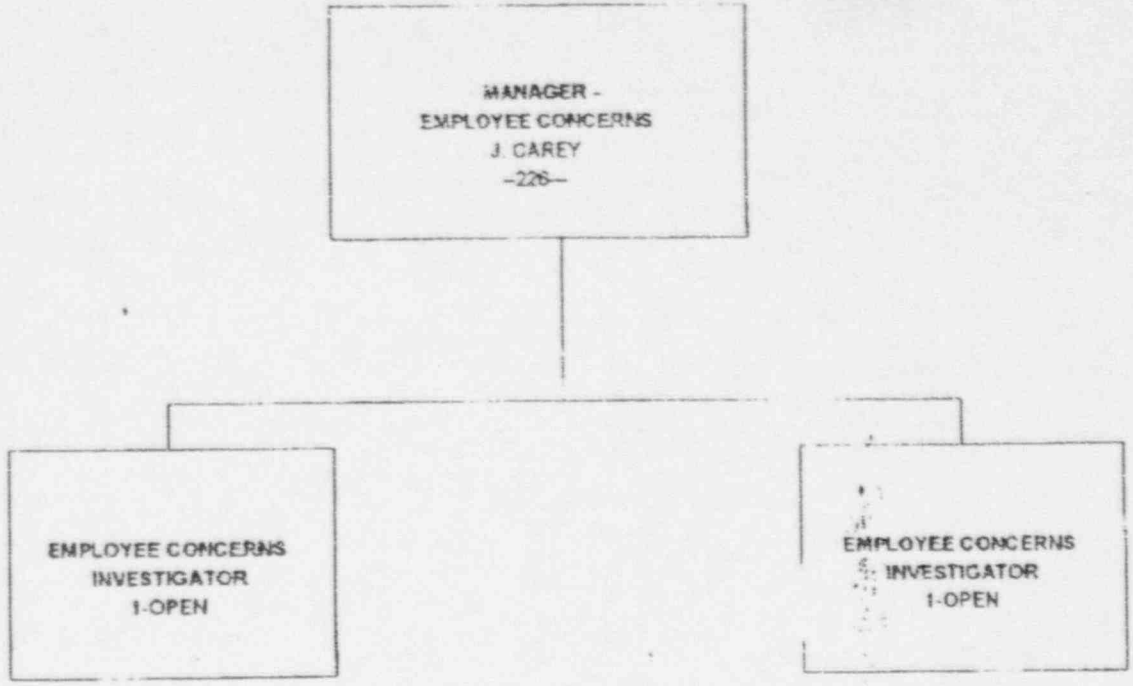


DATA AS OF 03/14/95

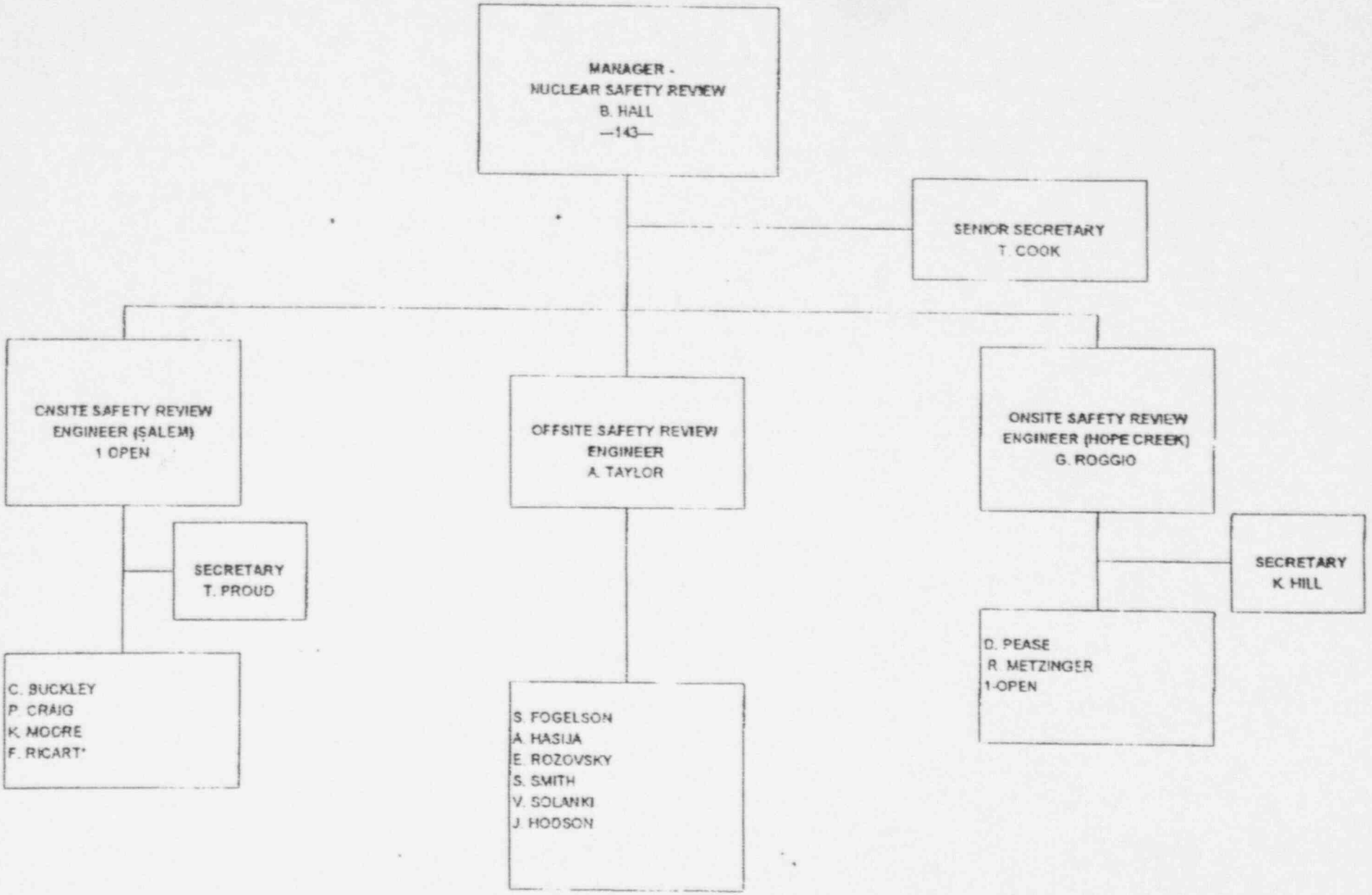
*ACTING GROUP HEAD

QA/N...

EMPLOYEE CONCERNS



NUCLEAR SAFETY REVIEW



W:\DATA\143.AF2

SYSTEM ENGINEERING ASSIGNMENTS
APRIL 24, 1995
Sorted by System

SYSTEM DESCRIPTION /FUNCTIONAL AREA	ENGINEER	BACK UP	EXT.	GROUP
115V AC Systems	MICELI, LOU	MCLAUGHLIN, ROB	2757	ELECT.
125V DC Systems	MICELI, LOU	MCLAUGHLIN, ROB	2757	ELECT.
13KV AC System	BHATIA, VIJAY	MORAKINYO, PAUL	2117	ELECT.
240/208 AC Systems	CHRANOWSKI, RAY	FOCHT, BRUCE	2045	ELECT.
28V DC Systems	MICELI, LOU	MCLAUGHLIN, ROB	2757	ELECT.
480V AC Systems	CHRANOWSKI, RAY	FOCHT, BRUCE	2045	ELECT.
4KV AC Systems	CHRANOWSKI, RAY	FOCHT, BRUCE	2045	ELECT.
500 KV AC System	BHATIA, VIJAY	MORAKINYO, PAUL	2117	ELECT.
ADFCS (digital feedwater)	LOWRY, BILL	PEHUSH, JOHN	2066	I&C
AMIMS	GRIMM, JIM		2096	I&C
AMSAC	JANNETTY, SANDY		2074	I&C
ARPI	SHEA, DOMINIC	MAI, KIM	2078	I&C
Auto Stop Oil	ORTICELLE, MATT	KOLASINSKI, DAVE	2084	BOP
Aux. Ann.	JANNETTY, SANDY		2074	I&C
Aux. Bldg. Structure	ANNETT, JIM		2756	BOP
Aux. Diesels	KOLASINSKI, DAVE	RODGERS, BILL	2055	BOP
Aux. Feedwater Unit 1	ERHARD, JOHN		2752	NSSS
Aux. Feedwater Unit 2	ROBERTS, FLOANN		2086	NSSS
BETA/Annunciators	LOWRY, BILL		2066	I&C
Bistable Trending	PANKO, MIKE	PEHUSH, JOHN	2192	I&C
Bleed Steam (up to heater shells)	RUDOLPH, STEVE	ORTICELLE, MATT	2726	BOP
Boric Acid Transfer	CHOROMANSKI, WAYNE		2077	NSSS
Boron Recovery	ROBERTS, FLOANN		2086	NSSS
Bulk H2 & C02	ORTICELLE, MATT	KOLASINSKI, DAVE	2084	BOP
Cask Crane	FORD, LISA	ALPAUGH, MIKE	2051	RX. ENG.
Cathodic Protection	CHRANOWSKI, RAY	FOCHT, BRUCE	2045	ELECT.
Chemical Feed Unit 1	AMBROSINO, MIKE		2133	NSSS
Chemical Feed Unit 2	CURHAM, JACK		2751	NSSS
Chilled Water Unit 1	PAHWA, GULSHAN		2092	NSSS
Chilled Water Unit 2	CHOROMANSKI, WAYNE		2077	NSSS
Circ. Water	SWARTZWELDER, BOB & GARCIA, ART		2760 & 2763	BOP
Circ. Water Boiler	SWARTZWELDER, BOB & GARCIA, ART		2760 & 2763	BOP
Circ. Water Structure	ANNETT, JIM		2756	BCP
Circ. Water Ventilation	SWARTZWELDER, BOB & GARCIA, ART		2760 & 2763	BOP
Component Cooling Unit 1	ERHARD, JOHN		2752	NSSS
Component Cooling Unit 2	ROBERTS, FLOANN		2086	NSSS
Computers, Plant Liaison	LOWRY, BILL		2066	I&C
Condensate	ROBITZSKI, STEVE	MALEY, MICHAEL	2081	BOP
Condensate Polishing Unit 1	AMBROSINO, MIKE		2133	NSSS
Condensate Polishing Unit 2	CURHAM, JACK		2751	NSSS
Condenser Air Removal & Priming	SWARTZWELDER, BOB & GARCIA, ART		2760 & 2763	BOP
Condenser Vacuum	SWARTZWELDER, BOB & GARCIA, ART		2760 & 2763	BOP
Condensers	SWARTZWELDER, BOB & GARCIA, ART		2760 & 2763	BOP
Containment Bldg Structure	ANNETT, JIM	ORTICELLE, MATT	2756	BOP
Containment Spray Unit 1	CHEN, GORDEN		2754	NSSS
Containment Spray Unit 2	LEMBERGER, BOB		2043	NSSS
Contaminated Drains Unit 1	TIMM, CARL		2762	NSSS
Contaminated Drains Unit 2	HOEG, TIM		2042	NSSS
Control Air	RODGERS, BILL	KOLASINSKI, DAVE	2760	BOP
Control Room Instruments	SHEA, DOMINIC	MAI, KIM	2078	I&C
Core Exit Thermocouple System	FORD, LISA	ALPAUGH, MIKE	2051	RX. ENG.
Cranes	ANNETT, JIM	ORTICELLE, MATT	2756	BOP
CVCS - Unit 1	TIMM, CARL		2762	NSSS
CVCS - Unit 2	HOEG, TIM		2042	NSSS
Cylinder Heating Steam	ORTICELLE, MATT	KOLASINSKI, DAVE	2084	BOP
Diesel Fuel Oil	KOLASINSKI, DAVE	RODGERS, BILL	2055	BOP

M102

SYSTEM DESCRIPTION/FUNCTIONAL AREA	ENGINEER	BACKUP	EXT.	GROUP
Rosemount Trending	MAI, KIM	SHEA, DOMINIC	2008	I&C
RTBs	PANKO, MIKE	STARING, KEN	2192	I&C
RVLIS	JANNETTY, SANDY	LOWRY, BILL	2074	I&C
SEC	SHEA, DOMINIC	MAI, KIM	2078	I&C
Secondary Lab Unit 1	AMBROSINO, MIKE		2133	NSSS
Secondary Lab Unit 2	CURHAM, JACK		2751	NSSS
Secondary Sampling Unit 1	AMBROSINO, MIKE		2133	NSSS
Secondary Sampling Unit 2	CURHAM, JACK		2751	NSSS
Security Power System	MCLAUGHLIN, ROB	MICELI, LOU	2758	ELECT.
Seismic Instruments	GRIMM, JIM		2096	I&C
Service Water	BARNES, JIM	ZABIELSKI, VINCE	2067	BOP
Service Water Intake Structure	BARNES, JIM	ZABIELSKI, VINCE	2067	BOP
Service Water Ventilation	BARNES, JIM	ZABIELSKI, VINCE	2067	BOP
SGFP Control-DCP (Elec)	JANNETTY, SANDY	LOWRY, BILL	2074	I&C
SGFP Lube Oil	ROBITZSKI, STEVE	MALEY, MICHAEL	2081	BOP
SGFP Turbine (including Steam Supply)	ROBITZSKI, STEVE	MALEY, MICHAEL	2081	BOP
Solenoid Valves	FOCHT, BRUCE		2080	ELECT.
SPDS Power System	MCLAUGHLIN, ROB	MICELI, LOU	2758	ELECT.
SPDS	LOWRY, BILL		2066	I&C
Spent Fuel Cooling Unit 1	ERHARD, JOHN		2752	NSSS
Spent Fuel Cooling Unit 2	ROBERTS, FLOANN		2086	NSSS
Spent Fuel Pool	FORD, LISA		2051	RX. ENG.
SSPS/Status Panel	STARING, KEN	PANKO, MIKE	2157	I&C
Station Air/Service Air	RODGERS, BILL	KOLASINSKI, DAVE	2760	BOP
Steam Flow Project/Trending	MAI, KIM	SHEA, DOMINIC	2008	I&C
Steam Generator Blowdown	ROBITZSKI, STEVE	MALEY, MICHAEL	2081	BOP
Steam Generators Unit 1	AMBROSINO, MIKE		2133	NSSS
Steam Generators Unit 2	CURHAM, JACK		2751	NSSS
Subcooling Margin Monitor	FORD, LISA	ALPAUGH, MIKE	2051	RX. ENG.
Transient Loading (Civil)	ANNETT, JIM	ORTICELLE, MATT	2756	BOP
TSC Power Systems Generator	MICELI, LOU	MCLAUGHLIN, ROB	2757	ELECT.
Turbine Auxiliary Cooling System	ORTICELLE, MATT	KOLASINSKI, DAVE	2084	BOP
Turbine Bldg. Structure	ANNETT, JIM	ORTICELLE, MATT	2756	BOP
Turbine Drains	MALEY, MICHAEL	ROBITZSKI, STEVE	2721	BOP
Unit 3 (Electrical)	BHATIA, VIJAY	MORAKINYO, PAUL	2117	ELECT.
Unit 3 Turbine (Mechanical)	KOLASINSKI, DAVE	RODGERS, BILL	2055	BOP
Waste Disposal (Gas, Liquid, Solid) Unit 1	TIMM, CARL		2762	NSSS
Waste Disposal (Gas, Liquid, Solid) Unit 2	HOEG, TIM		2042	NSSS
Watertight Doors	ANNETT, JIM	ORTICELLE, MATT	2756	BOP
Yard Transformers	MORAKINYO, PAUL	BHATIA, VIJAY	2030	ELECT.

Component Engineering Group

SYSTEM DESCRIPTION/FUNCTIONAL AREA	ENGINEER	EXT.
I&C	CROUCH, CLAYTON	2175
Mechanical	CONROY, MATT	7697
Mechanical	DAVIES, STEVE	2089
I&C	LAUGHMAN, DAN	2759
Electrical	DIGIROLAMO, CHARLIE	2064
Electrical/MOV	GALLOGLY, STEVE	2797
Mechanical	RHODA, JOHN	2095

Salem SIT Open Questions

5/10/95 1:10:16 PM

ITEM NUMBER	DATE ISSUED	RESP DEPT	PSEG SPONSOR / LR SPONSOR	NRC INSPECTOR / DESCRIPTION	STATUS UPDATE
SIT-003	4/26/95	OPS	B. O' GRADY W. GRAU	P. ESELGROTH FOR SIT-002 PROVIDE SOMETHING THAT DESCRIBES THE SIGNIFICANCE OF THE SIT-002 DATA.	B. O' Grady addressing - he has copy of SIT-002. Forecast complete 5/10/95.
SIT-025	4/27/95	OPS	B. O' GRADY W.MCTIGUE	P. ESELGROTH PROVIDE INFORMATION REGARDING REDUCTIONS IN UNPLANNED ENTRY INTO TECHNICAL SPECIFICATION ACTION STATEMENTS, TAGGING PROBLEMS/MISPOSITION.	B. O' Grady to supply answer. Forecast complete 5/10/95.
SIT-090	5/8/95	QA	D. TAUBER R. MALONE	P. ESELGROTH Is there a program at Salem for improving procedural adherence? If so, provide a copy of documentation.	R. Malone reviewing with station points-of-contact and SQA. Forecast reply by 5/10/95.
SIT-093	5/8/95	VAR	VARIOUS W. MCTIGUE	P. ESELGROTH Does Station management have a basis for concluding that procedure use and adherence over the past 3 months has improved, declined or remained the same?	Requested key station points-of contact to reply by 5/9 am.
SIT-101	5/8/95	OPS	B. O'GRADY W. MCTIGUE	P. ESELGROTH Attachment 2, p.3 of the IMPACT plan states that "ease of operations has been facilitated by reducing operator workarounds, administrative burdens and other unnecessary diversions. What actions have been taken?	With B. O'Grady for action. Forecast response by 5/10/95.

ITEM NUMBER	DATE ISSUED	RESP DEPT	PSEG SPONSOR LR SPONSOR	NRC INSPECTOR DESCRIPTION	STATUS UPDATE
SIT-105	5/8/95	OPS	B. O'GRADY W. MCTIGUE	P. ESELGROTH Attachment 2, p. 4 of the IMPACT plan says that "actions were defined to allow Salem to implement many of Hope Creek's work control processes and to assure proper control of tagging." What are these actions?	With B. O'Grady for action. Request reply by 5/10/95.
SIT-109	5/8/95	TECH	T. SPENCER W. MCTIGUE	G. GALLETTI For IR 95-518 (PR 0095050388), which was assigned significance level 2, provide the evaluation by the Technical department.	Operability determination/system engineer memo provided 5/10; Mctigue to provide follow-up by 5/10 pm.
SIT-110	5/8/95	PLAN	W. O'BRIEN W.MCTIGUE	T. WALKER Provide status of scheduled work activities for EMIS tags: 0077880, 18617, 15904, 11503, 050337, 06615, 15703.	McTigue to review MMIS status and follow-up with planning as necessary. Forecast 5/10 am response. Licensing generated workorder screen prints for 18617, 15904, 11503 and 15703. 77880, 50337 and 6615 are with Planning for followup.
SIT-112	5/9/95	PLAN	W. O'BRIEN W. McTigue	T. WALKER Workorder 950418079: "2 Gen Vreg in alarm" was sched for 5/8 (or 5/5 pod) - rescheduled? to when? When was it identified? Why is it "B" priority?	Question and MMIS workorder screen print provided to W. O'Brien. Reply requested 5/10/95.
SIT-115	5/9/95	MAINT	M. MORRONI W.MCTIGUE	P.ESELGROTH The 5/9 response to SIT-86 identified two cases where a troubleshooting procedure was used because the original work package was found to be unworkable: W/O's 950406037 and 950226056. In these cases, does Maintenance - Controls consider the use of the troubleshooting procedure to be appropriate?	Morroni provided with packages on 5/9 pm. Request reply by 5/10 pm. SEE SIT-089 and M. Morroni's response to QA finding as documented in PMG 95-0208.

ITEM NUMBER	DATE ISSUED	RESP DEPT	PSEG SPONSOR LR SPONSOR	NRC INSPECTOR DESCRIPTION	STATUS UPDATE
SIT-116	5/9/95	SQA	D.TAUBER W.MCTIGUE	P.ESELGROTH For 47 troubleshooting procedure work packages provided in response to SIT-86, determine whether use of troubleshooting procedures was appropriate.	D. Tauber provided with the packages on 5/9 pm. Feedback requested by 5//10 pm.
SIT-117	5/9/95	NTC	A.ORTICELLE P. MOELLER	P. ESELGROTH Please provide training handouts used at NTC relative to the April 7 event and the Turbine Generator failure.	Discussed with A. Orticelle 5/9/pm; reply requested by 5/10.
SIT-119	5/9/95	TECH	MADSEN/PEHUS W.MCTIGUE	S. BARR Provide list of Hagan controller modules (XREF: SIT-071, NJS 2N1701 transistors).	List with component ID's and rack location was reviewed with NRC 5/10 am. Inspector requested component functional description (e.g., 11 SG level control, etc) . Request marked-up table by 5/10 pm.
SIT-120	5/10/95	NE	SANTONASTAS W.MCTIGUE	P.ESELGROTH Is there a program in place to review the Bills of Material and correct discrepancies, other than fixing them on a case-by-case basis?	FAX'd to L. Santonastaso, v-mail to R. Bashall, 5/10 pm. Request reply by end of 5/10.
SIT-121	5/10/95	GMSTF	WILTSEE W.MCTIGUE	G.GALLETTI Provide a status of IR's with breakdown of actions by department, from 2/1/95.	Discussed with Galletti and Wiltsee on 5/10. Wiltsee working to provide by 5/11.
SIT-122	5/10/95	GMSTF	WILTSEE W.MCTIGUE	G.GALLETTI Provide data on number of IR actions originally due 4/95, relative to whether the actions were completed or due dates extended.	Discussed with Galletti and Wiltsee on 5/10. Wiltsee working to provide by 5/11.

16 open questions

Licensee/Facility:

Public Service Electric
and Gas Company
Salem Unit 2
Docket No. 50-311
PWR/Westinghouse 4 loop

Notification:

11/18/91 AIT Leader

Subject: Salem 2 AIT

Reportable Event No.: 22209

Discussion: Update of PNO-I-91-81. The AIT at Salem 2 continues. Licensee evaluation of the November 9 turbine damage/generator fire event has proceeded very carefully and methodically. The following equipment damage, beyond that mentioned in the Preliminary Notification, has been identified:

-- over 80 tubes in the #22 condenser were cut by turbine blade fragments, resulting in chloride contamination of the secondary plant;
-- the "L0" blades in all three low pressure (LP) turbines have about 1/8 inch of their tips sheared;
-- stator water cooling lines ruptured, resulting in flooding of the generator stator;
-- generator rotor windings have loosened, apparently from vibration and overspeed;
-- a flow diffuser in the #22 LP turbine sheared its mounting bolts during the event and apparently fell into the turbine blade path, causing the extensive blade damage and the turbine casing ruptures; and
-- the #9 shaft bearing is badly damaged and seized.

Licensee reconstruction of a sequence of events and evaluation of potential causes continue. This evaluation is focusing on turbine controls and the turbine tests that were in progress when the event began. A comprehensive test and troubleshooting procedure is being finalized -- this procedure will test turbine control components and circuitry and may confirm several suspected component failures. The licensee suspects that a solenoid operated emergency trip valve, as well as redundant overspeed protection control solenoids failed to automatically trip the turbine in the event.

The unit remains in cold shutdown at 110 degrees F with the primary plant vented to the pressurizer relief tank. RHR shutdown cooling is in service. The licensee has commenced the sixth refueling outage. Preparations for reactor disassembly are currently underway.

The NRC AIT will continue onsite at least through Wednesday and is tentatively planning an exit meeting for November 25.

Regional Action: Continue AIT.

Contact: John White FTS: (609)935-3850