#### United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

		Functional			Template	
Date	Source	Area	ID	Туре	Codes	Item Description
01/16/2000	1999009	Pri: OPS	NRC	NEG	<b>Pri:</b> 1B	Steam Generator Chemistry Excursion
		Sec:			Sec: 1C	Several operational deficiencies allowed an increased volume of seawater to enter the steam generators during a
Dockets Discussed: 05000443 Seabrook 1 01/31/2000 1999009					<b>Ter:</b> 5A	secondary chemistry event. Specifically, the operating procedure and existing management expectations enabled the operators to maintain the condensate lineup in preparation for placing an idle pump in-service for an extended period of time. Additionally, the operators were slow to respond to three condensate system alarms during the event. The license is conducting a root cause evaluation to identify any additional corrective actions.
01/31/2000	1999009	Pri: OPS	NRC	POS	Pri: 1A	Nuclear Safety Audit Review committee (NSARC) Meeting
		Sec:			Sec:	A regularly scheduled NSARC meeting effectively reviewed key station activities and satisfied TS requirements.
Dockets Discussed: 05000443 Seabrook 1					Ter:	
01/31/2000	1999009	Pri: OPS	NRC	POS	<b>Pri:</b> 1A	Plant Shutdown, Steam Generator Chemistry Excursion, and Start-Up
		Sec:			Sec: 1B	The operators performed a reactor down-power and start-up well. The licensee responded well after identifying the
Dockets Discu 05000443 Sea					<b>Ter:</b> 1C	problem, to minimize the adverse consequences associated with the intrusion of seawater into the steam generators. The event did not appear to have any immediate steam generator operability concerns.
01/16/2000	1999009	Pri: OPS	NRC	POS	<b>Pri:</b> 1C	Year 2000 (Y2K) Readiness Review
		Sec:			<b>Sec:</b> 4B	The licensee developed and implemented a comprehensive Year 2000 contingency plan.
Dockets Discu 05000443 Sea					Ter:	
12/05/1999	1999008	Pri: OPS	NRC	POS	<b>Pri:</b> 1C	Operator Training and Qualifications
		Sec:			Sec:	Although there were some performance errors, the crews performed acceptably overall in all four examination scenarios
Dockets Discussed: 05000443 Seabrook 1					Ter:	The facility evaluators identified all performance deficiencies from both the Job Performance Measures and the scenarios. Post-scenario evaluations were exceptionally thorough and comprehensive. Detailed trending of drew and individual simulator competency scores was considered a program strength. Remediation and reexaminations practice were appropriate. The facility monitored attendance and ensured that missed training was made up. The facility utilizer effective methods for obtaining trainee feedback and for evaluating these comments, as well as plant and industry events, for revision of the training curriculum.
12/05/1999	1999008	Pri: OPS	NRC	POS	<b>Pri:</b> 1C	Quality Assurance in Opertions/Response to Generic Letter 98-02
		Sec:			<b>Sec:</b> 4B	The licensee's response to Generic Letter (GL) 98-02, "Loss of Reactor Coolant Inventory and Associated Loss of
Dockets Discu 05000443 Sea					Ter:	Emergency Mitigation Functions While in a Shutdown Condition," was appropriate.

# United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Date	Source	Functional Area	ID	Туре	Template Codes	Item Title Item Description
12/05/1999	1999008	Pri: OPS	NRC	POS	<b>Pri:</b> 1C	Operator Training and Qualifications
		Sec:			<b>Sec:</b> 5A	The facility utilized effective methods for obtaining trainee feedback and for evaluating these comments, as well as plan
Dockets Discu 05000443 Sea					Ter:	and industry events, for revision of the training curriculum.
10/24/1999	1999007	Pri: OPS	NRC	POS	Pri: 1A	Operator Performance - Challenged a Planned Safety Injection System Maintenance Activity
		Sec:			Sec: 3A	A control room operator demonstrated a good questioning attitude by stopping a planned maintenance activity before
Dockets Discu 05000443 Sea					Ter:	placing the plant into an improper configuration that would have adversely affected both emergency core cooling system trains.
10/24/1999	1999007	Pri: OPS	NRC	POS	Pri: 1A	Engineered Safety Features Actuation System (ESFAS) Surveillance Testing
		Sec:			Sec: 3A	Quarterly engineered safety features actuation system slave relay testing was performed well. Shift management
Dockets Discu 05000443 Sea					<b>Ter:</b> 2B	responded appropriately to a minor test error.
09/12/1999	1999006	Pri: OPS	NRC	NEG	Pri: 1C	Operational Experience Review - Potential Loss of Cooling to Reator Coolant Pumps
09/12/1999 1999006 Dockets Discussed: 05000443 Seabrook 1		Sec:			Sec: 5B Ter:	The licensee is reviewing its operating procedures to enhance the operator response to a loss of a 4kV bus. Additionally, the licensee is reviewing the operating experience program requirements to ensure that items of potentiall higher significance are promptly identified for review.
09/12/1999	1999006	Pri: OPS	NRC	POS	Pri: 1A	Corrective Actions - Component Mis-Positioning Review
		Sec:			Sec: 3A	The common cause analysis was a good initiative to assess an adverse trend involving the frequency of component
Dockets Discu 05000443 Sea					<b>Ter:</b> 5B	mis-positioning events.
08/13/1999	1999010	Pri: OPS	NRC	NEG	Pri: 5A	Adverse Condition Reporting (ACR) System
		Sec:			Sec:	There was no formal training of station personnel on the ACR process either within general employee training initial or
Dockets Discu 05000443 Sea					Ter:	retraining lesson plans. There was an inconsistent understanding by personnel as to when to issue an ACR and inconsistent use of the program.

# United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Date	Source	Functional Area	ID	Туре	Template Codes	Item Title Item Description
08/13/1999	1999010	Pri: OPS	NRC	NEG	Pri: 5A	Self-Assessment Activities
		Sec:			Sec: 5B	Repetitive issues were noted in follow-up audits of program areas indicating lack of effectiveness in correcting problems
Dockets Discu 05000443 Seal					<b>Ter:</b> 5C	Also, the repetitive issues (e.g., procedure adherence) indicated the QA program did not aggressively track and monito corrective action issues identified in its audits to ensure deficiencies in its audits were properly resolved.
08/13/1999	1999010	Pri: OPS	NRC	NEG	Pri: 5B	Onsite Operation Review Committee - SORC
		Sec:			Sec: 1C	SORC members did not always actively participate in the discussion of the items being presented and members were
Dockets Discussed:           05000443 Seabrook 1           08/13/1999           1999010					Ter:	not always polled to seek approval or opinions on matters before the SORC.
08/13/1999	1999010	Pri: OPS	NRC	NEG	Pri: 5C	Corrective Action Program
		Sec:			Sec:	Initiatives over the past two years have resulted in a significant reduction in the backlog of both overdue corrective
Dockets Discussed: 05000443 Seabrook 1					Ter:	actions and evaluations. However, the current backlog indicates a need for enhanced personnel accountability and focus on backlog reduction.
08/13/1999	1999010	Pri: OPS	NRC	POS	Pri: 5A	Self-Assessment Activities
		Sec:			Sec: 5B	The licensee implemented a generally well defined self-assessment program.
Dockets Discu 05000443 Seal					<b>Ter:</b> 5C	
08/13/1999	1999010	Pri: OPS	NRC	POS	Pri: 5A	Self-Assessment Activities
		Sec:			Sec: 5B	Quality Assurance audits were an effective element of the self-assessment process and were critical and thorough in
Dockets Discu					Ter: 5C	evaluating station program areas.
05000443 Seal	prook 1					
08/13/1999	1999010	Pri: OPS	NRC	POS	Pri: 5A	Nuclear Safety Audit Review Committee (NSARC)
		Sec:			Sec: 5B	NSARC implemented numerous actions to improve its efficiency and effectivenes.
Dockets Discu	ssed:				Ter: 5C	

# United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Date	Source	Functional Area	ID	Туре	Template Codes	Item Title Item Description
08/13/1999	1999010	Pri: OPS	NRC	POS	<b>Pri:</b> 5B	Onsite Operation Review Committee - SORC
		Sec:			Sec: 1C	The SORC was conducted with appropriate regard to safety and oversight of plant activities.
Dockets Discu 05000443 Sea					Ter:	
08/13/1999	1999010	Pri: OPS	NRC	POS	Pri: 5B	Licensee Action on Non-cited Violations (NCVs)
		Sec:			Sec: 5C	Performance regarding corrective actions for NCVs was good. NCVs were entered into the corrective action program
Dockets Discu 05000443 Sea					Ter:	and corrective actions were implemented, as appropriate.
08/13/1999	1999010-11	Pri: OPS	NRC	NCV	Pri: 5C	General Performance in Problem Resolution
		Sec:			Sec: 1C	The licensee identified that it was slow to recognize an adverse trend in personnel training and qualification issues.
Dockets Discu 05000443 Sea					Ter:	Also, immediate and interim corrective actions were not identified in the corrective action program, and a common cause analysis for numerous training issues had been open for over a year.
08/25/1999	1999005	Pri: OPS	NRC	NEG	Pri: 1C	Operator Performance Emergency Cooling Tower Operation
		Sec:			Sec: 3A	Procedural and job planning weaknesses contributed to a failure to maintain the cooling tower basin conditions within
Dockets Discu 05000443 Sea					Ter:	the TS limits.
08/25/1999	1999005	Pri: OPS	NRC	POS	Pri: 1A	Operator Performance - Conduct Of Operations
		Sec:			Sec: 3A	The Unit Shift Supervisor demonstrated a good questioning attitude by challenging a request to initiate a 3% power
Dockets Discu	issed:				Ter:	reduction to support a planned reactor protection system surveillance test.
05000443 Sea	brook 1					
08/25/1999	1999005	Pri: OPS	NRC	POS	Pri: 2A	Corrective Actions - Operational Status Of Facilities and Equipment
		Sec:			Sec: 5C	The licensee's actions for an elevated steam chase temperature condition were appropriate, however, this condition
Dockets Discu 05000443 Sea					Ter:	may have been precluded by examination and cleaning of the ventilation intake screens in response to a previously NRC identified elevated temperature condition.

# United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Date	Source	Functional Area	ID	Туре	Template Codes	Item Title Item Description
08/25/1999	1999005	Pri: OPS	NRC	POS	Pri: 3A	Turbine Driven Emergency Feedwater Pump Surveillance Testing
		Sec:			Sec: 2B	emergency feedwater turbine driven pump surveillance test activities were performed well. The corrective actions f
<b>Dockets Discu</b> 05000443 Seal					<b>Ter:</b> 2A	previous oscillations in the indicated pump discharge pressure appeared successfull.
08/25/1999	1999005	Pri: OPS	NRC	POS	Pri: 5A	Corrective Actions - Emergency Cooling Tower Operation
		Sec:			Sec: 5C	The licensee appropriately declared the cooling tower inoperable and restored the basin conditions with the TS allowed
Dockets Discussed:           05000443 Seabrook 1           07/26/1999         1999004					<b>Ter:</b> 3A	outage time. The licensee's self-assessment appeared to identify the contributing factors for this event.
07/26/1999	1999004	Pri: OPS	NRC	POS	Pri: 1A	Operator Knowledge and Performance
		Sec:			Sec: 3A	The operators maintained good control of key reactor shutdown parameters. The operators performed the reactor
<b>Dockets Discu</b> 05000443 Seal					Ter:	start-up well and the station provided good support to the operators during the start-up.
06/21/1999	1999002	Pri: OPS	NRC	NEG	Pri: 1C	Operational Status of Facilities and Equipment
		Sec:			Sec: 3A	The inspector noted a poor radiological work practice inside the containment.
<b>Dockets Discu</b> 05000443 Seal					Ter:	
06/21/1999	1999002	Pri: OPS	NRC	POS	Pri: 1A	Plant Power Reduction and Cooldown;Turbine Volumetric Test
		Sec:			Sec: 3A	The plant power reduction and cooldown, and the turbine volumetric testing were performed well.
Dockets Discu	ssed:				Ter:	
05000443 Seal	brook 1					
06/21/1999	1999002	Pri: OPS	NRC	POS	Pri: 1A	Emergency Diesel Generator (EDG) Surveillance Testing
		Sec:			Sec: 3A	The operators performed the emergency diesel generator testing generally well; however, the licensee identified a few
Dockets Discu 05000443 Seal					<b>Ter:</b> 5A	test and configuration control deficiencies during the "A" train testing. These issues were properly entered into the licensee's corrective action program.

# United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Date	Source	Functional Area	ID	Туре	Template Codes	Item Title Item Description
04/20/1999	1999001	Pri: OPS	NRC	POS	Pri: 1A	Conduct of Operations
		Sec:			Sec:	Routine operations were performed well. The licensee responded well to minor equipment deficiencies identified during
Dockets Discu 05000443 Sea					Ter:	the period.
04/20/1999	1999001-02	Pri: OPS	NRC	NCV	Pri: 1C	Failure of Primary Auxiliary Building )PAB) Fan PAH-FN-42B
		Sec:			Sec: 3A	Multiple station personnel failed to recognize and question an improper pre-conditioning activity performed on the
Dockets Discu 05000443 Sea					Ter: 2A	primary auxiliary building fan dampers during routine testing. The licensee initiated an adverse condition report to review this event. The failure to properly test the safety-related fans is considered a non-cited violation (NCV 99-01-01)
02/26/1999	1998011	Pri: OPS	NRC	NEG	Pri: 1A	Emergency Feedwater Pump Operation and Testing
		Sec:			Sec: 1C	The inspector noted a minor problem identification weakness in that several personnel from multiple disciplines did no
Dockets Discu 05000443 Sea					Ter: 3A	identify a small steam leak from a EFW steam supply valve. The licensee promptly evaluated the leak, and determine that it did not affect the system operability.
02/26/1999	1998011	Pri: OPS	NRC	NEG	Pri: 5C	Operational Status of Facilities and Equipment
		Sec:			Sec:	A weakness was noted involving the effectiveness of previous actions to correct these problems involving the storage of
Dockets Discu 05000443 Sea					Ter:	boric acid and also ensuring access to the startup feed pump lower suction valve during cold weather conditions.
02/26/1999	1998011	Pri: OPS	NRC	POS	Pri: 1C	Emergency Feedwater Pump Operation and Testing
		Sec:			Sec: 1C	The emergency feedwater (EFW) turbine driven pump surveillance test activities were performed well.
Dockets Discu					Ter: 3A	
05000443 Sea	ibrook 1					
02/26/1999	1998011	Pri: OPS	NRC	POS	Pri: 1C	Operational Status of Facilities and Equipment
		Sec:			Sec: 4B	The licensee implemented adequate actions to address a boron storage deficiency, and to ensure timely access to the
Dockets Discu	<b>ussed:</b> Ibrook 1				Ter:	start-up feed pump condensate storage tank lower suction valve during cold weather conditions.

# United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Date	Source	Functional Area	ID	Туре	Template Codes	Item Title Item Description
01/28/1999	1998010	Pri: OPS	NRC	NEG	<b>Pri:</b> 1A	Main Feedwater Isolation Event and Human Performance Standdown
		Sec:			Sec: 1B	Several operational errors, including a failure to follow a procedural requirement, contributed to the feedwater isolation
Dockets Discu 05000443 Seal					Ter:	event. Additionally, several minor human performance deficiencies occurred during the forced outage. The licensee implemented adequate corrective actions to address these issues.
01/28/1999	1998010	Pri: OPS	NRC	NEG	Pri: 1A	Event Reports
		Sec:			Sec: 1C	A minor violation was identified for the failure to properly report an event involving the initiation of a shutdown required b
Dockets Discu 05000443 Seal					Ter:	Technical Specifications.
01/28/1999	1998010	Pri: OPS	NRC	POS	Pri: 1A	Reactor Startup Observations
		Sec:			Sec:	The operators performed two reactor start-ups well.
Dockets Discussed: 05000443 Seabrook 1					Ter:	
01/28/1999	1998010	Pri: OPS	NRC	POS	Pri: 1A	Automatic Reactor Trip Following a Load Reject
		Sec:			Sec: 1B	The operators responded well to stabilize plant conditions following the reactor trip on December 22. The event team
Dockets Discu 05000443 Seal					Ter:	review of this event was thorough and the licensee completed appropriate corrective actions prior to the plant restart.
01/31/2000	1999009	Pri: MAINT	NRC	NEG	Pri: 2B	Work Planning - Feedwater Isolation Valve Repair
		Sec:			Sec: 1C	The planned operator compensatory actions to ensure isolation of the associated feedwater loop during repair of a
Dockets Discu	ssed:				Ter:	nitrogen leak from a feedwater isolation valve were not documented in the on-line maintenance assessment evaluation.
05000443 Seal	brook 1					
01/31/2000	1999009	Pri: MAINT	NRC	POS	Pri: 3A	Feedwater Valve Nitrogen Leak
		Sec:			Sec:	The maintenance activities to repair a nitrogen leak in the 'A' steam generator main feedwater isolation valve FW-V30
Dockets Discussed:					Ter:	were performed well.

# United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Date	Source	Functional Area	ID	Туре	Template Codes	Item Title Item Description
12/05/1999	1999008	Pri: MAINT	NRC	NEG	Pri: 5B	Corrective Actions - Control Building Air Conditioning (CBA) System Electrical Connector Failure
		Sec:			<b>Sec:</b> 4B	The licensee's initial sampling criteria to ensuere tht the remaining station electrical connectors were in good co
Dockets Discu 05000443 Sea					Ter:	did not appear consistent with the guidance in draft regulatory guide (DG) 1070.
12/05/1999	1999008	Pri: MAINT	NRC	POS	Pri: 2A	Control Building Air Conditioning (CBA) System Electrical Connector Failure
		Sec:			Sec: 2B	The licensee responded well to investigate an event involving a failure of the "A" control building air compressor to start
Dockets Discussed: 05000443 Seabrook 1 					Ter:	due to a broken electrical connector.
12/05/1999	1999008	Pri: MAINT	NRC	POS	Pri: 2B	Seal Injection to Repair Steam Leak on The Main Turbine #2 Control Valve (1MS-CV-2)
		Sec:			Sec: 5A	The licensee evaluated and performed a temporary leak seal repair of the main turbine #2 control valve (1MS-CV-2) we
Dockets Discu 05000443 Sea					Ter:	The licensee properly recognized that this type of leak was repetitive and initiated a cause and failure analysis to prevent recurrence.
10/24/1999	1999007	Pri: MAINT	NRC	POS	Pri: 2B	Freeze Seal Installation Activities
		Sec:			Sec: 3A	The licensee performed a planned freeze seal activity on the 'B' boric acid pump discharge line well. The inspector
Dockets Discu 05000443 Sea					Ter:	found the work package and associated on-line maintenance and freeze seal evaluations adequate. In addition, adequate management and oversight support was observed.
10/24/1999	1999007	Pri: MAINT	NRC	POS	Pri: 2B	Primary Component Cooling Water (PCCW) Pump Maintenance Activities
		Sec:			Sec: 3A	The maintenance activities to repair an oil leak on the 'B' primary component cooling water pump were performed well.
Dockets Discussed: 05000443 Seabrook 1					Ter:	The licensee developed a positive initiative to review their vendor manual program requirements.
10/24/1999	1999007-05	Pri: MAINT	NRC	NCV	Pri: 1C	Work Planning - Improper Review of a Planned Safety Injection System Maintenance Activity
		Sec:			Sec: 2B	The licensee did not perform an adequate assessment of a significant planned maintenance activity that affected the
Dockets Discu 05000443 Sea					Ter:	normal emergency core cooling system alignment during power operations as required by maintenance procedure WM 10.1. The operator alertly stopped this activity.

#### United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Date	Source	Functional Area	ID	Туре	Template Codes	Item Title Item Description
09/12/1999	1999006	Pri: MAINT	NRC	NEG	Pri: 2B	Work Planning - Breaker Trip Checks of "C" Primary Component Cooling Water (PCCW) and Train "B" Charg
		Sec:			Sec:	The inspector identified that the risk assessment performed by the reliability and safety engineering group did not
Dockets Discu 05000443 Seal					Ter:	accurately model the turbine driven emergency feedwater pump steam inlet valve position. The licensee initiated an adverse condition report to review this issue.
09/12/1999	1999006	Pri: MAINT	NRC	POS	Pri: 2B	Replacement of "B" EDG Temperature Instrumentation
		Sec:			Sec: 3A	The inspector noted proper controls and coordination, including system engineering involvement and management
ockets Discussed: 5000443 Seabrook 1 8/13/1999 1999010					Ter:	oversight, during replacement of the "B" emergency diesel generator (EDG) temperature instrumentation. Field personnel alertly identified a discrepancy between the work instructions and the design drawing and obtained proper engineering involvement to resolve this issue.
08/13/1999	1999010	Pri: MAINT	NRC	NEG	Pri: 5C	General Performance in Problem Resolution
		Sec:			Sec: 2A	Corrective actions with a high voltage inverter problem were narrowly focused. The revised plan for resolution of the DC
Dockets Discu 05000443 Seal					Ter:	surveillance testing was adequate. The Westinghouse AR relay resolution was very good but the potential cross contamination on the instrument racks was inappropriately closed following the first ACR review.
08/13/1999	1999010	Pri: MAINT	NRC	NEG	Pri: 5C	Operating Experience Review Program
		Sec:			Sec: 2A	NAESCO failed to take prompt action to evaluate the need for preventive maintenance activities on its total population of
Dockets Discu 05000443 Seal					Ter:	safety-related AOVs and implement and document corrective actions to prevent failures.
08/13/1999	1999010	Pri: MAINT	NRC	POS	Pri: 5C	General Performance in Problem Resolution
		Sec:			Sec: 2B	The maintenance rule improvement plan for the MSIVs was thorough and the corrective actions assigned appeared to
Dockets Discu	ssed:				Ter:	resolve the outstanding issues. Performance on selected other longstanding equipment degradation issues was not as
05000443 Seal	brook 1					good.
08/25/1999	1999005	Pri: MAINT	NRC	NEG	Pri: 3B	Conduct Of Operations
		Sec:			Sec: 3A	The request by a technician to initiate an unnecessary power reduction for a planned surveillance activity indicated that
Dockets Discu	ssed:				Ter:	test personnel did not fully understand the surveillance requirements.

# United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Date	Source	Functional Area	ID	Туре	Template Codes	Item Title Item Description
08/25/1999	1999005	Pri: MAINT	NRC	POS	Pri: 2A	Service Water Pump Replacement
		Sec:			Sec: 2B	The "D" SW pump mechanical maintenance replacement activities were performed well.
<b>Dockets Discu</b> 05000443 Seal					<b>Ter:</b> 3A	
07/26/1999	1999004	Pri: MAINT	NRC	POS	Pri: 1B	Elevated Main Turbine Bearing Vibration
		Sec:			<b>Sec:</b> 4B	The licensee properly identified and responded well to address elevated main turbine bearing vibration levels
<b>Dockets Discu</b> 05000443 Seal					<b>Ter:</b> 3A	experienced during the plant startup activities on May 14, 1999. The planned actions to further reduce the main turbin bearing vibration levels appear appropriate.
07/26/1999	1999004	Pri: MAINT	NRC	POS	Pri: 2A	Pressurizer Safety Relief Valve (RC-V-115) Seat Leakage
		Sec:			Sec: 1C	The licensee properly identified and developed a plan to stop small seat leakage from one of the three pressurizer
<b>Dockets Discu</b> 05000443 Seal					<b>Ter:</b> 4B	safety relief valves. The licensee's efforts to seat the valve were successful.
07/26/1999	1999004	Pri: MAINT	NRC	POS	Pri: 2A	Containment Building Level Indicating Transmitter Drift
		Sec:			Sec: 1C	The licensee properly identified, evaluated, and corrected a containment building level indication instrument drift
Dockets Discu 05000443 Seal					<b>Ter:</b> 4B	problem.
06/21/1999	1999002	Pri: MAINT	NRC	NEG	Pri: 1C	Freeze Seal For Replacement of Spent Fuel Discharge Valve (SFPV-2))
		Sec:			Sec:	The inspector identified an industrial safety hazard in that personnel involved with the work activities failed to recognize
Dockets Discussed: 05000443 Seabrook 1					Ter:	that a local oxygen monitor indicated a low oxygen condition. The licensee implemented appropriate corrective action for this finding.
06/21/1999	1999002	Pri: MAINT	NRC	POS	Pri: 1C	Reactor Vessel Core Barrel Move
		Sec:			Sec: 1C	Excellent performance was observed during removal of the reactor vessel core barrel. The planning, and execution of
Dockets Discu 05000443 Seal					Ter: 3A	this activity allowed the move to be completed without any personnel exposure.

#### United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Date	Source	Functional Area	ID	Туре	Template Codes	Item Title Item Description
06/21/1999	1999002	Pri: MAINT	NRC	POS	<b>Pri:</b> 1C	Primary Component Cooling Heat Exchanger Leak
		Sec:			Sec: 1C	The licensee responded well to evaluate the extent of damage, and to repair a minor leak from the primary component
Dockets Discu 05000443 Sea					<b>Ter:</b> 3A	cooling heat exchanger upper head assembly.
06/21/1999	1999002	Pri: MAINT	NRC	POS	Pri: 2A	Refueling Outage/Maintenance Activities
		Sec:			<b>Sec:</b> 1C	The "B" train 4.16kv bus outage, and the "B" EDG outage and cylinder/liner replacement, were well controlled, governed
Dockets Discussed:           05000443 Seabrook 1           06/21/1999           1999002					<b>Ter:</b> 4A	by adequate procedural guidance, and documented in a way that appeared to provide retrievable quality information. The replacement of the #11 cylinder assembly on the "B" EDG appeared to be a prudent action by the licensee. The installation was partially observed by the inspector and found to be adequately handled and documented.
06/21/1999	1999002	Pri: MAINT	NRC	POS	Pri: 2A	Freeze Seal For Replacement of Spent Fuel Discharge Valve (SFPV-2)
		Sec:			Sec: 3A	The installation of a freeze seal to support replacement of the spent fuel pump discharge valve was performed well.
Dockets Discu 05000443 Sea					Ter:	
06/21/1999	1999002	Pri: MAINT	NRC	POS	Pri: 4B	First Ten-Year Interval In-Service Inspection Program;Inservice Inspection (ISI) Work In Progress
		Sec:			Sec: 1C	Inservice inspection (ISI) activities including examination of the piping welds, reactor vessel, steam generator tubes, and
Dockets Discu 05000443 Sea					<b>Ter:</b> 2A	completion of the first 10 year ISI interval were well planned and implemented by qualified personnel in accordance with approved procedures.
06/21/1999	1999002	Pri: MAINT	Licensee	POS	Pri: 5A	Oversight Inspection of Electrical Splice Activities
		Sec:			Sec: 3A	The maintenance oversight group identified multiple procedural and documentation deficiencies associated with the
Dockets Discu 05000443 Sea					Ter:	installation of electrical splices on safety-related solenoid valves by construction services electricians. The licensee's planned and completed corrective actions for this finding appeared adequate.
06/21/1999	1999002-05	Pri: MAINT	NRC	NCV	Pri: 2A	Emergency Power Sequencer Relay Failures
		Sec:			Sec: 1C	The licensee failed to establish adequate controls in June 1997 to ensure that the K-85 relay met the required
<b>Dockets Discu</b> 05000443 Sea					Ter:	calibration criteria prior to installation. This is a non-cited violation (NCV 99-02-01). The event team review, and corrective actions for the relay failures during testing were adequate. The risk associated with this event appeared minimal since the operators could have taken manual actions to compensate for the relay failures.

# United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Data	<b>C</b>	Functional	ID	<b>T</b>	Template	
Date	Source	Area		Туре	Codes	Item Description
04/20/1999	1999001	Pri: MAINT	NRC	POS	<b>Pri:</b> 1A	Surveillance Test Observations
		Sec:			Sec: 3A	Surveillance testing was performed well during the period.
Dockets Discu 05000443 Sea					Ter:	
02/26/1999	1998011	Pri: MAINT	NRC	NEG	Pri: 3A	Oil Sample Program Weaknesses
		Sec:			Sec: 1C	Several minor corrective action and oil sampling program weaknesses were noted following the test. The licensee is
Dockets Discussed: 05000443 Seabrook 1					<b>Ter:</b> 1C	developing corrective actions to address the identified concerns.
02/26/1999	1998011	Pri: MAINT	NRC	NEG	Pri: 4B	Service Water Fan Deficiency Tag
		Sec:			Sec: 1C	Work control process deficiencies allowed a potentially degraded condition to exist on a safety-related fan for
Dockets Discu 05000443 Sea					Ter: 3A	approximately six months without investigation. The equipment issue did not affect plant safety since the fan operate properly when tested.
02/26/1999	1998011	Pri: MAINT	NRC	POS	Pri: 3A	Containment Building Spary Pump Maintenance and Testing
		Sec:			Sec: 1C	The licensee performed a containment building spray pump test and pipe inspection well.
Dockets Discu 05000443 Sea					Ter: 2A	
01/28/1999	1998010	Pri: MAINT	NRC	POS	Pri: 1C	"A" Emergency Diesel Generator (EDG) Air Start Solenoid Valve Repair
		Sec:			Sec:	The licensee repaired and retested a degraded emergency diesel generator air start solenoid valve satisfactorily.
Dockets Discussed: 05000443 Seabrook 1					Ter:	
01/28/1999	1998010	Pri: MAINT	NRC	POS	Pri: 2A	Emergency Feedwater (EFW) Check Valve Back Leakage/Repair
		Sec:			Sec: 1C	The licensee satisfactorily repaired and retested the motor driven emergency feedwater pump outlet stop check valve
Dockets Discu 05000443 Sea					Ter:	(FW-V70). Adequate foreign material controls were observed.

#### United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Date	Source	Functional Area	ID	Туре	Template Codes	Item Title Item Description
01/28/1999	1998010	Pri: MAINT	NRC	POS	Pri: 2A	Main Steam Isolation Valve (MS-V-92) Slow Closing Performance
		Sec:			Sec: 1C	The licensee responded well to assure the proper operation of the main steam isolation valves following a test fa
Dockets Discu 05000443 Sea					<b>Ter:</b> 4B	The system engineer has developed a long term plan to ensure the proper operation of the fast closure solenoid valves This test failure was properly characterized per the maintenance rule requirements.
01/16/2000	1999009	Pri: ENG	NRC	POS	Pri: 4A	Residual Heat Removal Pump Vibration and Lubricating Oil Sample Results
		Sec:			Sec: 5B	The licensee's investigation and corrective actions for slightly elevated vibration readings and iron particle
Dockets Discu 05000443 Sea					Ter:	concentrations in the lubricating oil reservoirs for both the 'A' and 'B' RHR pump motors were adequate but not successful. The licensee plans additional corrective actions to resolve these issues.
01/16/2000	1999009	Pri: ENG	NRC	POS	Pri: 4A	Corrective Actions - Engineering Performance
		Sec:			Sec: 5B	The licensee continued to properly investigate fuel assembly upper nozzle screw integrity issues to determine the roo
Dockets Discu 05000443 Sea					Ter:	cause and required corrective actions. The newly identified holddown spring screw fractures do not adversely affect th reactor core.
01/31/2000	1999009	Pri: ENG	NRC	POS	Pri: 4B	Electric Trip Solenoid Valve Failure
		Sec:			Sec: 2A	The licensee's response to evaluate and correct a degraded turbine generator electrical overspeed trip system was
Dockets Discu 05000443 Sea					Ter:	timely and appropriate.
12/05/1999	1999008	Pri: ENG	NRC	NEG	Pri: 4B	Ultrasonic Testing of Emergency Core Cooling System Piping
		Sec:			Sec:	The licensee's original evaluation for a residual heat removal pipe void did not consider the potential for water hammer.
Dockets Discussed: 05000443 Seabrook 1					Ter:	The licensee reviewed this issue and concluded that the potential for a water hammer event was low due to the small void size.
12/05/1999	1999008	Pri: ENG	NRC	NEG	Pri: 5A	'A' EDG Lubricating Oil Cooler Inlet Temperature
		Sec:			Sec:	A previous elevated EDG lubricating oil temperature condition had not been reported to the system engineer. The
Dockets Discu 05000443 Sea					Ter:	licensee initiated a condition report to address this issue.

# United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Date	Source	Functional Area	ID	Туре	Template Codes	Item Title Item Description
12/05/1999	1999008	Pri: ENG	NRC	POS	Pri: 2A	'A' EDG Lubricating Oil Cooler Inlet Temperature
		Sec:			Sec: 4B	The licensee's evaluation and corrective actions to address an elevated lubricating oil temperature on the 'A' emerge
Dockets Discu 05000443 Sea					Ter:	diesel generaotr (EDG) lubricating oil heat exchanger were good.
12/05/1999	1999008	Pri: ENG	NRC	POS	Pri: 4B	Ultrasonic Testing of Emergency Core Cooling System Piping
		Sec:			Sec: 2A	The licensee concluded that two small voids detected in the residual heat removal system piping did not render the
Dockets Discu 05000443 Sea					Ter:	system inoperable.
12/05/1999	1999008-13	Pri: ENG	NRC	NCV	Pri: 4C	Ultrasonic Testing of Emergency Core Cooling System Piping
		Sec:			Sec: 2B	The licensee did not implement adequate controls to assure proper functioning of the ultrasonic test device during
Dockets Discu 05000443 Sea					Ter:	surveillance testing such as checking or calibrating the instrument at the end of each examination, and ensuring that the instrument use was consistent with the vendor guidelines. This was considered a non-cited violation.
10/24/1999	1999007	Pri: ENG	NRC	NEG	Pri: 4B	Emergency Diesel Generator Exahust Piping Inspection Program
		Sec:			Sec: 4C	The licensee did not obtain sufficient data to justify not performing additional emergency diesel generator exhaust line
Dockets Discu 05000443 Sea					Ter:	wall thickness inspections. The licensee planned to perform additional inspections in the future, and to include a large portion of the baseline data in the sample.
10/24/1999	1999007	Pri: ENG	NRC	NEG	Pri: 4B	Degraded Primary Component Cooling (PCCW) Pump Evaluation
		Sec:			Sec: 4C	Several examples were identified where the licensee's evaluation of a degraded pump condition could have been
Oockets Discussed: 15000443 Seabrook 1					Ter:	improved including: quantification of the oil consumption during pump operation, and evaluation of the leak consequences in a "post-accident" environment. The licensee initiated an adverse condition report to clarify expectations for system engineers in this area.
10/24/1999	1999007	Pri: ENG	NRC	NEG	Pri: 4B	Assessment of Industry Operating Experience
		Sec:			Sec: 4C	The assessment of ITE/Gould J-series relay failures in safety related systems was not completed in a timely manner.
Dockets Discu 05000443 Sea					Ter:	

# United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Date	Source	Functional Area	ID	Туре	Template Codes	Item Title Item Description
10/24/1999	1999007	Pri: ENG	NRC	POS	Pri: 4B	Penetration Seal Degradation
		Sec:			Sec: 4C	The licensee took prompt immediate actions and properly evaluated a licensee identified problem with, penetration
Dockets Discu 05000443 Sea					Ter:	sealing material curing.
10/24/1999	1999007	Pri: ENG	NRC	POS	Pri: 4B	Assessment of Industry Operating Experience
		Sec:			<b>Sec:</b> 4C	Industry operating experience issues were typically evaluated within a reasonable time. Applicability determinations
Dockets Discu 05000443 Sea					Ter:	and recommended actions were appropriate.
09/12/1999	1999006	Pri: ENG	NRC	NEG	Pri: 5B	Problem Identification - Primary Component Cooling System Flow Reductions
		Sec:			Sec: 5C	The inspector noted a corrective action program deficiency involving the disposition of an adverse condition report for a
Dockets Discu 05000443 Sea					Ter:	repeat valve failure problem. Additionally, the inspector noted that the system engineer was not informed following the third valve failure.
09/12/1999	1999006	Pri: ENG	NRC	POS	Pri: 5A	In-Service Testing - Service Water Pump Vibration
		Sec:			Sec: 5B	The licensee appropriately placed the "B" service water pump into an "alert" status after in-service testing indicated an
Dockets Discu 05000443 Sea					<b>Ter:</b> 5B	elevated vibration reading. The licensee's operability determination was appropriate.
09/12/1999	1999006	Pri: ENG	NRC	POS	Pri: 5A	Motor Operated Valve Pinion Key Failure
		Sec:			Sec: 5B	The licensee actions following the failure of an auxiliary steam system motor operated isolation valve during testing
Dockets Discu 05000443 Sea					<b>Ter:</b> 5C	were good.
08/13/1999	1999010	Pri: ENG	NRC	NEG	Pri: 4B	Problem Resolution - Safety Systems
		Sec:			Sec: 2A	Weaknesses continued to be noted in timeliness of corrective action resolution and continued focus was warranted or
Dockets Discu 05000443 Sea					Ter:	identification and response to degraded equipment (e.g., Post Accident Sampling System (PASS) panel, Radiation Monitoring System (RMS), Operational Experience (OE) response to vendor issues relative to concerns to Copes/Vulcan valve).

#### United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Date	Source	Functional Area	ID	Туре	Template Codes	Item Title Item Description
08/13/1999	1999010	Pri: ENG	NRC	NEG	Pri: 5A	Nuclear Safety Engineering Group (NSEG)
		Sec:			Sec: 5B	There were limited instances noted where NSEG had performed independent evaluation of station activities and
Dockets Discu 05000443 Sea					Ter:	identified areas for improvement indicating that NSEG was not being fully utilized to improve station corrective action program performance.
08/13/1999	1999010	Pri: ENG	NRC	POS	Pri:	Problem Resolution - Safety Systems
		Sec:			Sec:	Safety systems selected for review exhibited good material condition and those system engineers interviewed and
Dockets Discu 05000443 Sea					Ter:	accompanied on walkdowns were knowledgeable of the present and historical status of their system.
08/13/1999	1999010	Pri: ENG	NRC	POS	Pri: 5B	Operating Experience Review Program
		Sec:			Sec: 5C	Overall, NAESCO collected and distributed operating experience information to station groups for action and the statio
Dockets Discu 05000443 Sea					Ter:	groups were using the information, as appropriate, to make program enhancements and prevent recurrence. However, some OE items were overdue for review in that applicability evaluations had not been performed consistent with procedure recommended guidance.
07/26/1999	1999004	Pri: ENG	NRC	NEG	Pri: 4B	Corrective Actions - High Motor Amperage and Vibration on the "C" Service Water Pump
		Sec:			Sec: 1C	Some planned corrective actions, which could have prevented this unexpected failure, had not been properly
Dockets Discu 05000443 Sea					<b>Ter:</b> 5C	implemented. The "C" service water pump failure had minimal significance, and the inspector concluded that the failure to properly implement a planned corrective action was a violation of minor significance, and not subject to forma enforcement action.
07/26/1999	1999004	Pri: ENG	NRC	POS	Pri: 4B	Safety Injection System Check Valve Leakage
		Sec:			Sec: 1C	The licensee's recent actions to address a long-standing material problem involving reactor coolant system in-leakage
Dockets Discu 05000443 Sea					Ter:	into the safety injection accumulators were appropriate.
06/21/1999	1999002	Pri: ENG	NRC	POS	Pri: 4B	Fuel Assemblies Upper Nozzle Bolt Integrity
		Sec:			Sec: 1C	The licensee responded well to fuel assembly upper nozzle bolt integrity issues.
Dockets Discu 05000443 Sea					Ter: 3A	

# United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Date	Source	Functional Area	ID	Туре	Template Codes	Item Title Item Description
06/21/1999	1999002	Pri: ENG	Licensee	POS	<b>Pri:</b> 5A	Pressurizer Surge Line Cooldown
		Sec:			Sec:	The licensee properly identified and evaluated two potential plant issues during the cooldown.
Dockets Discu 05000443 Seal					Ter:	
05/20/1999	1999003	Pri: ENG	NRC	NEG	Pri: 3B	Walkdown Observations
		Sec:			Sec:	A weakness was noted regarding the lack of refresher training for system engineers.
Dockets Discu 05000443 Seal					Ter:	
05/20/1999	1999003	Pri: ENG	NRC	NEG	Pri: 4A	Primary Component Cooling Water System
		Sec:			<b>Sec:</b> 4B	The lack of a plan to resolve the PCCW system flow balance issue in the long term detracted from the otherwise good
Dockets Discu 05000443 Seal					Ter:	engineering support noted regarding the flow model development.
05/20/1999	1999003	Pri: ENG	NRC	NEG	Pri: 4B	Primary Component Cooling Water System
		Sec:			<b>Sec:</b> 4A	Auxiliary supply fan surveillance procedures, PAH-OS001 and PAH-OS002, were not comprehensive in that they did
Dockets Discu 05000443 Seal					Ter:	not verify the position of tornado damper, PAH-DP-356. The procedures were being revised to correct this weakness.
05/20/1999	1999003	Pri: ENG	NRC	NEG	Pri: 4B	Technical Resolution of Plant Problems
		Sec:			Sec: 5B	Past reviews of EDG equipment to support the Preventive Maintenance Optimization program were not always
Dockets Discu					Ter:	thorough, and there were missed opportunities to address degraded performance of EDG air start valves.
05000443 Seal	brook 1					
05/20/1999	1999003	Pri: ENG	NRC	NEG	Pri: 5A	Primary Component Cooling Water System
		Sec:			Sec:	Some PCCW equipment deficiencies had not being entered into the licensee's corrective action program. An
Dockets Discu 05000443 Seal					Ter:	administrative procedure was being developed to provide improved guidance to system engineers to correct this problem.

# United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Date	Source	Functional Area	ID	Туре	Template Codes	Item Title Item Description
05/20/1999	1999003	Pri: ENG	NRC	NEG	Pri: 5B	Plant Modifications
		Sec:			Sec:	The evaluations were sound, generally thorough and well documented. Evaluations were not always timely re-
Dockets Discu	issed:				Ter:	when the issue was originally identified, but were appropriate relative to the safety significance of the issues addresse
05000443 Sea	brook 1					
05/20/1999	1999003	Pri: ENG	NRC	NEG	Pri: 5C	Technical Resolution of Plant Problems
		Sec:			Sec: 5B	Good monitoring of the emergency feedwater piping temperatures has adequately assured system operability for
Dockets Discussed:           05000443 Seabrook 1           05/20/1999           1999003					Ter:	several years while engineering has been unsuccessful in achieving a long term resolution of check valve backleakage problems. The licensee plans to implement a design modification to correct this longstanding and high priority operational impact issue.
05/20/1999	1999003	Pri: ENG	NRC	NEG	Pri: 5C	Plant Modifications
		Sec:			Sec: 5B	The timeliness in completing initiatives and achieving resolution of long standing problems concerning the emergency
Dockets Discu 05000443 Seal					Ter: 4B	diesel generator (EDG) skid and service water vacuum breaker modifications detracted from the otherwise good quali of the engineering support.
05/20/1999	1999003	Pri: ENG	NRC	POS	Pri: 1C	Engineering Workload
		Sec:			Sec: 3C	Several initiatives in 1998 (12-week work schedule, focus on operational impact issues, engineering fix-it-now group)
Dockets Discu 05000443 Sea					Ter:	were successful in reducing engineering workloads to achieve realistic goals.
05/20/1999	1999003	Pri: ENG	NRC	POS	Pri: 4A	Primary Component Cooling Water System
		Sec:			Sec:	The PCCW temperature control valves were found to have an adequate backup nitrogen supply capable of fulfilling the
Dockets Discu					Ter:	system design requirements.
05000443 Seal	brook 1					
05/20/1999	1999003	Pri: ENG	NRC	POS	Pri: 4A	Primary Component Cooling Water System
		Sec:			Sec:	The team concluded that the PCCW system was installed consistent with the design requirements as described in the
Dockets Discu	issed:				Ter:	UFSAR and the design basis document.

# United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Date	Source	Functional Area	ID	Туре	Template Codes	Item Title Item Description
05/20/1999	1999003	Pri: ENG	NRC	POS	Pri: 4A	Plant Modifications
		Sec:			Sec: 4B	Engineering support for all modifications reviewed was good. Technical evaluations, installation instructions,
Dockets Discu	issed:	0001			Ter:	post-modification test plans, and the 10 CFR 50.59 screening and safety evaluations were thorough and well supported
05000443 Seal	brook 1				161.	
05/20/1999	1999003	Pri: ENG	NRC	POS	Pri: 4B	Generic Letter 96-01
		Sec:			Sec:	Engineering support was good to complete the reviews required by Generic Letter 96-01. Technical reviews were
Dockets Discussed: 05000443 Seabrook 1					Ter:	thorough, design basis documentation was complete and of good quality, and test discrepancies were properly resolved.
05/20/1999	1999003	Pri: ENG	NRC	POS	Pri: 4B	Generic Letter 96-01
		Sec:			Sec:	Engineering support was good in monitoring the status of EDGs and potential deficiencies, and appropriately prioritizing
Dockets Discu	issed:				Ter:	corrective actions to resolve them.
05000443 Sea	brook 1					
05/20/1999	1999003	Pri: ENG	NRC	POS	Pri: 4B	Engineering Workload
		Sec:			Sec: 1C	The risk ranking effort of engineering work requests and the decision to retain, train and improve on this effort were
Dockets Discu 05000443 Seal					Ter:	noteworthy.
05/20/1999	1999003	Pri: ENG	NRC	POS	Pri: 5A	Primary Component Cooling Water System
		Sec:			Sec: 5B	The licensee's corrective actions in response to PCCW system check valve testing problems as identified in LER
Dockets Discu	issed:				Ter:	98-013 were found to be acceptable.
05000443 Sea	brook 1					
05/20/1999	1999003	Pri: ENG	NRC	POS	Pri: 5B	Technical Resolution of Plant Problems
		Sec:			Sec:	Engineering supported plant operations with evaluations to address adverse conditions. The evaluations were sound,
Dockets Discu	issed:				Ter:	generally thorough and well documented.

Region I SEABROOK

#### United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

By Primary Functional Area / Issue Date

Functional Template Item Title ID Date Codes Item Description Source Area Type 05/20/1999 1999003-06 Pri: FNG NRC NCV Pri: 4B Primary Component Cooling Water System Sec: Sec: 1C The licensee failed to periodically calibrate the PCCW pump high temperature trip circuits. Appropriate actions were taken to calibrate this instrumentation, including an extensive extent-of-condition evaluation to ensure that no generic Dockets Discussed: Ter: implications existed with other equipment designated with special-as-requested maintenance frequencies. Therefore, 05000443 Seabrook 1 this Severity Level IV violation of test requirements was being treated as a Non-Cited Violation, consistent with Appendix C of the NRC Enforcement Policy. (NCV 50-443/99-03-01) 04/20/1999 1999001 Pri: FNG NRC POS Pri: 2A Safety Related Pump Lubricating Oil Analysis Results Sec: Sec: 4A The licensee properly identified and evaluated a small leak on the "A" containment building spray pump casing drain line. The leak was determined not to be pressure boundary leakage, and the licensee planned to repair this leak during **Dockets Discussed:** Ter: 4B the next refueling outage. 05000443 Seabrook 1 04/20/1999 1999001 Pri: ENG NRC POS Pri: 2A **Refueling Outage Planning Activities** Sec: Sec: 4A The risk management review for the scheduled refueling outage (ORO6) activities was thorough, and indicated that the planned outage activities presented minimal plant risk. The outage review board properly reviewed the scope of the **Dockets Discussed:** Ter: 4B planned outage activities. 05000443 Seabrook 1 04/20/1999 1999001 Pri: ENG NRC POS Pri: 2A Safety Related Pump Lubricating Oil Analysis Results Sec: Component engineering adequately identified and evaluated several abnormal lubricating oil samples on safety-related Sec: 4A components. Although none of the deficiencies challenged the operability of the affected components, the licensee **Dockets Discussed:** Ter: 4B developed adequate plans to address the identified anomalies. 05000443 Seabrook 1 04/20/1999 1999001-08 Pri: ENG NRC NCV Pri: 2A Primary Auxiliary Building (PAB) Fan Reliability Sec: Sec: 4A The licensee failed to implement adequate corrective actions to prevent recurrence of repeated primary auxiliary building fan test failures. This is considered a non-cited violation (NCV 99-01-02). The licensee determined that a postulated Dockets Discussed: Ter: 4B failure of both fans failures would not have challenged the operation of the primary component cooling water pumps. 05000443 Seabrook 1 The initial review of an improperly installed identification tag did not evaluate the potential for this problem to exist on other safety-related components. 02/26/1999 1998011 Pri: ENG Pri: 4A Solenoid Valve Differential Operating Pressure Review NRC POS Sec: Sec: 4B The licensee properly evaluated a potential failure mechanism that would have precluded the proper operation of multiple safety-related solenoid valves. **Dockets Discussed:** Ter: 05000443 Seabrook 1

#### United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Date	Source	Functional Area	ID	Туре	Template Codes	Item Title Item Description
02/26/1999	1998011	Pri: ENG	NRC	POS	Pri: 4A	High Flux Trip At Reduced Reactor Power
Dockets Discu 05000443 Sea		Sec:			Sec: 4B Ter:	The licensee's evaluation of a bulletin discussing the potential to perform a non-conservative calibration of the nuclear instruments was not completed in a timely manner. The licensee's subsequent response to this issue was appropriate The inspector reviewed the operating experience backlog and did not identify any operability concerns.
02/26/1999	1998011	Pri: ENG	NRC	POS	Pri: 4A	Emergency Feedwater (EFW) System Piping Review
Dockets Discussed:           05000443 Seabrook 1           01/28/1999         1998010		Sec:			Sec: 4B Ter:	The licensee evaluated an EFW pressurization condition that resulted from a degraded component condition. This piping is normally maintained depressurized. Pressurization of the emergency feedwater system discharge piping did not affect operation of the system, since the pressure source (check valve leakage) would be rapidly depleted during a postulated pipe break event. The licensee had an appropriate plan to ensure that the system operating condition matched the Updated Final Safety Analysis Report.
01/28/1999	1998010	Pri: ENG	NRC	NEG	Pri: 2A	"A" Emergency Diesel Generator (EDG) Air Start Solenoid Valve Repair
<b>Dockets Discu</b> 05000443 Sea		Sec:			Sec: 4B Ter:	The inspector noted weaknesses involving the identification of a degrading valve performance trend, and the timeliness in initiating a root cause analysis for previous solenoid valve failures.
01/28/1999	1998010	Pri: ENG	NRC	NEG	Pri: 5A	Steam Leak On The "D" Steam Generator Outboard Manway Cover
Dockets Discu 05000443 Sea		Sec:			Sec: Ter:	Minor corrective action program weaknesses were noted involving the timeliness of initiating an adverse condition repo (ACR), and in documenting the intended disposition of this ACR.
01/28/1999	1998010	Pri: ENG	NRC	POS	Pri: 1C	Steam Leak On The "D" Steam Genertor Outboard Manway Cover
Dockets Discu 05000443 Sea		Sec:			Sec: Ter:	The licensee evaluated and performed a temporary repair of a secondary leak from the "D" steam generator manway cover well.
01/28/1999	1998010	Pri: ENG	NRC	POS	Pri: 4B	New Fuel Receipt and Storage
Dockets Discu 05000443 Sea		Sec:			Sec: 1C Ter:	The new fuel assemblies were thoroughly inspected. The licensee properly addressed a minor anomaly involving debri on one of the new fuel assemblies.

#### United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Date	Source	Functional Area	ID	Туре	Template Codes	Item Title Item Description
01/28/1999	1998010	Pri: ENG	NRC	POS	<b>Pri:</b> 5A	Reactor Coolant System Leak
		Sec:			Sec: 1C	A reactor coolant system leak was of minor significance due to its magnitude, and location. The identification of the
<b>Dockets Discu</b> 05000443 Sea					<b>Ter:</b> 4B	leak during a plant walkdown indicated a good attention to detail. The licensee responded well to isolate and repair this leak.
12/05/1999	1999008	Pri: PLTSUP	NRC	POS	Pri: 1C	Exposure Reduction Efforts
		Sec:			Sec:	Radiological controls were effective in minimizing the dose and limiting the spread of contamination when performing
<b>Dockets Discu</b> 05000443 Sea					Ter:	tasks during power operations. Comprehensive planning and integration of various ALARA measures into the work control process were observed.
12/05/1999	1999008	Pri: PLTSUP	NRC	POS	Pri: 1C	Applied Radiological Controls
		Sec:			Sec:	Radiological controls were effectively implemented. The program included a trained and experienced staff, detailed
<b>Dockets Discu</b> 05000443 Sea					Ter:	procedures to minimize external and internal exposure, appropriate monitoring of personnel, detailed radiation work permits, and proper control of access to radiologically controlled areas.
12/05/1999	1999008	Pri: PLTSUP	NRC	POS	Pri: 1C	Quality Assurance in Radiological Protection Activities
		Sec:			Sec:	The licensee implemented effective management controls including quality assurance surveillances, departmental
<b>Dockets Discu</b> 05000443 Sea					Ter:	self-assessments, and job observations over the radiation protection program. Worker practices, and procedural compliance were adequately monitored, and prompt actions were taken to evaluate and correct factors that could degrade performance.
10/24/1999	1999007	Pri: PLTSUP	NRC	POS	Pri: 1C	Tritium Sampling in Plant Areas
		Sec:			Sec: 3A	The licensee's investigation to determine the source of tritium detected in the plant containment annulus and the spent
Dockets Discu					Ter:	fuel pool sump was thorough. The measured tritium levels are well below regulatory limits and would not adversely affect the health and safety of the public or the environment.
05000443 Sea	brook 1					
10/24/1999	1999007	Pri: PLTSUP	NRC	POS	Pri: 1C	Conduct of Secrutiy and Safeguards Activities
		Sec:			Sec: 3A	Protected area access controls were properly implemented. The licensee responded well to several fitness for duty test
Dockets Discu 05000443 Sea					Ter:	failures that occurred during the period. The licensee responded appropriately to a question involving the access contro to a normally inaccessible electrical cable vault.

# United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Date	Source	Functional Area	ID	Туре	Template Codes	Item Title Item Description
09/12/1999	1999006	Pri: PLTSUP	NRC	POS	<b>Pri:</b> 1C	Adequacy of Testing and Maintenance Programs
Dockets Discu 05000443 Seal		Sec:			Sec: Ter:	The licensee was conducting its testing and maintenance activities of security equipment in a manner that protected public health and safety. The inspector concluded that this portion of the program, as implemented, met the licensee's commitments and NRC requirements.
09/12/1999	1999006	Pri: PLTSUP	NRC	POS	Pri: 3B	Security and Safeguards Staff Knowledge and Performance
		Sec:			Sec: 1C	The security force members adequately demonstrated that they had the requisite knowledge necessary to effectively
Dockets Discu 05000443 Seal					Ter:	implement the duties and responsibilities associated with their position. The proposed training for the augmentation force met the requirements of the training and qualification plan.
08/13/1999	1999010	Pri: PLTSUP	NRC	POS	Pri: 5C	General Performance in Problem Resolution
		Sec:			Sec:	Plant Support groups have demonstrated adequate problem resolution.
Dockets Discu 05000443 Seal					Ter:	
08/25/1999	1999005	Pri: PLTSUP	NRC	POS	Pri: 1C	Post-Accident Sampling System Event Team Review
		Sec:			Sec: 2A	The licensee's efforts to resolve the recent test failures of the Post Accident Sample System have been comprehensive.
Dockets Discu 05000443 Seal					<b>Ter:</b> 5B	In addition, while the root cause has yet to be identified, the Event Team continues to methodically review this issue.
08/25/1999	1999005	Pri: PLTSUP	NRC	POS	Pri: 1C	Conduct of Security and Safeguards Activities
		Sec:			Sec: 5B	The licensee responded promptly to restrict the individual's access in accordance with the Fitness for Duty program
Dockets Discu 05000443 Seal					<b>Ter:</b> 5C	requirements, and to determine the scope of the individual's work activities. The inspector had no further questions regarding this issue.
07/26/1999	1999004	Pri: PLTSUP	NRC	NEG	Pri: 1C	EP Procedures and Documentation
		Sec:			Sec:	Based upon the review of recent licensee emergency plan changes, the inspector determined they did not decrease the
Dockets Discu 05000443 Seal					Ter:	effectiveness of the plan. The 50.54(q) documentation for two changes did not provide adequate information or reasoning for the change. The licensee initiated an adverse condition report to review their method for adequately documenting plan changes in a 50.54(q) review.

#### United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Date	Source	Functional Area	ID	Туре	Template Codes	Item Title Item Description
07/26/1999	1999004	Pri: PLTSUP	NRC	POS	<b>Pri:</b> 1C	Radiological Protection and Chemistry Controls/Conduct of Security and Safeguards Activities
		Sec:			Sec:	Routine radiological work practices and security controls were observed to be good.
Dockets Discu 05000443 Sea					Ter:	
07/26/1999	1999004	Pri: PLTSUP	NRC	POS	Pri: 1C	Status of Emergency Preparedness Facilities, Equipment, and Resources
<b>Dockets Discu</b> 05000443 Sea		Sec:			Sec: Ter:	Surveillance tests, equipment inventories, communication and siren tests were performed as required by the Seabrook Station Radiological Emergency Plan (SSREP). No unusual operability trends were noted. However, the monthly pager test records indicated a poor response trend by the emergency response organization (ERO) staff. In response, senior management emphasized the ERO responsibilities to the staff and records indicated an improvement in this area in the first quarter of 1999.
07/26/1999	1999004	Pri: PLTSUP	NRC	POS	<b>Pri:</b> 1C	Staff Training and Qualification in EP
Dockets Discussed: 05000443 Seabrook 1		Sec:			Sec: Ter:	The inspector concluded that training for the ERO was effectively implemented and management oversight in late 1998 reestablished the importance of maintaining ERO training current.
07/26/1999	1999004	Pri: PLTSUP	NRC	POS	<b>Pri:</b> 1C	Quality Assurance (QA) in EP Activities
		Sec:			Sec:	The inspector determined through document reviews and interviews that the audit reports had met the requirements
Dockets Discu 05000443 Sea					Ter:	specified in 10 CFR 50.54(t) and the reports clearly demonstrated the bases for the audit conclusions.
07/26/1999	1999004	Pri: PLTSUP	NRC	POS	Pri: 1C	Miscellaneous EP Issues
<b>Dockets Discu</b> 05000443 Sea		Sec:			Sec: Ter:	The inspector found the licensee's corrective actions, in response to the exercise weakness identified by the NRC in June 1998, to be adequate.
07/26/1999	1999004	Pri: PLTSUP	NRC	POS	<b>Pri:</b> 1C	EP Organization and Administration
Dockets Discu 05000443 Sea	issed:	Sec:	NICO	100	Sec: Ter:	No changes in emergency preparedness (EP) staff were noted since the previous inspection. A recent reorganization was completed in which the Manager, EP reports to the Manager, Environmental, Government and Community Relations. It was noted that during 1998, the lack of management oversight resulted in the ERO staff becoming complacent with respect to their EP responsibilities and training requirements. Corrective action was taken and no ERO member deficiencies were identified in the first quarter of 1999.

Region I SEABROOK

#### United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

By Primary Functional Area / Issue Date

Functional Template Item Title ID Date Area Codes Item Description Source Type 07/26/1999 1999004-15 Pri: PI TSUP NRC NCV Pri: 1C Staff Training and Qualification in EP Sec: Sec: The licensee conducted emergency response training and drills as required. However, a Non-Cited violation was identified based on the licensee not demonstrating timely activation of the facilities during off-hours as described in the Dockets Discussed: Ter: SSREP and the Drill and Exercise Procedure (NCV 99-04-01). The violation was entered into the licensee's corrective 05000443 Seabrook 1 action system (ACR 99-2477) and a satisfactory off-hours mobilization drill was conducted on June 9, 1999 to demonstrate activation in a timely manner. 06/21/1999 1999002 Pri: PI TSUP Pri: 1C **Outage Exposure Reduction Efforts** NRC POS Sec: Sec: ALARA program requirements were well developed, integrated in the work control process and effectively implemented with respect to reactor disassembly and steam generator inspection/cleaning activities. The final cumulative personnel **Dockets Discussed:** Ter: outage exposure was below the licensee's projected estimate, indicating that the ALARA measures were effectively 05000443 Seabrook 1 implemented. 06/21/1999 1999002 Pri: PLTSUP NRC POS Pri: 1C **Applied Radiological Controls** Sec: Sec: Radiological controls were effectively implemented as evidenced by a gualified staff properly implementing procedures to minimize external and internal exposure, by developing detailed RWPs, appropriately monitoring personnel exposure, **Dockets Discussed:** Ter: and adequately maintaining radiologically controlled areas. 05000443 Seabrook 1 06/21/1999 1999002 Pri: PLTSUP NRC POS Pri: 1C Quality Assurance in RP&C Activities Sec: Sec: The Nuclear Oversight Group and Health Physics management effectively monitored radiation protection program implementation, worker practices, and procedural compliance through close and frequent observations. Prompt actions **Dockets Discussed:** Ter: were taken to evaluate and correct factors that could degrade performance. 05000443 Seabrook 1 05/20/1999 1999003 Pri: PLTSUP NRC POS **Pri:** 1C Fire Protection Procedure Review Sec: Sec: Fire protection procedures met the requirements for fire protection program implementation, contained sufficient detail, and were technically sound. Dockets Discussed: Ter: 05000443 Seabrook 1 05/20/1999 1999003 Pri: PLTSUP Pri: 1C Fire Brigade Drills NRC POS Sec: Sec: Performance by the fire brigade team during a fire drill was very good. All expectations of the fire drill were met. Based on discussions with the local fire department, coordination activities to ensure proper understanding of fire fighting **Dockets Discussed:** Ter: strategies at the site were good. 05000443 Seabrook 1

# United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Date	Source	Functional Area	ID	Туре	Template Codes	Item Title Item Description
05/20/1999	1999003	Pri: PLTSUP	NRC	POS	Pri: 1C	Fire Brigade Training
		Sec:			Sec:	Fire brigade members were current on all required training and annual physical examinations.
Dockets Discu 05000443 Seal					Ter:	
05/20/1999	1999003	Pri: PLTSUP	NRC	POS	Pri: 1C	Audits and Surveillances
		Sec:			Sec:	The fire protection quality assurance audits appropriately reviewed fire protection program attributes and compliance
Dockets Discu 05000443 Seal					Ter:	with program requirements. The fire protection audit findings were appropriately addressed and timely corrective actions were taken for identified deficiencies.
05/20/1999	1999003	Pri: PLTSUP	NRC	POS	Pri: 1C	Facility Tour
		Sec:			Sec:	Fire protection equipment conditions and housekeeping were good. Roving fire watches were knowledgeable of statio
Dockets Discu 05000443 Seal					Ter:	procedures for reporting fires, fire watch duties, and responding to fires. Eight hour emergency light operation and illumination patterns were good.
05/20/1999	1999003	Pri: PLTSUP	NRC	POS	Pri: 1C	Fire Main Loop Flow Testing/Fire Pump Testing
		Sec:			<b>Sec:</b> 4B	The fire main loop was in good repair, and capable of providing the necessary water supply for fire fighting needs at the
Dockets Discu 05000443 Seal					<b>Ter:</b> 1C	facility. The fire pumps were well-maintained and ready for service.
05/20/1999	1999003	Pri: PLTSUP	NRC	POS	Pri: 4B	Fire Barrier Penetration Seals
		Sec:			Sec: 1C	Sampled fire barrier penetration seals were in good condition and the installed configuration of these seals was
Dockets Discu 05000443 Seal					Ter:	comparable to that described in Brand Industrial Services, Inc., Construction Group fire test report.
04/20/1999	1999001	Pri: PLTSUP	NRC	NEG	Pri: 1C	Damaged Cables in Alternate Health Physics Checkpoint Trailer
		Sec:			Sec:	The inspector identified weaknesses regarding the timeliness to notify operations, and security personnel of the first
Dockets Discu	ssed:				Ter:	event, and in securing the area to support the subsequent investigation.

# United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Date	Source	Functional Area	ID	Туре	Template Codes	Item Title Item Description		
04/20/1999	1999001	Pri: PLTSUP	NRC	POS	<b>Pri:</b> 1C	Radiological Protection and Chemistry Controls		
		Sec:			Sec:	Radiation worker performance was observed to be good during the period. Health physics technicians provided good		
<b>Dockets Discu</b> 05000443 Seal					Ter:	support to plant workers.		
04/20/1999	1999001	Pri: PLTSUP	NRC	POS	Pri: 1C	Damaged Cables in Alternate Health Physics Checkpoint Trailer		
		Sec:			Sec:	Security personnel properly evaluated two cases of potential tampering in the alternate health physics checkpoint		
<b>Dockets Discu</b> 05000443 Seal					Ter:	trailer.		
04/20/1999	1999001	Pri: PLTSUP	NRC	POS	Pri: 1C	Fitness-For-Duty Test Failures		
		Sec:			Sec:	The licensee responded well to several fitness for duty test failures during the period.		
Dockets Discussed: 05000443 Seabrook 1					Ter:			
02/26/1999	1998011	Pri: PLTSUP	NRC	POS	Pri: 1C	Conduct of Security and Safeguards Activities		
		Sec:			Sec:	The licensee was conducting security and safeguards activities in a manner that protected public health and safety in		
Dockets Discussed: 05000443 Seabrook 1				Ter:	the areas of access authorization, alarm stations, communications, and protected area access control of personn backages. This portion of the program, as implemented, met the licensee's commitments and NRC requirements			
02/26/1999	1998011	Pri: PLTSUP	NRC	POS	Pri: 1C	Status of Security Facilities and Equipment		
		Sec:			Sec:	The licensee's security facilities and equipment in the areas of protected area assessment aids, protected area		
Dockets Discu 05000443 Seal					Ter:	detection aids, and personnel search equipment were determined to be well maintained and reliable and were able to meet the licensee's commitments and NRC requirements.		
02/26/1999	1998011	Pri: PLTSUP	NRC	POS	Pri: 1C	Security and Safeguards Procedures and Documentation		
		Sec:			Sec:	Security and safeguards procedures and documentation were properly implemented. Event logs were being properly		
Dockets Discussed: 05000443 Seabrook 1					Ter:	maintained and effectively used to analyze, track, and resolve safeguards events.		

# United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Date	Source	Functional Area	ID	•		em Title em Description				
02/26/1999	1998011	Pri: PLTSUP	NRC	POS	<b>Pri:</b> 1C	Security and Safeguards Staff Knowledge and Performance				
		Sec:			Sec:	The security force members (SFMs) adequately demonstrated that they had the requisite knowledge necessary to				
Dockets Discussed: 05000443 Seabrook 1					Ter:	effectively implement the duties and responsibilities associated with their position.				
02/26/1999	1998011	Pri: PLTSUP	NRC	POS	Pri: 1C	Security and Safeguards Staff Training and Qualification				
		Sec:			Sec:	Training was conducted in accordance with the Training and Qualification (T&Q) plan, and based upon interviews and				
Dockets Discussed: 05000443 Seabrook 1					Ter:	inspector observations was considered effective.				
02/26/1999	1998011	Pri: PLTSUP	NRC	POS	Pri: 1C	Security Organization and Administration				
		Sec:			Sec:	The level of management support was adequate to ensure effective implementation of the security program, and was				
Dockets Discu 05000443 Sea					Ter:	evidenced by adequate staffing levels and the allocations of resources to support programmatic needs.				
02/26/1999	1998011	Pri: PLTSUP	NRC	POS	Pri: 1C	Quality Assurance (QA) In Security and Safeguards Activities				
		Sec:			Sec:	The review of the licensee's audit program indicated that the audit was comprehensive in scope and depth, that the				
Dockets Discussed: 05000443 Seabrook 1					Ter:	audit findings were reported to the appropriate level of management, and that the program was being properly administered. In addition, a review of the documentation applicable to the self-assessment program indicated that the program was being effectively implemented to identify and resolve potential weaknesses.				
01/28/1999	1998010	Pri: PLTSUP	NRC	POS	Pri: 1C	Solid Radioactive Waste Processsing, Handling, Storage, and Shipping				
		Sec:			Sec:	The radioactive waste management and transportation programs were effectively implemented. Radioactive waste a				
Dockets Discussed: 05000443 Seabrook 1					Ter:	other radioactive materials were properly characterized, classified, packaged and shipped. The "Green Is C program was aggressively managed and monitored to reduce the volume of radioactive waste generated fro tasks.				
01/28/1999	1998010	Pri: PLTSUP	NRC	POS	Pri: 1C	Status of RP&C Facilities and Equipment				
		Sec:			Sec:	Radioactive waste processing and storage areas were properly maintained, posted, and controlled. Drums and boxe				
Dockets Discussed: 05000443 Seabrook 1					Ter:	containing contaminated waste were properly labeled, segregated by waste type, and in satisfactory material conditi				

# United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

Date	Source	Functional Area	ID	Туре	Template Codes	Item Title Item Description
01/28/1999	1998010	Pri: PLTSUP	NRC	POS	Pri: 1C	Staff Training and Qualification in RP&C
		Sec:	-		Sec:	Personnel responsible for classifying radioactive waste and shipping radioactive materials met NRC and DOT training
Dockets Discussed: 05000443 Seabrook 1				Ter:	and retraining requirements.	
01/28/1999	1998010	Pri: PLTSUP	NRC	POS	Pri: 1C	Quality Assurance and Self-Assessment in RP&C Activities
		Sec:			Sec:	Performance of the waste services department was effectively monitored and problem areas were appropriately elevat
Dockets Discussed: 05000443 Seabrook 1			Ter:	to the appropriate management level for resolution.		
01/28/1999	1998010	Pri: PLTSUP	NRC	POS	Pri: 1C	Inspection Of Preparations For Transferring Spent Resin
Sec:			Sec:	Radiological controls were effectively implemented in preparation for transferring spent resin from the spent fuel pool		
Dockets Discussed: 05000443 Seabrook 1					Ter:	demineralizer to the resin sluice tank. Operational, radiological, and access control issues were effectively coordinated. Pre-job briefings reinforced management expectations on work practices.
12/05/1999	1999008	Pri: OTHER	NRC	POS	Pri: 5A	Conduct of Security and Safeguards Activities
		Sec:		Sec: 1C	Routine security controls were properly implemented. The licensee responded well to investigate an issue involving to	
Dockets Discussed: 05000443 Seabrook 1				Ter:	damaged door locks inside the protected area.	

#### United States Nuclear Regulatory Commission PLANT ISSUE MATRIX

By Primary Functional Area / Issue Date

#### Legend

Гуре Со	odes:	Template Codes:				
BU	Bulletin	] [	1A	Normal Operations		
CDR	Construction		1B	Operations During Transients		
DEV	Deviation		1C	Programs and Processes		
EEI	Escalated Enforcement Item	1	2A	Equipment Condition		
IFI	Inspector follow-up item	:	2B	Programs and Processes		
LER	Licensee Event Report	:	3A	Work Performance		
LIC	Licensing Issue	:	3B	KSA		
MISC	Miscellaneous	:	3C	Work Environment		
MV	Minor Violation		4A	Design		
NCV	NonCited Violation		4B	Engineering Support		
NEG	Negative		4C	Programs and Processes		
NOED	Notice of Enforcement Discretion	4	5A	Identification		
NON	Notice of Non-Conformance	4	5B	Analysis		
othr	Other	4	5C	Resolution		
P21	Part 21					
POS	Positive					
SGI	Safeguard Event Report					
STR	Strength		D Co	des:		
URI	Unresolved item		NRC	NRC		
VIO	Violation	:	Self	Self-Revealed		
WK	Weakness		Licer	nsee Licensee		

#### Functional Areas:

OPS	Operations
MAINT	Maintenance
ENG	Engineering
PLTSUP	Plant Support
OTHER	Other

EEIs are apparent violations of NRC Requirements that are being considered for escalated enforcement action in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Action" (Enforcement Policy), NUREG-1600. However, the NRC has not reached its final enforcement decision on the issues identified by the EEIs and the PIM entries may be modified when the final decisions are made.

URIs are unresolved items about which more information is required to determine whether the issue in question is an acceptable item, a deviation, a nonconformance, or a violation. A URI may also be a potential violation that is not likely to be considered for escalated enforcement action. However, the NRC has not reached its final conclusions on the issues, and the PIM entries may be modified when the final conclusions are made.