Page : 1 Printed: 06/06/05 ACTION REQUEST 00155986 Туре : NCR Orig Date: 04/08/05 14:25 Discovery Date: 04/08/05 13:15 : CONCRETE SPALLING OF RB WALL Subject Description PIECES OF CONCRETE FROM RB WALL WERE FOUND ON GRAOUND NEAR BWST Priority : 2 Report To Status: COMPLETE 06/01/05 : Due Date : 12/30/05 Event : Originator : BANDHW Originator Group: Facility : CR3 Department Organization: : 436 Owed To : Owed To Group : ESSDUEVAL Owed To Fac: CR3 Department : Discipline :

Page : 2 Printed: 06/06/05

ACTION REQUEST 00155986

Reqd Date Request Attribute Value 1A POT'L OPER/REPORT N Y 04/08/05 Name : WILLIAM BANDHAUER Request Attribute Value Reqd Date 2 SUPERVISOR REVIEW Ν Name : Request Attribute Value Reqd Date 2A CR VALID? Y Name : WILLIAM BANDHAUER Y 04/08/05 Request Attribute Value Reqd Date Y 04/13/05 2B FURTHER INVN REQD N Name : MERYLANNE GOTTERUP SEE 5B Request Attribute Value Reqd Date 2C RECOMMENDED OWNER ENG N : 04/08/05 Name : WILLIAM BANDHAUER Request Attribute Value Reqd Date) Y 04/08/05 2D OPER/REPORT ISSUE N Name : WILLIAM BANDHAUER ENGINEERING EVALUATED LIKELY SOURCE OF CONCRETE AND DETERMINED THAT THE RB REMAINS OPERABLE PER CONVERSATION WITH G ENGLERT. Request Attribute Value Reqd Date 2E MAINT RULE APPLIC Y N 04/08/05 Name : WILLIAM BANDHAUER Request Attribute Value Reqd Date 2F SYSTEM RB Y 04/08/05 Name : WILLIAM BANDHAUER

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ACTION REQUEST 00155986

Request Attribute Value 3 OPERATIONS REVIEW Name :

Request Attribute Value 3A IMMED REPT ISSUE Name :

Request Attribute Value 3B OCR Name :

Request AttributeValue3B1 OPER ISSUEName :

Request Attribute Value 3B2 REPORT ISSUE Name :

Request Attribute Value 3B3 REW Name :

Request Attribute Value 3C TRACKING NUMBER Name :

Request Attribute Value 4 REG AFF REVIEW Name :

Request AttributeValue4A OPER/REPORT ISSUENName : RONALDBRIGHT

Request Attribute 4A1 OPER ISSUE Name : RONALD **Value** N BRIGHT

Value

BRIGHT

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Request Attribute 4A2 REPORT ISSUE Name : RONALD Reqd Date N

Reqd Date

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Reqd Date N

 Reqd
 Date

 Y
 04/08/05

 Reqd
 Date

 Y
 04/08/05

Reqd Date Y 04/08/05

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ACTION REQUEST 00155986

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Request Attribute 4B FOLLOWUP ASG REQD Name : RONALD		Reqd Y	Date 04/08/05		
Request Attribute 4C T. SPEC VIOLATION Name : RONALD		Reqd Y	Date 04/08/05		
Request Attribute 4D ADD'L REPORT REQD Name : RONALD	Ν	Reqd Y	Daté 04/08/05		
Request Attribute 4E PNSC/CSERB REQD Name : RONALD		Reqd Y	Date 04/08/05		
Request Attribute 5 CLASSIFN/ASSIGNMNT Name :	Value	Reqd N	Date		
Request Attribute 5A CR VALID? Name : MERYLANNE	Value Y GOTTERUP	Reqd Y	Date 04/11/05		
Request Attribute 5B FURTHER INVN REQD Name : GEORGE		Reqd Y	Date 04/13/05		
Name : GEORGE ENGLERT JR. NO FURTHER INVESTIGATION IS REQUIRED. BASED ON THE RESULTS OF INSPECTIONS PERFORMED BY ENGINEERING ON 4/8/05 AND MAINTENANCE DURING THE WEEKEND OF 4/ 9/05, THE SOURCE OF THE CONCRETE DEBRIS AND THE EQUIPMENT FAILURE APPEARS T O BE DEGRADED SECTIONS OF PREVIOUSLY PATCHED AREAS ON THE EXTERIOR REACTOR BUILDING WALL AND ROOF. THE APPARENT CAUSE OF THE FAILED CONCRETE PATCHES IS ATTRIBUTED TO "AGING/EXPECTED DETERIORATION" (CAUSE CODE: J7A) HASTENED BY "WEATHER-RELATED" (CAUSE CODE: K1) INFLUENCES. THE NIGHT BEFORE THE DIS COVERY OF THE CONCRETE DEBRIS, CR3 EXPERIENCED HIGH WINDS AND RAIN STORMS. CORRECTIVE ACTIONS TO BE TAKEN INCLUDE: (1) DEVELOP APPROPRIATE REPAIR PLA N. (ASSIGN TO MECHANICAL DESIGN ENGINEERING, DUE DATE: 6/1/05) AND (2) IMPL					

EMENT REPAIR PLAN. (ASSIGN TO MAINTENANCE, DUE DATE: 7/30/05. (G. ENGLERT, 4/13/05)

Request Attribute	Value	Reqd	Date
6 MISCELLANEOUS		N	
Name :			

Page : 5 Printed: 06/06/05 4

ACTION REQUEST 00155986

Request Attribute Value Name : MERYLANNE

6A COMMENTS NO NCON NEEDED GOTTERUP

Reqd Date N 04/12/05

SUPERVISOR OF ENGINEERING MECH/STRUCT DESIGN HAS REVIEWED AND INDICATED THA T NO NCON ASSIGNMENT IS NEEDED FOR THIS NCR. MLG

Request Attribute 6B COMMENTS Name :	Value	Reqd N	Date
Request Attribute 6C COMMENTS Name :	Value	Reqd N	Date
Request Attribute 6D COMMENTS Name :	Value	Reqd N	Date

Request Attribute Value 6E COMMENTS Name :

Request Attribute Value 6F SCHD ISS CLOS DT Name :

Request Attribute Value 6G EQUIP PRI ISSUE Name :

Request Attribute Value 6H RESP MGR Name :

Request Attribute Value 6I EQUIP PRI STATUS Name :

Reqd Date Ν

Reqd Date N

Reqd Date

Ν

Reqd Date Ν

Reqd Date Ν

ACTION REQUEST APPROVAL REVIEW

Route List: 001 Alert PASSPORT Fac Group/Type Last Name BANDHW CR3 OPSSUPV A BANDHAUER BRIGHR01 CR3 REGREV A BRIGHT LOEHRM CR3 UNITEVAL A GOTTERUP

Route List Initiator: BANDHW					
Send	Send	Action	Ac	tion	
Date	Time	Taken	Dat	e/Time	
04/08/05	14:28	APPROVED	04/08/05	14:31	
04/08/05	14:31	APPROVED	04/08/05	14:43	
04/08/05	14:43	APPROVED	04/11/05	16:23	

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ACTION REQUEST 00155986

TREND-CAUSE

Facility: CR3 Trend 1:	ACAUSE Trend 2: J	Trend 3: J7A	Date: 04/13/05
Process: N/A	Org: ESSD Rank: E	Assign:	
Description: AGING/EXPE	CTED DETERIORATION		
Facility: CR3 Trend 1:	CCAUSE Trend 2: K	Trend 3: Kl	Date:
Process: N/A	Org: N/A Rank:	Assign:	
Description: WEATHER-RE	LATED		
Facility: CB3 Trend 1:	CFC Trend 2: ER	Trend 3: EB3	Date:
-	Org: N/A Rank:		
Description: LONG-TERM		· ·	
Facility: CR3 Trend 1:	EVENT Trend 2: EC	Trend 3: EC8	Date:
Process: OP3	Org: N/A Rank:	Assign:	
Description: DEGRADED E	QUIPMENT		

ASSIGNMENT NUMBER 02 SUB			
ASSIGNMENT NUMBER 02 SUB			
Type : INVN Due Date :	05/07/05		
Type: INVNDue Date:Status: CANCELEDReschedule:Assigned To: G ENGLERT JR.Subject: CONCRETE SPALLING: ADVERSE CO	NDITION IN	Pri Resp Group: ESDSUPV2 Sec Resp Group: NVESTIGATION	
Aff Facility: CR3 Unit :		System :	
UCR : Schedule Ref : Organization: Department : Est Manhrs : Est Comp Date :	476		
Assignment Attribute Value	Reqd	Date	
EXTERNAL OE RECOMM Name :	Y		
Assignment Attribute Value	Reqd	Date	
INTERNAL OE RECOMM . Name :	Y		
Assignment Attribute Value BENEFIT REALIZED	Reqd N	Date	
Name :			
Assignment Attribute Value 1 EVALUATOR/ASSIGNEE	Reqd N	Date	
Name :			
Assignment Attribute Value	Reqd	Date	
IA COMMITTED Name :	N		
Assignment Attribute Value	Reqd	Date	
1B CHANGE BASIS CANCELED Name : MERYLANNE GOTTERUP	Ν	04/13/05	
SEE ATTRIBUTE 5B FOR NFIR			
Assignment Attribute Value 2 MISCELLANEOUS	Reqd N	Date	
Name :			

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ACTION REQUEST 00155986

Reqd N	Date		
Reqd N	Date		
Reqd N	Date		
-	Date		
	Date		
IN			
Route List			
Send	Send	Action	Action
Date	Time	Taken	Date/Time
	c	CANCELED	04/13/05 13:42
	N Reqd N Reqd N Reqd N Reqd N Reqd N	N Reqd Date N Reqd Date N Reqd Date N Reqd Date N Reqd Date N Reqd Date Time	Reqd Date N Reqd Date N Reqd Date N Reqd Date N Reqd Date N Reqd Date N

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ACTION REQUEST 00155986

ASSIGNMENT NUMBER 05 SUB

Type: CORRDue Date: 06/01/05Status: COMPLETEReschedule:Pri Resp Group: ESDSUPV2Assigned To: J LESESec Resp Group:Subject: DEVELOP APPRIATE REPAIRPLAN FOR RB WALL

Aff Facility: CR3Unit:System:UCR:Schedule Ref::Organization:Department: 476Discipline:Est Manhrs:Est Comp Date::

Assignment Attribute Value Reqd Date
BENEFIT REALIZED N
Name :

Assignment Attribute Value 1 UNIT/SECT EVALUATR Name :

Assignment Attribute Value 1A COMMITTED Name :

Assignment Attribute Value 1B CHANGE BASIS Name :

Assignment Attribute Value 2 MISCELLANEOUS Name :

Assignment Attribute Value 2A COMMENTS Name :

Assignment Attribute Value 2B COMMENTS Name :

Assignment Attribute Value 2C COMMENTS Name : Reqd Date

Reqd Date

Reqd Date

Reqd Date

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Reqd Date N

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ACTION REQUEST 00155986

Assignment Attribute 2D COMMENTS Name :	Value	Reqd N	Date
Assignment Attribute 2E COMMENTS Name :	Value	Reqd N	Date
Assignment Attribute 3A LTCA APPROVAL Name :	Value	Reqd N	Date
Assignment Attribute 3B LTCA CONCURRENCE Name :	Value	Reqd N	Date

COMPLETION NOTES

A VISUAL WALKDOWN OF THE EXTERIOR FACE OF THE REACTOR B UILDING WAS CONDUCTED ON 5/23/05 (J.A. LESE). NO EVIDE NCE OF FURTHER DEGRADATION OF THE CONCRETE SURFACE WAS NOTED. BASED ON THE DISCUSSION OF SECTION 5B OF THE AT TRIBUTES SECTION OF THE SUBJECT AR, IT APPEARS THAT THI S IS AN ISLOATED OCCURRENCE OF WEATHER RELATED SPALLING OF PREVIOUS PATCHING OF THE EXTERIOR RB SURFACE. SEVE RAL YEARS AGO, A CONCERTED EFFORT WAS MADE TO REMOVE TH E ARCHITECTURAL SECTIONS OF CONCRETE AT THE CORNERS OF THE RB BUTTRESSES WHICH WERE NOT TIED BACK INTO THE BUI LDING ITSELF. NO FURTHER SPALLING OCCURRED UNTIL THIS RECENT ISOLATED EVENT. GIVEN THE PERIODIC INSPECTION P ER PM-156 AND THAT FURTHER EVIDENCE OF DEGRADATION IS N OT APPARENT AT THIS TIME, NO FURTHER CORRECTIVE ACTIONS WILL BE PURSUED. THERE DOES NOT APPEAR TO BE A CONDIT ION ADVERSE TO QUALITY WHICH WOULD WARRANT FURTHER INVE STIGATION OR ANALYSIS. THIS ITEM TO BE CLOSED BASED ON DISCUSSION ABOVE.

CAUSE/ACTION

ASSIGNMENT COMPLETION APPROVAL

Route List: 001 Route List Initiator: LESEJO				
Alert	Send Send Action Action			
PASSPORT Fac Group/Type Last Name	Date Time Taken Date/Time			
ENGLEG CR3 ESDSUPV2 A ENGLERT JR.	05/24/05 07:55 APPROVED 05/24/05 10:23			
LOEHRM CR3 ESSDUEVAL A GOTTERUP	05/24/05 10:23 APPROVED 05/24/05 10:28			
	1			

Page : 11 Printed: 06/06/05 ACTION REQUEST 00155986 ASSIGNMENT NUMBER 10 SUB Type: MREVDue Date: 05/04/05Status: COMPLETEReschedule: : Pri Resp Group: ESSSUPV2 Assigned To : P ALLEN Sec Resp Group: Subject : PERFORM MAINTENANCE RULE EVALUATION FOR RB WALL Aff Facility: CR3 Unit : System : UCR : Schedule Ref : Department : 485 Discipline : Organization: Est Comp Date : Est Manhrs : Assignment Attribute Value Reqd Date 1 FUNCTIONAL FAILURE N Y 04/19/05 Name : PARKS ALLEN Assignment Attribute Value Reqd Date 2 REPETITIVE FF N Y 04/19/05 Name : PARKS ALLEN Assignment Attribute Value Regd Date 3 UNAVAILABILITY N Y 04/19/05 Name : PARKS ALLEN Assignment Attribute Value Reqd Date 4A RX TRIP OCCUR N Y 04/19/05 Name : PARKS ALLEN Assignment Attribute Value Reqd Date 4B SAFETY SYS ACTUAT N Y 04/19/05 Name : PARKS ALLEN Assignment Attribute Value Reqd Date 4C UNPLANNED CAP LOS N Y 04/19/05 Name : PARKS ALLEN Assignment Attribute Value Reqd Date 5 PERF CRIT EXCEEDED N Y 04/19/05 Name : PARKS ALLEN Assignment Attribute Value Reqd Date 6 MR DATABASE ENTRY N Y 04/19/05 ALLEN Name : PARKS

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ACTION REQUEST 00155986

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Assignment Attribute 7A PRI 1 NCR REQ Name : PARKS	Value N ALLEN	Reqd Y	Date 04/19/05	
Assignment Attribute CHANGE BASIS Name :	Value	Reqd N	Date	
Assignment Attribute 7 RECOMMEND (A)(1) Name :	Value	Reqd N	Date	
Assignment Attribute 8 EQUIP. REFERENCE Name :	Value	Reqd N	Date	·
COMPLETION NOTES				
CAUSE/ACTION		<u>"</u>		
ASSIGNMENT COMPLETIO	N APPROVAL			
Route List: 001	t	Route Lis Send	t Initiator:AI Send Action	LENP Action
PASSPORT Fac Group/	Type Last Name	Date	Time Taken	Date/Time
ALLENP CR3 ESSSUPV2		04/19/05	14:15 APPROVED	04/19/05 14:15
DYERKA	A DYER	04/19/05	14:15 APPROVED	04/19/05 16:42
LOEHRM CR3 ESSSUEVA	L A GOTTERUP	04/19/05	16:42 APPROVED	04/20/05 08:52

Page : 13 Printed: 06/06/05 ACTION REQUEST 00155986 ASSIGNMENT NUMBER 11 SUB Type: CORRDue Date: 07/30/05Status: COMPLETEReschedule: Pri Resp Group: ESDSUPV2 Assigned To : J LESE Sec Resp Group: Subject : IMPLEMENT REPAIR PLAN FOR RB WALL : Aff Facility: CR3 Unit System : UCR Schedule Ref : : Discipline : Organization: Department : 476 Est Manhrs : Est Comp Date : DEVELOPED IN ASSIGNMENT 5 OF THIS NCR Assignment Attribute Value Reqd Date BENEFIT REALIZED Ν Name : Reqd Date Assignment Attribute Value 1 UNIT/SECT EVALUATR Ν Name : Assignment Attribute Value Reqd Date 1A COMMITTED Ν Name : Assignment Attribute Value Reqd Date 1B CHANGE BASIS Ν Name : Assignment Attribute Value Reqd Date 2 MISCELLANEOUS Ν Name : Assignment Attribute Value Reqd Date 2A COMMENTS Ν Name : Assignment Attribute Value Reqd Date 2B COMMENTS Ν Name :

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ACTION REQUEST 00155986

Assignment Attribute Value 2C COMMENTS Name :	Reqd Date N
Assignment Attribute Value 2D COMMENTS Name :	Reqd Date N
Assignment Attribute Value 2E COMMENTS Name :	Reqd Date N
Assignment Attribute Value 3A LTCA APPROVAL Name :	Reqd Date N
Assignment Attribute Value 3B LTCA CONCURRENCE Name :	Reqd Date N
COMPLETION NOTES BASED ON THE DISCUSSION ASSOCIATED WITH AS OMPLETION NOTES, THERE IS NO IMPLEMENTATION ED. THE SUBJECT ISSUE IS BEING TREATED AS EVENT AND CONTINUED MONITORING PER PM-156 CTION OF PLANT STRUCTURES) WILL MONITOR TH THIS ITEM TO BE CLOSED BASED ON DISCUSSION HE COMPLETION NOTES OF ASSIGNMENT #5.	ON PLAN REQUIR 5 AN ISOLATED (VISUAL INSPE HE SITUATION.
CAUSE/ACTION	
ASSIGNMENT COMPLETION APPROVAL	
Route List: 001 Alert PASSPORT Fac Group/Type Last Name ENGLEG CR3 ESDSUPV2 A ENGLERT JR. LOEHRM CR3 ESSDUEVAL A GOTTERUP	Route List Initiator: LESEJO Send Send Action Action Date Time Taken Date/Time 05/24/05 07:59 APPROVED 05/24/05 10:25 05/24/05 10:25 APPROVED 05/24/05 10:27

"XYZ" was completed in the field on mm/dd/yy, or Material Evaluation was completed and approved on mm/dd/yy.

		CORRECTIVE ACTION	TYPE Specify (CORL OR ENHN) [*]	ASSIGNEE/ CONCURRENCE	DUE OR COMPLETION DATE
ADVERSE CONDITION	.	Implement a repair plan or monitor for future degradation	CORL	J.A. Lese	Completed by J.A. Lese on 3/7/2006. PM-156 will provide for future monitoring of the RB structure. See also AR 155986 and included corrective action plan.
OTHER	N/A				

* Designate which items are Long Term Corrective Action

Page : 1 Printed: 04/18/06 ACTION REQUEST 00184396 : NCR Orig Date: 02/15/06 19:13 Discovery Date: Type Subject : RB WALL CONCRETE SPALLS WERE FOUND ON THE ROOF. Description CONCRETE SPALLS FROM THE RB ROOF WERE FOUND ON THE AUXIALLIARY BUILDING ROOF, THE THREE PIECES ARE APPROCIMATELY 8 INCHES BY EIGHT INCHES EACH AND NO THICKER THAN 1 IINCH WHICH TAPERS DOWN TO LESS THAN 1/16. Status: COMPLETE 04/17/06 Priority : 3 Report To : Due Date : 06/30/06 Event Date : Originator : PEPINR Originator Group: Organization: Facility : CR3 Department : 607 Owed To Group : ESSDUEVAL Owed To : Owed To Fac: CR3 Department Discipline : : AR Status History Updated Date Updated By AR Status AR Due Date 02/15/06 PEPINR INPROG 02/15/06 PEPINR H/APPR 02/16/06 LOEHRM 06/30/06 02/16/06 LOEHRM PRE-APRV 02/16/06 LOEHRM APPROVED 04/17/06 LOEHRM COMPLETE

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Page : 2 Printed: 04/18/06

ACTION REQUEST 00184396

Reqd Date Request Attribute Value 1A POT'L OPER/REPORT N Y 02/15/06 Name : RICHARD PEPIN Request Attribute Value Reqd Date 1B EQUIPMENT RELATED N Y 02/16/06 Name : MERYLANNE GOTTERUP Request Attribute Value Reqd Date 2 SUPERVISOR REVIEW Ν Name : Request Attribute Value Reqd Date Y 2A CR VALID? Y 02/15/06 Name : RICHARD PEPIN Request Attribute Value Regd Date 2B FURTHER INVN REQD Y 02/15/06 Y Name : RICHARD PEPIN CAP-NGGC-0200 is the official document for NCR processing Priority 2 Include, at a minimum, the following information: Inappropriate Act statement ... work group involved in the inappropriate act ... Apparent Cause and recommended cause code (reference CAP-NGGC-0206) ... Completed Corrective Actions - CORR, and/or ... Additional Corrective Actions if needed 0 recommended assignee recommended due date 0 Priority 3 Include the following information: Completed Corrective Actions - CORL, and/or 11 Additional Corrective Actions if needed recommended assignee 0 o recommended due date Request Attribute Value Reqd Date 2C RECOMMENDED OWNER ENG N 02/15/06 Name : RICHARD PEPIN Request Attribute Value Reqd Date 2D OPER/REPORT ISSUE N Y 02/15/06 Name : RICHARD PEPIN Request Attribute Value Reqd Date 2D1EOUIPMENT RELATED N Y 02/16/06 Name : MERYLANNE GOTTERUP Request Attribute Value Reqd Date 2E MAINT RULE APPLIC Y Ν 02/15/06 Name : RICHARD PEPIN

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ACTION REQUEST 00184396

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Request Attribute 2F SYSTEM Name : MERYLANNE	Value MX GOTTERUP	-	Date 02/16/06
Request Attribute 3 OPERATIONS REVIEW Name :	Value	Reqd N	Date
Request Attribute 3A IMMED REPT ISSUE Name :	Value	Reqd N	Date
Request Attribute 3B OCR Name :	Value	Reqd N	Date
Request Attribute 3B1 OPER ISSUE Name :	Value	Reqd N	Date
Request Attribute 3B2 REPORT ISSUE Name :	Value	Reqd N	Date
Request Attribute 3B3 REW Name :	Value	Reqd N	Date
Request Attribute 3B4 GL 91-18 Name :	Value	Reqd N	Date
Request Attribute 3C TRACKING NUMBER Name :	Value	Reqd N	Date
Request Attribute 4 REG AFF REVIEW Name :	Value	Reqd N	Date
Request Attribute 4A OPER/REPORT ISSUE Name : DENNIS		Reqd Y	Date 02/16/06
Request Attribute 4A1 OPER ISSUE Name : DENNIS	Value N HERRIN	Reqd Y	Date 02/16/06

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ACTION REQUEST 00184396

Request Attribute Value N 4A2 REPORT ISSUE HERRIN Name : DENNIS

Request Attribute 4A3 REW Name : DENNIS

Ν HERRIN

Value

Request Attribute Value 4A4 GL 91-18 N Name : DENNIS HERRIN

Request Attribute Value 4B FOLLOWUP ASG REQD N Name : DENNIS HERRIN

Request Attribute Value 4C T. SPEC VIOLATION N Name : DENNIS HERRIN

Request Attribute Value 4D ADD'L REPORT REQD N Name : DENNIS HERRIN

(Request Attribute Value 4E PNSC/CSERB REQD N Name : DENNIS HERRIN

Request Attribute Value 5 CLASSIFN/ASSIGNMNT Name :

Request Attribute Value 5A CR VALID? Y Name : MERYLANNE GOTTERUP

Request Attribute Value 5B FURTHER INVN REQD Y Name : MERYLANNE GOTTERUP

Request Attribute Value 6 MISCELLANEOUS Name :

Request Attribute Value 6A COMMENTS Name :

Reqd Date Y 02/16/06

Reqd Date 02/16/06 Y

Reqd Date Y 02/16/06

Regd Date Y 02/16/06

Reqd Date 02/16/06 Y

Reqd Date Y 02/16/06

Reqd Date Y 02/16/06

Reqd Date Ν

Reqd Date Y 02/16/06

Reqd Date Y 02/16/06

Reqd Date Ν

Regd Date Ν

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ACTION REQUEST 00184396

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Request Attribute 6B COMMENTS Name :	Value	Reqd N	Date	
Request Attribute 6C COMMENTS Name :	Value	Reqd N	Date	
Request Attribute 6D COMMENTS Name :	Value	Reqd N	Date	
Request Attribute 6E COMMENTS Name :	Value	Reqd N	Date	
Request Attribute 6F SCHD ISS CLOS DT Name :	Value	Reqd N	Date	
Request Attribute 6G EQUIP PRI ISSUE Name :	Value	Reqd N	Date	
Request Attribute 6H RESP MGR Name :	Value	Reqd N	Date	
Request Attribute 6I EQUIP PRI STATUS Name :	Value	Reqd N	Date	
ACTION REQUEST APPROV	AL REVIEW			
Route List: 001 Alert PASSPORT Fac Group/T PEPINR CR3 MNTMSUPV HERRID CR3 REGREV LOEHRM CR3 UNITEVAL	Type Last Name A PEPIN A HERRIN	Send Date 02/15/06 1 02/15/06 1	9:19 APPROVED	Action
TREND-CAUSE				
Process: OP3	1: EVENT Trend 2: EC Org: N/A Ranl EVENT (FLOOD, STORM,	k: A	3: EC15 ssign:	Date:
FACILITY FACILI	d Description TIES URATION CONTROL			

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ACTION REQUEST 00184396

ASSIGNMENT NUMBER 10 SUB

Accimpment Status Mistory

Type: MREVDue Date: 03/30/06Status: COMPLETEReschedule: 1Pri Resp Group: ESSSUPV2Assigned To: P PETERSONSec Resp Group:Subject: PERFORM MAINTENANCE RULE EVALUATION FOR MX SYSTEMAff Facility:CR3Unit: 3UCR:Schedule Ref:Organization:Department: 485DisciplineEst Manhrs:Est Comp Date:

Assignment Stat	us History		
Updated Date	Updated By	Assgn Status	Assgn Due Date
02/15/06	PEPINR	INPROG	
02/16/06	LOEHRM		03/03/06
02/16/06	LOEHRM	NTFY/PRI	
02/16/06	ALLENP	ACC/PRI	
02/16/06	ALLENP	NTFY/ASG	
02/16/06	PETERP	ACC/ASG	
02/27/06	LOEHRM		03/30/06
03/28/06	PETERP	AWAIT/C	
03/29/06	ALLENP	ACC/ASG	
03/30/06	PETERP	AWAIT/C	
 04/03/06	LOEHRM	COMPLETE	

RB WALL CONCRETE SPALLS WERE FOUND ON THE ROOF.

Assignment AttributeValueCHANGE BASISEXTEND 3/30/06Name : PATRICKPETERSON

 Reqd
 Date

 N
 02/27/06

Extend the MREV until the investigation is completed to determine the impact on the Structural Maintenance Rule.

Assignment Attribute	Value	Reqd	Date
1 FUNCTIONAL FAILURE	N	Y	03/28/06
Name : PATRICK	PETERSON		

Assignment Attribute Value 2 REPETITIVE FF N Name : PATRICK PETERSON

Assignment Attribute Value ' 3 UNAVAILABILITY N Name : PATRICK PETERSON

Assignment Attribute Value 4A RX TRIP OCCUR N Name : PATRICK PETERSON

 Reqd
 Date

 Y
 03/28/06

Reqd Date Y 03/28/06

03/28/06

Reqd Date Y 03/28/06

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ACTION REQUEST 00184396

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Assignment Attribute 4B SAFETY SYS ACTUAT Name : PATRICK	N	Reqd Y	Date 03/28/06
Assignment Attribute 4C UNPLANNED CAP LOS Name : PATRICK	Ν	_	Date 03/28/06
Assignment Attribute 5 PERF CRIT EXCEEDED Name : PATRICK	Ν	-	Date 03/28/06
Assignment Attribute 6 MR DATABASE ENTRY Name : PATRICK	N	Reqd Y	Date 03/28/06
Assignment Attribute 7 RECOMMEND (A)(1) Name :	Value	Reqd N	Date
Assignment Attribute 7A PRI 1 NCR REQ Name : PATRICK	N		Date 03/28/06
Assignment Attribute 8 EQUIP. REFERENCE Name :	Value	Reqd N	Date
COMPLETION NOTES			
CAUSE/ACTION			
ASSIGNMENT COMPLETION	APPROVAL		
ALLENP CR3 ESSSUPV2 ALLENP CR3 ESSSUPV2 BARBIL	'ype Last Name A ALLEN	Send Date 03/28/06 1 03/30/06 1 03/30/06 1	Initiator: PETERP Send Action Action Time Taken Date/Time 4:20 RETURNED 03/29/06 17:18 1:57 APPROVED 03/30/06 17:02 1:57 7:02 APPROVED 04/03/06 08:47

Page : 8 Printed: 04/18/06 ACTION REQUEST 00184396 ASSIGNMENT NUMBER 18 SUB Type: INVNDue Date: 03/15/06Status: COMPLETEReschedule: Pri Resp Group: ESDSUPV2 Assigned To : J LESE Sec Resp Group: Subject : PRI 3 INVN: RB WALL CONCRETE SPALL FOUND ON ROOF OF AUX Aff Facility: CR3 Unit : 3 System : UCR : Schedule Ref : Department : 476 Organization: Discipline : Est Manhrs : Est Comp Date : Assignment Status History Updated Date Updated By Assgn Status Assgn Due Date 02/15/06 PEPINR INPROG
 02/15/06
 PEPINK

 02/16/06
 LOEHRM

 02/16/06
 LOEHRM

 02/16/06
 ENGLEG

 02/16/06
 ENGLEG

 03/07/06
 LESEJO

 03/07/06
 LOEHRM
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ACTION REQUEST 00184396

Assignment Attribute 2A COMMENTS Name :	Value	, Reqd N	Date
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CAUSE/ACTION .			
ASSIGNMENT COMPLETION	APPROVAL		
Route List: 001 Alert PASSPORT Fac Group/Ty ENGLEG CR3 ESDSUPV2 LOEHRM CR3 ESSSUEVAL	ype Last Name A ENGLERT JR.	Send Date 03/07/06 1	Initiator: LESEJO Send Action Action Time Taken Date/Time 2:53 APPROVED 03/07/06 12:58 2:58 APPROVED 03/07/06 13:10

ACTION REQUEST 00184396

Type : NCR Orig Date: 02/15/06 19:13 Discovery Date: Subject : RB WALL CONCRETE SPALLS WERE FOUND ON THE ROOF.

Description

CONCRETE SPAILS FROM THE RE ROOF WERE FOUND ON THE AUXIALLIARY BUILDING ROOF, THE THREE PIECES ARE APPROCIMATELY & INCHES BY EIGHT INCHES EACH AND NO THICKER THAN 1 IINCH WHICH TAPERS DOWN TO LESS THAN 1/16.

Priority:3Report To:Status: COMPLETE 04/17/06'Due Date:06/30/06Event Date:Originator:PEPINROriginator Group:Facility:CR3Department: 607Owed To:Owed To Group:ESSDUEVALOwed To Fac: CR3Department: Discipline ;

Page : 1 Printed: 04/18/06

AR Status HistoryUpdated DateUpdated ByAR StatusAR Due Date02/15/06PEPINRINPROG02/15/06PEPINRH/APPR02/16/06LOEHRM06/30/0602/16/06LOEHRMPRE-APRV02/16/06LOEHRMAPPROVED04/17/06LOEHRMCOMPLETE

Page : 2 Printed: 04/18/06

ACTION REQUEST 00184396

Read Date Request Attribute Value 1A POT'L OPER/REPORT N Y 02/15/06 Name : RICHARD PEPIN Value Reqd Date Request Attribute 1B EQUIPMENT RELATED N 02/16/06 Y Name : MER/LANNE GOTTERUP Request Attribute Value Regd Date 2 SUPERVISOR REVIEW N. Name : Request Attribute Value Reqd Date 2A CR VALID? Y 02/15/06 Y Name : RICHARD PEPIN Request Attribute Value Reqd Date 2B FURTHER INVN REQD Y Y 02/15/06 PEPIN Name : RICILARD CAP-NGGC-0200 is the official document for NCR processing Priority 2 Include, at a minimum, the following information: " Inappropriate Act statement work froup involved in the inappropriate act Apparent Cause and recommended cause code (reference CAP-NGGC-0206) Completed Corrective Actions - CORR, and/or Additional Corrective Actions if needed o recommended assignee recommended due date 0 Priority 3 Include the following information: Completed Corrective Actions - CORL, and/or Additional Corrective Actions if needed recommended assignee 0 o recommended due date Request Attribute Value Reqd Date 2C RECOMMENDED OWNER ENG 02/15/06 N Name : RICHARD PEPIN Request Attribute Value Reqd Date 2D OPER/REPORT ISSUE N Y 02/15/06 PEPIN Name : RICHARD 64. I Request Attribute Value Reqd Date 2D1EQUIPMENT RELATED N Y 02/16/06 Name MER LANNE GOTTERUP Request Attribute Value Reqd Date 2E MAINT RULE APPLIC Y. N 02/15/06 Name : RICHARD PEPIN

Page : 3 Printed: 04/18/06

ACTION REQUEST 00184396

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ACTION REQUEST 00184396

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ACTION REQUEST 00184396

Reqd Date Request Attribute Value 6B COMMENTS \mathbf{N} Name : Request Attribute Value Regd Date 6C COMMENTS N Name : Request Attribute Value Reqd Date 6D COMMENTS ·N Name : Request Attribute Value Regd Date 6E COMMENTS Ν Name : Request Attribute Value Reqd Date 6F SCHD ISS CLOS DT N Name : Request Attribute Value Reqd Date 6G EQUIP PRI ISSUE N Name : Request Attribute Value Reqd Date 6H RESP. MGR. N Name : Request Attribute Value Reqd Date 61 EQUIP PRI STATUS N Name : ACTION REQUEST APPROVAL REVIEW Route List Initiator: PEPINR Route List: 001 Route List: 001 Alert PASSPORT Fac Group/Type Last Name Date Time Taken Date/Tim Date/Time PEPINRCR3 MNTMSUPYA PEPIN02/15/06 19:13 APPROVED 02/15/06 19:19HERRIDCR3 REGREVA HERRIN02/15/06 19:19 APPROVED 02/16/06 04:50LOEHRMCR3 UNITEVALA GOTTERUP02/16/06 04:50 APPROVED 02/16/06 10:28 TREND-CAUSE Facility: CR3 Trend 1: EVENT Trend 2: ECTrend 3: EC15Process: OF3Org: N/ARank:Assign: Date: Description: EXTERNAL EVENT (FLOOD, STORM, SEISMIC) Keywords Keyword Keyword Description FACILITY FACILITIES CONFIGURATION CONTROL CFGCNTRL

Page : 6 Printed: 04/18/06 ACTION REQUEST 00184396 ASSIGNMENT NUMBER 10 SUB : MREV Due Date : 03/30/06 : COMPLETE Reschedule : 1 Туре Status : COMPLETE Pri Resp Group: ESSSUPV2 Assigned To : P PETERSON Sec Resp Group: Subject PERFORM MAINTENANCE RULE EVALUATION FOR MX SYSTEM Unit: :3 Aff Facility: CR3 System : MX Schedule Ref ÜCR Department : 485 Discipline : Organization: .Est Comp Date Est Manhrs Assignment Status History Updated Date Updated By Assgn Status Assgn Due Date 02/15/06 PEPINR INPROG 02/16/06 LOEHRM 03/03/06 02/15/06 PEPINK 02/16/06 LOEHRM 02/16/06 LOEHRM NTFY/PRI 02/16/06 ALLENP ACC/PRI 02/16/06 ALLENP NTFY/ASG 02/16/06 PETERP ACC/ASG LOEHRM 02/27/06 LOEHRM 03/28/06 PETERP AWAIT/C 03/29/06 ALLENP ACC/ASG 03/30/06 PETERP AWAIT/C 03/30/06 LOEHRM COMPLETE 04/03/06 RB WALL CONCRETE SPALLS WERE FOUND ON THE ROOF. Assignment Attribute Value Reqd Date CHANGE BASIS EXTEND 3/30/06 N 02/27/06 Name : PATRICK PETERSON Extend the MREV until the investigation is completed to determine the impact on the Structural Maintenance Rule: Assignment Attribute Value Reqd Date 1 FUNCTIONAL FAILURE N Y 03/28/06 Name PATFICK PETERSON Assignment Attribute Value Regd Date 2 REPETITIVE FF 03/28/06 Y Name : PATRICK PETERSON Assignment Attribute Value Reqd Date 3 UNAVAILABILITY N Name : PATFICK PETERSON Y 03/28/06 Assignment Attribute Value Regd Date 4A RX TRIP OCCUR N Name : PATRICK PETERSON Y 03/28/06

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ACTION REQUEST 00184396

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LOEHRM CR3 ESSSUEVAL	A GOTTERUP		:02 APPROVED 04/03/06 08:47

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ACTION REQUEST 00184396

ASSIGNMENT NUMBER 18 SUB Type: : INVN Due Date :03/15/06 Status : COMPLETE Reschedule : Pri Resp Group: ESDSUPV2 Assigned To : J LESE Sec Resp Group: Subject : PRI 3 INVN: RB WALL CONCRETE SPALL FOUND ON ROOF OF AUX Aff Facility: CR3 Unit : 3 UCR : Schedule Ref : Organization: Department : 476 :3 Discipline Est Comp Date : Est Manhrs : Assignment Status History Updated Date Updated By Assgn Status Assgn Due Date ہ در ہی_و INPROG 02/15/06 PEPINR 02/16/06 LOEHRM 02/16/06 LOEHRM 03/15/06 -U2/16/UELOEHRM02/16/06LOEHRMNTFY/PRI02/16/06ENGLEGACC/PRI02/16/06ENGLEGNTFY/ASG03/07/06LESEJOACC/ASG03/07/06LESEJOAWAIT/C03/07/06LOEHRMCOMPLETE Assignment Attribute Value Reqd Date BENEFIT REALIZED N Name : Assignment Attribute Value Reqd Date EXTERNAL OF RECOMM N Y 03/07/06 Name : JOSEPH Assignment Attribute Value Reqd Date INTERNAL OE RECOMM N Y 03/07/06 Name : JOSEPH LESÉ Assignment Attribute Value Reqd Date 1 EVALUATOR/ASSIGNEE N Name : Assignment Attribute Value Reqd Date 1A COMMITTED N Name : Assignment Attribute Value Reqd Date 18 CHANGE SASIS Ń Name : Assignment Attribute Value Reqd Date 2 MISCELLANEOUS N Name :

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ACTION REQUEST 00184396		
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ATTACHMENT 10 Sheet 1 of 1 Adverse Condition Correct and Trend Form (CAT)

Form CAP-NGGC-0200-10-16

Action Request Number: 184396

Investigator:

Joe A. Lese

1. Event Description

• Using information provided in the NCR, identify the problem to be investigated.

A small piece of concrete spalled from the side of the Reactor Building and fell to the Auxiliary Building roof below. An engineering walkdown of the area near Buttress #5 (Auxiliary Building roof at the RB Vent Stack) has been conducted and no additional spalling issues are apparent. It is suspected that a recent period of unusually cold weather has contributed to cracking in a localized area near the lower edge of one of the concrete panel sections, which resulted in a small section of concrete coming loose.

The section is relatively small is size with minimal thickness. No reinforcement has been exposed and it does not appear to be indicative of a common cause type failure nor do any adjacent sections of concrete appear to be susceptible to additional degradation.

Reventive Maintenance procedure PM-156, Visual Inspection of Plant Structures, provides for the periodic monitoring of the structural elements of the plant, including concrete structures. Continued monitoring of the exterior condition of the Reactor Building will be encompassed by this procedure.

As documented previously under AR 155986 wherein a small section of concrete spalled after severe weather, this condition does not appear to be indicative of a widespread concern. The completed engineering walkdown coupled with continued monitoring under the PM-156 program serve as the completed actions to date with no new corrective actions being required.

The apparent cause of this issue appears to aging/expected deterioration (cause code J7A) hastened by weather related effects (cause code K1).

2. Corrective Action Plan

• For completed or interim actions, provide appropriate completion documentation or ensure that the investigation results contain adequate detail to ensure traceability, for example; Work Order "ABC" was completed and finished on mm/dd/yy, Engineering Change Request

NRC Questions from 10/22 (assigned to G.Pugh):

Question #2 (Request Number 8) NRC Question:

Any information on significant repairs (concrete related) between buttress 3 and 4 from original construction to today.

CR3 Response:

Performed a search of the document control system, both the SEEK system and historical QA records. Looked for any Work Orders, NCRs, Correspondence, or other documents using the keywords "concrete repair" and "concrete crack." There were several "hits" on these key words. The majority of these "hits" were screened away by reviewing the title of the document. Any "hits" where the title was not clear were reviewed individually. The results were several AR's and Work Orders to repair damaged or cracked concrete on the RB containment. However, none of the items reviewed were in the area of concern.

In addition, conversations were held with several people in maintenance and engineering, including one person that was employed in the early 1970's. No one could remember making any repairs on the RB shell concrete in the area of interest. No modifications could be identified.

Conclude that the concrete between buttress 3 and 4 is original construction.

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Record No	Facility Un	iit Doc Type	Doc Nbr	Sheet Nbr Rev Nbr	Minor Rev	Doc Date	Doc Title	
00000000094006	CR3	AR	00081794			01/31/2003	SAB W. DOOR HANDRAIL HAS BECOME DETACHED FROM THE CONCRETE	
<u>000000002899534</u>	CR3	Í AR	00091019	. · · ·		07/22/2003	CONCRETE SLUDGE ENTERS CR3 STORM DRAIN SYSTEM	
000000002912578	CR3	AR	00099147		4	08/18/2003	CONCRETE DEFICIENCIES FOUND IN RVCH STORAGE BUILDING	
000000002922537	CR3	AR	00103171			09/03/2003	SPALLED CONCRETE RECORDED DURING SP-208 VISUAL ON DHR-16	
000000002946225	CR3	AR	00036167		·	10/16/2003	99-3482 A CRACKED SECTION OF CONCRETE HAS BEEN REMOVED FROM	
000000002950099	CR3	AR	00107955	······································		10/23/2003	FAILED CLASS I CONCRETE COATINGS IN RB	
000000003279242	CR3	AR	00155986			06/01/2005	CONCRETE SPALLING OF RB WALL	_
000000003459255	CR3	AR	00184396	1	and the second	04/17/2006	RB WALL CONCRETE SPALLS WERE FOUND ON THE ROOF.	
000000003724253	CR3	AR	00244731	000		09/04/2007	BASEPLATE INSTALLED OVER A CONCRETE SPALL	
000000003956583	CR3	AR	00258477	000		10/01/2008	CONCRETE COLUMN IN SEAWATER ROOM HAS CRACKS AT BASE	, .
000000004047775	CR3	AR	00050458	000		02/12/2009	WATER LEAKING FROM CONCRETE NEAR CWP-1D	
000000004077144	CR3	AR	00327173	000		03/26/2009	OTSG RETIREMENT STRUCTURE CONCRETE WALL POUR	
<u>000000004128179</u>	CR3	AR	00329963	000		05/04/2009	CONCRETE SEAL SLAB INSTALLATION WO 1305629 TASK 03	
000100001160128	CR3	4R	00275724	000		08/10/2009	CRACKED CONCRETE SUPPORT PADS IN SEAWATER ROOM	
000110104/09405	CR3	AR	00183501	000		09/28/2009	CONCRETE FOUND IN RB 119'	
01013001214710	CR3	٩R	00254820	000		10/14/2009	SUI CONCRETE COATINGS CANNOT BE APPLIED R15	

Using SEEK document service and using the NCR/AR document search with "concrete" in the title the above "hits" were identified. Only two had relevance to the RB structure. These are AR's 00155986 and 00184396. These two AR's are printed out and included in the folder.

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000000002394833 CR3 CORR 1.02.8 000000002394258 CR3 CORR 1.02.19		01/0 1/1975 REACTOR BUILDING - INTERNAL STRUCTURES - STEEL CONNECTIONS TO CONCRETE (BOOK I) 01/0 1/1975 REACTOR BUILDING - INTERNAL STRUCTURES - CONCRETE FLOORS (BOOK IV)
000000002395003 CR3 CORR 2.01.17		01/01/1975 AUXILIARY BUILDING STRUCTURE - SEISHIC ANALYSIS OF CONCRETE STRUCTURE (BOOK IV)
C00000002395023 CR3 CORR 2.01.17		01/01/1975 TURBINE BUILDING - COUCRETE FOUNDATION PLAN (BOOK ID
00000002335086 CR3 CORR 3.01.14		0101/11975 TURBINE BUILDING - CONCRETE COMBINED COL, FTG & MAT FON FTG ALONG COL LINE 301 & 302 (BOOK II)
000000002895087 CR3 CORR 3.01.15		01/0/1/1975 TURBINE BUILDING - CONCRETE COMBINED COLUMN & MAT FND BASEMENT SLAB REINFORCEMENT WEST SIDE (BOOK II)
000000002395058 CR3 CORR 3.01.16		01/01/1975 TURBINE BUILDING - CONCRETE NORTHWEST CORNER EQUIPMENT LOADS AND LOCATION (BOOK II)
000000002895094, CR3 . CORR -3.01.17		01/01/1975 TURBINE BUILDING - CONCRETE BASEMENT SLAB LOADING CONDITION COLUMN LINE F (BOOK III)
000000002895095 CR3 CORR 3.01.18		01/01/1975 TURBINE BUILDING - CONCRETE COLUMN PLASTER PLAN AT EL 114 FT (BOOK III)
000000002895120; CR3CORR 3.01.21		01/01/1975 TURBINE BUILDING - CONCRETE COLUMN FOUNDATIONS (BOOK III)
00000002595126 CR3 CORR 3.01.22	an a sea Sector to	01/01/1975 TURBINE BUILDING - CONCRETE H.P. AIR SHAFT DUCT ALONG COL. LINE A SEC. 4-4 AND 5-5 (BOOK III)
000000002395257 CR3 CORR 8.01.10		01/01/1975 MISCELLANEOUS CALCULATIONS AUXILIARY BUILDING CONCRETE PLUG (BOOK I)
000000002395259 CR3 CORR 8.01.12	· · · · · · · · · · · · · · · · · · ·	
00000002295270, CR3 ' , CORR 8.01.22		01/01/1975 MISCELLANEOUS CALCULATIONS AUXILIARY STEALI LINE CONCRETE ANCHOR AND MANHOLE (BOOK I) 01/01/1975 MISCELLANEOUS CALCULATIONS TURBINE BUILDING CONCRETE CHECKS AND MODIFICATIONS (BOOK 01/01/1975 D
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000000004030665 CR3 CORR 3.01.21	- 001	01/01/1975 TURBINE BUILDING - CONCRETE COLUMN FOUNDATIONS (BOOK III) -SUPPLEMENT
000000004030688 CR3 CORR 2.01.58	001	0 101/1975 INTERMEDIATE BUILDING BEINE CONCRETE (DESIGN REVIEW-SUPPLEMENT TO BMS 2895560
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C1:00:01:03:113.65 CR3 MUT 0078251804: 10/19/2007 Y, PM, RAX-3, PULL/REPLACE CONCRETE 0:000:0003790727 CR3 MHT 0100101301 000 11/24/2007 P.OM.R15 COATHINGS: SLI CONCRETE EL 95 0:000:0003790727 CR3 MHT 0068104308 001 11/24/2007 P.OM.R15 COATHINGS: SLI CONCRETE EL 95 0:000:00003785100 CR3 MHT 0111453205 000 02/19/2008 M, OM.CONCRETE FILL CW SUPPLY AND DISCHARGE FLUME MANWAYS 0:00000003785133 CR2 MHT 0112752301 000 02/21/2008 M, OM.CONCRETE RWP PIT MANHOLE SUMPS 0:000000032352526 CR3 MHT 0129547901 0305/2008 INSTALL CONCRETE RWP PIT MANHOLE SUMPS 0:000000032352526 CR3 MHT 0100405201 000 03/10/2008 M, OM, GONCRETE REPAIR 0:00000003372136 CR3 MHT 008375301 000 03/10/2008 M, OM, GROUT ABANDONED ANCHOR HOLE IN CONCRETE 0:00000003372136 CR3 MHT 0083375301 000 09/22/2008 M, OM, CONCRETE REPAIR 0:00000003372136 CR3 MHT 0075666301, 000 09/22/2008 M, OM, CONCRETE REMOVE ABANDONED CO	00000003373564 CR3 MNT 0065874801		11/21/2005 P.OW,R14 SCRAPE FAILED/FLAKING CONCRETE& STEEL COATINGS
Implication CR3 LMT 0.100 101301 0.00 11/24/2007 P.OLIR 15 COATILIGS: SLI CONCRETE EL 95 0000/00003790727 CR3 MNT 0.068104308 0.01 11/24/2007 P.OLIR 15 COATILIGS: SLI CONCRETE EL 95 0000/00003790727 CR3 MNT 0.068104308 0.01 11/24/2007 P.OLIR 15 COATILIGS: SLI CONCRETE EL 95 000000003790727 CR3 MNT 0.068104308 0.01 11/24/2007 (E.O.OV), RB ASME XLIWE / IWL VISUAL EXAMIS LIMER / CONCRETE - SUPPLEMENT TO RMS # 000000003790727 CR3 MNT 0.111453205 0.00 0.02/19/2008 M.OM.CONCRETE FILL CW SUPPLY AND DISCHARGE FLUME MANWAYS 0000000038329533 CR2 MNT 0.0129547901 0.00 0.02/21/2008 M.OM.CONCRETE RWP PIT MANHOLE SUMPS 00000003836968 CR3 MNT 0.129547901 0.00 0.305/2008 INSTALL CONCRETE CURB AROUND HEAT EXCHANGER IAHE-6B 1 0.00000038369295 CR3 MNT 0.0129547901 0.00 0.3410/2008 M.OM, GCXR-1, PERFORM CONCRETE REPAIR 1 0.0000003972130 0.00 0.3410/2008 M.OM, GCXR-1, PERFORM CONCRETE REPAIR 0.00 1 0.00 0.00	000000003384199 CR3 MNT 0047821102		12/09/2005 M, PM, RAX-3, REINSTALL CONCRETE BEAMS AT EQUIP. HATCH
0000/0003790727 CR3 MNT 0068104308 001 12/02/2007 (E, Q, OW, RB ASME XLIWE / IWL VISUAL EXAMIS LIPER / CONCRETE - SUPPLEMENT TO RMS # 000000003790727 CR3 MNT 0111453205 000 02/19/2008 M, OM, CONCRETE FILL CW SUPPLY AND DISCHARGE FLUME MANWAYS 0000000033295533 CR2 MNT 01129547901 000 02/21/2008 M, OM, CONCRETE RWP PIT MANHOLE SUMPS 00000003236566 CR3 MNT 0129547901 0300 02/10/2008 M, OM, CONCRETE CURB AROUND HEAT EXCHANGER IAHE-6B 1/00000032365765 CR3 MIT 0100405201 000 03/10/2008 M, OM, GCXR-1, PERFORM CONCRETE REPAIR 0/0000003372130 CR3 MNT 0083375301 000 09/22/2008 M, OM, GCWR-1, PERFORM CONCRETE REPAIR 0/0000003372130 CR3 MNT 0075665301, 000 09/22/2008 M, OM, CDP-14 & CDP-18 REMOVE ABANDONED CONCRETE PADS & STUDS	600000103711639 CR3 MUT 0078551804		10/19/2007 Y, PM, RAX-3, PULL/REPLACE CONCRETE
000000003785100 CC CR3 LITT 0111453205 000 02/19/2008 M.OM.CONCRETE FILL CW SUPPLY AND DISCHARGE FLUIE MANWAYS C000000033325533 CR2 MNT 0112752301 000 02/21/2008 M.OM.CONCRETE RWP PIT MANHOLE SUMPS D0000003233556 CR3 MNT 0129547901 03/05/2008 INSTALL CONCRETE CURB AROUND HEAT EXCHANGER IAHE-68 2*0000002335555 CR2 LITT 0100405201 000 03/10/2008 M.OM.GCXR-1, PERFORM CONCRETE REPAIR 5*/>00000003372136 CR3 MNT 0083375301 000 09/22/2008 M.OM.GCXR-1, PERFORM CONCRETE REPAIR 000000003372130 CR3 MNT 0003375301 000 09/22/2008 M.OM.CDP-14 & CDP-1B REMOVE ABANDONED CONCRETE PADS & STUDS	CR3 MUT 0100101301	000	11/24/2007 P.OH.R 15 COATINGS: SET CONCRETE EL 95
000000000000000000000000000000000000	0000-0003790727 CR3 MNT 0068104308	- 001	12/02/2007 ¹ E,Q,O,W, RB ASME XI WE / WE VISUAL EXAMIS LINER / CONCRETE - SUPPLEMENT TO RMS # []
0000000032363646 CR3 MNT 0129547901 03/05/2008 INSTALL CONCRETE CURB AROUND HEAT EXCHANGER IAHE-68 1*0000003936155 CR3 MILT 0100405201 000 03/10/2008 M, OH, GCXR-1, PERFORM CONCRETE REPAIR 6600131342136 CR3 MILT 000 09/22/2008 M, OH, GCXR-1, PERFORM CONCRETE REPAIR 000000003972130 CR3 MILT 000 09/22/2008 M, OH, GCXR-1, PERFORM CONCRETE REPAIR 000000003972130 CR3 MILT 000 09/22/2008 M, OH, GCXR-1, PERFORM CONCRETE REPAIR 000000003972130 CR3 MILT 000 09/22/2008 M, OH, GCXR-1, PERFORM CONCRETE RADS & STUDS	<u>0.0:01/_007000</u> CR3 MDT 0111453205	000	02/19/2008 M.OM.CONCRETE FILL OW SUPPLY AND DISCHARGE FLUME MANWAYS
000000032363636 CR3 MNT 0129547901 03/05/2008 INSTALL CONCRETE CURB AROUND HEAT EXCHANGER IAHE-68 2:0000003236135 CR3 MIT 0100406201 000 03/10/2008 INSTALL CONCRETE CURB AROUND HEAT EXCHANGER IAHE-68 5:x:00013336135 CR3 MIT 0100406201 000 03/10/2008 IN, OLI, GCXR-1, PERFORM CONCRETE REPAIR 6:x:000133361236 CR3 MIT 0083375301 000 09/22/2008 IN, OLI, GROUT ABANDONED ANCHOR HOLE IN CONCRETE 000000003972130 CR3 MIT 0075665301, 000 10/20/2008 IN, OLI, GROUT ABANDONED CONCRETE PADS & STUDS	00000003829533 CR2 MNT 0112752301	,000 	02/21/2008 M, OH, CONCRETE RWP PIT MANHOLE SUMPS
0.0.00000003372130 CR3 MNT 0083375301 000 09/22/2008 M, OM, GROUT ABANDONED ANCHOR HOLE IN CONCRETE 000000003372130 CR3 MNT 0075665301 000 10/20/2008 M, OM, CDP-16 & CDP-18 REMOVE ABANDONED CONCRETE PADS & STUDS	00000003836366 CR3 MNT 0129547901	a se s a ser ser a s	03/05/2008 INSTALL CONCRETE CURB AROUND HEAT EXCHANGER IAHE-6B
000000003972130 CR3 MNT 0075665301, 000 10/20/2008 M.OM.CDP-1A & CDP-1B REMOVE ABANDONED CONCRETE PADS & STUDS	" <u>210000002836126</u> " CR2 MUIT 0100406201"	 000	03/10/2008 M,OH,GCXR-1, PERFORM CONCRETE REPAIR
		000 .	09/22/2008 M, OM, GROUT ABANDONED ANCHOR HOLE IN CONCRETE
	000000003972130 CR3 MNT 0075665301,	000	10/20/2008 M,OM,CDP-1A & CDP-1B REMOVE ABANDONED CONCRETE PADS & STUDS
	000000004212750 CR3 MNT 0131602202	000	10/15/2009 P,OM,RB COATINGS: SL I CONCRETE EL 95

Using SEEK document service and using the Work Order document search with "concrete" in the title the above "hits" were identified. There are no relevant "hits".

3. 4 NCR# 184396-10

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1. Does the described condition document the failure or degradation of a component or subcomponent in a Maintenance Rule scoped system?

2. Does the condition describe a plant level event or unplanned /unexpected unavailability?

Yes to either: Continue to Question 2

No to Both: MREV is not needed. Mark the *1 FUNCTIONAL FAILURE* attribute with an "N". Document in the *1 FUNCTIONAL FAILURE* attribute note why an MREV is not needed. Place "N's" in the remaining required attributes and forward MREV to your Supervisor.

Condition Summary (Optional):

Pieces of concrete from the Containment Building were discovered on the Auxiliary Building roof. Since Containment Building is within the boundaries of the MX system, the MREV is proceeding to question 2.

2. Review PMG basis and functional failure definition. Based on the functional failure definition and PMG basis, is this a functional failure?

Yes: Mark the *1 FUNCTIONAL FAILURE* attribute with a "Y". Identify affected function and PMG in the *1 FUNCTIONAL FAILURE* attribute note. Identify all other performance criteria (unavailability, Rx trips, etc.) that this PMG is monitored with. If you did not perform the apparent cause investigation for this failure, you must perform one to ensure the cause /corrective action(s) are sufficient to prevent reoccurrence. In accordance with CP-153B, NFIR's are not acceptable and a investigation must be performed by the system engineer. Document the apparent cause information (assignment # and due date) in the MREV.

Go to Question 3.

No: Mark the *1 FUNCTIONAL FAILURE* attribute with an "N". Identify the function and PMG reviewed in the 1FUNCTIONAL FAILURE attribute note. Using the functional failure definition or PMG basis, clearly identify why the condition is not a functional failure. List all other performance criteria for this PMG.

Go to Question 4.

1 FUNCTIONAL FAILURE: \Box Y \boxtimes N

Note Text:

There are five Performance Monitoring Groups (PMGs) for the MX system:

MXF1 - Integrity of structures which house equipment vital to monitoring containment integrity MXF2 - Integrity of structures which house equipment vital to safe shutdown of the reactor.

MXF3 - Integrity of structures for equipment containing significant quantities of radioactive materials.

Page 2 of 5

MXF4 - Provide water tight barrier in the event of a flood MXF5 - The documentation of an unacceptable condition as defined in PM-156

Of these groups, the pertinent ones to consider here are PMG function pertinent to this condition is MXF1, MXF2, and MXF3. A functional failure is a structure determined to be unacceptable, which is damaged or degraded such that it may not be capable of performing the structural functions. For these functions, a functional failure would be damage or degradation of sufficient severity to prohibit the structure from protecting equipment vital to monitoring containment integrity, protecting equipment vital to safe shutdown of the reactor, and prohibit the structure from protecting equipment containing significant quantities of radioactive materials. The external spalling of the concrete is not an unacceptable condition as described in PM-156.

3. Is this a repetitive Maintenance Rule functional failure? Review historical data for the past 3 years to identify if there are any functional failures of the same component type (same manufacturer and model number) that have failed due to the same cause.

Yes: Mark the 2 REPETITIVE FF attribute with a "Y" and identify the repetitive FF in the 2 REPETITIVE FF attribute note.

Go to Question 4.

No: Mark the 2 *REPETITIVE FF* attribute with an "N" and document search details in the 2 *REPETITIVE FF* attribute note.

Go to Question 4.

2 REPETITIVE FF: [Y]Y [X]N

Note Text:

This is not a repetitive failure of the Containment, however, as documented previously under AR 155986 wherein a small section of concrete spalled after severe weather, this condition does not appear to be indicative of a widespread concern. The completed engineering walkdown coupled with continued monitoring under the PM-156 program serve as the completed actions to date with no new corrective actions being required.

4. Is the affected PMG monitored by other criteria?

Unavailability:	Go to 5
Rx. Trips:	Go to 6
Safety Sys Acts:	Go to 7
Unplanned Mw loss:	Go to 8

No, AND the condition IS a functional failure:

Go to 9

No, AND the condition IS NOT a functional failure:

Place "N's" for the above attributes, and forward to Supervision for approval.

		MREV Screening
	NCR#	184396-10 Page 3 of 5
5.	Did th	nis condition result in exceeded unavailability?
	Yes:	Mark the 3 UNAVAILABILITY attribute with a "Y" and provide details in the 3 UNAVAILABILITY attribute note.
	No:	Mark the 3 UNAVAILABILITY attribute with an "N" and provide details about the unavailability in the 3 UNAVAILABILITY attribute note.
	3 UNA	VAILABILITY: DY XN
	Note T	Text:
		HER case, if plant level criteria are not monitored, place "N's" in the 4A, 4B, C attributes, and go to Question 9, otherwise go to Question 6.
6.	Did th	nis condition cause a reactor trip?
	Yes:	Mark 4A RX TRIP Attribute with a "Y" and provide details in the 4A RX TRIP attribute note.
	No:	Mark 4A RX TRIP Attribute with an "N" and provide explanation in the 4A RX TRIP attribute note.
	4A RX	TRIP: TRIP:
	Note T	ext:
	11-	safety system actuations are monitored, go to Question 7.
	ELSE,	place an "N" in the 4B SAFETY SYS ACTUAT, AND go to Question 8.
7.	Did th	nis condition cause safety system actuation?
	Yes:	Mark 4B SAFETY SYS ACTUAT Attribute with a "Y" and provide details in the 4B SAFETY SYS ACTUAT attribute note.
	No:	Mark 4B SAFETY SYS ACTUAT Attribute with an "N" and provide explanation in the 4B SAFETY SYS ACTUAT attribute note.
	4B ŞA	FETY SYS ACTUAT: IY IN
	Note T	Text:

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IF unplanned megawatt losses are monitored, go to Question 8.

ELSE, place an "N" in the 4C UNPLANNED CAP LOS, AND go to Question 9.

Page 4 of 5

- 8. Did the condition cause an unplanned power reduction as reportable to the MicroGads System (Thermal Performance)
 - Yes: Mark *4C UNPLANNED CAP LOS* Attribute with a "Y" and provide MW hours lost and total hours remaining in the *4C UNPLANNED CAP LOS* attribute note.
 - No: Mark *4C UNPLANNED CAP LOS* Attribute with an "N" and provide explanation in the *4C UNPLANNED CAP LOS* attribute note.

4C UNPLANNED CAP LOS: \Box Y \boxtimes N

Note Text:

- 9. Have any performance criteria been exceeded? This attribute is required if a functional failure, repetitive functional failure, any unavailability, or a plant level event occurred.
 - Yes: Mark the 5 PERF CRIT EXCEEDED Attribute with a "Y" and provide details in the 5 PERF CRIT EXCEEDED attribute note.
 - No: Mark the 5 PERF CRIT EXCEEDED Attribute with an "N" and provide explanation in the attribute note.

5 PERF CRIT EXCEEDED: \Box Y \boxtimes N

Note Text:

None of the performance criteria were exceeded for the Containment Building.

10.If any performance criteria have been exceeded or a repetitive functional failure has been identified, has an NCR to perform a significant adverse condition investigation been initiated?

- Yes: Mark the 7A PRI 1 NCR REQ Attribute with a "Y" and provide NCR number in the attribute note.
- No: Initiate one, mark the *7A PRI 1 NCR REQ* attribute with an "Y" and provide NCR number in the attribute note.

NA: Mark the 7A PRI 1 NCR REQ attribute note with an "N" and proceed to 11.

7A PRI 1 NCR REQ: \square Y \square N \square N/A

Note Text:

N/A

11. Does this condition require a log entry in the Maintenance Rule database? This attribute is required to be marked with a "Y" if a functional failure, repetitive functional failure, any unavailability, or a plant level event occurred. Otherwise all other log entries are optional,

NCR#	184396-10

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and you may mark the 6 attribute with an "N" and submit MREV for approval.

Yes: Make a log entry in the MR database, mark attribute 6 MR DATABASE ENTRY REQ with a "Y" and submit MREV for approval.

6 MR DATABASE ENTRY REQ: Y

Note Text:

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This was not a functional failure of the Containment Building and therefore does not require a MR database entry.

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NCR#

2.

Page 1 of 5

1. Does the described condition document the failure or degradation of a component or subcomponent in a Maintenance Rule scoped system? Does the condition describe a plant level event or unplanned /unexpected unavailability?

Yes to either: Continue to Question 2

No to Both: MREV is not needed. Mark the *1 FUNCTIONAL FAILURE* attribute with an "N". Document in the *1 FUNCTIONAL FAILURE* attribute note why an MREV is not needed. Place "N's" in the remaining required attributes and forward MREV to your Supervisor.

Condition Summary (Optional):

NCR 155986 documents the discovery of chunks of concrete on the ground near the BWST that had fallen from the exterior of the Reactor Building (RB) wall. Since the walls of the RB are within the system boundaries of the MX system, the described condition does document the degradation of a component in a Maintenance Rule scoped system.

2. Review PMG basis and functional failure definition. Based on the functional failure definition and PMG basis, is this a functional failure?

Yes: Mark the *1 FUNCTIONAL FAILURE* attribute with a "Y". Identify affected function and PMG in the *1 FUNCTIONAL FAILURE* attribute note. Identify all other performance criteria (unavailability, Rx trips, etc.) that this PMG is monitored with. If you did not perform the apparent cause investigation for this failure, you must perform one to ensure the cause /corrective action(s) are sufficient to prevent reoccurrence. In accordance with CP-153B, NFIR's are not acceptable and a investigation must be performed by the system engineer. Document the apparent cause information (assignment # and due date) in the MREV.

Go to Question 3.

No: Mark the *1 FUNCTIONAL FAILURE* attribute with an "N". Identify the function and PMG reviewed in the 1FUNCTIONAL FAILURE attribute note. Using the functional failure definition or PMG basis, clearly identify why the condition is not a functional failure. List all other performance criteria for this PMG.

Go to Question 4.

1 FUNCTIONAL FAILURE: \Box Y \boxtimes N

There are three Maintenance Rule Functions that are applicable to the documented condition. The first to be considered is MXF1 - Integrity of structures which house equipment vital to monitoring containment integrity. An example of a functional failure for this PMG is described as damage or degradation of sufficient severity to prohibit the structure from protecting equipment vital to monitoring containment

Note Text: damage or degradation of sufficient severity to prohibit the structure from protecting equipment vital to monitoring containment integrity

NCR#

Page 2 of 5

integrity. Based on the results of inspections performed by engineering and maintenance, as described in the attribute notes, the source of the concrete debris and the equipment failure appears to be degraded sections of previously patched areas on the exterior reactor building wall and roof. The RB remains operable per these inspections. Thus, it is apparent that the degradation is not of sufficient severity to jeopardize this PMG.

The second PMG to consider is MXF2 - Integrity of structures which house equipment vital to safe shutdown of the reactor. For this function, then, a functional failure would be damage or degradation of sufficient severity to prohibit the structure from protecting equipment vital to safe shutdown of the reactor. As described above, this condition does not meet that level of severity.

The third PMG to consider is MXF3 - Integrity of structures for equipment containing significant quantities of radioactive materials. For this function, then, a functional failure would be damage or degradation of sufficient severity to prohibit the structure from protecting equipment containing significant quantities of radioactive materials. As described above, this condition does not meet that level of severity.

Thus, the described condition does not constitute a functional failure of the MX system. The MX system is not monitored for any other performance criteria besides functional failures.

3. Is this a repetitive Maintenance Rule functional failure? Review historical data for the past 3 years to identify if there are any functional failures of the same component type (same manufacturer and model number) that have failed due to the same cause.

Yes: Mark the 2 *REPETITIVE FF* attribute with a "Y" and identify the repetitive FF in the 2 *REPETITIVE FF* attribute note.

Go to Question 4.

No: Mark the 2 *REPETITIVE FF* attribute with an "N" and document search details in the 2 *REPETITIVE FF* attribute note.

Go to Question 4.

2 REPETITIVE FF:]Y	
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Note Text:

This is the box where the text can be entered. Note that the box grows as more text is entered

4. Is the affected PMG monitored by other criteria?

Unavailability:	NO Go to 5
Rx. Trips:	NO Go to 6
Safety Sys Acts:	NO Go to 7
Unplanned Mw loss:	NO Go to 8

No, AND the condition IS a functional failure:

NCR#

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No, AND the condition IS NOT a functional failure:

Place "N's" for the above attributes, and forward to Supervision for approval.

5. Did this condition result in exceeded unavailability?

- Yes: Mark the *3 UNAVAILABILITY* attribute with a "Y" and provide details in the *3 UNAVAILABILITY* attribute note.
- No: Mark the *3 UNAVAILABILITY* attribute with an "N" and provide details about the unavailability in the *3 UNAVAILABILITY* attribute note.

3 UNAVAILABILITY: **D**Y **D**N

Note Text:

This is the box where the text can be entered. Note that the box grows as more text is entered.

In EITHER case, if plant level criteria are not monitored, place "N's" in the 4A, 4B, and 4C attributes, and go to Question 9, otherwise go to Question 6.

6. Did this condition cause a reactor trip?

- Yes: Mark *4A RX TRIP* Attribute with a "Y" and provide details in the 4A RX TRIP attribute note.
- No: Mark *4A RX TRIP* Attribute with an "N" and provide explanation in the 4A RX TRIP attribute note.

4A RX TRIP: \Box Y \Box N

Note Text:

This is the box where the text can be entered. Note that the box grows as more text is entered.

IF safety system actuations are monitored, go to Question 7.

ELSE, place an "N" in the 4B SAFETY SYS ACTUAT, AND go to Question 8.

7. Did this condition cause safety system actuation?

- Yes: Mark *4B SAFETY SYS ACTUAT* Attribute with a "Y" and provide details in the *4B SAFETY SYS ACTUAT* attribute note.
- No: Mark *4B SAFETY SYS ACTUAT* Attribute with an "N" and provide explanation in the *4B SAFETY SYS ACTUAT* attribute note.

 $4B SAFETY SYS ACTUAT: \qquad \Box Y \qquad \Box N$

Note Text:

NCR#

Page 4 of 5

This is the box where the text can be entered. Note that the box grows as more text is entered.

IF unplanned megawatt losses are monitored, go to Question 8.

ELSE, place an "N" in the 4C UNPLANNED CAP LOS, AND go to Question 9.

8. Did the condition cause an unplanned power reduction as reportable to the MicroGads System (Thermal Performance)

- Yes: Mark *4C UNPLANNED CAP LOS* Attribute with a "Y" and provide MW hours lost and total hours remaining in the *4C UNPLANNED CAP LOS* attribute note.
- No: Mark *4C UNPLANNED CAP LOS* Attribute with an "N" and provide explanation in the *4C UNPLANNED CAP LOS* attribute note.

 $4C UNPLANNED CAP LOS: \Box Y \Box N$

Note Text:

This is the box where the text can be entered. Note that the box grows as more text is entered.

- 9. Have any performance criteria been exceeded? This attribute is required if a functional failure, repetitive functional failure, any unavailability, or a plant level event occurred.
 - Yes: Mark the 5 PERF CRIT EXCEEDED Attribute with a "Y" and provide details in the 5 PERF CRIT EXCEEDED attribute note.
 - No: Mark the 5 PERF CRIT EXCEEDED Attribute with an "N" and provide explanation in the attribute note.

5 PERF CRIT EXCEEDED: $\Box Y \Box N$

Note Text:

This is the box where the text can be entered. Note that the box grows as more text is entered. Amazing! BTW, Try not to nuke the box.

10.If any performance criteria have been exceeded or a repetitive functional failure has been identified, has an NCR to perform a significant adverse condition investigation been initiated?

- Yes: Mark the *7A PRI 1 NCR REQ* Attribute with a "Y" and provide NCR number in the attribute note.
- No: Initiate one, mark the *7A PRI 1 NCR REQ* attribute with an "Y" and provide NCR number in the attribute note.
- NA: Mark the 7A PRI 1 NCR REQ attribute note with an "N" and proceed to 11.

NCR#			
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7A PRI 1 NCR REQ: $\Box Y \Box N \Box N/A$

Note Text:

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This is the box where the text can be entered. Note that the box grows as more text is entered. Amazing! BTW, Try not to nuke the box.

- 11. Does this condition require a log entry in the Maintenance Rule database? This attribute is required to be marked with a "Y" if a functional failure, repetitive functional failure, any unavailability, or a plant level event occurred. Otherwise all other log entries are optional, and you may mark the 6 attribute with an "N" and submit MREV for approval.
 - Yes: Make a log entry in the MR database, mark attribute 6 MR DATABASE ENTRY REQ with a "Y" and submit MREV for approval.

6 MR DATABASE ENTRY REQ:

Note Text:

This is the box where the text can be entered. Note that the box grows as more text is entered. Amazing! BTW, Try not to nuke the box.

ATTACHMENT 3 Sheet 1 of 2 ADVERSE CONDITION INVESTIGATION FORM Form CAP-NGGC-0200-3-14

Action Request Number:

Investigator:

1. Event Description

• Using information provided in the NCR, identify the problem to be investigated.

2. Problem Description / Investigation Summary

NOTE: The below elements are not required but should be considered, as applicable, to assist in developing a quality investigation:

- What Should Be: the requirement, standard, norm, or expectation
- What Is: the existing, as-found condition
- What Is Wrong: the gap or deviation between 'what is' and 'what should be'

3. Inappropriate Acts / Equipment Malfunctions/Causal Factors/Corrective Action Plan

- Complete the below table to identify the required information (Non-shaded areas).
- For completed or interim actions, provide appropriate completion documentation or ensure that the investigation results contain adequate detail to ensure traceability, for example; Work Order "ABC" was completed and approved on mm/dd/yy, Engineering Change Request "XYZ" was completed in the field on mm/dd/yy, or Material Evaluation was completed and approved on mm/dd/yy.

N:\Shared\Trend Codes to Hyperlink\CAP-NGGC-0206 CAUSE CODES.doc

	DESCRIPTION	CAUSE	CODE	ACTION	TYPE (CAPR, CORR, ENHN)	ASSIGNEE/ CONCURRENCE	DUE OR COMPLETION DATE
ADVERSE CONDITION							
I/A or EQ Malfunction							
OTHER							

SOURCE OF CONCRETE DEBRIS AND EQUIPMENT FAILURE APPEARS TO BE DEGRADED SECTIONS OF PREVIOUSLY PATCHED AREAS ON EXTERIOR REACTOR BUILDING WALL AND ROOF.

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Support

Search - NGG Historical QA Records

Enter Search Terms	concrete repair	All Words	NGG Search	NG
	Show Summary	100 🗌 Hits per Pa	ge (Max 2,000 Documents F	Returned)
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	OBrunswick Nuclear Plant - Navigator			
	● Crystal River 3 - SEEK			
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	OHarris Nuclear Plant - EDMS			
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Title/D 1 @<u>http://nggstairs/</u> Historical SEEK data 0407 RETEN: LIFE O	escription mdot/CR3/B/c004740407.htm - CR3 RAN: 00474-0407 DOCNO: WR26915 D/ F POLICY + 10	NTE: 09/04/1981, 10/08/1981 KV		BERM LOC: 00474-
Title/D 1 ¹ Title/D Historical SEEK data 0407 RETEN: LIFE O 2 ¹ <u>Historical SEEK data</u>	escription <u>mdot/CR3/B/c004740407.htm</u> CR3 RAN: 00474-0407 DOCNO: WR26915 D/		/DS: REPAIR, CONCRETE,	
Title/D 1 Dhttp://nggstairs// Historical SEEK data 0407 RETEN: LIFE O 2 Dhttp://nggstairs// Historical SEEK data CONCRETE REPAIR 3 Dhttp://nggstairs// Historical SEEK data KWDS: REPAIR, CON	escription mdot/CR3/B/c004740407.htm CR3 RAN: 00474-0407 DOCNO: WR26915 D/ F POLICY + 10 mdot/CR3/B/c020450100.htm CR3 RAN: 02045-0100 DOCNO: WR22207 D/	ATE: 02/27/1981, 01/18/1982 DX LIFE OF POLICY + 10 PATE: 10/18/1994, 06/21/1996, 0	/DS: REPAIR, CONCRETE, REF: POF11527, POF1188. 5/15/1996 DXREF: MP1396	2 KWDS: 13248 TAG: MX-0-0

DOC_SECURITY_FLAG 353151 CP213 .

5 @http://nggstairs/mdot/CR3/L/c990092393.htm

Historical SEEK data - CR3 RAN: 99009-2393 DOCNO: WR45875 DATE: 05/24/1983, 06/13/1983, 06/14/1983 KWDS: CONCRETE, REPAIR LOC: 02247-1746 RETEN: LIFE OF POLICY + 10

6 Chttp://nggstairs/mdot/CR3/M/c990134732.htm

Historical SEEK data - CR3 RAN: 99013-4732 DOCNO: WR54828 DATE: 04/24/1984, 08/10/1984 KWDS: REMOVAL, CONCRETE, REPAIR, HOLE LOC: 02780-0986 RETEN: LIFE OF POLICY + 10

7 Chttp://nggstairs/mdot/CR3/N/c990273528.htm

Historical SEEK data - CR3 RAN: 99027-3528 DOCNO: QPE DATE: 07/08/1985, 07/08/1986 TITLE: VENDOR QUALITY EVALUATION REPORT TRACE: FLAG KWDS: CONCRETE, REPAIR, INJECTION, EPOXY LOC: 03164-0097 RETEN: LIFE OF POLICY + 10 RMKS: STRUCTURAL INJECTION & BONDING CO

8 Chttp://nggstairs/mdot/CR3/N/c990279393.htm

Historical SEEK data - CR3 RAN: 99027-9393 DOCNO: QPE DATE: 07/08/1985, 07/08/1986 TITLE: VENDOR QUALITY EVALUATION REPORT VEND: S60902, STRUCTURAL INJECTION, 819797 KWDS: CONCRETE, REPAIR, INJECTION LOC: 03429-1589 RETEN: LIFE OF POLICY + 10

9 Chttp://nggstairs/mdot/CR3/N/c990285771.htm

Historical SEEK data - CR3 RAN: 99028-5771 DOCNO: LOG DATE: 01/01/1976, 06/01/1976 TITLE: VARIOUS LOGBOOK OF DOME REPAIR TO REACTOR BUILDING TAG: RC-0-0 VEND: J11100, JONES JA CONSTRUCTION CO, JA JONES CONSTRUCTION KWDS: DOME, CONCRETE, REPAIR, REACTOR COOLANT, RC LOC: RUSTY BLDG VAULT RETEN: LIFE OF POLICY + 10 RMKS: THESE ARE LOGBOOKS KEPT BY VARIOUS QC PERSONNEL ON THE DOME REPAIR, THEY ARE FILED UNDER HARD COPY FILE LOCATION 99028-5771

10 Chttp://nggstairs/mdot/CR3/0/c990374873.htm

Historical SEEK data - CR3 RAN: 99037-4873 DOCNO: RWP86-719 DATE: 11/14/1986 TITLE: REMOVE ANCHOR, PLUG GREASE LEAK & REPAIR CONCRETE AT HOLE, 95FT ELEVATION, AUXILIARY BUILDING DXREF: RS86-11-299, RS86-11-193, WR84239, RS86-11-316, RS86-11-322 TAG: SWR-6 KWDS: NUCLEAR SERVICE CLOSED CYCLE COOLING, SW, SEISMIC RESTRAINT, RECORDER, R LOC: 03911-1371 RETEN: LIFE OF POLICY + 10

11 @http://nggstairs/mdot/CR3/O/c990395792.htm

Historical SEEK data - CR3 RAN: 99039-5792 DOCNO: WR87489 DATE: 02/19/1987, 06/10/1987 DXREF: EQ87-0247, FCR80 KWDS: REPAIR, CONCRETE, GUARD, RAIL LOC: 04083-1279 RETEN: LIFE OF POLICY + 10

12 Chttp://nggstairs/mdot/CR3/T/c990837314.htm

Historical SEEK data - CR3 RAN: 99083-7314 DOCNO: WR276090 DATE: 10/22/1990, 10/31/1990 KWDS: REPAIR, CONCRETE, BERM LOC: 05955-0419 RETEN: LIFE OF POLICY + 10

13 @http://nggstairs/mdot/CR3/T/c990848963.htm

Historical SEEK data - CR3 RAN: 99084-8963 DOCNO: WR280038 DATE: 01/31/1991, 03/13/1991 TAG: PS-0-0 KWDS: CONCRETE, REPAIR, PLANT SECURITY SYSTEM, PS, BERM LOC: 06163-0060 RETEN: LIFE OF POLICY + 10

14 Chttp://nggstairs/mdot/CR3/V/c991031076.htm

Historical SEEK data - CR3 RAN: 99103-1076 DOCNO: CALC, CALCS92-0089 REV: 0 DATE: 05/01/1992 TITLE: CALCULATION & ANALYSIS, REPAIR OF MISCELLANEOUS PIPE SUPPORT, CONCRETE ANCHOR DXREF: MAR92-05-01-01 TAG: MX-0-0, DHH-646 VEND: F16200, FLORIDA POWER CORP, FPC, 285718 KWDS: MISCELLANEOUS MECHANICAL STRUCTURAL, MX, DECAY HEAT REMOVAL, DH, HANGER, H LOC: 06602-0194 RETEN: LIFE OF POLICY + 10

15 Chttp://nggstairs/mdot/CR3/V/c991036275.htm

Historical SEEK data - CR3 RAN: 99103-6275 DOCNO: CALC, CALCS92-0095 REV: 0 DATE: 05/21/1992 TITLE: CALCULATION & ANALYSIS, REPAIR OF PIPE SUPPORT DXREF: MAR92-05-01-01, DC552006011PE TAG: SWH-24 VEND: F16200, FLORIDA POWER CORP, FPC, 285718 KWDS: NUCLEAR SERVICE CLOSED CYCLE COOLING, SW, HANGER, H, ANCHOR, BOLT, CONCRETE LOC: 06668-2480 RETEN: LIFE OF POLICY + 10

16 Chttp://nggstairs/mdot/CR3/W/c991067575.htm

Historical SEEK data - CR3 RAN: 99106-7575 DOCNO: WR294274 DATE: 02/18/1992, 02/18/1993, 02/03/1993 DXREF: RWP93-4, Al1810102709, MP139102710 TAG: CZ-0-0 PARTNO: CSA119404SE KWDS: CONDUIT SUPPORT, CZ, WALL, GROUT, CONCRETE, REPAIR, HANGER LOC: 06961-0353 RETEN: LIFE OF POLICY + 10

17 Chttp://nggstairs/mdot/CR3/E/c900186167.htm

Historical SEEK data - CR3 RAN: 90018-6167 DOCNO: WR321117 DATE: 07/27/1994, 03/25/1997, 09/08/1994, 10/19/1994 DXREF: CLEARANCE94-08-149, PI308823, CDS017650, CDS017648, CDS017649, CDS017956, CDS017955, RWP96-37, RWP94-170, CONTRACT N00918AA, PRR0871, PRC94-32, REA94-0922, PRR0915, PRC94-37, NOMO95-0053, WPN83-0146, WR258135, NED95-0372, PI908747, PI308569, PI908728, PI308976, PI312036, SR00110 EXREF: BSP-1A, DHP-1A, DH-2-TE1, BSV-12, BSV-17, BSP-1B, DHP-1B, DH-2-TE2, BSV-11, BSV-16 TAG: DH-...

18 Chttp://nggstairs/mdot/CR3/N/c990256141.htm

Historical SEEK data - CR3 RAN: 99025-6141 DOCNO: PRNR, MP145, MP146, MP148, MP150, MP153, MP155, MP156, MP157, MP158, MP159, MP160, MP162, MP164, MP165, MP166, MP168, MP169, MP170, MP172, MP203, MP302, MP407, MP410, MP509, MP510, MP511, PM512, MP517, MP601, PM123, PM124, PM126, PM128, PM130, PM133, PM135, PM136, PM138, PM143, PM144, PM210, PM223, PM224 DATE: 10/17/1985 TITLE: PROCEDURE REVIEW NOTIFICATION RECORD, MAINTENANCE OF SPENT FUEL COOLING PUMP, DISASSEMBLY & REASSEMBLY OF BUTTERFLY ...

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ORIG: BISS D, ADLER RW, G15130, PARSONS POWER GROUP INC, GILBERT COMMONWEALTH INC RCVR: NISULA WW, LESE JA, NUCLEAR ENGINEERING & LICENSING, NUCLEAR ENGINEERING, 723, PLANT ENGINEERING & TECHNICAL SERVICES, PLANT ENGINEERING, 620 DXREF: FCS14896, CONTRACT N00821AD, SMALL ACCOUNT REQUEST21, DWG421-031, DWG421-032, DWG421-033, DWG421-036, DWG421-040 JOB: WA50 RETEN: LIFE OF ...

> Talks about minor crack/spall around tendons and ring girder- no structural concerns



8167

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July 22, 1997

FCS-14896 Contract N00821AD Small Account Request #21 WA 50

Mr. W. W. Nisula Contract Manager Florida Power Corporation (NA1B) 15760 West Power Line Street Crystal River, FL 34428-6708

Attention: Mr. Joe Lese

Re:

Crystal River Unit 3 Containment Buttress Concrete Cracking

Dear Mr. Nisula:

As a deliverable to Small Account Request number 21, the following evaluation is provided. Cracking and subsequent spalling of concrete at the external corner of the containment buttresses has been attributed to the presence of a small steel angle welded to the existing tendon anchorage base plates. Concrete cover over this angle created a small unreinforced region of concrete. Normal concrete shrinkage cracking has provided a path for moisture to penetrate the concrete resulting in corrosion of the embedded angle. This corrosion provided the mechanism for the small unreinforced concrete region to spall away from the embedded angle.

Original construction drawings, SC-421-031, SC-421-032, SC-421-033, SC-421-036, and SC-421-040 and original design basis calculation, 1.01.8, "Buttress Analysis and Design" were reviewed to establish if loss of the small region of concrete on the external corner of the buttresses was structurally significant. Based upon the following observations the spalled concrete area is not structurally significant:

- The horizontal tendon bearing plate is three inches thick. The small supplemental embedded angle does not extend beyond the back surface of the tendon bearing plate.
- Tendon forces are transmitted to the concrete structure at the back surface of the tendon bearing plate. Spiral reinforcement is provided to develop the localized bursting forces at each tendon bearing plate.
- Horizontal #9 and #11 reinforcing bars are provided within the buttress to transfer all tendon anchorage forces into the cylindrical concrete containment structure. The large scale

FCS-14896 Page 2 of 2

reinforcement placement detail provided on drawing SC-421-040 demonstrates the amount of concrete "outside" these large diameter bars at the corner where spalling has occurred.

• Supplemental reinforcement consisting of a vertical #4 bar with horizontal #4 hairpins to control localized shrinkage cracking of the concrete "outside" of the principal reinforcement in the external corner of the buttress is provided in the construction documents. This reinforcement would be positioned further into the buttress than the embedded angle.

In conclusion, the small unreinforced corner of concrete formed by the small embedded steel angle, most likely provided as a forming and positioning aid during construction, does not participate in the structural performance of the containment. Controlled removal of the small region of concrete external to the embedded angle and subsequent sealing of the surface is the recommended resolution of the existing condition.

If there are any questions on this evaluation please contact the writer.

Very truly yours,

Daniel Biss, PE Supervising Structural Engineer

W. Adler R

Manager, Nuclear Projects

RWA\TDB\bmb

l.

cc: W. W. Nisula (NA1B)
J. A. Lese (NT06D)
R. E. Vaughn (NT03)
FPC Records Management (CL Only)
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S. E. Frymoyer
T. D. Biss