REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8206140020 DOC.DATE: 82/06/04 NOTARIZED: NO DOCKET #
FACIL:50-397 WPPSS Nuclear Project, Unit 2, Washington Public Powe 05000397
AUTH.NAME AUTHOR AFFILIATION
BOUCHEY,G.D. Washington Public Power Supply System
RECIP.NAME RECIPIENT AFFILIATION
SCHWENCER,A. Licensing Branch 2

SUBJECT: Submits util position re SER License Condition 9, "Conformance of Diesel Generator Fuel Oil Sys." Storage tank internals coating requirement & resulting license condition unwarranted. Poll of committee in ANSI std encl.

DISTRIBUTION CODE: B001S COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 29
TITLE: PSAR/FSAR AMDTS and Related Correspondence

NOTES:

	RECIPIENT ID CODE/NAME		COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME		COPIES LTTR	COPIES ENCL
	A/D LICENSNG		1	0	LIC BR #2 BC		1	0
	LIC BR #2 LA		1	0	AULUCK,R.	01	1	1
INTERNAL:	ELD/HDS2		1	0	IE FILE		1	1
	IE/DEP EPDS	35	1	1	IE/DEP/EPLB	36	3	3
	MPA		1	0	NRR/DE/CEB	11	1	1
	NRR/DE/EQB	13	3	3	NRR/DE/GB	28	2	2
	NRR/DE/HGEB	30	2	2	NRR/DE/MEB	18	1	1
	NRR/DE/MTEB	17	1	1	NRR/DE/QAB	21	1	1
	NRR/DE/SAB	24	1	1	NRR/DE/SEB	25	1	1
	NRR/DHFS/HFEB	40	1	1	NRR/DHFS/LQB	32	1	1
	NRR/DHFS/OLB	34	1	1	NRR/DHFS/PTRB	20	1	1
	NRR/DSI/AEB	26	1	1	NRR/DSI/ASB	27	1	1
	NRR/DSI/CPB	10	1	1	NRR/DSI/CSB	09	1	1
	NRR/DSI/ETSB	12	1	1	NRR/DSI/ICSB	16	1	1
	NRR/DSI/PSB	19	1	1	NRR/DSI/RAB	22	1	1
	NRR/DSI/RSB	23	1	1	NRR/DST/LGB	33	1	1
	REG FILE	04	1	1	RGN5		2	2
EXTERNAL:	ACRS	41	16	16	BNL(AMDTS ONLY)		1	1
	FEMA-REP DIV	39	1	1	LPDR	03	1	1
	NRC PDR	02	1	1	NSIC	05	1	1
	NTIS		1	1				

TOTAL NUMBER OF COPIES REQUIRED: LTTR 63 ENCL 58

Washington Public Power Supply System
P.O. Box 968 3000 George Washington Way Richland, Washington 99352 (509) 372-5000

June 4, 1982
G02-82-507

Docket No. 50-397

Mr. A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Schwencer:

Subject: NUCLEAR PROJECT NO. 2
SER LICENSE CONDITION NO. 9

This letter expresses the Supply System's position in regards to the WNP-2 Safety Evaluation Report, License Condition No. 9. This position was requested by Mr. Alfonso Ungaro and Mr. Bob Giardina of the Power Systems Branch of the NRC in a telephone conversation including Messrs. R.M. Nelson, P.L. Powell and T.L. Meade of the Supply System, May 17, 1982.

The WNP-2 SER License Condition No. 9, "Conformance of Diesel Generator Fuel Oil System" (9.5.4.2), has two parts.

Item 3 of Section 9.5.4.2 of the WNP-2 SER requires that the diesel fuel oil storage tanks be emptied and cleaned on a 10-year period as required by position C.2.f of Regulatory Guide 1.137.

WNP-2 commits to the cleaning of these tanks on a ten-year period.

Item 2 of Section 9.5.4.2 of the WNP-2 SER states that "Internal corrosion protection for the fuel oil storage tanks as required by Section 7.5 of ANSI N195 is not being provided".

The Supply System does not concur with the conclusion of the NRC that WNP-2 does not comply with the ANSI standard in regards to internal corrosion protection.

This position is supported by all of the committee members who prepared this standard.

To determine the correct interpretation of this standard, the Supply System contacted Mr. F.A. Dougherty, Chairman of the Committee who prepared ANSI N195/ANS 59.51. Mr. Dougherty proceeded to initiate a poll of the committee in the standard. Resulting correspondence with Mr. Dougherty has indicated that an internal corrosion allowance meets the requirements of Section 7.5 of ANSI N195/ANS 59.51. This correspondence has been attached for your review. A telephone conversation record has also been attached which outlines future action which will occur as a result of this request for an interpretation.

B001

Materials selected for the fuel oil system assure adequate corrosion protection for the interior surfaces of piping, storage and day tanks to minimize fuel oil contamination. Piping systems are ASME SA-106, Grade B. Buried storage tanks are constructed of ASME SA-515, Grade 70, with a 3/16" corrosion allowance and exteriors coated with coal tar enamel. Application of coating and covering is in strict accordance with AWWA Specification C203. The diesel oil day tank is constructed of ASME SA-283, Grade C, with a 3/16" corrosion allowance. A fuel oil filter and strainer system is provided in each fuel line to eliminate passage of particles five microns or greater in size to the engine ejectors.

Inquiries have been made to the operating facilities in this area in regards to corrosion history on similar type diesel oil storage tanks.

The Hanford Reserve N-Reactor maintains records of corrosion experienced in their diesel oil storage and day tanks. They have provided samples of these records for our review. Examples of these records have been attached for your review.

The internal lower half of these storage tanks were coated. They have experienced and continue to experience problems associated with this coating. The coating peels off and comes loose. They have had to repair this coating several times.

The day tanks and the upper half of the storage tanks (not coated) have not experienced excessive corrosion or pitting in the many years of use.

This clearly shows a lack of corrosion problems on diesel oil storage tanks in this area. It also shows that the coating on the internals of these tanks can be a source of contamination, completely opposite to its intended function.

Positions of the WNP-2 Technical Specifications have been provided to show that these tanks will be kept nearly full. They also show that the fuel in these tanks will be maintained at a high quality.

The Supply System, in addition, intends to procure a skid mounted purification unit and operate this unit on each fuel oil storage tank periodically to eliminate moisture and sediment. This unit was described in a letter to the NRC, dated February 19, 1982.

The Supply System is committed to the safe operation of WNP-2. WNP-2 has gone beyond the normal requirements to insure the fuel oil is obtained of the highest quality and maintained that way.

The Supply System does not feel that coating these tanks will provide any benefit. It has been shown that this coating may be harmful.

It has been shown that this area does not have a history of excessive corrosion on similar type tanks.

WNP-2 complies with the requirements of ANSI N195/ANS 59.51.

The Supply System feels the requirement to coat the internals of the diesel fuel oil storage tanks and the resulting license condition is unwarranted and should be deleted.

Very truly yours,

GD Bouchey

G. D. Bouchey
Deputy Director, Safety and Security

TLM/jca
Attachments

cc: R Auluck - NRC
WS Chin - BPA
A Ungaro - NRC
R Feil - NRC Site
R Giardina - NRC

AMERICAN NUCLEAR SOCIETY
STANDARDS COMMITTEE

Headquarters:
555 North Kensington Avenue
LaGrange Park, Illinois 60525 USA
Telephone 312/352-6611
Telecopy 312/352-0499
Telex 254635

March 22, 1982

Mr. Frank A. Dougherty
Chairman, ANS-59.51
EDS Nuclear Inc.
220 Montgomery Street
San Francisco, California 94104

Dear Mr. Dougherty:

Confirming your recent telephone conversation with Marilyn Weber I am enclosing copy of page 8 from the American Nuclear Society Standards Committee Procedures Manual. This procedure is to be followed when preparing the interpretation request of Terry Mead from Washington Public Power on ANS-59.51.

If you have any questions or require any additional assistance, please do not hesitate to contact us.

Sincerely,

Kathy Picha

Mrs. Kathy Picha
Secretary, ANS Standards

kp
encl.

4.2 On occasion, the state of the technology may be such that final development of a proposed standard would benefit from wider input by trial use of its criteria. It is then appropriate to issue the proposed standard in draft form for Trial Use and Comment, for a period not to exceed 12 months. This procedure requires the approval of the responsible subcommittee.

4.3 A proposed standard prepared for declaration as an ANS Standard proceeds through the following approval steps after completion of the steps given in Section 2:

a. The consensus body chairman submits the proposed standard to the Chairman of the ANS Standards Committee with a statement giving the background of the standard.

b. The Steering Committee votes by letter ballot or by vote at a regularly constituted meeting on the adequacy of the development of technical approval based on the background statement. A two-thirds affirmative vote of the Steering Committee membership shall be necessary for approval.

c. The Chairman of the Standards Committee reports the approval of the standard to the ANS President and recommends that he declare the standard an ANS Standard.

d. The standard is then published as an ANS Standard.

5. Preparation of Case Interpretations of ANS Standards

Interpretations of an ANS Standard shall be conducted according to the following procedure:

a. The request is forwarded to the Chairman of the Standards Committee, who refers it through the consensus body chairman to the appropriate subcommittee for interpretation.

b. The subcommittee determines whether the existing standard is applicable. If so, the subcommittee chairman formulates a reply containing the appropriate interpretation and submits it for ballot and comment of the subcommittee. After attempting to reconcile comments and negative ballots, the subcommittee chairman submits a recommendation to the Chairman of the Standards Committee through the consensus body chairman.

c. The interpretation is transmitted to the requester by the Chairman of the Standards Committee and is published in *Nuclear News*.

ANS as Secretariat of American National Standards Committees

Chairmen of American National Standards Committees for which ANS is the Secretariat are ANS members and are appointed to their respective positions for three years by the President upon recommendation of the Chairman of the Standards Committee. The chairmen of these American National Standards Committees administer the committees in accordance with the procedures of ANS and the American National Standards Institute.

ANS Representation on Other Standards Committees

The need for ANS representation on standards committees of other organizations is determined by the Steering Committee. If such a need is identified, the chairman of the Standards Committee, with appropriate consultation, appoints a representative.

...IAL DISTRIBUTION

KD Cowan 927M
RM Nelson 906D
CM Powers 927M
WNP-2 Files 917Y
...TLM/File/lb

THIS LETTER SATISFIES COMMITMENT NO. _____

THIS LETTER (DOES) (DOES NOT) ESTABLISH A NEW COMMITMENT.

WPPSS CORRESPONDENCE NO. GO2-82-340

March 24, 1982
GO2-82-340

Responds to: N/A
Response required by: N/A

Mr. F. A. Dougherty
EDS Nuclear Inc.
220 Montgomery Street
San Francisco, CA 94104

Subject: ANSI-N195-1976/ANS 59.51

NRC Regulatory Guide 1.137 recognizes ANSI-N195-1976/ANS 59.51 as providing a method acceptable to the NRC staff for complying with the pertinent requirements of General Design Criterion 17 of Appendix A to 10CFR Part 50.

This letter requests the interpretation of a phrase in section 7.5 of ANSI-N195-1976. This phrase states: "protection against external and internal corrosion shall be provided". The portion in question is internal corrosion protection.

An NRC reviewer has interpreted this phrase as an internal tank coating. The Supply System and other utilities interpret this as an internal corrosion allowance.

The requirement for an internal tank coating on a fuel oil tank is unprecedented in our industry.

Please provide us a letter stating the intent of the committee who prepared the standard with respect to this phrase in ANSI-N195-1976/ANS 59.51. Please send this correspondence to:

Terry L. Meade
WASHINGTON PUBLIC POWER SUPPLY SYSTEM
3000 George Washington Way
P. O. Box 968, MD 927M
Richland, WA 99352

Thank you for your cooperation.

Original Signed By

T. L. Meade
Electrical Engineer

pb

AUTHOR:	TL Meade TL Meade		FOR SIGNATURE OF:	TL Meade TL Meade	
SECTION					
FOR APPROVAL OF					
APPROVED					
DATE					

eds nuclear

EDS Nuclear Inc.
220 Montgomery Street
San Francisco, California 94104
(415) 544-8000

April 7, 1982
EDS/WP-82-006

Washington Public Power Supply System
Post Office Box 968
3000 George Washington Way
Richland, Washington 99352

ATTENTION: Mr. Terry L. Meade
Mail Drop 927M

SUBJECT: American Nuclear Society (ANS-59.51)
ANSI N195 - 1976
Fuel Oil Systems

Dear Terry:

Enclosed is a copy of the proposed response to your March 24, 1982 letter which I am submitting to the working group for acceptance as a formal response. I will keep you informed of the results.

Very truly yours,

Frank

F. A. Dougherty
Chairman
ANS 59.51

FAD/rab
Enclosures

REQUEST FOR INTERPRETATION

WORKING GROUP: ANS 59.51

STANDARD: ANS N195 - 1976/ANS 59.51

INTERPRETATION REQUEST: See attached letter, dated 3/24/82 (G02-82-340)

Discussion of Request

Section 7.5 of the Standard states: "Protection against internal and external corrosion shall be provided." The basic question, is whether the working group intended that a lining be required for the tanks in the system. To respond to this question, we must look at our intent in establishing the requirement. The purpose of the Standard is defined in Section 2 and is to assure that an adequate fuel oil supply to the diesel is maintained and that sufficient fuel exists under all conditions. This has two components:

- The fuel reserve must be large enough and sufficiently reliable to meet the fuel requirements during an emergency.
- The supply system must be designed so that fuel can be delivered to the engine from the stored fuel.

The protection against internal and external corrosion is based on the above concerns. External corrosion to a buried tank could affect the integrity of the tank and thus place the fuel oil supply in jeopardy. Thus, the working group required protection against external corrosion.

The basis for requiring protection against the effects of internal corrosion is two fold. Firstly, there must be assurance of adequate system integrity for the same reasons as for protection against external corrosion. Secondly, the corrosion products must not affect engine performance. This requirement is stated in Section 7.2 of the Standard. That is, the materials must be compatible to the extent that engine operation is not impaired by the materials used.

Question

Is the use of a corrosion allowance an adequate means of meeting the requirements of Section 7.5 of ANSI N195 - 1976/ANS 59.51 regarding internal corrosion protection?

Response

Yes, provided that the allowance is large enough to assure integrity of the component and conformance with applicable design criteria at the end of the plant's design life and provided that corrosion products do not impair diesel engine operation.

eds nuclear

EDS Nuclear Inc.
220 Montgomery Street
San Francisco, California 94104
(415) 544-8000

May 4, 1982

Washington Public Power Supply System
P.O. Box 968, MD 927M
3000 George Washington Way
Richland, Washington 99352

ATTENTION: Mr. T. L. Meade
Electrical Engineer

SUBJECT: ANSI-N195-1976/ANS 59.51

Dear Mr. Meade:

Per today's conversation, I am enclosing five (5) ballots in response to your need for interpretation of ANSI-N195-1976. One final ballot should be arriving in a few days. Upon receipt of this ballot, I will contact you with additional information.

Very truly yours,

R A Barcenas for
F. A. Dougherty
Chairman
ANS 59.51

FAD/rab
Enclosures

BALLOT

☒ Response approved.

☐ Response approved with comments:

Comments _____

☐ Response not approved for the following reasons:

Mail ballots to: Mr. F. A. Dougherty
EDS Nuclear Inc.
220 Montgomery Street
San Francisco, California 94104

Telephone: (415) 544-8018

Ballots due: April 20, 1982

D. L. Blizzard 4/20/82
Cooper Energy Services

P. Carr

BALLOT

☑ Response approved.

☐ Response approved with comments:

Comments _____

☐ Response not approved for the following reasons:

Mail ballots to: Mr. F. A. Dougherty
EDS Nuclear Inc.
220 Montgomery Street
San Francisco, California 94104

Telephone: (415) 544-8018

Ballots due: April 20, 1982

BALLOT

☑ Response approved.

☐ Response approved with comments:

Comments _____

_____

_____

_____

_____

_____

_____

☐ Response not approved for the following reasons:

_____

_____

_____

_____

_____

_____

_____

Mail ballots to: Mr. F. A. Dougherty
EDS Nuclear Inc.
220 Montgomery Street
San Francisco, California 94104

Telephone: (415) 544-8018

Ballots due: April 20, 1982

Lou Crouch

BALLOT

☐ Response approved.

☒ Response approved with comments:

Comments Linings in fuel tanks historically are short lived, with the lining material plugging downstream filters. The corrosive media is water purchased with the fuel, and from condensation. The very best protection against this is frequent (daily) draining off of the water and periodic cleaning of bottom sludge from the tank. Downstream filters should be monitored for pressure drop during periodic testing. An internal corrosion allowance is therefore satisfactory. M. H. Jowsey

☐ Response not approved for the following reasons:

_____

_____

_____

_____

_____

_____

_____

Mail ballots to: Mr. F. A. Dougherty
EDS Nuclear Inc.
220 Montgomery Street
San Francisco, California 94104

Telephone: (415) 544-8018

Ballots due: April 20, 1982

BALLOT

☐ Response approved.

☒ Response approved with comments:

Comments A specific corrosion allowance may not be necessary based on the material specified. My understanding of why the corrosion section was included was to ensure the designer considered the internal corrosion question, yet it could be possible that a "zero" corrosion allowance is satisfactory.

Raymond C Rossi 4/15/82

☐ Response not approved for the following reasons:

Mail ballots to: Mr. F. A. Dougherty
EDS Nuclear Inc.
220 Montgomery Street
San Francisco, California 94104

Telephone: (415) 544-8018

Ballots due: April 20, 1982

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

RECORD OF TELEPHONE CONVERSATION

DATE	TIME	TO BE CONFIRMED
May 4, 1982	11:00	☐ YES ☐ NO

FROM: Terry L. Meade (NAME) — Technical Staff - WNP-2 (COMPANY OR DEPARTMENT)

TO: F.A. Dougherty (NAME) — EDS Nuclear - California (COMPANY OR DEPARTMENT)

SUBJECT(S) DISCUSSED

Request for interpretation results and procedure to official response.

REMARKS:

Last ballet has been recieved by Mr. Dougherty. It is now unanimous, internal corrosion allowance meets the requirements of section 7.5 of ANSI N195/ANS 59.51. Future action: A letter will be written by F.A. Dougherty to Ed Smith, Chairman of ANS 3, which will include all correspondence and recommend ANS 3 review and approve the response. NUPPSCO, Nuclear Power Plants Standards Committee will then ballet on it. John Cooper of Nebraska Public Power District is the chairman. When they approve it, it will be published in Nuclear News and become effectively the same thing as an ASME Section 3 code case (official request for interpretation), Same as explicit statement in the standard.

This is basically duplicating an official approval cycle of a new standard.

Mr. Dougherty approved the use of this conversation record with the NRC.

Mr. F.A. Dougherty, EDS Nuclear Inc.
220 Montgomery St. San Fran. Cal. 94104 1-415-544-8018

WP-106 R2

DISTRIBUTION: CC: FILE

Shoemaker

THIRD PARTY INSPECTIONS

INSPECTOR'S NAME	DATE	COMPANY NAME	AREA
D.L. Starr	5-11-78	Rockwell U.N.I. TPI. 29	100N

BUILDING AND AREA	* EQUIPMENT OR VESSEL NO.	EQUIPMENT OR VESSEL NAME	MAWP **	INSPECTOR'S RECOMMENDATIONS
Outside	#1 Horton	diesel storage tank	vented	Internal inspection, no recommendations. This vessel is in very good condition.
Outside	#4 Horton	diesel storage tank	vented	Internal inspection, The lower half of the shell and bottom has an internal coating. This coating is peeling off in spots about two feet wide near the top of the coating. Because of the linning and fuel oil in the bottom it is hard to tell if the vessel is leak free. If this vessel is needed for fuel oil storage, the vessel should be cleaned, leak tested, and the coating repaired. The other three tanks are insulated on the outside, to the height of the inner coating. Number four tank is not insulated and this may be why the coating is coming loose. I did not see any rust or corrosion on the inside or outside. This tank appears to be in good condition.

* PLANT NUMBER

** MAXIMUM ALLOWABLE WORKING PRESSURE.

INSPECTOR: MAKE CARBON COPY. SEND ORIGINAL THROUGH PLANT MAIL TO:

E. R. Martin
QA Administration
C111, 2750 E Building, 200 East
Rockwell Hanford Operations

H.C. Shoemaker

THIRD PARTY INSPECTIONS

INSPECTOR'S NAME	DATE	COMPANY NAME	AREA
D.L. Starr	5-8-78	Rockwell 'U,N,I. TPI. 26	100N

BUILDING AND AREA	* EQUIPMENT OR VESSEL NO.	EQUIPMENT OR VESSEL NAME	MAWP **	INSPECTOR'S RECOMMENDATIONS
Outside	#2	diesel storage tank	vented	Internal inspection,no recommendations.
				This vessel is in very good condition.

* PLANT NUMBER

** MAXIMUM ALLOWABLE WORKING PRESSURE.

INSPECTOR: MAKE CARBON COPY. SEND ORIGINAL THROUGH PLANT MAIL TO:

E. R. Martin
QA Administration
C111, 2750 E Building, 200 East
Rockwell Hanford Operations.

11516 F

THREE-YEAR MECHANICAL EQUIPMENT MAINTENANCE STANDARDS CHECK SHEET

N 2 0 1 M 3 6	MO | DAY | YR 1 3	18	23	SHEET 3 OF 4 SHEET(S)

TITLE	OPERATIONS APPROVAL TO PROCEED WITH INSP.	BLDG. NO.
EMERGENCY COOLING SYSTEM		
PERFORMED BY	**SUPERVISOR APPROVAL**	**DATE**
SEE BELOW	SEE BELOW	SEE BELOW

3. INTERNAL INSPECTION OF DIESEL ENGINE DAY TANKS

Tank emptied and cleaned

Internal inspection for excessive pitting

Inspection of internal welds

Inspection of level controller

CHECK IF OK Day Tank No. 3	Performed By	Date
✓		
✓		
✓		

System returned to normal and Operations notified that the inspection has been completed. ☒ Yes ☐ No

Were any discrepancies or failures found? Repairs, replacements, adjustments, or recalibration needed? ☐ Yes ☒ No
If "YES", describe in REMARKS. Is further corrective action on this equipment needed? ☐ Yes ☒ No

Procedure and/or inspection sheet revisions required? ☐ Yes ☒ No If "YES", changes detailed on inspection sheet attachment _____

EMS ITEM NO.	PERFORMED BY	DATE
N 201-M	Hamilton Rohr Tiemann	7/17/81

Approved by W L Rueck (Supervisor)

REMARKS

Diesel Oil was pumped from #3-Day tank into truck tank cars and returned to storage tanks at 166-N to allow internal inspection. 7-17-81. JHS.

22 47177 DCB 8-1-78

THREE-YEAR MECHANICAL EQUIPMENT MAINTENANCE STANDARD CHECK SHEET

N 2 01 M 3 6	18 47177 23	Sheet 3 of 4 sheet(s)

Title	Operations Approval to Proceed with Insp.	Bldg.No.
EMERGENCY COOLING SYSTEM	R H Stant	
Performed By	**Supervisor Approval**	**Date**
Robinske, Osborne, Porter	C F Smith	7/20/78

3. INTERNAL INSPECTION OF DIESEL ENGINE DAY TANKS

	CHECK IF OK				
	Day Tank No. 1	Day Tank No. 2	Day Tank No. 3	Performed By	Date
Tank emptied and cleaned					
Internal inspection for excessive pitting	✓	✓	✓	K. Petteros	7/20/78
Inspection of internal welds	✓	✓	✓	K. Petteros	7/20/78
Inspection of level controller	✓	✓	✓	K. Petteros	7/20/78

MAINTENANCE AUDIT
DATE 7-31-78
BY O D Russell

Revise EMS: No ☑ Yes ☐

If Yes, Changes Detailed on:
Procedure ____
Check Sheet ____
Attachment ____

Were any discrepancies or failures found? Repairs, replacements, adjustments or recalibration needed? Yes☐ No☑ If "yes" describe in REMARKS. Is further corrective action on this equipment needed Yes☐ No☑

System returned to normal and Operations notified that the inspection has been completed. Yes ✓ No ____

REMARKS

14 999 17

(Code Change 1 27 76) (CA No. 416)(5mll-76)

UNITED NUCLEAR INDUSTRIES, INC.
TECHNICAL DIVISION

EQUIPMENT MAINTENANCE STANDARDS WAIVER

WAIVER NO. 1465

PLANT REQUEST NO. 78-30

TITLE OF EMS: EMERGENCY COOLING SYSTEM

EXPIRES: End of 1978 Summer Outage

EMS NO.	DISCIPLINE	INTERVAL	EMS WORK AUTHORIZATION NO. (S)	EFFECTIVE DATE
201	MXXXMX (M)	36 Mo.	47177P	2-23-78

THE FOLLOWING REQUIREMENT OF SUBJECT STANDARD IS WAIVED: (PAGE NO., PARAGRAPH IDENTIFICATION)

Page 76, e., Internal Inspection of Diesel Engine Day Tank #3.

EMS CHECK SHEET NO. (S) A-5000-587.01

REASON FOR WAIVER:

Inspectors remarks as to the condition of #2 day tank inspected 1-12-78. "Number 2 tank looks like a new tank. No corrosion or pitting of any kind." Tank #3 is expected to be found in the same condition.

THIS WAIVER RENEWS EXISTING WAIVER NO. 934 (Expired)

THE FOLLOWING MEASURES WILL BE TAKEN TO ASSURE INTERIM EQUIPMENT RELIABILITY DURING THE EFFECTIVE PERIOD OF THIS WAIVER:

None required.
Discussed with Tom Clement 2-22-78

REPAIR WORK AUTHORIZATION NO. (S)

PREPARED BY: D. C. Greenhalgh D C Greenhalgh — DATE 2-27-78

APPROVED: _____ MANAGER - U-PLANT MAINTENANCE — DATE 3/28/78

APPROVED: _____ MANAGER - NUCLEAR SAFETY SECTION — DATE 3-16-78

11515 E

THREE-YEAR MECHANICAL EQUIPMENT MAINTENANCE STANDARDS CHECK SHEET

2,0,1,M,3,6	MO | DAY | YR	18	23	SHEET 3 OF 4 SHEET(S)

TITLE	OPERATIONS APPROVAL TO PROCEED WITH INSP.	DATE
EMERGENCY COOLING SYSTEM		7-24-81
PERFORMED BY	**SUPERVISOR APPROVAL**	**DATE**
SEE BELOW	SEE BELOW	SEE BELOW

3. INTERNAL INSPECTION OF DIESEL ENGINE DAY TANKS

	CHECK IF OK ✓
	Day Tank No. 2
Tank emptied and cleaned	
Internal inspection for excessive pitting	✓
Inspection of internal welds	✓
Inspection of level controller	✓

HW-73000 N EQUIPMENT MAINTENANCE STANDARDS – INSPECTION SHEET

EMS NO. 201 M

WA No. 11515

System returned to normal and Operations notified that the inspection has been completed. ☒ Yes ☐ No

Procedure and/or inspection sheet revisions required? ☐ Yes ☒ No If "Yes", changes detailed on inspection sheet attachment _____, Feedback number _____.

Were recorder charts used (disturbed) marked with EMS WA number? ☐ Yes ☒ No ☐ NA

Were any certified measuring and test equipment required? ☐ Yes ☒ No If "Yes", identify equipment below.

EMS Item No.	Measuring and Test Equipment - Name and Identify Number (Standards Code, HEW Number, or Serial Number)

Were any discrepancies or failures found? Repairs, replacements, adjustments, or recalibration needed? ☒ Yes ☐ No

Is further corrective action on this equipment needed? * ☒ Yes ☐ No

If "Yes", then report discrepencies to Shift Manager, describe in REMARKS, and obtain Shift Manager's signature below.

Shift Manager _____ Date 7-24-81

Before signing this check sheet, please be sure of the following: (1) that the data which you recorded is complete and accurate; (2) that you personally observed the data that you recorded or that the person who did observe the data reported it directly to you; and (3) that you have recorded the "As Found" condition and any unusual conditions. This data will be used to decide if the equipment or inspection procedure should be changed.

EMS Item No.	Performed By	Date
201-M	Hamilton Rooke McDonald	7/24/81

Approved By: W L Lisenbe (Supervisor) Date 7/24/81

REMARKS

* Tank had pretty good amount of sludge in the bottom. Should be cleaned.
Operations notified of sludge in bottom of tank and have decided not to clean tank at this time.
☆ Manhole has been reinstalled and tank refilled. Tank will be cleaned when scheduled by operations.
☆ ☆ Inspection of tank completed for 36-Month inspection no evidence of pitting was found, welds & load controllers

47179 P

le	Interval	Sheet 3 of 4 Sheets
EMERGENCY COOLING SYSTEM	Three-Year	

3. INTERNAL INSPECTION OF DIESEL ENGINE DAY TANKS

Tank emptied and cleaned

Internal inspection for excessive pitting

Inspection of internal welds

Inspection of level controller

CHECK IF OK				
Day Tank No. 1	Day Tank No. 2	Day Tank No. 3	Performed By	Date
*	OK	**	K J Parker	1/12/76
*	OK	**	K S Parker	1/12/76
*	OK	**	[illegible]	1/12/76

System returned to normal and Operations notified that the inspection has been completed. Yes ✓ No ____

REMARKS

"999" NO. 2 TANK LOOKS LIKE NEW TANK NO CORROSION OR PITTING OF ANY KIND. KJP

* #1 TANK INSPECTED 7-23-75.

** WAIVER REQUEST 76-30 INITIATED FOR TANK #3

THREE-YEAR MECHANICAL EQUIPMENT MAINTENANCE STANDARDS CHECK SHEET

2 0 M 3 6 (MO / DAY / YR)			SHEET 1 OF 4 SHEET(S)
TITLE: EMERGENCY COOLING SYSTEM	OPERATIONS APPROVAL TO PROCEED WITH INSP.		BLDG NO: 102N
PERFORMED BY: SEE BELOW	SUPERVISOR APPROVAL: SEE BELOW		DATE: SEE BELO

3. INTERNAL INSPECTION OF DIESEL ENGINE DAY TANKS

	Check If OK (AS FOUND) Day Tank No. 1	No. 2	No. 3	Performed by	Date
Internal inspection for excessive pitting	✓	X	X	Resck/Hamilton	6/30/80
Inspection of internal welds	✓	X	X	Resck/Hamilton	6/30/8
Inspection of level controller	✓	X	X	Resck/Hamilton	6/30/8

MAINTENANCE AUDIT
DATE 7-7-80
BY ODRussell

System returned to normal and Operations notified that the inspection has been completed. ☑ Yes ☐ No

Were any discrepancies or failures found? Repairs, replacements, adjustments, or recalibration needed? ☐ Yes ☑ No
If "YES", describe in REMARKS. Is further corrective action on this equipment needed? ☐ Yes ☑ No

Procedure and/or inspection sheet revisions required? ☐ Yes ☑ No If "YES", changes detailed on inspection sheet attachment _____ Feedback Number(s) _____

EMS ITEM NO.	PERFORMED BY	DATE
#1. DAY TANKS	Resck/Hamilton	6/30/80
Approved by (Supervisor)		6/30/80

REMARKS

Inspected by Third Party

N-201-M

EQUIPMENT MAINTENANCE STANDARDS WAIVER

Title of EMS	EMS No. + Disc.	Waiver Req. No.	Waiver No.
EMERGENCY COOLING SYSTEM	201 M	78-95	1516

Freq.	W.A. Nos.	Effective Date	Expiration Date
36 mo.	47177	July 31, 1978	End of 1979 Summer Outage

PORTION OF EMS WAIVED (Page No., Section, Limit)

Page 76 e Internal inspection of Diesel Engine Day Tank #1

REASON FOR WAIVER

Insufficent time before start up from 1978 Summer Outage.

Inspectors remarks as to condition of #2 and #3 Day Tanks inspected this year; number 2 and 3 tank look like new tanks. No corrosion or pitting of any kind. Tank #1 is expected to be found in the same condition.

Renews Existing Waiver No. NONE

Repair Work Authorization No(s) NONE

Technical Specification Surveillance Violation after NONE
Date

The following measures will be taken to assure interim equipment reliability during the effective period of this Waiver:

NONE REQUIRED

CONCURRENCE OF E. J. O'Black
A. E. Engler

Prepared by: D. W. Eide D W Eide — July 31, 1978
Date

Approved: [signature] — 8/4/78
Manager - N-Plant Maintenance — Date

Approved: [signature] — 8/8/78
Manager - Nuclear Safety Section — Date

A 5400-172 (6-78)

22 THREE-YEAR MECHANICAL EQUIPMENT MAINTENANCE STANDARD CHECK SHEET 47176

N 2 0 1 M 3 6 | 18 47176 23 | Sheet 2 of 4 sheet(s)

Title	Operations Approval to Proceed with Insp.	Bldg. No.
EMERGENCY COOLING SYSTEM	R. H. Hauser	Yard
Performed By	**Supervisor Approval**	**Date**
REMY-ROBINSKE-LOUNDAGIN	DC Greenholz	2-10-75

Check If Items Found.

2. INTERNAL INSPECTION OF DIESEL FUEL STORAGE TANKS - 166-H
(Circle Code No. of Tank Inspected)

	Code No. *		Code No. *
Tank No. 1	01	Tank No. 3	03
Tank No. 2	02	Tank No. 4	(04)

0024 Internal Inspection for Sludge, Water, Foreign Material ✓
Interior Protective Coating Condition *
Tank Foundation ✓

Performed by L L Loundagin Date 1-30-75

Interior coating spalled & blistered on East wall ~ 12 foot elevation; flaps of coating hanging on wall.
Oil on tank bottom has slight milky appearance.

* Special Keypunch Instructions: Repeat code number recorded above for all columns 31--35 in all cards punched for data item 0024.

System returned to normal and Operations notified that the inspection has been completed. Yes ___ No *

REMARKS
999 UNIT NOT PLACED IN SERVICE. WAIVER REQUEST 75-22 PROCESSED, DCG

47175 K

THREE-YEAR MECHANICAL EQUIPMENT MAINTENANCE STANDARDS CHECK SHEET

N 2 0 1 M 3 6	MO | DAY | YR	18	21	SHEET 1 OF 4 SHEET(S)

TITLE	OPERATIONS APPROVAL TO PROCEED WITH INSP.	BLDG NO.
EMERGENCY COOLING SYSTEM	E. L. Woods	166-N
PERFORMED BY	**SUPERVISOR APPROVAL**	**DATE**
SEE BELOW	C. L. Smith SEE BELOW	10-13-80 SEE BELOW

CHECK IF OK (AS FOUND)

2. INTERNAL INSPECTION OF DIESEL FUEL STORAGE TANKS - 166-N

Tank No. 3

Internal inspection for sludge, water, foreign material. ✓

Interior protective coating condition. ✓

Tank foundation. 6-24-80 ✓

Performed by R K Stafford PME/S&E Date 10-13-80

MAINTENANCE AUDIT
DATE 10-14-80
BY O D Russell

System returned to normal and Operations notified that the inspection has been completed. ☒ Yes ☐ No

Were any discrepancies or failures found? Repairs, replacements, adjustments, or recalibration needed? ☐ Yes ☒ No
If "YES", describe in REMARKS. Is further corrective action on this equipment needed? ☐ Yes ☒ No

Procedure and/or inspection sheet revisions required? ☐ Yes ☒ No If "YES", changes detailed on inspection sheet attachment _____ Feedback Number(s) _____

EMS ITEM NO.	PERFORMED BY	DATE
201-M	R. K. STAFFORD	6-24-80
Approved by C. L. Smith (Supervisor)		10/13/80

REMARKS

THREE-YEAR MECHANICAL EQUIPMENT MAINTENANCE STANDARDS CHECK SHEET

N201N3609/3/77	175	Sheet 2 of 4 sheet(s)	9/14/77
Title: EMERGENCY COOLING SYSTEM	Operations Approval to Proceed with Insp.: G H Phillips		Bldg.No. Yard
Performed By: R. L. Lowndes	Supervisor Approval: G H Phillips		Date: 9/13/77

Check If OK (As Found)

OPERATIONS AUDIT	
DATE	9-14-77
BY	GKC

2. INTERNAL INSPECTION OF DIESEL FUEL STORAGE TANKS - 166-N
(Circle Code No. of Tank Inspected)

	Code No.		Code No.
Tank No. 1	01	Tank No. 3	(03)
Tank No. 2	02	Tank No. 4	04

Internal Inspection for Sludge, Water, Foreign Material ✓
Interior Protective Coating Condition ✓
Tank Foundation ✓

Performed by R L Lowndes Date 9-13-77

Revise EMS: No ☑ Yes ☐

If Yes, Changes Detailed on:
Procedure ____
Check Sheet ____
Attachment ____

Were any discrepancies or failures found? Repairs, replacements, adjustments or recalibration needed? Yes☐ No☑ If "yes" describe in REMARKS. Is further corrective action on this equipment needed Yes☐ No☑

System returned to normal and Operations notified that the inspection has been completed. Yes ✓ No ____

REMARKS
999

22 SW1001743-140 X 47175 B

THREE-YEAR MECHANICAL EQUIPMENT MAINTENANCE STANDARDS CHECK SHEET

N 2 0 1 M 36 032575	18 47175 23	Sheet 2 of 4 sheet(s)
Title: EMERGENCY COOLING SYSTEM	Operations Approval to Proceed with Insp.: R. M. Jamison	Elev. No.: Yard
Performed By: Remy/Rabouske	Supervisor Approval: J. J. Zaccardo	Date: 3-25-75
		Check If N/A (As Found)

2. INTERNAL INSPECTION OF DIESEL FUEL STORAGE TANKS - T66-N
(Circle Code No. of Tank Inspected)

	Code No. *		Code No. *
Tank No. 1	01	Tank No. 3	(03)
Tank No. 2	02	Tank No. 4	04

0024	Internal Inspection for Sludge, Water, Foreign Material	36 ✓ 40
	Interior Protective Coating Condition	41 ✓ 45
	Tank Foundation	46 ✓ 50

Performed by R. L. Lowndayes Date 3-24-75

* Special Keypunch Instructions: Repeat code number recorded above for all columns 31--35 in all cards punched for data item 0024.

System returned to normal and Operations notified that the inspection has been completed. Yes ✓ No ___

REMARKS

0999.

N-201-M

WS 4-5-74 1 of 1

SURVEILLANCE REQUIREMENTS (Continued)

4.8.1.1.2 Each diesel generator shall be demonstrated OPERABLE:

a. In accordance with the frequency specified in Table 4.8.1.1.2-1 on a STAGGERED TEST BASIS by:

1. Verifying the fuel level in the day and engine-mounted fuel tank.

2. Verifying the fuel level in the fuel storage tank.

3. Verifying the fuel transfer pump starts and transfers fuel from the storage system to the day and engine-mounted fuel tank.

4. Verifying the diesel starts from ambient condition and accelerates to at least X900X rpm in less than or equal to X10X seconds. The generator voltage and frequency shall be X4160X ± X420X volts and X60X ± ~~(1.2)~~ Hz within (13) seconds after the start signal. ~~The diesel generator shall be started for this test by using one of the following signals with startup on each signal verified at least once per 224 days:~~

~~a)~~ Manual.

~~b) Simulated loss of offsite power by itself.~~

~~c) Simulated loss of offsite power in conjunction with an ESF actuation test signal.~~

~~d) An ESF actuation test signal by itself.~~

5. Verifying the diesel generator is synchronized, loaded to greater than or equal to ~~(continuous rating)~~ kw for diesel generators ~~(1A)~~ and ~~(1B)~~ and ~~(continuous rating)~~ kw for diesel generator ~~(1C)~~ in less than or equal to X60X seconds, and operates for greater than or equal to 60 minutes.

6. Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.

7. Verifying the pressure in all diesel generator air start receivers to be greater than or equal to ~~(250)~~ psig.

b. At least once per 31 days and after each operation of the diesel where the period of operation was greater than or equal to 1 hour by checking for and removing accumulated water from the day and engine-mounted fuel tanks.

c. At least once per 92 days and from new fuel oil prior to addition to the storage tanks by verifying that a sample obtained in accordance with ASTM-D270-1975 has a water and sediment content of less than or equal to .05 volume percent and a kinematic viscosity @ 40°C of greater than or equal to 1.3 but less than or equal to 2.4 when tested in accordance with ASTM-D975-77, and an impurity level of less than 2 mg. of insolubles per 100 ml. when tested in accordance with ASTM-D2274-70.

A.C. SOURCES - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.1.2 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

a. One circuit between the offsite transmission network and the onsite Class 1E distribution system, and

b. Diesel generator ~~(1A)~~ or ~~(1B)~~, and diesel generator ~~(1C)~~ when the HPCS system is required to be OPERABLE, with each diesel generator having:

1. Day and engine mounted fuel tanks containing a minimum of ~~(250)~~ 1400 gallons of fuel.

2. A fuel storage system containing a minimum of ~~(31,000)~~ 54000 gallons of fuel for DG-1 & 2 each and 30000 gallons for DG-3.

3. A fuel transfer pump.

APPLICABILITY: OPERATIONAL CONDITIONS 4, 5 and *.

ACTION:

a. With all offsite circuits inoperable and/or with diesel generators ~~(1A)~~ and ~~(1B)~~ inoperable, suspend CORE ALTERATIONS, handling of irradiated fuel in the secondary containment and operations with a potential for draining the reactor vessel.

b. With diesel generator ~~(1C)~~ inoperable, restore the inoperable diesel generator ~~1C~~ to OPERABLE status within 72 hours or declare the HPCS system inoperable and take the ACTION required by Specification 3.5.2 and 3.5.3

c. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.8.1.2 At least the above required A.C. electrical power sources shall be demonstrated OPERABLE per Surveillance Requirements 4.8.1.1.1, 4.8.1.1.2, and 4.8.1.1.3, except for the requirement of 4.8.1.1.2.a.5.

*When handling irradiated fuel in the secondary containment.