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Ref. # 10CFR50.73(a)(2)(i)

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Log # TXX-01019
File # 10200

January 31, 2001

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)-UNIT 1
DOCKET NOS. 50-445
CONDITIONS PROHIBITED BY TECHNICAL SPECIFICATIONS
LICENSEE EVENT REPORT 445/01-001-00

Enclosed is Licensee Event Report (LER) 01-001-00 for Comanche Peak Steam Electric Station Unit 1, "Emergency Diesel Fuel Oil Technical Specification Surveillance Was Not Met."

This communication contains no new licensing basis commitments regarding CPSES Unit 1.

Sincerely,

C. L. Terry

By: Roger D. Walker
Roger D. Walker
Regulatory Affairs Manager

OAB: oab
Enclosure

cc: Mr. E. W. Merschoff, Region IV
Mr. J. I. Tapia, Region IV
Resident Inspectors, CPSES

IE22

NRC FORM 366 (4-95) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 04/30/98
ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

LICENSEE EVENT REPORT (LER)

Facility Name (1)	Docket Number (2)	Page (3)
COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1	05000445	1 OF 6

Title (4)
EMERGENCY DIESEL FUEL OIL TECHNICAL SPECIFICATION SURVEILLANCE WAS NOT MET

Event Date (5)			LER Number (6)			Report Date (7)			Other Facilities Involved (8)	
Month	Day	Year	Year	Sequential Number	Revision Number	Month	Day	Year	Facility Name	Docket Numbers
01	04	01	01	001	00	01	31	01	CPSES UNIT 2	05000446
										05000

Operating Mode (9)	1	This report is submitted pursuant to the requirements of 10 CFR : (Check one or more) (11)					
Power Level (10)	100	20.2201 (b)	20.2203 (a) (2) (v)	X	50.73 (a) (2) (i)		50.73 (a) (2) (viii)
		20.2203 (a) (1)	20.2203 (a) (3) (i)		50.73 (a) (2) (ii)		50.73 (a) (2) (x)
		20.2203 (a) (2) (i)	20.2203 (a) (3) (ii)		50.73 (a) (2) (iii)		73.71
		20.2203 (a) (2) (ii)	20.2203 (a) (4)		50.73 (a) (2) iv)		OTHER
		20.2203 (a) (2) (iii)	50.36 (c) (1)		50.73 (a) (2) (v)		Specify in Abstract below or in NRC Form 366A
		20.2203 (a) (2) (iv)	50.36 (c) (2)		50.73 (a) (2) (vii)		

Licensee Contact For This LER (12)

Name	Telephone Number (Include Area Code)
TIM CLOUSER - CHEMISTRY MANAGER	254-897-5365

Complete One Line For Each Component Failure Described in This Report (13)

Cause	System	Component	Manufacturer	Reportable To NPRDS		Cause	System	Component	Manufacturer	Reportable To NPRDS
				N						

Supplemental Report Expected (14)			EXPECTED SUBMISSION DATE (15)	Month	Day	Year
YES (If YES, complete EXPECTED SUBMISSION DATE)	X	NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On January 04, 2001, during a review of an Industry Operating Experience Report (IOER), Chemistry Personnel (Utility, Non-Licensed) discovered that Technical Specification (TS) Surveillance requirements for fuel testing in accordance with Diesel Fuel Oil Testing Program were not met. Comanche Peak Steam Electric Station (CPSES) TS 3.8.3.3 and 5.5.13 test the fuel by requiring that the new fuel oil has either "a clear and bright appearance with proper color; or water and sediment content within limits." When using the clear and brightness option, TS 3.8.3.3 Bases require verifying the Diesel Fuel Oil has "... proper color when tested in accordance with ASTM D4176-1982." Contrary to the TS and the American Society for Testing and Materials (ASTM) standard, proper color has not been verified or documented during the performance of the clear and bright test for new fuel oil shipments when the clear and brightness option was used.

Corrective actions are to revise the applicable procedures to be compatible with the requirements of the Diesel Fuel Oil Testing Program.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

Facility Name (1)	Docket	LER Number (6)			Page(3)
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COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1	05000445	01	001	00	2 OF 6

Text (If more space is required, use additional copies of NRC Form 366A) (17)

I. DESCRIPTION OF THE REPORTABLE EVENT

A. REPORTABLE EVENT CLASSIFICATION

This Licensee Event Report is submitted as a violation of conditions prohibited by plant Technical Specifications pursuant to the requirements of 10CFR50.73 (a)(2)(i)(B).

B. PLANT OPERATING CONDITIONS PRIOR TO THE EVENT

On January 4, 2001, when this issue was discovered both Comanche Peak Steam Electric Station (CPSES) Unit 1 and Unit 2 were in Mode 1 power operations.

C. STATUS OF STRUCTURES, SYSTEM OR COMPONENTS THAT WERE INOPERABLE AT THE START OF THE EVENT AND THAT CONTRIBUTED TO THE EVENT

On January 4, 2001, when this issue was discovered, there were no other inoperable structures, systems or components that contributed to event.

D. NARRATIVE SUMMARY OF THE EVENT, INCLUDING DATES AND APPROXIMATE TIMES

On January 4, 2001, during a review of an Industry Operating Event Report (IOER), chemistry department personnel (utility, non-licensed) identified that the event identified at Donald C. Cook Nuclear Plant (LER number 50-315-00-006-00) happened at Comanche Peak Steam Electric Station (CPSES).

On January 4, 2001, (no approximate times are available) the chemistry department personnel ascertained that CPSES TS surveillance 3.8.3.3 was not performed consistent in all aspects with the statements in the TS Bases section 3.8.3.3.c. The CPSES TS Bases states that new diesel generator fuel oil be tested in accordance with American Society for Testing and Materials (ASTM) D 4176-82. Specifically the " clear and bright" criterion specified in the stated ASTM was not verified for the acceptance of the new fuel oil delivered at CPSES.

ASTM D4176-82, "Standard Test Method for Free Water and Particulate Contamination in Distillate Fuels (Clear and Bright Pass/Fail Procedures)," provides both a field test and laboratory procedure for determining the presence of free water and solid particulate contamination in distillate fuels having an ASTM color of 5 or less. CPSES uses the clear and bright field test procedure as one check of incoming fuel oil to ensure no contaminants are present. The ASTM color refers to a scale of tint and depth of color for refined fuel and the

scale ranges from 0 (clear) to 8 (very dark). The clear and bright procedure requires an ASTM color of 5 or less to ensure that the presence of free water or particulates in the fuel oil sample are not obscured and missed by the viewer. Prior to 1993, EDG fuel oil purchased by CPSES was not dyed. In 1993, federal regulations required the addition of dye for tax-exempt diesel fuel, and CPSES began purchasing dyed fuel oil. The dye, if present in high enough concentrations, could prevent the detection of water or particulate contamination.

In 1994 CPSES amended the TS to allow an alternate water and sediment test when dye was added to the fuel that obscured visual examination. This alternate test was the primary test performed until the color of the dye changed from the darker blue to the lighter red approximately in the 1995 time frame. Although it is believed that the alternate water and sediment tests were performed for most of the samples of the fuel with the darker blue dye, it was possible that for some lighter shades of the blue dye that a clear and bright test was performed without the ASTM color verification being met.

In approximately 1995, after the fuel dye was changed to the lighter red color, the alternate particulate test was no longer performed. Only the clear and bright test was credited because the fuel was believed to be light enough to perform the clear and bright test option of the TS. However, even with the lighter red dye, the color would not have passed the specific color test of the ASTM standard.

In July 1999, the TS were converted to the new Improved Technical Specifications. The new TS section 3.8.3.3 simply requires that fuel oil properties of new and stored fuel oil be tested in accordance with, and maintained within the limits of, the Diesel Fuel Oil Testing Program. The "Diesel Fuel Oil Testing Program" as described in TS section 5.5.13 still allows both options for testing the fuel by requiring that the new fuel oil has either "a clear and bright appearance with proper color; or water and sediment content within limits." Even though the specific reference to the ASTM standard was removed from the TS itself, the new TS Bases section for surveillance requirement 3.8.3.3, does state that the surveillance would "Verify that the new fuel oil has a clear and bright appearance with proper color when tested in accordance with ASTM D4176-1982." Therefore, crediting a clear and bright test to meet the surveillance requirement without verifying the proper color when tested in accordance with the ASTM as referenced in the bases would not meet the full requirement of the TS.

Failure to perform the required Emergency Diesel Generator (EDG) fuel oil TS surveillances is a violation of TS. This LER is submitted in accordance with 10CFR50.73(a)(2)(i)(B) for a condition prohibited by the plant's TS.

E. METHOD OF DISCOVERY OF EACH COMPONENT OR SYSTEM FAILURE OR PROCEDURAL ERROR

At CPSES appropriate departments review operating experiences and lessons learned are derived and or actions are taken to avoid similar events or conditions. During a review of the Donald C. Cook Nuclear Plant experience, chemistry department personnel recognized that fuel being supplied to CPSES was of a darker color than ASTM 5; and the verbatim compliance with the criterion specified in the TS Bases was not incorporated adequately in the applicable chemistry procedure used for testing and verification of the fuel.

II. ANLYSIS OF THE EVENT

A. SAFETY SYSTEMS THAT RESPONDED

Not applicable – there were no safety system responses associated with this event.

B. DURATION OF SAFETY SYSTEM INOPERABILITY

Not applicable – there were no safety systems rendered inoperable due to this event.

C. SAFETY CONSEQUENCES AND IMPLICATIONS OF THE EVENT

The emergency diesel fuel oil system is designed to provide a reliable supply of fuel to operate the EDGs. The system includes two fuel oil storage tanks per unit, each tank holding approximately 104,000 gallons both units. The fuel oil transfer system transfers the fuel oil from the storage tanks to the diesel fuel oil day tanks, which in turn supply fuel to the diesel engines. The EDG fuel oil must be clean and free of particulates to ensure proper operation of the EDGs during accident conditions.

CPSES performs testing of new diesel fuel oil to ensure that the fuel is of the proper quality prior to unloading the shipment into the EDG fuel oil storage tanks. The clear and bright test is a pass/fail test based on a visual examination and a subjective evaluation of what is observed in the field; therefore, no statistical evaluations of the repeatability and reproducibility of the test have been determined.

The clear and bright test is one of four analyses performed as required by TS prior to adding new diesel fuel oil to the storage tanks. The other three analyses, specific gravity, kinematic viscosity, and flash point, are quantitative and reflect a limited, but adequate, immediate multi-dimensional profile of fuel oil chemistry. Additionally, TS require that a sample of the new fuel oil be sent for laboratory analysis to validate the site analyses and verify that the fuel put into the storage tanks is of acceptable quality.

Failure to observe the "with proper color" criterion and to provide detailed test procedures for the TS required analyses had no impact on the quality of diesel fuel oil available in the storage tanks. A high quality grade of diesel fuel oil has consistently been used by CPSES for the EDGs, as verified by laboratory analyses. The three other analyses performed on new fuel provide quantitative evaluation of the new fuel as compared with the subjective clear and bright analysis. Laboratory analysis of new fuel is also performed within 31 days following fuel loading to validate the results of the four tests performed prior to loading.

With regard to the lack of ASTM detail in the procedures, Chemistry Technicians are provided training on performance of each analysis, and are required to undergo an individual qualification program to perform the tests, thereby ensuring reasonable consistency in the analyses between Technicians. The analysis procedures in place at the time of discovery of the conditions described in this LER did meet the intent of the ASTM standard procedures on which each was based, but did not include all the specific details of each ASTM.

Based on the above controls in place to ensure high quality fuel is used for the EDGs, there is minimal safety significance to the failure to verify proper color of new diesel fuel oil or provide explicitly detailed procedures for performance of ASTM requirements.

III. CAUSE OF THE EVENT

The cause of the missed surveillance was the failure to recognize the phrase "with proper color" and the ASTM procedure steps as surveillance criteria. The "proper color" criterion was assumed to have been met if the sample was clear enough to allow contaminants to be detected. The ASTM standard procedural steps were adhered to closely enough to meet their intent, but the CPSES fuel oil analysis procedures did not include all the specific details of the ASTM to ensure compliance with the TS requirements.

IV. CORRECTIVE ACTIONS

Immediate actions were to perform an operability determination, no matters of concern were identified. Given that the bright and color requirements are not feasible, applicable procedures are being enhanced to incorporate and implement verification of water and sediment content within limits.

The Site specific procedure(s) will be revised prior to the next fuel receipt at CPSES.

V. PREVIOUS SIMILAR EVENTS

There have been other previous events, which resulted in inoperable components due to equipment malfunctions. However, the causes of those events are sufficiently different than subject event such that the corrective actions taken for the previous events would have not prevented this event.