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John A. Ventosa
Site Vice President

NL-12-104

August 20, 2012

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Stop O-P1-17
Washington, D.C. 20555-0001

SUBJECT: Licensee Event Report # 2012-007-00, "Technical Specification (TS)
Prohibited Condition Due to Diesel Generator Reserve Fuel Oil (FO)
Storage Tank Total Particulates Not Within Limits for Greater Than TS
Allowed Outage Time"
Indian Point Unit No. 2 and 3
Docket No. 50-247 and 50-286
DPR-26 and DPR-64

Dear Sir or Madam:

Pursuant to 10 CFR 50.73(a)(1), Entergy Nuclear Operations Inc. (ENO) hereby provides Licensee Event Report (LER) 2012-007-00. The attached LER identifies an event where there was a Technical Specification (TS) prohibited condition due to the Diesel Generator reserve fuel oil (FO) storage tank total particulates not within limits for greater than the TS allowed outage time, which is reportable under 10 CFR 50.73(a)(2)(i)(B). This condition was recorded in the Entergy Corrective Action Program as Condition Reports CR-IP2-2012-04132, CR-IP2-2012-04164, CR-IP3-2012-01914, and CR-IP3-2012-01939.

There are no new commitments identified in this letter. Should you have any questions regarding this submittal, please contact Mr. Robert Walpole, Manager, Licensing at (914) 254-6710.

Sincerely,



JAV/abr

cc: Mr. William Dean, Regional Administrator, NRC Region I
NRC Resident Inspector's Office, Indian Point 2 and 3
Mrs. Bridget Frymire, New York State Public Service Commission
LEREvents@inpo.org

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LICENSEE EVENT REPORT (LER)

Estimated burden per response to comply with this mandatory collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

1. FACILITY NAME: INDIAN POINT 2	2. DOCKET NUMBER 05000-247	3. PAGE 1 OF 5
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4. TITLE: Technical Specification (TS) Prohibited Condition Caused by Diesel Generator Reserve Fuel Oil (FO) Storage Tank Total Particulates Not Within Limits for Greater than TS AOT

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV. NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
06	21	2012	2012-	007 -	00	08	20	2012	Indian Point Unit 3	05000-286
									FACILITY NAME	DOCKET NUMBER
										05000

9. OPERATING MODE 1	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)			
10. POWER LEVEL 100%	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)
	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)
	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)
	<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER
<input type="checkbox"/> 20.2203(a)(2)(vi)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A	

12. LICENSEE CONTACT FOR THIS LER	
NAME Carl Smyers, Manager Chemistry	TELEPHONE NUMBER (Include Area Code) (914) 254-5585

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT									
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED <input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO	15. EXPECTED SUBMISSION DATE
	MONTH DAY YEAR

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

On June 21, 2012, the results of a diesel fuel oil (FO) sample from the Diesel Generator (DG) Reserve FO Storage Tank were received from an offsite vendor that showed the total particulates were not within the allowable value per Technical Specification (TS) 5.5.11 (Diesel Fuel Oil Testing Program) for Unit 2 and TS 5.5.12 for Unit 3. FO sampling is performed in accordance with TS Surveillance Requirement 3.8.3.4 to verify that FO properties of new and stored FO are within the limits specified in the Diesel FO Testing Program. TS 3.8.3 (Diesel Fuel Oil and Starting Air) Condition D was entered with a required action to restore stored FO total particulates to within limits within 30 days. Actions were initiated to provide the required total usable reserve FO that met FO properties per the Diesel Fuel Oil Testing Program. TS 3.8.3 Condition D was exited on July 5, 2012. Previous FO sample results were reviewed and some were not within the TS allowable value and in some cases there was no credible documentation to verify operability during past operation. The apparent cause was a failure to trend adverse conditions identified for out of spec FO particulates and failure to use the Corrective Action Process to document out of spec FO particulate results. Corrective actions included implementation of a process for formal trending of safety related chemistry analysis results, updating the duty matrix to ensure responsibilities for trending are assigned and documented. A stand down will be performed to review the CR process and sampling protocol and training will be performed on the event and lessons learned. In addition, the cause of the increase in particulates after the change in sample vendor will be determined. The event had no significant effect on public health and safety.

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Indian Point Unit 2	05000-247	2012	- 007	- 00	2 OF 5

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

Note: The Energy Industry Identification System Codes are identified within the brackets {}.

DESCRIPTION OF EVENT

On June 21, 2012, the results of a diesel fuel oil (FO) {DC} sample from the Diesel Generator (DG) Reserve FO Storage Tank {DE} were received from an offsite vendor that showed the total particulates (10.8 mg/L) were not within the allowable value per Technical Specification (TS) 5.5.11 (Diesel Fuel Oil Testing Program) (10.0 mg/L) for Unit 2 and TS 5.5.12 for Unit 3. The sample was obtained on May 25, 2012, per TS Surveillance Requirement 3.8.3.4 to verify that FO properties of new and stored FO are within the limits specified in the Diesel FO Testing Program. TS 3.8.3 (Diesel Fuel Oil and Starting Air) Condition D was entered for both units (Units 2 & 3) upon review of the results on June 21, 2012, with a required action to restore stored FO total particulates to within limits in 30 days. The condition was recorded in the Indian Point Energy Center (IPEC) Corrective Action Program (CAP) as Condition Report CR-IP2-2012-04132 for Unit 2 and CR-IP3-2012-01914 for Unit 3. On June 21, 2012, confirmatory FO samples (#1 and #2) were obtained and shipped to two separate FO analysis vendors [sample #1 to River Bend Station (RBS) and sample #2 to Herguth]. Confirmatory sample #1 did not yield a valid result because of uncertainty over the exact standard used. FO sample #2 received on June 27, 2012 yielded a result of 12.9 mg/L. On June 25, 2012, confirmatory samples #3 and #4 were obtained and shipped to RBS and Herguth respectively. On June 26, 2012, results of confirmatory sample #3 analyzed by RBS was received yielding a result of 9.5 mg/L. On June 28, 2012, results of confirmatory sample #4 analyzed by Herguth was received yielding a result of 9.94 mg/L. Although confirmatory samples #3 and #4 were within TS limits, Chemistry conservatively concluded the sample was out of spec based on the results of the multiple samples analyzed and the high particulate results recorded. On July 5, 2012, actions were completed to provide the required total usable FO in temporary FO onsite trailers that met TS SR 3.8.3.4 and TS 3.8.3 Condition D was exited. On July 24, 2012, the DG FO reserve storage tank was declared operable after actions were completed to restore the DG FO reserve storage tank FO properties to the requirements of the Diesel Fuel Oil Testing Program.

Investigations revealed that some previous FO samples were not within the TS allowable value and in some cases no credible documentation was available to verify operability during past operation. An increasing trend in FO particulates was evident since June 17, 2010. On June 17, 2010, the FO Reserve Storage Tank particulate level showed a step increase from approximately 1 mg/L to 8 mg/L. This increase coincided with a change in FO sample vendor (Martel to Herguth) in April 2010. FO particulate continued to indicate a generally increasing trend from the June 17, 2010 value (8 mg/L) to the present. During the period between June 17, 2011 to May 25, 2012, FO particulate level had been vendor analyzed as exceeding the TS allowable value (10.0 mg/L) on five occasions.

- FO sample particulate results analyzed by Herguth for a June 17, 2011 sample (13.4 mg/L). No Condition Report (CR) initiated and the conduct of follow-up sampling and testing could not be substantiated.
- FO sample particulate results analyzed by Herguth for a December 1, 2011 sample (13.2 mg/L). No Condition Report (CR) initiated and the conduct of follow-up sampling and testing could not be substantiated.
- FO sample particulate results analyzed by Herguth for a February 28, 2012 sample (12 mg/L). Sample results received on March 14, 2012. CR-IP2-2012-01831 and CR-IP3-2012-00805 recorded condition. In-house analysis of FO sample for particulates on March 15, 2012, yielded a result of 1.22 mg/L. Operability of FO Reserve Storage Tank was based on the In-House sample results. The In-House FO sample result of 1.22 mg/L was entered into the Indian Point Energy Center (IPEC) Chemistry Data Management System (CDMS).

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- FO sample particulate results analyzed by Martel for a March 15, 2012 sample (18 mg/L). FO sample results received on March 29, 2012 and not entered into the CDMS. No CR recorded the results from Martel.
- FO sample particulate results analyzed by Herguth for a April 18, 2012 sample (12.8 mg/L). FO sample results received on April 30, 2012, was a split sample which was also analyzed In-house with a result of 2.59 mg/L. This In-house sample result was entered into the CDMS. CR-IP2-2012-03135 was initiated on May 2, 2012, recording this condition noting the discrepancy between the In-House result and the Herguth results. The Herguth results were not entered into the CDMS.

Three of the five out of specification FO conditions identified from June 17, 2011 to May 25, 2012, had not been documented in a CR. The out of specification condition for the February 28, 2012 sample was documented in a CR and Unit 3 entered the appropriate TS action statement. Unit 2 was in Mode 5 and the TS Limiting Condition of Operation (LCO) did not apply. For the June 17, 2011 and December 1, 2011 FO samples, follow-up In-house analyses were entered into the CDMS in February 2012 for re-samples allegedly taken on June 29, 2011 and December 9, 2011, indicating satisfactory results of 6.9 mg/L and 8.2 mg/L. Further evaluation concluded however, there was no credible evidence that these two In-House confirmatory analyses were performed. CR-IP2-2012-04164 and CR-IP3-2012-01939 recorded the condition. The out of specification FO conditions for the April 18, 2012, sample was documented in CR IP2-2012-03135.

In the first quarter of 2012, a self assessment performed in support of an upcoming NRC Component Design Basis Inspection (CDBI) identified that the FO sample results from June 17, 2011 and December 1, 2011, had not resulted in CRs. CR-IP2-2012-00901 recorded this condition and further noted that the alleged In-House follow-up samples of June 29, 2011 and December 9, 2011 were not entered into the CDMS. CR-IP2-2012-04164 and CR-IP3-2012-01939 recorded the review of the issues in CR-IP2-2012-00901 identifying there is no credible evidence that re-samples of the FO reserve tank on June 29, 2011 and December 9, 2011 were ever performed. These two discrepant samples were evaluated under another process and documented in a separate onsite report.

Analysis of the time line and events concluded the FO Reserve Storage Tank particulate is actually high, at or just above the TS allowable value of 10.0 mg/L. Analysis shows data scatter. Normalizing a best fit line of the data indicates that the FO particulate level could be as high as 12 mg/L. Four of the sample results known to have utilized the enhanced sampling techniques yielded an average of 10.1 mg/L which is below the best fit line, and is probably most representative of the FO Reserve Storage Tank particulate level.

Indian Point In-House sampling results of March 15, 2012 and April 18, 2012 significantly differed from off-site analysis. The In-House analysis techniques can not be considered reliable or accurate. The most likely cause of In-House analysis yielding results below those of offsite vendor analysis was due to filter size. For FO particulate analysis, the ASTM Standard is to use a 0.8 micron filter. FO particulates greater than 0.8 micron are captured and weighted to yield mg from a known volume of sample. This value is then normalized to mg/L. There is evidence that the particular filter in use by Indian Point for In-House FO analysis was a type AE filter which has openings up to 1 micron. The larger filter openings would lead to lower sample values of particulate.

Extent of condition (EOC) review determined that the condition could apply to other TS sample surveillances that evaluate adverse trends for otherwise in specification parameters. Oil samples from other tanks were evaluated and found to be acceptable.

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

The Cause of Event

The apparent cause was a lack of trending and the failure to use the IPEC corrective action program (CAP). The increasing trend in FO particulate level was not properly recorded in the CAP. The step change increase in FO particulate that occurred in 2010 coinciding with the change in FO sample vendor was not documented in the CAP. Had the condition been properly recorded and trended, early remedial action would have been initiated. The FO monitoring program failed to identify the trend because the program had degraded. Quarterly FO sample results were being entered in the IPEC data tracking system but were not being entered into the CAP when out of spec nor were quarterly FO sample results being trended for approximately 10 months in 2011. This was due to the retirement of the individual responsible for these tasks which was not managed to ensure his duties were re-assigned.

Corrective Actions

The following corrective actions have been or will be performed under the Corrective Action Program (CAP) to address the cause of this event.

- Implement a process for formal trending of safety related chemistry analysis results.
- Updating the duty matrix to ensure responsibilities for trending are assigned and documented.
- A stand down of the chemistry department will be performed to review the CR process and sampling protocol and training will be performed on the event and lessons learned.
- An assessment will be performed to determine the cause of the step increase in FO particulate after the change in sample vendor.

Event Analysis

The event is reportable under 10CFR50.73(a)(2)(i)(B). The licensee shall report any operation or condition which was prohibited by the plant's TS. This condition meets the reporting criteria because FO samples showed total particulates were not within the allowable value per TS 5.5.11 for Unit 2 and TS 5.5.12 for Unit 3. TS 3.8.3 (Diesel Fuel Oil and Starting Air) Condition D has a required action to restore stored FO total particulates to within limits within 30 days. Required action for TS Condition G (Required action and associated completion time not met) is to declare the EDGs inoperable. Failure to perform the TS required actions is a TS prohibited condition. Review of past FO particulate conditions showed some previous FO sample results since June 17, 2011, were not within the TS allowable value and in some instances credible documentation was not available to verify operability during past operation. CR-IP2-2012-04164 and CR-IP3-2012-01939 recorded the results of a review of the issues identified in CR-IP2-2012-00901 that there was no credible evidence that re-samples of the FO reserve tank were performed on June 29, 2011 and December 9, 2011. A past operability assessment concluded that the analyzed FO particulate level was found to be above the minimum TS limit for the second quarter 2011 per the June 2011 sample and fourth quarter per the December 2011 sample, and the TS 3.8.3 required actions not performed. The third quarter was within spec based on the September 2011 sample. An analysis concluded the FO Reserve Storage Tank particulate is actually high, at or just above the TS allowable value of 10.0 mg/L. Normalizing a best fit line of sampling data indicates that the FO particulate level can be as high as 12 mg/L. Four of the sample results known to have utilized the enhanced sampling techniques yielded an average of 10.1 mg/L which is below the best fit line, and is likely most representative of the FO Reserve Storage Tank particulate level.

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The time of inoperability was estimated to have begun in June 2011 based on the July 2011 sample results. The out of spec FO conditions for the sample results received in July and December were not adequately addressed in 30 days and the required TS actions not taken nor were actions taken for the vendor analysis on March 15, 2012 and April 18, 2012, which is a TS prohibited condition reportable under 10CFR50.73(a)(2)(i)(B). This condition of FO not within specification for particulates is not reportable under 10CFR50.73(a)(2)(v) as a safety system functional failure. The Unit 2 TS 5.5.11 limit and the Unit 3 TS 5.5.12 limit is 10 mg/L. However, this limit is the supply limit to the Emergency Diesel Generators (EDG) {EK} FO filters {FLT} to ensure that particulates do not reach a limit of 20-25 mg/L which EPRI Standards considers the maximum acceptable limit for FO particulates. The actual FO particulate content was slightly above the TS limit of 10.0 mg/L. Additionally, the IPEC EDGs utilize two sets of Duplex filters on the inlet and outlet side of the EDG FO booster pump. These filters alarm on high differential pressure requiring actions by operators to swap filters without interruption to EDG operation. The out of service filter would then be changed out and returned to standby service. The particulate buildup on the filters would be a relatively slow process therefore sufficient time would be available to perform a filter change out and continue EDG operation. In accordance with reporting guidance in NUREG-1022, an additional random single failure need not be assumed in that system during the condition.

Past Similar Events

A review was performed of the past three years of Licensee Event Reports (LERs) for events reporting a TS violation due to inadequate sampling surveillances did not identify any LERs.

Safety Significance

This event had no significant effect on the health and safety of the public. There were no actual safety consequences for the event because there were no accidents or transients requiring the use of the FO Reserve Storage Tank.

There were no significant potential safety consequences of this event. The UFSAR Design Basis Accident (DBA) and transient analysis assume Engineered Safety Features (ESF) are operable. The onsite EDGs are designed to provide sufficient capacity, capability, redundancy, and reliability to ensure the availability of necessary power to ESF systems. The EDG FO system supports the operability of the EDGs. FO for the three EDGs is stored in three EDG FO storage tanks and a common EDG FO reserve tank. If the EDGs require FO from the FO reserve tank, the FO will be transported by truck to the EDG FO storage tanks. Commercial FO supplies and trucking facilities are also available in the vicinity of the plant. For proper operation of the EDGs, it is necessary to ensure the proper quality of the FO. Regulatory Guide 1.137 addresses the recommended FO practices as supplemented by ANSI N195. The requirements for EDG FO testing methodology, frequency, and acceptance criteria are maintained in the program required by TS 5.5.11 for Unit 2 and TS 5.5.12 for Unit 3. Normally, trending of FO particulate levels allow sufficient time to correct high particulate levels prior to reaching the limit of acceptability. The presence of particulates does not mean failure of the FO to burn properly in the diesel engine. The TS 5.5.11 for Unit 2 and TS 5.5.12 for Unit 3 limit for FO particulate is 10 mg/L. However, this limit is the supply limit to the Emergency Diesel Generators FO filters to ensure that particulates do not reach a limit of 20-25 mg/L which EPRI Standards considers the maximum acceptable limit for FO particulates. The actual FO particulate content was slightly above the TS limit of 10.0 mg/L. Additionally, the IPEC EDGs utilize two sets of Duplex filters on the inlet and outlet side of the EDG FO booster pump. These filters alarm on high differential pressure requiring actions by operators to swap filters without interruption to EDG operation. The out of service filter would then be changed out and returned to standby service. The particulate buildup on the filters would be a relatively slow process therefore sufficient time would be available to perform a filter change out and continue EDG operation.