



Entergy Nuclear Northeast
Indian Point Energy Center
450 Broadway, GSB
P.O. Box 249
Buchanan, N.Y. 10511-0249
Tel (914) 254-6700

Anthony J Vitale
Site Vice President

NL-17-097

August 9, 2017

U.S. Nuclear Regulatory Commission
Document Control Desk
11545 Rockville Pike, TWFN-2 F1
Rockville, MD 20852-2738

SUBJECT: Licensee Event Report # 2017-002-00, "Manual Isolation of Chemical and Volume Control System Normal Letdown to Stop a Valve Leak Resulted in an Exceedance of Technical Specification 3.4.9 Condition A Limit for Pressurizer Level"
Indian Point Unit No. 3
Docket No. 50-286
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) 2017-002-00. The enclosed LER identifies an event where there was a condition that could have prevented fulfillment of a safety function. This condition resulted from manual isolation of Chemical and Volume System normal letdown to stop a body to bonnet joint leak on the Reactor Coolant Filter Inlet Isolation Valve. The condition is reportable under 10 CFR 50.73(a)(2)(v). This event was recorded in the Entergy Corrective Action Program as Condition Reports CR-IP3-2017-03202 and CR-IP3-2017-03208.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Anthony J Vitale".

AJV/cdm

JEZZ
NRR

cc: Mr. Daniel H. Dorman, Regional Administrator, NRC Region I
NRC Resident Inspector's Office
Ms. Bridget Frymire, New York State Public Service Commission

1. FACILITY NAME
Indian Point 3

2. DOCKET NUMBER
05000-286

3. PAGE
1 of 5

4. TITLE
Manual Isolation of Chemical and Volume Control System Normal Letdown to Stop a Valve Leak Resulted in an Exceedance of Technical Specification 3.4.9 Condition A Limit for Pressurizer Level

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	11	2017	2017	- 002	- 00	08	09	2017		05000
									FACILITY NAME	DOCKET NUMBER
										05000

9. OPERATING MODE	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)			
	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)
<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	
<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)	
<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)	
10. POWER LEVEL	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> 73.77(a)(1)
	<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)(D)	<input type="checkbox"/> 73.77(a)(2)(i)
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 73.77(a)(2)(ii)
		<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> OTHER	Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

LICENSEE CONTACT: Tat Chan, Supervisor, Engineering

TELEPHONE NUMBER (Include Area Code): (914) 254-6873

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
E	CB	ISV	I207	Y					

14. SUPPLEMENTAL REPORT EXPECTED
 YES (If yes, complete 15. EXPECTED SUBMISSION DATE) NO

15. EXPECTED SUBMISSION DATE
MONTH: _____ DAY: _____ YEAR: _____

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

On June 11, 2017, while at 100 percent reactor power, Operations placed Chemical and Volume Control System (CVCS) Demineralizer Diversion Valve CH-TCV-149 in DIVERT to allow the 32 Mixed Bed Demineralizer to be removed from service and align the 31 Mixed Bed Demineralizer for service. Within about two minutes after returning CH-TCV-149 to AUTO, which placed the 31 Mixed Bed Demineralizer in service, Letdown Backpressure Control Valve CH-PCV-135 demand had gone to 0 percent (full open demand) while letdown backpressure had increased, reaching 302 psig. Operations was alerted to a leak that had developed on 32 Mixed Bed Demineralizer Inlet Isolation Valve CH-352. In an effort to isolate the leak, CH-TCV-149 was placed in DIVERT. Due to the elevated pressure at CH-TCV-149 with CH-PCV-135 fully open, placing CH-TCV-149 in DIVERT coupled with the elevated line pressure created a pressure transient in the letdown line upstream of the CVCS Reactor Coolant Filter. Reactor Coolant Filter Inlet Isolation Valve CH-305 experienced this pressure transient, which resulted in the valve developing a significant leak at the body to bonnet joint. Abnormal Operating Procedure (AOP) 3-AOP-LEAK-1 was entered, and normal letdown was manually isolated to stop the CH-305 leak. Excess letdown was placed in service to balance reactor coolant inventory at a Pressurizer water level of 61 percent. This exceeded the 54.3 percent limit of Technical Specification 3.4.9 Condition A, and Operations declared the Pressurizer inoperable. The inoperability of the Pressurizer is reportable as a safety system functional failure under 10 CFR 50.73(a)(2)(v). The direct cause of this event was elevated system pressure due to loading of the Reactor Coolant Filter from materials when the 31 Mixed Bed Demineralizer pathway was aligned. The elevated operating pressure in the CVCS letdown stream challenged the integrity of diaphragm valves CH-352 and CH-305, requiring the isolation of normal letdown.



**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

(See NUREG-1022, R.3 for instruction and guidance for completing this form
<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/>)

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Information Services Branch (T-2 F43), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.Resource@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	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Indian Point 3	05000-286	2017	- 002	- 00

NARRATIVE

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

DESCRIPTION OF EVENT

On June 11, 2017, at approximately 0833 hours, while at 100 percent reactor power, Operations placed the control switch {HS} for Chemical and Volume Control System (CVCS) {CB} Demineralizer Diversion Valve CH-TCV-149 {TCV} in DIVERT (normally in AUTO) to bypass the in service 32 Mixed Bed Demineralizer {FDM} in accordance with Operating Procedure 3-SOP-CVCS-004. This was in anticipation of placing the 31 Mixed Bed Demineralizer {FDM} in service. At the time, all parameters were normal, with a slight increase in Letdown Backpressure Control Valve CH-PCV-135 {PCV} demand to close due to the lower backpressure when the 32 Mixed Bed Demineralizer was bypassed. The CH-PCV-135 air-operated modulating pressure control valve is located downstream of the CVCS letdown orifices {OR} and Non-Regenerative Heat Exchanger {HX} to maintain letdown backpressure (upstream of the valve) between 225 pounds per square inch gauge (psig) and 275 psig to prevent fluid flashing.

After placing CH-TCV-149 in DIVERT, Operations closed 32 Mixed Bed Demineralizer Inlet Isolation Valve CH-352 {ISV} to remove the 32 Mixed Bed Demineralizer from service. Operations then opened 31 Mixed Bed Demineralizer Inlet Isolation Valve CH-346 {ISV} to line up the 31 Mixed Bed Demineralizer for in service operation. The 31 Mixed Bed Demineralizer had previously been used for the unit refueling outage that was completed in May 2017. At approximately 0837 hours on June 11, 2017, Operations returned the CH-TCV-149 control switch to AUTO, which placed the 31 Mixed Bed Demineralizer in service. All parameters were normal, with a slightly elevated CH-PCV-135 valve demand, and a slight increase in letdown backpressure at the outlet of the Non-Regenerative Heat Exchanger (location of Pressure Transmitter PT-135 {PT} for CH-PCV-135 pressure sensing). However, within about two minutes, CH-PCV-135 valve demand had gone to 0 percent (full open demand) and letdown backpressure had increased, reaching 302 psig. Also during this time, Operations was alerted to a leak that had developed on valve CH-352.

At approximately 0842 hours, in an effort to isolate the leak at valve CH-352, Operations placed CH-TCV-149 in DIVERT. At the time, letdown backpressure was above 280 psig. Because CH-PCV-135 was fully open, the pressure upstream of CH-TCV-149 was abnormally high, and the action of placing CH-TCV-149 in DIVERT (bypassing the 31 Mixed Bed Demineralizer) coupled with the elevated line pressure created a pressure transient in the letdown line upstream of the CVCS Reactor Coolant Filter {FLT}. Reactor Coolant Filter Inlet Isolation Valve CH-305 {ISV} experienced the pressure transient, which challenged the valve's integrity, and resulted in the valve developing a significant leak (estimated leakage of 18 gallons per minute (gpm)) at the body to bonnet joint.

At approximately 0855 hours, Operations entered Abnormal Operating Procedure (AOP) 3-AOP-LEAK-1, and initiated action in accordance with the AOP to stop the body to bonnet joint leak on CH-305. Normal letdown was manually isolated, and excess letdown was placed in service to balance reactor coolant inventory in the Reactor Coolant System (RCS) {AB} at a Pressurizer {PZR} water level of 61 percent. This was above the 54.3 percent limit for Pressurizer water level in Modes 1 and 2 specified in Technical Specification Limiting Condition for Operation (LCO) 3.4.9.a (Pressurizer). As required, Operations declared the Pressurizer inoperable and entered Technical Specification LCO 3.4.9, Condition A (Pressurizer water level not within limit) at 0911 hours, which placed the unit in the applicable shutdown action statement to be in Mode 3 (Hot Standby) within 6 hours.

Emergency maintenance was invoked to re-torque the body to bonnet fastening nuts for CH-305 to eliminate the valve leakage. Operations bypassed the Reactor Coolant Filter, removed the 31 Mixed Bed Demineralizer from service, and placed the 31 Reactor Coolant Pump {AB, P} Seal Injection Filter {CB, FLT} in service,



**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

(See NUREG-1022, R.3 for instruction and guidance for completing this form
<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/>)

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Information Services Branch (T-2 F43), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.Resource@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	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Indian Point 3	05000-286	2017	- 002	- 00

isolating the 32 Seal Injection Filter {CB, FLT} due to the filter media being exhausted. Normal letdown was restored to service with no observed valve leakage. The Pressurizer water level was restored to less than 54.3 percent (within Technical Specification limit), and excess letdown was secured. The Pressurizer level was then stabilized, and being maintained acceptable within the normal programmed control level band.

With the Pressurizer water level being maintained acceptable within the Technical Specification Condition A limit, Operations declared the Pressurizer operable at 1136 hours on June 11, 2017. Technical Specification LCO 3.4.9 Condition A and 3-AOP-LEAK-1 were then exited, thereby terminating the event. The Pressurizer was inoperable for approximately 145 minutes (from 0911 to 1136), no unit shutdown actions were required pursuant to Technical Specification LCO 3.4.9, and the unit was not in a condition prohibited by the Technical Specifications. However, the Pressurizer is considered a single train system that performs a specified safety function to maintain water level within the LCO limit. The LCO provides assurance that a steam bubble exists for events that result in pressurizer liquid surge (e.g., loss of normal feedwater, loss of offsite power, loss of load/turbine trip) to control RCS pressure and maintain subcooling for post-shutdown decay heat removal. Accordingly, the inoperability of the Pressurizer for exceeding the 54.3 percent water level limit specified in Technical Specification LCO 3.4.9.a was determined to be a loss of Technical Specification specified safety function, requiring an 8-hour non-emergency notification to the Nuclear Regulatory Commission (NRC). The notification was made at 1435 hours on June 11, 2017 by Event Notification Number 52801, under 10 CFR 50.72(B)(3)(v)(A), as a condition that could have prevented the fulfillment of a safety function of structures or systems that are needed to shut down the reactor and maintain it in a safe shutdown condition. This event was recorded in the Entergy Corrective Action Program as Condition Reports CR-IP3-2017-03202 and CR-IP3-2017-03208.

One of the immediate actions completed on June 11, 2017 to restore CVCS normal letdown was to bypass the Reactor Coolant Filter. On June 13, 2017, the Reactor Coolant Filter was replaced and placed in service, along with the 32 Mixed Bed Demineralizer. On June 17, 2017, the 32 Mixed Bed Demineralizer was removed from service and the 31 Mixed Bed Demineralizer was placed back in service as part of the event investigation. The observed system behavior was similar to the June 11, 2017 event, where letdown backpressure was observed to be increasing with a corresponding lowering of letdown flow. In addition, it was noted that the Reactor Coolant Filter differential pressure had risen to approximately 70 pounds per square inch differential (psid). As a result, Operations again bypassed the Reactor Coolant Filter, removed the 31 Mixed Bed Demineralizer from service, and placed the 32 Mixed Bed Demineralizer back in service. This condition was recorded in the Entergy Corrective Action Program as Condition Report CR-IP3-2017-03339.

The Reactor Coolant Filter was replaced a second time on June 18, 2017, and the removed filter was inspected. There was no visible presence of a buildup of any specific material that caused the rapid rise in differential pressure observed on June 17, 2017. More importantly, no resin was found in the filter, which indicated that the 31 Mixed Bed Demineralizer screen was not damaged. Following replacement, the Reactor Coolant Filter was placed in service, with the 32 Mixed Bed Demineralizer aligned, and the differential pressure was observed to be normal at 4 psid, and remained steady. Thus, the rapid rise in Reactor Coolant Filter differential pressure does not appear to occur when the 32 Mixed Bed Demineralizer flow path is aligned. The condition is only observed to occur when the 31 Mixed Bed Demineralizer flow path is aligned. Therefore, although not evident by visual inspection of the Reactor Coolant Filter, it was concluded that materials were being released from the 31 Mixed Bed Demineralizer flow path into the letdown flow stream when aligned, causing filter loading.

CAUSE OF EVENT

The direct cause of this event was the release of materials from the 31 Mixed Bed Demineralizer pathway into the



**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

(See NUREG-1022, R.3 for instruction and guidance for completing this form
<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/>)

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Information Services Branch (T-2 F43), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.Resource@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	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Indian Point 3	05000-286	2017	- 002	- 00

letdown flow stream when aligned. These materials were captured by the Reactor Coolant Filter, which caused an increase in differential pressure as the filter loaded, and the increased backpressure was reflected into the letdown flow stream. Letdown pressure upstream of CH-PCV-135 increased to approximately 300 psig with the valve fully open. The elevated pressure challenged the integrity of CH-352, causing the valve to leak. In order to isolate the CH-352 leak, CH-TCV-149 was taken to DIVERT. This action caused a pressure transient that challenged CH-305 overall integrity, and resulted in an estimated 18 gpm body to bonnet joint leak. The leak was stopped by manually isolating CVCS normal letdown. Excess letdown was placed in service to balance reactor coolant inventory in the RCS at a Pressurizer water level of 61 percent. This resulted in the Pressurizer water level exceeding the Technical Specification 3.4.9 Condition A limit of 54.3 percent for 145 minutes, until normal letdown was restored.

As part of the event investigation, on June 17, 2017, the 31 Mixed Bed Demineralizer pathway was aligned with the RCS at low pressure (during the planned unit shutdown for an unrelated issue). Similar CVCS behaviors as the June 11, 2017 event were noted, in that the letdown pressure increased while letdown flow decreased. The Reactor Coolant Filter differential pressure reached approximately 70 psid during the June 17, 2017 letdown pressure transient, confirming that material was released from the 31 Mixed Bed Demineralizer pathway. As for the 70 psid on the Reactor Coolant Filter, this differential pressure is within the rated differential pressure of 75 psid for the filter, and the removed filter was not deformed or damaged. This may not have been the case for the June 11, 2017 event. The maximum differential pressure that the Reactor Coolant Filter experienced during the June 11, 2017 event was not available; however, it is likely that the filter was subjected to a much higher differential pressure due to material loading. Typical operation maintains the Reactor Coolant Filter differential pressure at less than 20 psid (15 psid in the logs).

A causal factor contributing to this event is that previous corrective actions for a similar condition were less than adequate. Specifically, the corrective actions from Indian Point Energy Center (IPEC) Operating Experience (OE) OE35259/Institute of Nuclear Power (INPO) Consolidated Event System (ICES) Report 252526 (Condition Report CR-IP2-2012-00197) were not adequately tracked or implemented. Additionally, there was little management knowledge of this potential condition or OE. In order to mitigate future occurrences of similar events, corrective actions will include implementing guidance for the use of CVCS demineralizers in the appropriate procedures and briefing Chemistry and Operations on the topic of re-using previously used CVCS demineralizers.

CORRECTIVE ACTIONS

The following corrective actions have been or will be performed under the Entergy Corrective Action Program to address the causes of this event.

- Verify body and bonnet joint tightness and diaphragm integrity on CH-305.
- Replace diaphragm on CH-352.
- Replace Reactor Coolant Filter and Seal Injection Filter.
- Place restriction on the use of the 31 Mixed Bed Demineralizer until the resin has been replaced (i.e. Caution Tag or similar).
- Include guidance in Operating Procedures 3-SOP-CVCS-004 and 2-SOP-3.5 in support of placing CVCS Demineralizers in and out of service to preclude recurrence.
- Identify similar valves (i.e., location and service relative to the letdown lines) and issue Condition Reports (Work Orders) to verify their body to bonnet joint integrity (applicable to IPEC Units 2 and 3).



**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

(See NUREG-1022, R.3 for instruction and guidance for completing this form
<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/>)

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Information Services Branch (T-2 F43), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOF-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	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Indian Point 3	05000-286	2017	- 002	- 00

EVENT ANALYSIS

The event is reportable under 10 CFR 50.73(a)(2)(v)(A) and 10 CFR 50.73(a)(2)(v)(D). The licensee shall report any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to (A) Shut down the reactor and maintain it in a safe shutdown condition or (D) Mitigate the consequences of an accident. This event meets these criteria because the Pressurizer water level exceeded the 54.3 percent limit specified in Technical Specification LCO 3.4.9.a (Pressurizer) while in Mode 1 and, as required, Operations declared the Pressurizer inoperable. The Pressurizer is considered a single train system that performs a specified safety function to maintain water level within the LCO limit. The LCO provides assurance that a steam bubble exists for events that result in pressurizer liquid surge (e.g., loss of normal feedwater, loss of offsite power, loss of load/turbine trip) to control RCS pressure and maintain subcooling for post-shutdown decay heat removal. The LCO also ensures the capability to establish and maintain pressure control for steady state operation, and to minimize the consequences of potential overpressure transients. Requiring the presence of a steam bubble and saturated conditions in the Pressurizer is consistent with analytical assumptions to limit RCS pressure to maintain the integrity of the RCS pressure boundary and prevent challenging other safety systems during design basis accidents (DBAs) and transients. Accordingly, there was a loss of Technical Specification specified safety function for the 145 minutes that the Pressurizer was in the condition which resulted in it being declared inoperable.

PAST SIMILAR EVENTS

A review was performed of the past five years for Licensee Event Reports (LERs) and historical performance related to the causes of CVCS Reactor Coolant Filter plugging that are similar to the event reported in this LER. One relevant OE at IPEC was found to be directly related. The described condition involved Reactor Coolant Filter over pressurization, and was recorded in the Entergy Corrective Action Program as Condition Report CR-IP2-2012-00197 (OE35259/ICES Report 252526). The cause was attributed to suspended material being released from previously used Mixed Bed Demineralizers during a forced oxygenation of the Residual Heat Removal System {BP} that resulted from the change in chemistry. The suspended material overwhelmed the small micron size filter installed for normal operation. This previous event, which occurred in 2012, was not reportable in an LER.

SAFETY SIGNIFICANCE

There were no actual safety consequences associated with this event because there were no accidents or events during the 145 minutes that the Pressurizer was in the condition which resulted in it being declared inoperable. Furthermore, it has been determined that exceedance of the 54.3 percent limit for Pressurizer water level specified in Technical Specification LCO 3.4.9.a, up to the maximum indicated level of 61 percent described in this event, would not have rendered the Pressurizer incapable of performing its safety functions. Based on engineering analysis of the design seismic event, DBAs, and plant transients in which the Pressurizer water level changes, including the transients cited in the Technical Specification 3.4.9 Bases, the maximum transient water volume in each applicable quantifiable case was determined to remain below 1764 cubic feet, which is conservatively considered to be the point of water solidity in the Pressurizer. Accordingly, the required presence of a steam bubble and saturated conditions in the Pressurizer would have continued to be met for the analyzed accidents and transients with the initial Pressurizer water level at 61 percent indicated. It is; therefore, concluded that the Pressurizer remained capable of performing its safety functions, and this event had no effect on the health and safety of the public. Moreover, consistent with guidance provided in Section 2.2 of Nuclear Energy Institute (NEI) 99-02 (Regulatory Assessment Performance Indicator Guideline), Revision 7, this event did not represent, and should not be counted as, a safety system functional failure. As such, Entergy will not record this event as a safety system functional failure in the NRC Mitigating Systems Performance Indicators for Indian Point Unit 3.