

March 28, 2005

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United States Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Subject: Licensee Event Report (LER) 454-2005-001-00, "Failed Technical Specification Ventilation Surveillance Requirements During Surveillance Requirement 3.0.3 Delay Period"

Byron Station, Units 1 and 2
Facility Operating License Nos. NPF-37 and NPF-66
NRC Docket Nos. STN 50-454 and STN 50-455

Enclosed is an LER involving the failure of six Technical Specifications Surveillance Requirements (SR) while they were in SR 3.0.3 allowed delay period. This is reportable to the NRC in accordance with 10 CFR 50.73 (a) (2) (i) (b). In addition, two of the SR failures involved both trains of the Main Control Room Ventilation System, consequently this is also reportable in accordance with 10 CFR 50.73 (a) (2) (vii).

Should you have any questions concerning this matter, please contact Mr. William Grundmann, Regulatory Assurance Manager, at (815) 234-5441, extension 2800.

Respectfully,

Original signed by
Stephen E. Kuczynski
Site Vice President
Byron Nuclear Generating Station

Attachment LER 454-2005-001-00

NRC FORM 366 (6-2004)		U.S. NUCLEAR REGULATORY COMMISSION			APPROVED BY OMB: NO. 3150-0104		EXPIRES: 06/30/2007												
<h2 style="margin: 0;">LICENSEE EVENT REPORT (LER)</h2> <p style="margin: 0;">(See reverse for required number of digits/characters for each block)</p>										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 Byron Station, Unit 1					2. DOCKET NUMBER 05000454			3. PAGE 1 of 9											
4. TITLE Failed Technical Specification Ventilation Surveillance Requirements During Surveillance Requirement 3.0.3 Delay Period																			
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								
01	25	2005	2005	- 001 -	00	03	28	2005	Byron Station, Unit 2		05000455								
									FACILITY NAME		DOCKET NUMBER								
									N/A		N/A								
9. OPERATING MODE			11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: <i>(Check all that apply)</i>																
1			<input type="checkbox"/> 20.2201(b)		<input type="checkbox"/> 20.2203(a)(3)(i)		<input type="checkbox"/> 50.73(a)(2)(i)(C)		<input checked="" type="checkbox"/> 50.73(a)(2)(vii)										
100			<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)										
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			<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								TELEPHONE NUMBER (Include Area Code)											
William Grundmann, Regulatory Assurance Manager								(815) 406-2800											
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										
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A										
14. SUPPLEMENTAL REPORT EXPECTED						15. EXPECTED SUBMISSION DATE			MONTH	DAY	YEAR								
<input type="checkbox"/> YES <i>(If yes, complete 15. EXPECTED SUBMISSION DATE)</i>						<input checked="" type="checkbox"/> NO													
ABSTRACT <i>(Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)</i>																			
<p>On January 13, 2005, 15 Technical Specifications (TS) Ventilation surveillance procedures were discovered not performed due to willful falsification of documents by a non-licensed employee. An ensuing investigation found 12 additional falsified surveillance procedures. These surveillance procedures were used to perform and credit TS surveillance requirements (SRs). As a result, these TS SRs exceeded their TS frequencies. TS SR 3.0.3 was immediately entered and a risk evaluation performed that concluded the risk was acceptable to perform these surveillance procedures within a five week delay period. Of the 27 surveillance procedures re-performed, six SRs failed. Specifically these SRs were the charcoal filter penetration test for the 0B Fuel Handling Building (FHB) ventilation train and the 0C Auxiliary Building non-accessible area ventilation train, both the 0A and 0B Main Control Room make-up flow rate tests, the 0B Main Control Room Ventilation System (VC) make-up charcoal bank bypass leakage test and the 0B VC recirculation charcoal bank bypass leakage test. The responsible individual's employment was terminated and extensive corrective actions taken to identify and correct this inappropriate activity in a more timely manner. In each of surveillance failures, (except for the FHB SR where the failure was not applicable in the current mode of operation), the ventilation train was declared inoperable and returned to service within the TS allowed outage time. The risk significance of the missed SRs was evaluated to be low. Failure of a surveillance within the SR 3.0.3 delay period is reportable as a condition prohibited by TS in accordance with 10 CFR 50.73 (a)(2)(i)(b). Additionally, concurrent inoperability of both trains of VC is also reportable in accordance with 10 CFR 50.73 (a)(2)(vii).</p>																			

A. Plant Condition Prior to Event:

Event Date/Time: January 25, 2005/ 1316 hours

Unit 1 and Unit 2 - Mode 1 – Power Operations, Reactor Power 100%

Reactor Coolant System [AB]: Normal operating temperature and pressure.

No structures, systems or components were inoperable at the start of the event or contributed to the event.

Background

Byron Nuclear Power Station is a two-unit site with a common Main Control Room (MCR), Auxiliary Building (AB), and Fuel Handling Building (FHB). The Heating, Ventilation, and Air Conditioning (HVAC) systems for these areas are also common to both units. The MCR HVAC system (VC) [VI] consists of two 100% redundant trains (i.e., 0A and 0B) as specified by Technical Specification (TS) 3.7.10, "Control Room Ventilation Filtration System and TS 3.7.11, "Control Room Ventilation Temperature Control System."

The AB HVAC system (VA) [VF] consists of three subsystems. These three subsystems consist of the AB accessible area, the AB non-accessible area, and the FHB [VG]. Only the HVAC for the VA non-accessible area and the FHB are specified in TS. The AB non-accessible area consists of three 50% trains (i.e., 0A, 0B, and 0C) and the FHB area consists of two 100% trains (i.e., 0A and 0B.) TS 3.7.12, "Non-accessible Area Exhaust Filter Plenum Ventilation System," governs the VA non-accessible area and TS 3.7.13, "Fuel Handling Building Exhaust Filter Plenum Ventilation System" governs the FHB area.

Surveillance Requirements (SRs) for each of the above TS, require the filters in these systems to be tested in accordance with TS 5.5.11, "Ventilation Filter Testing Program". At Byron Station, periodic activities, such as procedures used to satisfy a TS SR, are controlled by a Predefine Process. This process is coordinated by the Site Predefine Administrator in the Work Management Department.

B. Description of Event:

On January 13, 2005, a Nuclear Oversight assessment identified that 15 TS ventilation related surveillance procedures were electronically taken to a "finished" status in the computer tracking program (i.e., Passport) by the System Manager (a non-licensed employee). However, the completed surveillance procedures with the appropriate review signatures were not, in accordance with the Predefine Process, forwarded to the Site Predefine Administrator in a timely manner.

When the surveillance procedure is taken to "finished" status, it is credited as fulfilling the TS SR. However, the next scheduled due date for the surveillance procedure is not generated until it is taken to "completed" status by the Predefine Administrator. An investigation into this discrepancy led to the responsible individual admitting to electronically taking the surveillance procedure status to "finished" in Passport without actually performing the surveillance procedures.

All of the SRs that were satisfied by performing the surveillance procedures were now beyond their critical date (i.e., TS SR frequency plus a 25% grace period allowed by SR 3.0.2). The SRs were considered not performed within the specified frequency and TS SR 3.0.3 was entered. SR 3.0.3 allows a delay period to perform the SR before declaring the Limiting Condition for Operations (LCO) not met of 24 hours or up to the limit of the specified frequency, whichever is greater. In order to go beyond the 24 hours a risk evaluation is required and the risk impact managed.

A risk evaluation was conducted and approved by the Byron Station Plant Operations Review Committee. This evaluation concluded that the risk was acceptably low to perform the surveillance requirements beyond the 24-hour delay period but within the next five week period.

A root cause evaluation and extent of condition investigation was immediately initiated. The extent of condition review discovered 12 additional TS ventilation related surveillance procedures that had been falsely taken to "finished" status in Passport by the same responsible individual. In addition, this review found 11 completed surveillance procedures with some of the required signatures suspected as being forged. The same individual later admitted to forging these signatures. Of these 11 surveillance procedures, two were considered valid since independent results were obtained from the vendor test lab. The remaining nine surveillance procedures were previous or current executions of one of the previously discovered surveillance procedures falsely taken to "finished" status. These forged surveillance procedures were provided by the responsible individual to the site Predefine Administrator and consequently the surveillance procedure was electronically taken to the "completed" status, which in turn generated the next scheduled dates. Three of these additional surveillance procedures had already been re-performed based on a decision to re-perform all TS surveillance procedures that this particular individual had supposedly performed. All of the applicable SRs satisfied by these additional surveillance procedures had also exceeded their critical dates.

Nine of these 12 SRs were also considered not performed within the specified frequency and TS SR 3.0.3 was entered. The original risk evaluation was updated to include these additional missed surveillance requirements and concluded that the risk was acceptable to perform the surveillance requirements beyond the 24 hour delay period during the next four week period.

The site-wide extent of condition review included 1262 randomly selected documents that could be verified through an independent means such as security door card readers. This review did not find any other falsification issues with other site staff personnel. The 27 surveillance procedures involved and the falsified dates are listed in Table 1. Twenty-five of 27 surveillance procedures were tied to TS 5.5.11. Item 4 of Table 1 satisfies TS SR 3.7.12.4 and item 6 satisfies TS SR 3.7.13.5.

All 27 surveillance procedures were re-performed between January 14, 2005 and February 24, 2005. Of these 27 surveillance procedures, six failed their acceptance criteria. These six are listed in Table 2.

Table 1

Scope of Missed Surveillance Requirements
(All have a Frequency of 18 months)

#	Procedure No. (note 1)	Title	Falsified Finished Date/s (* Also Involved Forged Signature/s	Last Known Valid SR Satisfaction Date
1	0BVSR 7.12.2-2	Unit 0 OA Non-Accessible Exhaust Filter Plenum Charcoal Adsorber Bank Operability	10/7/02* 6/2/04	01/08/01
2	0BVSR 7.12.2-7	Unit 0 "A" Non-Accessible Area Exhaust Filter Plenum Ventilation System Total Bypass Leakage Test	10/7/02* 6/2/04	01/08/01
3	0BVSR 7.12.2-1	Unit 0 OA Non-Accessible Exhaust Filter Plenum HEPA Filter Performance Test	10/9/02* 6/2/04	01/08/01
4	0BVSR 7.12.4-1	Unit 0 ECCS Equipment Rooms Differential Pressure Test	8/20/03*	01/16/02
5	0BVSR 7.13.2-7	Unit 0 OA Fuel Handling Building Exhaust Ventilation System Carbon Sample Analysis	10/20/03*	04/20/02
6	0BVSR 7.13.5-1	Unit 0 Fuel Handling Building Exhaust Filter Plenums Negative Pressure Test	10/27/03*	02/14/02
7	0BVSR 7.10.4-1	Unit 0 OA Control Room Ventilation System Flowrate and Pressurization Test	11/19/03*	02/04/02
8	0BVSR 7.10.4-2	Unit 0 OB Control Room Ventilation System Flowrate and Pressurization Test	12/5/03	02/11/02
9	0BVSR 7.10.2-6	Unit 0 OB Control Room Make-Up Filter System Carbon Sample Analysis	12/8/03*	06/12/02
10	0BVSR 7.10.2-12	OB Control Room Recirculation Carbon Sample Analysis	12/8/03*	04/19/02
11	0BVSR 7.10.2-4	Unit 0 OB Control Room Make-Up Charcoal Adsorber Bank Operability	12/9/03	07/07/02
12	0BVSR 7.10.2-10	Unit 0 "B" Control Room Recirculation Charcoal Adsorber Bank Operability	12/09/03	02/12/02
13	0BVSR 7.12.2-5	Unit 0 0C Non-Accessible Exhaust Filter Plenum HEPA Filter Performance Test	4/21/04 Note 3	01/22/01
14	0BVSR 7.12.2-6	Unit 0 0C Non-Accessible Exhaust Filter Plenum Charcoal Adsorber Bank Operability	4/21/04 Note 3	01/22/01
15	0BVSR 7.12.2-9	Unit 0 0C Non-Accessible Exhaust Filter Plenum Ventilation System Total Bypass Leakage Test	4/21/04 Note 3	01/22/01
16	0BVSR 7.13.2-8	Unit 0 0B Fuel Handling Building Exhaust Ventilation System Carbon Sample Analysis	5/5/04 Note 3	10/11/02

Table 1 (Continued)

Scope of Missed Surveillance Requirements
(All have a Frequency of 18 months)

#	Procedure No. (note 1)	Title	Falsified Finished Date/s (*) Also Involved Forged Signature/s	Last Known Valid SR Satisfaction Date
17	0BVSR 7.13.2-3 Note 2	Unit 0 0B Fuel Handling Building Exhaust Ventilation System HEPA Filter Performance Test	5/5/04 Note 3	06/11/01
18	0BVSR 7.13.2-4 Note 2	Unit 0 0B Fuel Handling Building Exhaust Ventilation System Charcoal Adsorber Bank Operability	5/5/04 Note 3	06/11/01
19	0BVSR 7.13.2-6 Note 2	Unit 0 0A Fuel Handling Building Exhaust Filter Plenum "B" Train Total Bypass Leakage Test	5/5/04 Note 3	06/11/01
20	0BVSR 7.10.2-5	Unit 0 0A Control Room Make-up Filter System Carbon Sample Analysis	6/21/04 Note 3	11/25/02
21	0BVSR 7.12.2-3	Unit 0 0B Non-Accessible Exhaust Filter Plenum HEPA Filter Performance Test	8/20/04 Note 3	07/01/01
22	0BVSR 7.12.2-4	Unit 0 0B Non-Accessible Exhaust Filter Plenum Charcoal Adsorber Bank Operability	8/20/04 Note 3	07/01/01
23	0BVSR 7.12.2-8	Unit 0 "B" Non-Accessible Area Exhaust Filter Plenum Ventilation System Total Bypass Leakage Test	8/20/04 Note 3	07/01/01
24	0BVSR 7.12.2-12	Unit 0 0C Non-Accessible Exhaust Filter Plenum Carbon Sample Analysis	9/8/04 Note 3	07/13/01
25	0BVSR 7.13.2-1	Unit 0 0A Fuel Handling Building Exhaust Ventilation System HEPA Filter Performance Test	9/24/04 Note 3	05/21/01
26	0BVSR 7.13.2-2	Unit 0 0A Fuel Handling Building Exhaust Ventilation System Charcoal Adsorber Performance Test	9/24/04 Note 3	05/21/01
27	0BVSR 7.13.2-5	Unit 0 Fuel Handling Building Exhaust Filter Plenum "A" Train Total Bypass Leakage Test	9/24/04 Note 3	05/21/01

Note 1 – 0BVSR = Common to Units 1 and 2 (0), Byron (B), Engineering Department (V), Surveillance Requirement (SR).

Note 2 – SR 3.0.3 was not entered for these missed SRs since they had already been re-performed prior to knowing they involved falsified records.

Note 3 – The previous execution of the surveillance procedure is suspect because it was performed by the system manager, however there is no direct indication of falsification.

Table 2
Surveillance Procedure Failures

#	Procedure	Title	Failed Date
1	0BVSR 7.13.2-8	Unit 0 0B Fuel Handling Building Exhaust Ventilation System Carbon Sample Analysis	1/25/05
2	0BVSR 7.12.2-12	Unit 0 OC Non-Accessible Exhaust Filter Plenum Carbon Sample Analysis	1/27/05
3	0BVSR 7.10.4-1	Unit 0 OA Control Room Ventilation System Flowrate and Pressurization Test	2/19/05
4	0BVSR 7.10.4-2	Unit 0 OB Control Room Ventilation System Flowrate and Pressurization Test	2/23/05
5	0BVSR 7.10.2-4	Unit 0 OB Control Room Make-Up Charcoal Adsorber Bank Operability	2/24/05
6	0BVSR 7.10.2-10	Unit 0 OB Control Room Recirculation Charcoal Adsorber Bank Operability	02/24/05

0BVSR 7.13.2-8 is the carbon methyl iodide penetration test of the 0B FHB charcoal adsorber train in the FHB Exhaust Ventilation System. The acceptance criterion is a penetration of 10% or less. The actual penetration was 13.2%. Since the FHB system was not currently in an applicable condition (i.e., moving irradiated fuel), the 0B train was placed on the degraded equipment list. The 0B charcoal adsorber bed was replaced on February 4, 2004 and the 0B train subsequently removed from the degraded equipment list. The same test on the 0A FHB train's charcoal bed was found acceptable on February 4, 2005.

0BVSR 7.12.2-12 is the carbon methyl iodide penetration test of the 0C charcoal adsorber train of the AB non-accessible plenum. The acceptance criterion is a penetration of 4.5% or less. The actual penetration was 6.23%. The 0C train was declared inoperable and TS 3.7.12, "Nonaccessible Area Exhaust Filter Plenum Ventilation System", Action Condition entered for one train inoperable. The 0C charcoal adsorber bed was replaced and the 0C train restored to an operable condition on January 30, 2005. The 0A and 0B trains surveillance procedures were performed by this individual, however the test vendor confirmed carbon results were actually received and analyzed as acceptable on July 16, 2003 and July 29, 2003 respectively. The SRs for these trains were considered acceptable and were still within their TS frequency.

0BVSR 7.10.4-1 is the 0A train VC flowrate and pressurization test. The flowrate acceptance criterion for the make-up flow rate is between 5400 and 6600 cubic feet per minute (cfm). The actual measured flowrate was 7029 cfm. The 0A train was declared inoperable and TS 3.7.10 "VC Filtration System", Action Condition was entered. The flowrate was readjusted to within limits and the 0A train restored to an operable condition on February 20, 2005.

OBVSR 7.10.4-2 is the 0B train VC flowrate and pressurization test. The flowrate acceptance criterion for the make-up flow rate is between 5400 and 6600 cubic feet per minute (cfm). The actual flowrate was 6884 cfm. The 0B train was declared inoperable and TS 3.7.10 Action Condition entered. The flowrate was readjusted to within limits on February 24, 2005.

OBVSR 7.10.2-4 is the 0B train VC Make-up Charcoal Adsorber Bank Operability test. In this test 0VC05FB filter failed the Halide bypass leakage test. The acceptance criterion is less than a bypass leakage of .05%. The actual measurement was .24%. The 0B VC train was already inoperable due to the make-up flowrate failure. The leakage was readjusted to within limits and the 0B train restored to an operable condition on February 27, 2005.

OBVSR 7.10.2-10 is the 0B VC Recirculation Charcoal Adsorber Bank Operability Test. In this test the 0VC02FB filter failed the Halide bypass leakage test. The acceptance criterion is less than a bypass leakage of 2.0%. The actual measurement was 3.99%. The 0B VC train was already inoperable due to the high make-up flowrate failure. The leakage was adjusted to within limits and the 0B VC train restored to an operable condition on February 27, 2005.

These six TS surveillance requirement failures are considered an event or condition prohibited by TS and reportable to the NRC in accordance with 10 CFR 50.73, Licensee event report system", section (a)(2)(i)(b).

In addition, though the exact time the VC make-up flowrates exceeded the acceptance criteria is unknown, it is likely that the condition existed simultaneously on both trains for a time period longer than allowed by TS LCO 3.0.3. Consequently, this is also an event or condition prohibited by TS.

In addition, the two VC make-up flowrate failures are considered an event where a single cause or condition caused two independent trains to become inoperable in a single system. This is also reportable to the NRC in accordance with 10 CFR 50.73 (a)(2)(vii).

C. Cause of Event:

The cause of the 27 TS surveillances exceeding their TS specified frequency was the willful falsification of documentation by one non-licensed employee.

There are several causes that contributed to the failure to detect this inappropriate practice in a timely manner. The more significant of these causes include inadequate supervisory oversight of the responsible individual, inadequate management oversight of the Predefine Process, and inadequate use of the Corrective Action Program within the Work Management and Engineering departments.

The cause of both failed charcoal samples in the 0B FHB and 0C non-accessible train, was normal degradation of charcoal. Charcoal filters have a finite life and are expected to degrade over time due to oxidation and exposure to contaminants. The 0B FHB charcoal filter was installed in 1997 and its last valid sample analysis was in October 2002. The 0C non-accessible charcoal filter was installed in 1995 and its last valid sample analysis was in July 2001. In addition, the failure to perform valid sample and analysis between October 2002 and January 2005 for the 0B FHB charcoal filter and between July 2001 and January 2005 for the 0C non-accessible charcoal filter resulted in a missed opportunity for trending of the degradation and possible replacement prior to failure.

The cause of the higher than allowed VC system make-up flowrates was due to differences in the air flow profile between the installed flow elements and the pitot tube used as test equipment for the surveillance procedure. The installed flow measuring elements are installed less than the 7.5 duct diameters downstream from a major flow disturbance (i.e., duct elbow) which caused flow measurement distortions in the air profile. The pitot tube measurement for the surveillance procedure is measured at a different location from the installed flow elements and not within 7.5 duct diameters of a major flow disturbance. The approved setpoint for the flow controller is 6000 cfm. The 0A train was found set at 6200 cfm, however when it was reset to 6000 cfm the flow still was outside acceptance criteria at 6806 cfm. The previous valid execution of the surveillance procedures, in February 2002, resulted in flows at 6432 cfm and 6438 cfm respectively for the 0A and 0B trains.

The installed instruments on each train were verified and all were still within calibration tolerances. A review of work activities on the system could not determine how the 0A train was set at 6200 cfm or find any reason that may have caused an increase of air flow on either of the FHB trains. In addition, the failure to perform these surveillance procedures in late 2003, resulted in a missed opportunity for trending of the flow measurement and possible intervention before exceeding the acceptance criteria. The installed flow transmitter on each train was subsequently rescaled based on the pitot tube flow measurements. To ensure repeat successful performance, measurements will be taken three times within the next six months to ensure effectiveness of the corrective action.

The cause of the failure of the 0B VC make-up charcoal adsorber bypass leakage test was determined to be the settling of the charcoal over time, allowing a leak to develop gradually. The 0B charcoal trays were originally installed in 1988. In addition, failing to perform this surveillance in December 2003, resulted in a missed opportunity for trending of the degradation and possible intervention before exceeding the acceptance criteria.

The cause of the failure for the 0B VC recirculation charcoal adsorber bank operability test was determined to be leakage past the closed bypass damper (i.e, 0VC044Y). It is unknown why the bypass damper developed enough leakage to effect the Halide penetration test. No maintenance had been performed on the bypass damper since the last successful test. In addition, failing to perform this surveillance procedure in December, 2003, resulted in a missed opportunity for trending of the degradation and possible intervention before exceeding the acceptance criteria.

D. Safety Analysis

A risk evaluation was conducted using methods described in Engineering procedure ER-AA-600-1045, "Risk Assessments of Missed or Deficient Surveillances." Both a bounding risk assessment and a refined assessment were performed. These assessments concluded that the risk impact of the missed surveillances was not significant and the surveillance frequencies could be extended to allow completion in a systematic manner.

In support of the SR 3.0.3 risk analysis, a conservative bounding analysis was completed of the applicable UFSAR chapter 15 accident analysis assuming no credit for AB filtration and a 50% efficiency on the FHB filters. The result of this analysis indicate that the offsite dose would be under 10 CFR Part 100 limits and the dose to the control room operators would be less than the limits specified in the UFSAR.

The impact of the three failed VC SR's involving both trains has been evaluated and given the actual VC system make-up flowrates, recirculation flowrate, inleakage

flowrates and as-found filter efficiencies, the existing Main Control Room habitability analysis would bound these as-found conditions and there would be no adverse impact on the dose to control room operators.

E. Corrective Actions

The responsible individual's employment was terminated. All TS Ventilation surveillance procedures that were performed by this individual were reperformed unless the results could be independently verified by another means.

A review was conducted of 584 work documents completed by the individual during his tenure in the Byron Engineering Department. Several other non-TS falsifications of records were identified and appropriate actions taken to resolve.

Several actions were taken to improve supervisory oversight of system managers. These include issuing clear expectations to Engineering supervisors for performing and documenting quality field observations. Additionally, Engineering supervisor's day-to-day activities will be aligned to those expectations listed in the Conduct of Plant Engineering Manual. This should increase the amount of time allocated for supervisory oversight activities.

Management oversight of the Predefine Process has been improved. This will be accomplished by having all Predefine work activities at the "finished" status reviewed at the weekly Work Management Review meeting. In addition, an indicator or report on predefines at the "finished" status will be included in the agenda of the planning and status meeting attended daily by senior managers. This will provide additional senior management level oversight of the Predefine Process.

A self-assessment of the Corrective Action Program within the Work Management and Engineering Departments will be conducted. This assessment will focus on identification threshold, individual participation and type of issues generated.

The corrective actions for the surveillance failure are explained in the description section above.

F. Previous Occurrences

A review of Byron Station events since January 2003 found no similar events.

G. Component Failure Data:

<u>Manufacturer</u>	<u>Nomenclature</u>	<u>Model</u>
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N/A