

W. D. Nash

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Thank you for your response letter dated February 9, 2005, to the choice call on January 9, 2006 between the NRC (D. Ayres) and your staff. The reply met the requirements of 10 CFR 2.201 and your corrective actions will be reviewed in an upcoming inspection.

[REDACTED]

Sincerely,

/RA/

David A. Ayres, Chief
Fuel Facility Inspection Branch 1
Division of Fuel Facility Inspection

Docket No. 70-27
License No. SNM-42

Enclosures: 1. Notice of Violation
2. NRC Inspection Report
3. [REDACTED]

cc w/encls:
Leah R. Morrell
Manager, Licensing and Safety Analysis
BWX Technologies
P. O. Box 785
Lynchburg, VA 24505-0785

Leslie P. Foldesi, Director
Bureau of Radiological Health
Division of Health Hazards Control
Department of Health
1500 East Main Street, Room 240
Richmond, VA 23219

Distribution w/encls: (See page 3)

[REDACTED]

W. D. Nash

Distribution w/encls:

- D. Ayres, RII
- G. Wertz, RII
- C. Evans, RII
- B. Gleaves, NMSS
- N. Baker, NMSS
- M. Williams NSIR
- D. Votolato, NSIR

*see previous concurrence

ADAMS: Yes ACCESSION NUMBER: _____

OFFICE	RII:DFFI	RII:DFFI	RII:DFFI	RII:DFFI	RII:DFFI	RII:EICS	
SIGNATURE	A.Gooden for				A.Gooden for	/RA/	
NAME	GWertz	CTaylor*	OLópez*		WGloersen	CEvans	
DATE	03/27/2006	May 18, 2008	May 18, 2008	May 18, 2008	03/28/2006	03/28/2006	
E-MAIL COPY?	YES NO	YES NO					

OFFICIAL RECORD COPY DOCUMENT NAME: E:\Filenet\ML060930565.wpd



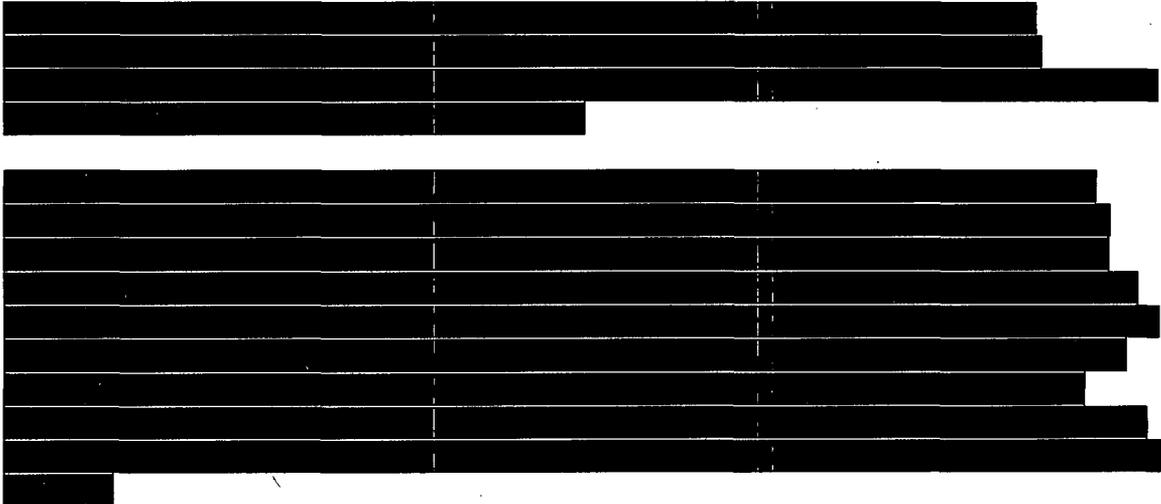
NOTICE OF VIOLATION

BWX Technologies, Inc.
Lynchburg, Virginia

Docket No. 70-27
License No. SNM-42
EA-06-020

During NRC inspection activities conducted between January 22 and March 4, 2006, two violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy the violations are listed below:

A.



This is a Severity Level IV violation (Supplement III).

B. Safety Condition S-1 of NRC license SNM-42 authorizes the use of nuclear materials in accordance with Chapters 1-8 of the License Application submitted on July 14, 1995, and supplements thereto. Section 2.7 of the License Application states that activities involving licensed materials shall be performed in accordance with written and approved procedures. Industrial Health & Safety Procedure, HS-FP-008, Section 6.3, requires an annual inspection of sprinkler standpipes.

Contrary to the above, prior to January 27, 2006, the licensee failed to perform the annual inspection of sprinkler standpipes. In addition, the annual inspection described in the procedure did not appear to comply with the requirements of the National Fire Protection Agency, Section 25.

This is a Severity Level IV violation (Supplement VI).



NOV

Regarding Violation A, the NRC has concluded that information regarding the reasons for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence and the date when full compliance will be achieved is already adequately addressed on the docket in the enclosed inspection report. However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation," and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555 with a copy to the Regional Administrator, Region II, and a copy to the NRC Resident Inspector at BWX Technologies, Inc., within 30 days of the date of the letter transmitting this Notice of Violation (Notice).

Regarding Violation B, pursuant to the provisions of 10 CFR 2.201, BWX Technologies, Inc., is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555 with a copy to the Regional Administrator, Region II, and a copy to the NRC Resident Inspector at BWX Technologies, Inc., within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previously docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days.

Dated this 3rd day of April 2006

[REDACTED]

U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.: 70-27

License No.: SNM-42

Report No.: 70-27/2006-002

Licensee: BWX Technologies, Inc.

Facility: Nuclear Products Division

Location: Lynchburg, Virginia

Dates: January 22 through March 4, 2006

Inspectors: G. Wertz, Senior Resident Inspector
O. López, Fuel Facility Inspector
C. Taylor, Fuel Facility Inspector

Approved by: David A. Ayres, Chief
Fuel Facilities Inspection Branch 1
Division of Fuel Facility Inspection

Enclosure 2

[REDACTED]

[REDACTED]

NRC INSPECTION REPORT 70-27/2006-002

EXECUTIVE SUMMARY

BWX Technologies, Inc., Nuclear Products Division

This inspection included observations conducted by the Senior Resident Inspector during normal and off-normal shifts in the area of Plant Operations, Management Organization and Controls, Maintenance and Surveillance, Radiation Protection, and Material Control and Accounting. A specialized inspection and review of documentation was conducted by regional inspectors in the areas of Fire Protection (January 23 through 27) and Radiation Protection (February 13 through 17).

On February 28 and March 1, Government Accounting Office representatives toured the facility and interviewed personnel [REDACTED].

Plant Operations

- Nuclear criticality safety requirements were properly evaluated and maintained [REDACTED] (Paragraph 2.a).
- The emergency team responded effectively to a chemical reaction event in a controlled area when a worker mixed epoxy floor paint in unsuitable containers (Paragraph 2.b).

Management Organization and Controls

- A root cause evaluation incorrectly identified the cause of a personnel contamination event as being due to a worker "distracting" an operator. The inspectors concluded that the operator failed to ensure adequate "attention to detail" prior to opening the wrong valve (Paragraph 3).

Maintenance and Surveillance

- Calibration of [REDACTED] was performed properly and the calibration results agreed with known uranium solution standards (Paragraph 4).

Radiation Protection

- Contaminated soil not excavated [REDACTED] was properly evaluated, documented in the licensee's decommissioning file, and did not pose any radiological risk to workers (Paragraph 5.a).
 - A pre-operational readiness review team performed an effective review of the Lynchburg Technology Center [REDACTED] (Paragraph 5.b).
- [REDACTED]

- Radiation monitoring, the internal and external exposure control program, and the respiratory program were implemented in accordance with license requirements. Surveys and contamination control were performed according to procedure. As Low As Reasonably Achievable concepts were implemented to ensure effective exposure control (Paragraph 5.c).
- Procedures for maintaining accountability and security of sealed sources were adequate (Paragraph 5.d).

Material Control and Accounting

- [REDACTED]
- [REDACTED]

Fire Protection

- A violation was identified for failure to perform the annual sprinkler system standpipe flow test. (Paragraph 7.a).
- Fire protection and suppression systems, including Items Relied On For Safety, were maintained properly. Audits were completed in accordance with license requirements. The pre-fire plan was accurate. The fire brigade training program was adequate (Paragraph 7.a).
- Fire Protection Information Notices were not applicable (Paragraph 7.b).

Attachment:
Partial Listing of Persons Contacted
List of Items Opened, Closed and Discussed
Inspection Procedures Used

[REDACTED]

REPORT DETAILS

1. Summary of Plant Status

Routine fuel manufacturing operations were conducted in the fuel process area and in the [REDACTED] facility. Uranium recovery and downblending operations were conducted in the [REDACTED] facility.

2. Plant Operations (Temporary Instruction (TI) 2600/006)

a. Nuclear Criticality Safety Review [REDACTED]

(1) Inspection Scope and Observations

The inspectors observed operations involving [REDACTED], reviewed nuclear criticality safety (NCS) postings, change request-1019509, NCS evaluation 2005-009, and toured the area with an NCS engineer. Operators questioned understood the NCS limits.

(2) Conclusions

NCS requirements were properly evaluated and maintained [REDACTED]
[REDACTED]

b. Event Response Review

(1) Inspection Scope and Observations

On February 3, at approximately 1:00 pm, a worker mixing epoxy floor paint in the Waste Treatment decontamination area caused an exothermic chemical reaction after mixing the paint in their storage containers contrary to the manufacturer's warning label. The emergency team was notified and responded promptly, and the Emergency Operations Center (EOC) was staffed for support. The reaction subsided after approximately an hour. Radiation protection (RP) personnel performed air sampling and surveyed emergency team responders who had entered the controlled area. No contamination was identified. The licensee captured the event as Unusual Incident Report 2000465. The inspectors responded to the scene and observed effective command and control, communications, and radiological protection actions.

(2) Conclusions

The emergency team responded effectively to a chemical reaction event in a controlled area when a worker mixed epoxy floor paint in unsuitable containers.

[REDACTED]

3. **Management Organization and Controls (TI 2600/006)**

a. **Inspection Scope and Observations**

The inspectors reviewed the cause of a contamination event documented in radiation safety incident notice 06-017 involving a UR operator who inadvertently opened the wrong valve and splashed special nuclear material (SNM) solution onto a nearby Nuclear Material Control (NMC) worker. Although the contamination event was minor, the NMC worker was unprotected (no face shield) from the consequences of a more significant spill. The licensee concluded that the NMC worker had "distracted" the UR operator which caused the wrong valve to be opened. However, the inspectors concluded, following an interview of both workers, that the event occurred due to "inattention to detail" by the UR operator who failed to verify the correct valve. The NMC manager re-opened the event for additional review.

b. **Conclusions**

A root cause evaluation incorrectly identified the cause of a personnel contamination event as being due to a worker "distracting" an operator. The inspectors concluded that the operator failed to ensure adequate "attention to detail" prior to opening the wrong valve.

4. **Maintenance and Surveillance (TI 2600/006)**

a. **Inspection Scope and Observations**

The inspectors observed calibration of [REDACTED] Enrichment Monitor performed in accordance with Operating Procedure (OP)-0000503. The inspectors reviewed the calibration methodology with the cognizant engineer and reviewed the results which validated close agreement [REDACTED] to known standards of uranium solution.

b. **Conclusions**

Calibration of [REDACTED] Enrichment Monitor was performed properly and the calibration results agreed with known uranium solution standards.

5. Radiation Protection (TI 2600/006 and Inspection Procedure (IP) 83822)

a. Review of Decommissioning File Updated

(1) Inspection Scope and Observations

The inspectors reviewed radiation protection technical work record (RPTWR) 06-005 which documented the contaminated soil not excavated [REDACTED]. The RPTWR also described the contaminated soil location, radiological survey results, and was added to the licensee's decommissioning file for future decontamination activities. The remaining soil was stable and did not pose any radiological risk to site workers or visitors.

(2) Conclusions

Contaminated soil not excavated [REDACTED] was properly evaluated, documented in the licensee's decommissioning file, and did not pose any radiological risk to workers.

b. Lynchburg Technology Center

(1) Inspection Scope and Observations

The inspectors reviewed the project plan, the radiation work permit and procedure, and observed equipment dry-run activities in preparation [REDACTED]. The inspectors noted that effective recommendations were provided by an independent readiness review team and incorporated in the procedure by the project team.

(2) Conclusions

An independent readiness review team performed an effective review [REDACTED].

c. Review of the Radiation Protection Program, Equipment (R1.03), External and Internal Exposure Control (R1.04/05), Respiratory Protection (R1.06), Surveys (R1.08), and Implementation of the As Low As Reasonably Achievable Program (R1.10)

(1) Inspection Scope and Observations

The inspectors toured radiological controlled areas, reviewed records and interviewed staff in order to verify the adequacy, calibration, and operability of various RP surveys and monitoring equipment. Instruments observed were operable and their calibration was current. The inspectors reviewed the licensee's As Low As Reasonably Achievable (ALARA) exposure control program which was effective as workers' exposures were [REDACTED].

below regulatory limits. Workers in the respiratory program were tracked, their fit test was performed by a knowledgeable person, and the areas used for storage and cleaning of respirators were adequately controlled. The inspectors reviewed survey documentation and observed RP technicians performing surveys in accordance with the procedures.

(2) Conclusions

Radiation monitoring, the internal and external exposure control program, and the respiratory program were implemented in accordance with license requirements. Surveys and contamination control were performed according to procedure. ALARA concepts were implemented to ensure effective exposure control.

d. Information Notice Review (TI 2600/012)

The inspectors reviewed information notice (IN) 95-051 and concluded that procedures for maintaining accountability and security of sealed sources were adequate.

6. Material Control and Accounting (TI 2600/006)

■ [REDACTED]

■ [REDACTED]

[REDACTED]

■ [REDACTED]

7. Fire Protection (IP 88055)

- a. Review of the Fire Protection Program, Insurer's Audit, and Safety Committee (O4.02), Fire Safety of Process, Equipment, and Storage Areas (O4.04), Pre-Fire Plan (O4.07), Fire Brigade Training (O4.08), Building Design, Construction, and Ventilation System (O4.03), Fire Protection Systems (O4.05) and, Fire Hazard Analysis (O4.06)

(1) Scope and Observations

The inspectors reviewed third and fourth quarter audits for 2005 of fire protection (FP) safety systems, the Pre-Fire Plan and the fire brigade training program, and toured SNM processing areas. The inspectors toured fire suppression and protection systems in the fuel process and UR areas and inspected items relied on for safety (IROFS) involving [REDACTED] detection and cut off systems, overheat protection controls, and inert gas purges. No discrepancies were identified.

The inspectors reviewed maintenance and test records for selected fire safety systems and IROFS and identified that the annual inspection of the sprinkler standpipes, as required by Procedure HS-FP-008, Section 6.3, had not been performed. In addition, the test did not meet the requirements specified in National Fire Protection Agency (NFPA), Chapter 25. The annual inspection performed by HS-FP-008 only required standpipe flow until clear water was observed. NFPA 25 required comparison of pre-test, post-test and residual pressure test measurements to verify no major water flow reduction had developed. When notified, the licensee performed the test, in accordance with NFPA 25 requirements, and no flow reduction was observed. However, failure to follow Procedure HS-FP-008, Section 6.3, was a violation of NRC requirements, and cited as VIO 70-27/2006-02-02, Failure to Perform the Annual Sprinkler System Standpipe Flow Test.

(2) Conclusions

A violation was identified for failure to perform the annual sprinkler system standpipe flow test.

Fire protection and suppression systems, including IROFS, were maintained properly. FP safety audits were completed in accordance with license requirements. The pre-fire plan was accurate. The fire brigade training program was adequate.

b. IN Review (TI 2600/012)

As part of the effort to review past generic communications, the inspectors reviewed IN-02-024, IN-99-028-S1, IN-00-007, and IN-99-007 and concluded that the INs were not applicable to this licensee.

8. **Exit Meeting**

The inspection scope and results were summarized on January 27, February 16, and March 9, 2006, with W. Nash, Vice President and General Manager, and other members of the licensee's staff. No dissenting comments were received from the licensee.

[REDACTED]

ATTACHMENT

1. **LIST OF PERSONS CONTACTED**

R. Cochrane, Manager, Operations
J. Creasey, Manager, Uranium Processing
L. Duncan, Manager, Nuclear Criticality Safety
L. Morrell, Manager, Licensing & Safety Analysis
W. Nash, Vice President and General Manager
T. Nicks, Manager, Security
S. Schilthelm, Manager, Safety and Licensing
D. Spangler, Manager, Radiation Protection
M. Suwala, Manager, Nuclear Materials Control
D. Ward, Manager, Environment, Safety, Health and Safeguards

Other licensee employees contacted included engineers, technicians, production staff, security, and office personnel.

2. **LIST OF ITEMS OPENED AND CLOSED**

<u>Item Number</u>	<u>Status</u>	<u>Description</u>
70-27/2006-02-01	Opened	[REDACTED]
70-27/2006-02-02	Opened	VIO - Failure to Perform Annual Sprinkler System Standpipe Flow Test (Paragraph 7.a)

3. **INSPECTION PROCEDURES USED**

TI 2600/006 Resident Inspection Program for Category I Fuel Cycle Facilities
IP 88055 Fire Protection
IP 83822 Radiation Protection
TI 2600/012 Institutionalizing Concern Regarding Safety Issues Identified in selected Past Generic Communications

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]