



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

December 30, 2010

Dr. Ronald J. Land
Richland Plant Manager
AREVA NP, INC.
2101 Horn Rapids Road
Richland, WA 99352-0130

SUBJECT: NOTICE OF VIOLATION AND NUCLEAR REGULATORY COMMISSION
INSPECTION REPORT NO. 70-1257/2010-010

Dear Dr. Land:

This refers to the inspections conducted at your facility in Richland, Washington on November 15 through 18, 2010, and November 29 through December 2, 2010. The purpose of the inspections was to determine whether activities authorized by the license were conducted safely and in accordance with Nuclear Regulatory Commission (NRC) requirements. At the conclusion of the inspections on November 18, 2010, and December 2, 2010, the findings were discussed with you and members of your staff.

During these inspections, the NRC staff examined activities conducted under your license as they relate to public health and safety to confirm compliance with the Commission's rules and regulations and with the conditions of your license. The inspection activities conducted on November 15 through 18, 2010, involved inspection of the Fire Protection program. The inspection activities conducted on November 29 through December 2, 2010, involved inspection of the Operational Safety program. Within these areas, the inspection consisted of selective examinations of procedures and representative records, observations of activities, walkdowns of IROFS, and interviews with personnel.

Based on the results of these inspections, the NRC has determined that three Severity Level IV violations of NRC requirements occurred. These violations were evaluated in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's Web site at (<http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>). The violations are cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding them are described in detail in the enclosed inspection report. The three violations are all associated with procedural noncompliance and are being cited in the Notice because you failed to identify the violations and initiate immediate and effective corrective actions.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. For your consideration in presenting the corrective actions, the guidance from NRC Information Notice 96-28, "Suggested Guidance Relating to Development and Implementation of Corrective Action," is available on the NRC website and may be helpful. If you have additional information that you believe the NRC should consider, you may provide it in your response to the Notice. The NRC review of your response to the Notice will also determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Should you have any questions concerning this inspection, please contact us.

Sincerely,

/RA by M. Sykes/

Marvin D. Sykes, Chief
Fuel Facility Inspection Branch 3
Division of Fuel Facility Inspection

Docket No. 70-1257
License No. SNM-1227

Enclosures: 1. Notice of Violation
2. NRC Inspection Report; No. 70-1257/2010-010

cc w/enclosures:

Thomas Scott Wilkerson, Vice President,
Engineering
Areva NP, Inc.
3315 Old Forest Road
Lynchburg, Virginia 24501

Robert E. Link, Manager
Environmental, Health, Safety & Licensing
Areva NP, Inc.
2101 Horn Rapids Road
Richland, Washington 99352

Loren J. Maas, Manager
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Calvin D. Manning, Manager
Nuclear Criticality Safety
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Gary L. Robertson, Director
Division of Radiation Protection
Department of Health, Bldg. 5
PO Box 47827
7171 Cleanwater Lane
Olympia, Washington 98504-7827

Earl Fordham
Eastern Regional Director
Office of Radiation Protection
Department of Health
309 Bradley Boulevard, Suite 201
Richland, Washington 99352

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Should you have any questions concerning this inspection, please contact us.

Sincerely,

/RA by M. Sykes/

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PUBLICLY AVAILABLE NON-PUBLICLY AVAILABLE SENSITIVE NON-SENSITIVE
ADAMS: Yes ACCESSION NUMBER: _____ SUNSI REVIEW COMPLETE

OFFICE	RII:DFFI	RII:DFFI	RII:DFFI				
SIGNATURE	NCovert	CCramer	MThomas				
NAME	/RA by NC/	/RA by NC/	/RA by MS for MT/				
DATE	12/30/2010	12/30/2010	12/30/2010	1/ /2011	1/ /2011	1/ /2011	1/ /2011
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

Letter to: Dr. Ronald J. Land from Marvin D. Sykes dated December 30, 2010

Subject: NOTICE OF VIOLATION AND NUCLEAR REGULATORY COMMISSION
INSPECTION REPORT NO. 70-1257/2010-010

Distribution w/enclosures:

M. Thomas, RII

R. Rodriguez, NMSS

M. Diaz, NMSS

M. Sykes, RII

NOTICE OF VIOLATION

Areva NP, Inc.
Richland, WA

Docket No. 70-1257
License No. SNM-1227

During an NRC inspection conducted between November 15, 2010 and December 2, 2010, three violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy, the Violations are listed below:

Safety Condition No. S-1 of Special Nuclear Material (SNM) License No.: SNM-1227 requires that material be used in accordance with the statements, representations, and conditions in the license application dated October 24, 2006, and supplements dated: December 13, 2006 (License Application and RAI Responses); December 10, 2008 (Revised License Renewal Application); e-mail from R.E. Link titled: "Compliance Plan," dated March 5, 2009; June 12, 2008, August 22, 2008, June 5, 2009, July 13, 2009, November 11, 2009, December 4, 2009, February 4, 2010, e-mail and attachment submitted by C.D. Manning on April 16, 2010, April 28, 2010, and July 1, 2010.

1. Section 11.1.1, Configuration Management Policy, of Revised License Renewal Application; License No. SNM-1227, dated December 10, 2008, states that "It is management's policy to control facilities and processes so that the safety basis is maintained and that changes to facilities and processes are evaluated according to approved written procedures and consistent with 10 CFR 70.72."

Section 6.5, Permit Duration, of facility procedure MCP-30149 Version (V) 3.0, "Equipment Interlock Bypass," states in part, that the duration of the permit is a function of the severity of the bypass and the maximum durations allowed for a safety related bypass permit are seven days.

Section 6.7, Renewals, of facility procedure MCP-30149 V 3.0, "Equipment Interlock Bypass," states in part, that permits may be renewed by issuing a new permit with the same approvals as the original permit and it is expected that the condition requiring an interlock bypass should normally be resolved within the original duration.

Contrary to the above,

- a) from August 7, 2009 to November 30, 2010, the licensee failed to properly implement procedure MCP-30149 V 3.0 Sections 6.5 and 6.7, by allowing Interlock Bypass Permit # 326, for item relied on for safety (IROFS) #4722, a mass/ moderation control, to remain open for a period in excess of seven days and by not properly renewing the permit.
- b) from March 23, 2009 to December 1, 2010, the licensee failed to properly implement procedure MCP-30149 V 3.0 Sections 6.5 and 6.7, by allowing Interlock Bypass Permit # 322 for IROFS #4703, a moderation control, to remain open for a period in excess of seven days and by not properly renewing the permit.

This is a Severity Level IV violation (Section 6.2.d).

2. Section 11.6, Incident Investigation and Corrective Action, of Revised License Renewal Application; License No. SNM-1227, dated December 10, 2008, states in part, that the incident investigation and corrective action programs will be implemented via formally approved procedures.

Section 11.6.2, Issue Investigation and Causal Analysis, of Revised License Renewal Application; License No. SNM-1227, dated December 10, 2008, states, in part, that more significant safety-related incidents or conditions require formal investigation and cause analysis as dictated by an approved issue investigation/causal analysis procedure. This section also defines requirements relative to identification of cause and generic implications.

Step 7.1 of facility procedure 1703-76 "Issue and Causal Analysis Procedure" Revision 013, states, in part, that during the investigation, the licensee will determine if the event might have generic safety consequences that warrant further evaluation under Part 21 or other regulations; evaluate for potential extent of condition; and "Site NRC licenses and NRC regulations require specific information be reported and collected regarding IROFS. When the apparent cause analysis (ACA) investigating an IROFS failure or potential failure, the Issue Investigator will collect this information and report it on a specific page on the ACA form".

Contrary to the above, as of December 2, 2010, the licensee failed to properly implement procedure 1703-76 Step 7.1 by not performing an extent of condition and generic implication review while conducting an ACA to investigate an IROFS failure or potential failure. Specifically, the licensee failed to identify and document the cause, extent of condition, and generic implications for criticality drain 100DR10 failing to perform its design function. Criticality drain 100DR10 is a mass control item relied on for safety, IROFS # 6303.

This is a Severity Level IV violation (Section 6.2.d).

3. Section 11.6, Incident Investigation and Corrective Action, of Revised License Renewal Application; License No. SNM-1227 dated December 10, 2008, states "AREVA will implement and maintain an integrated incident investigation/corrective action program to assure that safety-adverse incidents or conditions are appropriately identified, evaluated, and reported, and that suitable corrective actions are identified and applied. This integrated program will include incidents and adverse conditions involving the control and processing of licensed materials, including those with actual or potential adverse impacts to items relied on for safety (IROFS). The incident investigation and corrective action programs will be implemented via formally approved procedures."

Contrary to the above, on and before November 30, 2010, the licensee failed to implement the integrated incident investigation/corrective action program by not identifying, evaluating, and reporting two conditions involving the control and processing of licensed materials, including those with actual or potential adverse impacts to IROFS, that were identified during the performance of IROFS preventative maintenance (PM) activities C090P021 "Calciner L2 Lubricate 1 MO MWHZ" and C323P002 "Powder Receipt Interlock 6 MO RE".

This is a Severity Level IV violation (Section 6.2.d).

Pursuant to the provisions of 10 CFR 2.201, AREVA NP, INC. is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555, with a copy to the Regional Administrator, Region II 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 for each violation: (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, and (4) the date when full compliance will be achieved. Your response may reference or include previous 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 not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this violation or its significance, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with copies to the Regional Administrator, Region II, and the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-001.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, it should not include any personal privacy, proprietary, classified, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21. If Classified Information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR Part 95.

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

Dated this 30th day of December, 2010

U.S. NUCLEAR REGULATORY COMMISSION
REGION II

Docket No.: 70-1257

License No.: SNM-1227

Report No.: 70-1257/2010-010

Licensee: AREVA NP, Inc.

Facility: Richland Facility

Location: 2101 Horn Rapids Road
Richland, Washington

Dates: November 15 through 18, 2010
November 29 through December 2, 2010

Inspector: Mary Thomas, Senior Fuel Facility Inspector
Chad Cramer, Fuel Facility Inspector
Nicole Coover, Fuel Facility Inspector-in-Training

Approved by: Marvin D. Sykes, Chief
Fuel Facility Branch 3
Division of Fuel Facility Inspection

EXECUTIVE SUMMARY

AREVA NP, Inc.
NRC Inspection Report No. 70-1257/2010-010

Inspections were conducted by the regional inspectors during normal shifts in the areas of fire protection, operational safety, and event follow up. During the inspection period, normal production activities were ongoing. This routine, announced inspection consisted of a selective examination of procedures and representative records, observations of activities, walkdowns of items relied on for safety (IROFS), and interviews with personnel.

Operational Safety

- In the area of process operations, safety controls, and IROFS for the rod and bundle area, no issues of safety significance were identified. (Paragraph 2.b)
- A violation of Safety Condition No. S-1 of SNM License No. SNM-1227, Section 11.1.1, Configuration Management Policy, and of the licensee's procedure MCP-30149 V 3.0, "Equipment Interlock Bypass," was cited for allowing two Equipment Interlock Bypass Permits to remain open past their expiration date and for not renewing or re-issuing a new interlock bypass permit for IROFS related interlocks. (Paragraph 2.(1).b)
- A violation of Safety Condition No. S-1 of SNM License No. SNM-1227, Section 11.6, Incident Investigation and Corrective Action, and Section 11.6.2, Issue Investigation and Causal Analysis, and of the licensee's procedures 1703-76, "Issue and Causal Analysis Procedure" Rev. 013, was cited for failing to perform an extent of condition and generic implication review while conducting an apparent cause analysis (ACA) for an IROFS failure or potential failure. (Paragraph 2.(2).b)
- A violation of Safety Condition No. S-1 of SNM License No. SNM-1227, Section 11.6, Incident Investigation and Corrective Action, was cited for failing to implement the integrated incident investigation/corrective action program by not identifying, evaluating, and reporting in the integrated program, two conditions involving the control and processing of licensed materials, including those with actual or potential adverse impacts to IROFS. (Paragraph 2.(3).b)

Fire Protection

- Fire protection equipment and control of transient combustible materials and ignition sources were adequately maintained and inspected. Hot work was performed in accordance with the licensee's procedure hot work procedure. The licensee was meeting its commitments made in the Memorandum of Understanding with the Richland fire Department. No issues of safety significance were identified. (Paragraph 3.b)

Attachment

List of Persons Contacted
List of Items Opened, Closed, and Discussed
Inspection Procedures Used
Documents Reviewed

REPORT DETAILS

1. Summary of Plant Status

The AREVA Richland facility converts uranium hexafluoride (UF₆) into uranium dioxide for the fabrication of low-enriched fuel assemblies used in commercial nuclear power reactors. During the inspection period, normal production activities were ongoing.

2. Operational Safety (IP 88020)

a. Inspection Scope and Observations

The inspectors reviewed the Integrated Safety Analysis (ISA) Summary and licensee procedures for the following areas: Rod Loading (System 460); Rod Testing (System 470); Rod Transport and Storage (System 480); Rod Downloading (System 490); Bundle Assembly and Storage (System 540); and Bundle Disassembly (System 550); as documented in ISA Chapter 9D. The inspectors performed an area walk down, in which process operations were observed and the existing process safety controls and IROFS were evaluated for these areas. The inspectors walked down sections of the standard operating procedures and verified that IROFS were identified and operable in each of the areas. Inspectors interviewed operators in rod and bundling processing area and determined operators were trained to perform the observed tasks. The inspectors verified that there was adequate staffing and that operators were attentive to their duties, including the status of various alarms and annunciators. The inspectors attended various plan-of-the-day meetings throughout the inspection period in order to determine the overall status of the plant. The inspectors evaluated the adequacy of the licensee's response to plant issues as well as their approach to solving various plant problems. The activities observed by inspectors during normal conditions were performed in compliance with procedures and station limits.

In addition, the inspectors reviewed management measures and supporting documentation for designated IROFS to ensure that safety controls were available and reliable to function when needed for selected areas documented above. The management measures evaluated included configuration management and corrective action program, with respect to generic implications and Condition Report initiation.

Configuration Management

During the inspection, the inspectors reviewed the management measures for configuration management including the facility procedure "Equipment Interlock Bypass", MCP-30149 V 3.0, to confirm that engineered controls were present and capable of performing their intended safety functions. The inspection identified two instances where Equipment Interlock Bypass Permits for IROFS remained open for a period in excess of seven days and were not renewed or re-issued in accordance with licensee's procedures.

During the review of the Equipment Interlock Bypass Log, the inspectors identified that Permit # 326 for IROFS #4722 was still open as of November 30, 2010, although the permit expired on August 7, 2009. IROFS #4722 is a mass/moderation control provided by an Active Engineered Control (AEC) and is a container-in-place/lid-down interlock

that prevents powder from being transferred to the fill station unless a container is in place below the dump mechanism and the container fill lid is down (installed on the container).

The inspectors reviewed the licensee's procedures and configuration management requirements for IROFS. Section 6.5, Permit Duration, of procedure MCP-30149 "Equipment Interlock Bypass," states "The duration of the permit is a function of the severity of the bypass. Maximum durations are 7 days for a safety related bypass permit and 30 days for others." Section 6.7, Renewals, of procedure MCP-30149 V 3.0, states "Permits may be renewed by issuing a new permit with the same approvals as the original permit. It is expected that the condition requiring an interlock bypass should normally be resolved within the original duration."

The inspectors brought Permit # 326 to the attention of the licensee. As a result, the licensee closed Permit #326 on December 1, 2010, one year and four months after it had expired. In addition, the inspectors identified that the system had been in operation between August 27, 2009, when the functional tests were completed and December 1, 2010, when the permit was closed. The inspectors did confirm that the system was not in operations between August 7, 2009, when the permit had expired, until August 27, 2009, when the functional tests were performed.

The second incident identified during the Equipment Interlock Bypass Log review was Permit # 322 for IROFS #4703. The inspectors identified that Permit # 322 was still open as of November 30, 2010. IROFS #4703 is a moderation control provided by an AEC to weigh OPTU (OP Uranium Oxide Transport Unit) inner container and compare to shipped weight to determine if there has been a weight gain. The computer system prevents transfer into inner container vacuum transfer room (Room 154) until weight is confirmed.

The inspectors discussed the log discrepancies with the licensee and requested a copy of selective permits for further review. The licensee provided copies of two separate #322 permits, in which both had issue dates of March 16, 2009, and expiration dates of March 23, 2009, however, one of the copied #322 permits was signed closed on March 26, 2009, and the other was signed closed on July 28, 2009. Later during the inspection, a third version of Permit #322 was found in a folder in Room 155, the OPTU Shipping Package Unload Station during a plant tour with an Areva staff member. The third permit had an issue date of May 25, 2009, an expiration date of June 1, 2009, and as of December 1, 2010, was not signed as being closed.

The licensee failed to properly implement procedure MCP-30149 Version 3.0 by allowing a permit to remain open past its expiration date and not renewing or issuing a new interlock bypass permit, as required in Sections 6.5 and 6.7. Specifically, the licensee failed to close Interlock Bypass Permit # 326 for IROFS #4722 and Permit # 322 for IROFS #4703 within the required seven days. In addition, the licensee failed to renew or issue a new interlock bypass permit. Failure to comply with approved procedures for IROFS configuration management is considered a violation of your license requirements and your facility procedures. (VIO 070-1257/2010010-01)

b. Conclusions

A violation of Safety Condition No. S-1 of SNM License No. SNM-1227, Section 11.1.1, Configuration Management Policy, and of the licensee's procedure MCP-30149 V 3.0, "Equipment Interlock Bypass," was cited for allowing two Equipment Interlock Bypass Permits to remain open past their expiration date and for not renewing or re-issuing a new interlock bypass permit for IROFS related interlocks.

(1) Corrective Action Program – Generic Implications

During the inspection, the inspectors reviewed the management measures for corrective action program with respect to extent of condition and generic implications. The inspection identified that the licensee failed to identify and document extent of condition and generic implications while performing an apparent cause analysis (ACA) for an IROFS failure or potential failure.

During the review of the IROFS Failure Log and associated Condition Reports, the inspectors reviewed failed IROFS # 6303 that occurred on April 23, 2010. IROFS #6303 is a mass control that is maintained by a 1.5" NCS overflow drain (100DR10) that will remove ammonium diuranate (ADU) transferred into scrubber to tank TK-212.

The inspectors reviewed Condition Report (CR) 2010-2822 and the ACA, which had been completed on June 11, 2010. In the CR and ACA for failed IROFS #6303, the licensee documented that an operator found scrubber S-184 overflowing on the UO2 building floor. At the time of the event, ADU was not running but scrubber S-184 was operational to support Miscellaneous Uranium Recovery (MURS), furnace, and cylinder wash activities. Upon further review by the licensee, the 1.5" NCS drain C100DR10 was discovered to be partially obstructed with ADU in the drain line and at the S-184 tank, along with a plugged discharge line to tank 703. If the discharge to tank 703 fails or becomes plugged, the system is designed to drain the fluid in scrubber S-184 to tank 212 through NCS drain 100DR10 (IROFS # 6303). However, because the criticality drain line 100DR10 was plugged, it did not allow the fluid to drain to tank 212 as designed and as a result, the rising level in S-184 drained to the floor through drain 100DR09.

The inspectors reviewed the ACA and determined that the licensee had not identified the cause of the criticality drain 100DR10 (IROFS # 6303) failing to perform its design function, nor did the ACA include an extent of condition or generic implication review for other criticality drains. The inspectors interviewed cognizant personnel for this event and the licensee's corrective action program to determine if extent of condition or generic implications were performed but not documented. However, the Manager of Nuclear Criticality Safety and Manager of Uranium Conversion and Recovery both stated that extent of condition and generic implications were not performed or documented for failed IROFS # 6303.

The inspectors reviewed the licensee's Procedure 1703-76 Rev. 013, "Issue and Causal Analysis Procedure," which defines generic implications, and states, in part, the requirements when performing an ACA and root cause analysis. Specifically, step 7.1, sub-bullet Significance Determination, states that during the investigation, the licensee will determine if the event might have generic safety consequences that warrant further

evaluation under Part 21 or other regulations. Additional items to evaluate under step 7.1 are in part, potential extent of condition; and "Site NRC licenses and NRC regulations require specific information be reported and collected regarding IROFS. When the ACA is investigating an IROFS failure or potential failure, the Issue Investigator will collect this information and report it on a specific page on the ACA form".

The licensee failed to properly implement procedure 1703-76 Step 7.1 while conducting an ACA to investigate an IROFS failure, by not performing an extent of condition and generic implications review for criticality drain 100DR10 (IROFS # 6303) failing to perform its design function. Failure to comply with approved procedures for the corrective action program with respect to generic implications and extent of condition reviews for IROFS is considered a violation of your license requirements and your facility procedures. (VIO 070-1257/2010010-02)

b. Conclusions

A violation of Safety Condition No. S-1 of SNM License No. SNM-1227, Section 11.6, Incident Investigation and Corrective Action, and Section 11.6.2, Issue Investigation and Causal Analysis, and of the licensee's procedures 1703-76, "Issue and Causal Analysis Procedure" Rev. 013, was cited for failing to perform an extent of condition and generic implication review while conducting an apparent cause analysis (ACA) for an IROFS failure or potential failure.

(3) Integrated Incident Investigation/Corrective Action Program

During the inspection, the inspectors reviewed the management measures for corrective action program with respect to Condition Report (CR) initiation during IROFS preventative maintenance activities. The inspectors identified two instances where the licensee failed to identify, evaluate, and report in the integrated incident investigation/corrective action program, incidents and adverse conditions involving the control and processing of licensed materials, including those with actual or potential adverse impacts to IROFS.

During the review of PM and surveillance documents for IROFS, the inspectors identified that on November 12, 2010, PM C090P021 "Calciner L2 Lubricate 1 MO MWHZ" was performed, however, the comments in the Maintenance Performed or Required And/Or Unusual Conditions section stated "Can not fill. Air line was removed." The purpose of the criticality safety PM C090P021 was to alert NCS to abnormally high grease consumption rate of the Line-2 Calciner by filling the Calciner L2 unit with Unirex #2 grease after the current grease level had been measured. Interviews were conducted and after further review of the PM documentation, the inspectors identified that the PM had been closed with no work done and had not been rescheduled. In addition, a CR had not been written documenting that the PM could not be done, or to report the issue of the air line removed and to evaluate adverse or potential adverse impacts to the IROFS. The licensee wrote CR 2010-8712 on December 1, 2010, after NRC identification during the inspection.

The second issue the inspectors identified occurred on September 29, 2010, during the performance of PM C323P002 "Powder Receipt Interlock 6 MO RE" when the PM was performed, however, the comments in the Maintenance Performed or Required And/Or

Unusual Conditions section stated that a loose wire was found on the BLEU Powder Receipt Moisture Analyzer Sample flow switch, FSL-B145B, which prevented the flow switch to indicate flow. The loose wire was repaired prior to completion of the PM. The purpose of the criticality safety PM C323P002 was to test the powder receipt interlocks for the IROFS Hood #2 Drum Fill Station and to provide NCS protection for downstream processes, Blended Low Enriched Uranium (BLEU) powder storage and preparation. Interviews were conducted and after further review of the PM documentation, the inspectors identified that at the time of the PM completion, a CR had not been written to document the flow switch wiring deficiency or to evaluate the adverse or potential adverse impacts to the IROFS. The licensee wrote CR 2010-9084 on December 14, 2010, after NRC identification during the inspection.

The licensee failed to implement the integrated incident investigation/corrective action program by not identifying, evaluating, and reporting two conditions, involving the control and processing of licensed materials, including those with actual or potential adverse impacts to IROFS, that were identified during the performance of IROFS PM activities C090P021 "Calciner L2 Lubricate 1 MO MWHZ" and C323P002 "Powder Receipt Interlock 6 MO RE". Failure to implement the integrated incident investigation/corrective action program for actual or potential adverse impacts to IROFS is considered a violation of your license requirements. (VIO 070-1257/2010010-03)

b. Conclusions

A violation of Safety Condition No. S-1 of SNM License No. SNM-1227, Section 11.6, Incident Investigation and Corrective Action, was cited for failing to implement the integrated incident investigation/corrective action program by not identifying, evaluating, and reporting in the integrated program, two conditions involving the control and processing of licensed materials, including those with actual or potential adverse impacts to IROFS.

3. **Annual Fire Protection (IP 88055)**

a. Inspection Scope and Observations

The inspectors walked down the following areas: Engineering Laboratory and Offices, the Specialty Fuels Building, the Dry Conversion Building, the Uranium Dioxide Building, Ammonia Recovery Facility, and multiple warehouses. The inspectors determined that the licensee was adequately controlling transient combustible materials and ignition sources in accordance with procedures and fire safety requirements. The inspectors confirmed that the sprinklers were not obstructed, there were no signs of physical degradation, and that the water supply to the system was readily available with correct valve positioning, in areas where sprinklers are used as fire suppression. The inspectors also reviewed the licensee's inspection program. The licensee was performing fire inspections in accordance with their commitments and findings were being tracked utilizing the corrective action program. No significant safety issues were identified.

Fire extinguishers were readily available, unobstructed, and rated for the correct fire scenario for the specific areas.

The inspectors reviewed the licensee's hot work program (welding, metal cutting, etc.) to ensure the licensee was implementing the requirements of their hot work procedure. The inspectors also observed hot work being performed. The licensee was in compliance with their hot work procedures.

The inspectors reviewed the Memorandum of Understanding (MOU) between the licensee and the City of Richland. The MOU stated that the licensee would provide opportunities for the Richland Fire Department to participate in drills with the licensee and the licensee would provide the Richland Fire Department with periodic training. The inspectors discussed this MOU with the Richland Fire Department and determined that the licensee was meeting the commitments made in the MOU. No significant issues were identified.

b. Conclusions

Fire protection equipment and control of transient combustible materials and ignition sources were adequately maintained and inspected. Hot work was performed in accordance with the licensee's procedure hot work procedure. The licensee was meeting its commitments made in the Memorandum of Understanding with the Richland fire Department. No issues of safety significance were identified.

4. Open Items Review

(Closed) VIO 07-1257/2010-202-02: On June 23, 2010, the licensee left radioactive material unattended in an area outside a designated radioactive material area. Specifically, the licensee left unattended two shipping containers of radioactive materials, containers RA-150 and RA-035, containing fuel bundles FBD-253, 254, 235, and 236, in the middle of a road within their facility.

The inspectors interviewed licensee personnel to determine the type of training that was given and its effectiveness. The inspectors reviewed proposed corrective actions in order to prevent recurrence of the events, including procedure SOP-40525, "Refurbishment of RAJ-II Shipping Containers and the Shipping and Receiving of UO₂ Fuel Assemblies and Fuel rods in RAJ-II Shipping Containers," SOP-40937, "Shipping and Receiving of MAP-12 Shipping Containers," and E04-NCSS-G01, "[NCS] Nuclear Criticality Safety Guide Rules and Generic Program Requirements." Based on discussions with licensee personnel, review of documentation, and field observations, the inspectors found that the proposed corrective actions had been implemented. The licensee implemented changes to operational procedures to inform personnel that unattended full radioactive shipping containers are not to be used as road barricades. This item is closed.

(Closed) Inspector Follow-up Item (IFI) 07-1257/2007-007-01: On August 27, 2007, during a UO₂ powder/additive drum tumbling operation in the BLEU area, the stationary air sample was determined to have elevated airborne activity levels above the licensee's action levels. There were two workers in the vicinity of the tumbler during the operation. One worker was able to provide bioassay samples to determine if there was an intake of uranium. The other worker could not be contacted due to scheduled leave and did not provide bioassay samples. Both workers surveyed out of the contamination control areas using the personnel contamination monitors which did not detect the presence of contamination. The results from the bioassay samples and the dose estimates for the

workers in the area were not available at the time of the inspection. It was noted that the drum tumbling procedure was revised to allow the use of a new drum lid. The new lid should not have needed tape to make an adequate seal to prevent leakage; however, the lid did not provide a proper seal during the tumbling operation (CR 2007-4086). IFI 70-1257/2007-07-01 was opened to review the estimated personnel dose results and the licensee's corrective actions to prevent recurrence of elevated airborne activity levels.

The inspectors reviewed the corrective actions in order to prevent recurrence of the events, including procedures SOP-40531, "Blending Powder Additives into 45-Gallon Powder Drums in BLEU (Room 157)," and SOP-40532, "BLEU (Room 157) Drum Tumbler and Bucket Tumbler Operation." Based on discussions with licensee personnel, review of documentation, and field observations, the inspectors found that the proposed corrective actions had been implemented. This item is closed.

(Discussed) IFI 07-1257/2009-01-02: The inspectors followed up with IFI 70-1257/2009-01-02, the licensee did not have a documented basis to demonstrate that existing management measures were adequate to ensure IROFS functionality. Through interviews with licensee staff, the inspectors determined that the licensee has not yet completed this documented basis. However, the licensee stated that they expected to have this basis documented by the end of the year. Therefore, the IFI will remain open.

5. Exit Meeting Summary

The inspection scope and results were summarized on November 18, 2010 with Robert Link; and December 2, 2010, with Ronald Land and members of your staff. The licensee acknowledged the inspection findings. Proprietary information was discussed but not included in the report.

ATTACHMENT

1. LIST OF PERSONS CONTACTED

Licensee

R. Land, Acting Site Manager
R. Link, Environmental, Health, Safety, and Licensing Manager
T. Tate, Safety, Security & Emergency Preparedness
J. Diest, Emergency Preparedness Manager
L. Hope, Training Manager
L. Smith, Training Instructor
V. Gallacher, Uranium Conversion and Recovery Manager
R. Kimura, Engineering Manager
C. Manning, Nuclear Criticality Safety Manager
L. Maas, Licensing Manager
L. Stevens, Operations Manager
J. Veysey, Maintenance Manager

2. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

<u>Item Number</u>	<u>Status</u>	<u>Description</u>
VIO 70-1257/2010-010-001	Open	Failure to close and renew interlock bypass permit in accordance with procedure MCP-30149 V 3.0
VIO 70-1257/2010-010-002	Open	Failure to identify and document extent of condition and generic implications in accordance with procedure 1703-76 Rev 013
VIO 70-1257/2010-010-003	Open	Failure to implement the integrated incident investigation/corrective action program for IROFS deficiencies identified during PMS.
VIO 70-1257/2010-202-02	Closed	Failure to attend radioactive material (special nuclear material) while not in a designated radioactive material area.
IFI 70-1257/2009-01-02	Discussed	Licensee did not have a documented basis to demonstrate that existing management measures were adequate to ensure IROFS functionality
IFI 70-1257/2007-007-01	Closed	Review Results of Bioassay and Exposure to Workers

3. **INSPECTION PROCEDURES USED**

IP 88020 Operational Safety
 IP 88055 Fire Protection (Annual)

4. **DOCUMENTS REVIEWED**

<u>Number</u>	<u>Title</u>
MCP-30149, V 3.0	Equipment Interlock Bypass
FRM-30149A	Interlock Bypass Permit Form
1703-77 Rev 025	US Fuel BU Corrective Action Program
1703-76 Rev 013	Issue and Causal Analysis Procedure
SOP-40525	Refurbishment of RAJ-II Shipping Containers and the Shipping and Receiving of UO ₂ Fuel Assemblies and Fuel rods in RAJ-II Shipping Containers
SOP-40937	Shipping and Receiving of MAP-12 Shipping Containers
E04-NCSS-G01	Nuclear Criticality Safety Guide Rules and Generic Program Requirements
SOP-40531	Blending Powder Additives into 45-Gallon Powder Drums in BLEU (Room 157)
SOP-40532	BLEU (Room 157) Drum Tumbler and Bucket Tumbler Operation