

July 21, 2009

EA 08-127
CAL 3-08-002

Surendra K. Gupta, Ph.D., President
American Radiolabeled Chemicals, Inc.
101 ARC Drive
Saint Louis, MO 63146

SUBJECT: NRC INSPECTION REPORT NO. 03020567/2009-001(DNMS)
AMERICAN RADIOLABELED CHEMICALS (ARC)

Dear Dr. Gupta:

As a result of an inspection at your facility on January 22-24, 2008, you sent the NRC a Statement of Commitment (SOC) on February 8, 2008, which addressed concerns that the NRC had regarding the implementation of your radiation safety program. As a result of the inspection findings and your SOC letter, the NRC issued a Confirmatory Action Letter (CAL) on February 21, 2008. The CAL outlined actions that you agreed to complete to ensure compliance with NRC requirements.

The NRC conducted an inspection at your facility on March 31 through April 1, 2009. The purpose of the inspection was to evaluate ARC's progress in addressing the CAL items, the results of which were documented in NRC Inspection Report 03020567/2009-001(DNMS) (Enclosed). A preliminary exit meeting between you, the Radiation Safety Officer, and members of my staff was held on April 1, 2009, to discuss NRC observations and findings identified during the inspection. The NRC continued its review of information you and your staff provided regarding actions taken to comply with the CAL. A final telephonic exit meeting was conducted on June 9, 2009, between you and members of my staff. Based on the results of the NRC inspection, the NRC had no further questions regarding the four CAL Items. We will inform you of our decision regarding the adequacy of your CAL Items under separate cover.

In addition, one item identified during the inspection at your facility on January 22-24, 2008, and included in Inspection Report 030-20567/2008-001(DNMS), provided to you on April 23, 2008, was not included with the Notice of Violation dated July 22, 2008. The NRC has determined this item to be a Severity Level IV violation of NRC requirements. The violation was evaluated in accordance with the NRC Enforcement Policy included on the NRC's Web site at (<http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>).

The violation is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it are described in detail in the subject inspection report. The violation is being cited in the Notice because it was identified by the NRC.

The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence is already adequately addressed on the docket in Inspection Report No. 03020567/2008-001(DNMS). Therefore, you are not required to respond to this letter unless the description herein does not accurately reflect your corrective actions or your position. In that case, or if you choose to provide additional information, you should follow the instructions specified in the enclosed Notice.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room (PDR) or from the Publicly Available Records (PARS) component of the NRC's document system, Agencywide Documents Access & Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA by Patrick L. Loudon acting for/

Steven A. Reynolds, Director
Division of Nuclear Materials Safety

Docket No. 030-20567
License No. 24-21362-01

Enclosures:

1. Notice of Violation
2. Inspection Report 03020567/2009-001(DNMS)

cc w/encl: State of Missouri

The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence is already adequately addressed on the docket in Inspection Report No. 03020567/2008-001(DNMS). Therefore, you are not required to respond to this letter unless the description herein does not accurately reflect your corrective actions or your position. In that case, or if you choose to provide additional information, you should follow the instructions specified in the enclosed Notice.

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NOTICE OF VIOLATION

American Radiolabeled Chemicals, Inc.
St. Louis, Missouri

Docket No. 030-20567
License No. 24-21362-01

During an NRC inspection conducted from January 22, through 24, 2008, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

License Condition 22.B, Amendment No. 37, dated July 25, 2006, of NRC License No. 24-21362-01, requires, in part, that the licensee conduct its program in accordance with the statements, representations, and procedures contained in a letter, dated February 8, 2005, including the Radiation Protection Program (RPP), dated October 1, 2004.

Section 5.2.5 of the licensee's RPP requires, in part, that shoe covers be worn in contaminated areas.

Contrary to the above, on January 23 and 24, 2008, licensee personnel were observed improperly wearing shoe covers in contaminated areas. Specifically, several licensee employees were observed wearing rubber shoe covers with broken or bent heels, allowing personal shoes to scrape the floor.

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

The NRC has concluded that information regarding the reason 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 NRC Inspection Report 030020567/2008-001(DNMS). 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, DC 20555 with a copy to the Regional Administrator, Region III, within 30 days of the date of the letter transmitting this Notice of Violation (Notice).

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, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

If you choose to respond your response will be placed in the NRC Public Document Room (PDR); therefore, to the extent possible, it should not include any personal, privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction.

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

Dated this 21st day of July 2009

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No. 030-20567

License No. 24-21362-01

Report No. 03020567/2009-001(DNMS)

Licensee: American Radiolabeled Chemicals

Locations Inspected: 101 ARC Drive
St. Louis, Missouri

Dates: Onsite March 31, 2009 through April 1, 2009,
Continued in-office review through June 9, 2009

Inspector: Robert P. Hays, Health Physicist

Approved By: Kenneth J. Lambert, Acting Chief, Materials Inspection
Division of Nuclear Materials Safety, Region III

EXECUTIVE SUMMARY

American Radiolabeled Chemicals St. Louis, Missouri NRC Inspection Report 03020567/2009-001(DNMS)

On March 31 and April 1, 2009, the NRC conducted an onsite inspection to evaluate the licensee's progress in addressing items identified in a Confirmatory Action Letter (CAL) issued on February 21, 2008. The program deficiencies as documented in the CAL consist of:

- 1) Contamination outside restricted areas. Carbon-14 contamination was identified on employee's clothing, shoes, lunch boxes, inside automobiles, and in two lunch rooms;
- 2) Training of personnel. The training consisted of improving employee's knowledge of the nature of carbon-14 contamination, controlling the spread of carbon-14 contamination, and proper survey techniques;
- 3) Control of contamination. The licensee initiated use of additional personal protective items for controlling carbon-14 contamination such as heavy cloth aprons, sleeve protectors, and laboratory shoes. In addition, 10 survey instruments and 13 probes were repaired. All abnormal discharges of liquid waste are required to have direct supervision by the RSO to ensure acceptable before and after surveys and maintenance staff wear appropriate clothing; and
- 4) Radiation Safety Committee. Weekly Radiation Safety Committee meetings were reinstated to ensure corrective actions are implemented and included within the radiation safety program. The inspection activities involved selective examination of procedures and representative records, observations of licensed activities in progress including interviews with personnel. The NRC has no further questions regarding your commitments in the CAL.

In addition, the inspection reviewed corrective actions and closed apparent violations identified during an inspection conducted from January 22, 2008, through March 26, 2008. (Section 3.0) One Severity Level IV violation identified during that inspection pertaining to employees improperly wearing shoe covers was not included with the prior Notice of Violation (NOV) and is now cited in the enclosed NOV. Corrective actions for the violation have already been taken by the licensee and it is considered closed. (Section 2.2)

The inspection also reviewed three open Unresolved Items (URIs) remaining from the inspection conducted from January 22, 2008, through March 26, 2008. One URI involving potentially contaminated items in a location not approved by the license was closed. (Section 4.0). The two remaining open URIs, involving implementation and adequacy of the licensee's sites characterization efforts, and its Emergency Spill and Incident Investigation Procedures were discussed with the licensee, however, additional NRC review is required before they can be closed. (Section 5.0)

Report Details

1.0 Introduction

On January 25, 2008, the U.S. Nuclear Regulatory Commission (NRC) Region III completed the first part of a two-part inspection of your facilities. During the inspection, Region III staff identified radiological contamination outside of your radiologically protected areas. Carbon-14 contamination was identified on workers' clothing, shoes, lunch boxes, and inside workers' automobiles. Immediate actions were initiated by your staff to characterize the extent of the contamination, conduct remedial activities as necessary, and implement changes to prevent recurrence.

Pursuant to telephone conversations held on February 7, 12, and 21, 2008, between you and your Radiation Safety Officer and Steven Reynolds, Director, Division of Nuclear Materials Safety, and other members of the NRC staff; and pursuant to your Statement of Commitment letter to NRC Region III dated February 8, 2008, to address the deficiencies discussed in the telephonic meetings, the NRC issued a Confirmatory Action Letter (CAL) dated February 21, 2008, to American Radiolabeled Chemicals (ARC). The CAL listed corrective actions that ARC agreed to take regarding program deficiencies concerning its Radiation Safety Program. The program deficiencies were in the following areas: 1) Contamination Outside of Restricted Areas; 2) Training of personnel; 3) Control of contamination; and 4) Radiation Safety Committee. Finally, a Predecisional Enforcement Conference was held on May 20, 2008, resulting in a July 22, 2008, Notice of Violation and Proposed Imposition of Civil Penalty, EA-08-126.

Inspection of CAL Corrective Actions

On March 31 and April 1, 2009, the NRC conducted an onsite inspection to evaluate the licensee's progress in addressing items specified in the February 21, 2008, CAL. The licensee commitments and associated inspection findings are discussed below:

- 1.1 Contamination Outside of Restricted Areas - Carbon-14 contamination was identified on employee's clothing, shoes, lunch boxes, inside automobiles, and in two lunch rooms;

Commitment: You agreed to perform an upper-bound calculation of the potential dose to the most sensitive off-site individual by March 28, 2008. Additionally, an increase in the location and extent of contamination surveys was initiated in the Building 100 and 300 lunch rooms by February 4, 2008. Based on an evaluation of several weeks of survey data (currently being collected), a decision will be made by February 25, 2008, as to whether the lunch rooms will be left open or permanently closed. If the decision is made to leave the lunch rooms open, the frequency and scope of surveys in those areas will be changed, as appropriate, to ensure any inadvertent spread of contamination is quickly identified. Forthcoming changes in the surveys for both lunch rooms will be incorporated into the Standard Operating Procedures (SOPs) by March 14, 2008.

Finding: The inspector conducted a review of the licensee's contamination survey records and identified that additional locations were added to the contamination surveys performed in building 100 and 300. The results of the surveys indicated that contamination levels were trending lower over time. A decision was made to leave the lunch rooms open and a daily Monday through Friday contamination survey frequency was implemented for the lunch rooms to quickly identify any contamination concerns. SOP 16 was revised to specifically include that daily contamination surveys of the lunch

rooms will be conducted. The upper-bound calculation of the potential dose to the most sensitive off-site individual had been performed and provided to NRC on April 20, 2009. The report stated that the upper-bound calculation for carbon-14 surface contamination to the most sensitive off-site individual was less than 1 millirem in a year. NRC reviewed the upper-bound calculation and agreed with the licensee's conclusion.

1.2 Training - Improve employee's knowledge of carbon-14 contamination, controlling the spread of carbon-14 contamination, and proper survey techniques

Commitment: On February 6, 2008, your staff conducted refresher training for all but three chemists regarding the nature of contamination, controlling the spread of contamination, and proper survey techniques. One of the three individuals who was not available for the February 6, 2008, training was provided a one-on-one training session on February 11, 2008. The other two individuals are out of the country and will be trained by March 7, 2008, upon their return.

Finding: The inspector determined that refresher training had been provided to all chemists which included the nature of contamination, controlling the spread of contamination, and proper survey techniques. On February 6, 2008, the licensee's staff conducted refresher training for all but three chemists regarding the nature of contamination, controlling the spread of contamination, and proper survey techniques. One of the three chemists not available for the February 6, 2008, training was provided with a one-on-one training session on February 11, 2008. The other two chemists who were out of the country during the February training sessions, completed the training on March 4, 2008.

1.3 Control of Contamination - Use of additional personal protective items for controlling carbon-14 contamination

Commitment: Heavy cloth aprons were purchased and are now required to be worn under lab coats. Sleeve protectors have also been ordered for the chemists, and will be required for use by February 22, 2008. In the past, your staff wore street shoes in the laboratories underneath rubber shoe covers, and visitors wore disposable cloth shoe covers. A new policy has been instituted such that workers are now required to have a separate pair of shoes for use in the laboratories. Although rubber shoe covers will still be required for your staff, the cloth shoe covers will only be used until replacement vinyl shoe covers can be acquired. Workers who have not yet been able to obtain a new pair of shoes for laboratory use may temporarily continue to use their existing street shoes. The target date to have the vinyl shoe covers in use is February 22, 2008, and all workers will be required to have separate lab shoes no later than March 18, 2008. These changes in the policy for laboratory attire will be addressed in the SOPs by March 14, 2008.

Desk areas in laboratories are now designated as contaminated. As a result of this change, workers are required to wear a separate lab coat when using the laboratory desks. The workers were trained in this change on January 25, 2008, and it will be incorporated into the SOPs by March 14, 2008.

A total of 10 meters and 13 probes for conducting radiological surveys were sent for repairs, and additional pancake probes were ordered. All survey instruments will be repaired or replaced by February 29, 2008.

All future abnormal discharges of liquid radioactive waste will require the Radiation Safety Officer (RSO) to directly supervise the activity to ensure surveys before and after are acceptable and that maintenance personnel wear appropriate clothing. This protocol will be addressed in the SOPs by March 14, 2008.

A combination lock was placed on the inner door to the shipping area where packages containing radioactive materials are received. This door will shut and lock automatically after someone passes through preventing workers from inadvertently leaving radioactive material unattended in an unlocked area.

Finding: The inspector interviewed licensee staff and determined that all chemists were using aprons and sleeve protectors. Each chemist also had separate laboratory work shoes and vinyl shoe covers. At laboratory desk areas designated as contaminated, chemists were required to wear a separate lab coat when working at the desk, however, after a trial period, the licensee determined that a separate lab coat was impractical due to the chemists working on multiple and separate synthesis procedures concurrently, which required more frequent access to the laboratory desk and for less time spent at the desk due to the chemist's attention needed at each synthesis station. Changing into a separate lab coat to sit at the desk would impede the chemist's time needed at a synthesis station. In lieu of the separate lab coat, the licensee has been conducting contamination surveys of the laboratory desks twice weekly to identify and control contamination. The contamination survey results of the desks have identified contamination levels above the licensee's action level but weekly results indicated a trend of lower contamination levels being identified. The licensee had revised SOP-33 to clarify the laboratory attire policy and requirements.

Survey instruments had been repaired or replaced and combination locks had been installed on doors with access to licensed material to prevent unauthorized entry. The inspector determined that the licensee has not had any additional abnormal discharges of liquid radioactive waste. The licensee had modified SOP-7 to specifically require that the RSO be physically present to supervise the abnormal discharge of liquid radioactive waste and not delegate to other ARC staff when such a discharge is required.

1.4 Radiation Safety Committee - Weekly Radiation Safety Committee meetings

Commitment: Weekly Radiation Safety Committee (RSC) meetings were reinstated on February 5, 2008. Procedurally the RSC meetings are required monthly. These meetings will be conducted weekly until corrective actions appear to be effectively in place, and will then be reduced in frequency as appropriate, and according to the SOPs.

Finding: The inspector interviewed the RSO and reviewed selected documentation and determined that licensee staff had reduced the RSC meetings to a monthly frequency beginning in September 2008. The weekly RSC meetings reviewed weekly summary reports provided to the RSC from the RSO to ensure that the licensee's corrective actions had been implemented. The RSC, after conducting weekly meetings for six months, was satisfied that the licensee's corrective actions had been implemented by the RSO and contamination survey results indicated improvements in identification and reduction of carbon-14 contamination. Based upon the improved results, the RSC decided to return to monthly meetings. However, the licensee will continue to conduct RSC meetings when necessary and the RSO will continue to provide weekly summary reports of radiation safety program activities to the RSC.

2.0 Closure of Other Open Radiation Safety Program Items

2.1 Radioactive Waste Management

a. Inspection Scope

An apparent violation of 10 CFR 20.2003(a) that was identified on January 23, 2008, involving the discharge of licensed material into the sanitary sewerage during December 2007 and December 2003 in excess of the regulatory limitations was reviewed. In December 2007, the licensee apparently discharged a concentration of licensed material at 108 percent of the monthly average concentration limit for carbon-14 listed in Table 3 of Appendix B to 10 CFR Part 20, and in December 2003, the licensee apparently discharged a concentration of licensed material at 159 percent of the monthly average concentration limit for carbon-14 (APV 03020567/08-01-04).

b. Observations and Findings

The licensee disagreed with the apparent violation and provided a revised calculation of sanitary system discharges for the two months in question. The revised calculations took into account water volume totals that were more indicative of actual volumes during those times rather than the default value that is used for the routine monthly calculation. The revised calculations determined that the discharge total for December 2007 equaled 99.5%, and for December 2003 equaled 92.4% of the monthly limit. The NRC reviewed the new information and had no concerns regarding the licensee's calculations.

c. Conclusion

Based on the revised information, a violation of 20.2003(a) did not occur and this item is considered closed.

2.2 Improper Use of Shoe Covers

a. Inspection Scope

During a Predecisional Enforcement Conference held on May 20, 2008, in the Region III office between the NRC and the licensee, the licensee's RSO made verbal statements which implied that workers in ARC's laboratories were not following radiation protection program procedures and instructions. Specifically, the workers were wearing shoe covers improperly and failing to survey hands upon exiting the laboratories. The nature of the RSO's statements were in the manner of frustration in trying to get the laboratory workers to comply with Radiation Protection Program (RPP) procedures for contamination control and conduct of self-monitoring surveys. The RSO further stated because of this problem, 100 percent compliance could not be achieved from the laboratory workers.

b. Observations and Findings

During July 2008, eleven ARC laboratory workers, including the RSO, were interviewed. The interviews did not identify any new radiation safety issues. However, a violation of the licensee's RPP was identified pertaining to the failure of the laboratory workers to survey their hands upon exiting the laboratories. This violation was included with a

Notice of Violation (NOV) dated July 22, 2008. The licensee provided corrective actions to prevent recurrence of the violation in their reply dated August 16, 2008.

An additional violation of the licensee's RPP was identified pertaining to laboratory worker's failure to properly wear shoe covers, specifically, several workers were observed wearing shoe covers with broken or bent heels, allowing laboratory worker's personal shoes to scrape the floor. The violation, pertaining to a failure to properly wear shoe covers, involved several laboratory workers who were observed wearing shoe covers with broken or bent heels, allowing the laboratory worker's personal shoes to scrape the floor was not previously cited.

Section 5.2.5 of the licensee's RPP required that all individuals wear shoe covers in contaminated areas. The purpose of this requirement was to prevent employees from transporting contamination out of the Controlled Area laboratories. On January 23 and 24, 2008, the inspectors observed licensee personnel improperly wearing rubber shoe covers. Specifically, several licensee employees were observed wearing shoe covers with broken or bent heels, allowing personal shoes to scrape the floor. This improper wearing of the protective shoe covers negates the effectiveness of the covers in contamination control. The inspectors performed surveys on several employee personal shoes stored in unrestricted areas of the licensee facilities, and identified radiological contamination on both the outside and inside of the employees' shoes. The identified contamination ranged from a few hundred disintegrations per minute per 100 square centimeters (dpm/100 cm²) to several thousand dpm/100 cm². The licensee's failure to properly wear shoe covers in the laboratories in accordance with Section 5.2.5 of the licensee's RPP is a violation of Condition 22.B. of Amendment No. 37, dated July 25, 2006, which required the licensee to implement its program in accordance with their RPP.

The licensee's corrective action was to institute a new policy; workers were to have a separate pair of shoes for use in the laboratories and to use rubber shoe covers; visitors would be required to use vinyl shoe covers. The licensee's corrective actions for the violation have already been addressed with the licensee's updating the SOP-16 as the licensee stated in the Statement of Commitment letter dated February 21, 2008.

c. Conclusion

A violation of the licensee's RPP was identified which pertained to a failure to properly wear shoe covers. The licensee's corrective actions taken to prevent recurrence was addressed on the docket in NRC Inspection Report 030020567/2009-001(DNMS)

3.0 Closure of Violations (VIO)

(Closed) APV 03020567/08-01-01: License Condition 22.B. references the licensee's RPP in a letter dated February 8, 2005. License Condition 22.B of Amendment No. 37 to ARC's license, dated July 25, 2006, required the licensee to implement its program in accordance with their RPP document. Examples of License Condition 22 violations included:

The licensee's failure to implement timely and adequate corrective actions to ensure compliance with NRC and license requirements and to prevent the recurrence of repetitive radiation program violations and weaknesses identified in annual program reviews in December 2004, June 2005, April 2006, and November 2007, as required by

Section 3.3.3.5 of the RPP which states that the RSO “annually reviews and updates, as necessary, the Radiation Protection Program to assure compliance with established standards and procedures.” This apparent violation was issued as violation B-2 in the Notice of Violation dated July 22, 2008.

The licensee’s corrective actions included reviewing annual audits for the previous four years and submitting revisions to the radiation safety program with the license renewal application. In addition, the licensee plans to have an outside consultant perform an audit during 2009. Results of the consultant’s audit report will be submitted to the NRC upon completion. This item is closed.

The licensee’s failure to conduct Radiation Safety Committee (RSC) meetings during the months of February, June, July, September through December 2006, and January through October 2007, as required by Section 3.2.5 of the RPP which specifies that the RSC must meet at least monthly, and under any of the following circumstances: (a) to fulfill the listed duties of the Committee, or (b) whenever any Committee member requests the Chairman or Vice Chairman to call a meeting at any time for any valid reason. This apparent violation was issued as violation B-1 in the Notice of Violation dated July 22, 2008.

The inspector verified that RSC meetings were being conducted as required. Corrective actions were also required as part of the CAL. See Section 1.0. This item is closed.

(Closed) APV 03020567/08-01-02: License Condition 22.B of Amendment 37 to ARC’s license, dated June 25, 2006, required the licensee to implement its program in accordance with their SOPs. Examples of Condition 22 violations included:

The licensee failed to survey a Controlled Area in accordance with the licensee’s SOP-16 “Radioactive Contamination Control Program,” which states, in part, that controlled areas are to be surveyed at the end of every week; at the start of every week; and daily (as conditions and manpower permit). This apparent violation was issued as violation C-1 in the Notice of Violation dated July 22, 2008.

The inspector verified that SOP-16 requirements were conducted weekly, and that written ambiguities in SOP-16 have been corrected and submitted as part of the license renewal application. This item is closed.

The licensee failed to ensure that employees survey their hands upon exiting the laboratory areas in accordance with Section 5.2.3 of the licensee’s RPP which requires that all individuals survey their hands upon leaving the laboratory. This apparent violation was issued as violation C-3 in the Notice of Violation dated July 22, 2008.

The inspector verified, through surveys and discussions with staff, that employees had been surveying their hands based upon contamination surveys of the areas outside of the labs and the RSO had informed the inspector that he had investigated calls from employees with hand contamination. This item is closed.

The licensee failure to perform radiation surveys and document required information prior to releasing gas nitrogen tanks to a vendor on March 13, 2008, in accordance with SOP-30 “Release of Equipment to Vendors” which required the licensee to survey and, if necessary, decontaminated equipment before released to vendors, if the material to be

released exceeds the licensee's release limits. This apparent violation was issued as violation C-4 in the Notice of Violation dated July 22, 2008.

The inspector verified that gas nitrogen tanks being returned to the vendor were wipe tested for contamination prior to release to the vendor by reviewing contamination survey reports for the gas nitrogen tanks which were included with weekly summary report records submitted to the RSC and maintained by the RSO. This item is closed.

(Closed) APV 03020567/08-01-03: Failure to secure from unauthorized removal or limit access to licensed material stored in a controlled area, while the exterior door remained unlocked and unsecured. This apparent violation was issued as violation A in the Notice of Violation dated July 22, 2008.

The inspector verified that the licensee replaced all of the external door handles and locks with an electronic keypad controlled combination lock throughout the site. A combination lock on the inner door to the shipping area where packages containing radioactive materials are received was also installed. The inner door would shut and lock automatically after someone passed through it, preventing workers from inadvertently leaving radioactive material unattended in an unlocked area. This change was completed by February 12, 2008. This item is closed.

(Closed) APV 03020567/08-01-04: Failure to discharge licensed materials into the sanitary sewer in accordance with 10 CFR 20.2003(a). See Section 2.1 of the inspection report. This item is closed.

(Closed) APV 03020567/08-01-05: Failure to perform and document investigations of contamination found in controlled and unrestricted areas greater than 10 times the contamination action levels on June 19, 2006, February 20, 2006, January 30, 2007, November 19, 2007, July 16, 2007, May 21, 2007, and August 14, 2007, in accordance with SOP-16. This apparent violation was issued as violation D in the Notice of Violation dated July 22, 2008.

The inspector reviewed corrective actions which included the RSO providing a weekly summary report which includes results of all contamination surveys performed during the week. The contamination survey results are reviewed for any areas that have contamination levels greater than ten times the action level that would require an investigation. This item is closed.

4.0 Closure of Unresolved Item(s) (URI)

(Closed) URI 03020567/08-01-01: The licensee stored potentially contaminated items in a location that is not approved by the license. The inspector verified that potentially contaminated items found in Building 400 during the January 22 through March 26, 2008, inspection was a one-time isolated occurrence which was caused by a painter who took painting equipment into the maintenance shop in Building 400 to clean. Subsequent actions by the licensee to prevent recurrence was to close the maintenance shop in building 400 and to establish maintenance shops in building 100 and 300. This item is closed.

5.0 Discussion of Unresolved Items (URI)

(Discussed) URI 03020567/08-01-02: Implementation and adequacy of the licensee's site characterization.

Radiological contamination identified by the NRC in soil samples from around the licensee's facility and the licensee's program for site characterization remains under NRC review. An email, dated May 28, 2009, to ARC's RSO from G.M. McCann, Senior Health Physicist, specified that a separate amendment request be submitted, complete with a description of the proposed characterization plan, associated site maps, and with sampling points indicated. The licensee was also requested to provide: (1) sample collection procedures; (2) analytical procedures; (3) chain of custody; (4) actions to monitor future depositions resulting from air and liquid discharges from ARC's facilities; (5) actions to be taken if potential contamination approaches the public unrestricted dose limits; and (6) a modification to their Decommissioning Funding Plan to address future site remediation. A follow up telephone call between NRC staff and the licensee provided additional clarification for the license amendment request. This URI will remain open until the licensee submits a characterization plan, and the plan is reviewed and approved by the NRC.

(Discussed) URI 03020567/08-01-03: The full scope and adequacy of the licensee's implementation of its Emergency Spill and Incident Investigation Procedures.

The licensee submitted an event report on April 10, 2008, for a spill identified on March 11, 2008, during an NRC inspection. Once the spill was brought to the licensee's attention by the inspectors, appropriate corrective actions were implemented. During this inspection, the inspector discussed the spill procedures with the RSO, however, additional review is needed to determine the adequacy and scope of emergency spill procedures to ensure that the RSO is notified in a timely manner and contamination is controlled. This URI will remain open until a detailed review of the licensee's spill procedure is completed.

6.0 Exit Meeting Summary

The inspector presented the preliminary inspection results to members of licensee management at the conclusion of the inspection on April 1, 2009. A final telephonic exit meeting was held with the licensee on June 9, 2009, to discuss the inspection results and ongoing unresolved items. The licensee did not identify any information reviewed during the inspection and proposed for inclusion in the inspection report as proprietary in nature.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONNEL CONTACTED

Surendra K. Gupta, President
Regis A. Greenwood, Radiation Safety Officer

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened.

None

Closed

	Type	Summary
APV 03020567/08-01-01	VIO	Failure to implement timely and adequate corrective actions to ensure compliance with NRC and license requirements and to prevent the recurrence of repetitive radiation program violations and weaknesses identified in annual program reviews. Failure to conduct RSC meetings during the months of February, June, July, September through December 2006, and January through October 2007, as required by Section 3.2.5 of the RPP which specifies that the RSC must meet at least monthly, and under any of the following circumstances: (a) to fulfill the listed duties of the Committee, or (b) whenever any Committee member requests the Chairman or Vice Chairman to call a meeting at any time for any valid reason. This apparent violation was issued as a violation in the Notice of Violation dated July 22, 2008.
APV 03020567/08-01-02	VIO	Failure to survey a Controlled Area in accordance with the licensee's SOP-16 "Radioactive Contamination Control Program," which states, in part, that controlled areas are to be surveyed at the end of every week; at the start of every week; and daily (as conditions and manpower permit). Failure to ensure that employees survey their hands upon exiting the laboratory areas in accordance with Section 5.2.3 of the licensee's RPP which requires that all individuals survey their hands upon leaving the laboratory. Failure to properly wear shoe covers, specifically, several workers were observed wearing shoe covers with broken or bent heels, allowing personal shoes to scrape the floor. Failure to perform radiation surveys and document required information prior to releasing gas nitrogen tanks to a vendor on March 13, 2008, in accordance with SOP-30 "Release of Equipment to Vendors" which required

the licensee to survey and, if necessary, decontaminated equipment before released to vendors, if the material to be released exceeds the licensee's release limits. This apparent violation was issued as a violation in the Notice of Violation dated July 22, 2008.

APV 03020567/08-01-03	VIO	Failure to secure from unauthorized removal or limit access to licensed material stored in a controlled area, while the exterior door remained unlocked and unsecured. This apparent violation was issued as a violation in the Notice of Violation dated July 22, 2008.
APV 03020567/08-01-04	VIO	Failure to discharge licensed materials into the sanitary sewer in accordance with 10 CFR 20.2003(a). No violation was issued. Additional information provided by the licensee indicated the licensee was in compliance with 10 CFR 20.2003(a).
APV 03020567/08-01-05	VIO	Failure to perform and document investigations of contamination found in controlled and unrestricted areas greater than 10 times the contamination action levels on June 19, 2006, February 20, 2006, January 30, 2007, November 19, 2007, July 16, 2007, May 21, 2007, and August 14, 2007, in accordance with SOP-16. This apparent violation was issued as a violation in the Notice of Violation dated July 22, 2008.
URI 03020567/08-01-01	URI	The licensee stored potentially contaminated items in a location that is not approved by the license.
<u>Discussed.</u>		
URI 03020567/08-01-02	URI	Implementation and adequacy of the licensee's site characterization efforts.
URI 03020567/08-01-03	URI	Implementation of licensee's Emergency Spill and Incident Response Procedures

PARTIAL LIST OF DOCUMENTS REVIEWED

Licensee documents reviewed and utilized during the course of this inspection are specifically identified in the "Report Details" above.

LIST OF ACRONYMS USED

ADAMS	Agencywide Documents Access and Management System
APV	Apparent Violation
CAL	Confirmatory Action Letter
CFR	Code of Federal Regulations
DNMS	Division of Nuclear Material Safety
NRC	U.S. Nuclear Regulatory Commission
NOV	Notice of Violation
OI	NRC Office of Investigations
PDR	Public Document Room
RPP	Radiation Protection Program
RSC	Radiation Safety Committee
RSO	Radiation Safety Officer
SOC	Statement of Commitment
SOP	Standard Operating Procedure
VIO	Violation
URI	Unresolved Issue