

April 18, 2008

Larry Hummel, Vice President  
Sigma-Aldrich Company  
St. Louis Operations  
P.O. Box 14508  
St. Louis, Missouri 63178

SUBJECT: NRC INSPECTION REPORT 030-10716/07-01(DNMS) AND  
NOTICE OF VIOLATION SIGMA-ALDRICH COMPANY

Dear Mr. Hummel:

On March 26, 2008, the NRC completed inspection activities at the Sigma-Aldrich Company, St. Louis, Missouri facilities located at 3300 South Second Street, 3500 DeKalb Street, 2909 Leclde Avenue, 3050 Spruce Street, and the Maryland Heights facility at 11542 Fort Mims Drive. The purpose of the inspection was to determine whether routine activities involving licensed radioactive materials and specific decommissioning activities were conducted safely and in accordance with NRC requirements. Specifically, the company's decommissioning program for: the tracking of current and past radioactive material use locations, the conduct of radiological surveys for unrestricted release of former use areas, and performance of decommissioning activities was reviewed. At the conclusion of the on-site inspections, the inspectors discussed the findings with members of your staff; and on March 26, 2008, a telephone exit meeting was conducted between the NRC and your Radiation Safety Officer, Mr. Thomas Spencer.

The inspection consisted of an examination of activities as they relate to safety and compliance with the Commission's rules and regulations. Areas examined during the inspection are identified in the enclosed report. Within these areas, the inspection consisted of a selective examination of procedures and representative records, interviews with personnel, and the conduct of NRC confirmatory surveys.

Based on the results of this inspection, the NRC has determined that two Severity Level IV violations of NRC requirements occurred. The violations were evaluated in accordance with the Enforcement Policy. The current Enforcement Policy is included on the NRC's Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforcement-pol.html>. The violations are cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding them are described in detail in the subject inspection report. The violations are being cited in the Notice because they were identified by the NRC.

The NRC has concluded that information regarding the reason for the violations, the corrective actions taken and planned to correct the violations and prevent recurrence is already adequately addressed on the docket in Inspection Report No. 030-10716/07-01. 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.

We also acknowledge your letter dated March 28, 2008, informing the NRC of your Company's intent to cease all activities by August 1, 2008, at your Fort Mims facility located at 11542 Fort Mims Drive, Maryland Heights, Missouri; your letter indicated that a decommissioning plan (DP) will be sent and the license amended. As part of our DP review process, the NRC staff performs an acceptance review of the licensee's DP to determine if it is acceptable to begin a detailed technical review. The objective of the acceptance review is to verify that the DP contains sufficient information to allow the staff to begin the in-depth technical review. NRC staff uses the expanded acceptance review guidance contained in NUREG-1757 to perform the acceptance review. Typically, NRC staff schedules a meeting prior to the submittal of the DP. During this meeting the review guidance is discussed and pertinent questions relating to the DP process are discussed. Please contact Mr. Mike McCann of my staff at (630) 829-9856, once you are ready to discuss your DP.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). The NRC's document system is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

We will gladly discuss any questions you may have regarding this inspection.

Sincerely,  
 /RA/  
 Patrick L. Loudon, Chief  
 Decommissioning Branch

Docket Nos.: 030-10716, 030-28732, 030-28992/030-11303  
 License Nos.: 24-16273-01, 24-16607-02, 24-16607-03

Enclosures:

1. Notice of Violation
2. NRC Inspection Report 030-10716/07-01(DNMS)

cc: Thomas Spencer, RSO  
 State of Missouri

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 See next page

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Letter to Larry Hummel from Patrick L. Loudon dated April 18, 2008

SUBJECT: NRC INSPECTION REPORT 030-10716/07-01(DNMS) AND  
NOTICE OF VIOLATION SIGMA-ALDRICH COMPANY

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## NOTICE OF VIOLATION

Sigma-Aldrich Company  
St. Louis, Missouri

Docket No. 030-10716  
License No. 24-16273-01

During an NRC inspection completed on March 26, 2008, two violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," the violations are listed below:

1. Title 10 CFR 30.35 requires, in part, that each person licensed under this part or Parts 32 through 36 and 39 of this chapter shall keep records of information important to the decommissioning of a facility in an identified location until the site is released for unrestricted use. Specifically, 10 CFR 30.35(g)(3) requires, in part, that a list contained in a single document must be kept of all areas designated and formerly designated restricted areas as defined in 10 CFR 20.1003.

Contrary to the above, as of October 31, 2007, the licensee failed to keep a list contained in a single document of all areas designated restricted areas that included those areas designated as restricted prior to 2007.

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

2. License Condition 16.A requires that the licensee conduct its program in accordance with statements, representations and procedures in its application, dated August 24, 2001, with attachments. Item 10 of the application references the attached Radiation Safety Program Manual.

Section XIV, titled, "Area Survey Procedures," of the Radiation Safety Program Manual, dated October 1, 1996, requires in part, that a survey consists of: a) a series of wipe tests to measure removable contamination levels. The method for performing wipe tests will be sufficiently sensitive to detect 220 disintegrations per minute (dpm) per 100 cm<sup>2</sup> for the contaminant involved; and b) decontamination of areas found to be in excess of 220 dpm per 100 cm<sup>2</sup>, except the restricted area at Radiochemicals which is allowed 2200 dpm per 100 cm<sup>2</sup>.

Contrary to the above, as of October 31, 2007, the licensee's wipe tests to measure removable contamination levels were not sufficiently sensitive to detect 220 dpm per 100 cm<sup>2</sup> for the contaminant involved. Specifically, the licensee failed to identify a significant number of areas with fixed and removable contamination levels (ranging from 40,000 dpm to 1,800,000 dpm), in excess of the licensee's decontamination limit of 220 dpm per 100 cm<sup>2</sup> in unrestricted areas within their production facility located at 11542 Fort Mims Drive.

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

The NRC has concluded that information regarding the reason for the violations, the corrective actions taken and planned to be taken to correct the violations and prevent recurrence, and the date when full compliance was achieved, is already adequately addressed on the docket in Inspection Report No. 030-10716/07-01. 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 20555-0001 with a copy to the Regional Administrator, Region III, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice, within 30 days of the date of the letter transmitting this Notice of Violation (Notice).

If you choose to respond, 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>. Therefore, to the extent possible, the response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

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

Dated this 18<sup>th</sup> day of April 2008

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 030-10716, 030-28732, 030-28992/030-11303

License Nos: 24-16273-01, 24-16607-02, 24-16607-03

Report No: 030-10716/07-01(DNMS)

Licensee: Sigma-Aldrich Company

Locations: St. Louis, MO facilities: 3300 South Second Street, 3500 DeKalb Street, 2909 Leclède Avenue, 3050 Spruce Street;  
Maryland Heights, MO facility: 11542 Fort Mims Drive

Dates: October 29 – November 2, 2007  
January 29 – February 1, 2008  
March 13 and 26, 2008

Inspectors: George M. McCann, Senior Health Physicist, RIII  
Eugenio A. Bonano, Health Physicist, RIII

Approved by: Patrick L. Loudon, Chief  
Decommissioning Branch  
Division of Nuclear Materials Safety

## EXECUTIVE SUMMARY

### **Sigma-Aldrich Company Report No: 030-10716/07-01(DNMS)**

This inspection focused on routine activities involving licensed radioactive materials and the licensee's decommissioning program for: the tracking of current and past radioactive material use locations, the conduct of decommissioning activities performed prior to the release of these areas, and the maintenance of required information important to the decommissioning of a facility until the site is released for unrestricted use. During the inspection, the inspectors discussed the status of decommissioning activities with licensee personnel, examined licensee records and procedures, and performed confirmatory surveys in former use areas.

Sigma-Aldrich Company (Co.) is a Type A Broadscope licensee authorized to use a variety of radionuclides for research and development as defined in 10 CFR Part 30.4. Sigma-Aldrich Co. is authorized to use licensed material in five locations within the St. Louis area: 3300 South Second Street, 3500 DeKalb Street, 2909 Leclde Avenue, 3050 Spruce Street; and in Maryland Heights, 11542 Fort Mims Drive, as specified in the current licenses.

#### Management Organization & Controls

- The NRC inspectors did not identify any concerns with the Radiation Safety Committee's (RSC) meeting minutes; the inspectors concluded that the Radiation Safety Officer's (RSO) oversight activities of the radiation safety program were adequate. Minor enhancements such as including discussions of operational activities in the RSC meetings, and documenting the RSO's periodic walk-throughs were observations made by the inspectors. The licensee's management and staff understood their authorities and responsibilities. The inspectors identified one violation for failure to maintain a list of all areas designated as restricted areas of use that included those areas designated as restricted areas prior to 2007, as required by 10 CFR 30.35(g). (Section 1.0)

#### Radiation Protection

- The licensee's performance in implementing regulatory requirements related to radiation protection for all three of their licenses was adequate regarding: posting and labeling, radioactive material controls (10 CFR 20.1801 and 1802); posting of notices (10 CFR 19.11); and the implementation of the ALARA (As Low As Reasonably Achievable) program in accordance with 10 CFR 20.1101(b) regarding the personnel monitoring program, and sewer discharge and air stack emission levels. However, the inspectors identified one violation for a failure to conduct adequate surveys in unrestricted areas at the Fort Mims facility to demonstrate compliance with License Condition 16.A and NRC regulations. (Section 2.0)

### Closeout Inspection and Surveys

- The inspectors determined that the licensee had an effective program for the survey and release of individual laboratories, and former storage areas; and conducted work in accordance with NRC regulations. The licensee plans to cease operations in 2008 at the Fort Mims facility located in Maryland Heights, 11542 Fort Mims Drive. Due to contamination found in soil around the facility above the NUREG-1757 screening values for carbon-14, the licensee agreed not to disturb the soil on its property or to undertake any construction or renovation projects. The licensee plans to submit a DP for decommissioning and license amendment in 2008. (Section 3.0)

## Report Details<sup>1</sup>

### 1.0 Management Organization and Controls (IP 88005)

#### a. Inspection Scope

The inspectors reviewed and evaluated: the licensee's RSC activities and meeting minutes from January 2006 to January 2008; the RSO's oversight activities such as annual audits, and periodic walk-throughs. Inspectors interviewed management and staff concerning their knowledge and understanding of their authorities and responsibilities in support of the licensee's radiation safety program. The inspectors interviewed the licensee's health physics (HP) staff regarding the maintenance and tracking of decommissioning records necessary for the release of areas for unrestricted use and license termination pursuant to the requirements of 10 CFR Part 30.35, "Financial Assurance and Record keeping for Decommissioning." The inspectors reviewed and evaluated the licensee's procedures, practices, and documentation used to track areas approved for use of licensed material.

#### b. Observations and Findings

The licensee's RSC met quarterly, with appropriate staff, and discussed relative topics, including their ALARA program. Meeting minutes from 2006, 2007, and January 2008 were comprehensive, and the meetings adequately attended. The inspectors noted that the meeting minutes did not include a discussion regarding the operational aspects of the licensee's radiation safety program. The inspectors discussed this observation with the licensee.

The inspectors determined that the licensee's 2007 Annual Radiation Safety Program review, as required by 10 CFR Part 20.1101(c), was comprehensive and detailed. The RSO and Assistant RSO (ARSO) effectively worked to ensure that activities involving licensed radioactive material were conducted in a safe manner. The RSO performed periodic walk-throughs of the various laboratories; however, records of such walk-throughs were not maintained. The inspectors discussed with the RSO the value of keeping such records.

Research and health physics staff demonstrated proper radiation safety practices while conducting research in active labs and routine radiation surveys, respectively. Management and staff were knowledgeable of the licensee's policies and procedures, and understood their authorities and responsibilities. There was good communication between research staff and the RSO.

During the inspection, the inspectors identified that no records were produced and/or kept regarding all areas designated and formerly designated restricted areas as defined in 10 CFR 20.1003.

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<sup>1</sup>A list of acronyms used in the report is included at the end of the Report Details.

Title 10 CFR 30.35(g) requires, in part, that each person licensed under this part or Parts 32 through 36 and 39 of this chapter shall keep records of information important to the decommissioning of a facility in an identified location until the site is released for unrestricted use. Specifically, 10 CFR 30.35(g)(3)(i) requires, in part, that a list contained in a single document and updated every 2 years, be kept of all areas designated and formerly designated restricted areas as defined in 10 CFR 20.1003. The licensee's failure to identify and track all locations designated as restricted areas, that included those areas designated as restricted areas prior to 2007, constitutes a violation of 10 CFR 30.35(g). (VIO 030-10716/07-001-01).

At the conclusion of the inspection, the licensee presented to the inspectors a Historical Site Assessment (HSA) dated January 2008. The HSA contains a list of locations, a description and history of restricted areas within the facilities, and addressed operations, isotopes used, inventory levels, and spill incidents.

c. Conclusion

The NRC inspectors did not identify any concerns with the Radiation Safety Committee's (RSC) meeting minutes; the inspectors concluded that the Radiation Safety Officer's (RSO) oversight activities of the radiation safety program were adequate. Minor enhancements such as including discussions of operational activities in the RSC meetings, and documenting the RSO's periodic walk-throughs were observations made by the inspectors. The licensee's management and staff understood their authorities and responsibilities. The inspectors identified one violation for failure to maintain a list of all areas designated as restricted areas of use that included those areas designated as restricted areas prior to 2007, as required by 10 CFR 30.35(g).

2.0 Radiation Protection (IP 83822)

a. Inspection Scope

Inspectors reviewed and evaluated the licensee's performance in implementing regulatory requirements related to radiation protection for all three of their licenses, such as: posting and labeling; radioactive material controls (10 CFR 20.1801 and 1802); posting of notices (10 CFR 19.11); and the implementation of the ALARA (As Low As Reasonably Achievable) program in accordance with 10 CFR 20.1101(b) regarding the personnel monitoring program, and sewer discharge and air stack emission levels.

Inspectors also evaluated the licensee's proper use of calibrated instrumentation in performing routine periodic surveys as required by 10 CFR 20.1501(a) and (b), and documenting the surveys as required by 10 CFR 20.2103 (survey records). The inspectors performed direct measurements [units in counts per minute (CPM)], using the Ludlum 44-9 "Pancake" probes attached to calibrated Ludlum 2241-2 survey meters, and took wipes (dry and wet). Inspectors performed confirmatory and side-by-side surveys with the licensee's staff of the following locations:

- 1) 3300 S. Second Street [Lab: N-1111 (Active), N-1143 (inactive, not released for unrestricted use), N-340 (active, released for unrestricted use)];

- 2) 3500 DeKalb Street [Crossover Lab 1 and 2 (inactive, released for unrestricted use), G1 Vault Room (inactive, released for unrestricted use)];
- 3) 3050 Spruce Street [Radiochemical Shipping Room (active)];
- 4) 11492 Fort Mims Drive (active).

b. Observations and Findings

Posting and labeling was conducted in accordance with NRC regulations; licensed material was located in secured areas and stored in secured cabinets in the laboratories as required by regulations. Posting of the NRC Form 3 was in accordance with 10 CFR 19.11. Radiation dosimetry records of monitored research staff demonstrated doses as ALARA. The RSO provided calculations of sewer liquid discharges and air stack emission effluent levels below the 10 CFR 20, Appendix B limits.

The licensee's use of calibrated survey meters to detect and determine levels of radioactive contamination was appropriate for the type of radioisotopes listed on the licenses. However, the licensee's staff reported measurements in units of milli-roentgen per hour (mR/hr), instead of CPM, to determine levels of surface contamination. When using Ludlum meters with the Ludlum 44-9 "Pancake" probes (with known efficiencies), measurements should be reported in units of CPM to calculate levels of surface contamination in disintegrations per minute (dpm). The licensee's staff agreed to change their survey procedures to ensure appropriate units were reported.

The licensee maintained records of periodic routine surveys of restricted and unrestricted areas as required by 10 CFR 20.2103. The licensee's staff only performed dry wipes to determine levels of contamination in restricted and unrestricted areas.

Side-by-side surveys with the licensee's staff resulted in comparable measurements. The inspectors identified one hot spot (approximately 10,000 dpm) in Lab N-1111, which the licensee's staff decontaminated; surface radiation levels in the other labs, the G1 Vault Room (storage), and the Radiochemical Shipping Room were background.

At the Fort Mims facility, the inspectors identified several areas with fixed and removable contamination (ranging from 40,000 dpm to 1,800,000 dpm) in unrestricted areas (on surfaces in hallways, restrooms, offices, and stairs). From wipe tests and calculations performed on site, and historical data, the inspectors determined that the contamination was primarily from carbon-14. The licensee did not perform direct measurements with survey meters equipped with hand-held probes sensitive for alpha, beta, and gamma radiations; and therefore did not know the extent of the contamination. The licensee performed routine periodic surveys at the Fort Mims facility using only dry wipes and counted in a liquid scintillation counter. In addition, the licensee did not determine the removable surface contamination fraction for tritium and carbon-14; therefore, the screening levels listed in NUREG-1757, Volume 2, were decreased by a factor of 10 for unrestricted areas.

License Condition 16.A requires that the licensee conduct its program in accordance with statements, representations and procedures in its application, dated August 24, 2001, with attachments. Item 10 of the application references the attached Radiation Safety Program Manual.

Section XIV, titled, "Area Survey Procedures," of the Radiation Safety Program Manual, dated October 1, 1996, requires in part, that a survey consists of: a) a series of wipe tests to measure removable contamination levels. The method for performing wipe tests will be sufficiently sensitive to detect 220 dpm per 100 cm<sup>2</sup> for the contaminant involved; and b) decontamination of areas found to be in excess of 220 dpm per 100 cm<sup>2</sup>, except the restricted area at Radiochemicals which is allowed 2200 dpm per 100 cm<sup>2</sup>.

The licensee's wipe tests to measure removable contamination levels were not sufficiently sensitive to detect 220 dpm per 100 cm<sup>2</sup> for the contaminant involved. Specifically, the licensee failed to identify a significant number of areas with fixed and removable contamination levels (ranging from 40,000 dpm to 1,800,000 dpm), in excess of the licensee's decontamination limit of 220 dpm per 100 cm<sup>2</sup> in unrestricted areas within their production facility located at 11542 Fort Mims Drive.

The failure to make adequate surveys to determine the presence and extent of residual radioactivity constitutes a violation of license condition 16.A and NRC regulations. (VIO 030-10716/07-01-02).

At the conclusion of the inspection, the licensee provided to the NRC inspectors survey procedures titled, "Radiological Survey Protocol for the Cherokee, Laclede and Spruce," and "Radiological Survey Protocol for the Fort Mims Radiochemical Facilities," which requires taking direct measurements using survey meters equipped with hand-held probes sensitive for alpha, beta, and gamma radiations, and supplemented with taking dry and wet wipes, in restricted and unrestricted areas; the licensee will also determine the removable fraction for tritium and carbon-14; therefore, the NUREG-1757 screening level of 3,700,000 dpm/100 cm<sup>2</sup> would apply. The licensee submitted an evaluation report dated, November 2007 which details the licensee's findings, conclusions and recommendations for the Fort Mims facility.

c. Conclusion

The licensee's performance in implementing regulatory requirements related to radiation protection for all three of their licenses was adequate regarding: posting and labeling, radioactive material controls (10 CFR 20.1801 and 1802); posting of notices (10 CFR 19.11); and the implementation of the ALARA (As Low As Reasonably Achievable) program in accordance with 10 CFR 20.1101(b) regarding the personnel monitoring program, and sewer discharge and air stack emission levels. However, the inspectors identified one violation for a failure to conduct adequate surveys in unrestricted areas at the Fort Mims facility to demonstrate compliance with license condition 16.A and NRC regulations.

### 3.0 Closeout Inspections and Surveys (IP 83890)

#### a. Inspection Scope

The NRC inspectors evaluated the licensee's performance in releasing, for unrestricted use, areas affected by routine radioactive material licensed activities. The health physics staff was interviewed regarding their performance of close-out surveys. The NRC inspectors performed confirmatory surveys of the following laboratories and storage room released for unrestricted use:

- 1) Lab N-340 (3300 S. Second Street)
- 2) Crossover Lab 1 (C1) (3500 Dekalb Street)
- 3) Crossover Lab 2 (C2) (3500 Dekalb Street)
- 3) G1 Vault Room (storage) (3500 Dekalb Street)

The inspectors reviewed and evaluated the licensee's contractor (R. M. Wester & Associates, Inc.) final status survey report dated January 11, 2005, for Lab C1, Lab C2, and the G1 Vault Room (storage).

The inspectors reviewed a lab report from Teledyne Brown Engineering, Inc. dated October 3, 2003, for the analysis of three soil samples collected outside the Fort Mims facility as part of the characterization for decommissioning.

#### b. Observations and Findings

The licensee contracted out to experienced vendors the responsibility to conduct decommissioning work for the release for unrestricted use. The inspectors' confirmatory surveys did not identify any general surface radiation contamination levels above background in the laboratories and storage room released for unrestricted use. The contractor's survey report was detailed for the release of the labs C1 and C2, and the storage room; but did not address the multi-layered floors in labs C1 and C2 for the probability of contamination. In an e-mail message dated March 31, 2008, the licensee committed to verify, either through historical knowledge or sampling, that there is no radioactive contamination below the existing floor surface prior to allowing unrestricted activities. This information was added to the Historical Site Assessment (HAS) and used as the basis for unrestricted use.

In 2003, the licensee hired a contractor to characterize the residual radiation contamination at the Fort Mims facility as part of future decommissioning activities. The licensee plans to cease operations in 2008. The contractor collected three soil samples on the south side of the building. All three samples contained activity concentrations [13 to 140 picocuries per gram (pCi/g)] for carbon-14 greater than the NUREG-1757 screening value of 12 pCi/g. In October 2007 and January 2008, NRC inspectors collected a total of 14 soil samples around the Fort Mims facility. The Oak Ridge Institute for Science and Education (ORISE) analyzed the samples for tritium and carbon-14. The results for tritium ranged from 0.87 to 83 pCi/g, all below the

NUREG-1757 screening value of 110 pCi/g. Sample results ranged from 2 to 137 pCi/g for carbon-14, with 11 samples above 12 pCi/g. The licensee agreed, by letter dated March 28, 2008, not to disturb the soil on its property or to undertake any construction or renovation projects. The licensee intends to complete their site specific characterization of the Fort Mims facility after ceasing operations, and submit in 2008 a decommissioning plan (DP) and amend the license to decommission.

c. Conclusion

The inspectors determined that the licensee had an effective program for the survey and release of individual laboratories, and former storage areas; and conducted work in accordance with NRC regulations. The licensee plans to cease operations in 2008 at the Fort Mims facility located in Maryland Heights, 11542 Fort Mims Drive. Due to contamination found in soil around the facility above the NUREG-1757 screening values for carbon-14, the licensee agreed not to disturb the soil on its property or to undertake any construction or renovation projects. The licensee plans to submit a DP for decommissioning and license amendment in 2008.

4.0 Exit Meeting Summary

The inspectors presented preliminary inspection findings to the licensee's radiation safety staff at the conclusion of each onsite inspection activity and conducted a telephone exit with the licensee's RSO on March 26, 2008. The licensee did not identify any documents or processes reviewed by the inspectors as proprietary.

ATTACHMENT: SUPPLEMENTAL INFORMATION

**SUPPLEMENTAL INFORMATION**

PARTIAL LIST OF PERSONS CONTACTED

Licensee

C. Stipsits, Environmental Health and Safety (EHS) Director  
T. Spencer, Production Manager/Radiation Safety Officer  
V. Reisenbichler, Senior Manufacturing Chemist  
R. Ringering, Director Production  
K. Schmidt, EHS Specialist  
B. Dulle, Production Supervisor  
R. Wulf, EHS Technician

INSPECTION PROCEDURES USED

IP 88005 Management Organization and Controls  
IP 83890 Closeout Inspections and Surveys  
IP 83822 Radiation Protection

ITEMS OPENED, CLOSED, AND DISCUSSED

<u>Opened</u>	<u>Type</u>	<u>Summary</u>
VIO 030-10716/07-01-01	VIO	Failure to account for formerly designated restricted areas as required by 10 CFR 30.35.
VIO 030-10716/07-01-02	VIO	Failure to conduct adequate surveys as required by Section 16.A of the license.

Closed

None

Discussed

None

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

ALARA	As Low As Reasonably Achievable
CFR	Code of Federal Regulations
CPM	counts per minute
DP	decommissioning plan
dpm	disintegrations per minute
HSA	Historical Site Assessment
IP	Inspection Procedure
NRC	Nuclear Regulatory Commission
ORISE	Oak Ridge Institute for Science and Education
pCi/g	picocuries per gram
VIO	Violation