UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

May 30, 2003

Docket No. 04009027 License No. SMC-1562

Timothy Knapp
Radiation Safety Officer
Cabot Corporation
P.O. Box 1608 County Line Road
Boyertown, PA 19512

SUBJECT: INSPECTION 04009027/2003001, CABOT CORPORATION, CABOT READING SITE, READING, PA AND NOTICE OF VIOLATION

Dear Mr. Knapp:

During the period from March 26 - May 27, 2003, Randolph Ragland and Robert Prince of this office conducted a safety inspection at the Cabot Reading Site, in Reading, Pennsylvania of activities authorized by the above listed NRC license. The inspection was limited to a review of radiological access controls and radiation surveys. The findings of the inspection were discussed with you and Wayne Reiber at the conclusion of the inspection.

Based on the results of this inspection, it appears that your activities were not conducted in full compliance with NRC requirements. A Notice of Violation is enclosed that categorizes each violation by severity level in accordance with the General Statement of Policy and Procedure for NRC Enforcement Actions, (Enforcement Policy), NUREG 1600. 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 are already adequately addressed on the docket in the attached inspection report. Therefore, you are not required to respond to this letter unless the description therein 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 2.790, a copy of this letter will be placed in the NRC Public Document Room and will be accessible from the NRC Web site at http://www.nrc.gov/reading-rm.html .

Your cooperation with us is appreciated.

Sincerely,

Original signed by Ronald R. Bellamy

Ronald R. Bellamy, Chief
Decommissioning and Laboratory Branch
Division of Nuclear Materials Safety

Enclosures:

1. NRC Inspection Report No. 04009027/2003001
2. Notice of Violation

cc:
Wayne Reiber, Manager, Environmental Assessment and Remediation, Cabot Corporation
Commonwealth of Pennsylvania
Bryan Werner, Health Physicist, Commonwealth of PA

Distribution:
D. Holody, RI
D. Schmidt, Health Physicist
T. Smith, NRC Project Manager

DOCUMENT NAME: C:\ORPCheckout\FileNET\ML031500285.wpd
To receive a copy of this document, indicate in the box: "**C**" = Copy w/o attach/encl "**E**" = Copy w/ attach/encl "**N**" = No copy

OFFICE	DNMS/RI	N	DNMS/RI		DNMS/RI			
NAME	Rragland RCR1		Rprince RJP4		Rbellamy RRB1			
DATE	5/29/03		5/29/03		5/29/03			

OFFICIAL RECORD COPY

NOTICE OF VIOLATION

Cabot Corporation
Boyertown, PA

Docket No. 04009027
License No. SMC-1562

During an NRC inspection conducted on March 26 - May 27, 2003, two violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy), NUREG-1600, the violations are listed below:

A. Cabot Reading License SMC-1562, Condition 13 states that "Access to the [Cabot Reading Slag Pile] site will be controlled during decontamination and decommissioning activities; access to areas where radioactive waste will be stored will be controlled at all times."

Contrary to the above, two examples were identified that violated this requirement:

1. On March 26, 2003, inspectors identified a two-foot break in one area along the upper eastern slag pile boundary fence.

2. On March 26, 2003, inspectors identified the presence of approximately 15 - 20 pieces of radioactive slag, averaging about 1-foot in diameter, located on the ground surface at distances up to about 35 feet outside of the eastern slag pile boundary fence.

These two examples represent a Severity Level IV violation (Supplement IV).

B. Cabot Reading License SMC-1562, Condition 19 states that "The licensee shall conduct at least quarterly at the Reading Slag dump a monitoring program that consists of ..." Step C. "Measurement of direct radiation levels at 1 meter above the ground at all boundaries of the dump site."

Contrary to the above, on March 26, 2003, inspectors identified that documented radiation survey measurements for 2002 were performed only along the Southern slag pile boundary fence and did not include the western, northern, and eastern slag pile boundaries.

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 correct the violations and prevent recurrence and the date when full compliance will be achieved is already adequately addressed on the docket. However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation," and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555 with a copy to the Regional Administrator, Region I, 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 to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001. Under the authority of Section 182 of the Act, 42 U.S.C. 2232, any response which contests an enforcement action shall be submitted under oath or affirmation.

Your response will be placed in the NRC Public Document Room (PDR) and on the NRC Web site at http://www.nrc.gov/reading-rm.html . To the extent possible, it should, therefore, not include any personal privacy, proprietary, or safeguards information so that it can be made publically available without redaction. However, if you find it necessary to include such information, you should clearly indicate the specific information that you desire not to be placed in the PDR, and provide the legal basis to support your request for withholding the information from the public.

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

Dated This _30th_ day of _May_ 2003

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No.	04009027/2003001
Docket No.	04009027
License No.	SMC-1562
Licensee:	Cabot Corporation
Address:	P. O. Box 1608 County Line Road Boyertown, PA 19512
Locations Inspected:	Reading, Pennsylvania
Inspection Dates:	03/26/03 - 05/27/03
Inspectors:	Randolph C. Ragland, Jr., CHP Health Physicist, Decommissioning & Laboratory Branch (D&LB) Division of Nuclear Material Safety (DNMS) Robert Prince, Health Physicist, D&LB, DNMS
Approved By:	Ronald Bellamy, Chief D&LB, DNMS

EXECUTIVE SUMMARY

Cabot Corporation
NRC Inspection Report No. 04009027/2003001

The Cabot Corporation has a possession-only license for a slag pile located at their Reading, PA site. The slag originated from precious metal extraction and contains naturally occurring thorium and uranium. The slag pile extends approximately 160 feet along a steep embankment adjacent to a railroad track and the Schuylkill River. Access to the slag pile is controlled with chain link fencing and locked gates. A revised decommissioning plan was submitted to the NRC in March 2000 which includes additional information to support the licensee's plan to conduct no further remediation, which is based on a licensee dose model that indicated that for any reasonable future use of the land (e.g., resident trespasser), leaving the material in place at its current location would result in a dose that is less than 25 millirem per year. The licensee's decommissioning plan and dose model are currently under review by the NRC.

During this inspection, two violations of NRC requirements were identified. The first violation included two examples of a failure to control access to areas where waste is stored (i.e., break in the fence and some slag identified outside of fence) in accordance with NRC License No. SMC-1562, Condition 13. This violation was classified as a Severity Level IV violation (Supplement IV). **(VIO 04009027/2003-01-01)** The second violation involved a failure to perform radiation surveys in accordance with NRC License SMC-1562, Condition No. 19 and was classified as a Severity Level IV violation (Supplement IV). **(VIO 04009027/2003-01-02)**

The inspector noted that because the slag pile is located on a steep slope with thick brush, a trespasser would have limited occupancy on the slope and therefore, any dose that could have resulted from unauthorized access to the slag pile or areas adjacent to the eastern slag pile boundary fence was likely to be low.

REPORT DETAILS

The Cabot Corporation has a possession-only license for a slag pile located at their Reading, PA site. Currently the site is in decommissioning status, the slag pile is located within a posted fenced boundary, and there are no routine work activities occurring at the slag pile site.

I. Radiological Access Controls

a. Inspection Scope (83750)

The Inspectors reviewed radiological access controls for the slag pile including radiological postings, use of locked gates and fencing, and performed a visual qualitative evaluation of the amount of slag present on the surface of the slag pile slope.

b. Observations and Findings

Access to the slag pile slope is controlled with radiological postings, hurricane fencing, and locked gates. Adequate radiological postings were observed on fencing and the upper and lower access gates were observed to be securely locked. However, the inspectors identified one area along the upper eastern boundary fence with a two-foot break in the boundary fence that would allow enough room for an individual to gain entry into the controlled area. The inspectors pointed out to licensee representatives that the break in the slag pile fencing was contrary to NRC License SMC-1562, Condition 13 which states that "Access to the site will be controlled during decontamination and decommissioning activities; access to areas where radioactive waste will be stored will be controlled at all times."

The Radiation Safety Officer stated that the break in the boundary fence was likely due to a trespasser, and a fencing contractor had already been contacted and scheduled to make needed repairs to the fencing. The Radiation Safety Officer reported to the NRC that the eastern slag pile boundary fence was repaired on May 19, 2003. Future actions to prevent recurrence will include quarterly inspections of the perimeter fencing and initiation of repairs as necessary.

During an NRC site visit on January 30, 2003, NRC Headquarters staff and an NRC Region I inspector identified the presence of several pieces of radioactive slag on the ground surface located outside of the eastern slag pile boundary fence. In response to that discovery, NRC Region I scheduled a followup inspection to evaluate the extent of surface slag located outside of the boundary fence. On March 26, 2003, inspectors visually examined the slag pile and adjacent areas to qualitatively evaluate the amount of radioactive slag present on ground surfaces inside and outside of the slag pile boundary fence. Inspectors observed approximately 15 - 20 pieces of slag averaging about 1-foot in diameter on the surface of the eastern side of the slag pile slope and a similar amount on the ground surface located outside of the eastern slag pile boundary fence. Surface slag was observed at distances up to about 35 feet outside of the eastern fence boundary.

The inspectors pointed out to licensee representatives that the presence of surface slag outside of the slag pile boundary fence was contrary to NRC License SMC-1562, Condition 13 which states that "Access to the site will be controlled during decontamination and decommissioning activities; access to areas where radioactive waste will be stored will be controlled at all times."

The Radiation Safety Officer stated that he believed that the location of the original eastern slag pile boundary fence was selected by simply performing a cursory radiation survey and establishing the boundary at a point where radiation levels appeared to drop-off; rather than selecting the boundary location based on a detailed survey of the eastern slope, which would have revealed the presence of surface slag in adjacent areas outside of the selected boundary fence. The Radiation Safety Officer stated that following the identification of slag outside of the boundary fence by the NRC on January 30, 2003, he obtained a detailed radiation survey of areas surrounding the slag pile, that surface slag was identified in areas up to 35 feet outside of the eastern slag pile boundary fence and that a fencing company had been contracted to extend the eastern boundary fence to include the identified surface slag. The Radiation Safety Officer reported that on May 19, 2003, an additional fence was installed along the eastern slag pile boundary that included all of the surface slag identified by the detailed survey.

The inspector noted that because the slag pile is located on a steep slope with thick brush, a trespasser would have limited occupancy on the slope and therefore, any dose that could have resulted from unauthorized access to the slag pile or areas adjacent to the eastern slag pile boundary fence was likely to be low.

c. Conclusions

Two examples of a failure to control access to areas where waste is stored in accordance with NRC License No. SMC-1562, Cabot Reading Site, Condition 13, were identified and classified as a Severity Level IV violation (Supplement IV). **(VIO 04009027/2003-01-01)**

II. Radiation Surveys

a. Inspection Scope

The inspectors performed radiation surveys along the outer perimeter of the slag pile fence and in selected areas inside and outside of the fence and reviewed radiological survey data obtained by the licensee's contractor for the year 2002.

b. Observations and Findings

Inspectors used a Ludlum Model 12S microR meter to perform the radiation surveys, and results of the NRC survey appear as Attachment I "Cabot Facility - Reading, PA Perimeter Fence Dose Rate Survey, March 26, 2003." All measurements were made at a distance of one meter above the ground surface unless otherwise noted and included a background exposure rate of approximately 7 microR/h. Exposure rate

measurements obtained at one meter above the ground surface along the outer perimeter of the fence line ranged from 8 - 180 microR/h. The inspectors obtained several measurements outside of the eastern slag pile boundary fence in direct contact with the ground surface or slag and results ranged from 400 - 1000 microR/h. Inspectors noted that the elevated measurements (e.g., > 50 microR/h) appeared to originate from areas where slag was confirmed to be at or near the ground surface.

The inspectors reviewed radiation exposure monitoring data obtained by the licensee's contractor for four quarters in the year 2002. NRC License No. SMC-1562, Condition 19 requires the licensee to "conduct at least quarterly at the Reading slag dump a monitoring program that consists of..." (Condition 19 c) "Measurement of direct radiation levels at 1 meter above the ground at all boundaries of the dump site." The inspectors noted that contrary to this requirement, documented survey data for the year 2002 only included radiation survey measurements obtained along the southern property boundary at the railroad tracks.

The inspectors acknowledged that the licensee's performance of radiation surveys along the southern property boundary were the most important surveys because it allowed for monitoring of the southern slag pile boundary which is immediately adjacent to publicly accessible land (e.g., railroad tracks). However, the inspectors pointed out that if the licensee had performed radiation surveys "at all boundaries" in accordance with NRC License SMC- 1562, License Condition No. 19, then they would have likely identified the presence of surface slag outside of the boundary fence and could have taken action to control access to the residual slag in accordance with License Condition No. 13.

The Radiation Safety Officer stated that all future quarterly surveys performed to meet NRC License SMC-1562, License Condition 19, will include surveys at all slag pile perimeter fence boundaries.

c. Conclusions

One example of a failure to perform radiation surveys in accordance with NRC License SMC- 1562, Condition No. 19 was identified and classified as a Severity Level IV violation (Supplement IV). **(VIO 04009027/2003-01-02)**

II. Exit Meeting

On May 27, 2003, the inspectors presented a summary of inspection findings to Mr. Tim Knapp, RSO, and Mr. Wayne Reiber by telephone. Licensee representatives acknowledged the inspection findings and confirmed that the corrective and preventative actions described in the report had and would be taken.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

Tim Knapp, Radiation Safety Officer
Wayne Reiber, Manager, Environmental Assessment and Remediation

NRC Personnel

Duane Schmidt, Health Physicist
Theodore Smith, NRC Project Manager

State of Pennsylvania

Bryan Werner, Health Physicist
Chris Ott, Health Physicist
John Chippo, Environmental Specialist

INSPECTION PROCEDURES USED

IP 87104: Decommissioning Inspection Procedure for Material Licensees, 6/4/97
IP 83750: Occupational Radiation Exposure, 3/15/94

Items Opened:

1) VIO 04009027/2003-01-01, “Failure to Control Access to Stored Waste IAW License Condition No. 13"

2) VIO 04009027/2003-01-02, “Failure to Perform Radiation Survey IAW License Condition No. 19.

Items Closed:

1) VIO 04009027/2003-01-01, “Failure to Control Access to Stored Waste IAW License Condition No. 13"

2) VIO 04009027/2003-01-02, “Failure to Perform Radiation Survey IAW License Condition No. 19.

Items Discussed: None

LIST OF ACRONYMS USED

NRC	Nuclear Regulatory Commission
PDR	Public Document Room
RSO	Radiation Safety Officer
VIO	Violation