

August 27, 2004

Mr. Wayne Reiber
Manager, Environmental Assessment and Remediation
Cabot Corporation
157 Concord Road
P.O. Box 7001
Billerica, MA 01821-7001

SUBJECT: RESPONSE TO CABOT'S PROPOSED RESOLUTION REGARDING THE
CABOT-READING SITE DECOMMISSIONING PLAN AND RADIOLOGICAL
ASSESSMENT

Dear Mr. Reiber:

This letter is in response to your February 3, 2004, proposed response to the U.S. Nuclear Regulatory Commission's (NRC's) request for additional information (RAI) for the Cabot Reading, Pennsylvania, site. The March 21, 2003, NRC RAI identified three areas where additional information was necessary in order for the staff to complete its review of Cabot's Decommissioning Plan (DP), Radiological Assessment (RA), and additional information provided by Cabot in November 2002.

Cabot's proposed approach would place a rip-rap erosion barrier over the slope containing radioactively contaminated slag. The cover would comply with NUREG-1623, *Design of Erosion Protection for Long Term Stabilization*, and therefore, would not require active ongoing maintenance. You indicate in your letter that this rip-rap cover should resolve the pending NRC questions and all outstanding issues at the Reading site.

The NRC staff has determined that Cabot's proposed conceptual approach is acceptable to be included in a revised DP. However, complete evaluation of the proposal would begin when the revised DP and RA are received for NRC review and approval. The revised DP and RA should contain the information included in the "Conclusion" section of your February letter.

Concurrent with this conceptual agreement with your proposed erosion barrier approach, we are including some additional comments. The enclosed comments are clarifications for Cabot to consider while revising the DP and RA, now that a specific conceptual approach has been proposed.

W. Reiber

- 2 -

As you consider our RAI and clarifications in developing revisions to the DP and RA, we suggest meeting to discuss details of your February letter and the revised DP and RA.

Please contact Ted Smith at (301) 415-6721, if you have any questions.

Sincerely,

/RA/

Daniel M. Gillen,
Deputy Director
Decommissioning Directorate
Division of Waste Management
and Environmental Protection
Office of Nuclear Material Safety
and Safeguards

Docket No. 40-9027

License No. SMC-1562

Enclosure: As stated

cc: Cabot Reading Site Mailing List

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DISTRIBUTION:

PDR	DCB r/f	NMSS r/f	JWray/R1	RLJohnson	MThaggard
TSmith	DSchmidt	CCraig			

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* See previous concurrence.

OFC	DWMEP*		DWMEP*		DWMEP*	
NAME	TSmith		DSchmidt		CBurkhalter	
DATE	7/30/2004		8/04/2004		8/26/2004	

OFC	DWMEP*		DWMEP*		DWMEP	
NAME	MThaggard		CCraig		DGillen	
DATE	8/10/2004		8/11/2004		08/27/04	

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CONCEPTUAL APPROACH COMMENTS

- While the placement of a rip-rap cover will address the erosion and ALARA concerns, some uncertainty remains regarding the distribution and quantity of subsurface slag. The U.S. Nuclear Regulatory Commission (NRC) staff considers parts of the staff's concerns described in the "Source Term" and "Site Characterization" sections of our March 2003 RAI to be applicable to the source term for excavation scenarios. The staff also believes that uncertainties in the quantities of contaminated slag from processing at the Reading site and concentrations of radionuclides in remediation materials from the Canton Yards (slag in soil) may be critical to the dose assessment for the limited-extent excavation scenario. These concerns should be considered and addressed by Cabot in developing the revised Decommissioning Plan (DP) and Radiological Assessment (RA).
- Some guidance on treating buried residual radioactivity is available in Appendix J of NUREG-1757, Consolidated NMSS Decommissioning Guidance, Volume 2. The staff notes that this guidance may not be directly applicable to the excavation scenarios for the Cabot Reading site. However, the concepts regarding averaging the inventory (activity) to estimate potential source concentrations may be useful to Cabot.
- NRC staff notes that the proposed approach will require an update to the cost estimate Section 5.0 ("Funding") of the March 2000 *Reading Slag Pile Decommissioning Plan*, and if appropriate, a revision to the amount of financial assurance for the site. Similarly, Section 6.0, ("ALARA Analysis") of the March 2000 *Reading Slag Pile Radiological Assessment* should also be updated to reflect the proposed approach.

Enclosure