

August 9, 2000

Mr. Randall L. Solomon  
Baker & Hostetler, LLP  
1900 East 9<sup>th</sup> Street  
Cleveland, OH 44114-3485

SUBJECT: RELEASE OF THE CHEMETRON CORPORATION BERT AVENUE SITE

Dear Mr. Solomon:

I am responding to your letter of February 24, 2000, to Dr. Carl Paperiello regarding the termination of the U.S. Nuclear Regulatory Commission (NRC) license for the Bert Avenue Site of the Chemetron Corporation (Chemetron) in Newburgh Heights, OH. As stated in our license termination letter of July 1, 1999, to Chemetron, the site was released for unrestricted use. NRC placed no limitations or conditions on the use of the site by the current owner or any prospective future owner.

As stated in the July 1, 1999, letter, "NRC will not require any additional decommissioning, in response to future NRC criteria or standards, unless additional contamination or noncompliance with remediation commitments is found, indicating a significant threat to public health and safety." Concerning the term "additional contamination," our intent was that the Commission would require additional cleanup only if, based on information not previously supplied to the Commission, there were additional contamination and the residual radioactivity remaining at the site could result in a significant public risk. With regard to the term "noncompliance with remediation commitments," our intent was that the Commission would require additional cleanup only if there was new information developed that would demonstrate that, at the time of license termination, the licensee had failed to meet the commitments it had agreed to take as described in the license to remediate the site. Such commitments would not extend to future use of the site, because the site was released for unrestricted use. Prior to terminating the license and releasing the site, we were satisfied that the licensee's commitments had been met.

After this license was terminated, NRC entered into an agreement with the State of Ohio (the State), pursuant to Section 274b of the U.S. Atomic Energy Act, as amended, for the State to regulate the use of most forms of radioactive material within the State. In accordance with this agreement, regulatory responsibility for sites such as Chemetron was transferred to the State. If further regulatory actions are needed to address the residual radioactivity remaining at the site, such actions would be taken by the State, not NRC. We have consulted with the State in responding to your letter and any questions concerning potential future actions at the Chemetron site should be referred to the Bureau of Radiation Protection, Ohio Department of Health.

R. Solomon

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August 9, 2000

Enclosure 1 contains a detailed response to each question raised in your February 24, 2000, letter. I have also enclosed a copy of SECY-99-033, "Removal of the Chemetron Harvard Avenue and Bert Avenue Sites from the Site Decommissioning Management Plan," (without draft letter attachments) dated February 1, 1999, for your reference.

I trust that this letter responds to your concerns.

Sincerely,  
/S/ /RA/  
Larry W. Camper, Chief  
Decommissioning Branch  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards

Enclosures:

1. Response to Questions
2. SECY-99-033 (w/out Attachments 2-6)

cc: R. Suppes

R. Solomon

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Larry W. Camper, Chief  
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cc: R. Suppes

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**RESPONSE TO QUESTIONS RAISED IN THE FEBRUARY 24, 2000, LETTER  
FROM RANDALL SOLOMON (BAKER & HOSTETLER LLP) TO CARL PAPERIELLO**

INTRODUCTION

A summary of U.S. Nuclear Regulatory Commission (NRC) staff actions resulting in the termination of the Chemetron license is provided in SECY-99-033, "Removal of the Chemetron Harvard Avenue and Bert Avenue Sites from the Site decommissioning Management Plan," dated February 1, 1999. A copy of this paper is attached for reference.

QUESTIONS AND RESPONSES

**Question 1**

What may McGean, or any subsequent owner or user of the Bert Avenue site, do or not do on that site?

**Response**

As discussed in SECY-99-033, Chemetron's remediation of the site met the NRC's criteria for unrestricted use as established in the "Action Plan to Ensure Timely Cleanup of Site Decommissioning Management Plan Sites" (57 FR 13389; April 16, 1992). As such, there are no limitations or conditions on the use of the site by the current owner or any prospective future owner.

**Question 2**

McGean understands that the Option 2 limit is 160 picocuries. In other words, waste with radioactive concentrations up to 160 picocuries could be stored in the cell. Is that understanding correct?

**Response**

The appropriate limit under Option 2 of the "Branch Technical Position for Disposal or Onsite Storage of Thorium or Uranium Wastes from Plant Operations" (46 FR 520; October 23, 1981), for uranium concentration limits is based on the solubility of the uranium. For the Bert Avenue Site, the total uranium concentration limit was determined to be 161 picocuries per gram (pCi/g), based on uranium solubility testing. The limit is based on average, rather than a peak concentration. Attachment 1 to SECY-99-033 (page 6) includes a summary of final surveys conducted by Chemetron and NRC's Contractor. Based on these surveys, NRC concluded that the requirements of Option 2 had been met.

**Question 3**

It is McGean's understanding that these final surveys were based on concentrations of radioactivity at the ground surface, that is, that readings were not taken of radioactive waste in the cell as part of the surveys? Is McGean's understanding correct? Does the radioactive cell contain concentrations of radioactivity that exceed the 37 pCi ground surface standard? If so, why has Chemetron's license been terminated?

**Response**

As discussed in Attachment 1 to SECY-99-033, in-cell measurements were taken to verify compliance with the Option 2 limits and areas outside the cells were surveyed to demonstrate compliance with Option 1 limits. A summary of these results, and NRC's conclusions based on these surveys, are included in the Attachment as discussed in response to Question 2.

**Question 4**

How does NRC define "noncompliance with remediation commitments"?

**Response**

The term "noncompliance with remediation commitments," refers to specific actions that the licensee agreed to take as documented in the license. Such commitments would not extend to future uses of the site, because the site was released for unrestricted use, and future actions are beyond the licensee's control. Prior to terminating the license and releasing the site, NRC, based on the actions described in SECY 99-033, determined that the licensee's commitments had been met.

**Question 5**

Does the NRC consider a breach in or failure of the radioactive cell to be "additional contamination or noncompliance with remediation commitments"? In other words, if the landfill has a failure (a fissure in the cap, a slump of a sidewall, a leachate release outside the leachate collection system) caused by any reason, whether due to poor design, improper construction or otherwise, would that be considered to be "additional contamination" or "noncompliance with remediation commitments"?

**Response**

No. "Additional contamination" is residual contamination not previously described in information supplied to the Commission, that may result in a significant public risk. "Noncompliance with remediation commitments" is discussed in the response to Question 4. NRC would not consider failure of the cell to be "noncompliant with remediation commitments."

**Question 6**

Would a breach in the cell caused by a third-party actions, including vandalism, accident, or construction work, or caused by an act of God, constitute “additional contamination or noncompliance with remediation commitments”?

**Response**

No, these terms are discussed in response to Questions 4 and 5.

**Question 7**

Would the construction of a building footers of which penetrated the radioactive cell and released remediation above 37 picocuries be considered “additional contamination or noncompliance with remediation commitments”?

**Response**

As discussed in response to Questions 4 and 5, NRC would not consider such an action to be “additional contamination” or “noncompliance with remediation commitments.”

It should be noted that hypothetical doses to a resident farmer were computed based on the actual average soil concentrations (see page 3 of SECY-99-033). Assuming the disposal cell cover is no longer in place, the peak dose over a 1000-year period after disposal would be 15 millirem per year (mrem/y) for the Bert Avenue Site. Such a scenario is considered to be a bounding case. This dose meets the unrestricted release limits in 10 CFR Part 20, Subpart E.

**Question 8**

Would repair or replacement of the radioactive cell be considered “additional decommissioning”?

**Response**

No. Failure of the cell would not be expected to result in a significant threat to public health and safety and, as such, we would not require repair or replacement of the cell if cell failure occurred. As noted in response to Question 7, the dose analysis assumed the cell was not in place.

**Question 9**

What constitutes a “significant threat to public health and safety”? Is it the release of waste from the cell with a radioactivity concentration above the 37 picocuries concentration limit that was used to determine unrestricted use?

## **Response**

Such situations are reviewed on a case-by-case basis, but, in general, NRC staff would examine any situation within its jurisdiction that had the potential for members of the public to exceed the public dose limit of 100 mrem/y. However, as noted in the response to Question 10, this site is no longer within the jurisdiction of the NRC.

## **Question 10**

What facts would trigger intervention by the NRC after this release for “unrestricted” use and what the nature of that intervention would be? Is McGean correct in its assumption that the NRC would proceed against Chemetron and Chemetron only for “additional decommissioning”? Through what process would NRC seek additional decommissioning from Chemetron, since Chemetron’s NRC license is now terminated? What if Chemetron no longer existed? Do any circumstances exist under which the NRC would look to McGean or any future owner or user of the Bert Avenue site to do anything with regard to the site or the cell?

## **Response**

After Chemetron’s license was terminated, NRC entered into an agreement with the State of Ohio, pursuant to Section 274b of the U.S. Atomic Energy Act, as amended, for the State to regulate the use of most forms of radioactive material within the State. In accordance with this agreement, any future regulatory responsibility for this site was transferred to the State. Such determinations regarding potential future actions would need to be made by the State.