



Pennsylvania Department of Environmental Protection

Rachel Carson State Office Building

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April 25, 2001

Bureau of Radiation Protection

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030-05980

Dr. Ronald R. Bellamy, Chief
Decommissioning and Laboratory Branch
Division of Nuclear Materials Safety
U.S. Nuclear Regulatory Commission- Region I
475 Allendale Road
King of Prussia, PA 19406-1415

SUBJECT: PA Comments on Safety Light Decommissioning Cost Estimates and
Decommissioning Plan

Dear Dr. Bellamy:

As requested in your December 13, 2000 letter, the Pennsylvania Department of Environmental Protection, Bureau of Radiation Protection (BRP) has reviewed the subject decommissioning cost estimates and plan for the Safety Light site in Bloomsburg, PA. You specifically asked for our comments regarding the adequacy of the licensee's assumptions in areas of dual jurisdiction and areas of mutual concern, such as mixed waste, radium wastes, and groundwater characterization and proposed remediation and waste disposal methods. You also asked that the results and interpretation of the department's water sampling be made available.

BRP comments are provided in the enclosure. However, I would like to re-emphasize the Commonwealth's concerns that the present location of the containerized silo wastes is unsatisfactory and that NRC should take prompt action to direct the licensee to characterize the waste and dispose of this material. As stated in the September 1, 2000 letter to Safety Light from the Director of the PA Bureau of Land Recycling and Waste Management, and restated by me at the February 13, 2001 meeting, the Department of Environmental Protection considers this action to be the highest priority step to be taken in the remediation of the site. I would appreciate your keeping me informed on the progress being taken by NRC to direct Safety Light to remove and properly dispose of this material.

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NMSS/RGN MATERIALS-002



Dr. Ronald R. Bellamy, Chief

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April 25, 2001

If you have any questions on the enclosed comments, please contact Robert Maiers at 717-983-8979.

Sincerely,

A handwritten signature in black ink, appearing to read "David J. Allard". The signature is fluid and cursive, with the first name "David" and last name "Allard" clearly distinguishable.

David J. Allard, CHP
Director
Bureau of Radiation Protection

Enclosure

cc: Denise Chamberlain, DEP
William Kirk, DEP
James P. Snyder, DEP
Thomas Crowley, DEP
James Kopenhaver, DEP
Robert Maiers, DEP
Bernard Snyder, Consultant
William E. Lynch, Jr., Safety Light

Enclosure

BRP Comments on Safety Light Corporation Decommissioning Plan (DP) and Decommissioning Cost Estimates (DCE) for Bloomsburg, PA Site

1. The DCE includes a 25% overall contingency. This may be inadequate considering the major uncertainties in the waste volumes and the actual contamination levels of buildings, soils and groundwater. Examples of these uncertainties are:
 - Subsurface contamination of the soil and the possible presence of the discrete contaminated objects is uncertain in areas of the abandoned canal, lagoons, west plant dump site, drain lines and both parking lots.
 - Waste disposal is 74% of the total cost estimate, and according to GTS-Duratek cost estimate this is a significantly higher proportion than normal for site remediation projects. Furthermore, 56% of the contaminated waste volume is attributed to soil from the site, and the contaminated soil volume is highly uncertain.
 - There is no provision for restoration of the contaminated areas on facility grounds after the contaminated soil is removed.
 - All waste is assumed to meet Envirocare acceptance criteria. No provisions have been made for mixed wastes or higher levels of radioactive waste that do not meet Envirocare criteria.
 - Several buildings have not been fully characterized. For example, 13 of 16 rooms in the etching building have never been characterized since they are considered to be structurally dangerous to enter.
 - There is no provision for treatment of the water in the lagoons if it cannot meet the criteria for discharge into the river.
 - There is no groundwater treatment included in the cost estimate (see comment 3 and 4 below).
 - There is no provision for site stabilization and long-term surveillance (if necessary).
2. The planned remediation is based on no soil contamination existing below 2 meters. However, Sr-90 was found between 3.66 and 5.49 meters below the surface when well M10 was drilled and at 4.27 meters when well M4 was drilled. In addition, no DCGL's have been established for soil depths below 2 meters. The licensee's cleanup plan for depths below 2 meters and its impact on the cost estimate are unclear. The implications of the statement in the DP on page 6 of the Attachment that "(It) is known that some of the radioactive material was buried on site at unknown depths and 2 meters is appropriate for general disposal" should be explained by the licensee to the satisfaction of both NRC and BRP.

3. The DP does not include the following information necessary to fully understand the types and concentrations of radioactive material contamination in the groundwater as well as the extent of the contamination:
 - A summary of the aquifer(s) at the facility that contain residual radioactive material in excess of site background levels.
 - A summary of the background levels used during scooping or characterization surveys.
 - A summary of the radionuclides present in each aquifer and the maximum and average radionuclide activities in pCi/L.
4. There is no provision for treatment of the groundwater included in the DP even though there is known radiological groundwater contamination on the site. It appears the DCGL's were developed with the assumption that the unsaturated zone and the groundwater are initially free of radiological contamination. If this is the case, either the DCGL's should be recalculated to account for the known groundwater contamination, or provisions for groundwater remediation need to be included in the DP and DCE.
5. There is potential Ra-226 contamination of a well at the well house, but there is no plan to sample this well for possible contamination of the aquifer. The DP states that this well will just be grouted. No justification has been given for this approach. (Note that BRP has its consultant reviewing available hydrological data for the site that was recently received, and any additional comments that are relevant for the DP or the DCE will be provided in separate correspondence).
6. Monserco's characterization study found Co-60 and Po-210. However, GTS did not establish DCGL's for these two radionuclides and did not include them in their survey plans.
7. On page 4-6 of the DCE, it is stated that the only consideration given for the selection of remediation methods is that minimum cost should be the criteria. No mention is made of the importance of worker and public safety as the first criteria in the selection of a remediation option. This emphasis on minimum cost, to the exclusion of safety and environmental protection considerations, is considered inappropriate and should be modified. It is further suggested that NRC management ensure that these considerations will be the primary consideration when any remediation options are actually selected.
8. Although Amendment 51 to NRC License 37-00030-02 requires the submission of a decommissioning schedule, the licensee has not provided any schedule or even an estimate of the time to accomplish major tasks.
9. The NRC letter dated December 13, 2000 requested BRP comments regarding the adequacy of the licensee's assumptions in area of dual jurisdiction. Although no discussion of dual jurisdiction was stated by the licensee in the documents provided, in a letter dated February 19, 2001 to the BRP the licensee states that

radium is not being treated separately from the other isotopes that are contaminating the site and will be removed in conjunction with the other isotopes found when decommissioning occurs.

10. The interpretation of the results of the Department's groundwater samples will be provided by separate correspondence.