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April 17, 1980



Mr. Michael L. Brown  
Health Physicist  
Radiation and Hazardous Wastes  
Control Division  
Colorado Department of Health  
Control Division  
Colorado Department of Health  
4210 East 11th Avenue  
Denver, Colorado 80220

Re: Cotter Corporation  
License Application  
Ore Sorter

Dear Mr. Brown:

Set forth below are the understandings reached at the conference held on April 10, 1980 between representatives of your office, the U.S. NRC and Cotter Corporation, and the commitments undertaken by the latter at that time, relating to amendment of the pending application of Cotter Corporation for a radioactive materials license to operate an ore sorter located at the Schwartzwalder Mine of Cotter in Jefferson County, Colorado. The purpose of the conference, and the site visit which preceded it on April 9, 1980, was to reach agreement on the matter which Cotter will submit and the issues which will be addressed in the amended license application. Based upon the conference, and the correspondence which preceded it, Cotter proposes to file an amended application containing information originally submitted as supplemented and augmented by the following:

1. Since the mine waste storage area includes ore sorter reject rock, the following inquiries will be made and the results included in the amended license application:

A. Infiltration Rate Study of Mine Waste and Ore Sorter Reject

(i) Review literature pertaining to infiltration, porosity, permeability in alluvium. Given the larger void space in the waste area, the factors derived from the literature for alluvium will tend to be conservative due to the lesser contact time between water and waste rock.

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16203  
Add info

Mr. Michael L. Brown  
April 17, 1980

Page Two

(ii) Develop a qualitative discussion of the exposed surface area on the waste dump following reclamation, covering hydrologic obstruction, including precipitation lost to evaporation, interception, depression storage, and infiltration.

B. Infiltration (Runoff) Study

(i) Following a summer thunderstorm which generates runoff in Ralston Creek, and which is of sufficient intensity to cover the waste dump, Cotter will collect water samples from Ralston Creek at a point upstream from the NPDES discharge point #001, but downstream from the waste dump, and at a point upstream from the waste dump. The samples will be collected on a daily basis for approximately five (5) days (if this is supported by the infiltration rate study) or until flow ceases in Ralston Creek. Samples will be analyzed to determine the concentrations of Ra-226 and uranium, total and soluble.

2. The amended license application will contain facts with respect to previous operation of the ore sorter plant.

3. The amended license application will contain supplemental facts concerning the functions of the crew which operates the ore sorter.

4. The amended application will establish an environmental monitoring program which includes:

- A. Particulate sampling at two locations indicated in the original license application utilizing hi-vol samplers. The parameters will be mass loading and radionuclides.
- B. Radon monitoring at the two hi-vol locations and at one perimeter background station, utilizing passive environmental radon monitors.
- C. Monthly water sampling above and below the mine waste and sorter reject storage area, with analyses for Ra-226 and uranium, both total and soluble.
- D. Semi-annual soil and vegetation samples taken at the water sample locations identified in C. above, with analyses to be performed for radium. Both washed and unwashed samples shall be subjected to analysis.

Mr. Michael L. Brown  
April 17, 1980

Page Two

5. The amended application will contain a sorter plant monitoring program, which shall include:

- A. Ambient air sampling for particulate and radon.
- B. Personnel breathing zone sampling.
- C. A bioassay program in conformity with U.S. NRC Regulatory Guide 8.22.

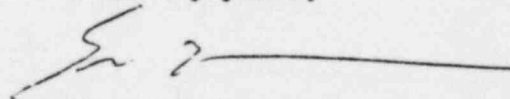
6. The design flood calculations and discussion contained in the original license application will be supplemented by material augmenting the justification for the use of a 100 year flood, and there will be included an analysis of the consequences of a "worst case" flood.

7. The amended license application will contain matter responsive to the inquiries set forth in Mr. Hazle's letters of December 18, 1979 and February 11, 1980, with the exception of paragraph 10. of the December 18, 1979 letter. The subject matter of that paragraph is more properly relevant to the mined land reclamation plan for the Schwartzwalder Mine operation, which has already been approved by the Mined Land Reclamation Board and a bond in the amount required by said Board has been furnished.

8. Cotter Corporation will file an amended application for a radioactive materials license pertaining to the ore sorter within sixty (60) days from April 10, 1980.

Cotter is proceeding to prepare an amended application in conformity with the foregoing. Should you have an additional questions or suggestions, please advise.

Sincerely yours,



Edward J. McGrath

EJM:j

cc: A. Hazle  
J. Rothfleisch

16203