

Memorandum

TO : Ernest D. Campbell, Special Projects
Division, SAN

DATE: NOV 2 1962

FROM : H. E. Book, Radiation Specialist (Supervisory)
Region V, Division of ComplianceSUBJECT: U INSPECTION OF LICENSED OPERATIONS OF U.S. GEOLOGICAL
SURVEY AT PROJECT CHARLOT SITECO: V REB
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In early August, 1962, I discussed with you the possibility of inspecting the licensed operations of USGS at the Project Charlot site in Alaska. The hydrologic run-off studies to be performed at the Project Charlot site were authorized by Amendment No. 8 to AEC license 5-1399-3, which had been issued to U. S. Geological Survey in Denver, Colorado. Responsibility for the inspection of this license is assigned to Region IV, Division of Compliance, Denver, Colorado. Further discussions led to a request from Region IV to this office, Region V, to conduct an assist inspection of the referenced licensed operations.

R. F. Fish, Radiation Specialist, Region V, visited the Project Charlot site at Cape Thompson, Alaska, from August 27 to August 31, 1962. At the time of this inspection visit, the run-off studies had been completed and cleanup of the plots had been effected. All radioactive material had been buried, and the USGS personnel were no longer at the site. This portion of the inspection was therefore confined to radiation surveys of certain plots where isotopes had been used, observation of the burial location, interviews with caretaker personnel at the site, and an interview with a SAN security representative who was present during the tests.

The plots surveyed by Mr. Fish had been cleaned to acceptable levels such that they could be returned to uncontrolled use. The information obtained by Mr. Fish was forwarded to Region IV, Division of Compliance, Denver, Colorado. That office continued the inspection by interviewing the responsible users named on the license, and by examination of records and procedures pertinent to the experiment. Following the inspection, the results of the inspection were discussed by the Region IV inspector with Mr. V. J. [redacted], U.S. Geological Survey, named as a responsible user on the license. Several possible items of noncompliance were discussed. These included lack of records of surveys made of the plots after

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decontamination, disposal by burial in soil of more than 10 CFR 20 specified quantities of radioisotopes, and the use of isotopes in the experiment which were not specifically authorized by the license. It should be noted that the licensee will be officially notified of any items of noncompliance by letter from the Enforcement Branch, Division of Licensing and Regulation.

U I would like to point out at this time that in my opinion, no problems involving health or safety existed during the experiment or presently exist at the Project Chariot site. While items of noncompliance were observed during the inspection, these were all of a technical nature, not affecting health and safety.

There is one condition existing at the site which you may wish to review at some later date. Burial of the radioactive material was accomplished by transporting the contaminated earth to the burial location and mounding clean earth over the contaminated earth. Conventional burial was prevented by the presence of permafrost near the ground surface. Because of this fact, the Division of Compliance did not recommend an item of noncompliance in this regard. However, the Enforcement Branch still may choose to make a citation on this point, since this method is not in strict agreement with 10 CFR 20 requirements. I do not believe that this method of burial poses any radiation safety problem at this time. There is a possibility of the mound of earth "slumping" or eroding over a period of time and exposing the contaminated earth. There also is a possibility of some curious native digging into the mound, particularly if the Commission were to completely abandon the site. Such a possibility would not normally create a health and safety hazard but could generate public relations problems.

Contrary to my earlier belief, I find that the contaminated earth was not enclosed in steel drums at the time of burial, but was merely piled on the ground and a mound of earth formed over it. This would make recovery of the radioactivity very difficult. I believe, however, that should the Commission ever abandon the site, an evaluation of the situation should be made. At that time the decision should be reached whether to attempt recovery of the remaining radioactive material prior to abandonment of the

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