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RICHLAND, WASHINGTON

HANFORD ATOMIC PRODUCTS OPERATION

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August 19, 1954

U. S. Atomic Energy Commission
Hanford Operations Office
Richland, Washington

Attention: D. F. Shaw, Manager

Gentlemen:

CONTROL OF GROUND CONTAMINATION

In the last few months, significant particulate contamination originating in the Redox process has affected substantial portions of the Hanford reservation. The Commission is already aware of the measures taken to rehabilitate regions in which construction work is required to be performed. Decontamination of areas required for use by operations is also being performed.

There remain large areas of the reservation in which particulate contamination exceeds levels that can be considered unequivocally safe and access to which is normally required by selected forces only. The principal contaminant is radioruthenium of which the predominant isotope has a half-life of one year. Solution of the problem by decay is entirely different from our earlier experience with ^{131}I . In the absence of weathering of the contamination, the problem may persist in part for several years. Another troublesome characteristic, not yet fully investigated, is the apparent tendency of the present contamination to be redistributed by wind action.

Two conventional methods of control have been considered.

1. Decontamination
2. Access control

The first method appears to be unnecessarily expensive, and further contra-indicated by the possibility that future emissions may still occur. Although substantial process improvements to reduce emission have recently been effected, it is not yet demonstrable that they will be wholly successful.

CLASSIFICATION CANCELLED

OR CHANGED TO *Cancelled*

BY AUTHORITY OF *J.P. [unclear]*

BY *J.P. [unclear]* DATE *5-10-8*

Springfield 3-10-92

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The alternative normal and reasonable course is to control access to the affected regions. This will include about one-half of the area of the reservation.

To achieve control it is proposed to provide four kinds of signs approximately as follows:

1. Inside each barricade entrance, a billboard advising of contamination in the central area and warning of additional control signs.
2. On all roads and at intersections in the affected areas, signs permitting travel on roadways.

It is yet undecided whether these will need to be of two types representing different degrees of control on primary and secondary roads. (For example, to leave a car to change a wheel will be safe on primary roads, but may require monitoring check on some secondary roads.)

3. "Leaving Contaminated Area" signs.
4. "Contamination - Keep Out" signs at about one-tenth mile intervals around blocks of contaminated ground.

In all, some 1700 signs will be required at a cost of approximately \$30,000.

This control program, although normal in function and principle, is more extensive than personnel in the reservation have experienced. The relations problem will be a severe one, and educational efforts to assure ready compliance without excitation of undue alarm will be needed. The help of the Commission in this phase, as it affects construction contractors and the like, will be essential.

The appropriate control of military forces within the reservation introduces special problems. The existing fine cooperation between these forces, the AEC, and ourselves should permit a mutually satisfactory plan to be worked out.

It is our present intent to attempt the necessary orientation without public release of information. However, the program is so large that publicity may be unavoidable. A suitable press story will be prepared so that outside questions could be answered, if necessary.

We would appreciate your comments on this general program, and will plan to work directly with your associates as the details are developed.

Very truly yours,

RESERVED
W. G. PARKER

Director,
RADIOLOGICAL SCIENCES DEPARTMENT

WM PARKER:MDS

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