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326 U.S. ATOMIC ENERGY
COMMISSION

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FOAT-1

10 NOV 1949
RCC1.950330.033

Mr. S. C. Schlemmer
Manager, Hanford Operations Office
U. S. Atomic Energy Commission
P. O. Box 550
Richland, Washington

OSD ATSD(AE) DECLASSIFICATION REVIEW
BOARD COMPRISED OF REPRESENTATIVES
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Dear Mr. Schlemmer:

This letter will confirm the arrangements made on 25 October 1949 between Dr. William B.erry of this Headquarters; representatives of the Health Instruments Division and the Production Division; and Lt. E. E. Earlan, Air Weather Service, USAF.

At the above conference an agreement was reached concerning a proposed experiment in the detection and measurement of the distribution of stack effluents following the solution of 20 day slugs. The plan agreed upon is as follows:

a. One ton of 20 day slugs to be dissolved, subject to atmospheric and other necessary conditions, on 26 November 1949, in a manner which will least interfere with production but which will give a minimum dilution of the effluents with "heel" material.

b. Special flights to be conducted over and in the vicinity of the Hanford area with a specially equipped C-47 aircraft of the Air Weather Service for the detection and sampling of the stack effluents.

c. The C-47 aircraft to be equipped in accordance with instructions contained in letter to Commander, Military Air Transport Service, Attn: Chief, Air Weather Service, dated 10 November 1949, subject: "Detection of Stack Effluents," copy attached.

d. The Health Instruments Division to furnish and aid in the operation of the following equipment in the C-47 aircraft:

- (1) Filters specially prepared for the collection of iodine.
- (2) Large scrubbing unit for collection of iodine.
- (3) H.I.D. silver reactor for collection of iodine.
- (4) H.I.D. Halogen detectors.

Remainder of equipment required to be furnished by the Air Weather Service.

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| AA S. WIS GALL | 11/2/54 |
| REVIEWER (ADD): | |
| NAME: <u>ML KOLBAM</u> | |
| DATE: <u>11/7/54</u> | |

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e. Air Weather Service to make necessary arrangements for participation by personnel of the Health Instruments Division in such flights as may be desired.

f. The Health Instruments Division to plan and implement all experiments on the ground to make full use of the opportunities afforded by this special solution.

g. Air Weather Service to augment the normal on-site weather observations with additional observations taken off-site as necessary.

h. The Health Instruments Division to complete studies of the samples obtained with its equipment.

Dr. William D. Urry will be present at Hanford during the test as technical representative for this office.

It would be appreciated if a report of the results obtained by the Health Instruments Division is forwarded to this Headquarters.

The security classification of all nuclear data from these tests is AEC RESTRICTED DATA, Type A, military SECRET. The classification of the meteorological data from these tests is military SECRET.

The possibility of the detection of stack effluents is of great importance to the intelligence requirements of the country and your excellent cooperation, both in the past and in connection with the proposed operation, is appreciated.

Sincerely,

E. R. WILSON
Major General, USAF
Chief, AF047-1
Office for Atomic Energy, DCS/O

Incl.
Cy SEC Ltr to Cdr, WATS
(Attn Ch, AES), 10 Nov 49

cc: Dr. H. W. Parker (Hanford)
Mr. V. R. Holquist (Hanford)
Lt. E. E. Sarlam (e/o Hanford)
Mr. A. V. Peterson (AFU)
Mr. L. Joe Deal (AIC) ✓
Cdr WATS (Chief, AES)

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ATOMIC ENERGY ACT - 1946
SPECIFIC RESTRICTED DATA CLEARANCE REQUIRED

DOE ARCHIVES

SECRET RD
AUTH CS, USAF
M. R. N.
10 Nov 49

AFOAT-1

SUBJECT: Detection of Stack Effluents

10 NOV 1949

TO: Commander
Military Air Transport Service
Andrews Air Force Base
Washington 20, D. C.
ATTN: Chief, Air Weather Service
(Major G. M. Leies)

1. In furtherance of the research and development program being conducted by this Headquarters (AFOAT-1) it is planned to conduct a test of the detection and measurement of the stack effluent of the Hanford Engineer Works, Hanford, Washington, on 26 November 1949, in accordance with plans made at a conference held at Hanford, Washington on 25 October 1949.

2. The test will be under the supervision of Dr. William D. Urry of this Headquarters, who will coordinate the activities of the Hanford Operations Office and the Air Weather Service.

3. It is desired that the Air Weather Service participate in this test to the following extent:

a. Operate the C-47 aircraft now engaged in research activities in the Hanford area over and outside the Hanford area in accordance with instructions furnished to Lt. W. E. Harlan of the Air Weather Service at the conference referred to in paragraph 1 above. This aircraft will be equipped with the following instruments:

- (1) Gamma-ray recording meter.
- (2) Aircraft filter unit for particle collection.
- (3) AMC wrap-around counter.
- (4) Recording apparatus for measurement of atmospheric conductivity.
- (5) Beta-ray counter mounted externally.
- (6) Filters specially prepared for the collection of iodine.
- (7) Large scrubbing unit for the collection of iodine.

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| SINGLE REVIEW AUTHORIZED BY: AB S. A. G. 11/2/49 |
| REVIEWER (ADD): M. L. KOLBY |
| NAME: 11/7/49 |
| DATE: |

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RESTRICTED DATA
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SUBJECT: Detection of Stack Effluents

(8) H.I.D. silver reactor for collection of iodine.

(9) H.I.D. Halogen detectors.

Items (1) through (5) above will be provided by the Air Weather Service. Items (6) through (9) will be provided and operated by the Health Instruments Division, Hanford Operations Office, AEC. All modifications to the aircraft necessary for the installation of the above equipment will be made by or arranged for by the Air Weather Service.

b. Make necessary arrangements for members of the Health Instruments Division to participate in the flights as required.

c. Establish and operate one (1) rawind and radiosonde portable unit near Richland, Washington, and such extra pibal stations at surrounding off-site locations as may be required.

d. Establish liaison with the meteorologists of the Hanford Operations Office and coordinate all meteorological facilities in the area to obtain all possible data at the time of the test, including extra pibal measurements. Mr. Philip Allen of this Headquarters will be available during the test to assist in this task.

e. Upon the conclusion of this test the Air Weather Service will prepare and submit a report on the meteorological measurements to this Headquarters without delay. This report may be prepared jointly with that of the H.I.D. or separately as desired. Nuclear data taken with instruments (1) through (5) (paragraph 3a above) will be turned over to Dr. William D. Urry immediately upon completion of each flight for inclusion in an integrated H.I.D./AFOAT-1 final report on the nuclear phase of this experiment.

4. Funds allocated to your Headquarters for AFOAT-1 Project B/2 may be used for this operation in an amount not to exceed \$10,000.

5. The security classification of all nuclear data from these tests is AEC RESTRICTED DATA, Type A, military SECRET. The classification of the meteorological data from these tests is military SECRET.

FOR THE CHIEF OF STAFF:

Incl.

Cy SRD Ltr to Mr Schlemmer,
Hanford Operations Office

MR. R. NELSON
Major General, USAF
Chief, AFOAT-1
Office for Atomic Energy, DCS/O

cc: Dr. H. M. Parker (Hanford)
Lt. W. E. Harlan (c/o Hanford)

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ATOMIC ENERGY ACT - 1946