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Richard J. Thompson

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Secretary



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STATE OF WASHINGTON

DEPARTMENT OF SOCIAL AND HEALTH SERVICES

Olympia, Washington 98504-0095

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AUG 16 1989

August 14, 1989

ERD/P & P RR

Michael J. Lawrence, Manager
U. S. Department of Energy
Richland Operations Office
P.O. Box 550
Richland, WA 99352

Dear Mr. Lawrence:

We have received the requested registration materials for all U.S. Department of Energy (DOE) operated sources of radioactive air emissions on the Hanford Reservation. Based upon our review of this information, including a preliminary radiation dose assessment, and receipt of the registration fee, we are issuing you the enclosed permit in accordance with chapter 402-80-060 WAC.

Prior to submitting the source registrations, we agreed with your staff to keep the initial required information simple to expedite the permitting process. Please note that one of the permit requirements is to submit by September 1, 1990, supplemental information for the department to do an indepth assessment of compliance with the radioactive air emissions regulations. The supplemental information to be provided is described in the enclosed material. The permit is good for two years. We feel this provides a workable time schedule within which we can make a more comprehensive assessment of compliance.

We thank you for your continued cooperation and look forward to working with your staff on these issues. If you have any questions please contact me at 206/586-3303.

Sincerely,

Robert R Mooney

Robert R. Mooney, Head
Environmental Radiation Section
Division of Radiation Protection



RRM/DP:sg

Enclosures

cc: T. R. Strong
E. A. Bracken
Tony Knepp
File: V.1
File: V.4

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STATE OF WASHINGTON
DEPARTMENT OF SOCIAL AND HEALTH SERVICES

Olympia, Washington 98504-0095

INSTRUCTIONS FOR SUBMISSION
OF
SUPPLEMENTAL INFORMATION
FOR
RADIOACTIVE AIR EMISSIONS SOURCES

I. Facility Information

Describe the facility/facilities operations (chemical and physical). Identify the facilities as they were identified on the source registration form(s). Supply blueprints or drawings.

II. Source Information

- A. List the source(s) to which the information in this section pertains. Identify all sources consistent with the source registration identification.
- B. Describe the sources. Supply blueprints or drawings. Include the following information for each source:
1. System function/area exhausted
 2. Effluent system layout (filters, absorbers, exhausters, etc.)
 3. Efficiency values of each control device for removal of radioactivity (e.g., filter efficiencies, etc.)
 4. Means and frequency of testing effluent system
 5. Operating mode (continuous or batch; give % of time operated)
 6. Chemical and physical forms of the releases. For chemical forms indicate the radioactive chemical compounds and ICRP 26 solubility classes of the radioactive elements or compounds; for physical forms indicate whether particulate, vapor or gas.
 7. Stack (or release point) data:
 - a. height from ground/inside diameter (meters)
 - b. building height (meters)
 - c. building width/length (meters). Needed only if stack height is less than 2.5 times building height and source to receptor distance is less than 1000 meters.
 - d. annual average stack and ambient air temperatures (degrees F)

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- e. windrose
- f. Chi/Q data, if it exists (sec/cubic meter)
- g. annual average volumetric flow rate (cubic meter/sec)
- h. release rates. Annual average release rates in Ci/yr for each radionuclide from each source. The facility inventory should be listed and compared to that fraction available for potential airborne release.

C. Describe the sampling/monitoring system(s). Supply blueprints or drawings. Include the following information for each source:

1. Stack flow measuring system
2. Sample probes (isokinetic). For exemption from isokinetic sampling, operator must demonstrate that no particulate fraction is possible.
3. Number and location of sampling points
4. Description of sample lines including: diameters, lengths, materials, bends (radii), entry points into effluent line and angles of entry into effluent.
5. Sample flow regulation
6. Sampling media (filters, silica gels, charcoal, etc.)
7. Frequency of sampling (continuous or batch)
8. Frequency of sample collection

III. General Information

- A. Effluent sampling/monitoring systems designs, procedures and quality assurance must be consistent with accepted industry standards. Reference the appropriate standards and describe how they have been used -- e.g., ANSI N13.1-1969; ANSI N323-1978; ANSI N42.18-1980; 40 CFR 61, App. A and B; etc. Include calibration schedule and the frequency of audits and inspections. Submit copies of procedures used.
- B. Effluent sample analysis (provide documentation):
 1. Methodology
 2. Procedure references
 3. Detection limits
 4. Quality assurance (include internal audit schedule and results)
- C. Environmental monitoring program. Give a description of the program and a summary of the data (including background or control station data) which relate to assessing possible environmental impacts from radioactive airborne releases from the registered sources. Include copies of applicable procedures.

IV. Demonstration of Compliance

- A. Give methodology used to demonstrate compliance (specify computer model or manual method).

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- B. Include all input data used.
 - C. Present the results. Unless demonstration of compliance is by the EPA COMPLY code "possession" or "concentration" method, the results should be calculated annual dose equivalents in mrem/yr for the whole body and relevant organs of the nearest resident or the maximally exposed hypothetical member of the public.
 - D. Describe any internal standards used to ensure compliance with applicable state and federal laws and regulations. Include copies of those standards.
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For more information, questions or comments contact:

Don Peterson
Environmental Protection Section
Office of Radiation Protection
Dept. of Social & Health Services
M/S LE-13
Olympia, Wa. 98504
Phone: 206/586-3310

PROC AIR-01/4-89

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**STATE OF WASHINGTON
DEPARTMENT OF HEALTH
RADIOACTIVE AIR EMISSIONS PERMIT**

Pursuant to the Nuclear Energy and Radiation code (RCW 70.98) and Monitoring and Enforcement of Air Quality and Emission Standards for Radionuclides (WAC 402-80), a permit is hereby issued authorizing the permittee described below to operate an existing facility(s) constructed prior to August 10, 1988 under the conditions specified below.

PERMITTEE (SOURCE OPERATOR) NAME: Michael J. Lawrence, Manager ADDRESS: U.S. Department of Energy Richland Operations Office P.O. Box 550, Richland, WA 99352	PERMIT NUMBER: FF-01	
	PERMITTED AREA: Hanford Reservation	
	DATE EFFECTIVE: 8/15/89	EXPIRATION DATE: 8/15/91

FACILITY DESCRIPTION (BRIEF)

Operations of U.S. Department of Energy facilities in the 100, 200, 300, 400 and 600 Areas of the Hanford Reservation related to fuel reprocessing, radioactive waste handling and disposal, research and development and other nuclear operations having the potential to emit airborne radioactivity.

CONDITIONS AND LIMITATIONS

The collective emissions from all registered sources from all areas on the reservation shall meet the emission requirements of Chapter 173-480-040 WAC.

Operations shall be consistent with the federal Clean Air Act, the Washington Clean Air Act (RCW 70.94) and WAC 402-80.

Facilities built or sources modified after August 10, 1988 shall be registered separately. (No additional registration fee will be required.)

Supplemental information shall be submitted by September 1, 1990.

Site inspections must be allowed following DOE security access requirements.

The department shall be notified of any source location changes.



Division of
Radiation
Protection

For The Division of Radiation Protection

Robert R. Mooney

Robert R. Mooney, Head, Environmental Radiation Section

8-14-89

Date

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CORRESPONDENCE DISTRIBUTION COVERSHEET

Author	Addressee	Correspondence No.
R. R. Mooney, DOH	M. J. Lawrence, DOE-RL	Incoming 9003413

Subject: HANFORD SITE RADIOACTIVE AIR EMISSIONS PERMIT FF-01, SUPPLEMENTAL INFORMATION

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