

STATE OF IDAHO  PERMIT TO CONSTRUCT AN AIR POLLUTION EMITTING SOURCE	PERMIT NUMBER 0 2 3 - 0 0 0 0 1  AQCR CLASS SIC 0 6 1 A 1 9 9 9 9  ZONE UTM COORDINATE (km) 1 2 3 6 6 3 4 8 2 8 1
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1. PERMITTEE Department of Energy - Idaho National Engineering & Environmental Laboratory/ICFP			
2. PROJECT New Waste Calcining Facility/Decontamination Area			
3. MAILING ADDRESS 850 Energy Drive	CITY Idaho Falls	STATE Idaho	ZIP CODE 83401
4. SITE LOCATION COUNTY Butte	NO. OF FULL TIME EMPLOYEES 4,832 (INEEL Site)	TELEPHONE NUMBER (208) 526-1925	
5. PERSON TO CONTACT Richard Cullison	TITLE DOE/Environmental Programs		
6. EXACT PLANT LOCATION The NWCF is located within the ICPP at the INEEL in Butte County Idaho. The approximate stack location is Latitude North 43°34'21.6", Longitude West 112°55'54.5". UTM coordinates are N 4826.01 km and E 344.08 km.			
7. GENERAL NATURE OF BUSINESS & KINDS OF PRODUCTS Government Energy and Environmental Research and Development, and Nuclear Waste Management.			
8. GENERAL CONDITIONS This permit is issued according to the Rules for the Control of Air Pollution in Idaho, Section 16.01.01.200, and pertains only to emissions of air contaminants that are regulated by the State of Idaho and to the sources specifically allowed to be constructed by this permit.  This permit (a) does not affect the title of the premises upon which the equipment is to be located, (b) does not release the permittee from any liability for any loss due to damage to person or property caused by, resulting from, or arising out of the design, installation, maintenance, or operation of the proposed equipment, (c) does not release the permittee from compliance with other applicable federal, state, tribal or local laws, regulations, or ordinances, (d) in no manner implies or suggests that the Idaho Department of Health and Welfare, Division of Environmental Quality (DEQ) or its officers, agents, or employees, assumes any liability, directly or indirectly, for any loss due to damage to person or property caused by, resulting from, or arising out of design, installation, maintenance, or operation of the proposed equipment.  This permit is not transferable to another person, place, piece or set of equipment. This permit will expire if construction has not begun within two years of its issue date or if construction is suspended for one year.  This permit has been granted on the basis of design information presented with its application. Changes of design or equipment that result in any change in the nature or amount of emissions must be approved in advance by the DEQ unless exempted by the Rules for the Control of Air Pollution in Idaho Sections 220 through 225.			

*Deville D. Green*

ASSISTANT ADMINISTRATOR  
DIVISION OF ENVIRONMENTAL QUALITY

DATE: December 17, 1997

## PERMIT TO CONSTRUCT

## P E R M I T N U M B E R

## PERMITTEE, PROJECT, AND LOCATION

DOE - Idaho Chemical Processing Plant  
 NWCF  
 Idaho Falls, Idaho

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## SOURCE

Government Energy Research and Development

1. EMISSION LIMITS

Radionuclide emissions emanating from the New Waste Calcining Facility (NWCF) subsystem HVAC stack along with all other airborne radionuclides from all DOE/INEEL facilities shall not result in an effective dose equivalent to the maximally exposed off-site member of the public where there is a residence, school, business, or office which exceeds ten (10) millirems per year (mrem/yr) as per 40 CFR 61.92 and 94. Furthermore, radionuclide emissions emanating from the debris treatment exclusive of all other DOE/INEEL emissions shall not result in an effective dose equivalent at any business, school, or residence which equals or exceeds 0.10 millirems per year (mrem/yr).

Emission requirements, as well as all requirements to this Permit to Construct (PTC), apply to the calciner area HVAC subsystem and associated stack in the New Waste Calcining building (CPP-679) at the Idaho Chemical Processing Plant (ICPP). The stack is designated as emission source CPP-659-033.

2. OPERATING REQUIREMENTS

- 2.1 Testable HEPA filter, or HEPA filter stage particle removal, efficiency shall be maintained at or above 99.97% removal efficiency as determined by guidelines of the American Society of Mechanical Engineers (ASME) N510, Section 10.
- 2.2 If the removal efficiency of the testable HEPA filter or HEPA filter stage elements falls below 99.97%, as determined by the guidelines of N510, Section 10, the testable HEPA filter or HEPA filter stage shall be isolated or replaced within ten (10) days until the required efficiency is achieved.

Each testable HEPA filter or filter stage shall be operated at a pressure drop that is limited to a maximum of 5.0 inches water column. If the total pressure drop across a HEPA filter or HEPA filter stage exceeds 5.0 inches water column, the permittee shall isolate it or replace it within ten (10) days.

- 2.4 Pressure monitoring devices shall be maintained in good working order to enable monitoring of operating pressure drop across the testable HEPA filter stages.

Operators shall be alerted of a degraded HEPA filter (breached, plugged, or leaking) by a monitor alarm or by differential pressure readings across the HEPA filters.

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The facility shall process, within a 12-month period, a maximum of 600 m<sup>3</sup> of INEEL-generated debris in the existing NWCF cells, decontamination cubicles, and glove box.

Debris generated outside the INEEL shall be processed in the facility only upon written consent of the DEQ.

3. MONITORING REQUIREMENTS

The permittee shall conduct an in-place efficiency test on the testable HEPA filters or filter stages, as applicable. The periodic in-place efficiency test shall be conducted at least once every 12 months, per Nuclear Air Cleaning Handbook, ERDA 76-21, Section 8.3.5, "Frequency of Testing." Testing shall be conducted using guidelines of ASME N510, Section 10, "HEPA Filter Bank In-Place Test." In addition, after replacement or installation of a HEPA filter, an in-place efficiency test shall be conducted within 90 days of the date that the HEPA filter is placed in operation.

3.2 Pressure monitoring devices shall be installed to enable monitoring of pressure drop across the testable HEPA filters. An alarm system shall be activated by the pressure monitoring system when the pressure drop reaches or exceeds 5.0 inches water column. The pressure drop monitoring equipment shall be maintained in good working order. Pressure drop shall be checked daily.

3.3 The permittee shall monitor and test emissions of radionuclides from the NWCF calciner subsystem HVAC stack pursuant to 40 CFR 61.93(b)(2) requirements.

The amount of mixed debris processed shall be monitored and recorded on a quarterly basis and the most recent two (2) years' compilation of data shall be kept on site, in a log, and be made available to DEQ representatives upon request.

4. REPORTING REQUIREMENTS

The results of the initial performance test of the HEPA filter shall be reported to the DEQ within 30 days of performing the test.

The permittee shall compile, keep on site, and make available to the DEQ upon request, a quarterly record of the following information:

4.2.1 The dates and results of all HEPA filter efficiency tests using the ASME N510, Section 10 guidelines.

4.2.2 The dates of replacement of HEPA filter elements

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- 4.2.3 All HEPA filters or HEPA filter stage alarms and a record of pressure readings above 5.0 inches water column.
- 4.2.4 The permittee shall submit an annual report to the DEQ indicating the highest dose equivalent as required in 40 CFR.61.94.

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## PERMIT TO CONSTRUCT GENERAL PROVISIONS

All emissions authorized herein shall be consistent with the terms and conditions of this permit and the Rules for the Control of Air Pollution in Idaho. The emission of any pollutant in excess of the limitations specified herein, or noncompliance with any other condition or limitation contained in this permit, shall constitute a violation of this permit and the Rules for the Control of Air Pollution in Idaho, and the Environmental Protection and Health Act, Idaho Code 39-101, et. seq.

- B. The permittee shall at all times (except as provided in the Rules for the Control of Air Pollution in Idaho) maintain in good working order and operate as efficiently as practicable, all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable Idaho laws for the control of air pollution.
- C. The permittee shall allow the Director, and/or the authorized representative(s), upon the presentation of credentials:
1. To enter at reasonable times upon the premises where an emission source is located, or in which any records are required to be kept under the terms and conditions of this permit; and
  2. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit, to inspect any monitoring methods required in this permit, and require stack emission testing in conformance with the DEQ's Procedures Manual for Air Pollution Control when deemed appropriate by the Director.
- D. Nothing in this permit is intended to relieve or exempt the permittee from compliance with any applicable federal, state, or local law or regulation, except as specifically provided herein.

The permittee shall notify the DEQ, in writing, of the required information for the following events within five (5) working days after occurrence:

1. Initiation of Construction - Date
  2. Completion/Cessation of Construction - Date
  3. Actual Production Start-up - Date
  4. Initial Date of Achieving Maximum Production Rate - Production Rate and Date
- F. If emission testing is specified, the permittee must schedule such testing within sixty (60) days after achieving the maximum production rate, but not later than one hundred and eighty (180) days after initial start-up. Such testing must strictly adhere to the procedures outlined in the DEQ's Procedures Manual for Air Pollution Control, and shall not be conducted on weekends or state holidays without prior written DEQ approval. Testing procedures and specific time limitations may be modified by the DEQ by prior negotiation if conditions warrant adjustment. The DEQ shall be notified at least fifteen (15) days prior to the scheduled compliance test. Any records or data generated as a result of such compliance test shall be made available to the DEQ upon request.

The maximum allowable operating rate shall be limited to 120% of the average operating rate attained during any performance test period, for which a test protocol has been granted prior approval by the DEQ, unless (1) a more restrictive operating limit is specified elsewhere in this permit, or (2) at such an operating rate, emissions would exceed any emission limit(s) set forth in this permit, or (3) the test demonstrates noncompliance.

The provisions of this permit are severable, and if any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

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