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STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

Mail Stop PV-11 • Olympia, Washington 98504-8711 • (206) 459-6000

November 22, 1993

Mr. Jim Bauer
U.S. Department of Energy
PO Box 550 A5-15
Richland, WA 99352-0550

Dear Mr. Bauer:

Re: Notice of Construction Air Permit for the Rotary Mode Sampler Exhauster

Enclosed you will find the Notice of Construction (NOC) Air Permit for the unit mentioned above. Ecology is issuing this permit to the Department of Energy (DOE) based on verbal assurance by members of your staff regarding the submittal of additional information on emissions from the diesel generator to be used for power supply. This generator is considered part of the emission control unit, and as such, the information concerning emissions from this unit are part of this system. We are issuing this permit as part of a good faith effort to expedite the sampling of waste tanks. This sampling and analysis is vital to the safe operations of the tank farms, and the timely collection of information necessary to support retrieval, pretreatment, and disposal planning. We request that you submit the information on the diesel generator to Bob King upon receipt of this permit. We will let you know if any changes to the permit or your power source are required as a result of this submittal.

Ecology will continue to work with the DOE and their contractors in efforts to expedite the permitting and regulatory processes under our control. We hope that you will join us in these efforts. If you have any questions about this letter, please contact Bob King at (206) 407-7147.

Sincerely,

David B. Jansen, P.E.
ETASI Section Manager
Nuclear and Mixed Waste Management Program

DBJ:jr

cc: Tanya Barnett, AG
Steve Stites, DOE
Cathy Sowa, WHC
Becky Austin, WHC
John Clark, DOE
Doug Sherwood, EPA

WASHINGTON DEPARTMENT OF ECOLOGY
P O Box 47600
OLYMPIA, WASHINGTON 98504-7600

IN THE MATTER OF:	]	NO. NOC-93-04
	]	APPROVAL OF NOC
United States Department of Energy	]	APPLICATION FOR
Rotary Mode Core-Sampling Truck	]	NONRADIOACTIVE AIR
Richland, Washington	]	EMISSIONS

In June, 1993 the United States Department of Energy (Energy) submitted a Notice of Construction (NOC) application to construct a new air emission unit - a Rotary Mode Core-Sampling Truck and Exhauster. The truck and exhauster will be located in the 200 East and 200 West Area Tank Farms of the Hanford Site.

DESCRIPTION

1. The rotary mode core-sampling truck will be used for approximately 80 single-shell tanks (SSTs) that contain saltcake waste. In the first two years of operation, the truck will take core samples from approximately 30 tanks which have already been identified in this NOC application.
2. An exhauster will be used during operation of the rotary mode core-sampling system on SSTs to prevent tank pressurization and to control air emissions. This exhauster will be moved from one tank farm to another tank farm with the rotary mode core-sampling system. The exhauster includes high efficiency particulate air filters, a fan, a stack and a monitor.
3. Each tank will take approximately one month to sample. The total sampling time includes set-up and break-down time, in addition to the time needed to move the truck once at each tank (i.e., to allow two complete cores to be taken). The exhaust system will only be operated while sampling activities are underway (one or two 8-hour shifts of active sampling each day).
4. Energy proposes high efficiency particulate air (HEPA) filters to control particulates for this

unit. The proposal does not include controls for organic and inorganic vapors, because the emissions will be negligable, and the potential controls will be economically infeasible. After having reviewed the NOC application, the department has determined the proposal meets the best available control technology for air toxics (T-BACT).

5. The estimated toxic air pollutants to be emitted to the atmosphere for benzene and carbon tetrachloride are 1.36 and 1.34 pounds per year, respectively. The estimated ammonia emissions will be 200 parts per million (ppm).

6. The Total Organic Carbon (TOC) monitor will record the total amount of organic compounds emitted to the atmosphere. A calculation of emissions of each compound can be determined, based on the TOC value and the preoperational vapor sampling, assuming the same ratio of components.

7. A diesel generator (250 kW) will be used with the core-sampling unit. It will emit the following air pollutants: NOx, hydrocarbons, CO, aldehydes, sulfur dioxide, and particulates. 2.2 tons of NOx per 1,000 hours of operation will be emitted from this generator.

Pursuant to the Washington State regulations for the Notice of Construction (NOC) set forth in Chapter 173-400 WAC and Chapter 173-460 WAC, the new source review sections- WAC 173-400-110 and 173-460-040 and based upon the complete NOC application submitted by Energy, the Department of Ecology (the department) hereby approves the application subject to the following conditions:

CONDITIONS

1. The stack height of the exhauster shall be at least 15 feet with inside diameter of 4 inches. Opacity from the stack shall not exceed 5 percent as measured by EPA Reference Method 9 as described in 40 CFR Part 60, Appendix A, dated July 1, 1992. Results of opacity measurement of the tank shall be provided to the department. Any excess of five percent opacity limit shall be reported to the department.

2. Energy shall conduct a vapor composition analysis for each tank to be core-sampled. If the

results of this analysis conclude that the concentration of any pollutant exceeds the maximum concentration of that pollutant listed in Section 6.0 of this NOC application, Energy shall contact to the department within a week of receiving the results of the analysis and that tank shall not be rotary mode core-sampled.

3. Energy shall provide the department the method for calculating TOC limits for approval prior to initiating core-sampling activities in the first tank.

4. The operation of sampling activity shall be stopped if the gaseous flow in the HEPA filters has more than 80 percent relative humidity at anytime.

5. Energy shall develop and comply with an operation and maintenance manual for all equipment that has the potential to affect emissions to the atmosphere. Copies of the manual shall be available to the department. Energy shall also develop and follow an operation and maintenance plan to implement procedures and control methods described in the NOC application as T-BACT prior to start-up of any new or modified emission units or process equipment, in accordance with WAC 173-460-040(8) dated June 18, 1991. Prior to implementation, Energy shall submit the plan to the department for approval.

6. Operation and maintenance of equipment that has the potential to affect emissions to the atmosphere must be conducted in compliance with all emission data submitted as part of the NOC application unless otherwise approved by the department.

7. This final approval shall become void if construction of this unit is not commenced within eighteen (18) months after issuance of the final approval, or if construction or operation of these units is discontinued for eighteen (18) months.

8. Any activity undertaken by Energy, in a manner that is inconsistent with the application or this final approval, shall be subject to department enforcement under applicable regulations. Nothing in this determination shall be construed to relieve Energy of its obligations under any local, state, or federal laws or regulations.

9. Access to the unit by the department shall be permitted upon request for the purpose of

compliance assurance inspections. Failure to allow access is grounds for enforcement action.

10. Energy shall not make any changes in the designs of the proposed air emission control systems without first notifying the department and receiving its approval of the changes. The department may require a new approval or a modification of this final approval.

11. A standard commercially available diesel generator shall be used to provide power to the system. It will be a new generator acquired from a manufacturer licensed to meet nationally applicable emission limitations for such generators and be fueled, maintained, and operated with in accordance with manufacturer recommendations. Operation in excess of 6,000 hours per year shall be reported to the department.

APPROVED BY:

David B. Jansen, P.E.
Nuclear and Mixed Waste Management
Department of Ecology

11/22/1993
Date

Myron B. Saikewicz, P.E.
Engineering and Technical Services
Air Quality Program
Department of Ecology

11/22/93
Date

CORRESPONDENCE DISTRIBUTION COVERSHEET

Author	Addressee	Correspondence No.
D. B Jansen, Ecology (C. E. Sowa, WHC)	J. D. Bauer, RL	Incoming:9400609 XRef:9307018 30952 XRef:9357267D 30951

Subject: NOTICE OF CONSTRUCTION AIR PERMIT FOR THE ROTARY MODE SAMPLING EXHAUSTER

INTERNAL DISTRIBUTION

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