



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.

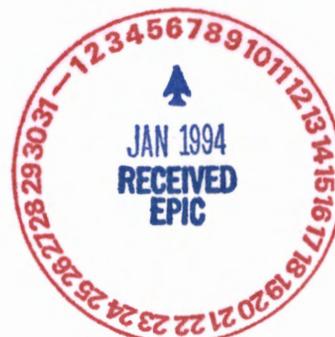
Ecology will continue to work with the DOE and their contractors in efforts to expedite the permitting and regulatory processes under our control. We hope that you will join us in these efforts. If you have any questions about this letter, please contact Bob King at (206) 407-7147.

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



DEC 1993
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Becky A. Austin

1 WASHINGTON DEPARTMENT OF ECOLOGY
2 P O Box 47600
3 OLYMPIA, WASHINGTON 98504-7600
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9 IN THE MATTER OF:] NO. NOC-93-04
10] APPROVAL OF NOC
11 United States Department of Energy] APPLICATION FOR
12 Rotary Mode Core-Sampling Truck] NONRADIOACTIVE AIR
13 Richland, Washington] EMISSIONS
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17 - - In June, 1993 the United States Department of Energy (Energy) submitted a Notice of Construction
18 (NOC) application to construct a new air emission unit - a Rotary Mode Core-Sampling Truck and
19 Exhauster. The truck and exhauster will be located in the 200 East and 200 West Area Tank Farms of
20 the Hanford Site.

21 DESCRIPTION

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

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

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

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

46 7. A diesel generator (250 kW) will be used with the core-sampling unit. It will emit the
47 following air pollutants: NO_x, hydrocarbons, CO, aldehydes, sulfur dioxide, and particulates.
48 2.2 tons of NO_x per 1,000 hours of operation will be emitted from this generator.

49
50 Pursuant to the Washington State regulations for the Notice of Construction (NOC) set forth in Chapter
51 173-400 WAC and Chapter 173-460 WAC, the new source review sections- WAC 173-400-110 and
52 173-460-040 and based upon the complete NOC application submitted by Energy, the Department of
53 Ecology (the department) hereby approves the application subject to the following conditions:

54 **CONDITIONS**

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

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

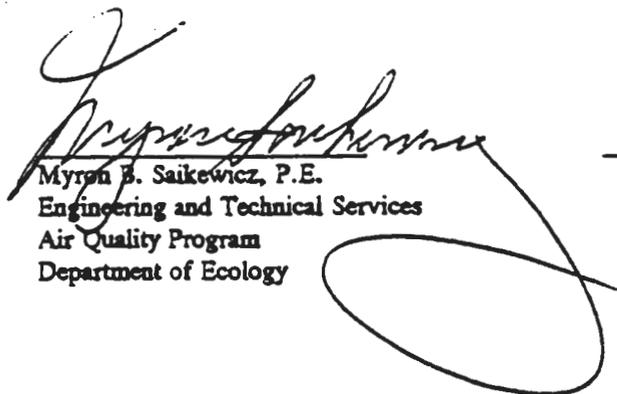
- 61 results of this analysis conclude that the concentration of any pollutant exceeds the maximum
62 concentration of that pollutant listed in Section 6.0 of this NOC application, Energy shall
63 contact to the department within a week of receiving the results of the analysis and that tank
64 shall not be rotary mode core-sampled.
- 65 3. Energy shall provide the department the method for calculating TOC limits for approval prior
66 to initiating core-sampling activities in the first tank.
- 67 4. The operation of sampling activity shall be stopped if the gaseous flow in the HEPA filters has
68 more than 80 percent relative humidity at anytime.
- 69 5. Energy shall develop and comply with an operation and maintenance manual for all equipment
70 that has the potential to affect emissions to the atmosphere. Copies of the manual shall be
71 available to the department. Energy shall also develop and follow an operation and
72 maintenance plan to implement procedures and control methods described in the NOC
73 application as T-BACT prior to start-up of any new or modified emission units or process
74 equipment, in accordance with WAC 173-460-040(8) dated June 18, 1991. Prior to
75 implementation, Energy shall submit the plan to the department for approval.
- 76 6. Operation and maintenance of equipment that has the potential to affect emissions to the
77 atmosphere must be conducted in compliance with all emission data submitted as part of the
78 NOC application unless otherwise approved by the department.
- 79 7. This final approval shall become void if construction of this unit is not commenced within
80 eighteen (18) months after issuance of the final approval, or if construction or operation of
81 these units is discontinued for eighteen (18) months.
- 82 8. Any activity undertaken by Energy, in a manner that is inconsistent with the application or this
83 final approval, shall be subject to department enforcement under applicable regulations.
84 Nothing in this determination shall be construed to relieve Energy of its obligations under any
85 local, state, or federal laws or regulations.
- 86 9. Access to the unit by the department shall be permitted upon request for the purpose of

87 compliance assurance inspections. Failure to allow access is grounds for enforcement action.
88 10. Energy shall not make any changes in the designs of the proposed air emission control systems
89 without first notifying the department and receiving its approval of the changes. The
90 department may require a new approval or a modification of this final approval.
91 11. A standard commercially available diesel generator shall be used to provide power to the
92 system. It will be a new generator acquired from a manufacturer licensed to meet nationally
93 applicable emission limitations for such generators and be fueled, maintained, and operated
94 with in accordance with manufacturer recommendations. Operation in excess of 6,000 hours
95 per year shall be reported to the department.

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99 APPROVED BY:

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106 David B. Jansen, P.E.
107 Nuclear and Mixed Waste Management
108 Department of Ecology
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115 11/22/1993
Date

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

11/22/93
Date

CORRESPONDENCE DISTRIBUTION COVERSHEET

Author D. B Jansen, Ecology (C. E. Sowa, WHC)	Addressee J. D. Bauer, RL	Correspondence No. Incoming: 9400609 XRef: 9307018 30952 XRef: 9357267D 30951
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Subject: NOTICE OF CONSTRUCTION AIR PERMIT FOR THE ROTARY MODE SAMPLING EXHAUSTER

INTERNAL DISTRIBUTION

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