

Incoming:9403803



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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

May 31, 1994

Mr. James D. Bauer, Program Manager
Department of Energy
P. O. Box 550
Richland, Washington 99352



Dear Mr. Bauer:

Re: The Notice of Construction (NOC) Permit for the Backup Package Boiler

Your application to construct, install, and operate a backup boiler was received by the Washington Department of Ecology's (Ecology) Nuclear Waste Program on November 23, 1993.

The approval of this application is attached for your use. Failure to meet the approval conditions may result in the revocation of this permit, the issuance of Notices of Violation, the imposition of civil penalties, and other civil or criminal actions as provided for in Chapter 70.94 RCW.

An important piece of information needed by Ecology before making a BACT determination, is a BACT analysis for the emission unit(s) proposed by the applicant. For applicants to conduct a BACT analysis, the EPA's guidance document titled, "Top-down" Best Available Control Technology should be followed. One of the well prepared BACT analysis reports this office has reviewed is the BACT analysis for the Waste Receiving and Processing Facility, which was submitted to Ecology by your office on April 2, 1993. Ecology, on a case-by-case basis, takes into account energy, environmental, and economic impacts and other costs, before making a BACT determination. In addition to the proposed BACT analysis report, Ecology might also review existing BACT analyses and determinations of similar emission units as references to conduct a BACT determination for a proposed emission unit. For this package boiler, Ecology's air engineers have used the existing BACT analysis (attached) as one of the reference documents to make the BACT determination for your proposed package boiler.

What we consider a reasonable cost for using certain air emission control technology is based on BACT analysis, and some other factors, such as existing BACT determinations for similar air emission units, areas of attainment status, type of emission units, size of emission units, etc. In other words, Ecology will base on the proposed BACT analysis, existing BACT

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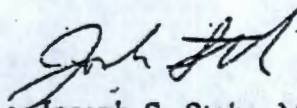
Mr. James D. Bauer
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analyses and determinations, new technologies, and professional judgment to determine a reasonable cost.

One important thing the permit applicant should do is to have a pre-application meeting. This meeting will help the applicant prepare permit applications and BACT analysis reports. Therefore, I would like your staff to meet with Ecology air engineers to discuss any proposed air emission unit(s) before your staff starts to prepare a permit application and a BACT analysis for the application. In addition, I would be happy to work with you and your staff to improve regulatory interactions on air permitting. Our Ecology staff will work with you to set up a meeting in the next month. Please let me know the agenda items you would like to include in this meeting.

If you or your staff have any questions regarding this permit or the BACT determination, please call me at (206) 407-7107, or Bob King at (206) 407-7147. Thanks very much for your cooperation.

Sincerely,



Joseph S. Stohr, Manager
Technical Assistance & Regulatory Coordination Section
Nuclear Waste Program

JSS:BK:dr
Enclosure

cc: Steve Stites, Energy
Ella Coenenberg, WHC

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

IN THE MATTER OF:

NO. NOC-94-06
APPROVAL OF NOC

United States Department of Energy
Backup Package Boiler
Richland, Washington

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On November 23, 1993 the United States Department of Energy (Energy) submitted a Notice of Construction (NOC) application to construct a new air emission unit - a Backup Package Boiler. Per the Department of Ecology (Ecology) request, Energy submitted additional information to Ecology on March 17, 1994. The Boiler will be located in the 200 West Area of the Hanford Site, on the east side of the existing steam plant.

DESCRIPTION

1. Energy proposes to install a new 50,000 pounds per hour (lb/hr) steam boiler in the 200 West Area of the Hanford Site. The boiler will provide back-up services when the 200 East Area steam line (which provides steam to the 200 West Area) is down for maintenance or, when the demand for steam exceeds the supply available from the 200 East Area.
2. The proposed boiler will fire No. 2 fuel oil, which will be specified to produce steam at 225 pounds per square inch gage (psig) and 456 F (superheated). Natural gas firing will not be requested because an adequate supply of natural gas is not available at the Hanford Site.
3. The proposed backup boiler is assumed to be needed for 60 days per year, about 15 days are required as backup for routine maintenance activities; 45 days are planned as backup when the steam demand exceeds the supply from the existing 200 East Area.
4. Best available control technology (BACT) for NOx from the boiler has been determined not to exceed 0.10 pound per million Btu (lb/MMBtu) heat input. BACT for sulfur dioxide (SO2) control is determined by limiting the maximum sulfur content in the fuel oil to 0.05 weight

34 percent. Good combustion practices will be used for CO and VOCs emissions control.

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36 Pursuant to the Washington State regulations for the Notice of Construction (NOC) set forth in Chapter
37 173-400 WAC and Chapter 173-460 WAC, the new source review sections- WAC 173-400-110 and
38 173-460-040 and based upon the complete NOC application submitted by Energy, Ecology hereby
39 approves the application subject to the following conditions:

40 APPROVAL CONDITIONS

- 41 1. NOx emissions from the boiler stack shall not exceed 0.1 lb/MMBtu and 6.5 pounds per hour
42 on an hourly average. Compliance shall be determined by EPA Method 7A of 40 CFR Part
43 60, Appendix A as of July 1, 1991 or an equivalent method approved by Ecology.
- 44 2. SO2 emissions from the boiler stack shall not exceed 3.0 lb/hr on an hourly average.
45 Compliance shall be determined by EPA Method 6 of 40 CFR Part 60, Appendix A as of July
46 1, 1991 or an equivalent method approved by Ecology. Ecology will consider to use
47 certification from the fuel supplier to determine fuel oil sulfur limits instead of compliance
48 stack test for SO2.
- 49 3. The boiler shall operate no more than 1,440 hours per year and the boiler shall only burn No.
50 2 fuel oil with sulfur content no more than 0.05 weight percent.
- 51 4. PM10 emissions from the boiler stack shall not exceed 0.8 lb/hr on an hourly average.
- 52 5. Energy shall demonstrate initial compliance for NOx through source tests conducted not later
53 than 180 days after start-up of the boiler. EPA Reference Methods shall be followed for
54 testing. A test plan will be submitted for Ecology's approval at least 30 days prior to the
55 testing.
- 56 6. Sampling port and platform shall be provided for the boiler, after the final pollution control
57 device. The port shall meet the requirements of 40 CFR, Part 60, Appendix A Method 1.
58 Other arrangements may be acceptable if approved in advance by Ecology prior to installation.
59 Adequate permanent and safe access to the test ports shall be provided.

- 60 7. Opacity from the boiler stack shall not exceed 5 percent as measured by EPA Method 9 of 40
61 CFR Part 60, Appendix A as of July 1, 1991.
- 62 8. For each occurrence of monitored emissions in excess of any condition limits, Energy shall
63 report to Ecology the following:
- 64 8.1 The date and time of the occurrence.
- 65 8.2 The magnitude and duration excess.
- 66 8.3 The cause of the exceedance.
- 67 8.4 Corrective actions taken or planned.
- 68 9. Operating and maintenance manuals for all equipment that has the potential to affect emissions
69 to the atmosphere shall be developed and followed. Copies of the manuals shall be available
70 to Ecology. Emissions that result from a failure to follow the requirements of the manuals,
71 excluding emissions specified in Condition 8, may be considered proof that the equipment was
72 not properly operated and maintained.
- 73 10. Good combustion practices shall be determined as BACT for CO and VOC emission control.
74 CO and VOC emissions shall not exceed 2.1 lb/hr and 0.1 lb/hr, respectively.
- 75 11. This approval shall become void if construction of this unit is not commenced within eighteen
76 (18) months after receipt of the final approval, or if construction or operation of this unit is
77 discontinued for a period of eighteen (18) months.
- 78 12. Any activity undertaken by Energy in a manner that is inconsistent with the application or this
79 final approval, shall be subject to Ecology enforcement under applicable regulations. Nothing
80 in this determination shall be construed to relieve Energy of its obligations under any local,
81 state, or federal laws or regulations.
- 82 13. Energy shall notify Ecology in writing at least 30 days before operational start-up of this
83 emission unit.
- 84 14. Access to this emission unit by Ecology shall be permitted upon request for the purpose of
85 compliance assurance inspections. Failure to allow access is grounds for enforcement under

86 federal and state law.

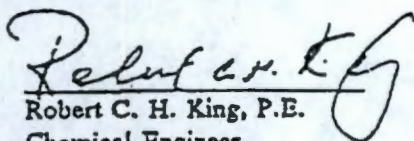
87 15. Energy shall not make any changes in the designs of the proposed air emission control system
88 without first notifying Ecology. Ecology may require a new approval or a modification of this
89 final approval.

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92 REVIEWED BY:

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95 Robert C. H. King, P.E.
96 Chemical Engineer
97 Nuclear Waste Program
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5-25-94
Date

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103 APPROVED BY:

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110 Joseph S. Stohr, Manager
111 Technical Assistance and Regulatory
112 Coordination Section
113 Nuclear Waste Program
114 Department of Ecology
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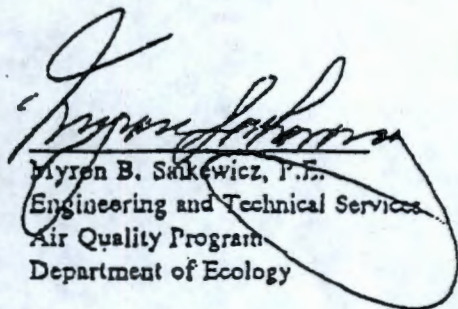
5/31/94
Date

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122 Myron B. Salkewicz, P.E.
123 Engineering and Technical Services
124 Air Quality Program
125 Department of Ecology
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5/31/94
Date

CORRESPONDENCE DISTRIBUTION COVERSHEET

Author	Addressee	Correspondence No.
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Subject: THE NOTICE OF CONSTRUCTION PERMIT FOR THE BACKUP PACKAGE BOILER

INTERNAL DISTRIBUTION

Approval	Date	Name	Location	w/att
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		B. A. Austin	B2-35	
		E. M. Bright	S2-63	
		D. E. Cline	G3-06	
		L. P. Diediker	T1-30	
		E. T. Coenenberg	H6-25	
		W. T. Dixon, Assignee	H6-21	
		B. G. Erlandson	H6-20	
		A. D. Gadenken	G3-05	
		A. Greenberg	S2-66	
		R. C. Huilseman	N1-29	
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		J. L. Wise	N1-22	
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