Department of Energy
Richland Field Office
P.O. Box 550
Richland, Washington 99352

SEP 02 1993

93-RPS-341

Mr. Roger F. Stanley, Director
Tri-Party Agreement Implementation
State of Washington
Department of Ecology
P.O. Box 47600
Olympia, Washington 98504-7600

Dear Mr. Stanley:

RESPONSE TO THE STATE OF WASHINGTON DEPARTMENT OF ECOLOGY COMMENTS ON THE ROTARY MODE CORE SAMPLING SYSTEM EXHAUSTER NOTICE OF CONSTRUCTION

Enclosed please find the response to the State of Washington Department of Ecology (Ecology) comments on the Notice of Construction (NOC) for the Rotary Mode Core Sampling System Exhauster. These comments were provided by Mr. R. C. H. King, of Ecology, to Ms. C. E. Sowa, of the Westinghouse Hanford Company, on August 19, 1993, and further clarification was provided on August 23, 1993.

Approval of the NOC is required before the exhauster can be connected to a tank for sampling. Your prompt attention to this matter would be appreciated. Hanford Federal Facility Agreement and Consent Order Milestone M-10-13 requires the restoration of rotary mode core sampling ability by September 30, 1993.

Should you have any questions, please contact me or Mr. S. D. Stites of my staff on (509) 376-8566.

Sincerely,

Robert G. Holt

Robert G. Holt, Acting Program Manager
Office of Environmental Assurance,
Permits, and Policy

EAP:SDS

Enclosure:
Response to Comments

cc w/o encl:
R. King, Ecology
R. Oldham, WHC
D. Price, WHC

Response to Comments from the
State of Washington Department of Ecology
on the Rotary Mode Core Sampling Exhauster
Notice of Construction

Ms. C. E. Sowa, of the Westinghouse Hanford Company, was contacted on August 19, 1993, by Mr. R. C. H. King, of the State of Washington Department of Ecology, with questions and concerns from his review of the subject Notice of Construction. Mr. King had three areas of concern: Emissions from the generator used with the core sampling system, the actual height of the stack, and humidity in the tank dome space and its effect on the High Efficiency Particulate Air (HEPA) filter efficiency. Each of these areas are addressed below.

Generator Emissions

The generator used with the core sampling systems is a 250 kVa diesel generator. A 250 kVa generator is approximately equivalent to a 250 kW generator. A 250 kW generator is the same as a 335 hp generator (1W = 1.341 E-3 hp). AP-42 presents information on emissions expected from generators fueled by diesel. Those values are dependent on the size of the generator (hp) and the time the generator is operated. Assuming 15 tanks per year, two shifts (16 hours) per day, and eight days of actual sampling per tank, the generator will be operated approximately 2,000 hours per year. This information is used to develop the following table of emissions.

Pollutant	AP-42 Factor (g/hr•hp)	Annual Emissions (g/yr)	Annual Emissions (tons/yr)
CO	3.03	2,000,000	2.2
Hydrocarbons	1.12	750,000	0.83
NO_x	14.0	9,400,000	10.
Aldehydes	0.21	140,000	0.16
SO_x	0.931	620,000	0.69
Particulates	1.0	670,000	0.74

The assumption of 2,000 operating hours per year is a conservative assumption. Actual operation will likely be fewer hours per year, and therefore lower emissions will result. The generator used with the core sampling system is not subject to a new source performance standard, because it does not produce steam and it is an internal combustion engine less than 500 hp.

Stack Height

A stack height of 15 feet has been chosen to protect the onsite workers.

Tank Humidity

Mr. King was concerned about the effect of the humidity on the efficiency of the HEPA filters from a design point. The in-riser filter will act to remove droplets of moisture, but will not decrease the humidity of the stream. The procurement process has been initiated to obtain an in-line heater, to be installed upstream of the HEPA filters, to decrease the relative humidity of the air stream. Until the heater is installed, it is proposed to not operate the system if the relative humidity of the tank exceeds the dewpoint of the ambient temperature of the air surrounding the filter assembly. This will serve to maintain the efficiency of the HEPA filters.

CORRESPONDENCE DISTRIBUTION COVERSHEET

Author	Addressee	Correspondence No.
R. G. Holt, RL (C. E. Sowa, WHC)	Roger F. Stanley, Ecology	Incoming:9307018 XRef:9357267D

Subject: RESPONSE TO THE STATE OF WASHINGTON DEPARTMENT OF ECOLOGY COMMENTS ON THE ROTARY MODE CORE SAMPLING SYSTEM EXHAUSTER NOTICE OF CONSTRUCTION

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