



U.S. Department of Energy
Office of River Protection

0068978

P.O. Box 450, MSIN H6-60
Richland, Washington 99352

MAR 15 2006

06-ED-022

Mr. A. W. Conklin, Head
Air Emissions and Defense
Waste Section
State of Washington
Department of Health
P.O. Box 47827
Olympia, Washington 98504

RECEIVED
MAR 21 2006

EDMC

Dear Mr. Conklin:

COMPLETION OF THE STATE OF WASHINGTON DEPARTMENT OF HEALTH (WDOH)
NOTICE OF VIOLATION (NOV) AND COMPLIANCE ORDER, ORDER NUMBER 2

- References:
1. WDOH letter from A. W. Conklin to R. J. Schepens, ORP, and K. A. Klein, RL, "Notice of Violation and Compliance Order," AIR 05-1103, dated November 17, 2005.
 2. WDOH letter from A. W. Conklin to R. J. Schepens, ORP, and K. A. Klein, RL, AIR 06-110, dated January 19, 2006.

The WDOH, in Reference 1, issued a NOV and Compliance Order concerning the designation of the 222-S Laboratory main ventilation system, 296-S-21, as a minor emission point. The WDOH issued 17 Findings and 3 Orders. Compliance Order 2 states:

"Within 60 days of receipt of this Notice of Violation and Compliance Order, perform an assessment of the 296-S-21 monitoring system to determine what actions are necessary to bring the monitoring system into compliance with requirements of WAC 246-247-075. Within the same time frame, provide a schedule, for review and approval by WDOH, for completing any necessary upgrades."

The WDOH granted an extension to the required due date in Reference 2 thereby changing the required response date to March 31, 2006. Discussions have occurred with WDOH staff to present the stack assessment progress and to propose a compliance schedule. The discussions resulted in WDOH staff agreeing that the schedule would be submitted in stages.

The schedule includes the following items to meet the March 31, 2006, due date:

1. Performance of testing activities for the exhaust system and associated sample system by Pacific Northwest National Laboratory (PNNL) personnel;
2. Receipt of the PNNL report by CH2M HILL Hanford Group, Inc. (CH2M HILL);
3. Assessment of the report by CH2M HILL; and

Mr. A. W. Conklin
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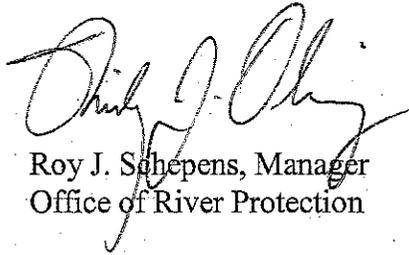
MAR 15 2006

4. Establishment of the date for submittal of the physical upgrade schedule.

The initial schedule is included as Attachment 1. The compliance assessment matrix is included as Attachment 2.

If you have any questions, please contact me, or your staff may contact Dennis W. Bowser, Environmental Division, (509) 373-2566.

Sincerely,



Roy J. Schepens, Manager
Office of River Protection

ED:DWB

Attachments: (2)

cc w/attachs:

O. S. Wang, Ecology
N. A. Homan, FHI
J. Martell, WDOH Richland Office
Administrative Record
CH2M Correspondence Control
Environmental Portal, LMSI

cc w/o attachs:

B. G. Erlandson, BNI
E. S. Aromi, CH2M HILL
D. J. Carrell, CH2M HILL
P. C. Miller, CH2M HILL
J. Cox, CTUIR
S. Harris, CTUIR
B. Becker-Khaleel, Ecology
S. L. Dahl, Ecology
J. L. Hensley, Ecology
J. A. Bates, FHI
G. Bohnee, NPT
K. Niles, Oregon Energy
M. F. Jarvis, RL
R. Jim, YN

Attachment 1
06-ED-022

Compliance Schedule for the State of Washington Department of Health
Notice of Violation and Compliance Order, Order Number 2

**Compliance Schedule for the Washington State Department of Health
Notice of Violation and Compliance Order, Order Number 2**

- May 1, 2006: Complete 296-S-21 sampling system performance testing, which will be performed by Pacific Northwest National Laboratory (PNNL).
- July 1, 2006: PNNL will submit testing report.
- August 1, 2006: CH2M HILL Hanford Group, Inc. (CH2M HILL) will complete the review of the PNNL report, and will determine the required system modifications.
- September 1, 2006: CH2M HILL will submit the modification schedule to the Washington State Department of Health.

Attachment 2
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American National Standards Institute N13.1-1999 Maintenance,
Calibration, and Field Check Requirements Matrix

American National Standards Institute (ANSI) N13.1-1999 Maintenance, Calibration, and Field Check Requirements

	ANSI N13.1	ANSI Requirement	Minimum Frequency	Drawing or Procedure	PM/S #	Cost for development	Comments
1	6.2.2.1	Cleaning of thermal anemometer elements.	As required	N/A	N/A		No installed stack flow devices will be used. Flow rates are established by procedure.
2	6.2.2.2	Inspect pitot tubes for contaminant deposits.	Annually	N/A	N/A		No installed stack flow devices will be used. Flow rates are established by procedure.
3	6.2.2.2	Inspect pitot tube systems for leaks.	Annually	N/A	N/A		No installed stack flow devices will be used. Flow rates are established by procedure.
4	6.3.4.5	Inspect sharp-edged nozzles for damage.	Annually or after maintenance	N/A	N/A		Shrouded probe.
5	6.3.4.8	Check nozzles for alignment, presence of deposits, or other potentially degrading factors.	Annually	TBD	TBD		Shrouded probe will be inspected annually.
6	6.4.6	Check transport lines of HEPA-filtered applications to determine if cleaning is required.	Annually	TBD	TBD		If nothing is found on probe then this would not need to be performed. Add to procedure in item 5 to cover this.
7	6.4.6	Clean transport lines when deposits are visible.	Visible deposits for HEPA filter applications	TBD	TBD		If nothing is found on probe then this would not need to be performed. Add to procedure in item 5 to cover this.
8	6.9	Inspect or test sample transport system for leaks. Visually inspect to ensure proper connections.	Annually	TBD	TBD		Discuss this requirement with WDOH. Testing will introduce more chance of leakage.

American National Standards Institute (ANSI) N13.1-1999 Maintenance, Calibration, and Field Check Requirements

	ANSI N13.1	ANSI Requirement	Minimum Frequency	Drawing or Procedure	PM/S #	Cost for development	Comments
9	7.5.1	Check mass flow meters of sampling systems with a secondary or transfer standard.	Quarterly	N/A	N/A		Stack sampling equipment does not employ a mass flow meter. Flow meter and flow totalizer are currently calibrated every 6 months.
10	7.5.1	Check sampling flow rate through critical flow venturis.	Start of each sampling period	N/A	N/A		No venturis.
11	7.5.1	Inspect rotameters of sampling systems for presence of foreign matter.	Start of each sampling period	S-BW-004	N/A		Radcon task performed bi-weekly during sample filter replacement.
12	7.5.2	Check response of stack flow rate systems.	Quarterly	N/A	N/A		No installed stack flow measurement devices. Flows are determined by procedure and measurements are accomplished quarterly.
13	7.6.1	Calibration of flow meters of sampling systems.	Annually	2S18061 2S18064	2S-00298 2S-00299		Air sample flow meter and flow totalizer currently calibrated every six months.
14	7.6.2	Calibration of effluent flow measurement devices.	Annually	N/A	N/A		No installed stack flow measurement devices. Flows are determined by procedure and measurements are accomplished quarterly.
15	7.6.3	Calibration of timing devices.	Annually	N/A	2S-105463		Timing device currently calibrated every 6 months to verify accuracy.

ANSI N13.1-1999
Performance Criteria

	ANSI N13.1 Reference	ANSI Requirement	Drawing or Procedure	PM/S #	Cost for development	Comments
1	6.4.1 and 6.5	Total transport of 10 μ m AD particles and vaporous contaminants shall be >50% from the free stream to the collector/analyzer				PNNL personnel to evaluate
2	6.3.2	Sample nozzle inlet shall have a transmission ratio between 80% and 130% for 10 μ m AD particles (criterion particle size may be larger as stated in the referenced clauses)				Nozzle characteristics verified by previous testing.
3	6.3.2	Sample nozzle shall have an aspiration ratio that does not exceed 150% for 10 μ m AD particles (criterion particle size may be larger as stated in the referenced clauses)				Nozzle characteristics verified by previous testing.
4	5.2.2.2	Characteristics of a suitable sampling location are:				PNNL personnel to evaluate
4a		Sampling location coefficient of variation over the central 2/3 area of the cross section is within +/-20% for 10 μ m AD particle, gaseous tracer, and gas velocity				PNNL personnel to evaluate
4b		flow angle <20 degrees relative to the long axis of the stack and nozzle inlet				PNNL personnel to evaluate

ANSI N13.1-1999
Performance Criteria

	ANSI N13.1 Reference	ANSI Requirement	Drawing or Procedure	PM/S #	Cost for development	Comments
4c		tracer gas concentration shall not vary from the mean >30% at any point on a 40CFR 60 Appendix A Method 1 velocity mapping grid				PNNL personnel to evaluate
5	6.2.1	Effluent flow rate continuous measurement required if flow variation is >+/-20% in a year	N/A	N/A		Based on operating experience, the annual exhaust flow rate for the 296-S-21 stack, does not vary by greater than +/-20%. Normal operations maintains the system flowrate at @78,000 cfm
6	6.2.1 and 7.6.1	Effluent and sample flow rate shall be measured within +/-10%	2S18061/ S-D080	2S-00298		Facility specific testing procedure will be developed. Effluent flow rate measurements shall be made using methods specified in Reference Method 2 of 40 CFR 60 Appendix A. Sample flow instrumentation calibrated within +/-10% and sample flow verified daily.
7	6.8.2 and 6.8.3	Continuous sample flow rate measurements and control required if flow rate varies >+/-20% during a sample interval. Flow control shall be within +/-15%	N/A	N/A		Based on operating experience, the annual exhaust flow rate for the 296-S-21 stack, does not vary by greater than +/-20%. Normal operations maintains the system flowrate at @78,000 cfm

ANSI N13.1-1999
Performance Criteria

	ANSI N13.1 Reference	ANSI Requirement	Drawing or Procedure	PM/S #	Cost for development	Comments
8	6.2.1. 6.8.1 and 6.8.3	Continuous measurement of effluent flow rate and continuous measurement and control of sampling flow rate (to track flow rate in stack or duct within +/-20% of a predetermined value)	N/A	N/A		Based on operating experience, the annual exhaust flow rate for the 296-S-21 stack, does not vary by greater than +/-20%. Normal operations maintains the system flowrate at @78,000 cfm
9	6.2.1	Continuous flow rate measurement unless flow rate variation is less than +/-20% during a year	N/A	N/A		Based on operating experience, the annual exhaust flow rate for the 296-S-21 stack, does not vary by greater than +/-20%.
10	7.5	Periodic inspection of nozzles, transport lines, sample and effluent flow meters shall be conducted	TBD-nozzle/probe S-D080/S-BW-004	TBD		Annual inspection of probe and transport line to be established. Sample flow meter is checked daily and bi-weekly.
11	7.63	Periodic calibrations of effluent and sample flow meters, CAMs , and sample analysis instrumentation shall be conducted	2S18061	2S-00298		Sample flow meter and other stack sampler components currently calibrated every 6 months. WSCF analyzes the samples and conducts sample analysis instrument calibrations.

ANSI N13.1-1999
Sample Location

	ANSI Requirement	Methodology	Drawing or Procedure	Cost for development/verification	Comment
1	The average resultant angle shall be less than 20 degrees.	40CFR60, Appendix A method 1			PNNL personnel to evaluate
2	COV shall not exceed 20% over center region of the stack that encompasses at least 2/3 of the stack area	Select traverse points from 40CFR60, Appendix A Method 1 (figure 1-2) for the center 2/3 of the area of the stack or duct. Additional points or area may be needed to adequately cover a the region.			PNNL personnel to evaluate
3	COV shall not exceed 20% over center region of the stack that encompasses at least 2/3 of the stack area	Select traverse points from 40CFR60, Appendix A, Method 1 (figure 1-2) for the center 2/3 of the area of the stack or duct. Additional points or area may be needed to adequately cover the region			PNNL personnel to evaluate
4	The maximum value of tracer gas concentration shall not exceed the mean value by more than 30% of the mean value a any point on a complete Method 1 set of velocity traverse points	Select traverse points from 40CFR60, Appendix A, Method 1 (figure 1-2) for the entire cross sectional area			PNNL personnel to evaluate
5	COV shall not exceed 20% over center region of the stack that encompasses at least 2/3 of the stack area	Select traverse points from 40CFR60, Appendix A, Method 1 (figure 1-2). Additional points or area may be needed to adequately cover the region			PNNL personnel to evaluate