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STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

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October 20, 1998

Mr. James E. Rasmussen, Director
Environmental Assurance, Permits, and Policy Division
U.S. Department of Energy
P.O. Box 550, MSIN: A5-15
Richland, WA 99352

Dear Mr. Rasmussen:

Re: "Comments on the Public Review Draft State of Washington Department of Ecology Title V Hanford Site Air Operating Permit, HNF-AOP-97-1" from J.E. Rasmussen, USDOE-RL, to M.A. Wilson, Ecology, April 9, 1998

In response to the 30-day public review of the Draft Title V Hanford Site Air Operating Permit (AOP), your office submitted 122 comments on April 9, 1998. The Washington State Department of Ecology (Ecology) received the comment package on April 13, 1998. This letter transmits Ecology's responses to your comments as enclosed.

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In the last six months, Mr. Oliver Wang of my staff, along with representatives from the Department of Health (Health) had discussed with your staff regarding the resolution of these comments. I believe that the enclosed responses are agreeable by representatives of both Ecology and the U.S. Department of Energy-Richland Operations Office (USDOE-RL). The finalized AOP, which will incorporate all these comment resolutions, should better protect the public with streamlined regulatory requirements and enhanced compliance efficiency.

Next month (November) Ecology will submit the Proposed AOP to the Environmental Protection Agency, Region X (EPA-X) for approval. If USDOE-RL still has issues at that time, please contact Ms. Elizabeth Waddell of EPA-X at (206) 553-4303. Ms. Waddell will take comments for consideration during the 45-day review/approval period. I will send you a courtesy copy of Ecology's EPA submittal letter next month.

Should you have additional questions, please contact Mr. Oliver Wang at (509) 736-3040.

Sincerely,

Michael A. Wilson, Manager
Nuclear Waste Program

MAW:OW:sb
Enclosure

cc w/encl: Arthur Ingle, USDOE-RL
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Administrative Record: (new) Site Wide Air Operating Permit

OE/RL Review Comments, Hanford Site Air Operating Permit (HNF-AOP-97-1)

No.	Permit Section	Text Section	Pg.	Comment	Requested Action	ECOLOGY/DOH Response
1	Attachment 1	1.2, Table 1.1	3	Emission point 200 F-284 WB has been shut down and will not operate.	Cancel the approved order (No. NOC-94-06A), remove the regulatory order conditions from the AOP (perhaps the conditions could be placed in the completed activities section in SOB), and remove all references in the AOP to emission point 200 F-284 WB.	(1) Ecology received 98-EAP-212 letter on 4/10/98 (2) Ecology canceled order on 5/15/98. (3) Remove this emission point (200W F-284).
2	Attachment 1	1.2, Table 1.1	3	Emission points 300 F-384 002 and 300 F-384 006 are no longer operating.	Remove all references to these emission units in the AOP.	Remove 300 F-384 002 and 006.
3	Attachment 1	1.2, Table 1.1	3	We believe some of the emission units listed in the table for internal combustion engines may be Insignificant Emission Units (IEUs) based on actual emissions under WAC 173-401-530(4).	Allow Permittee to submit calculations showing that some of the emission units are IEUs.	Request permitted. Calculations must submitted to and approved by Ecology for future revisions.
4	Attachment 1	1.2, Table 1.1	4	The 324 Building Plasma Arc Furnace is not listed under the 300 Area permitted emission units. A NOC permit (NWP-96-2), approved by Ecology, exists for this emission unit. It is understood that the Table 1.1 list of permitted emission units identifies those significant emission units on the Hanford Site, as defined by WAC 173-401.	Add the 324 Building Plasma Arc Furnace to the list of 300 Area permitted emission units.	Request permitted.
5	Attachment 1	1.3, Table 1.2	5	Paragraph introduces several tables that contain superscripts or endnote references. There is no guidance or reference cited to indicate to the reader that 55 pages later there is an endnote section that further defines the requirements.	Add sentence to 1st paragraph that indicates further requirements as endnotes are found on page 60. This will make it easier for the reader, since the reader must filter through 55 pages before encountering the endnotes.	Add sentence to first paragraph indicating endnote location.
6	Attachment 1	1.3, Table 1.2	5	Periodic Monitoring for SO_2 does not always require emission calculations. Model 1F is a one-time calculation – not a calculation that is done annually.	Add language that states for internal combustion engines greater than 500 horsepower that only recordkeeping is required.	Add one more sentence to endnote #5 on page 60, "For internal combustion engine greater than 500 horsepower that only recordkeeping is required."
7	Attachment 1	1.3, Table 1.2	5	Somewhere it needs to be made clear that we are not using EPA method 9A to determine compliance, but that this test method is listed because one exists.	Suggest adding a footnote to "Test Method" that explains a test method is listed if there is a specific EPA method. Suggest changing EPA Method 9A to Ecology Method 9A. When a test method does not exist, the cell should state "none" or be blacked out.	Agree to the suggestions.
8	Attachment 1	1.3, Tables 1.3 through 1.7	5 through 25	The endnotes for this tables are missing from section 1 tables, but may be included after section 2.	Suggest copying applicable endnotes so they are available under both sections for ease of reference due to the large number of pages.	Agree to the suggestion.

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9	Attachment 1	1.3, Table 1.3	6 through 7	Discharge point numbers 300-F-384-002 and 300-F-384-006 deal with the 300 Area steam generating plants that were officially and permanently shutdown on 3/14/98. Facilities are offline and are no longer operating. Requirements are obsolete and do not need to be in the permit.	Remove discharge point numbers and references to the 300 Area steam generating plants in table.	Agreed to remove.
10	Attachment 1	1.3, Table 1.3	7	The period for the reduction in SO_2 will be over by the time the AOP is issued.	Move requirement to completed activities.	Agree. The requirements for 300 F-384 002 and 006 will be moved to the Ecology SOB, Section 8 (Section 6 of Ecology SOB will be deleted, so Section 8 will be the revised Section 7). Also, Table 1.3 has been deleted.
11	Attachment 1	1.3, Table 1.5	16	The periodic monitoring column for sulfur content is not clear.	For sulfur content, change to read for to the following: Vendor documentation or fuel analysis once per year. Delete sentence reading " The permittee shall annually certify compliance with this condition."	Agreed to the suggestion.
12	Attachment 1	1.3, Table 1.5	16	The periodic monitoring column for NOx content is not clear. Emission calculations are not required.	Change to read: "Fuel consumption rate" instead of "emission calculations."	Agreed to the change.
13	Attachment 1	1.3, Table 1.5	16	The NOx rate is not correct for Engine W.	Change to read 42 pounds per hour.	Agreed to the change.
14	Attachment 1	1.3, Table 1.7	18	Incorrect reference cite in title.	Revise WAC 173-460-060 to correctly reference WAC 173-460-040.	Agreed to the change
15	Attachment 1	1.3, Table 1.7	19	The NOC for the Industrial Hygiene Field Service Facility was issued for the Environmental Analytical Laboratory. The facility has not been used for the EAL since 1996. The regulatory order for the EAL states that the approval if void if operation of the EAL is discontinued for a period of 18 months. The NOC is now void and the industrial hygiene field service facility, which now occupies the facility, is an insignificant emission unit that does not require permitting. See the letter submitted to Ecology dated March 6, 1998 (056784).	Delete the information on the Industrial Hygiene Field Service Facility.	Agreed to the deletion.
16	Attachment 1	1.3, Table 1.7	21	Column 4 on State only enforceability identifies a "N" for the EMSL ammonia and VOC emissions. In the NOC, Ecology indicated that these emission limits were placed as conditions to meet the NAAQS under the State Implementation Plan. Since the Hanford Site is in an attainment area and there is no increases relative to the PSD permit, the requirement for VOC and ammonia measurements are a "State Only" requirement. Recommend changing the column to a "Y" which indicates the requirements are State only.	Replace "N" with "Y" in the 4th column on state only enforceable.	OK.

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17	Attachment 1	2.1, Table 2.1	27	(See column heading "Table No. Reference from Att. 1" - Table 1.5) Periodic Monitoring for SO_2 needs to be made more clear and consistent. Vendor documentation ought to be allowed. Model 1F states that SO_2 emissions are independent of engine size or fuel consumption rate. Therefore, records on the fuel are the only relevant variable.	Change to read: "Vendor documentation or fuel analysis once per year."	Agreed to the change.
18	Attachment 1	2, Table 2.1	28	Required records for good combustion practice of the EMSL boilers is not listed. Recommend adding text that indicates appropriate vendor information be used to define GCP. Vendor guidelines, defined as GCP, are included in operating procedures and Manufacturer's Operation and Maintenance Manual that has been reviewed by Ecology. Such manual is available in the power operator's office or the maintenance shop.	Add the following to the "Required Records" column for GCP: "1. Vendor guidelines are defined as GCP. 2. Vendor guidelines included in operating procedures and O&M manual required by Ecology".	Agreed to the suggestion.
19	Attachment 1	2, Table 2.1	28	Required records column on NOx and CO should contain emissions calculations rather than weight of feed materials processed. Recommend replacing item #2 with annual emissions calculations.	Replace item #2 with "annual emissions calculations".	Agreed to the change.
20	Attachment 1	2.2 Emission Calculations Models 1A, 1D, 1E, 2A, 2D, 2E, 3C, and 4C	29 through 60	Models are not listed or defined in permit. Use of the word "reserved" is identified in the permit and is unacceptable. These models deal with calculations, methods, and approaches for achieving and demonstrating compliance and will be used for enforcement purposes.	Identify the model or add the methods, calculations, and approaches for the models not listed. Otherwise, delete section if there is no activity that references the models.	These models are not mentioned in the permit. Delete.
21	Attachment 1	2.2 Emission Calculations Model 3B	45	Calculation and assumptions are incorrect. Emission rate for NOx in lbs/hr is calculated as the product of the maximum feed rate (lbs/hr) multiplied by the maximum release rate (lbs of N as NO_2/lbs feed). The only assumptions are that all nitrogen is produced as NO_2. The other assumptions listed are really approval conditions of the NOC permit and should not be included in the calculation or Model 3B.	Replace Model 3B with the following: "ER = F*R where: ER = emission rate for NOx in lbs/hr F = maximum feed rate (lbs/hour) R = maximum release rate (lbs N as NO_2/lbs feed) Assumptions: all nitrogen produced is NO_2. "	Agreed to the change.
22	Attachment 1	2.2 Emission CalculationsModel 3D	47	The emission limit for Engine W is 42 lbs./hr – not 42.2 lbs./hr	Change number to reflect number in Order No. NWP-96-1.	Agreed to the change.
23	Attachment 1	2.2 Emission	47	The manufacturer specification is actually 90.8 gallons/hour and 104.7 gallons/hour for engine W and engine E, respectively.	Change the numbers in the assumptions to reflect comment.	Agreed to the change.

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		CalculationsModel 3D				
24	Attachment 1	2.2 Emission Calculations Model 5E	55	Assumption states (for Method 25A) that a VOC level of 50 ppm is the lowest meaningful concentration within instrument capabilities and VOC emissions are expected to be below the detection levels. The applicability section 1.1 of Method 25, 40 CFR 60, Appendix A states that the minimum detectable for the method is 50 ppm. For Method 25A, a different method than Method 25, no minimum detectable is listed in the applicability section. A minimum detection of 0.1 ppm by volume of organic material (propane or carbon equivalent) is identified in Section 4.2 of the method. EPA guidance recommends Method 25A for VOC streams that are less than 50 ppm. Total organic carbon analyzer minimum detection levels are 0.1 ppm methane (or carbon equivalent).	Reword assumption to accurately reflect the EPA Method 25A, since Method 25 is different than 25A and applies to different conditions.	Agreed to the change. Correct the error.
25	Attachment 1	2.2 Emission Calculations Model 5F	56	Calculation is incorrect. Endnote #2 after usage rate refers to opacity and has nothing to do with usage and should be deleted. CF_1 equals day/56400 sec. and should be day/86400 sec instead. CF_1 in first equation for calculating ER should be CF_2. Calculation of ER should equal RE*CF_2. Release fraction of 10^{-3} for inorganic liquids also includes other liquids. Vent & Balance measurements for average stack flow are not required for this calculation. Chemical inventory records (mass balance) should be deleted from assumptions.	Delete Endnote #2 after usage rate (g/day). Replace CF_1 as written with CF_2 in calculation of ER and replace 56400 sec with 86400 sec for CF_1. Replace CF_2 with CF_1 in calculation of RE. Add "other" after inorganic under release fraction of 10^{-3}. Delete "stack exhausts at ambient temperature, vent & balance measurements for average stack flow, and chemical inventory records (mass balance)..." from assumptions.	Agreed to the change.
26	Attachment 1	2.2 Emission Calculations Model 6B	58	Calculation is not correct as written. CF_1 in ER calculation should be CF_2. CF_2 in RE calculation should be CF_1. CF_1 equals day/56400 sec should read day/86400 sec. Stack exhaust ... and vent & balance...are not required for the mass balance calculation and should be deleted from assumptions. The mass balance calculation method was approved by Ecology in the EMSL source test plan and results. The emissions are based on mass balance calculations because there are no EPA Reference Test Methods for analyzing ammonia in stationary sources. The current mass balance calculation of the emission rate is far below the NOC permit emission limit. Mass balance calculations will be submitted as demonstration of compliance and should be included in the assumptions.	RF = release fraction 10^{-3} for inorganic and other liquids CF_1 = day/86400 sec CF_2 = 3600 lb*sec/454g Assumptions: Chemical inventory and mass balance calculations demonstrate compliance. There are no EPA Reference Test Methods for analyzing ammonia in stationary sources."	Agreed to the change.
27	Attachment 1	2.2 Emission Calculati	59	Model does not provide calculation or method. Model is really a statement on approach and should be included as an endnote rather than as a calculation or method.	Delete Model 7 and move text as endnote on pages 60-61, since no calculation or method is provided in model.	Agreed to the change.

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		ons Model 7				
28	Attachment 2	General		RTAMs are presently considered as regulatory order approvals. It is questionable if the RTAMs are regulatory order approvals or, instead, serves as a mutually agreed upon approach to a particular project or activity of, typically, a short term duration with a very low potential to emit radionuclides. The RTAM meetings are to be a working meeting to avoid possible compliance issues through an exchange of information.	Consider that RTAM approvals are guidance and remove the RTAM approvals from the Hanford Site AOP.	The RTAM approvals are not guidance. These are approvals and meet all the requirements including documentation under WAC 246-247 Appendix A for Notice of Construction approvals. These routine technical assistance meetings serve an important function in expediting approvals in the regulatory process with the added benefit of substantial cost savings to the Department of Energy.
29	Attachment 2	General		The "Regulatory Requirement, Emission Limit, or Work Practice Standard" information is very inconsistent throughout the Tables 3.x. For many of the NOCs, the information provided is not a "Regulatory Requirement, Emission Limit, or Work Practice Standard" and is background information only.	Revise Tables 3.x to provide complete and consistent regulatory requirements, emission limits, or work practice standards	The following have been revised: Page 90 #3: Wording added to clarify and make current. Page 91 #3: Limits identified. Page 94: NOC deleted from table. Page 98 #1: Clarification language added. Page 100 #2: Reworded to identify specific requirements. Page 132 #2: Language added for specificity. Page 143 #1: Clarification language added. Page 144 # 1 and 2: Language to establish conditions. Page 148 #7: Clarification language added. Page 149 #4: Reworded to identify specific requirements. Page 150 # 5: Requirement clarified.
30	Attachment 2	3.1	6	Last sentence identifies the shrouded probe as an approved stack sampling technology for both continuous and periodic confirmatory monitoring. The statement does not provide qualifications as to when it is acceptable. There are performance and installation requirements that determine if the probe is acceptable. Clarification should be added as to the use of the probe and how it must be applied.	Add clarification on how the probe is used and what criteria must be applied before it is acceptable.	A Notice of Construction is required for new construction or modification to the emission unit. Each application for a shrouded probe will be handled on a case-by-case basis. Performance and installation requirements are unique and will be determined for each application.
31	Attachment 2	3.1	7	The note in the figure indicates that the flow chart is only for emission units with a PTE less than 0.01 mrem/yr. This appears to be a typo as the cut off for continuos monitoring versus periodic confirmatory monitoring is 0.1 mrem/year.	Either change the note to read "...dose potential less than 0.1 mrem/yr...", or provide the regulatory reference for applying a new standard of 0.01mrem/yr.	DOH acceptance of the alternate operating scenario is based on a mrem/yr threshold of less than 0.01. This is not a new regulatory standard. The department still allows for periodic confirmatory monitoring for emission units with a PTE under 0.1 mrem/yr TEDE to the MEI (ref. Table 2.1). It was requested by the permittee that an alternate operating scenario be allowed for greater monitoring flexibility at emission units, that fall well below the 0.1 threshold. That scenario is allowed under the process in Figure 1 for those units with an offsite dose potential less than 0.01 mrem/yr.
32	Attachment	3.3	9	This note is confusing. All units which emit radionuclides are	Change note to read, "Only for stacks designated as	A change will be made to add the word "major" to the note.

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	2			regulated under the federal NESHAP. The note seems to be referring to stacks designated as "major" under the NESHAP regulations.	Major under NESHAP".	
33	Attachment 2	3.3	9	Specific references to Quality Assurance Plans (i.e. Facility Effluent Monitoring, Facility Assurance Plan No. F0-011) should be avoided as these documents are continuously updated to reflect programmatic improvements.	Remove any references to specific Quality Assurance Plans.	Specific references will be removed.
34	Attachment 2	3.3	9	Although not specified in Attachment 2, the underlying WAC 246-247 regulation requires that records be available for at least 5 years. It is not practical or cost effective for taxpayers to retrieve archived records for minor (non-NESHAP) stacks from an offsite record repository area and bring back to the Hanford Site to satisfy the "readily retrievable" requirement. Not relocating these records is furthermore substantiated by the fact that monitored radiological doses are well within the offsite DOE limits for protection of public health.	Specify that 1) only records for major (NESHAP) stacks shall be available onsite for the past 5 years or from the promulgation date of WAC 246-247 whichever is the latest and 2) the agency shall allow a reasonable time for the Hanford Site to retrieve records from offsite record repository areas for minor (non-NESHAP) stacks.	A revision was made which identified "major" in " Section1" under 3.3 recordkeeping.
35	Attachment 2	3.3	11	Same comment as above.	Same as above.	Same as above.
36	Attachment 2	4.0	12	A statement is made in the last paragraph that, "Tables 3.x contain Notice of Construction conditions and limits..." Since Table 3.x is not all inclusive and the underlying NOC are considered by the agency under (1) on page 13 as the applicable requirement, the word "contain" in the above quotes is confusing.	Suggest replacing the word "contain" with "summarizes" so as to not infer that conditions listed in Tables 3.x are all inclusive and/or verbatim.	Every effort was made to make Table 3.x all inclusive of the conditions and limits found in the underlying NOCs. Contain is appropriately used.
37	Attachment 2	4.0, Index Table	18	Index table lists regulatory ID no. EP-331A-01-S as an emission unit. Emission unit has been deregistered, permanently shutdown, and physically demolished during FY96-97. Health inspected and verified the emission unit as being removed and ventilation system blanked off on 12/30/97 (AIR-98-107).	Delete emission unit from table, since unit does not physically exist at the 331 Building facility.	Emission unit will be removed.
38	Attachment 2	4.0, Table 1.0	21 & 24	Conditions 1 and 2 place requirements on abatement control technology for facilities referenced in the table. The conditions list activities that are applicable to the new or modified source and are not directly tied to the underlying regulations. Activities should not be listed if the facility can demonstrate the emissions are less than the potential-to-emit (PTE) and no change in operation or method of operation where a NOC is not required.	Remove conditions, since they do not directly correspond to the underlying regulations. The regulations clearly focus on the PTE and changes to operations rather than on the type of activities that should be regulated.	The conditions are appropriate. The identified unit's inability to meet control technology standards was identified in Health's audit 28. Based on DOE need for these units to operate, Health set requirements and limitations on the operations of the emission units and specified them in this license (WAC 246-247-040(5)). The basis for these conditions is documented in the Statement of Basis pages 16 and 17.
39	Attachment 2	4.0, Table 1.1	26	Discharge point AEI number EP-331A-01-S currently does not exist and should be removed from table. Source term and emission unit do	Delete discharge number from table.	Emission unit will be removed.

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				not exist.		
40	Attachment 2	Table 1.1	30	The comment for emission point 200W P-296S07W 001 is in the wrong row.	Move the comment to the additional description/conditions column for the 200W P-29607E 001 emission point.	Comment will be relocated.
41	Attachment 2	Table 1.1	30	The "2" is located in the wrong column for the 200W P-296002 001 emission point.	Delete the "2" from the additional description/conditions and place it in the required number of units column to indicated that there are two HEPA filters.	"2" will be removed from additional comments and placed in required number of units column.
42	Attachment 2	Table 2.1	42 through 49	Appendix B, Method 114 is identified as the required monitoring and testing procedure for all minor stacks listed in Table 2.1. The requirement to collect samples according to Appendix B, Method 114 is incorrectly applied to certain sampling methods, such as smear samples and NDA.	Remove the requirement to perform monitoring and sampling according to Appendix B, Method 114 for smear sampling and NDA.	The reference is correctly applied under Part 61, Appendix B, Method 114, section 3.5 Counting Methods. The reference will be changed to state that only Appendix B, Method 114, 3. "Radionuclide Analysis Methods" applies.
43	Attachment 2	Table 2.1	42 through 49	Appendix B, Method 114 is identified as the required monitoring and testing procedure for all minor stacks listed in Table 2.1. 40 CFR 61, Appendix B, Method 114, 2.1 requires that radionuclides as particulates be collected following ANSI N13.1-1969, which applies to stack sampling. An upstream air sample can not be collected using the sample collection methods in ANSI N13.9-1969.	State that only Appendix B, Method 114, 3. "Radionuclide Analysis Methods" applies to upstream samples.	The reference will be changed to read that only Appendix B, Method 114, 3. "Radionuclide Analysis Methods" applies.
44	Attachment 2	Table 2.1	42 through 49	Appendix B, Method 114 is identified as the required monitoring and testing procedure for all minor stacks listed in Table 2.1. 40 CFR 61, Appendix B, Method 114, 2.1 requires that radionuclides as particulates be collected following ANSI N13.1-1969. WAC 246-247 and 40 CFR 61 Subpart H do not require that stack monitoring and sample collection methods shall follow ANSI N13.1-1969 guidance for periodic confirmatory measurements of minor stacks.	State that only Appendix B, Method 114, 3. "Radionuclide Analysis Methods" applies to record sampling.	See previous comment.
45	Attachment 2	Tables 2.1 and 2.3	42 through 51	Both tables indicate that the appropriate method for monitoring and testing is Appendix B, Method 114, which is for major stacks.	Recommend that this column be changed to indicate that only the analytical requirements of this section are applicable.	For Table 2.3 column will be changed to indicate that only the analytical requirements of Method 114 are applicable. For Table 2.1 methods to implement periodic confirmatory monitoring shall be approved by the department. (WAC 246-247-075(3)). With the exception of stacks otherwise noted (see three previous comments) all minor stacks in tables 2.1 currently comply with Appendix B, Method 114.
46	Attachment 2	4.0, Table 2.1	48	Discharge point AEI numbers EP-ISV-01-V and EP-ISV-02-V identify a TBD (to be determined) for required sampling, analysis, and sampling frequency. The in-situ vitrification units are currently not in	Add the following text to columns (three) containing TBD: "TBD based on final NOC permit conditions".	Table 2.1 will be changed to read, "TBD based on permit conditions in approved Notice of Construction..

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				full operation and there is no source term. As such, no sampling or monitoring is being performed. When both emission units become active in the near future, a Notice of Construction application will be submitted to Health. The table should reflect the current status of these emission units.		
47	Attachment 2	Table 2.3	51	Appendix B, Method 114 is identified as the required monitoring and testing procedure for all minor stacks listed in Table 2.1. 40 CFR 61, Appendix B, Method 114, 2.1 requires that radionuclides as particulates be collected following ANSI N13.1-1969, which applies to stack sampling. An environment sample can not be collected using the sample collection methods in ANSI N13.1-1969.	State that only Appendix B, Method 114, 3. "Radionuclide Analysis Methods" applies to environment sampling.	Table 2.3 identifies environmental sampling as acceptable method for discharge points identified in Table 2.3. Table 2.3 was changed to read Appendix B, Method 114, (3)
48	Attachment 2	Table 3	55	The dates for the 100-N Diffuse Emissions point and 100N P-116N 005 emission point do not match the dates in Table 3.1	Make Table 3 consistent with Table 3.1	The dates for the 100-N Diffuse Emissions point (10/31/95) and 100N P-116N 005 emission point (5/10/94) DO match the dates in Table 3.1. Reference pages 80 and 81 of the final draft.
49	Attachment 2	Table 3.1 through Table 3.5	68 through 145	Paragraph two at the bottom of page 12 states that Table 3.x contains the NOC "conditions and limits for approval to construct, modify, and operate an emission unit", and paragraph (1) at the top of page 13 states that all information contained in the NOCs is applicable. The agency should explain the reasoning for these two contradictory statements because, as written, the purpose of a Title V permit is defeated because not all applicable requirements that the licensee must comply with is included in the permit.	Tables 3.x should be revised to reflect the NOC approval conditions from NOCs issued and applicable to date.	The two statements are not contradictory. The underlying requirement still applies. Just as the applicable requirements are cited from the WAC, the WAC still applies, it does not go away, its enforceability is not diminished. So too is the case with an approved Notice of Construction. An NOC is a standalone document, and the underlying requirement. The applicable requirements listed in table 3.1 are inclusive of the conditions and limits found in the underlying NOCs. But, just as with the WAC, the NOC does not go away.
50	Attachment 2	Table 3.1 through Table 3.5	68 through 145	The regulatory order approvals associated with Routine Technical Assistance Meetings (RTAM), telephone clarifications, and the corresponding EPA approvals of the RTAM listed in these tables are typically for a short-term project or activity and have been shown to have a very small potential to emit radionuclides. Removing these would be consistent with Chapter II of the Hanford Site Air Operating Permit Application.	Remove RTAM approvals, telephone clarifications, and the corresponding EPA approvals from Tables 3.x.	See previous comment response #28.
51	Attachment 2	Table 3.1	85	Item 3 indicates that monitoring shall also be composed of operating a record sampler one week per quarter and sending the filter for analysis. However, this is not a regulatory order requirement. The regulatory order states that samples will be taken periodically during operations to verify the limits are not exceeded.	Replace item 3 with the language from the regulatory order dated April 13, 1995.	Item 3 – monitoring requirements, have been removed from table 3.1. This emission unit was missing from the attachment 2 tables 1.1 and 2.1, monitoring and control requirements. Appropriate information was obtained from the operating contractor and requirements will be listed in these tables. The monitoring requirements previously listed

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						in table 3.1 were agreed to in meetings with Health, are currently in use, and will be listed in table 2.1.
52	Attachment 2	Table 3.5	150	The PTREAU approval listed is for 12/15/97. There are a couple approval conditions that are under discussion that could be changed.	It is recommended that the approval conditions be deleted or qualified to indicate that modifications to these conditions may be forthcoming.	Approval conditions will remain in effect until superceded by a new regulatory order.
53	Standard Terms & Conditions	Cover		BCCAA not identified as an authority for a portion of this permit.	Include reference on AOP cover: Benton County Clean Air Authority (BCCAA)	Agree.
54	Standard Terms & Conditions	NA	1	There should only be one permitting authority listed in the permit with Title V authority (see definition of "permitting authority" in WAC 173-401).	Remove all references to other authorities for the Hanford Site Air Operating Permit or Ecology should delegate authority under RCW 70.94 and have EPA approve that authority.	References to the permitting authorities have been revised to comply with the definition of permitting authority. Washington State Attorney General Memorandum January 15, 1993 in The State of Washington Part 70 – Operating Permits Program, Formatted from Submittal Checklist -- EPA Draft 4-21-93, November 1, 1993; will be provided to DOE-RL to substantiate the respective agencies' authority within the permit.
55	Standards Terms & Conditions	1.0	6	The acronym WESF is incorrectly identified as Waste Encapsulation and Sampling Facility.	Revise to correctly identify WESF as Waste Encapsulation and Storage Facility.	WESF will be correctly identified.
56	Standard Terms & Conditions	2.0	7	The Hanford Site for purposes of this permit is not well defined. This section of the permit needs to address the exact boundaries and those activities and areas that are excluded from the permit.	Add text to Section 2.0 that address the boundaries, excluded areas, and excluded activities more specifically.	Text will be added to Section 2.0 that will better address the Hanford boundaries. The Statement of Basis will address activities specifically excluded from the permit.
57	Standard Terms & Conditions	3.5	9	Note at end of section Representatives of Ecology, Health or BCCAA shall be provided classified documents on a need-to-know basis. WAC 246-247-080(10) state only requirement is referenced. The requirement is a Health requirement and Health is the enforcement agency.	Remove Ecology and BCCAA from requirement, since Health is the enforcement agency.	Disagree. On a need-to-know basis, any state representative with appropriate security clearance can review relevant classified documents if needed. Quotations of WAC 173.401-500 and Section 114 of CAA will be added at the end of this section.
58	Standard Terms & Conditions	3.9	10	This section deals with permit appeals as required under WAC 173-401. It is understood that the permit or any condition in it may be appealed by filing an appeal with the pollution control hearings board pursuant to RCW 43.21B310. This includes all regulatory agencies that are listed in the permit, including the Washington State Department of Health.	Verify that all regulatory agencies and their requirements listed in the permit may be appealed by filing an appeal with the pollution control hearings board in accordance with RCW 43.21B310. Add the following words "including the Health license" after this permit or any conditions…	The attorney generals office has agreed that because Ecology issues the AOP and because the Radioactive Air Emissions License is incorporated into the AOP, the AOP as a whole may be considered subject to appeal to the PCHB. Clarification language was added to include attachments.
59	Standard Terms & Conditions	Section 3.9	10	Duplicate reference in text.	Delete the first reference to WAC 173-401-735; leave duplicate reference in the note.	Agreed to the change.
60	Standard	4.3	13	There should be no references to the statement of basis in permit like	Remove footnote and incorporate definition into the	Agreed to the change.

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	Terms & Conditions			there is in relation to "discovery." The statement of basis is a stand-alone document.	permit.	
61	Standard Terms & Conditions	4.3.2	13	The permit should state what types of emission units the Annual Air Emission Inventory applies to.	Add a sentence that states what types of emission units the inventory applies to and why this is needed in addition to the periodic monitoring required in the permit. Elaborate on how this might apply to IEUs.	Referencing WAC 173-400-105 is adequate. Do not add sentence to explain.
62	Standard Terms & Conditions	4.3.3	13	4th sentence Although this section deals with semiannual reporting, the word "semiannual" should be added before the word reporting in the sentence to clarify that such reporting is semiannual rather than annual.	Add the word "semiannual" before the word reporting in the 4th sentence.	"Semiannual" will be added before the word "reporting" in the 4th sentence.
63	Standard Terms & Conditions	4.3.3	13	The text states that starting in 1998 semi-annual reports will be submitted by August 15 and by March 15th. The permit will only be recently issued by the time the August 15th submittal is required.	It is recommended that the permit effective date be established after August 15, 1998	The permit effective date will be changed and established after August 15, 1998
64	Standard Terms & Conditions	Section 4.3.2	13	Text is confusing; annual emission inventory (lower case) consists of the Annual Emission Inventory update (upper case).	Suggest deleting second AEI reference and adding (when required) between the words "Ecology" and "no" to reflect the regulatory language.	Agreed to the change.
65	Standard Terms & Conditions	4.3.3	14	Item #3 ...summary of any air emission complaint investigation(s)... should be a "substantiated" complaint and not just harassing as seen in previous operations. The requirement should emphasize that there was a valid issue.	Insert the word "substantiated" before air emission complaint investigation. Sentence should read "...any substantiated air emission complaint investigation(s)..."	Agreed to the change.
66	Standard Terms & Conditions	4.3.4	14	Item #5 Requirement is too vague and overbroad. Requirement does not directly correspond to the underlying regulations and appears to focus on non-regulatory bases.	Reword sentence to read "Such other facts as reasonably required by Ecology, Health, or BCCAA to determine the compliance status of the source."	Reword sentence to read, " Such other facts related to the permit as Ecology, Health, or BCAA may require to determine the compliance status of the source."
67				A number 5 has been added to this section which requires certification of undefined requirements.	Delete item 5 as DOE cannot be expected to certify to undefined requirements.	See response to #66.
68	Standard Terms & Conditions	4.4	15	1st paragraph and last para. (2nd sentence) These paragraphs identify requirements for the permittee to provide the necessary training to allow inspection of the facilities by the regulators. There is no requirement that indicates the regulators must be certified or trained appropriately, and that the training is kept current.	Add requirement that the regulator's training is to be kept current and that the regulators are held responsible for that training.	Disagree. Regulators training and security clearance are required for entry to certain facilities. It is regulators' responsibility to keep them updated. AOP is not the place to make it a "condition."
69	Standard Terms & Conditions	4.4	15	The section states that "Health may require a demonstration of ALARACT at any time." According to WAC 246-247-030, 040, and Appendix C, ALARACT demonstrations are "used to evaluate existing emission units and ... proposed nonsignificant modifications." Presumably, all existing emission units meet ALARACT as attested to their inclusion in this permit without compliance schedules. Hence, the ALARACT demonstration can only be requested for "proposed nonsignificant modifications."	Insert "only for proposed nonsignificant modifications" after the phrase "Health may require a demonstration of ALARACT at any time."	The wording is correct as written. WAC 246-247-040(6) Defines BARCT and states, "...requirements for proposed newly constructed or significantly modified emission units..." and "BARCT requirement also meet ALARACT requirements." The requirements for BARCT identified in 040(6) include the ALARACT requirements by definition. WAC 246-247-080(1) states, "The department may require a demonstration of ALARACT at any time." Compliance to this standard cannot be presumed.

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70	Standard Terms & Conditions	4.5	16	Footnote [1] on bottom of page Footnote #1 requires the reader to refer to the Statement of Basis. Footnotes #2 and #3 include the definition or clarification in the footnote.	Remove the definition of discovery from the Statement of Basis and move the definition to the footnote on the bottom of page 16, to be consistent with the other footnotes. This will make it easier for the reader so the reader doesn't have to refer to the Statement of Basis.	Agreed to the change.
71	Standard Terms & Conditions	4.5	16	The 24 hour notification policy for DOH does not include the provision in WAC 246-247-080 to notify only if the transient abnormal condition lasts more than 4 hours.	Add a sentence that indicates notification is not required for transient abnormal conditions lasting less than 4 hours.	It is not correct to presume any transient abnormal condition lasting less than 4 hours would not require notification, if the abnormal condition or other change in facility operations, if allowed to persist, would result in emissions of radioactive material in excess of applicable standards or license requirements.
72	Standard Terms & Conditions	4.5	16	The section states that "Deviations, which represent a potential threat to human health or safety, shall be reported promptly or as soon as possible. Promptly as defined here means as soon as possible following discovery, but in no case later than 12 hours after discovery of a potential threat to human health or safety. This notice contains a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. This notice fulfills the immediate reporting requirements of WAC 173-401-615(3)(b), WAC 173-400-107(3) and WAC 246-247-080(5) (state only)." In fact, Section WAC 246-247-080(5) does not pertain to reports of "a potential threat to human health or safety," nor does it require "prompt" reports, nor does it specify "12 hours." Instead it applies to events of a non-threatening nature, and allows 24 hours for a "notification."	Delete citation to WAC 246-247-080(5).	It is appropriate to keep this citation because as written, this statement does meet the requirements of WAC 246-247-080(5).
73	Standard Terms & Conditions	4.5	16	The section states that "Deviations, which represent a potential threat to human health or safety, shall be reported promptly or as soon as possible." The term "a potential threat to human health or safety," is not defined in quantitative terms and, thus, is open to subjective, arbitrary, and capricious enforcement.	Define the term "a potential threat to human health or safety," in quantitative terms as "in excess of 10 mrem/yr."	To make a determination in these quantitative terms is beyond the authority of the regulations. To the extent that the effects of any activity conducted on the site for which the source is liable, and may constitute a potential threat to human health and safety, is the responsibility of the source, and must be known. To the extent that any activity conducted on site to assure health and safety of the public is protected is also the responsibility of the source. To this end the responsibility for compliance to the section in question, as well as all other requirements of the permit, must lie with the permittee.

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74	Standard Terms & Conditions	4.5	16	The section requires that "Notification must be given to Health within 24 hours ... of the condition or emission which would require notification pursuant to WAC 246-247-080(5) (state only)." It then states that "Such notification is required for other than normal operations when a potential or actual release of radionuclides to the air is due to any one or more of the following:" and cites several conditions. To the contrary, WAC 246-247-080(5) requires notification of those events "which would result in emissions ... in excess of applicable standards." The only applicable, defined, quantifiable standard is 10 mrem/yr. Only an actual, not potential, release in excess of 10 mrem/yr should necessitate a notification. To do otherwise would result in subjective, arbitrary, and capricious enforcement.	Delete "potential or" and conditions 1 and 2 and. In condition 4, delete "or conditions" or justify this additional expenditure of funds on a cost benefit basis in accordance with RCW 34.05.328 and 70.94.145."	The requirements are correct as written. Besides "applicable standards" the WAC 246-247-080(5) also includes the words..."OR license requirements. The comment also overlooked applicable standards such as ALARACT, BARCT and specific emission limits, which also apply to the requirements of this section.
75	Standard Terms & Conditions	Section 4.5	16	This section on Permit Deviation Reporting appears contradictory. The first portion deals with deviations that pose a potential threat to human health and safety (must be reported within 12 hours). The permit text then goes on to state that "Other deviations from permit requirements or excess emissions shall be reported within 30 days after the end of the month during which the deviation is discovered or as part of routine emission monitoring reports." This permit condition then goes on to state: "Notification must be given to Health within 24 hours [or during the course of the next normal business day] from the time of discovery of the condition or emission which would require notification pursuant to WAC 246-247-080(5)." This appears confusing as to whether notification is required within 24 hours or 30 days. Please provide clarification.	Please provide clarification as which deviations require 12 hour notification (define "potential threat to human health and safety"), which require 24 hour notification, and which deviations are to be reported 30 days after the end of the month.	To the extent that 12 hour is a notification requirement and the 30 day requirement is for a full written report, the regulations cited in the section are reasonable and clear. See response to comment #72. The requirements of WAC 246-247-080(5) are fulfilled if the prompt reporting requirements are fulfilled under WAC 173-401-615(3)b.
76	Standard Terms & Conditions	4.5	17	1st paragraph, top of page 17 Paragraph provides requirement for facility to implement corrective actions or any other actions directed by Health within a time limit set by Health per WAC 246-247-080(11). The facility should have the ability to negotiate these time frames in a reasonable manner.	Sentence should read "The licensee shall respond...within a reasonable time limit set by Health per WAC 246-247-080(11) (state only) and agreed to by the permittee..."	The authority of the state is clear and appropriately stated within the citation of this regulation.
77	Standard Terms & Conditions	4.7	18	This section does not address modifications to NOCs contained within this AOP. This issue has been discussed in meetings with DOH and Ecology and it has been stated that if an NOC is modified that it can supercede the information contained in the air operating permit. However, this is not clear in the permit.	It is recommended that the following text be added to this section or other appropriate section: "Modifications to NOCs approved by the appropriate regulatory agency will supercede approval conditions identified in the NOC tables referenced in	Agreed to the suggested addition. The process is the same here as with any modification. Any modification to an existing Notice of Construction would necessitate the submittal of a new Notice of Construction to modify the existing requirements established by the previous NOC

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					the Ecology Permit and Health License. The modification will be incorporated to the next update of the air operating permit.	approval.
78	Standard Terms & Conditions	4.10	20	Item number 1 requires the establishment of readily retrievable records storage areas that the Hanford Site. However, some of the records are currently stored in other locations and bringing all those records back to Hanford would have very little added value for the cost incurred.	Add the statement to item number 1: Storage at Hanford is only required for those records generated after October 1997. Records generated prior to this date may be stored at the Hanford Site or other repository in, if already so located.	The State requirement for onsite storage has existed since WAC 246-247 was promulgated 3/4/94. Prior to this, it has been a federal requirement under 40 CFR 61.95 stating in part, "records must be kept at the site of the facility for at least five years..." This issue has been negotiated, and a schedule agreement reached by which the permittee can achieve compliance. This schedule is correctly identified in section 4.10 Compliance Schedules, item 1. (Reference: DOH response to comment #34)
79	Standard Terms & Conditions	4.10	20	Item number 2 describes a compliance schedule for passively ventilated point sources. These point sources are currently monitored by the Hanford Site Environmental Monitoring Program. Several years worth of monitor show that emissions from these sources is very low; therefore, the cost of additional monitoring and evaluation is not justified.	Delete item number 2 from the permit. In addition, text in Table 2.3 and the Health Statement of Basis (Requirements for Table 2.3) indicating that point source monitoring is to be conducted should be deleted.	This issue was accurately identified as a necessary part of this Title V permit, and the requirement is both federally and state enforceable. This issue has been negotiated, and a schedule agreement reached by which the permittee can achieve compliance. This schedule is correctly identified in section 4.10 Compliance Schedules, item 2.
80	Standard Terms & Conditions	4.10	20	The section requires that "In a time not to exceed 1 year from the effective date of this permit or April 4, 1999, whichever is later ...." The permit will not be issued by April 4, 1998; hence the April 4, 1999, date is meaningless, as one year from the issuance of the permit will be later than April 4, 1999.	Delete "April 4, 1999, whichever is later."	This date will be deleted or revised to be reflective of the permit issue date.
81	Standard Terms & Conditions	4.10	20	The section states that "... the licensee shall maintain readily retrievable storage areas at the Hanford Site for records required pursuant to Attachment 2, Section 3.3, Recordkeeping, of this license." Contrary to this, WAC 246-247-080(8) states only that "The facility shall maintain readily retrievable storage areas." There is no definition of "readily" in the WAC; hence, to require the records to be located at the Hanford Site is arbitrary and capricious, especially given the low dose rates of existing emission units and the current location of some records in a Federal Records archive facility in the Seattle area. In addition, many of the emission units have been closed and their records relocated to the archive facility. To comply with this requirement would necessitate relocating old records from Seattle to Hanford Site and building additional records storage facilities, with no dose-reduction benefit, and, thus, will be a low-value added exercise which will divert funds from	Delete "at the Hanford Site" and define "readily" to be within thirty days of a request or justify this additional expenditure of funds on a cost benefit basis in accordance with RCW 34.05.328 and 70.94.145."	"Readily" is a common use term. The standard dictionary definition applies. See response to comment #78.

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				Hanford's mission to clean-up the site.		
82	Standard Terms & Conditions	4.10	20	The section establishes requirements to "identify categories of passively ventilated point sources." By definition, these sources are low emitters of radionuclide at rates several orders of magnitude below the 10 mrem/yr site standard and the 0.1 mrem/yr standard for a major NESHAPs unit. Thus, this will be a low-value added exercise which will divert funds from Hanford's mission to clean-up the site, with no dose-reduction.	Delete this requirement or justify this additional expenditure of funds on a cost benefit basis in accordance with RCW 34.05.328 and 70.94.145."	See comment response # 79.
83	Standard Terms & Conditions	4.10	21	Item #5 (a) and (b) identify requirements for SO_2 emissions from the 300 Area steam generating boilers during period through June 1998. The boilers were officially shut down on 3/14/98. DOE made a public formal announcement on the permanent shutdown. The backup package boilers are permitted and are coming online in a phased approach.	Remove or delete (a) and (b) requirements, since the requirements are no longer applicable.	Delete the requirements.
84	Standard Terms & Conditions	Section 4.10	21	Under subsection 5, boilers subject to this regulatory order agreement are no longer in operation.	Suggest deleting subsection 5 and/or moving any completed conditions to the statement of basis section for completed regulatory order requirements.	Delete subsection 5.
85	Standard Terms & Conditions	4.11	22	The section states that "The permittee is not allowed to construct or operate new or modified emission units without prior approval ...." This requirement does not allow for the exemption in 40 CFR 61.96(b) which states that "An application for approval ... does not need to be filed for any new construction of or modification ... if the effective dose equivalent, caused by all emissions from the new construction or modification, is less than 0.1% of the standard prescribed in 61.92." The standard prescribed in 61.92 is 10 mrem/yr. Hence, no application (or notice of construction) is required for any construction or modification of less than 0.1 mrem/yr, if the facility is in compliance with 40 CFR 61 Subpart H. Following successful completion of Section 4.10, Compliance Schedules, Number 3, (NESHAP FFCA), the Hanford Site will be eligible for the exemption.	Section 4.11 should include reference to 40 CFR 61.96(b), which allows for the exemption from submitting applications for approval for new construction of or modification within an existing facility with an effective dose equivalent of less than 0.1 mrem/yr.	The comment correctly points out that the permittee is not eligible for this exemption with the facility is under the compliance orders of the Federal Facility Compliance Agreement. However, this exemption upon the successful completion of all the compliance orders, will not preclude the state only applicable requirements for new construction or modification of emission units found in WAC 246-247-060.
86	Standard Terms & Conditions	5	23	Table 5.1 Applicable Requirements should be included in the permit shield.	Revise permit to include Table 5.1 in the permit shield	The footnotes regarding Stage 1 gasoline requirements (WAC 173-491) and stratospheric ozone protection (40 CFR 82) are moved to Section 3.11 and 3.12, respectively. Also, the regulatory authorities of the asbestos requirements are clearly stated in Attachment 3. In addition, Table 5.1 is deleted per EPA comment #4.
87	Standard Terms & Conditions	5	23	The table is confusing. The only thing that is relevant is whether or not the requirement is "federally enforceable."	Ecology should consider just having a column that indicates whether or not the requirement is federally enforceable.	

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88	Standard Terms & Conditions	Table 5.1	24	It is understood that the applicable requirements listed are those federally enforceable and State only requirements and apply to the Hanford Site areas as defined in Section 2.0 of the permit.	Modify the statement in paragraph prior to Table 5.1: "The applicable facility enforceable requirements and State only requirements, applicable to the Hanford Site as defined in Section 2.0, are shown in Table 5.1."	
89	Standard Terms & Conditions	Table 5.1	24	Requirement contains Sec. 112 (HAP) including 40 CFR 61 and WAC 173-400-075…There is no Federal or State enforcement date listed for these two regulations.	Add State enforcement date for WAC 173-400-075. Effective date is 10/14/96.	
90	Standard Terms & Conditions	Table 5.1	24	The footnote to 40 CFR 61 Subpart M states that "The Benton County Clean Air Authority has jurisdiction." What needs to be made clear is whether or not they have "delegation of the Administrator's authorities and responsibilities" (see section 112(l) of CAA and 40 CFR 61.04). If the delegation is partial, then the permit needs to show what parts of the NESHAP that they have authority for.	Make it more clear which regulators have what delegated authorities on the Hanford site. Perhaps a table that has a column listing the regulator (e.g., Ecology), regulations that they have authority for (e.g., 40 CFR 61, subpart M), and whether or not those regulations are federally enforceable. If there is partial delegation given by the administrator, then the permit should show exactly what parts the regulator has authority for.	Section 112(l) of CAA on State Program describes how EPA's authorities and responsibilities are delegated to a State to implement approved State programs. Section 112(l)(9) on Permit Authority further states that "Nothing in this subsection shall affect the authorities and obligations of the Administrator or the State under Title V." Title V authorities and responsibilities take precedence over other CAA Titles and regulations. Washington's Title V State Program was submitted by the Department of Ecology on behalf of the State. According to EPA-X (Elizabeth Waddell), the Washington State program is fully approvable. It's just a matter of finding the time to complete the paper work. The State has full authority to implement the Title V State Program as long as it is "not inconsistent with the CAA (per Section 506(a) of CAA. The State has the authority to implement the program using any available resources in a coordinated and efficient manner. In addition, Table 5.1 has been deleted per EPA comment #4.
91	Standard Terms & Conditions	5.3 Statement of Basis	28	1st Paragraph, 3rd sentence. The third sentence seems paradoxical. The Statement of Basis can not be the legal and factual basis for the permit conditions and yet be non-enforceable. WAC 173-401-700(8) seems to imply that the SOB is legally enforceable to the extent that it is the factual basis for the permit.	Identify the regulatory citation that makes the Statement of Basis unenforceable, or change the language to be consistent with the language in WAC 173-401-700(8).	The declaration of non-enforceability is a true and accurate statement and was requested by the permittee, as an assurance that the Statement of Basis is a separate document from the permit and by itself not enforceable. But this doesn't preclude the fact that the regulations referenced in the Statement of Basis are not in and of themselves enforceable. See similar discussion for comment response #49.
92	Standard Terms & Conditions	5.3	28	The section states that "This Statement of Basis provides a common understanding between the permittee, the permitting agencies, and the public."	Revise to state "This Statement of Basis provides the Department of Health's understanding of the basis for the permit."	The second sentence, "This Statement of Basis… and the pubic", has been removed to more closely follow regulatory language.

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93	Statement of Basis (Ecology)	2 Definitions	3	Definition of "discovery" should be moved to page 16 of the permit as a footnote to be consistent with footnotes #2 and #3 of Section 4.5 of the permit.	Move discovery definition from Statement of Basis to page 16 of permit as footnote.	Agreed to the suggestion.
94	Statement of Basis (Ecology)	6 Fossil-fuel Fired Steam Generators on the Hanford Site	14	This section lists the 300 Area fossil-fuel fired steam generators on the Hanford Site: 300F-384-002 and 300F-384-006. These generators have been officially decommissioned, deactivated by DOE on 3/14/98 and are no longer an emission unit. As such, these emission units should be deleted from permit and statement of basis documents or moved to Section 17 of the Statement of Basis.	Remove Section 6 from Statement of Basis or move to Section 17 under fossil fuel-fired steam generating plants that have been shutdown or deactivated.	Agreed to the suggestion.
95	Statement of Basis (WDOH)	Clarification Section	5	Regulation WAC 246-247-030(21): the Department has made an attempt to list several methods as options for determining the Potential-to-Emit but, in doing so, has really defined certain terms within the definition rather than listing the methods. The Department does not provide any method other than the Appendix D methodology and states that "other methods described are self-explanatory."	Delete clarification.	At the request of DOE (reference letter 98-EAP-165) all clarifications will be removed. Definitions will also be deleted from the Statement of Basis. The Department of Health at the request of the Department of Energy provided these "clarifications" to DOE to assist the licensee with Health regulations, and how they would be interpreted and applied. The benefits were clearly favorable to the licensee. The clarification will be deleted.
96	Statement of Basis (WDOH)	Clarification Section	5, 2nd para.	Second paragraph beginning with "Release..." is unclear. This sentence implies that small modifications are well over 1.0 mrem/yr, however, later the Department defines 1.0 mrem/yr as significant. This seems to be contradictory. In addition, the term "small modification" is used; however, there is no such definition in the State or Federal regulations.	Delete clarification.	See response to comment # 95 above.
97	Statement of Basis (WDOH)	Clarification Section	5, 3rd para.	Under the statement about new construction it is presented that "unless alternative methods are approved by EPA and the department, the above release fractions must be used..." The release fractions referenced are those found in Appendix D of 40 CFR 61; consequently, the Department is ignoring their own release fraction requirements found in WAC 246-247-030(21). Although the Department's release fraction assumptions are similar to those in Appendix D, they differ regarding temperature which could result in different sampling requirements from those prescribed using the Appendix D methodology.	Delete Clarification.	See response to comment # 95 above.
98	Statement of Basis	Clarification	5, 2nd	The second sentence that starts with PTE is confusing. 40 CFR 61, Subpart H (NESHAP) applies to all DOE radiological emission points	Delete Clarification.	See response to comment # 95 above.

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	(WDOH)	Section	sent.	regardless of the PTE. The sampling requirements are different depending on the PTE but they are all regulated under the NESHAP. The parenthetical statements in this sentence are confusing and unnecessary.		
99	Statement of Basis (WDOH)	Clarification Section	5 through 12	The "clarifications" presented in the Statement of Basis do not appear to be minor clarifications of the regulations but rather a reinterpretation or expansion of how the Department wants to regulate the Hanford Site. In general, the clarifications expand the existing requirements and introduce new terms (e.g., "small modifications" and "routine activities")not found in the regulation. In addition, other definitions and regulations are not correctly quoted from WAC 246-247, including: Page 2, WAC 246-247-030(21) unit versus point; Page 4, WAC 246-247-060(1) only half of definition quoted and need to add notation (b); Page 6, WAC 246-247-030(16) is missing part of the definition and it not directly quoted; Page 7, WAC 246-247-080(8) is missing text and is not directly quoted.	Revise to quote the regulation accurately or delete section from Statement of Basis.	See response to comment # 95 above.
100	Statement of Basis (WDOH)	Clarification Section	6, last sent.	Regulation WAC 246-247-060(1): the Department's statement in the last sentence is inappropriate since it implies the Department's decision-making process is driven by public or agency perceptions as opposed to regulatory requirements. The statement portrays the Department's position rather than clarifying the requirements for the permittee.	Delete Clarification.	See response to comment # 95 above.
101	Statement of Basis (WDOH)	Clarification Section	7 and 8	The regulations, when taken in context, seem to be quite clear that the Department controls the process for determining what constitutes sufficient information in a permit application. The clarification presented does not enhance that understanding. In addition, while the "streamlined approach" benefits the applicant, it should be noted that there is no regulatory basis in WAC 246-247 for such a process.	Delete Clarification.	The approach the Department of Health takes is in expediting approvals within the regulatory process. Any "streamlining" is done in compliance with our regulations. The added benefit is of substantial cost savings to the Department of Energy. See response to comment # 95 above.
102	Statement of Basis (WDOH)	Clarification Section	8 last sent.	Regulation WAC 246-247-060(1)(c): the last statement regarding the Department's evaluation of a project based on the risks and benefits seems to be beyond the scope of the regulations. The decision to approve or deny an application should be based on the project's ability to meet the emission limits, monitoring, and control technology requirements (e.g., ALARACT or BARCT). A facility that can demonstrate that potential abated emissions will be below the 10 mrem risk-based standard has satisfied the regulatory requirements. Any additional risk/benefit evaluations represent new requirements that must be clearly defined within the regulations before being applied in	Delete Clarification.	The 10 mrem standard is only one requirement, and are already defined in WAC 246-247. See response to comment # 95 above.

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				the permitting process.		
103	Statement of Basis (WDOH)	Clarification Section	9 2nd and 3rd para.	Regulation WAC 246-247-030(16): in 2nd paragraph there is no State or Federal regulatory precedence for limiting emissions to a previous two-year baseline. In addition, the statistical or technical basis for the referenced 2-sigma error is not presented. In 3rd paragraph NESHAP applies to all DOE radiological emission points. It is unclear what being "already NESHAP " means? It is believed the Department is trying to refer to those emission points with a PTE greater than 0.1 mrem that requires continuous sampling under NESHAP requirements.	Delete Clarification.	The two years baseline offered flexibility in determining an increase in emissions. The regulation citing "any" increase will determine a modification will be applied. See response to comment # 95 above.
104	Statement of Basis (WDOH)	Clarification Section	10	Regulation WAC 246-247-080(8): the phrase "readily retrievable" is not defined within the regulations and should be open for negotiation at the time the Department requests the documents to evaluate a facility for compliance with the standards. Depending upon the request, some documents may take longer to retrieve than others. However, records will be retrieved within a reasonable time and every effort will be made to accommodate the Department's request.	Delete Clarification.	See response to comment #78 and #81. See response to comment # 95 above.
105	Statement of Basis (WDOH)	Clarification Section	11	Regulation WAC 246-247-030(23): the examples cited are related to the page 9-modification definition and associated language that is believed to incorrectly state that a modification has occurred if the baseline emissions (previous two years operation) are exceeded. The definition of "routine" in the regulations is limited to normal, day-to-day operations or physical changes at the facility that do not increase the operating capacity. The definition in the SOB erroneously excludes all activities that increase the PTE or that have not been performed within a two-year period. PNNL facilities frequently experience minor changes in radioactive materials inventory that could increase their PTE (e.g., analytical sample receipt). PNNL considers the receipt and analysis of samples as a routine activity for analytical laboratories. Finally, as mentioned previously, there are no regulatory bases for specifying times for determining what is "routine" for a given facility.	Delete Clarification.	WAC 246-247 does define routine as a day-to-day operation. See response to comment # 95 above.
106	Statement of Basis (WDOH)	Clarification Section	12	Regulation WAC 246-247-030(25): as previously mentioned, NESHAP is applicable to all emission points and to all modifications affecting those emission points. The Department is misusing the term NESHAP to distinguish between those emission points with a PTE greater than 0.1 mrem requiring continuous sampling and those less than 0.1 mrem that require only periodic confirmatory sampling.	Delete Clarification.	See response to comment # 95 above.
107	Statement of Basis (WDOH)	Clarification Section	13	A definition of maintenance records is not included.	Please include the term, as previously provided in pre-drafts of the permit, in either the SOB definitions or under Section 3.3 of Attachment 2 of the license.	It was at the request of the Department of Energy, that this definition be removed in DOE comments to the "draft permit".

No.	Permit Section	Text Section	Pg.	Comment	Requested Action	ECOLOGY/DOH Response
						See response to comment # 95 above.
108	Statement of Basis (WDOH)	Clarification Section	14	The second sentence under upstream sampling does not appear to be relevant to this discussion and appears to be in the wrong section.	Delete the second sentence under upstream sampling.	See response to comment # 95 above.
109	Statement of Basis (WDOH)	Clarification Section	15	(Recordkeeping) This section could be expanded to include a paragraph on the understanding between licensee and the agency on the intended scope of record keeping, as identified under Section 3.3 of the license.	Request technical assistance in jointly drafting explanatory paragraph.	Refer to compliance plan section 4.10 of the permit. See response to comment # 95 above.
110	Statement of Basis (WDOH)	Clarification Section	15	The second paragraph states that Health establishes emission limits in NOC approvals or upon baseline emissions from an emission unit. There is no basis for establishing emission limits based on a baseline. The site as a whole is way below the overall standard of 10 mrem/yr (orders of magnitude below) and emission limits based on a baseline is overly restrictive.	Delete the text concerning establishment of limits based on a baseline.	Refer to comment # 103. See response to comment # 95 above.
111	Statement of Basis (WDOH	Technical Support Document	19	These tables do not accurately reflect the current information for the ER facilities.	The text should be updated to incorporate previous comments submitted on this information.	DOH has incorporated up-to-date facility descriptions provided by RL.
112	Statement of Basis (WDOH)	Technical Support Document	77	Revise "Building Description."	Revise Building Description to read as follows: "This complex consists of the Central Waste Complex, the 224-T Building, caissons, and the Low-Level Burial Grounds. The Central Waste Complex is a cluster of storage structures storing vented and sealed containers. The 224-T Building is a multi-story concrete structure divided into two sections. One section is capable of storing vented and sealed containers. The other section contains the process cells that were used for chemical processing for purifying liquid plutonium nitrate by the lanthanum fluoride process. These process cells ceased operations in 1956 and have not been accessed since 1975."	DOH has incorporated up-to-date facility descriptions provided by RL.
113	Statement of Basis (WDOH)	Technical Support Document	79	Revise "Building Description."	Revise Building Description to read as follows: "This complex consists of the Central Waste Complex, the 224-T Building, caissons, and the Low-Level Burial Grounds. The Central Waste Complex is a cluster of storage structures storing	DOH has incorporated up-to-date facility descriptions provided by RL.

No.	Permit Section	Text Section	Pg.	Comment	Requested Action	ECOLOGY/DOH Response
					vented and sealed containers. The 224-T Building is a multi-story concrete structure divided into two sections. One section is capable of storing vented and sealed containers. The other section contains the process cells that were used for chemical processing for purifying liquid plutonium nitrate by the lanthanum fluoride process. These process cells ceased operations in 1956 and have not been accessed since 1975."	
114	Statement of Basis (WDOH)	Technical Support Document	183 and 184	Several pieces of information in the technical section for this emission point are either incorrect or extremely vague and unclear. The building and process descriptions contain outdated and redundant information, the stack height is incorrect, and the controls description is very imprecise.	Revise/correct the information included to read as follows: Building Description: "WESF currently provides surveillance operations to ensure safe storage and management of radiological inventory. Operations include generation of demineralized waste, and treatment and storage of radioactive waste. The facility handles waste transfers within and outside of the Waste Encapsulation and Storage Facility (WESF)." Process Description: "This stack vents the 225-B (WESF) Building. WESF was used to encapsulate purified Cesium (Cs) and Strontium (Sr) salts from the processing of tank waste. It is now used for storage of the Cs and Sr capsules underwater in pool cells." The stack height should be corrected to read 22.9 m (75 ft), not 17.4 m (57 ft). Controls: "The K-1 exhaust system ventilates the WESF pool cells and operating areas through the K-1 filter building. This system consists of 2 prefilters, followed by 2 stages of in-line HEPA filtration. The exhaust air then exits through 1 of 2 parallel/identical pathways consisting of a damper, an exhaust fan, and another damper, before discharge out the 296-B-10 stack. The K-3 exhaust	DOH has incorporated up-to-date facility descriptions provided by RL.

No.	Permit Section	Text Section	Pg.	Comment	Requested Action	ECOLOGY/DOH Response
					system ventilates the WESF hot cells and canyon area through 1 of 2 parallel/identical K-3 filter housings which contain impingement vanes, demisters and heaters in front of 2 stages of in-line HEPA filtration. The air flow then exits through a damper and an exhaust fan before discharge out the 296-B-10 stack." "Both the K-1 and K-3 systems exhaust through the P-296B010 001 stack."	
115	Statement of Basis (WDOH)	Technical Support Document	185 and 186	The information on this page has some of the same problems outlined above for 296-B-10. The building description is outdated and redundant, the process description is incomplete and the controls are inaccurate. NOTE****The 296-B-12 stack has been shutdown and is not operational. Final capping of the emission point in being pursued and closure documentation is being prepared for submittal to WDOH.	Revise/correct the information to read as follows (keeping in mind that the stack is not operational at this time): Building Description: Use same description as suggested above for 296-B-10 page. Process Description: Use same description as suggested above for 296-B-10 page. Add the following sentence to the end of that description. "This stack is located downstream of the K-3 filter housing and provides emergency venting capacity in the event of the failure of the K-3 exhaust system." Controls: The 296-B-12 stack is downstream of all the controls listed for the K-3 system in the page for 296-B-10. Use that same description in this place.	DOH has incorporated up-to-date facility descriptions provided by RL.
116	Statement of Basis (WDOH)	Technical Support Document	190 through 245	Data listed for each building and emission point is inaccurate. Use of significant figures is inappropriate. Emission point locations are inaccurate. Geological surveys are currently being conducted for determining the exact physical location coordinates, and results will be included in the Statement of Basis.	Replace data with the appropriate changes identified in Attachment 1.	DOH has incorporated up-to-date facility descriptions provided by RL.
117	Statement of Basis (WDOH)	Technical Support Document	196	The EP-318-01-S stack was relocated and a short form Notice of Construction was approved by Health on 1/6/98. The data for the old stack listed in the Statement of Basis should be replaced by the new data listed in the NOC.	Replace data with new data listed in Attachment 1.	DOH has incorporated up-to-date facility descriptions provided by RL.
118	Statement	Technica	220	Emission unit EP-331-01-S is a vent and not a stack. The emission	Change emission unit EP-331-01-S to EP-331-01-V.	Emission unit EP-331-01-S will be change to EP-331-01-V.

No.	Permit Section	Text Section	Pg.	Comment	Requested Action	ECOLOGY/DOH Response
	of Basis (WDOH)	l Support Docume nt		unit designation should be revised to reflect the type of unit.		
119	Statement of Basis (WDOH)	Technica l Support Docume nt	222	Stack was deregistered and has physically been removed. Health conducted a visual inspection on 1/16/98 and verified deregistration and closure. The emission unit should be deleted from this section of the Statement of Basis.	Delete Emission Unit EP-331A-01-S from Technical Support Document.	Emission Unit EP-331A-01-S will be deleted.
120	Statement of Basis (WDOH)	Obsolete Applicati on Require ments	260	The title to this section indicates that obsolete requirements are still applicable.	Delete the word "applicable".	No such meaning is intended or implied. The section title is correct as written.
121	Statement of Basis (WDOH)	Obsolete Applicati on Require ments	261 thro ugh 280	Some of the dates listed in the table for the ER Program emission units are not correct. In addition, there are several NOCs listed that are not obsolete and some of which are correctly included in the Health License as active.	The three Rad Counting Facility approvals dated 4/27/95, 4/13/95, and 7/11/95 are not obsolete and are included in the Health License. These should be deleted from the obsolete table. The Purgewater Modutanks approval is also current and should be included in the Health License and deleted from the obsolete table.	This section will be reviewed for accuracy. Dates, NOC's, and other records will be checked for the facilities identified and corrected accordingly. Some applicable requirements are obsolete; however, that's what this Table reflects.
122	Statement of Basis (WDOH)	CERCL A Applicab le or Relevant and Appropri ate Require ments	281	CERCLA activities are not relevant to this permit. The text indicates that the purpose of including the CERCLA activities is to inform the public. The public is informed of CERCLA activities through the public review process that is well established at Hanford for CERCLA activities.	Delete the CERCLA section from the Statement of Basis.	Statements regarding CERCLA activities are not in the permit. CERCLA activities are however, applicable or relevant and appropriate requirements, and are correctly and appropriately identified as such in the Statement of Basis.

ATTACHMENT 1

Number	Emission Unit	AOP Draft	Recommended Changes
A1	EP-305B-01-S	**Emission Unit Location**: See Draft AOP **Stack Height:** 10 m (32.8 ft) **Stack Diameter**: 0.25 m (0.82 ft) **Stack Gas Velocity**: 9.4 m/s (30.8 ft/s) **Average Volumetric Flowrate**: 0.3 m^3/s (1000 cfm)	**Emission Unit Location**: TBD (awaiting geological survey results) **Stack Height:** 10 m (32.8 ft) **Stack Diameter**: 0.25 m (0.83 ft) **Stack Gas Velocity**: 9.7 m/s (31.8 ft/s) **Average Volumetric Flowrate**: 0.5 m^3/s (1040 cfm)
A2	EP-306W-03-V	**Emission Unit Location:** See Draft AOP **Stack Height:** 8 m (26.24 ft) **Stack Diameter:** 1.09 m (3.575 ft) **Stack Gas Velocity:** 12.2 m/s (40.016 ft/s) **Average Volumetric Flowrate:** 13 m^3/s (27550 cfm)	**Emission Unit Location:** TBD (awaiting geological survey results) **Stack Height:** 8.8 m (28.8 ft) **Stack Diameter:** 1.09 m (3.58 ft) **Stack Gas Velocity:** 13.4 m/s (44.0 ft/s) **Average Volumetric Flowrate:** 12.5 m^3/s (26603 cfm)
A3	EP-318-01-S (old)	**Emission Unit Location:** See Draft AOP **Stack Height:** 9 m (29.52 ft) **Stack Diameter:** 6.10E-01 m (2.0008 ft) **Stack Gas Velocity:** 10.6 m/s (34.768 ft/s) **Average Volumetric Flowrate:** 3.1 m^3/s (6569 cfm)	**Emission Unit Location:** TBD(awaiting geological survey results) **Stack Height:** 12.0 m (39.3 ft) **Stack Diameter:** 0.61 m (2.0 ft) **Stack Gas Velocity:** 12.0 m/s (39.4 ft/s) **Average Volumetric Flowrate:** 3.5 m^3/s (7434 cfm)
A4	EP-318-01-S (new)	**Emission Unit Location:** - **Stack Height:** - **Stack Diameter:** - **Stack Gas Velocity:** - **Average Volumetric Flowrate:** -	**Emission Unit Location:** TBD(awaiting geological survey results **Stack Height:** 8.8 m (28.9 ft) **Stack Diameter:** 0.25 m (0.83 ft) **Stack Gas Velocity:** TBD **Average Volumetric Flowrate:** TBD

Number	Emission Unit	AOP Draft	Recommended Changes
A5	EP-320-01-S	**Emission Unit Location:** See Draft AOP **Stack Height:** 13 m (42.7 ft) **Stack Diameter:** 1.52 m (5 ft) **Stack Gas Velocity:** 11.3 m/s (37.1 ft/s) **Average Volumetric Flowrate:** 20.6 m^3/s (43655 cfm)	**Emission Unit Location:** TBD (") **Stack Height:** 12.1 m (39.7 ft) **Stack Diameter:** 1.52 m (5.0 ft) **Stack Gas Velocity:** 10.8 m/s (35.4 ft/s) **Average Volumetric Flowrate:** 19.6 m^3/s (41688 cfm)
A6	EP-320-02-S	**Emission Unit Location:** See Draft AOP **Stack Height:** 8 m (26.24 ft) **Stack Diameter:** 0.25 m (0.83 ft) **Stack Gas Velocity:** 3.98 m (13.1 ft/s) **Average Volumetric Flowrate:** 0.2 m^3/s (424 cfm)	**Emission Unit Location:** TBD (") **Stack Height:** 9.7 m (31.8 ft) **Stack Diameter:** 0.25 m (0.83 ft) **Stack Gas Velocity:** 4.8 m (15.9 ft/s) **Average Volumetric Flowrate:** 0.2 m^3/s (516 cfm)
A7	EP-320-03-S	**Emission Unit Location:** See Draft AOP **Stack Height:** 6 m (19.68 ft) **Stack Diameter:** 0.177 m (0.6 ft) **Stack Gas Velocity:** 16.3 m/s (53.5 ft/s) **Average Volumetric Flowrate:** 0.4 m^3/s (847 cfm)	**Emission Unit Location:** TBD (") **Stack Height:** 7.9 m (26.0 ft) **Stack Diameter:** 0.18 m (0.58 ft) **Stack Gas Velocity:** 9.0 m/s (29.5 ft/s) **Average Volumetric Flowrate:** 0.2 m^3/s (473 cfm)
A8	EP-320-04-S	**Emission Unit Location:** See Draft AOP **Stack Height:** 6 m (19.68 ft) **Stack Diameter:** 0.177 m (0.58 ft) **Stack Gas Velocity:** 12.2 m/s (40 ft/s) **Average Volumetric Flowrate:** 0.3 m^3/s (636 cfm)	**Emission Unit Location:** TBD (awaiting geological survey results) **Stack Height:** 7.9 m (26.0 ft) **Stack Diameter:** 0.18 m (0.58 ft) **Stack Gas Velocity:** 9.2 m/s (30.2 ft/s) **Average Volumetric Flowrate:** 0.2 m^3/s (483 cfm)
A9	EP-323-01-S	**Emission Unit Location:** See Draft AOP	**Emission Unit Location:** TBD (") **Stack Height:** 4.9 m (16.2 ft)

Number	Emission Unit	AOP Draft	Recommended Changes
		Stack Height: 5 m (16.4 ft) **Stack Diameter:** 0.59 m (1.7 ft) **Stack Gas Velocity:** 11.3 m/s (37.1 ft/s) **Average Volumetric Flowrate:** 2.3 m^3/s (4874 cfm)	**Stack Diameter:** 0.51 m (1.67 ft) **Stack Gas Velocity:** 11.2 m/s (36.7 ft/s) **Average Volumetric Flowrate:** 2.3 m^3/s (4803 cfm)
A10	**EP-325-01-S**	**Emission Unit Location:** See Draft AOP **Stack Height:** 17.9 m (58.712 ft) **Stack Diameter:** 2.44 m (8.0 ft) **Stack Gas Velocity:** 13.6 m/s (44.6 ft/s) **Average Volumetric Flowrate:** 63.4 m^3/s (134357 cfm)	**Emission Unit Location:** TBD **Stack Height:** 27.1 m (88.8 ft) **Stack Diameter:** 2.44 m (8.0 ft) **Stack Gas Velocity:** 13.8 m/s (45.2 ft/s) **Average Volumetric Flowrate:** 64.0 m^3/s (136199 cfm)
A11	**EP-326-01-S**	**Emission Unit Location:** See Draft AOP **Stack Height:** 14 m (45.92 ft) **Stack Diameter:** 1.83 m (6.1 ft) **Stack Gas Velocity:** 9.52 m/s (31.2 ft/s) **Average Volumetric Flowrate:** 25 m^3/s (52980 cfm)	**Emission Unit Location:** TBD **Stack Height:** 14.5 m (47.7 ft) **Stack Diameter:** 1.83 m (6.0 ft) **Stack Gas Velocity:** 9.6 m/s (31.4 ft/s) **Average Volumetric Flowrate:** 25 m^3/s (53248 cfm)
A12	**EP-329-01-S**	**Emission Unit Location:** See Draft AOP **Stack Height:** 11 m (36.1 ft) **Stack Diameter:** 1.52 m (5 ft) **Stack Gas Velocity:** 10.1 m/s (33.13 ft/s) **Average Volumetric Flowrate:** 18.4 m^3/s (38993 cfm)	**Emission Unit Location:** TBD **Stack Height:** 19.1 m (62.5 ft) **Stack Diameter:** 1.52 m (5.0 ft) **Stack Gas Velocity:** 11.7 m/s (38.4 ft/s) **Average Volumetric Flowrate:** 21.2 m^3/s (45197 cfm)
A13	**EP-331-01-S**	**Emission Unit Location:** See Draft AOP **Stack Height:** 17.8 m (53.38 ft) **Stack Diameter:** 1.98 m (6.5 ft)	**Emission Unit Location:** TBD **Note: emission unit should be changed from EP-331-01-S to EP-331-01-V since it is a vent and not a stack.** **Stack Height:** 18.9 m (62.0 ft)

Number	Emission Unit	AOP Draft	Recommended Changes
		Stack Gas Velocity: 11.1 m/s (33.13 ft/s) **Average Volumetric Flowrate:** 31.1 m^3/s (65907 cfm)	**Stack Diameter:** 1.98 m (6.5 ft) **Stack Gas Velocity:** 10.9 m/s (35.8 ft/s) **Average Volumetric Flowrate:** 33.5 m^3/s (71278 cfm)
A14	**EP-3720-01-S**	**Emission Unit Location:** See Draft AOP **Stack Height:** 9.1 m (29.85 ft) **Stack Diameter:** 1.22 m (4 ft) **Stack Gas Velocity:** 9.25 m/s (30.4 ft/s) **Average Volumetric Flowrate:** 10.8 m^3/s (22887 cfm)	**Emission Unit Location:** TBD **Stack Height:** 11.0 m (36.1 ft) **Stack Diameter:** 1.22 m (4.0 ft) **Stack Gas Velocity:** 8.9 m/s (29.3 ft/s) **Average Volumetric Flowrate:** 10.4 m^3/s (22075 cfm)
A15	**EP-3720-02-S**	**Emission Unit Location:** See Draft AOP **Stack Height:** 5.3 m (17.38 ft) **Stack Diameter:** 0.61 m (2 ft) **Stack Gas Velocity:** 4.11 m/s (13.5 ft/s) **Average Volumetric Flowrate:** 1.2 m^3/s (2543 cfm)	**Emission Unit Location:** TBD **Note: stack has been out-of-service as of 1700 hrs on 8/25/96.** **Stack Height:** 4.7 m (15.3 ft) **Stack Diameter:** 0.61 m (2.0 ft) **Stack Gas Velocity:** 4.9 m/s (16.2 ft/s) **Average Volumetric Flowrate:** 1.4 m^3/s (3050 cfm)
A16	**EP-3720-03-S**	**Emission Unit Location:** See Draft AOP **Stack Height:** 9 m (29.5 ft) **Stack Diameter:** 0.71 m (2.5 ft) **Stack Gas Velocity:** 5.92 m/s (19.4 ft/s) **Average Volumetric Flowrate:** 2.7 m^3/s (5722 cfm)	**Emission Unit Location:** TBD **Stack Height:** 9.3 m (30.4 ft) **Stack Diameter:** 0.76 m (2.5 ft) **Stack Gas Velocity:** 7.3 m/s (24.0 ft/s) **Average Volumetric Flowrate:** 3.3 m^3/s (7082 cfm)
A17	**EP-3730-01-S**	**Emission Unit Location:** See Draft AOP **Stack Height:** 5 m (16.4 ft) **Stack Diameter:** 0.2 m (0.67 ft) **Stack Gas Velocity:** 6.11 m/s (20.04 ft/s)	**Emission Unit Location:** TBD **Stack Height:** 5.9 m (19.3 ft) **Stack Diameter:** 0.20 m (0.67 ft) **Stack Gas Velocity:** 5.1 m/s (16.7 ft/s) **Average Volumetric Flowrate:** 0.2 m^3/s (349 cfm)

Number	Emission Unit	AOP Draft	Recommended Changes
		Average Volumetric Flowrate: 0.2 m^3/s (424 cfm)	
A18	**EP-3745-01-S**	**Emission Unit Location:** See Draft AOP **Stack Height:** 2 m (6.56 ft) **Stack Diameter:** 0.2 x 0.2 m (0.67 x 0.67 ft) **Stack Gas Velocity:** 4.81 m/s (15.78 ft/s) **Average Volumetric Flowrate:** 0.2 m^3/s (424 cfm)	**Emission Unit Location:** TBD **Stack Height:** 2.8 m (9.17 ft) **Stack Diameter:** 0.203 x 0.203 m (0.67 x 0.67 ft) **Stack Gas Velocity:** 5.5 m/s (18.0 ft/s) **Average Volumetric Flowrate:** 0.2 m^3/s (485 cfm)