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**Enclosure 1 to Hanford Site Air Operating Permit, Revision C Issuance**

Administrative Amendments

This Enclosure contains Administrative Amendment page changes as:

1. **ATT 1-22, 1-77, 1-78, 1-79, and 1-79-i:** The Approval Order DE05NWP-001, Rev 1 (7/31/2007) is for Double-Shell Tank Waste Ventilation. The permit conditions of the original order DE05NWP-001 were found on 4 pages in the AOP (ATT 1-22, and 1-77 through 1-79). The Revision C eliminates Page ATT 1-22 and corrects designation of "State-Only" enforceabilities. All the permitting conditions are now on Pages ATT 1-77 through 1-79 and 1-79-i (total 4 pages).
2. **ATT 1-23:** Correct typographical error. The required citation for this page should be DE05NWP-002, not -001. This error is corrected (see #3 below).
3. **ATT 1-23, 1-80, 1-81, 1-82, 1-82-i, and 1-82-ii:** The Approval Order DE05NWP-002 is for Single-Shell Tank retrieval. Rev 2 was issued on 7/31/2007. The permit conditions of the original order (prior to Rev 2) were found in 4 pages (ATT 1-23, and 1-80 through 1-82). The Revision C eliminates Page ATT 1-23 and corrects designation of "State-Only" enforceabilities. All the permitting conditions are now in Pages ATT 1-80 through 1-82, 1-82-i, and 1-82-ii (total 5 pages).
4. **ATT 1-83-v:** DE07NWP-001, Amendment 1 was issued on 7/31/2007. This approval order is for HAMMER Training Facility. Amendment 1 modifies one permit condition in Page ATT 1-83-v and includes correction of designation of "State-Only" enforceabilities.
5. **ATT 1-47, 1-48 and 1-48-i:** DE07NWP-003, Amendment 2 was issued on 9/27/2007. This approval order is for Effluent Treatment Facility (ETF). The modifications are in Pages ATT 1-47, 1-48 and 1-48-i and includes correction of designation of "State-Only" enforceabilities.
6. **ATT 1-28, 1-29 and 1-29i:** The Approval Order DE01NWP-003 (8/21/2001) is for WTP Concrete Batch Plant with two revisions issued on 9/24/2002 and 3/12/2003. The addition of a Diesel Fuel Oil Boiler (3/12/2003 Revision) was inadvertently omitted in the 2006 AOP Renewal. The permit conditions for this boiler are now added in Page ATT 1-29-i. Three pages are affected by the addition (Pages ATT 1-28, 1-29, and 1-29-i).
7. **ATT 1-83-xi and 1-83-xii:** The Approval Order DE07NWP-004 for WTP Construction Heaters was issued on 11/21/2007: The approval order adds two new pages (ATT 1-83-xi and 1-83-xii).
8. **ATT 1-83-ix:** Correct a typographical error on this page (15 parts per million is 0.0015, not 0.015 percent).
9. **ATT 1-6, 1-7 and 1-8:** Update Table 1.1 of AOP Attachment 1 including deletion of deactivated boilers, removing an invalid unit, and adding new emission units. Associated orders of approval are provided in unit descriptions.

10. **ATT 1-13 and 1-14:** Update Table 1.3 of AOP Attachment 1 to delete deactivated boilers.
11. **ATT 1-24 to -26:** Typographical error correction of order references.
12. **ATT 1-33:** Typographical error correction.
13. **ATT 1-55:** Typographical error correction.
14. **ATT 1-27:** Provision of corrected reference citations.
15. **ATT 1-69:** Typographical error (indentation) correction.
16. **ATT 1-54:** Delete obsolete conditions (9/17/2001 DE01NWP-002).
17. **ATT 1-56 & -57:** Link DE01NWP-001 with condition date of 7/17/2001. Two pages are affected.
18. **ATT 1-46**: Approval Order 98NM-551 for the N-1724K Maintenance Shop was withdrawn by Ecology on 12/4/2007. Conditions for this Order removed.

AOP Attachment 1, incorporating these changes, is provided in Enclosure 3.

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(Permit conditions for Approval Order DE05NWP-001 and its revisions are consolidated in Pages starting ATT 1-77.)

**Discharge Point: Ventilation Systems for 241-AN and 241 AW Tank Farms**

200E, Tank Farms – Ventilation Systems for 241-AN and 241 AW Tank Farms

Requirement Citation (WAC or Order Citation): WAC 173-400-040(1), DE05NWP-001 (2/18/2005 *) and Rev 1 (7/31/2007)

| | |
|---|---|
| **Condition Approval:** | **2/18/2005 (DE05NWP-001)** |
| Condition: | EMISSION LIMITS<br>Visible emissions from each stack shall not exceed five (5) percent. |
| Periodic Monitoring: | Compliance and monitoring shall be met by Tier 3 Visible Emissions Survey requirements of the Hanford AOP, Section 2.1. Should visible emissions be observed which are not solely attributable to water condensation, compliance shall be met by performing an opacity determination utilizing 40 CFR 60, Appendix A, Method 9, providing that such determination shall not place the visible emission observer in hazard greater than that identified for the general worker. |
| Test Method: | 40 Code of Federal Regulations (CFR) Part 60, Appendix A, Method 9, as applicable. |
| Test Frequency: | None Specified (as needed for monitoring and compliance) |
| Required Records: | Visible emission surveys records in which a visible emission was observed, which are not solely attributable to water condensation; and Method 9 results if conducted. |
| State-Only: | No. |
| Calculation Model: | Not applicable. |

| | |
|---|---|
| **Condition Approval:** | **2/18/2005 (DE05NWP-001)** |
| Condition: | EMISSION LIMITS<br>Primary tank ventilation exhauster systems shall not exceed 4,000 $ft^3$/min (at standard temperature and pressure). |
| Periodic Monitoring: | Compliance and monitoring of this condition shall be demonstrated by stack gas flow and temperature measurement. |
| Test Method: | Not specified. |
| Test Frequency: | None Specified (as needed for monitoring and compliance). |
| Required Records: | (1) Records of exhauster system stack flow rates and temperature records.<br>(2) Records of calibration of stack gas flow rate and temperature measurement devices. |
| State-Only: | No. |
| Calculation Model: | Not applicable. |

* Per Ecology letter from Jane Hedges, Program Manager, Nuclear Waste Program, to Roy Schepend, Manager, DOE Office of River Protection, on August 17, 2006, NOC Order No. DE05NWP-001 issued on 2/18/2005 was extended through December 31, 2010, provided the approved construction of the new 241-AN Tank Farm ventilation system is complete and operating by January 1, 2011. Ecology reviewed and agreed that the treatment technology selected to be installed in the order does continue to represent T-BACT.

**Discharge Point: Ventilation Systems for 241-AN and 241 AW Tank Farms**

200E, Tank Farms – Ventilation Systems for 241-AN and 241 AW Tank Farms

Requirement Citation (WAC or Order Citation): WAC 173-400-040(1), DE05NWP-001 (2/18/2005) and Rev 1 (7/31/2007)

| | |
|---|---|
| **Condition Approval:** | **7/31/2007 (DE05NWP-001 Rev 1)** |
| Condition: | EMISSION LIMITS<br>All TAPs, as shown in Table 2 of Approval Order DE05NWP-001, Rev 1, shall be below their respective ASIL or Screening Level of Table 1 of Approval Order DE05NWP-001 Rev 1. |
| Periodic Monitoring: | Compliance and monitoring shall be met by operating the exhauster systems only when in accord with T-BACT emission controls for the project. T-BACT for this project has been determined to be operation of the primary tank ventilation exhauster systems not exceeding 4,000 cubic feet per minute with moisture de-entrainment, pre-heater, and HEPA filtration in service in the treatment train. |
| Test Method: | Not specified. |
| Test Frequency: | None Specified (as needed for monitoring and compliance). |
| Required Records: | Documentation and record-keeping of T-BACT compliance of emission control found for this project (operation of the primary tank ventilation exhauster system not exceeding 4,000 $ft^3$/min with moisture de-entrainment, pre-heater, and HEPA filtration in service in the treatment train). |
| State-Only: | Yes. |
| Calculation Model: | Not applicable. |

**Discharge Point: Ventilation Systems for 241-AN and 241 AW Tank Farms**

200E, Tank Farms – Ventilation Systems for 241-AN and 241 AW Tank Farms

Requirement Citation (WAC or Order Citation): WAC 173-400-040(1), DE05NWP-001 (2/18/2005) and Rev 1 (7/31/2007)

**Condition Approval: 2/18/2005 (DE05NWP-001)**

Condition: EMISSIONS LIMITS

Emissions of ammonia shall not exceed 0.22 pounds per hour (2.77E-02 gram/second) from either primary tank ventilation exhauster system. The term 'either exhauster system' shall mean each individual primary tank ventilation exhauster system within the 241-AN and 241-AW Tank Farms, where an exhauster system may be operated in single-train or dual-train modes.

Periodic Monitoring: Conduct of ammonia concentration readings as described in Sections 3.1 and 3.2 of NOC approval order DE05NWP-001 (2/18/2005), and applying these concentration readings with contemporaneous stack flow rate and temperatures to determine instantaneous mass release rate of ammonia.

Test Method: Ammonia sampling and analysis will be in accord with approved alternative sampling procedures including the use of Draeger tubes to measure stack gas concentration of ammonia providing such devices are spanned to appropriately measure the stack gas ammonia concentration. Stack flow rate and temperature will be applied with the ammonia stack gas concentration to report ammonia emission in terms of grams per second.

Test Frequency: In order to assess baseline emission concentrations from each exhauster system, emission levels of ammonia will be assessed between 12 and 24 hours after initiation of exhauster operation (single train or duel train). Ammonia stack concentrations shall be sampled a minimum of three times.

Baseline Assessments

Baseline assessments shall be conducted within ninety (90) days of commencement of operations. Should dual exhauster train operation not be required by the Permittee during this ninety (90) day period, assessment of dual train operation emissions shall be conducted on the first occasion of dual train operation which is anticipated to exceed 24 hours duration.

Bi-Annual Emission Assessment

In order to maintain reasonable assurance of continued compliance with emission limitations from these exhauster systems, bi-annual assessment of ammonia stack emissions will be conducted beginning the second calendar year following completion of single train exhauster operation assessment under Section 3.1 of NOC approval order DE05NWP-001. A minimum of three samples shall be used to assess these emissions.

Required Records: Results of emission assessments, baseline and bi-annual emission monitoring results, supporting data and calculations to demonstrate compliance with ammonia limits.

State-Only: Yes.

Calculation Model: Not applicable.

## Discharge Point: Ventilation Systems for 241-AN and 241 AW Tank Farms

200E, Tank Farms – Ventilation Systems for 241-AN and 241 AW Tank Farms

Requirement Citation (WAC or Order Citation): WAC 173-400-040(1), DE05NWP-001 (2/18/2005 *) and Rev 1 (7/31/2007)

| | |
|---|---|
| **Condition Approval:** | **2/18/2005 (DE05NWP-001)** |
| Condition: | REPORTING<br>Visible emission surveys conducted and a report of the maintenance conducted to maintain the subject exhaust system's T-BACT operations shall be submitted to Ecology within 30 days of completion of the survey with an assessment of the cause of visible emissions. |
| Periodic Monitoring: | Compliance of this condition is met by submitting to Ecology within thirty (30) days of completion of the survey with an assessment of the cause of visible emissions. |
| Test Method: | Not specified. |
| Test Frequency: | Not applicable. |
| Required Records: | Visible emission surveys conducted and a report of the maintenance. |
| State-Only: | No. |
| Calculation Model: | Not applicable |

| | |
|---|---|
| **Condition Approval:** | **2/18/2005 (DE05NWP-001)** |
| Condition: | REPORTING<br>Identification of any TAP not previously identified within the Notice of Construction Application or Supplement emissions estimates shall be submitted to Ecology within ninety (90) days of completion of laboratory analyses which verify emissions of that toxic air pollutant from the project. |
| Periodic Monitoring: | Compliance of this condition is met by submitting to Ecology within ninety (90) days of completion of laboratory analyses which verify emissions of that toxic air pollutant from the project. |
| Test Method: | Not specified. |
| Test Frequency: | Not applicable. |
| Required Records: | Laboratory analysis. |
| State-Only: | No. |
| Calculation Model: | Not applicable |

| | |
|---|---|
| **Condition Approval:** | **2/18/2005 (DE05NWP-001)** |
| Condition: | REPORTING<br>Results of emission assessments conducted shall be submitted to Ecology within 90 days of completion of the assessment. |
| Periodic Monitoring: | Compliance of this condition is met by submitting to Ecology within ninety (90) days of completion of such assessment. |
| Test Method: | Not specified. |
| Test Frequency: | Not applicable. |
| Required Records: | Emission assessment results. |
| State-Only: | No. |
| Calculation Model: | Not applicable |

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(Permit conditions for Approval Order DE05NWP-002 and its revisions are consolidated in Pages starting ATT 1-80.)

## Discharge Point: 200 Area SST Categorical Waste Retrieval

200 Area SST Categorical Waste Retrieval

Requirement Citation (WAC or Order Citation): WAC 173-400-040(1), DE05NWP-002 (2/18/2005), Rev. 1 (10/12/2005), and Rev 2 (7/31/2007).

| | |
|---|---|
| **Condition Approval:** | **2/18/2005 (DE05NWP-002)** |
| | EMISSION LIMITS |
| | Visible emissions from each tank ventilation exhauster stack or aggregated exhauster stack shall not exceed five percent. |
| Periodic Monitoring: | Compliance and monitoring shall be met by Tier 3 Visible Emissions Survey requirements of the Hanford AOP, Section 2.1. Should visible emissions be observed which are not solely attributable to water condensation, compliance shall be met by performing an opacity determination utilizing 40 CFR 60, Appendix A, Method 9, providing that such determination shall not place the visible emission observer in hazard greater than that identified for the general worker. |
| Test Method: | 40 CFR 60, Appendix A, Method 9, as applicable. |
| Test Frequency: | None Specified (as needed for monitoring and compliance) |
| Required Records: | Visible emission surveys records in which a visible emission was observed, which are not solely attributable to water condensation; and Method 9 results if conducted. |
| State-Only: | No. |
| Calculation Model: | Not applicable. |

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|---|---|
| **Condition Approval:** | **2/18/2005 (DE05NWP-002)** |
| Condition: | EMISSION LIMITS |
| | Tank ventilation exhauster systems for the 241-C SST farm 100 series tank (241-C-101 through 241-C-112) shall not exceed cumulative flow rates of 7,000 $ft^3$/min (at standard temperature and pressure) for three exhausters individually limited to 1,000 $ft^3$/min, 3,000 $ft^3$/min, and 3,000 $ft^3$/min, respectively (at standard temperature and pressure). |
| Periodic Monitoring: | Compliance and monitoring of this condition shall be demonstrated by stack gas flow and temperature measurement. |
| Test Method: | Not specified. |
| Test Frequency: | None Specified (as needed for monitoring and compliance). |
| Required Records: | (1) Records of exhauster system stack flow rates and temperature records. |
| | (2) Records of calibration of stack gas flow rate and temperature measurement devices. |
| State-Only: | No. |
| Calculation Model: | Not applicable. |

## Discharge Point: 200 Area SST Categorical Waste Retrieval

200 Area SST Categorical Waste Retrieval

Requirement Citation (WAC or Order Citation): WAC 173-400-040(1), DE05NWP-002 (2/18/2005), Rev. 1 (10/12/2005), and Rev 2 (7/31/2007).

| | |
|---|---|
| **Condition Approval:** | **2/18/2005 (DE05NWP-002)** |
| Condition: | EMISSION LIMITS<br>SST ventilation exhauster systems for the retrieval of wastes other than those of the 241-C tank farm 100 series tanks shall not exceed 1,000 $ft^3$/min (at standard temperature and pressure). |
| Periodic Monitoring: | Compliance and monitoring of this condition shall be demonstrated by stack gas flow and temperature measurement. |
| Test Method: | Not specified. |
| Test Frequency: | None Specified (as needed for monitoring and compliance). |
| Required Records: | (1) Records of exhauster system stack flow rates and temperature records.<br>(2) Records of calibration of stack gas flow rate and temperature measurement devices. |
| State-Only: | No. |
| Calculation Model: | Not applicable. |

## Discharge Point: 200 Area SST Categorical Waste Retrieval

200 Area SST Categorical Waste Retrieval

Requirement Citation (WAC or Order Citation): WAC 173-400-040(1), DE05NWP-002 (2/18/2005), Rev. 1 (10/12/2005), and Rev 2 (7/31/2007).

**Condition Approval:** **7/31/2007 (DE05NWP-002, Rev 2)**

Condition: EMISSION LIMITS

All TAPs, as submitted in the permittee's NOC Applications, shall be below their respective ASIL or Screening Level of Table 1 in Approval Order DE05NWP-002, Rev 2.

Periodic Monitoring: Compliance and monitoring with this condition shall be met by:

(1) Operating the exhauster systems only when in accord with T-BACT emission controls found for this project (operation of the tank ventilation exhauster systems with moisture de-entrainment, pre-heater, and HEPA filtration in service in the treatment train).

(2) Development and implementation of a sampling and analysis plan (SAP) for each tank retrieval. For each retrieval, the SAP shall address the emission of a minimum of the three TAPs with the higher potential ambient concentration relative to their ASILs of WAC 173-460-150 and WAC-173-460-160 or relative to their Screening Level of Table 1 of the Approval Order DE05NWP-002, Rev 2. The TAPs addressed in the SAP shall be identified from Table 2 of the Approval Order DE05NWP-002, Rev 2, and based upon best engineering judgment and most current tank content data. Analytical methods for the analysis shall be the United States EPA, OSHA, or NIOSH approved, or by approved equivalent method.

Test Method: Not specified.

Test Frequency: None specified (as needed for monitoring and compliance).

Required Records: (1) All monitoring and operations records required to operate and maintain the emission control equipment which implements T-BACT as required in Periodic Monitoring above.

(2) SAPs developed for compliance demonstration as described in Periodic Monitoring above.

(3) Laboratory analysis result summaries of any samples undertaken after the effective date of the Approval Order DE05NWP-002, Rev 2, from SST tank farm tank headspaces or SST ventilation system exhaust which are examined for organic species or other TAPs.

State-Only: Yes.

Calculation Model: Not applicable.

## Discharge Point: 200 Area SST Categorical Waste Retrieval

200 Area SST Categorical Waste Retrieval

Requirement Citation (WAC or Order Citation): WAC 173-400-040(1), DE05NWP-002 (2/18/2005), Rev. 1 (10/12/2005), and Rev 2 (7/31/2007).

| | |
|---|---|
| **Condition Approval:** | **2/18/2005 (DE05NWP-002)** |
| Condition: | REPORTING<br>Visible emission surveys, conducted pursuant to Compliance Demonstration requirement 1.3.2, per NOC approval DE05NPW-002, and a report of the maintenance conducted to maintain the subject exhaust system's T-BACT operations. |
| Periodic Monitoring: | The reporting condition shall be submitted to Ecology within thirty (30) days of completion of the survey with an assessment of the cause of visible emissions. |
| Test Method: | Not specified. |
| Test Frequency: | Not applicable. |
| Required Records: | Visible emission surveys conducted and a report of the maintenance. |
| State-Only: | No. |
| Calculation Model: | Not applicable |

| | |
|---|---|
| **Condition Approval:** | **10/12/2005 (DE05NWP-002, Rev. 1)** |
| Condition: | REPORTING<br>Identification of any TAP not previously identified within the Notice of Construction Application or Supplement emissions estimates as defined in Table 2, per NOC approval DE05NWP-002R1, shall be submitted to Ecology within ninety (90) days of completion of laboratory analyses which verify emissions of that toxic air pollutant from the project. |
| Periodic Monitoring: | The reporting condition shall be submitted to Ecology within ninety (90) days of completion of laboratory analyses which verify emissions of that toxic air pollutant from the project. |
| Test Method: | Not specified. |
| Test Frequency: | Not applicable. |
| Required Records: | Laboratory analysis. |
| State-Only: | Yes. |
| Calculation Model: | Not applicable |

| | |
|---|---|
| **Condition Approval:** | **2/18/2005 (DE05NWP-002)** |
| Condition: | REPORTING<br>An annual schedule (Federal fiscal year basis) of anticipated operations and installations of exhauster systems. |
| Periodic Monitoring: | The reporting condition shall be submitted by November first of each year. |
| Test Method: | Not specified. |
| Test Frequency: | Not applicable. |
| Required Records: | Annual Schedule |
| State-Only: | Yes. |
| Calculation Model: | Not applicable |

## Discharge Point: 200 Area SST Categorical Waste Retrieval

200 Area SST Categorical Waste Retrieval

Requirement Citation (WAC or Order Citation): WAC 173-400-040(1), DE05NWP-002 (2/18/2005), Rev. 1 (10/12/2005), and Rev 2 (7/31/2007).

**Condition Approval:** **2/18/2005 (DE05NWP-002)**

Condition: OPERATIONAL NOTICE

Notification shall be made at least ten (10) days prior to initial operation of any exhauster system covered by this ORDER DE05NWP-002 when installed to ventilate a tank not previously actively ventilated under this ORDER.

Periodic Monitoring: Not applicable.

Test Method: Not specified.

Test Frequency: Not applicable.

Required Records: Not applicable.

State-Only: Yes.

Calculation Model: Not applicable

## Discharge Point: HAMMER Training and Education Facility

Volpentest Hazardous Materials Management and Emergency Response (HAMMER) Training and Education Facility (2890 Horn Rapids Road, Richland, Washington)

| | |
|---|---|
| Requirement Citation (WAC or Order Citation): | DE07NWP-001 (4/19/2007) and Amendment 1 (7/31/2007) |
| **Condition Approval:** | **4/19/2007 (DE07NWP-001)** |
| Condition: | Volatile Organic Compound (VOC) emissions from training materials shall not exceed 4,000 pounds per year (lb/yr). [WAC 173-400-110(5)(d)] |
| Periodic Monitoring: | Materials record-keeping. |
| Test Method: | Not applicable. |
| Test Frequency: | Not applicable. |
| Required Records: | Material balance records which detail materials receipt and disposal with a summary assessment of losses, calculated each calendar quarter. |
| State-Only: | No. |
| Calculation Model: | Not applicable. |

| | |
|---|---|
| **Condition Approval:** | **4/19/2007 (DE07NWP-001) and 7/31/2007 (Amendment 1)** |
| Condition: | Emissions of all TAPs, as identified in Table 1 of NOC Order DE07NWP-001 (4/19/2007) and Amendment 1 (7/31/2007), or newly identified, shall be below their respective SQERs. [WAC 173-460-080(2)(e)] |
| Periodic Monitoring: | Materials record-keeping. |
| Test Method: | Not applicable. |
| Test Frequency: | Not applicable. |
| Required Records: | Material balance records which detail materials receipt and disposal with a summary assessment of losses, calculated each calendar quarter. Emission of any TAP exceeding SQERs detailed in Table 1 of Order DE07NWP-001 shall be reported to Ecology in accord with WAC 173-400-107. Identification of any TAP not previously identified within Order DE07NWP-001, shall be submitted to Ecology within 90 days of initiation of use in training with an estimate of annual emissions. |
| State-Only: | Yes. |
| Calculation Model: | Not applicable. |

**Discharge Point** **P-2025E ETF**

200E Area, Effluent Treatment

Requirement Citation (WAC or Order Citation): WAC 173-460-070, DE07NWP-003 (6/6/2007), Amendment 1 (8/7/2007) and Amendment 2 (9/27/2007)

**Condition Approval** **6/6/2007 (DE07NWP-003)**

| | |
|---|---|
| Condition: | Visible emissions from the ETF stack and the ETF STU stack (Figures 1 and 2, respectively, of Order DE07NWP-003) shall not exceed five percent (5%). |
| Periodic Monitoring: | Tier 3 Visible Emission Survey, Section 2.1 of AOP ATT 1. |
| Test Method: | Not specified. |
| Test Frequency: | Not applicable. |
| Required Records: | As required in AOP Attachment 2 for maintaining abatement control technology. |
| State-Only | No. |
| Calculation Model | Not applicable. |

**Condition Approval** **6/6/2007 (DE07NWP-003)**

| | |
|---|---|
| Condition: | Visible emission from the ETF STU dry material storage bins (Figure 2 of Order DE07NWP-003) shall not exceed 20 percent (20%). [WAC 173-400-040(1)] |
| Periodic Monitoring: | Tier 2 Visible Emission Survey, Section 2.1 of AOP ATT 1. |
| Test Method: | Record-keeping and EPA Method 9. |
| Test Frequency: | Once a year. |
| Required Records: | Annual surveillance records and/or EPA Method 9 test results. |
| State-Only | No. |
| Calculation Model | Not applicable. |

**Condition Approval** **6/6/2007 (DE07NWP-003)**

| | |
|---|---|
| Condition: | Volatile Organic Compound (VOC) emissions from the ETF (Figure 1 of Order DE07NWP-003) shall not exceed 0.50 gram per minute (g/min). |
| Condition: | Volatile Organic Compound (VOC) emissions from the ETF (Figure 1 of Order DE07NWP-003) shall not exceed 0.55 gram per cubic meter ($g/m^3$) at standard conditions. |
| Periodic Monitoring: | Initial compliance verified by EPA Method 18 in 1996 (NOC-93-3). |
| Test Method: | EPA Method 18 or 25A. |
| Test Frequency: | Not applicable (initial test condition for construction). |
| Required Records: | Testing Results of 1996 EPA Method. |
| State-Only | No. |
| Calculation Model | Not applicable. |

**Condition Approval** **6/6/2007 (DE07NWP-003)**

| | |
|---|---|
| Condition: | Volatile Organic Compound (VOC) emissions from ETF and ETF STU operations shall not exceed 4,000 lb/yr. [WAC 173-400-110(5)(d)] |
| Periodic Monitoring: | Material emission estimates. |
| Test Method: | Calculations and record-keeping. |
| Test Frequency: | Annual. |
| Required Records: | Records of data and calculations for the VOC emissions from ETF and ETF STU operations. |
| State-Only | No. |
| Calculation Model | Not applicable. |

**Discharge Point** **P-2025E ETF**

200E Area, Effluent Treatment

Requirement Citation (WAC or Order Citation): DE07NWP-003 (6/6/2007), Amendment 1 (8/7/2007) and Amendment 2 (9/27/2007)

**Condition Approval** **6/6/2007 (DE07NWP-003)**

| | |
|---|---|
| Condition: | Particulate matter emissions shall not exceed 1,500 lb/yr. [WAC 173-400-110(5)(d)] |
| Periodic Monitoring: | (1) HEPA filtration of ETF stack gases,<br>(2) HEPA filtration of offgases from the Feed Hopper, Grout Mixer, and Discharge Chute, and<br>(3) Industrial filtration of dry material storage bins. |
| Test Method: | See Required Records. |
| Test Frequency: | Not applicable. |
| Required Records: | Maintenance and operating records of all filtration systems. |
| State-Only | No. |
| Calculation Model | Not applicable. |

**Condition Approval** **6/6/2007 (DE07NWP-003) and 9/27/2007 (Amendment 2)**

| | |
|---|---|
| Condition: | All TAPs in the NOC applications and identified in Table 1 of DE07NWP-003 Amendment 2 (9/27/2007) and Table 2 of DE07NWP-003 (6/6/2007), shall not exceed ASILs. [WAC 173-460-070] |
| Periodic Monitoring: | Waste analysis records (see Required Records). |
| Test Method: | Not specified. |
| Test Frequency: | Not applicable. |
| Required Records: | (1) Laboratory or waste analysis results for TAPs identified in Table 1 of DE07NWP-003 Amendment 2 (9/27/2007) and Table 2 of DE07NWP-003 (6/6/2007), and<br>(2) waste stream influent volumetric records. |
| State-Only | Yes. |
| Calculation Model | Not applicable. |

**Condition Approval** **6/6/2007 (DE07NWP-003)**

| | |
|---|---|
| Condition: | All newly identified TAPs shall not exceed ASILs (with assessment of ASIL compliance). [WAC 173-460-070] |
| Periodic Monitoring: | Assessment of ASIL compliance (see Required Records). |
| Test Method: | Not specified. |
| Test Frequency: | Not applicable. |
| Required Records: | (1) Report laboratory or waste analysis result of newly identified TAPs within 90 days of completion of analysis, and<br>(2) waste stream influent volumetric records. |
| State-Only | Yes. |
| Calculation Model | Not applicable. |

**Discharge Point** **P-2025E ETF**

200E Area, Effluent Treatment

Requirement Citation (WAC or Order Citation): DE07NWP-003 (6/6/2007), Amendment 1 (8/7/2007) and Amendment 2 (9/27/2007)

**Condition Approval** **6/6/2007 (DE07NWP-003)**

| | |
|---|---|
| Condition: | Emissions of ammonia from the ETF STU stack shall not exceed two pounds per hour. [WAC 173-460-080(2)(e)] |
| Periodic Monitoring: | Ammonia emission calculations based on Grouted waste production records and material emission estimates (see Required Records). |
| Test Method: | Not specified. |
| Test Frequency: | Not applicable. |
| Required Records: | Supporting data, calculation, and procedures to demonstrate grouted waste production administrative control of ammonia content (an emission factor of 5.2% shall be applied to determine ammonia emissions based upon STU brine feed concentrations of ammonium sulfate and ammonium nitrate). |
| State-Only | Yes. |
| Calculation Model | Not applicable. |

**Discharge Point** **Concrete Batch Plant**
200E Area, Vitrification
Requirement Citation (WAC or Order Citation): DE01NWP-003 (8/21/2001), 9/24/2002 Revision, and 3/12/2003 Revision

**Condition Approval** **8/21/2001**

Condition: Total Emission Limits
A. Particulate Matter - Particulates from the bag-house exhaust shall not exceed 0.01grains per dry standard cubic foot, with no visible emissions. Engineering calculations or vendor information that the bag-house, when properly operated and maintained, will control emissions to less than 0.01 grains per dry standard cubic foot will be available at the facility. Periodic measurements shall consist of visible emission inspections per EPA Reference Method 22, Title 40 Part 60, Appendix A, July 1, 2000.
B. Fugitive Dust - Visible emissions from the sand and aggregate transfer points, truck loading station, the piles, or any other source shall not be allowed beyond 100 yards.

Periodic Monitoring: A. Recordkeeping
Test Method: B. EPA Method 22, Title 40 Part 60, App.A, July 1, 2000.
Test Frequency: Not applicable.
Required Records: A. Calculations, vendor information, baghouse maintenance logs, surveillance checklists.
B. Visible emission survey results.
State-Only Enforceable: No.
Calculation Model ID: Not applicable.

**Condition Approval** **8/21/2001**

Condition: Fugitive Dust
All unpaved areas at the CBP and quarry will be controlled by watering or chemical stabilization, or both. Means of chemical stabilization include the application of petroleum resins (EPA 1998). A water spray additive, (such as, "soil cement") will also be considered for application on unpaved roads. Soil cement has been previously used on the Hanford Site with effective results.

Vehicle speed limit signs will be posted to control speeds. Paved roads between the quarry and CBP will be kept clear of heavy accumulations of dust and debris. Front-end loaders will be used to pick up any significant spill of sand or aggregate material on the pave roads between the quarry and CBP. The sand and aggregate stockpiles will be kept sprinkled with water to prevent the movement of materials that may migrate because of wind erosion. Transfer points at conveyors, crushers, and screens will also be sprayed with water.

Periodic Monitoring: Recordkeeping
Test Method: Not specified.
Test Frequency: Not applicable.
Required Records: Surveillance checklists.
State-Only Enforceable: No.
Calculation Model ID: Not applicable.

**Discharge Point** **Concrete Batch Plant**
200E Area, Vitrification
Requirement Citation (WAC or Order Citation): DE01NWP-003 (8/21/2001), 9/24/2002 Revision, and 3/12/2003 Revision

**Condition Approval** **8/21/2001**

| | |
|---|---|
| Condition: | Emission Control Monitors<br>Emission equipment control monitors shall include but not be limited to the following:<br>A. Bag house - None required if there are no visible emissions per section 1.A. of the APPROVAL CONDITIONS, and maintenance records indicate proper maintenance practices and schedules. |
| Periodic Monitoring: | Recordkeeping |
| Test Method: | Not specified. |
| Test Frequency: | Not applicable. |
| Required Records: | Surveillance checklists and bah house maintenance logs. |
| State-Only Enforceable: | No. |
| Calculation Model ID: | Not applicable. |

**Condition Approval** **8/21/2001**

| | |
|---|---|
| Condition: | General Conditions<br>A. Visible Emissions: No visible emissions shall be allowed beyond 100 yards of source. During periods of high winds, an assessment shall be made to suspend operations or initiate a more comprehensive plant watering scheme. |
| Periodic Monitoring: | Visible Emission Surveys. |
| Test Method: | Not specified. |
| Test Frequency: | Not applicable. |
| Required Records: | Results of visible emission surveys. |
| State-Only Enforceable: | No. |
| Calculation Model ID: | Not applicable. |

**Discharge Point** **Concrete Batch Plant**
200E Area, Vitrification
Requirement Citation (WAC or Order Citation): DE01NWP-003 (8/21/2001), 9/24/2002 Revision, and 3/12/2003 Revision

**Condition Approval** **3/12/2003**

| | |
|---|---|
| Condition: | Diesel Fuel Oil Boiler<br>1. A 4.4 MMBtu diesel fuel oil boiler will be operated<br>2. The diesel fuel sulfur content will be less then or equal to 0.05% S, by weight.<br>3. Operation of the boiler is limited to 2000 hours per year.<br>4. Good combustion engineering practices shall be followed, including adherence to the boiler manufacturer's specification for operation, maintenance, and combustion control.<br>5. Specific combustion feed gas ratios, including the fuel-air ratio, monitoring, startup and shutdown procedures shall be followed to maximize combustion efficiency and minimize discharge of pollutants into the atmosphere. |
| Periodic Monitoring: | Recordkeeping |
| Test Method: | Not specified. |
| Test Frequency: | Not applicable. |
| Required Records: | 1. Manufacturer's specifications for operation, maintenance, and combustion control.<br>2. Records of operating hours.<br>3. Records of fuel specification (sulfur content).<br>4. Records of good combustion engineering practices and operating procedures. |
| State-Only Enforceable: | No. |
| Calculation Model ID: | Not applicable. |

**Discharge Point** **WTP Heaters and Dehumidifiers**

200 Area, Hanford Tank Waste Treatment and Immobilization Plant (WTP)

Requirement Citation (WAC or Order Citation): WAC 173-400-110, WAC 173-460-070, and DE07NWP-004 (11/21/2007)

**Condition Approval** **11/21/2007**

Condition: Emission Limits

(1) Total Suspended Particulates emission shall not exceed 1.25 tons per year [WAC 173-400-110(5)(d)].

(2) PM-10 particulate emission shall not exceed 0.75 tons per year [WAC 173-400-110(5)(d)].

Periodic Monitoring: Compliance shall be monitored by:

(1) Emission of visible emissions of no more than five percent opacity during normal operation of diesel-fired heaters.

(2) Diesel-fired heaters exceeding five percent opacity shall be removed from operation until maintenance of the unit results in visible emissions in compliance (no more than 5%).

(3) Compliance with visible emissions survey requirements of Approval Condition 3.0 of the Approval Order DE07NWP-004. Visible emissions (VE) from diesel-fired heaters in normal operation (not start-up or shut-down) will be monitored through a VE survey described herein. A minimum representation of 20 percent of active diesel-fired heaters under this ORDER shall be subject to VE survey. If VEs from one of these emission units are observed for more than 10 consecutive minutes, an attempt to identify the cause(s) of the VEs will be made and those results recorded. The recorded entry also will identify any corrective actions taken and the likely frequency of a future reoccurrence. If the event is likely to be re-occurring, and can not be demonstrated to consist of water vapor, a determination of opacity will be made using EPA Method 9. A VE survey shall be conducted weekly for a period of three months. If weekly VE surveys do not demonstrate emissions in excess of Approval Condition 1.3.1, the VE survey frequency will reduce to once every three months for a period of six months. After nine months of no excess visible emissions, visible emission surveys will be performed for any diesel-fired heater subject to this ORDER only when visible emissions are observed during normal operation.

Test Method: VE Surveys and/or EPA Method 9 (if needed).

Test Frequency: Not specified.

Required Records: (1) VE Surveys and/or EPA Method 9 results.
(2) Maintenance records for any diesel-fired heater removed from service.

State-Only No.

Calculation Model Not applicable.

**Discharge Point** **WTP Heaters and Dehumidifiers**

200 Area, Hanford Tank Waste Treatment and Immobilization Plant (WTP)

Requirement Citation (WAC or Order Citation): WAC 173-400-110, WAC 173-460-070, and DE07NWP-004 (11/21/2007)

**Condition Approval** **11/21/2007**

Condition: Emission Limits

Sulfur Oxides ($SO_x$) emission shall not exceed 2.0 tons per year [WAC 173-400-110(5)(d)].

Periodic Monitoring: Compliance shall be monitored by:

(1) Combustion of distillate fuel oil No. 2 with a sulfur content no greater than 0.0015 wt percent (15 ppm) for diesel heaters.

(2) Combustion of no greater than 933,100 gallons of distillate fuel oil per year, based upon a daily rolling summation.

Test Method: Record-keeping.

Test Frequency: Per daily rolling summation and/or fuel shipment.

Required Records: Fuel analysis data and consumption rates, including supporting data and calculations.

State-Only No.

Calculation Model Not specified.

**Condition Approval** **11/21/2007**

Condition: Emission Limits

(1) Nitrogen Oxides ($NO_x$) emission shall not exceed 16.2 tons per year [WAC 173-400-110(2)(a)].

(2) Total Volatile Organic Compounds emission shall not exceed 2.0 tons per year [WAC 173-400-110(5)(d)].

(3) Carbon Monoxide emissions shall not exceed 5.0 tons per year [WAC 173-400-110(5)(d)].

(4) Toxic Air Pollutant (TAP) emissions as specified in Table 1 of Approval Order DE07NWP-004 [WAC 173-460-070].

Periodic Monitoring: Compliance shall be monitored by:

(1) Operation in compliance with BACT/T-BACT (implementation of vendor-recommended combustion and maintenance practices).

(2) Fuel Limitation: (a) combustion of no greater than 933,100 gallons of distillate fuel oil per year, based upon a daily rolling summation, and (b) combustion of no greater than 1,109,500 gallons of propane per year, based upon a daily rolling summation.

Test Method: Record-keeping.

Test Frequency: Per daily rolling summation and/or fuel shipment.

Required Records: Fuel analysis data and consumption rates, including supporting data and calculations.

State-Only No.

Calculation Model Not specified.

**Discharge Point** **100B-181B/182B**

100 Area, Emergency Diesel Engines

Requirement Citation (WAC or Order Citation): DE07NWP-002

**Condition Approval** **6/27/2007**

| | |
|---|---|
| Condition: | Emissions of sulfur dioxide will not exceed two tons per year [WAC 173-400-110(5)(d)]. |
| Periodic Monitoring: | Compliance will be demonstrated by use of fuel containing (1) no greater than 0.05 weight percent sulfur (500 parts per million by weight) from installation to May 30, 2010 [40 CFR §60.4207(a), 40 CFR §80.510(a)], and (2) no greater than 0.0015 weight percent sulfur (15 parts per million by weight) on and after June 1, 2010 [40 CFR §60.4207(b), 40 CFR §80.510(b)]. |
| Test Method: | Not applicable. |
| Test Frequency: | Not applicable. |
| Required Records: | Diesel fuel quality shall be documented by annual fuel analysis or vendor documentation of fuel purchases from retail outlet(s) that demonstrate compliance with diesel fuel quality standards of 40 CFR §80.510 for all purchases. |
| State-Only | No. |
| Calculation Model | Not applicable. |

**Table 1.1 List of Significant Emission Units.**

| Emission unit | Requirements | Description |
|---|---|---|
| 200CC, Boiler 1 | 80 HP oil boiler permanently deactivated in September 2007 (per 07-SED-0407). | |
| 225-B, Boiler 1 | Table 1.3 | 150 HP fuel oil boiler, not subject to 40 CFR 60 Subpart Dc (WAC 173-400-115). |
| 275-E, Boiler 1 | 80 HP oil boiler permanently deactivated in September 2007 (per 07-SED-0407). | |
| 272-W, Boiler 1 | Table 1.3 | 250 HP fuel oil boiler, not subject to 40 CFR 60 Subpart Dc (WAC 173-400-115). |
| 222-S, Boilers 1 & 2 | Table 1.3 | 200 HP fuel oil boilers, not subject to 40 CFR 60 Subpart Dc (WAC 173-400-115). |
| 283-W, Boiler 1 | Table 1.3 | 200 HP fuel oil boiler, not subject to 40 CFR 60 Subpart Dc (WAC 173-400-115). |
| 283-E, Boiler 1 | Table 1.3 | 200 HP fuel oil boiler, not subject to 40 CFR 60 Subpart Dc (WAC 173-400-115). |
| 234-5Z, Boilers 1, 2, & 3 | Table 1.3 | 350 HP fuel oil boilers, subject to 40 CFR 60 Subpart Dc (WAC 173-400-115). |
| 242-A, Boiler 1 | Table 1.3 | 200 HP fuel oil boiler, not subject to 40 CFR 60 Subpart Dc (WAC 173-400-115). |
| 242-A, Boilers 2 & 3 | Table 1.3 | 700 HP fuel oil boilers, subject to 40 CFR 60 Subpart Dc (WAC 173-400-115). |
| 318, Boiler 1 | Table 1.3 | 30 HP natural gas boiler, not subject to 40 CFR 60 Subpart Dc (WAC 173-400-115). |
| 320, Boilers 1 & 2 | Table 1.3 | 100 HP natural gas boilers, not subject to 40 CFR 60 Subpart Dc (WAC 173-400-115). |
| 323, Boiler 1 | Table 1.3 | 50 HP natural gas boiler, not subject to 40 CFR 60 Subpart Dc (WAC 173-400-115). |
| 324, Boilers 1 & 2 | Table 1.3 | 300 HP natural gas boilers, subject to 40 CFR 60 Subpart Dc (WAC 173-400-115). |
| 325, Boilers 1 & 2 | Table 1.3 | 125 HP natural gas boilers, not subject to 40 CFR 60 Subpart Dc (WAC 173-400-115). |
| 326, Boilers 1 & 2 | Table 1.3 | 100 HP natural gas boilers, not subject to 40 CFR 60 Subpart Dc (WAC 173-400-115). |
| 327, Boiler 1 | Table 1.3 | 200 HP natural gas boiler, not subject to 40 CFR 60 Subpart Dc (WAC 173-400-115). |
| 328, Boiler 1 | 30 HP natural gas boiler permanently deactivated in May 2007 (per 07-SED-0247). | |
| 329, Boilers 1, 2, 3 & 4 | Table 1.3 | 50 HP natural gas boilers, not subject to 40 CFR 60 Subpart Dc (WAC 173-400-115). |
| 331, Boilers 1 & 2 | Table 1.3 | 300 HP natural gas boilers, subject to 40 CFR 60 Subpart Dc (WAC 173-400-115). |
| 337-B, Boilers 1 & 2 | 60 HP natural gas boiler permanently deactivated in May 2007 (per 07-SED-0247). | |
| 382-A-D, Boiler 1 | Table 1.3 | 200 HP natural gas boiler, not subject to 40 CFR 60 Subpart Dc (WAC 173-400-115). |
| 3709A, Boiler 1 | Table 1.3 | 15 HP natural gas boiler, not subject to 40 CFR 60 Subpart Dc (WAC 173-400-115). |
| 200E E-225BC 001 | Table 1.4 | 500 HP or greater internal combustion engine. |

**Table 1.1 List of Significant Emission Units.**

| Emission unit | Requirements | Description |
|---|---|---|
| 200E E-225BG 001 | Table 1.4 | 500 HP or greater internal combustion engine. |
| 200E E-282ED 001, Engine E | Table 1.6 | 500 HP or greater internal combustion engine. NOC: NWP-96-1 |
| 200W E-282WD 001, Engine W | Table 1.6 | 500 HP or greater internal combustion engine. NOC: NWP-96-1 |
| 300 E-900 001 | Table 1.4 | 500 HP or greater internal combustion engine. |
| 300 E-900 002 | Table 1.4 | 500 HP or greater internal combustion engine. |
| 300 E-900 003 | Table 1.4 | 500 HP or greater internal combustion engine. |
| 300 E-1000 001 | Table 1.4 | 500 HP or greater internal combustion engine. |
| 300 E-1450 001 | Table 1.4 | 500 HP or greater internal combustion engine. |
| 300 Emergency Diesel Generators, 325, 3709A, and 331 | Table 1.6 | Subject to NOC approval. 325 and 331 are greater than 500 HP internal combustion engines. NOC: DE02NWP-001 |
| 400 E-4250 001, G-3 | Table 1.4 | 500 HP or greater internal combustion engine. |
| 600 E WSCF 001 | Table 1.4 | 500 HP or greater internal combustion engine. |
| 200W P-296SY 001 (Exhauster) | Table 1.5 | Exceeds insignificant emission unit threshold(s). |
| 200E P-296AN 001 (Tank Exhauster) | Table 1.5 | Exceeds insignificant emission unit threshold(s). |
| 200E P-296AP 001 (Tank Exhauster) | Table 1.5 | Exceeds insignificant emission unit threshold(s). |
| 200E P-296AW 001 (Tank Exhauster) | Table 1.5 | Exceeds insignificant emission unit threshold(s). |
| 200E P-296A042 001 (Tank Exhauster) | Table 1.5 & 1.6 | Exceeds insignificant emission unit threshold(s) and NOC approval for 241-AZ-101 Tank Waste Retrieval and 241-AY/241-AZ Tank Farms ventilation upgrades, Project W-151 and project W-030. NOC: 94-07-01 |
| 100K P-296K142 001 | Table 1.6 | NOC approval for Cold Vacuum Drying - phase II. NOC: 97NM-022 |
| 100K N-1724K 001 | Removed from Table 1.6 (Revision C) | NOC approval for 1724K Building Maintenance Shop. NOC: 97NM-551 [Per WAC 173-400-110(9), this approval order voided in December 2007.] |
| Integrated Disposal Facility (200E) | Table 1.6 | NOC approval for 200E Integrated Disposal Facility (IDF). NOC: DE05NWP-004 |
| Ventilation Systems for 241-AN and 241-AW Tank Farms (200E) | Table 1.6 | NOC approval for 200E Ventilation Systems for 241-AN and 241-AW Tank Farms. NOC: DE05NWP-001 |
| Bulk Vitrification Demonstration Facility (200 Area) | Removed from Table 1.6 (Revision B) | NOC approval for 200 Area Bulk Vitrification Demonstration Facility. NOC: DE04NWP-002 [Per WAC 173-400-110(9), this approval order rendered invalid in May 2007.] |
| 200 Area SST Categorical Waste Retrieval | Table 1.6 | NOC approval for 200 Area SST Categorical Waste Retrieval. NOC: DE05NWP-002 |
| 200 Area Diffuse/Fugitive – Tank Farms | Table 1.6 | NOC for 200 Area Tank Farms Mixer Pumps. NOC: DE00NWP-001 |

**Table 1.1 List of Significant Emission Units.**

| Emission unit | Requirements | Description |
|---|---|---|
| 200W P-241U107-001<br>200W P-241S102-001<br>200W P-241S112-001 | Table 1.6 | NOC approval for construction and operation of the 241-U-107, 241-S-102, 241-S-112 waste retrieval system. NOC: DE03NWP-001 |
| 200E C-106 Sluicing | Table 1.6 | NOC approval for 241-C-106 Tank Sluicing, phase II. NOC: 97NM-001 |
| 200E P-2025E ETF | Table 1.6 | NOC approval for 200 Area Effluent Treatment Facility (ETF). NOC: DE07NWP-003 |
| 200E P-WTP-001 | Table 1.6 | NOC approval for Waste Treatment and Immobilization Plant. NOC: DE02NWP-002 |
| 200E Concrete Batch Plant | Table 1.6 | NOC approval for Waste Treatment and Immobilization Plant concrete and aggregate production. NOC: DE01NWP-003 |
| 200W P-2706T-001 | Table 1.6 | NOC approval for T Plant Complex. NOC: DE01NWP-002 |
| 200W P-291Z001-001 | Table 1.6 | NOC approval for Plutonium Finishing Plant. NOC: DE04NWP-001 |
| 200W J-CWC 001 (CWC) | Table 1.6 | NOC approval for storage of vented waste containers at Central Waste Complex. NOC: DE00NWP-002 |
| 200W P-296W 004 | Table 1.6 | NOC approval for Waste Receiving and Processing Facility (WRAP1). NOC: DE03NWP-002 |
| 300 EP-331C 01-V | Table 1.6 | NOC approval for 331-C Building gas cylinder management process. NOC: DE98NWP-003 |
| 300 EP-325-01-S | Table 1.6 | NOC approval for 325 Building Hazardous Waste Treatment Unit (HWTU). NOC: DE98NWP-004 |
| 300 EP-329-01-S | Table 1.6 | NOC approval for Chemical Sciences Laboratory, 329 Building modification and ventilation upgrades. NOC: NWP95-329/300A |
| 300 EP-331-01-V | Table 1.6 | NOC approval for Life Sciences Laboratory I (Building 331) modifications. NOC: 97NM-147 |
| 300 P-340NTEX-001 | Table 1.6 | NOC approval for 340-A Building tank solids removal. NOC: 97NM-137 |
| 200E E-85 Fuel Station | Table 1.6 | 200 E Area E-85 Automotive Fuel Tank and Dispensing Facility. NOC: DE06NWP-001 |
| 300 336 Building Diesel Engines | Table 1.6 | 300 Area 2 Diesel Engines supporting 336 High Bay Testing Facility. NOC: DE06NWP-002 |
| 100B-181B/182B Diesel Engines | Table 1.6 | 100 Area Emergency Diesel Engines. NOC: DE07NWP-002 |
| HAMMER Facility | Table 1.6 | Volpentest Hazardous Materials Management and Emergency Response (HAMMER) Training and Education Facility. NOC: DE07NWP-001 |
| 600 Hanford Site Asbestos Landfill | Table 1.7 | Miscellaneous emission unit. |
| 600 G-6290 (600 Area Gasoline Distribution) | Table 1.7 | Miscellaneous emission unit. |
| 200W 283-W Water Treatment Plant (Chlorine Tank) | Table 1.7 | Miscellaneous emission unit. |

## 1.4 Emission Unit Specific Applicable Requirements

The following sections contain emission unit specific requirements for steam generating units (Table 1.3), internal combustion units (Table 1.4), emission units exceeding insignificant emission unit thresholds (Table 1.5), individual NOC approval orders (Table 1.6), and miscellaneous emission units (Table 1.7).

### 1.4,1 Process: Fossil Fuel Fired Steam Generating Units.

**Table 1.3. Emission Limits and Periodic Monitoring Requirements for Steam Generating Units.**

| Boiler Annex | Unit | >5mmBTU/hr input | Fuel |
|---|---|---|---|
| 200CC | Boiler 1 permanently deactivated in September 2007. | | |
| 225-B | Boiler 1 | Yes | fuel oil |
| 275-E | Boiler 1 permanently deactivated in September 2007. | | |
| 272-W | Boiler 1 | Yes | fuel oil |
| 222-S | Boiler 1 | Yes | fuel oil |
| | Boiler 2 | Yes | fuel oil |
| 283-W | Boiler 1 | Yes | fuel oil |
| 283-E | Boiler 1 | Yes | fuel oil |
| 234-5Z | Boiler 1 | Yes | fuel oil |
| | Boiler 2 | Yes | fuel oil |
| | Boiler 3 | Yes | fuel oil |
| 242-A | Boiler 1 | Yes | fuel oil |
| | Boiler 2 | Yes | fuel oil |
| | Boiler 3 | Yes | fuel oil |
| 318 | Boiler 1 | No | natural gas |
| 320 | Boiler 1 | No | natural gas |
| | Boiler 2 | No | natural gas |
| 323 | Boiler 1 | No | natural gas |
| 324 | Boiler 1 | Yes | natural gas |
| | Boiler 2 | Yes | natural gas |

**Table 1.3. Emission Limits and Periodic Monitoring Requirements for Steam Generating Units.**

| Boiler Annex | Unit | >5mmBTU/hr input | Fuel |
|---|---|---|---|
| 325 | Boiler 1 | Yes | natural gas |
| | Boiler 2 | Yes | natural gas |
| 326 | Boiler 1 | No | natural gas |
| | Boiler 2 | No | natural gas |
| 327 | Boiler 1 | Yes | natural gas |
| 328 | Boiler 1 permanently deactivated in May 2007. | | |
| 329 | Boiler 1 | No | natural gas |
| | Boiler 2 | No | natural gas |
| | Boiler 3 | No | natural gas |
| | Boiler 4 | No | natural gas |
| 331 | Boiler 1 | Yes | natural gas |
| | Boiler 2 | Yes | natural gas |
| 337-B | Boilers 1 & 2 permanently deactivated in May 2007. | | |
| 382-A-D | Boiler 1 | Yes | natural gas |
| 3709A | Boiler 1 | No | natural gas |

## Discharge Point 200 Area Diffuse/fugitive-Tank Farms

200 Area, Tank Farms - Mixer Pumps

Requirement Citation (WAC or Order Citation): DE00NWP-001

**Condition Approval 6/13/2000**

| | |
|---|---|
| Condition: | The data obtained in the course of monitoring worker exposure will be used by the Permittee as an administrative control measure to verify that VOC emissions do not exceed 500 parts per million (PPM). The 500 PPM level will be used as an indicator to facilitate field monitoring of potential VOC emissions, using the existing Industrial Hygiene equipment. |
| Periodic Monitoring: | VOC measurements from each stack. |
| Test Method: | Organic Vapor Analyzers (OVAs) or similar instruments. |
| Test Frequency: | At least once per year during mixer pump operations. If mixer pumps do not operate, no monitoring is required. |
| Required Records: | VOC measurement. |
| State-Only | No. |
| Calculation Model | Not applicable. |

Requirement Citation (WAC or Order Citation): DE00NWP-001

**Condition Approval 6/13/2000**

| | |
|---|---|
| Condition: | Operation of the proposed boilers shall not exceed 720 hours per year per boiler, and be in accordance with good combustion practices (GCP) to minimize emissions, based on the manufacturer's recommendations, and require the use of fuel with a Sulfur content of 0.05% or less. Periodic preventive maintenance and combustion adjustments shall be made, as necessary, to maintain GCP, but at least annually. |
| Periodic Monitoring: | Recordkeeping. |
| Test Method: | Not specified (see Required Records below). |
| Test Frequency: | Annually. |
| Required Records: | 1. Operating logs showing all hours of operation.<br>2. GCP - Preventive maintenance and combustion adjustment records.<br>3. Records of vendor documentation or fuel analysis documenting procurements of diesel fuel with sulfur content of 0.05% or less once per year. |
| State-Only | No. |
| Calculation Model | Not applicable. |

**Discharge Point** **200 Area Diffuse/fugitive-Tank Farms**

200 Area, Tank Farms - Mixer Pumps

Requirement Citation (WAC or Order Citation): DE00NWP-001

**Condition Approval** **2/15/2005 (Revision 1)**

| | |
|---|---|
| Condition: | Tanks:<br>A new Notice of Construction will be required, if total emissions of toxic air pollutants exceed the SQER, unless dispersion modeling demonstrates that emissions would continue to result in concentrations less than the ASILs. Results of any such dispersion modeling demonstrations/calculations will be maintained on file at the tank farms and made available upon inspection. |
| Periodic Monitoring: | Analyze each proposed change to determine if emissions would exceed an SQER or ASIL. |
| Test Method: | Not specified. |
| Test Frequency: | Not applicable. |
| Required Records: | Results of analyses. |
| State-Only | Yes. |
| Calculation Model | Not applicable. |

Requirement Citation (WAC or Order Citation): DE00NWP-001

**Condition Approval** **6/13/2000**

| | |
|---|---|
| Condition: | An updated schedule of installation and operation activities will be made available upon request. |
| Periodic Monitoring: | Recordkeeping. |
| Test Method: | Not specified. |
| Test Frequency: | Not applicable. |
| Required Records: | Copy of updated schedule. |
| State-Only | Yes. |
| Calculation Model | Not applicable. |

**Discharge Point** **200 Area Diffuse/fugitive-Tank Farms**

200 Area, Tank Farms - Mixer Pumps

Requirement Citation (WAC or Order Citation): DE00NWP-001

**Condition Approval** **6/13/2000**

| | |
|---|---|
| Condition: | Tanks:<br>Notification will be made ten (10) days prior to initiating waste retrieval operations in each tank covered by this order. |
| Periodic Monitoring: | Recordkeeping. |
| Test Method: | Not specified. |
| Test Frequency: | Not applicable. |
| Required Records: | Copy of notification. |
| State-Only | Yes. |
| Calculation Model | Not applicable. |

**Discharge Point** **E-282WD 001**
200W Area, Generators
Requirement Citation (WAC or Order Citation): NWP-96-1

**Condition Approval** **4/30/1996**

| | |
|---|---|
| Condition: | 10 % Opacity. |
| Periodic Monitoring: | See Section 2.1, Tier 1 |
| Frequency: | At least once per quarter, if operates |
| Test Method: | EPA Method 9 of 40 CFR 60, App. A. |
| Test Frequency: | Not applicable. |
| Required Records: | Results of visible emissions survey or records of visual determination of the opacity. |
| State-Only | No. |
| Calculation Model | Not applicable. |

**Condition Approval** **4/30/1996**

| | |
|---|---|
| Condition: | $NO_x$ 42 pounds per hour. |
| Periodic Monitoring: | Recordkeeping & average fuel consumption rate determination shall be performed at least once per 12 months. |
| Test Method: | EPA Method 7A of 40 CFR 60, App. A. |
| Test Frequency: | Not applicable. |
| Required Records: | 1. Monthly fuel burned (this calculation is based on fuel added to supply tank).<br>2. Hours of operation logged. |
| State-Only | No. |
| Calculation Model | 2B. |

**Condition Approval** **4/30/1996**

| | |
|---|---|
| Condition: | Engine W shall burn only No. 2 fuel oil with sulfur content no more than 0.05 weight percent. |
| Periodic Monitoring: | Recordkeeping for compliance with condition. |
| Test Method: | Not specified. |
| Test Frequency: | Not applicable. |
| Required Records: | Vendor documentation of fuel purchase from retail outlet (i.e., for use in motor vehicles, see 40 CFR 80), or fuel analysis once per year showing $\leq$0.05 wt% sulfur. |
| State-Only | No. |
| Calculation Model | Not applicable. |

**Discharge Point** **P-2706T 001**
200W Area, T Plant Complex
Requirement Citation (WAC or Order Citation): DE01NWP-002 Revision 1 (6/29/2006)

**Condition Approval** **6/29/2006**

| | |
|---|---|
| Condition: | Visible Emissions<br>A. Visible emissions from any T-Plant Complex stack will not exceed limits specified in WAC 173-400-040(1). |
| Periodic Monitoring: | Section 2, Tier 3. |
| Test Method: | 40CFR60, Appendix A, Method 9 |
| Test Frequency: | Not applicable (when visible emissions are observed). |
| Required Records: | Maintenance records. |
| State-Only | No. |
| Calculation Model | Not applicable. |

**Condition Approval** **6/29/2006**

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|---|---|
| Condition: | Emission Limits<br>A. VOC emission will not exceed 3.5 tons per year.<br><br>B. All TAPs, as submitted in the Permittee's Notice of Construction Application, will be below their respective ASIL. |
| Periodic Monitoring: | Analyze each proposed changed to determine if emissions would exceed Emission limits. |
| Test Method: | Section 3.0 of the Approval Order DE01NWP-002 Revision 1 |
| Test Frequency: | Section 3.0 of the Approval Order DE01NWP-002 Revision 1 |
| Required Records: | Results of analyses. |
| State-Only | No. |
| Calculation Model | Not applicable. |

**Discharge Point** **C-106 Sluicing**

200E Area, Tank Farms - Sluicing

Requirement Citation (WAC or Order Citation): NOC Approval Order 97NM-001 (10/24/1997) Revised 4/9/1999 and 2/24/2003

**Condition Approval** **2/24/2003**

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|---|---|
| Condition: | VOC 500 ppm. |
| Periodic Monitoring: | Instruments used to detect fugitive organic emissions as part of Hanford's Industrial Hygiene (IH) worker monitoring program will be used to monitor for VOCs during sluicing pump operations. |
| Test Method: | Hanford's IH monitoring program. |
| Test Frequency: | VOC monitoring as part of the routine industrial hygiene sampling program during and after the sluicing operation. |
| Required Records: | Records of VOC sample results. |
| State-Only | No. |
| Calculation Model | Not applicable. |

**Condition Approval** **2/24/2003**

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|---|---|
| Condition: | Sluicing operations may only be conducted for up to 1800 hours per calendar year. Actions shall be taken prior to reaching 50 ppm to limit any excursions above that level. VOC readings may peak at restart of sluicing operations but then are expected to stabilize. A sluicing pump operations log shall show hours of operation. |
| Periodic Monitoring: | Recordkeeping. |
| Test Method: | Not specified. |
| Test Frequency: | Not applicable. |
| Required Records: | Operations log showing all hours of sluicing pump operation. |
| State-Only | No. |
| Calculation Model | Not applicable. |

**Discharge Point** **P-WTP-001**
200E Area, Vitrification
Requirement Citation (WAC or Order Citation): DE02NWP-002, Amendment 1 and Amendment 2

**Condition Approval** **11/24/2003**

Condition: 3.5 Within 180 days of initial startup, boiler source testing shall be conducted according to the following methods, unless an alternate method has been proposed in writing by the permittee and approved by Ecology in writing in advance of the testing.

Carbon Monoxide - EPA Reference Method 10, 40 CFR 60, Appendix A, 7/1/00 Volatile Organic Compounds (VOC) - EPA Reference Method 18, 40 CFR 60, Appendix A, 7/1/00 Sulfur Dioxide - EPA Reference Method 6C, 40 CFR 60, Appendix A, 7/1/00.

Periodic Monitoring: Recordkeeping, measurements, and emission calculations.
Test Method: As stated in condition.
Test Frequency: Initial startup.
Required Records: Test Records.
State-Only No.
Calculation Model Not applicable.

**Condition Approval** **11/24/2003**

Condition: 3.6 During the boiler source testing, a direct-reading measurement device for carbon monoxide with a minimum measurement accuracy of five percent or less shall take readings according to methods proposed by the permittee and approved by Ecology in writing in advance of the testing. The direct-reading instrument shall be calibrated for future use, using the results of the source testing.

Periodic Monitoring: Recordkeeping, measurements, and emission calculations.
Test Method: Portable emissions analyzer calibrated during most recent source test.
Test Frequency: Initial startup.
Required Records: Logs of boiler tune-ups and significant boiler maintenance activities will be maintained.
State-Only Yes.
Calculation Model Not applicable.

**Condition Approval** **11/24/2003**

Condition: 4. Emissions from boilers and generators shall be monitored for CO, and Oxygen by means of a portable emissions analyzer (direct-reading measurement device) at initial startup and after routinely scheduled maintenance activities and burner/control adjustments such as fuel/air metering ratio control and oxygen trim control.

Periodic Monitoring: Recordkeeping, measurements, and emission calculations.
Test Method: Portable emissions analyzer calibrated during most recent source test.
Test Frequency: Initial startup and after routinely scheduled maintenance activities and burner/control adjustments such as fuel/air metering ratio control and oxygen trim control.
Required Records: Logs of boiler tune-ups and significant boiler maintenance activities will be maintained.
State-Only Yes.
Calculation Model Not applicable.

**Discharge Point** **P-2706T 001**
200W Area, T Plant Complex
Requirement Citation (WAC or Order Citation): DE01NWP-002 (9/17/2001) and Revision 1 (6/29/2006)

**The 9/17/2001 approval conditions are replaced by 6/29/2006 Revision 1 (see next page).**

**Discharge Point** **P-291Z001-001**
200W Area, Plutonium Stabilization and Handling
Requirement Citation (WAC or Order Citation): DE01NWP-001 (7/17/2001), DE04NWP-001 (3/30/04) and Amendment 1 (5/18/2006)

**Condition Approval** **7/17/2001 (DE01NWP-001)**

Condition: Total Emission Limits:

A. The activities described in the NOC application will be permitted without additional control technologies required, provided that the total emissions from all activities will not exceed the Small Quantity Emission Rates (SQERs) for constituents where a SQER is listed. Constituents without a listed SQER cannot result in exceedance of WAC 173-460 ASILs.

B. A new NOC will be required, if total emissions of toxic air pollutants exceed the SQERs, unless dispersion modeling demonstrates that emissions would continue to result in concentrations less than the ASILs. Results of any such dispersion modeling demonstrations/calculations will be maintained on file at the facility and made available upon inspection.

C. A new NOC also is required if total emissions of criteria pollutants would exceed the WAC 173-400-110 thresholds.

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| Periodic Monitoring: | Analyze each proposed change to determine if emissions would exceed an ASIL or NSR threshold. |
| Test Method: | Not specified. |
| Test Frequency: | Not applicable. |
| Required Records: | Results of analyses. |
| State-Only | NSR thresholds - No;<br>ASILs - Yes. |
| Calculation Model | Not applicable. |

**Condition Approval** **7/17/2001 (DE01NWP-001)**

Condition: General Requirements:

In accordance with the method(s) identified in Section 6 of this Order, an annual assessment shall be conducted to document compliance that no monitoring and/or sampling systems are needed. This assessment will be reported annually beginning as part of the Calendar Year 2001 nonradioactive inventory of airborne emissions report as specified in WAC 173-400-105.

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| Periodic Monitoring: | Recordkeeping. |
| Test Method: | Not specified. |
| Test Frequency: | Annually. |
| Required Records: | WAC 173-400-105 Report. |
| State-Only | Yes. |
| Calculation Model | Not applicable. |

**Discharge Point** **P-291Z001-001**
200W Area, Plutonium Stabilization and Handling
Requirement Citation (WAC or Order Citation): DE01NWP-001 (7/17/2001), DE04NWP-001 (3/30/04) and Amendment 1 (5/18/2006)

**Condition Approval** **7/17/2001 (DE01NWP-001)**

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|---|---|
| Condition: | Monitoring and Recordkeeping:<br>Facility operating records will be maintained on file to verify the low emission estimates stated in the notice of construction application have not been exceeded. Each batch of material from the total polycube inventory entering the furnaces will also be recorded (i.e., grams of polycube material per unit time) on the facility operating records, which are classified. The classified records shall be kept on-site by the Permittee and made available to cleared Ecology personnel, upon request. The records will cover a minimum of the most recent sixty-(60-) month period.<br><br>Emissions from the polycube thermal stabilization process will be reported in the annual Hanford report, pursuant to WAC 173-400-105. |
| Periodic Monitoring: | Recordkeeping. |
| Test Method: | Not specified. |
| Test Frequency: | Per batch. |
| Required Records: | 1. Emission estimates/calculations.<br>2. Operating log showing number of batches processed. |
| State-Only | No. |
| Calculation Model | Not applicable. |

**Condition Approval** **5/18/2006 (DE04NWP-001, Amendment 1)**

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|---|---|
| Condition: | Monitoring and Recordkeeping:<br>PROCESS ACTIONS resulting in the emissions of polychlorinated biphenyl from paint sources will not exceed the SQER. |
| Periodic Monitoring: | Recordkeeping. |
| Test Method: | Not specified. |
| Test Frequency: | Per process action |
| Required Records: | 1. Emission estimates/calculations.<br>2. Operating log showing the process action. |
| State-Only | No. |
| Calculation Model | Not applicable. |

**Condition Approval** **5/18/2006 (DE04NWP-001, Amendment 1)**

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|---|---|
| Condition: | Application of Rad Pro 100 decontamination solution:<br>Process use of Rad Pro 100 decontamination solution (identified as decontamination solution #1 of Table 2, Section 5, of the NOC application) is enjoined and may not be applied without petition and approval of specific acceptable emission standards for ethylene glycol monobutyl ether. |
| Periodic Monitoring: | Recordkeeping. |
| Test Method: | Not specified. |
| Test Frequency: | Per application |
| Required Records: | 1. Petition and approval.<br>2. Operating log showing the application. |
| State-Only | No. |
| Calculation Model | Not applicable. |

**Discharge Point N-1724K 001**
100K Area, 1724K Building Maintenance Shop Work Activities
Requirement Citation (WAC or Order Citation): 97NM-551 (1/29/1998)

**The approval order was withdrawn by Ecology on 12/4/2007 due to failure to install or operate processes in the maintenance shop (letter from Ecology to DOE).**