0059915

AIR 03-705
NOC ID 553

STATE OF WASHINGTON

DEPARTMENT OF HEALTH

DIVISION OF RADIATION PROTECTION

7171 Cleanwater Lane, Bldg. 5 • P.O. Box 47827 • Olympia, Washington 98504-7827

TDD Relay 1-800-833-6388

July 21, 2003

Mr. Joel B. Hebdon, Director
U. S. Department of Energy
Regulatory Compliance
and Analysis Division
P. O. Box 550 MSIN A 5-58
Richland, Washington 99352

RECEIVED
JUL 29 2003
EDMC

Mr. James E. Rasmussen, Director
U. S. Department of Energy
Office of River Protection
Environmental Management Division
P. O. Box 450 MSIN H 6-60
Richland, Washington 99352

Addressees:

Pursuant to chapter 246-247 WAC, the Department of Health has determined that your application may be approved according to the conditions, controls, monitoring requirements, and limitations of the enclosed Draft Notice of Construction (NOC) approval for:

Transition of the 232-Z Contaminated Waste Recovery Process Facility at the Plutonium Finishing Plant

The Department considers the conditions, controls, monitoring requirements, and limitations of the Draft NOC approval integral to approval of your application and cannot approve your application without them. Neither this letter nor the enclosure constitutes approval of your application.

If you accept the provisions of the Draft NOC approval, please notify us in writing by July 31, 2003. You may submit your acceptance by mail or fax to:

DOH-Division of Radiation Protection
Air Emissions and Defense Waste Section
P. O. Box 47827
Olympia, Washington 98504-7827
FAX: (360) 236-2256

Upon receipt of your acceptance, we will issue the approval of your application. If you do not accept the conditions, controls, monitoring requirements, and limitations of the Draft NOC approval, the Department will deny your application in writing and provide you with information concerning the opportunity to request an adjudicative proceeding.

If you have any questions regarding this approval, please call me at (360) 236-3261 or John Schmidt at (509) 377-3827.

Sincerely,

Roy B. Evans
for Allen W. Conklin, Supervising Health Physicist
Air Emissions and Defense Waste Section
Division of Radiation Protection

Enclosure: Conditions and Limitations

cc: Dennis Bowser, DOE-ORP
Nick Ceto, EPA
Stephen Lijek, WDOE
Rick Poeton, EPA
Oliver Wang, WDOE
John Bates, FH
William Green, FH
Mike Jansky, FH
Richard Gay, CTUIR
Richard H. Englemann, FH
Richard H. Gurske, FH
Karl H. Hadley, FH
Debbi A. Isom, Admin Record, LMSI
Russel Jim, YN
Partick Sabotta, NPT

fax: Mike Jansky, July 21, 2003
WDOH-Hanford, July 21, 2003

Approval Number: Not Assigned

DRAFT

NOC ID: 553

DEPARTMENT OF HEALTH
RADIOACTIVE AIR EMISSIONS
NOTICE OF CONSTRUCTION
APPROVAL FOR

PROJECT TITLE: TRANSITION OF THE 232-Z CONTAMINATED WASTE RECOVERY PROCESS FACILITY AT THE PLUTONIUM FINISHING PLANT

Emission Unit Name: 296-Z-14 **Emission Unit ID** 391

This is a MINOR, ACTIVELY ventilated emission unit.

This emission unit requires the following Abatement Technology:

Applicable Requirements: **ALARACT**

ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area:	Abatement Technology	Required # of Units	Additional Description/Conditions
	HEPA	2	3 parallel paths of 2 HEPAs in series, minimum of 1 path in operation
	Fan	1	2 fans, 1 fan is backup

Additional abatement technologies required by this Notice of Construction will be listed in the Conditions and Limitations section.

This emission unit has the following Monitoring and Sampling Requirements:

Applicable Requirements: Monitoring, Testing and Quality Assurance WAC 246-247-075

Federal and State Regulatory	Monitoring and Testing Procedure	Radionuclides Requiring Measurement	Sampling Frequency
40 CFR 61.93[b][4][i] & WAC 246-247-075[3]	Appendix B, Method 114(3)	TOTAL ALPHA TOTAL BETA	4 week sample/ year

Sampling Requirements: Record Sample

Additional monitoring or sampling requirements established by this NOC will be listed in the Conditions and Limitations section.

Change History

05/12/2003 NOC, DOE/RL-2002-64, Revision 0, received November 15, 2002. Contractor requested formal resubmittal of NOC revision. NOC revision, DOE/RL-2002-64, Revision 1, received May 12, 2003.

06/30/2003 Draft approval, AIR 03-612, of the project, Transition of the 232-Z Contaminated Waste Recovery Process Facility at the Plutonium Finishing Plant, DOE/RL-2002-64, Revision 1, submitted to DOE-RL for acceptance on June 30, 2003. New Draft approval, AIR 03-705, reissued on July 21, 2003, to clarify process description by request of Department of Energy.

CONDITIONS AND LIMITATIONS

1) The U.S. Department of Energy shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

2) The total abated emission limit for this Notice of Construction is limited to 1.40E-04 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 6.50E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).

3) **No activities, other than those explicitly described within this approval, shall be conducted without prior written approval. The approved activities are limited to:**

the transition the 232-Z Building for dismantlement. All work shall be performed in accordance with the approved radiological control procedures and as low as reasonably achievable (ALARA) program requirements, as implemented by the project radiological manual, as amended. These requirements shall be carried out through the activity work packages and associated radiological work permits.

The proposed transition activities include the following:

- Remove residual plutonium from gloveboxes, filterboxes, equipment, piping, ductwork, and the building surfaces and package for disposition to onsite or offsite disposal facilities.
- Remove internal equipment from gloveboxes and building equipment/system components and package for disposition to onsite or offsite disposal facilities.
- Decontaminate gloveboxes, filterboxes, ductwork, and equipment to less than transuranic levels if possible.
- Remove gloveboxes, filterboxes, ductwork, and equipment and package for disposition to onsite or offsite disposal facilities.
- Decontaminate or fix contamination on building interior and exterior.
- Disconnect utilities and services not necessary for monitoring.
- Perform radiological and chemical characterization in preparation for dismantlement.

The methods for removing residual contamination from equipment/systems and for removing equipment include direct contact and remote technologies/techniques. These include: laboratory analyses and nondestructive assay; chemical cleaning, brushing, washing, scrubbing, vacuum cleaning, and abrasive jetting; using nibblers, shears, circular saws; and potentially a remote-operated laser. More specifically, the activities include the following:

- Size reduction of equipment will be by mechanical means and may be accomplished by compaction, disassembling by use of wrenches, nibblers, shears, cutters, grinders, saws, or other similar methods. This equipment may be manually, hydraulically, pneumatically or electrically powered.
- Decontamination methods include: Scrapping, sweeping, chemical cleaning, brushing, washing, scrubbing, scabbling, grinding, vacuum cleaning, strippable coatings, washing using wet rags, spraying, abrasive jetting, low pressure and high pressure wash using water and/or chemicals cleaners, use of fixatives and/or physically removal of contamination by use of mechanical means such as chipping or cutting. The application of fixatives for contamination control would be accomplished via aerosol fogging, paint brush/roller, hand-held spray bottle, or an electric or pneumatic powered sprayer.
- Containment of waste may be accomplished by coating the material with a fixative or placing the material in containers, bags and/or wrapping in plastic sheeting, utilizing adhesive tape, heat sealing or mechanical closure to prevent spread of contamination.
- Miscellaneous mechanical processes allowed to support the proposed activity include threading of piping, use of hot taps on piping, capping and plugging piping using threaded pipe components and expanding/compressive plugs or caps, drilling of holes in metal and concrete, core drilling concrete surfaces, installation of anchor bolts, installation and removal of bolts, installations of hose and tubing connectors, compression fittings,

installation and removal of pumps, agitators and filters.

The inactive section of the 232-Z Building duct located in the 291-Z Building shall be blanked off. Underground ductwork between the 232-Z Building and the 291-Z Building shall be characterized (e.g., remotely using a pipe crawler) for residual contamination and structural integrity; appropriate mitigation actions shall be applied pending final disposition (i.e., decontamination, in-situ stabilization).

Minor amounts of excavation are allowed to take place in the vicinity of the 232-Z Building to support site stabilization and isolating/blanking utilities. Access to underground piping and cable may be gained by use of a bucket-type excavator. Manual digging methods with shovels, picks, and rakes are also approved. Up to approximately 84 cubic meters of soil are allowed to be disturbed. Contaminated soil removed during excavation activities shall be covered until replaced into the excavation or otherwise dispositioned (backfill would consist of the original material removed or 'clean' soil).

If used during these activities, the categorical NOCs for sitewide use of the guzzler, a portable temporary radioactive air emissions unit (PTRAEU) exhauster, or HEPA filtered vacuum radioactive air emission unit are allowed.

Wastes generated during deactivation would be packaged appropriately and transported in closed containers which meet established waste acceptance criteria to approved onsite locations/facilities pending final disposition.

After deactivation activities addressed have been completed, the ventilation system shall be de-energized. A monitoring plan shall be prepared identifying specific monitoring requirements based on final characterization and end state of the structure. The monitoring plan shall be submitted to WDOH for review before shutdown of the 296-Z-14 Stack.

4) **The Annual Possession Quantity is limited to the following radionuclides (Curies/year):**

5) These Conditions and Limitations must be documented in an established procedure prior to starting activities granted by this approval (WAC 246-247-040(5)) and (WAC 246-247-060(5)).

6) If this emission unit is not in compliance with the standards in WAC 246-247-040 during construction or operation, the department reserves the right to require modifications to bring it into compliance (WAC 246-247-060-(2)(d)).

7) The facility shall notify the department at least seven calendar days prior to any planned preoperational tests of new or modified emission units that involve emissions control, monitoring, or containment systems of the emission unit(s). The department reserves the right to witness or require preoperational tests involving the emissions control, monitoring, or containment systems of the emission unit(s) (WAC 246-247-060(4)).

8) The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards (WAC 246-247-075(6)).

9) The department retains the right to conduct stack sampling, environmental monitoring or other testing around this unit to assure compliance. If directed by the department, the facility must make provision for such testing (WAC 246-247-075(9) and (10)).

10) The facility must be able to demonstrate that workers associated with this emission unit are trained in the use and maintenance of control and monitoring systems, and in the performance of associated tests and emergency procedures (WAC 246-247-075(12)).

11) The facility must be able to demonstrate the reliability and accuracy of emissions data and other test results from this emission unit (WAC 246-247-075(13)).

12) The department reserves the right to inspect and audit all construction activities, equipment, operations, documents, data and other records related to compliance with the requirements of this chapter (WAC 246-247-080(1)).

13) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

14) The facility must meet all reporting and record keeping requirements of 40 CFR 61, Subpart H. (WAC 246-247-080(2)).

15) The facility shall report all measured or calculated emissions annually (WAC 246-247-080(3)).

16) The facility shall report to the department within 24 hours, any unexpected release of radioactivity, shutdown or other condition that, if allowed to persist, or lasts more than four hours, would result in the emission of radionuclides in excess of any standards or limitations in the license. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitation included in this approval (paragraph 5) (WAC 246-247-080(5)).

17) Prior to permanent shut down of an emission unit or completion of an activity, the permittee shall file a report of closure with the Department of Health. The report of closure shall include the date of the shutdown and indicate whether, despite cessation of operation, there is still a potential for radioactive air emissions and a need for any active or passive ventilation system with emission control and/or monitoring devices. An emission unit or activity will not be considered permanently shut down or completed until a report of closure is received and approved by Health.

    Once an emission unit is permanently shut down or an activity is completed, thereby rendering existing permit terms and conditions irrelevant, the permittee shall not be required, after the shutdown or completion, to meet any monitoring, record keeping, and reporting requirements which are no longer applicable for that emission unit or activity.

    All records, relating to the shut down emission unit or completion of an activity, generated while the emission unit or activity was in operation, shall be kept in accordance with (WAC 246-247-080(8)). (WAC 246-247-080(6))

18) The facility shall maintain readily (promptly) retrievable storage areas (on site) for all records and documents related to, and which may help establish compliance with, the requirements of this chapter. The facility shall keep these records available for department inspection for at least five years (WAC 246-247-080(8)).

19) The facility shall ensure all emissions units are fully accessible to department inspectors. In the event the hazards associated with accessibility to a unit require training and/or restriction or requirements for entry, the facility owner or operator shall inform the department, prior to arrival, of those restrictions or requirements. The owner or operator shall be responsible for providing the necessary training, escorts, and support services to allow the department to inspect the facility. At a minimum for unannounced inspections, such requirements or restrictions must be told to inspectors to provide an opportunity for

inspectors to meet those requirements prior to the inspection (WAC 246-247-080(9)).

20) The facility shall make available, in timely manner, all documents requested by the department for review. The facility shall allow the department to review documents in advance of an inspection. The facility shall allow access to classified documents by representatives of the department with the appropriate security clearance and a demonstrable need-to-know (WAC 246-247-080(10)).

21) The emission controls used during the deactivation activities are administrative, based on ALARA principles and consist of ALARA techniques. Use of these controls satisfy as low as reasonably achievable control technology (ALARACT) for deactivation of the 232-Z Building. The transition operations shall be performed in accordance with the controls specified in a radiation work permit (RWP) and/or operating procedures. These shall be made available for WDOH inspection upon request. These controls consist of the following.

1. Health physics technician (HPT) coverage shall be provided, as necessary, during all deactivation and excavation activities.

2. The existing ventilation system for the 232-Z Building, exhausting through the 296-Z-14 Stack, shall be operational during transition activities.

3. The existing monitoring system for the 296-Z-14 Stack shall be operational during transition activities.

4. Appropriate controls such as water, fixatives, covers, containment tents, or windscreens shall be applied, if needed, as determined by the Radiological Control Organization. Soil removed during excavation activities shall be covered until replaced into the excavation or otherwise dispositioned.

5. After leveling, the soil surface radiological contamination levels shall be verified to be acceptable per Radiological Control Organization guidelines. If contamination is present above identified levels, the soil shall be removed and containerized for disposal or covered or fixed to provide containment of the contamination, consistent with radiological work procedures in effect at the time.

6. As appropriate, before starting deactivation activities (such as isolating utilities and piping or dismantling the exhaust system) removable contamination in the affected area(s) shall be reduced to ALARA. Measures such as decontamination solutions, expandable foam, fixatives, or glovebags also may be used to help reduce the spread of contamination.

7. If a guzzler, PTRAEU, or HEPA filtered vacuum radioactive air emission unit is used, controls as described in the sitewide guzzler NOC, DOE/RL-96-75 or DOE/RL-97-50, as amended, shall be followed.

8. If field surveys during excavation identify localized areas of contamination greater than the gross levels (500 dpm/100 cm2
alpha), additional surveys shall be conducted on the perimeter of the identified area to verify the localized nature, ensuring that
the overall assumed contamination level was not exceeded.

9. Appropriate controls approved by WDOH and identified in a monitoring plan supporting de-energization of the 296-Z-14 Stack
shall be in place when the ventilation system is shut down (WAC 246-247-040(5)) and (WAC 246-247-060(5)).

22) The record sampler for the 296-Z-14 Stack shall be operated continuously, and the resultant particulate sample air filters shall be collected biweekly. At a minimum, four samples are selected (minimum of one sample per calendar quarter during periods of high deactivation activities) and analyzed for gross alpha/beta activity to verify low emissions (WAC 246-247-040(5)) and (WAC 246-247-060(5)).

23) Radiological surveys (dose measurements and smear samples) taken during deactivation activities would be performed to demonstrate the conservative nature of the estimated source term. These surveys are part of the existing radiological control program (WAC 246-247-040(5)) and (WAC 246-247-060(5)).

24) If a sitewide guzzler, PTRAEU, or HEPA filtered vacuum radioactive air emission unit is used, PCM for emissions from those units shall be performed as required by the guzzler NOC, DOE/RL-96-75 and DOE/RL-97-50, as amended, respectively (WAC 246-247-040(5)) and (WAC 246-247-060(5)).

25) All emissions of radionuclides, including those due to emergency conditions resulting from startup, shutdown, maintenance activities, or process upsets are subject to the standards of this section and, therefore, subject to the enforcement actions of WAC 246-247-100. (WAC 246-247-040(6))

26) All radioactive air emissions licenses issued by the department, except those issued to radioactive materials licensees, shall have an expiration date of five years from date of issuance or as specified in the Air Operating Permit. For radioactive material licensees, the requirements and limitations for the operation of emission units shall be incorporated into their radioactive materials license, and shall expire when the radioactive materials license expires (WAC 246-247-060(6)).

27) All facilities with licensed emission units, except for radioactive materials licensees, shall submit a request to the department for renewal of their radioactive air emissions license at least sixty days prior to expiration of the license or as required by the Air Operating Permit. All renewal requests shall include a summary of the operational status of all emission units, the status of facility compliance with the standards of WAC 246-247-040, and the status of any corrective actions necessary to achieve compliance with the requirements of this chapter. Facilities with licensed emission units that also hold a radioactive materials license issued by the department shall submit this information along with their radioactive material license renewal submittal. If the department is unable to renew a radioactive air emissions license before its expiration date, the existing license, with all of its requirements and limitations, remains in force until the department either renews or revokes the license (WAC 246-247-040(9)).

DRAFT

Approval Number: Not Assigned

NOC ID: 553

DEPARTMENT OF HEALTH
RADIOACTIVE AIR EMISSIONS
NOTICE OF CONSTRUCTION
APPROVAL FOR

PROJECT TITLE: TRANSITION OF THE 232-Z CONTAMINATED WASTE RECOVERY PROCESS FACILITY AT THE PLUTONIUM FINISHING PLANT

Emission Unit Name: 200 AREA DIFFUSE/FUGITIVE **Emission Unit ID** 486

This is a MAJOR, FUGITIVE, non-point source emission unit.

This emission unit requires the following Abatement Technology:

Applicable Requirements: **BARCT**

ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area:	Abatement Technology	Required # of Units	Additional Description/Conditions
			Abatement controls as required in the following Conditions and Limitations.

Additional abatement technologies required by this Notice of Construction will be listed in the Conditions and Limitations section.

This emission unit has the following Monitoring and Sampling Requirements:

Applicable Requirements: Monitoring, Testing and Quality Assurance WAC 246-247-075

Federal and State Regulatory	Monitoring and Testing Procedure	Radionuclides Requiring Measurement	Sampling Frequency
WAC 246-247-075[3]	Appendix B, Method 114	All radionuclides which could contribute 10% of the potential TEDE.	As listed in the following Conditions and Limitations.

Sampling Requirements: Existing near-facility monitoring stations.

Additional monitoring or sampling requirements established by this NOC will be listed in the Conditions and Limitations section.

Change History

05/12/2003 NOC, DOE/RL-2002-64, Revision 0, received November 15, 2002. Contractor requested formal resubmittal of NOC revision. NOC revision, DOE/RL-2002-64, Revision 1, received May 12, 2003.

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CONDITIONS AND LIMITATIONS

1) The U.S. Department of Energy shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

2) The total abated emission limit for this Notice of Construction is limited to 1.40E-04 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)). The total limit on the Potential-To-Emit for this Notice of Construction is limited to 6.50E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-030(21)).

3) **No activities, other than those explicitly described within this approval, shall be conducted without prior written approval. The approved activities are limited to:**

without prior written approval. The approved activities are limited to:

the transition the 232-Z Building for dismantlement. All work shall be performed in accordance with the approved radiological control procedures and as low as reasonably achievable (ALARA) program requirements, as implemented by the project radiological manual, as amended. These requirements shall be carried out through the activity work packages and associated radiological work permits.

The proposed transition activities include the following:

- Remove residual plutonium from gloveboxes, filterboxes, equipment, piping, ductwork, and the building surfaces and package for disposition to onsite or offsite disposal facilities.
- Remove internal equipment from gloveboxes and building equipment/system components and package for disposition to onsite or offsite disposal facilities.
- Decontaminate gloveboxes, filterboxes, ductwork, and equipment to less than transuranic levels if possible.
- Remove gloveboxes, filterboxes, ductwork, and equipment and package for disposition to onsite or offsite disposal facilities.
- Decontaminate or fix contamination on building interior and exterior.
- Disconnect utilities and services not necessary for monitoring.
- Perform radiological and chemical characterization in preparation for dismantlement.

The methods for removing residual contamination from equipment/systems and for removing equipment include direct contact and remote technologies/techniques. These include: laboratory analyses and nondestructive assay; chemical cleaning, brushing, washing, scrubbing, vacuum cleaning, and abrasive jetting; using nibblers, shears, circular saws; and potentially a remote-operated laser. More specifically, the activities include the following:

- Size reduction of equipment will be by mechanical means and may be accomplished by compaction, disassembling by use of wrenches, nibblers, shears, cutters, grinders, saws, or other similar methods. This equipment may be manually, hydraulically, pneumatically or electrically powered.
- Decontamination methods include: Scrapping, sweeping, chemical cleaning, brushing, washing, scrubbing, scabbling, grinding, vacuum cleaning, strippable coatings, washing using wet rags, spraying, abrasive jetting, low pressure and high pressure wash using water and/or chemicals cleaners, use of fixatives and/or physically removal of contamination by use of mechanical means such as chipping or cutting. The application of fixatives for contamination control would be accomplished via aerosol fogging, paint brush/roller, hand-held spray bottle, or an electric or pneumatic powered sprayer.
- Containment of waste may be accomplished by coating the material with a fixative or placing the material in containers, bags and/or wrapping in plastic sheeting, utilizing adhesive tape, heat sealing or mechanical closure to prevent spread of contamination.
- Miscellaneous mechanical processes allowed to support the proposed activity include threading of piping, use of hot taps on piping, capping and plugging piping using threaded pipe components and expanding/compressive plugs or caps, drilling of holes in metal and concrete, core drilling concrete surfaces, installation of anchor bolts, installation and removal of bolts, installations of hose and tubing connectors, compression fittings, installation and removal of pumps, agitators and filters.

The inactive section of the 232-Z Building duct located in the 291-Z Building shall be blanked off. Underground ductwork between the 232-Z Building and the 291-Z Building shall be characterized (e.g., remotely using a pipe crawler) for residual contamination and structural integrity; appropriate mitigation actions shall be applied pending final disposition (i.e., decontamination, in-situ stabilization).

Minor amounts of excavation are allowed to take place in the vicinity of the 232-Z Building to support site stabilization and isolating/blanking utilities. Access to underground piping and cable may be gained by use of a bucket-type excavator. Manual digging methods with shovels, picks, and rakes are also approved. Up to approximately 84 cubic meters of soil are allowed to be disturbed. Contaminated soil removed during excavation activities shall be covered until replaced into the excavation or otherwise dispositioned (backfill would consist of the original material removed or 'clean' soil).

If used during these activities, the categorical NOCs for sitewide use of the guzzler, a portable temporary radioactive air emissions unit (PTRAEU) exhauster, or HEPA filtered vacuum radioactive air emission unit are allowed.

Wastes generated during deactivation would be packaged appropriately and transported in closed containers which meet established waste acceptance criteria to approved onsite locations/facilities pending final disposition.

After deactivation activities addressed have been completed, the ventilation system shall be de-energized. A monitoring plan shall be prepared identifying specific monitoring requirements based on final characterization and end state of the structure. The monitoring plan shall be submitted to WDOH for review before shutdown of the 296-Z-14 Stack.

4) **The Annual Possession Quantity is limited to the following radionuclides (Curies/year):**

5) These Conditions and Limitations must be documented in an established procedure prior to starting activities granted by this approval (WAC 246-247-040(5)) and (WAC 246-247-060(5)).

6) If this emission unit is not in compliance with the standards in WAC 246-247-040 during construction or operation, the department reserves the right to require modifications to bring it into compliance (WAC 246-247-060-(2)(d)).

7) The facility shall notify the department at least seven calendar days prior to any planned preoperational tests of new or modified emission units that involve emissions control, monitoring, or containment systems of the emission unit(s). The department reserves the right to witness or require preoperational tests involving the emissions control, monitoring, or containment systems of the emission unit(s) (WAC 246-247-060(4)).

8) The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards (WAC 246-247-075(6)).

9) The department retains the right to conduct stack sampling, environmental monitoring or other testing around this unit to assure compliance. If directed by the department, the facility must make provision for such testing (WAC 246-247-075(9) and (10)).

10) The facility must be able to demonstrate that workers associated with this emission unit are trained in the use and maintenance of control and monitoring systems, and in the performance of associated tests and emergency procedures (WAC 246-247-075(12)).

11) The facility must be able to demonstrate the reliability and accuracy of emissions data and other test results from this emission unit (WAC 246-247-075(13)).

12) The department reserves the right to inspect and audit all construction activities, equipment, operations, documents, data and other records related to compliance with the requirements of this chapter (WAC 246-247-080(1)).

13) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

14) The facility must meet all reporting and record keeping requirements of 40 CFR 61, Subpart H. (WAC 246-247-080(2)).

15) The facility shall report all measured or calculated emissions annually (WAC 246-247-080(3)).

16) The facility shall report to the department within 24 hours, any unexpected release of radioactivity, shutdown or other condition that, if allowed to persist, or lasts more than four hours, would result in the emission of radionuclides in excess of any standards or limitations in the license. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitation included in this approval (paragraph 5) (WAC 246-247-080(5)).

17) Prior to permanent shut down of an emission unit or completion of an activity, the permittee shall file a report of closure with the Department of Health. The report of closure shall include the date of the shutdown and indicate whether, despite cessation of operation, there is still a potential for radioactive air emissions and a need for any active or passive ventilation system with emission control and/or monitoring devices. An emission unit or activity will not be considered permanently shut down or completed until a report of closure is received and approved by Health.

    Once an emission unit is permanently shut down or an activity is completed, thereby rendering existing permit terms and conditions irrelevant, the permittee shall not be required, after the shutdown or completion, to meet any monitoring, record keeping, and reporting requirements which are no longer applicable for that emission unit or activity.

    All records, relating to the shut down emission unit or completion of an activity, generated while the emission unit or activity was in operation, shall be kept in accordance with (WAC 246-247-080(8)). (WAC 246-247-080(6))

18) The facility shall maintain readily (promptly) retrievable storage areas (on site) for all records and documents related to, and which may help establish compliance with, the requirements of this chapter. The facility shall keep these records available for department inspection for at least five years (WAC 246-247-080(8)).

19) The facility shall ensure all emissions units are fully accessible to department inspectors. In the event the hazards associated with accessibility to a unit require training and/or restriction or requirements for entry, the facility owner or operator shall inform the department, prior to arrival, of those restrictions or requirements. The owner or operator shall be responsible for providing the necessary training, escorts, and support services to allow the department to inspect the facility. At a minimum for unannounced inspections, such requirements or restrictions must be told to inspectors to provide an opportunity for inspectors to meet those requirements prior to the inspection (WAC 246-247-080(9)).

20) The facility shall make available, in timely manner, all documents requested by the department for review. The facility shall allow the department to review documents in advance of an inspection. The

facility shall allow access to classified documents by representatives of the department with the appropriate security clearance and a demonstrable need-to-know (WAC 246-247-080(10)).

21) Diffuse/Fugitive emissions shall be monitored using the 200 Area near-field ambient air monitors. Sample collection and analysis shall follow that of the near field monitoring program. Analytical results shall be reported in the Annual Air Emissions Report. Any change to this near-field ambient monitoring program must be approved by the department (WAC 246-247-040(5)) and (WAC 246-247-060(5)).

22) The emission controls used during the deactivation activities are administrative, based on ALARA principles and consist of ALARA techniques. Use of these controls satisfy as low as reasonably achievable control technology (ALARACT) for deactivation of the 232-Z Building. The transition operations shall be performed in accordance with the controls specified in a radiation work permit (RWP) and/or operating procedures. These shall be made available for WDOH inspection upon request.

These controls consist of the following:

1. Health physics technician (HPT) coverage shall be provided, as necessary, during all deactivation and excavation activities.

2. The existing ventilation system for the 232-Z Building, exhausting through the 296-Z-14 Stack, shall be operational during transition activities.

3. The existing monitoring system for the 296-Z-14 Stack shall be operational during transition activities.

4. Appropriate controls such as water, fixatives, covers, containment tents, or windscreens shall be applied, if needed, as determined by the Radiological Control Organization. Soil removed during excavation activities shall be covered until replaced into the excavation or otherwise dispositioned.

5. After leveling, the soil surface radiological contamination levels shall be verified to be acceptable per Radiological Control Organization guidelines. If contamination is present above identified levels, the soil shall be removed and containerized for disposal or covered or fixed to provide containment of the contamination, consistent with radiological work procedures in effect at the time.

6. As appropriate, before starting deactivation activities (such as isolating utilities and piping or dismantling the exhaust system) removable contamination in the affected area(s) shall be reduced to ALARA. Measures such as decontamination solutions, expandable foam, fixatives, or glovebags also may be used to help reduce the spread of contamination.

7. . If a guzzler, PTRAEU, or HEPA filtered vacuum radioactive air emission unit is used, controls as described in the sitewide
guzzler NOC, DOE/RL-96-75 or DOE/RL-97-50, as amended, shall be followed.

8. If field surveys during excavation identify localized areas of contamination greater than the gross levels (500 dpm/100 cm2
alpha), additional surveys shall be conducted on the perimeter of the identified area to verify the localized nature, ensuring that
the overall assumed contamination level was not exceeded.

9. Appropriate controls approved by WDOH and identified in a monitoring plan supporting de-energization of the 296-Z-14 Stack
shall be in place when the ventilation system is shut down (WAC 246-247-040(5)) and (WAC 246-247-060(5)).

23) Radiological surveys (dose measurements and smear samples) taken during deactivation activities shall be performed to demonstrate the conservative nature of the estimated source term. These surveys are part of the existing radiological control program (WAC 246-247-040(5)) and (WAC 246-247-060(5)).

24) If a sitewide guzzler, PTRAEU, or HEPA filtered vacuum radioactive air emission unit is used, PCM for emissions from those units shall be performed as required by the guzzler NOC, DOE/RL-96-75 and DOE/RL-97-50, as amended, respectively (WAC 246-247-040(5)) and (WAC 246-247-060(5)).

25) After deactivation activities have been completed, and prior to the stack emissions sampling system being de-energized. A monitoring plan will be prepared identifying specific monitoring requirements based on final characterization and end state of the structure. The monitoring plan will be submitted to WDOH for review before and approval prior to the shut down of the 296-Z-14 Stack (WAC 246-247-040(5)) and (WAC 246-247-060(5)).

26) All emissions of radionuclides, including those due to emergency conditions resulting from startup, shutdown, maintenance activities, or process upsets are subject to the standards of this section and, therefore, subject to the enforcement actions of WAC 246-247-100. (WAC 246-247-040(6))

27) All radioactive air emissions licenses issued by the department, except those issued to radioactive materials licensees, shall have an expiration date of five years from date of issuance or as specified in the air operating permit. For radioactive material licensees, the requirements and limitations for the operation of emission units shall be incorporated into their radioactive materials license, and shall expire when the radioactive materials license expires (WAC 246-247-060(6)).

28) All facilities with licensed emission units, except for radioactive materials licensees, shall submit a request to the department for renewal of their radioactive air emissions license at least sixty days prior to expiration of the license or as required by the air operating permit. All renewal requests shall include a summary of the operational status of all emission units, the status of facility compliance with the standards of WAC 246-247-040, and the status of any corrective actions necessary to achieve compliance with the requirements of this chapter. Facilities with licensed emission units that also hold a radioactive materials license issued by the department shall submit this information along with their radioactive material license renewal submittal. If the department is unable to renew a radioactive air emissions license before its expiration date, the existing license, with all of its requirements and limitations, remains in force until the department either renews or revokes the license (WAC 246-247-040(9)).