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

Addressees – See Attached

Addressees:

TRANSMITTAL OF NOTICE OF CONSTRUCTION (NOC) APPLICATION/LICENSE REVISION REQUEST AND NOTIFICATION OF OFF-PERMIT CHANGE, PERMIT NUMBER: 00-05-006, RENEWAL 2 FOR ENTERING AND CHARACTERIZING OF THE 224-T FACILITY PROCESS CELLS

This letter transmits the NOC Application-License Revision Request (Attachment 1) and the Notification of Off-Permit Change, Permit Number: 00-05-006, Renewal 2 (Attachment 2) to remove the license conditions contained in Emission Units 314, 447, and 486 associated with “Entering and Characterizing of the 224-T Facility Process Cells” and list the facility as a diffuse and fugitive source in Table 2-1 of the FF-01 license, Attachment 2 of the Hanford Site Air Operating Permit (AOP). The 224-T Facility process cells have been characterized and cleaned and are awaiting demolition as found in DOE/RL-2004-68, Revision 0, “Action Memorandum for the Non-Time-Critical Removal Action for the 224-T Plutonium Concentration Facility.” Both attachments have been prepared in accordance with Washington Administrative Code (WAC) 246-247 and WAC 173-401-724.

Attachment 1 is submitted to the Washington State Department of Health to approve this requested change, consistent with its authority to administer and enforce the State Radioactive Air Emissions Regulations. Attachment 2 is submitted to the Washington State Department of Ecology for its administration of the AOP and to the U.S. Environmental Protection Agency, Region 10 as part of the notification process for off-permit changes as outlined in the AOP.

If you have any questions, please contact me, or your staff may contact Jeffrey A. Frey, Assistant Manager for Safety and Environment, on (509) 376-7727.

Sincerely,

Doug S. Shoop
Manager

ESQ:ETF

Attachments

cc: See page 2
cc w/attachs:
Dennis A. Faulk, EPA
Philip M. Gent, Ecology
Jim McAuley, EPA Region X
John W. Schmidt, WDOH
Administrative Record
Environmental Portal, G3-35

cc w/o attachs:
Gabriel Bohnee, NPT
Frank J. Carleo, CHPRC
Gary M. Fritz, MSA
Russell Jim, YN
Reed A. Kaldor, MSA
Tad Karschnia, CHPRC
Robert R. Nielson, CHPRC
Rod Skeen, CTUIR
Addressees – Letter dated MAR 07 2017
17-ESQ-0047

Mr. Donald A. Dossett, Unit Manager
Stationary Source Unit
U.S. Environmental Protection Agency
Region 10
1200 Sixth Avenue, Suite 900, OAW-150
Seattle, Washington 98101

Mr. John Martell, Manager
Radioactive Air Emissions Section
Washington State Department of Health
309 Bradley Boulevard, Suite 201
Richland, Washington 99352

Ms. Alexandra K. Smith, Program Manager
Nuclear Waste Program
Washington State Department of Ecology
3100 Port of Benton Boulevard
Richland, Washington 99354
ATTACHMENT 1

NOTICE OF CONSTRUCTION / LICENSE REVISION REQUEST

Consisting of 21 pages,
including this cover page
NOC Application/Permit Revision

NOTE: Any increase to abated or unabated potential to emit (PTE) is considered a modification and requires an Appendix A Application per Washington Administrative Code (WAC) 246-247.

Licensure Revision

WDOH Condition Number: (EU 314) 2, (EU 447) 1-9, (EU 486) 1-12

Report of Closure

PROJECT IDENTIFICATION

Project Title: Consolidated T-Plant Operations
Current WDOH NOC Number(s): 830
WDOH EU ID Number(s): 314, 447, and 486
Current WDOH Approval Letter Number(s): AIR-12-312

DESCRIPTION OF CHANGE

Number of Attachments: 3

WDOH will provide a new approval letter containing any new or modified conditions that result from the following proposed change.

The proposed change removes the specific conditions contained in Emission Unit (EU) 314 license pertaining to the Notice of Construction (NOC) for “Entering and Characterizing of the 224-T Facility Process Cells.” The proposed change removes all conditions contained in Emission Unit (EU) 447 license pertaining to the Notice of Construction for Consolidated T-Plant Operations.” The proposed change also removes all conditions contained in Emission Unit (EU) 486 license pertaining to the NOC for “Consolidated T-Plant Operations.” Any future Portable Temporary Radioactive Air Emission Unit (PTRAEU) usage at T Plant will be conducted under the site-wide PTRAEU license EU 447, NOC 1074. The characterization of the 224T building has been completed and is no longer part of the T-Plant mission. Emissions relating to the 224-T Facility Process Cells will now be captured under Table 2-1 as a diffuse and fugitive source. The revised EU 486, NOC 1067 for the 200 Area will be used to account for any diffuse and fugitive emissions from T-Plant. Attachment 1, Emission Unit (EU) 314, shows the redlined version of references being struck from Condition 2 within the “Consolidated T-Plant Operations” NOC. Attachment 2, EU 447, shows the redlined version of references being struck from all Conditions within the “Consolidated T-Plant Operations” NOC. Attachment 3, EU 486, shows the redlined version of references being struck from all Conditions within the “Consolidated T-Plant Operations” NOC.

Enter original and proposed wording here:

EU 314 Condition 2 original wording:

This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.

This consolidated T-Plant license supersedes all radioactive air licenses for 291-T-1.
This approval subsumes those activities approved in three previous license approvals, retains/revises the specific conditions and limitations of those approvals, and replaces them as the radioactive air license for T-Plant:

i) AIR 03-1208 (NOC ID # 445, "Storage in T-Plant Complex of Sludge from K Basins")

ii) AIR 01-1010 (NOC ID # 499, "T-Plant Complex Fuel Removal Project")

iii) AIR 02-704 (NOC ID # 500, "Entering and Characterizing of the 224-T Facility Process Cells")

With additional conditions and limitations provided herein, this approval also extends to new activities discussed in the NOC application "Radioactive Air Emissions Notice of Construction for Consolidated T Plant Operations", DOE/RL-2004-50, Rev. 0, September, 2004, described briefly:

i) Receipt, Storage, Treatment, and Load out of Contact-Handled and Remote-Handled Transuranic (TRU) and Transuranic Mixed Waste (M-91 Initiative)

ii) Treatment (in addition to storage) of K-Basin Sludge from the North Load out Pit (NLOP)

iii) Such activities considered routine at T Plant as are described in succeeding conditions.

Activities a)i through a)iii may emit radioactive air through 291-T-1. Additionally, activity a)iii may emit to the 200 Areas Diffuse & Fugitive emission unit and to Portable Temporary Radioactive Air Emission Units.

EU 314 Condition 2 proposed wording:

This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.

This consolidated T-Plant license supersedes all radioactive air licenses for 291-T-1.

a) This approval subsumes those activities approved in three previous license approvals, retains/revises the specific conditions and limitations of those approvals, and replaces them as the radioactive air license for T-Plant:

i) AIR 03-1208 (NOC ID # 445, "Storage in T-Plant Complex of Sludge from K Basins")

ii) AIR 01-1010 (NOC ID # 499, "T-Plant Complex Fuel Removal Project")

b) With additional conditions and limitations provided herein, this approval also extends to new activities discussed in the NOC application "Radioactive Air Emissions Notice of Construction for Consolidated T Plant Operations", DOE/RL-2004-50, Rev. 0, September, 2004, described briefly:

i) Receipt, Storage, Treatment, and Load out of Contact-Handled and Remote-Handled Transuranic (TRU) and Transuranic Mixed Waste (M-91 Initiative)

ii) Treatment (in addition to storage) of K-Basin Sludge from the North Load out Pit (NLOP)

iii) Such activities considered routine at T Plant as are described in succeeding conditions.

Activities a)i through a)ii may emit radioactive air through 291-T-1.

EU 486 proposed wording:

The attached license with redline/strikeout changes detail the removal of the original Consolidated T-Plant Operations wording from the EU 486 license.

Table 2-1 proposed wording:

It is proposed that the 224-T Facility be added as a Diffuse and Fugitive emission source to Table 2-1 of the FF-01 license designated as 224T.
Report of Closure

Number of Attachments: 0

WAC 246-247-080(6) Indicate whether, despite cessation of operations, there is still a potential for radioactive air emissions and a need for an active or passive ventilation system with emission control and/or monitoring devices. If decommissioning is planned and will constitute a modification, a NOC is required, as applicable, in accordance with WAC 246-247-080.

If monitoring, reporting or record keeping, are being relaxed, propose alternatives and give justification.

This license revision proposes to delete all references and conditions pertaining to the 224-T Facility within Attachment 2 of the Air Operating Permit, 00-05-006 Renewal 2 for EU 314, EU 447, and EU 486 while adding 224-T Facility to Table 2-1 as characterization activities have been completed.

Assessment of Potential Continued Emissions:
The 224-T Facility cells have been characterized and clean closed in 2008 under the Resource Conservation and Recovery Act (RCRA) requirements. The unabated PTE has been calculated to be 8.31E-03 mrem/year in DOE/RL-2001-19.

Future Plans:
The 224-T Facility has been characterized and clean closed under the RCRA requirements. It is currently awaiting demolition under Comprehensive Environmental Response, Compensation and Liability Act as the selected alternative in DOE/RL-2004-68, Rev 0.

Emissions Control and Monitoring:
Any emissions from the 224-T Facility will be monitored and reported in accordance with the requirements for Diffuse and Fugitive emission sources listed in Table 2-1 with the identifier being “224T.”

SIGNATURE

Licensee Name: Department of Energy Richland Office Hanford Site
Licensee Title: Doug S. Shoop - Manager
Licensee Signature: [Signature]
Date: 3/7/14

To request updates to this form, please contact Shawna Berven at (509) 946-0192 or airrichland@doh.wa.gov
Emission Unit ID: 314

200W P-291T001-001

291-T-1

This is a MAJOR, ACTIVELY ventilated emission unit.

T PLANT COMPLEX

Emission Unit Information

Stack Height: 200.00 ft. 60.96 m.
Stack Diameter 6.50 ft. 1.98 m.

Average Stack Effluent Temperature: 78 degrees Fahrenheit. 26 degrees Celsius.
Average Stack Exhaust Velocity: 20.10 ft/second. 6.13 m/second.

Abatement Technology

BARCT

Abatement Technology

WAC 246-247-040(3), 040(4)

Abatement Technology

state only enforceable: WAC 246-247-010(4), 040(5), 060(5)

Zone or Area

Abatement Technology

Required # of Units

Additional Description

Prefilter

HEPA

2

Fan

2

In series

2 in parallel (with one as a backup)

Monitoring Requirements

state enforceable: WAC 246-247-040(5), 060(5), and federally enforceable: 40 CFR 61 subpart H

Federal and State Regulatory

Monitoring and Testing Requirements

Radionuclides Requiring Measurement

Sampling Frequency

40 CFR 61.93(b)(4)(i) & WAC 246-247-075(2)

40 CFR 61, Appendix B,
Method 114

NDA as detailed in conditions below.

All radionuclides that contribute greater than 10 percent of the potential-to-emit TEDE to the MEI,
greater than 0.1 mrem/yr potential-to-emit TEDE to the MEI, and greater than 25 percent of the TEDE to the MEI after controls

Particulates shall be continuously sampled and analyzed every two weeks for gross alpha and gross beta/gamma,
composited quarterly, and analyzed isotopically.

Sampling Requirements

Record Sample

Additional Requirements

Additional monitoring or sampling requirements established by this License will be listed in the Conditions and Limitations section, if applicable.

Operational Status

Activities at the T Plant Complex involve waste management operations in support of decontamination and decommissioning operations at the Hanford Site.

This Emission Unit has 1 active Notice(s) of Construction.

Project Title

Consolidated T Plant Operations (Replaces NOC 711)

Approval #

AIR 12-312

Date Approved

2/23/2012

NOC_ID

830-

Conditions (state only enforceable: WAC 246-247-040(5), 060(5) if not specified)

1) The total abated emission limit for this Notice of Construction is limited to 5.60E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).

2) This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.

This consolidated T-Plant license supersedes all radioactive air licenses for 291-T-1.

a) This approval subsumes those activities approved in three previous license approvals, retains/revises the specific conditions and limitations of those approvals, and replaces them as the radioactive air license for T-Plant:

i) AIR 03-1208 (NOC ID # 445, "Storage in T-Plant Complex of Sludge from K-Basins")
ii) AIR 01-1010 (NOC ID # 499, "T-Plant Complex Fuel Removal Project")

iii) AIR 02-704 (NOC ID # 500, "Entering and Characterizing of the 224 T Facility Process Cells")

b) With additional conditions and limitations provided herein, this approval also extends to new activities discussed in the NOC application "Radioactive Air Emissions Notice of Construction for Consolidated T Plant Operations", DOE/RL-2004-50, Rev. 0, September, 2004, described briefly:

i) Receipt, Storage, Treatment, and Load out of Contact-Handled and Remote-Handled Transuranic (TRU) and Transuranic Mixed Waste (M-91 Initiative)

ii) Treatment (in addition to storage) of K-Basin Sludge from the North Load out Pit (NLOP)

iii) Such activities considered routine at T Plant as are described in succeeding conditions.

Activities a)i through a)iili may emit radioactive air through 291-T-1. Additionally, activity a)iili may emit to the 200 Areas Diffuse & Fugitive emission unit and to Portable Temporary Radioactive Air Emission Units.

3) The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 1.20E+02 mrem/year. Approved are the associated potential release rates (Curies/year) of:

<table>
<thead>
<tr>
<th>Element</th>
<th>Activity</th>
<th>Quantity</th>
<th>Form</th>
<th>WAC Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Am - 241</td>
<td>1.38E+00</td>
<td>Liquid/Particulate Solid</td>
<td>WAC 246-247-030(21)(a)</td>
<td></td>
</tr>
<tr>
<td>Cs - 137</td>
<td>1.46E+01</td>
<td>Liquid/Particulate Solid</td>
<td>WAC 246-247-030(21)(a)</td>
<td></td>
</tr>
<tr>
<td>Pu - 239/240</td>
<td>1.38E+01</td>
<td>Liquid/Particulate Solid</td>
<td>WAC 246-247-030(21)(a)</td>
<td></td>
</tr>
<tr>
<td>Sr - 90</td>
<td>1.94E+01</td>
<td>Liquid/Particulate Solid</td>
<td>WAC 246-247-030(21)(a)</td>
<td></td>
</tr>
</tbody>
</table>
The radioactive isotopes identified for this emission unit are (no quantities specified):

Am - 241  Cs - 137  Pu - 239/240  Sr - 90

The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)) DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.

4) All activities involving radioactive materials shall be conducted in accordance with radiation control procedures approved per applicable QA program. (WAC 246-247-040(5))

5) Calibrate all differential pressure gauges associated with 291-T-1 HEPA filters annually. (WAC 246-247-040(5))

6) Receipt, Storage, Treatment, and Load out of Contact-handled and Remote-handled transuranic (TRU) and transuranic mixed (TRUM) (M-91 Initiative):

A. M91 project activities shall be conducted in T-Plant within the head end, the railroad tunnel, and/or the T-
Plant Canyon. M-91 waste shall be received at the head end or at the railroad tunnel. M91 waste is remote or contact handled transuranic, transuranic mixed, mixed, or mixed low level waste.

B. M-91 waste containers shall be opened and their contents treated in the head end of T-Plant only under containment, containment being defined here as either vented and HEPA-filtered glove box/bag, sealed glove box/bag, ventilated and HEPA-filtered containment tent or ventilated and HEPA-filtered solid-structure temporary containment, or PTRAEU. Where active ventilation is provided, that ventilation shall discharge into the T-Plant canyon so that radioactive air emissions originating in this process are further controlled by the 291-T-1 ventilation system controls. Procedures (approved in accord with applicable QA program) to ensure the initial integrity of the containment and to ensure the continued integrity of the containment structures shall be followed, shall include periodic radiological surveys, and shall be kept available for WDOH review. The head end will be posted based on radiological conditions in accordance with radiation control procedures approved per applicable QA program.

C. M-91 waste containers shall be opened and their contents treated in the railroad tunnel and/or canyon of T-
Plant, in accord with radiological control procedures (approved in accord with applicable QA program).

D. Lower risk M-91 containers may be received at the head end of T-Plant, and higher risk M-91 containers shall be received at the railroad tunnel. Risk criteria, including radiological risk considerations, governing receipt location shall be developed and documented.

E. Surface contamination and dose rate limits on M-91 waste containers received at T-Plant shall be governed by approved solid waste acceptance procedures. Deviations from approved solid waste acceptance procedures are allowed under a controlled waiver process. Stand-alone solid waste acceptance documents specifying surface contamination and dose rate limits shall be developed and approved for any M-91 containers received under the waiver process. These procedures shall be kept readily available for WDOH review. Documentation shall be sufficient to allow ready identification of the criteria under which each waste container is accepted, and shall note definite compliance with the applicable criteria on receipt.

F. Applicable surface contamination/dose rate criteria shall be documented for each container of M-91 waste repackaged at T-Plant for transshipment. Documentation of applicable criteria and compliance thereto shall be maintained for M-91 waste containers shipped from T-Plant.
G. Receipt, Storage, Treatment, and Load out of Contact-Handled and Remote-Handled Transuranic (TRU) and Transuranic Mixed Waste (M-91 Initiative) includes the following activities:

G1) Receiving.
G2) Sorting.
G3) Storing.
G4) Size Reduction.
G5) Repackaging.
G6) Containerizing.
G7) Load out.
G8) Treatment. (WAC 246-247-040(5)).

7) Routine T-Plant Activities:
A1) Packaging and Repackaging Waste - Packaging and repackaging activities are performed for waste generated at T-Plant as well as for onsite and offsite generators. Packaging and repackaging activities are:
A1a) Sorting.
A1b) Segregation.
A1c) Removing prohibited items.
A1d) Compositing/aggregating solids or liquids.
A1e) Adding absorbent.
A1f) Size reduction [e.g., cutting (jaws, saws, torches)], bending, folding, crushing (e.g., drum crusher), shredding, compacting, or similar methods that do not have a higher extent of disruption].
A1g) Void filling.
A1h) Pressure relief/release (e.g., aerosol cans, gas cylinders, drums, or other similar containers).
A1i) Aerosol can/drum puncturing.

A2) Verification Activities - Verification support activities are provided for waste and other materials that are generated on or off the Hanford Site. Verification activities are:
A2a) Physical observation.
A2b) Nondestructive examination (NDE).
A2c) Nondestructive assay (NDA).
A2d) Chemical field screening.
A2e) Radiological surveys.
A2f) Radiological samples.
A2g) Headspace gas analysis.
A2h) Chemical sampling.

A3) Sampling Activities - Sampling of waste generated by operations or by other onsite or offsite generators is performed. The purpose of sampling is to confirm process knowledge, characterize waste, support verification, and determine land disposal requirements as applicable. Sampling activities are:
A3a) Field screening [e.g., pH paper, oxidizer, volatile organic analyses (VOAs), polychlorinated biphenyls (PCBs), or similar screening parameters].
A3b) Obtaining a sample for analysis [e.g., grab, composite, composite liquid waste sampler (COLIWASA), or other similar sampling techniques].
A3c) Shipping/transferring the samples to an approved laboratory for analysis.
A3d) Disposition of sample returns (e.g., placement back into the parent container or another approved container/tank).
A3e) Headspace gas analysis [typically in support of the Waste Isolation Pilot Plant (WIPP) Project].
A3f) Tank sampling (liquid, sludge, salt cake, composites).

A4) Decontamination/Refurbishment Activities - Materials, equipment, and waste can be decontaminated (e.g., free release, reduce the radiological levels, or other similar criteria) using a variety of methods. T-Plant also performs decontamination of T-Plant structural components (e.g., 221-T Building walls, cells, or other similar surfaces).
Decontamination activities at T-Plant are:

A4a) Water (fog, high or low-pressure praying).
A4b) Steam.
A4f) Abrasive tools.  A4g) Scraping.
A4h) Washing (e.g., chemicals/detergents).  A4i) Immersion.
A4j) Electro-polishing.
A4k) Cutting (e.g., removal by sawing, torch cutting more highly radioactive components or other similar methods).  A4l) Rust/paint removal.

A5) Maintenance Activities - A variety of preventative and/or repair maintenance activities are performed at T-Plant. Some maintenance activities involve the temporary shut down of the 291-T-1 exhaust stack.

Maintenance activities are:

A5a) Painting.
A5b) Crane maintenance.
A5c) Electronic systems functional checks and repairs [CAMs, personnel contamination monitors (PCMs)].
A5d) Calibrations.
And may be performed on:
A5e) Rollup doors.
A5k) Stack systems fan lubes.
A5l) Forklifts.

A6) Waste Treatment Activities - T-Plant is a treatment facility permitted by the Washington State Department of Ecology (Ecology).

Treatment activities are:

A6a) Macroencapsulation.
A6b) Absorption.
A6c) Neutralization.
A6d) Immobilization.
A6e) Encapsulation.
A6f) Stabilization (solidification, cementation, grouting).
A6g) Compaction.
A6h) Amalgamation.
A6i) Segregation.
A6j) Shredding.
A6k) Venting.
A6l) Size Reduction.

A7) Recycling Activities - Materials are recycled whenever possible. Recycled materials are collected in accumulation containers in approved locations and transferred to the Recycling Center. Only nonradioactive materials are sent to the Recycling Center. Some radioactive materials (ferrous and nonferrous metals) can be recycled. Recycled materials are: ferrous and non-ferrous metal, light bulbs, aerosol cans, oils, and batteries.

A8) Storage Activities - T-Plant is permitted for waste storage by Ecology. Plant also stores other materials (chemicals, or equipment, or similar materials) to support operations. Radioactive wastes may be stored uncontainerized or in:
A8a) Containers (boxes, drums, tanker trucks/railcars, or large diameter containers).
A8b) Tanks.
A8c) Sumps and pipes.

A9) Equipment, Materials, and Waste Movement Activities - The movement of materials, equipment, waste, chemicals, or similar items involves the receipt and/or transferring/shipping, and movement and/or relocation within the T-Plant TSD unit boundary. Movement activities (using a forklift, crane, truck, dolly, personnel) are:
A9a) Receiving waste (liquid, solid, semi-solid) for storage and/or treatment.
A9b) Movement of waste (liquid, solid, semi-solid) and equipment in or out of process cells, canyon deck crane way, or tunnel in the 221-T Building.
A9c) Movement of liquids, sludges, or other waste from containers and/or tanks via transfer lines.
A9d) Waste container transfers (among outdoor storage pads, within buildings, process cells, canyon deck, or other approved locations).
A9e) Placing and storing chemical products in flammable cabinets or other approved storage locations.
A9f) Transloading from the 221-T tunnel to canyon deck and/or process cells.
A10) Housekeeping Activities - Housekeeping activities involve maintaining T-Plant in a clean and orderly condition. Housekeeping activities are:
A10a) Sweeping (brooms).
A10b) Mopping (squeegees or mops).
A10c) Vacuuming.
A10d) Dusting.
A10e) Wiping (sponges, towels).
A10f) Picking up debris.
A10g) Removal of trash.
A11) Surveillance Activities - Surveillance activities involve walking down and inspecting various areas, systems, and components. Surveillances typically consist of daily, weekly, and monthly inspections of waste containers, tanks, buildings, or similar locations. Surveillances are subject to change (adding, deleting and/or modifying) as operations, maintenance, engineering, and radiological control dictates. Surveillances, inspections, and maintenance activities that do not have the potential to create airborne contamination can occur within the 221-T Building when the 291-T-1 exhaust stack emission system is shutdown. The following surveillances are performed at T-Plant:
A11a) Container storage areas treatment and storage tanks and ancillary equipment.
A11b) General condition of building structures.
A11c) Safety Cold weather surveillances (typically, between October 1 and March 31).
A11d) Inspection of equipment.
A11e) Inspection of HEPA filtered vacuums.
A11f) Radiological surveys.
A12) Contamination Within the Canyon - The operational activities described inherently involve the spread of contamination within the canyon. The canyon is designed to provide containment for these operational activities. Job specific contamination controls are used (spreading paper to facilitate easy decontamination, fogging, fixing contamination, performing operations remotely or other similar methods that cover, seal, or remove smearable contamination). (WAC 246-247-040(5))

7) The abated and unabated emissions for this license have been estimated using particulate 241-Am, 239/240-Pu, 137-Cs, and 90-Sr, based on the isotopic distribution measured in destructive analysis of a T-Plant pre-filter, a Dose Equivalent-Curie limit of 15,000 DE-Ci, and also include a small contribution from gaseous radionuclides that may be encountered. The amounts of radioactive gases included are: (3-H, 25 Ci), (85-Kr, 3000 Ci), (129-I, 0.05 Ci), (219-Rn, 0.2 Ci), (220-Rn, 30 Ci), (222-Rn, 2 Ci). Radionuclides that may be encountered as particulates are: 242-Cm, 243-Am, 244-Cm, 60-Co, 134-Cs, 154-Eu, 40-K, 94-Nb, 237-Np, 238-Pu, 241-Pu, 242-Pu, 244-Pu, 226-Ra, 106-Ru, 125-Sb, 228-Th, 234-Th, 232-U, 233-U, 234-U, 235-U, 236-U, 238-U. Other particulate radionuclides are permitted, the total to remain within the DE-Ci limit of 15,000 DE-Ci and the abated emission limit of the license. Gaseous radionuclides are permitted, the sum of doses from radioactive gases to remain less than 6% of the total abated emission limit for this license. This condition does not apply to naturally occurring Radon.

8) The alternative flow measurement method proposed for the 291-T-1 stack by USDOE letter 03-RCA-0210, dated April 9, 2003, is approved for use (WAC 246-247-075(3)).

9) The annual inspection and maintenance of the HEPA filters must include visual inspection of the filter housing. Documentation of these activities must be made available to DOH upon request. (WAC 246-247-040(5))

10) The emission unit monitoring system shall have the following activities performed: A1) By December 31, 2005 and annually thereafter:

A1a) A visual check of nozzle position and orientation as well as measurements of nozzle openings;
A1b) Checks to ensure the tightness of all fittings and connections as well as a leak test of the entire sampling system.
A1c) Visual inspections for corrosion, physical damage, or dust loading of the probe, sample lines, and monitoring system equipment.
A2) Annually, from December 31, 2003:
A2a) A functional/calibration check of monitoring system instrumentation shall be performed.
A2b) USDOE shall provide to WDOH for review copies of the procedures used to perform the above activities. (WAC 246-247-060(5)).

11) The PTE at T-Plant shall be tracked in DE curies. A running total of DE curies present at the beginning of the calendar year plus DE curies introduced into T-Plant during that year shall be maintained and kept available for WDOH review. This record shall be made current at no greater than weekly intervals. That the total does not exceed license limits shall be routinely verified, and documentation of that verification shall be maintained. (WAC 246-247-040(5)) (WAC 246-247-060(5))

12) The Quality Assurance Standards for the sampling of emissions and subsequent analysis must remain in compliance with HNF-0528 NESHAPS Quality Assurance Project Plan for Radioactive Airborne (all of sections 2.0, 3.0, 5.0). (WAC 246-247-060(5))

13) T-Plant must continue to demonstrate that the adequacy of their system design and operation is equivalent to the intent of ASME/ANSI N 510. Both stages of HEPA filtration must be individually aerosol tested in place, a minimum of annually (at a minimum control efficiency of 99.95 percent). (WAC 246-247-040(5))

14) Receipt and Storage of K-Basins Sludge:
A. Receipt, Treatment, Storage and Load out of north load out pit (NLOP) Sludge:
A1) Sludge treatment consists of mixing the sludge with grout via the following major process steps:
A1a) Transferring sludge from Large Diameter Container into the grout system.
A1b) Sampling to ensure grouted containers meet waste isolation project plant (WIPP) acceptance requirements.
A1c) Transferring aliquots into WIPP certified 55 gallon drums.
A1d) Grouting to meet WIPP waste acceptance criteria.
A2) Prior to treatment, NLOP sludge shall be stored in T-Plant process cells 3L, 10L, 13L, 15L, 8R, 9L, 14R, and/or 16R.
A3) Containerized and grouted sludge shall be stored for not longer than 23 years from the date of issue of this license within the T-Plant complex.
A4) Containerized and grouted sludge shall be stored within the TSD unit boundary, and disposed according to assay of individual containers.
A5) The potential-to-emit of NLOP sludge received at T-Plant shall not exceed 0.9 mrem/year, corresponding to 120 DE Ci.

B. Receipt and Storage of K-Basins Sludge:
B1) Preparation of cells to receive sludge containers, which shall be limited to the following activities:
B1a) Intrusive cell operations to relocate items within cells and to transfer items between cells.
B1b) Removal of cell contents, which shall be limited to the following operations.
B1b1) Remote crane operations using lifting bails and clamshells.
B1b2) Pumping of liquids.
B1b3) Vacuum suction.
B1b4) Storage, repackaging, and treatment of containerized and uncontainerized radioactive waste.
B1b5) Waste characterization, verification, repackaging, size reduction, segregation, immobilization, and consolidation.
B1b6) Preparation of waste shipments in accordance with acceptance criteria for other facilities.  B1b7) Treatment and storage of liquid mixed waste.

B1c) Storage of contaminated process equipment and debris in the 221-T Canyon Building cells and deck shall be limited to:


B1c4) Original equipment (prior to decontamination mission).  B1c5) Condensers, chillers, filter assemblies, and columns.

B1c6) Open and closed boxes, drums, and containers, filled with debris.  B1c7) Tools, concrete blocks, and loose debris.

B1d) Refurbishing, recycling, and maintenance of contaminated equipment shall be limited to the items of equipment listed above.

B1e) Decontamination of equipment and materials, which shall be limited to the following operations:

B1e1) Hand, spray, and abrasive methods.

B1e2) Steam cleaning.

B1e3) High pressure hot water.

B1e4) High pressure cold water

B1e5) Ice blasting.

B1e6) Abrasive tools.

B2) The chemical and physical processes associated with the sludge storage shall consist of the following:

B2b) Radioactive waste shall be managed in accordance with written facility and Hanford Site waste management procedures and acceptance criteria. Criteria for moving containers from the canyon into the tunnel include the requirements that smearable contamination on the outside of the container must be less than 400 dpm/100 cm2 alpha and less than 20,000 dpm/100 cm2 beta/gamma for low risk evolutions. For medium risk evolutions, criteria for moving containers from the canyon into the tunnel shall include the requirements that smearable contamination on the outside of the container must be less than 2,000 dpm/100 cm2 alpha and less than 100,000 dpm/100 cm2 beta/gamma.

B2c) New liner systems shall be installed in the pool if storage under water is required and in four to twelve of the process cells. Existing water conditioning systems (coolers, filtration system, ion exchange columns, and piping) shall be used, modified, replaced or removed if storage under water is required.

B2d) Spent nuclear fuel (SNF) sludge retrieved from the 105-KE and 105-KW Basins shall be managed as two separate waste streams. Sludge containers configured for dry storage shall be used for less reactive floor and pit sludge components, including windblown sand and rocks, spalled concrete from the basin walls, iron and aluminum corrosion products, ion exchange resin beads, uranium oxides, and uranium fuel particles. More reactive sludge collected in the knockout pots and settler tank during SNF retrieval and processing at K-Basins shall be stored in a container configured for storage under water or for dry storage if allowed by criticality and thermal analyses.

B2e) Physical upgrades to the 221-T Canyon, as determined in final design, shall include installation of new cell containment, liner bracing systems, sump pumps, leak detectors, and instrumentation and controls in the 221-T Canyon.

B2g) Canyon radiation detectors, alarms, and cameras will be upgraded to provide surveillance.

B2h) Sludge containers shall be designed to ensure a safe storage configuration, based on final design results determined in criticality and heat rejection requirements analysis. Final design shall analyze maximum sludge loading and container sizing to minimize the number of transfers and number of containers.

B2i) Contents of filled sludge containers shall consist of a layer of sludge below a layer of water and a layer of air to provide a void space in each container. Sludge containers shall be capable of maintaining sludge in a wet state during transport and storage.

B2j) Sludge containers shall be received and placed into interim storage in the 221-T Canyon, configured for dry cell storage or storage under water. All sludge container handling and placement within the 221-T Building shall be performed remotely via crane operations.
B2k) The containers shall be transported from K-Basins to the 221-T Building via tractor and trailer. Each transfer shall consist of one transport cask which shall be inspected upon receipt according to approved receipt methods.

B2l) Sludge container unloading operations shall be done remotely using the canyon crane system. T-Plant Complex personnel shall vent and purge the transport cask with non-radioactive inert gas within the controlled airspace. The purge/venting system shall include a radiation detection method to verify that the storage container does not leak during transport and shall purge all hydrogen from the transport cask.

B2m) As a sludge container is moved from the tunnel into the canyon, operations personnel shall verify remotely the identification number and record the container number, via existing camera systems. After the container is removed from the cask, an empty container will be placed in the cask and the lid shall be replaced. The transport system shall be surveyed for possible contamination on exiting the Radiological Area and will return to K-Basins.

B2n) After the sludge containers are placed in the 221-T Canyon interim dry storage location, surveillance shall be performed to ensure that safety, regulatory, and safeguards and security requirements are met. Water levels within the dry storage containers shall be monitored (weight differential), and water additions shall be made remotely.

B2o) After sludge containers are placed in the interim underwater pool storage location, surveillance shall be performed to ensure that safety, regulatory, and safeguards and security requirements are met. Pool storage conditions (water quality, water temperature, water level, and ion exchange column status) shall be monitored, and water shall be added as needed to the pool to maintain the necessary water depth. (WAC 246-247-040(5))
Emission Unit ID: 447

Hanford Sitewide type-1, type-2, type-3 type-1, type-2, type-3
This is a MINOR, ACTIVELY ventilated emission unit.

PTRAEU

Abatement Technology

Bar: WAC 246-247-040(3), 040(4)

State only enforceable: WAC 246-247-010(4), 040(5), 060(5)

<table>
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<th>Zone or Area</th>
<th>Abatement Technology</th>
<th>Required # of Units</th>
<th>Additional Description</th>
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</tr>
<tr>
<td>HEP A</td>
<td>Charcoal filter</td>
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</table>

Monitoring Requirements

State enforceable: WAC 246-247-040(5), 060(5), and federally enforceable: 40 CFR 61 subpart H

<table>
<thead>
<tr>
<th>Regulatory</th>
<th>Monitoring and Testing Requirements</th>
<th>Radionuclides Requiring Measurement</th>
<th>Sampling Frequency</th>
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</thead>
<tbody>
<tr>
<td>40 CFR 61.93(b)(4)(i) &amp; WAC 246-247-075(3)</td>
<td>40 CFR 61, Appendix B, Method 114</td>
<td>GROSS ALPHA/BETA specified by the NOC.</td>
<td>Annual, unless</td>
</tr>
</tbody>
</table>

Sampling Requirements

One of the following methods may be chosen for actual emissions reporting: nondestructive assay, record sampler, smears of the exhaust port or continuous air monitoring, whichever is more appropriate.

Additional Requirements

Additional monitoring or sampling requirements established by this License will be listed in the Conditions and Limitations section, if applicable.

Operational Status

Operations using PTRAEU's involve mobile filtration, sample preparation, screening and analysis units, and ventilation of operations at the Hanford Site.

This Emission Unit has 3 active Notice(s) of Construction.

Project Title

<table>
<thead>
<tr>
<th>Approval #</th>
<th>Date Approved</th>
<th>NOC_ID</th>
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<tbody>
<tr>
<td>AIR-12-312</td>
<td>2/23/2012</td>
<td>830</td>
</tr>
</tbody>
</table>

Conditions (state only enforceable: WAC 246-247-040(5), 060(5) if not specified)

1) The total abated emission limit for this Notice of Construction is limited to 5.60E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).

2) This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.

This consolidated T Plant license supersedes all radioactive air licenses for 291-T-1:

a. This approval subsumes those activities approved in three previous license approvals, revises the specific conditions and limitations of those approvals, and replaces them as the radioactive air license for T Plant:

i. AIR-03-1208 (NOC ID # 445, "Storage in T Plant Complex of Sludge from K-Basins")

ii. AIR-01-1010 (NOC ID # 499, "T Plant Complex Fuel Removal Project")

iii. AIR-02-704 (NOC ID # 500, "Entering and Characterizing of the 224-T Facility Process Cells")

b. With additional conditions and limitations provided herein, this approval extends to new activities discussed in the NOC application "Radioactive Air Emissions Notice of Construction for Consolidated T Plant Operations", DOE/RL-2004-50, Rev. 0, September, 2004, described briefly:

i. Receipt, Storage, Treatment, and Load-out of Contact-Handled and Remote-
Handled Transuranic (TRU) and Transuranic Mixed Waste (M-9 Initiative)

i. Treatment (in addition to storage) of K-Basin Sludge from the North Load-out Pit (NLOP)

ii. Such activities considered routine at T Plant as are described in preceding conditions.

Activities a) through a) iii may emit radioactive air through 291-T-1. Additionally, activity a) iii may emit to the 200 Areas Diffuse & Fugitive emission unit and to Portable Temporary Radioactive Air Emission Units.

3) The PTE for this project as determined under WAC 246-247-030(21)(a-e) [as specified in the application] is 1.20E+02 mrem/year. Approved are the associated potential release rates (Curies/year) of:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Alpha</th>
<th>Beta</th>
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<tbody>
<tr>
<td></td>
<td>9.86E-05</td>
<td>5.11E-03</td>
</tr>
</tbody>
</table>

The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)) DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.

4) All activities involving radioactive materials shall be conducted in accordance with radiation control procedures approved in accordance with applicable QA program. (WAC 246-247-040(5))

5) Characterization activities shall be stopped if general surface contamination levels in the containment tent reach 40,000 dpm/100 cm² alpha or 2,000,000 dpm/100 cm² beta/gamma or if general air concentration levels in the containment tent reach 2.0 E-9 microcuries/milliliter alpha or 2.0 E-6 microcuries/milliliter beta/gamma. In this event, the Department of Health shall be notified of existing conditions and work stoppage. Following such a work stoppage, activities in the process cells shall not continue until a review of the work and encountered conditions has been performed and a determination made, in conformance with the Department of Health, that no threat to the environment exists or proper controls have been put in place to mitigate any further threat. (WAC 246-247-040(5))

6) If a Portable/Temporary Radioactive Air Emission Unit (PORTRAEU) is used, the conditions, controls, monitoring requirements and limitations of the latest approved version of the PORTRAEU Notice of Construction shall be required. (WAC 246-247-060(5)) (WAC 246-247-080(7))

7) Periodic confirmatory measurements (PCM) for emissions from the containment tent shall be performed and shall consist of the radiological surveys and CAM readings/log papers from the containment tent. Compliance shall be demonstrated by showing that actual emissions are inherently less than the estimated emissions which are based and calculated from the same contamination levels. (WAC 246-247-040(5))

8) The dose to the maximally exposed member of the public from unabated emissions associated with this NOC and exhausted by the PORTRAEU shall not exceed 1.12E-03 mrem/year. For the purposes of dose estimation, gross beta–air concentrations associated with this emission point shall be conservatively assumed to consist entirely of Sr–90. Gross alpha–air concentrations associated with this emission point shall be conservatively assumed to consist entirely of Pu–239. (WAC 246-247-040(5))

9) When a HEPA-Filtered Vacuum Radioactive Air Emission Unit (HEPA VAC) is used, the conditions, controls, monitoring requirements and limitations of the latest approved revision of the HEPA VAC Notice of Construction shall be required. (WAC 246-247-060(5)) (WAC 246-247-080(7))
Conditions (state only enforceable: WAC 246-247-040(5), 060(5) if not specified)

1) The total abated emission limit for this Notice of Construction is limited to 5.60E-02 mrem/year to the Maximally Exposed Individual (WAC 246-247-040(5)).

2) This approval applies only to those activities described below. No additional activities or variations on the approved activities that constitute a "modification" to the emission unit, as defined in WAC 246-247-030(16), may be conducted.

This consolidated T-Plant license supersedes all radioactive air licenses for 291-T-1.

a. This approval subsumes those activities approved in three previous license approvals, retains/revises the specific conditions and limitations of those approvals, and replaces them as the radioactive air license for T-Plant:

i. AIR 03-1208 (NOC ID # 445, "Storage in T-Plant Complex of Sludge from K Basins")
ii. AIR 01-1010 (NOC ID # 499, "T-Plant Complex Fuel Removal Project")
iii. AIR 02-704 (NOC ID # 500, "Entering and Characterizing of the 224-T Facility Process Cells")

b. With additional conditions and limitations provided herein, this approval also extends to new activities discussed in the NOC application "Radioactive Air Emissions Notice of Construction for Consolidated T-Plant Operations", DOE/RL-2004-50, Rev. 0, September, 2004, described briefly:

i. Receipt, Storage, Treatment, and Load out of Contact-Handled and Remote-Handled Transuranic (TRU) and Transuranic Mixed Waste (M-9 Initiative)
ii. Treatment (in addition to storage) of K-Basin Sludge from the North Load-out Pit (NLOP)
iii. Such activities considered routine at T-Plant as are described in succeeding conditions.

Activities a)i through a)iii may emit radioactive air through 291-T-1. Additionally, activity a)iii may emit to the 200 Areas Diffuse & Fugitive emission unit and to Portable Temporary Radioactive Air Emission Units.

3) The PTE for this project as determined under WAC 246-247-030(21)(a-c) [as specified in the application] is 1.20E+02 mrem/year. Approved are the associated potential release rates (Curies/year) of:

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<tbody>
<tr>
<td>Alpha</td>
<td>1.78E-04</td>
</tr>
<tr>
<td>Beta</td>
<td>5.49E-05</td>
</tr>
</tbody>
</table>
The potential release rates described in this Condition were used to determine control technologies and monitoring requirements for this approval. DOE must notify the Department of a "modification" to the emission unit, as defined in WAC 246-247-030(16). DOE must notify the Department of any changes to a NESHAP major emission unit when a specific isotope is newly identified as contributing greater than 10% of the potential TEDE to the MEI, or greater than 25% of the TEDE to the MEI after controls. (WAC 246-247-110(9)) DOE must notify the Department of any changes to potential release rates as required by state or federal regulations including changes that would constitute a significant modification to the Air Operating Permit under WAC 173-401-725(4). Notice will be provided according to the particular regulation under which notification is required. If the applicable regulation(s) does not address manner and type of notification, DOE will provide the Department with advance written notice by letter or electronic mail but not solely by copies of documents.

4) A. Entry/Characterization of 224 T Process Cells:
   A1) (Deleted)
   A2) All work covered by this NOC must be completed by December 31, 2005. A3) (Deleted)
   A4) (Deleted)
   A5) HPT coverage shall be provided during all cell entries and excavation activities. A6) (Deleted)
   A7) When a HEPA Filtered Vacuum Radioactive Air Emission Unit (HEPA VAC) is used, the conditions, controls, monitoring requirements and limitations of the latest approved revision of the HEPA VAC Notice of Construction shall be required.
   A8) (Deleted)
   A9) Approved activities for the Entry/Characterization of 224 T Process Cells are:
      A9a) Approval extends to entry of the 224 T Facility to determine the condition and contents of the facility's cells, tanks, and vessels, as described below. A containment tent shall be erected outside each access door. The containment tent shall consist of two or more chambers, where the inner chamber shall surround the cell door and the outer chamber shall function as an airlock. Alpha and beta continuous air monitors (CAM) shall monitor each chamber and shall run continuously whenever the cell door is open. The inner chamber shall be fitted with a Type I portable temporary radioactive air emissions unit (PTRAEU) exhauster to provide air flow and contamination control in the containment tent. The exhauster shall be run intermittently to control radiological conditions, at the direction of the field work supervisor in collaboration with the health physics technician (HPT). The containment tent shall be isolated from the cell (door closed or otherwise blocked) before operating the exhauster. The Type I PTRAEU shall be used in accordance with the conditions, controls, monitoring requirements and limitations of the latest approved revision of the PTRAEU NOC (DOE/RL 96-75).
      A9b) The following characterization activities are allowed in the cells and/or containment tent:
         A9b1) Establishing radiological conditions/map (i.e., dose rates, smearable and fixed contamination, and airborne concentrations).
         A9b2) Nondestructive data analyses (NDA) measurements of equipment.
         A9b3) Collection of liquid and solid samples from open vessels, trenches, or sumps. A9b4) Collection of ultrasonic data on vessels and piping.
         A9b5) Taking photographs.
         A9b6) Performing visual inspections.
         A9b7) Removing flanges to collect samples from inside equipment or piping.
         A9b8) Cutting or drilling into piping to collect samples with appropriate equipment such as a reciprocating saw, a circular saw, a hacksaw, a tri-tool, or an abrasive wheel.
         A9b9) Minor decontamination activities such as wiping down, applying fixatives or sealants, etc., performed in the cell or in the containment tent.
         A9b10) Decontamination to reduce dose rates or remove contamination for personnel safety, to remove characterization equipment brought in, or to remove incidental loose equipment or waste found in the cell.
         A9b11) Size reduction and packaging and containerizing of incidental, loose equipment or waste found in the cell for removal and/or disposal.
         A9b12) Removal of infiltrated water from the pit and the submerged tanks in C-Cell by pumping into tanker trucks for subsequent disposal.
         A9b13) Characterization of the removed water prior to disposal.
         A9b14) Investigation of the source of water infiltrated into C-Cell.
         A9b15) Sealing and grouting of leaks causing water infiltration.
A9b 16) A small amount of excavation is allowed to take place around the cell access doors to support installation of the containment tents. Manual digging methods with shovels, picks and rakes shall be used. Up to two cubic meters of contaminated soil may be disturbed.

A9b 17) Within the containment tent, the weather barrier cover over the cell access door shall be removed. The integrity and functionality of the cell door shall be determined and as a result the door may be removed and replaced with another door. Any other physical barrier that limits access to the cell also shall be removed.

A9b 18) (Deleted) (WAC 246-247-040(5))

5) Actions to assure quality of periodic confirmatory measurement shall be as follows:

   (1) Implementation of quality checks supporting the periodic confirmatory measurements. These checks shall assure that the emissions measurements are sufficient to verify low emissions.

   (2) (Deleted)

   (3) An annual calibration will be performed on the existing sample flow meter or an annual function check will be performed if the flow meter is replaced by either a rotameter or a magnahelic gauge.

   (4) The effluent samples will be collected on standard (very high efficiency particulate air) sample filters.

   (5) The laboratory sample analysis will meet the requirements of Appendix B, Method 114(3); and

   (6) The following items shall be documented in a NESHAP Quality Assurance Project Plan or other documents:

      (i) The sample collection and analysis procedures used.

      (ii) The quality control program for evaluating and tracking the quality of the periodic confirmatory measurement data against preset criteria. The quality control program should include, where applicable, a system of replicates, spiked samples, split samples, blanks and control charts. The number and frequency of such quality control checks shall be identified; and

      (iii) The sample tracking system to provide positive identification of samples and data through all phases of the sample collection, analysis, and reporting system. Sample handling and preservation procedures to maintain the integrity of the samples during collection, storage, and analysis. (WAC 246-247-040(5)(WAC 246-247-075(3))(WAC 246-247-075(6))(WAC 246-247-075(13)).

6) After backfilling, the soil surface radiological contamination levels shall be verified to be less than 5,000 dpm/100 cm^2 beta/gamma and less than 100 dpm/100 cm^2 alpha. If contamination is present above these levels, the contaminated soil shall be removed and containerized for disposal or covered or fixed to provide containment of the contamination. (WAC 246-247-040(5))

7) All activities involving radioactive materials shall be conducted in accordance with radiation control procedures approved in accordance with applicable QA program. (WAC 246-247-040(5))

8) Appropriate excavation controls such as water, fixatives, covers, or wind screens shall be applied, if needed, as determined by the contractor's Health Physics organization. Spoil piles containing contaminated soil shall be segregated from the clean soil. Containerizing soil for disposal may also be performed. (WAC 246-247-040(5)) (WAC 246-247-060(5))

9) If a Portable/Temporary Radioactive Air Emission Unit (PTRAEU) is used, the conditions, controls, monitoring requirements and limitations of the latest approved version of the PTRAEU Notice of Construction shall be required. (WAC 246-247-060(5)) (WAC 246-247-080(7))

10) Periodic confirmatory measurements (PCM) for the diffuse and fugitive emissions shall be performed and shall consist of the radiological surveys from the soil excavation activities. Compliance shall be demonstrated by showing that actual emissions are inherently less than the estimated emissions, which are based and calculated from the same contamination levels.

   If a PTRAEU or a HEPA filtered vacuum radioactive air emission unit is used, PCM for emissions from those units shall be performed as required by the respective NOCs. (WAC 246-247-040(5)) (WAC 246-247-080(7))

11) The dose to the maximally exposed member of the public from unabated diffuse and fugitive emissions associated with excavation activities under this NOC shall not exceed 3.05E-03 rem/year. For the purposes of dose estimation, gross beta air concentrations shall be conservatively assumed to consist entirely of Sr-90. Also for the purposes of dose estimation, gross alpha air concentrations associated with excavation under this NOC shall be conservatively assumed to consist entirely of Am-241. (WAC 246-247-040(5))

12) Total volume of contaminated soil disturbed in excavation for installation of containment tents shall not exceed two cubic meters. (WAC 246-247-040(5))
ATTACHMENT 2

NOTIFICATION OF OFF-PERMIT CHANGE
PERMIT NUMBER: 00-05-006, RENEWAL 2

Consisting of 2 pages,
including this cover page
NOTIFICATION OF OFF-PERMIT CHANGE
Permit Number: 00-05-006, Renewal 2

This notification is provided to the Washington State Department of Ecology, Washington State Department of Health, and the U.S. Environmental Protection Agency as a notice of an off-permit change described as follows.

The following changes are allowed pursuant to WAC 173-401-724(1), WAC 173-401-724(2), and WAC 173-401-724(6):
1. Change is not specifically addressed or prohibited by the AOP terms and conditions;
2. Change does not weaken the enforceability of the existing AOP conditions;
3. Change is not a Title I modification or subject to the acid rain requirements under Title IV of the FCAA;
4. Change meets all applicable requirements and does not violate an existing permit term or condition;
5. Change has complied with applicable preconstruction review requirements established pursuant to RCW 70.94.152.

Description of the change:
The proposed changes removes the specific conditions contained in the FF-01 Emission Unit (EU) 314, 447 and 486 licenses pertaining to the Notice of Construction for, “Consolidated T-Plant Operations”. The characterization of the 224T building has been completed and the activities are no longer required to be included in the EU 314, 447 and 486 licenses.

Date of change: (To be provided in the agency approval order.)
Effective upon approval

Describe the emissions resulting from the change:
No radiologic emissions increase or decrease are created by removal of this activity from the existing licenses.

Describe the new applicable requirements that will apply as a result of the change:
(To be provided in the agency approval order.)
Any future PTRAEU usage at T Plant will be conducted under the site-wide PTRAEU license EU 447, NOC 1074.
Resulting 224T emissions will now be captured under Table 2-1 within the Air Operating Permit with the unique identifier being “224T.”