FACT SHEET

PART III, OPERATING UNIT GROUP 12, DOUBLE-SHELL TANK SYSTEM
This page intentionally left blank.
FACT SHEET

PART III, OPERATING UNIT GROUP 12, DOUBLE-SHELL TANK SYSTEM

UNIT DESCRIPTION

The Double-Shell Tank (DST) System consists of 28 double-shell tanks in 6 tank farms (groups) and the 204-AR Waste Unloading Station.

The SY Tank Farm is in Hanford’s 200 West Area. The other five tank farms (AN, AP, AW, AY, and AZ) are in Hanford’s 200 East Area. The 204-AR Waste Unloading Facility, which discharges to the AW Tank Farm, is also in the 200 East Area.

Table 1 in Addendum A, Part A Form, lists the tanks by farm, and shows the capacity of each tank and its operation start date. Table 1 includes the 204-AR Waste Unloading Station tank.

DST Tanks

The first DST, 241-AY-101, began operation in 1971. The last tanks began operation in 1986. The design capacity of the tanks ranges from 3,785,400 liters (1,000,000 gallons) to 4,542,480 liters (1,200,000 gallons).

The DST tanks have a primary tank within a second tank. This design helps protect human health and the environment. The second tank has sufficient capacity to hold the wastes from the primary tanks. Both the primary and secondary tanks are equipped with leak detection devices. An assessment of the DST tank systems in 2007 determined the tanks were fit for use.

The DST System also contains related equipment such as:

- Pipelines that run between tanks within a tank farm and between tank farms.
- The Cross-Site Transfer System, which is between the SY Tank Farm in the 200 West Area and the AP Tank Farm in the 200 East Area.
- Seal pots, usually on drain lines, to prevent gases from escaping to the atmosphere.
- Pumps to move liquids or solids from tank to tank or to other facilities.
- Valves to direct the flow of waste from one direction to another.
- Jumpers (removable sections of piping to connect transfer lines, or to connect nozzles inside diversion boxes and pits.) Jumpers can be rigid or flexible.
- Nozzles (termination points for transfer lines in a diversion box.)
- Pits or diversion boxes that contain various types of equipment, including valves, jumpers, and nozzles.

204-AR Waste Unloading Station

The 204-AR Waste Unloading Station is a two-story structure. It contains a 1,500-gallon waste tank that holds seal water and ventilation condensate.

The 204-AR Waste Unloading Station began operations in 1982. It is currently in a deferred status. This means it will not be used for transferring waste until it complies with WAC 173-303.

The use of the 204-AR Waste Unloading Station is deferred because the transfer pipeline does not comply with WAC 173-303-640 regulations. The Permittees will not receive, treat, store, or dispose of waste at the 204-AR Waste Unloading Station. The 204-AR Waste Unloading Station can receive waste for storage and treatment when this pipeline meets regulations and we modify the permit to allow its use.
TYPE AND QUANTITY OF WASTE

The tanks in the DST System store mixed wastes. Mixed waste contains both dangerous and radioactive wastes (see WAC 173-303-040). The Permittees add chemicals to the tanks in the DST System to control corrosion and use equipment such as airlift circulators or pumps to mix the waste. So the DST System is also a treatment facility.

The DST waste is in three main forms: liquid, sludge, and “saltcake.” The liquid waste is called supernatant when it is on top of the sludge. It is called interstitial liquid when it fills the void spaces in the tank’s solids. Sludges are solids that can’t be dissolved and are usually at the bottom of the tank. Saltcake is solid salts, which can be dissolved. It is usually near the top of the tank.

The DST System is designed to store and treat a maximum of about 126,185,000 liters (33,335,000 gallons) of waste.

Wastes come to the DST System from the Single-Shell Tank (SST) System and the 222-S Laboratory. Wastes also come from tank truck transfers and smaller, temporary storage tanks that support various activities around the tank farms. The Permittees transfer waste in the DST System to the 242-A Evaporator to reduce waste volume (by evaporation). The condensed waste is returned to the DSTs.

The mixed waste consists of:

- Characteristic waste (D001, D002, and D003).
- Toxic constituents (D004 - D011, D018, D019, D022, D028 - D030, D033 - D036, D038 - D041, and D043).
- Nonspecific source waste (F001 through F005).
- State-only waste (WT01, WT02, WP01, and WP02).
- Multi-source leachate (F039), a waste derived from non-specific sources F001 through F005. The Permittees added this waste type to the list of DST waste codes in 1994 in anticipation of receiving leachate from the startup of low-level burial grounds (Trench 31).

Any of these waste types could be stored or treated in any of the DSTs.

Some of these waste types have not been detected. But knowledge of processes that created the wastes in the DST System makes it very likely that these wastes will be there.

204-AR Waste Unloading Station

The 204-AR Waste Unloading Station is designed to treat liquid mixed waste that exhibits a pH of less than 12. The Permittees chemically increase the pH of the waste by adding caustic (sodium hydroxide and sodium nitrate). This allows the waste to meet DST System corrosion specifications for storage.

The waste types in the 204-AR Waste Unloading Station are the same as those listed above for the DSTs.

The 204-AR Waste Unloading Station is designed to store and treat a maximum of 50,000 gallons (189,270 liters), of which 10,000 gallons (37,854 liters) is for flushing the system.

When the 204-AR Waste Unloading Station meets all the requirements of WAC 173-303, the Permittees could accept mixed waste from various Hanford facilities as long as they meet waste acceptance criteria.
BASIS FOR PERMIT CONDITIONS

Because the DST System is a tank system, Ecology bases the conditions on WAC 173-303-640. This permit is intended to protect human health and the environment while ensuring proper management of waste at the DST System. The permit addenda are incorporated into this permit and are enforceable by reference. The conditions and addenda are derived from the permit application and comment resolution meetings with the Permittees. Ecology has reviewed the permit application for the DST System to ensure the unit meets dangerous waste facility standards.

The permit includes requirements for complying with environmental standards and for maintaining and modifying the permit. The permit conditions address specifics such as personnel training, adequate staffing, process controls, and inspection requirements.

GENERAL WASTE MANAGEMENT REQUIREMENTS

Conditions III.12.B.1 through III.12.B.3 authorize the Permittees to accept dangerous and mixed waste into the DST System according to Addendum B, the Waste Analysis Plan. The Permittees are allowed to accept, store, and treat waste in the DST System only if the waste satisfies the DST System waste acceptance criteria and permit conditions. The Permittees will comply with Addendum B for waste analysis for all dangerous and mixed waste they manage at the DST System. (WAC 173-303-300)

The Permittees track all DST System components for compliance with WAC 173-303, deferred use components, and components with variances that we have approved on the DST Waste Transfer Piping Diagram, H-14-107346, sheets 1 through 7. The diagram replaced two database printouts submitted to Ecology to respond to a notice of violation that depict compliant and noncompliant components of the DST System. The databases were difficult to maintain and did not easily show the status of the components.

Condition III.12.B.4 authorizes the Permittees to store, treat, or transfer dangerous waste only in components shown on H-14-107346, sheets 1 through 7, to comply with the requirements of WAC 173-303-640.

Condition III.12.B.5 requires the Permittees to maintain the most current revision of the diagram in Building 272-AW. The diagram is used to establish, in waste transfer procedures, the compliant transfer route. It also tracks pending changes or engineering change notices. Though the official version of the diagram is in Building 272-AW, the Permittees may keep reference versions in other buildings.

Condition III.12.B.6 requires the Permittees to manage wastes in accordance with the requirements of this Permit, including the performance standards requirements found in WAC 173-303-283.

Condition III.12.B.7 requires the Permittees to submit a revised Addendum C to us within 90 days of the effective date of the Permit. The Permittees evaluated the DST System permit application and determined that they need to update the application. Addendum C includes leak detection information, tanker truck loading/unloading procedures, and a list of DST System engineering drawings, but it does not contain all the information on the DST System process.

WASTE ANALYSIS REQUIREMENTS

Condition III.12.C requires the Permittees to perform all sampling and analysis according to Addendum B, the Waste Analysis Plan. Recordkeeping must comply with WAC 173-303-380.

Condition III.12.C.3 requires the Permittees to revise the Waste Analysis Plan and submit it to Ecology within 30 days of the effective date of the permit.
Condition III.12.C.5 requires the Permittees to maintain accurate and complete waste profile documentation and to maintain it in the Hanford Facility Operating Record, DST system file.

Condition III.12.C.6 requires the Permittees to use testing methods according to Condition I.F.1.b. If the Permittees cannot use the specific method because of the hazard of the waste, the Permittees must obtain Ecology approval for using another method. The justification for another method must be documented in the Hanford Facility Operating Record, DST System file.

**RECORDKEEPING AND REPORTING**

The basis of Condition III.12.D is WAC 173-303-380 for those requirements not included elsewhere in this permit. The operating record for the DST System is maintained in the Hanford Facility Operating Record, DST System file.

Condition III.12.D.2 requires the Permittees to update and maintain H-14-107346, sheets 1 through 7, in accordance with RPP-23814, Functions and Requirements for the Post 06/30/05 Routing Board. RPP-23814 describes how components must be shown on the diagram.

Condition III.12.D.3 requires the Permittees to submit an annual report to us identifying changes in the compliance status of DST System noncompliant components as identified in H-14-107346, sheets 1 through 7.

Condition III.12.D.4 requires the Permittees to place updates to the engineering drawings listed in Addendum C into the Hanford Facility Operating Record, DST System file.

Condition III.12.D.5 requires the Permittees to place reports and details of incidents requiring implementation of the Contingency Plan in the Operating Record.

**SECURITY**

Dangerous waste management units in the DST System are all within the secured area of Hanford. Access to the operating area of the facility is subject to the general security provision of Condition II.L. Condition III.12.E.1 and Addendum E define security provisions, access controls, and signs specific to the DST System. These requirements satisfy WAC 173-303-310 and WAC 173-303-640(5)(d).

**PREPAREDNESS AND PREVENTION**

Conditions III.12.F and Addendum F contain the DST System’s preparedness and prevention requirements. These requirements address internal and external communications with DST System personnel and emergency responders (Hanford Fire Department, Hanford patrol). The conditions also address emergency equipment in the case of releases, fire, or other emergency.

Condition III.12.F.2 requires the Permittees to implement the emergency procedures in the Contingency Plan (Addendum K) if a fire, explosion, or release could threaten human health or the environment. The basis for this condition is WAC 173-303-340 and -360.

Condition III.12.F.3 requires the Permittees operate and maintain runoff controls, interlock systems, and other systems according to Addendum F, Section F.2. The basis for these requirements is WAC 173-303-640(5).

**INSPECTIONS**

Conditions III.12.G require the Permittees to comply with inspection requirements based on WAC 173-303-320 and -640. The Permittees must comply with the inspection plan in Addendum I. The plan includes all tank system inspections not addressed in Condition II.X, including:
- The cathodic protection system.
- Safety.
- Monitoring equipment.
- Ignitable, reactive waste storage inspections.
- Security equipment.

The conditions address inspections, responses to problems, and related documentation and recordkeeping.

**CONTINGENCY PLAN**

Condition III.12.H requires the Permittees to comply with Addendum K (Contingency Plan) and Condition II.A and is based on the requirements of WAC 173-303-350.

**TRAINING**

Condition III.12.I.1 requires the Permittees to put the training requirements described in Addendum G into a written training plan required by Condition II.C. The plan will be specific to the positions and job descriptions associated with the dangerous waste management units and waste management activities for the DST System. The training program, the written training plan, and records must meet the requirements of WAC 173-303-330.

**CLOSURE**

Condition III.12.J.1 requires the Permittees to close the dangerous waste management units in the DST System in accordance with Addendum H.

Condition III.12.J.2 requires the Permittees to complete closure of the DST System in accordance with Tri-Party Agreement Milestone M-42-00A.

**TANK SYSTEMS**

**Waste and Storage Limits**

Conditions III.12.K.1 contain waste and storage limits for the DST System. The Permittees will not transfer waste into the DSTs in excess of the tank capacity listed in Addendum A, Table 1. If the design capacity changes for any individual tank, Condition III.12.K.2 requires the Permittees to submit a permit modification to Addendum A following Condition I.C.

**Waste Transfers**

Conditions III.12.K.2 contain the requirements for waste transfers.

Condition III.12.K.2.a requires the Permittees to use the latest approved revision of the DST Waste Transfer Piping Diagram H-14-107346, sheets 1 through 7, to establish waste transfer routes using compliant components or components subject that comply with Condition III.12.K.3.i.

Condition III.12.K.2.b requires the Permittees to comply with the waste transfer conditions in Addendum M and WAC 173-303-640(5).

Condition III.12.K.2.c requires the Permittees to follow Addendum B when transferring waste into the DST System through tank risers from tanker trucks in compliance with WAC 173-303-395 (4).

Condition III.12.K.2.d requires the Permittees to place a copy of the procedures to demonstrate compliance with WAC 173-303-395(4) in the Hanford Facility Operating Record, DST System file.
Conditions III.12.K.2.e specifies that the Permittees may not accept waste through the 204-AR Waste Unloading Station until pipeline LIQW-702 is replaced by a compliant pipeline or is modified to comply with WAC 173-303-640(4)(f). The Permittees may store, in Tank TK-1, ventilation condensate and water to maintain the drain seals in the 204-AR Waste Unloading Station.

Condition III.12.K.2.f requires the Permittees to provide a compliance schedule to make the 204-AR Waste Unloading Station transfer line fit for use or submit a closure plan for the 204-AR Waste Unloading Station as specified in WAC 173-303-610 within 24 months of the effective date of the permit.

**Tank System Integrity**

Ecology requires the Permittees to assess the integrity of all DST System dangerous waste components. The requirements are in Conditions III.12.K.3.

Condition III.12.K.3.a requires the Permittees to assess the integrity of all DST System tank systems in accordance with WAC 173-303-640(2).

Condition III.12.K.3.b addresses the frequency of integrity assessments as specified by the independent qualified registered professional engineer (IQRPE). For the DST System, each tank will be assessed within 10 years of the initial or previous integrity assessment or more frequently if specified by the IQRPE. The Permittees may request a less frequent integrity assessment schedule through a permit modification request based on IQRPE findings and recommendations. These requirements are based on WAC 173-303-640(2)(a) and -640(2)(e).

Condition III.12.K.3.c requires an IQRPE to review and certify the written assessment in accordance with WAC 173-303-810(13)(a).

Condition III.12.K.3.d requires the Permittees to conduct the IQRPE assessment and address any findings and implement any recommendations needed to obtain and maintain IQRPE certification as described in the current revision of RPP-28538, *IQRPE Double-Shell Tank Integrity Assessment Report*.

Condition III.12.K.3.e requires the Permittees to issue a report to us addressing the Permittees disposition of all findings and recommendations in the current IQRPE integrity assessment report. The Permittees will place this report into the Hanford Facility Operating Record, DST System file.

Condition III.12.K.3.f requires the Permittees to maintain the integrity assessment program and schedule for the entire DST System in accordance with the requirements of WAC 173-303-640(2). A description of updates to the program and schedule for the entire DST system must be submitted to us for review within 60 days of issuance. The basis for Condition III.12.K.3.f is the omnibus authority of WAC 173-303-815(2)(b)(ii) to protect human health and the environment.

Condition III.12.K.3.g contains the related reporting and recordkeeping requirements.

Condition III.12.K.3.h requires the Permittees to keep all reports, data, and other information used to evaluate the condition of the DST System, including the IQRPE report in the Hanford Facility Operating Record, DST System file until clean closure is complete and certified.

Tank System Design and Construction

Conditions III.12.K.4 require the Permittees to comply with WAC 173-303-640(3) for the design and construction of any new dangerous waste tank systems or components and includes related recordkeeping requirements.

Tank System Installation and Certification

Conditions III.12.K.5 require the Permittees to comply with WAC 173-303-640(3) when installing and certifying new equipment and includes the related recordkeeping requirements.

Tank System Certification of Major Repairs

Condition III.12.K.6.a requires the Permittees to comply with WAC 173-303-640(7)(f) if they have completed a major repair of a tank system. Condition III.12.K.6.b includes the required recordkeeping requirements.

Tank Management Practices

Conditions III.12.K.7 require the Permittees to comply with WAC 173-303-640(5).

Condition III.12.K.7.a requires the Permittees to properly operate and maintain all DST System facilities and systems of treatment and control that are installed or used to achieve compliance with WAC 173-303-810(6). This includes the components shown on H-14-107346.

Condition III.12.K.7.b requires the Permittees to maintain all labels and signs identifying the waste in the DST System.

Condition III.12.K.7.c requires the Permittees to maintain the DST System design features that will prevent the escape into the air of vapors, fumes or other emissions that are acutely or chronically toxic.

Condition III.12.K.7.d requires the Permittees to operate the DST System as designed to prevent the endangerment of the health of the employees or the public near the facility.

The Permittees transfer waste in and out of the DST System and within the system. Before transferring waste, they perform a compatibility assessment. Condition III.12.K.8.e requires the Permittees to place the most current revision of the Tank Farm Waste Transfer Compatibility Program into the DST operating record within 7 days after the assessment is issued. Condition III.12.K.7.f requires the Permittees to place the waste compatibility assessments for waste transfers into the operating record within 7 days after issuing the assessment.

In 1998, the Permittees received a notice of violation for failure to have adequate leak detection in the SY Tank Farm (Administrative Order 98NW-009 and Notice of Penalty 98NW-007). A settlement agreement (PCHB No. 98-249; No. 98-250, called the “SY Settlement Agreement”) resulted. It has requirements for continuous leak detection, maintenance, down time, and notifications. It also specifies how many and how leak detectors were to be installed in the annulus of each tank and in the primary tank. (An annulus is the space between the primary tank containing the dangerous waste and the secondary containment for that tank.)

The Permittees have been required to comply with the SY Settlement Agreement until the DST System is added to the Permit. We have included the conditions in the SY Settlement Agreement in the Permit because they continue to apply to the DST System.

Conditions III.12.7.g through III.12.7.l contains those requirements from the SY Settlement Agreement with one difference. Conditions III.12.7.L describes how the Permittees can use continuous air monitors in the annulus in each tank, if they choose to. Allowing the Permittees the discretion to operate is different from the SY Settlement Agreement, which required that the...
Permittees operate the continuous air monitors (CAMs). The rationale for this is the CAMs have not proved themselves consistent as leak detection indicators.

Condition III.12.K.7.g requires the Permittees to have a continuous leak detection system for each of the 28 DSTs. The detection system will be composed of three annulus leak detective probes, placed as equidistantly as possible within the annulus of each DST, and at least one in-tank surface level monitor installed within the primary tank of each DST.

Conditions III.12.K.7.h through j contain the specific requirements for the leak detection system, including:

- Setting the leak detectors in place.
- Evaluating a leak detector alarm
- Continuous operation except for maintenance and functional testing and downtime for repair of a leak detection device.
- Notifications to Ecology and the time repairs and downtime can take.
- Documentation requirements.

Condition III.12.K.7.m requires the Permittees to install, maintain, and operate the leak detection system described in Addendum C to meet the requirements of WAC 173-303-640(4)(b) and (c).

Condition III.12.K.7.n allows the Permittees to use an alternate leak detection method, in-pit video cameras during maintenance and testing of in-pit equipment or waste transfers as an equivalent leak detection method as long as the camera meets the requirements of WAC 173-303-640(4)(b)(iii).

Condition III.12.K.7.o requires the Permittees to comply with Addendum J, *Emergency Pumping Guide*, which was prepared to provide as much preplanning as practical for pumping waste out of the primary tank system and annulus or secondary containment of a DST in the event of a leak.

The Permittees sometimes transfer waste into or out of the DST from tanker trucks. Condition III.12.K.7.p requires that when the Permittees transfer waste to or from a tanker truck through a temporary waste transfer line, they follow the loading and unloading requirements in Addendum C for secondary containment, leak detection, and removal of waste from secondary containment to meet the requirements of WAC 173-303-395(4).

Condition III.12.K.7.q requires the Permittees to notify us within 24 hours if they discover waste in a deferred use line or if waste should inadvertently be transferred into a noncompliant component. Within 7 days of discovery of the waste, the Permittees must provide us with a process and schedule for removal of the waste. They must place all documentation into the operating record. This condition includes the recordkeeping requirements.

**TEMPORARY WASTE TRANSFER LINE MANAGEMENT**

The Permittees may use temporary waste transfer lines in the DST System. Some temporary waste transfer lines are used only once (for example, a hose-in-sleeve temporary waste transfer line used to transfer waste from a tanker truck into a DST). Another type, the hose-in-hose transfer line (HHITL), is used for a longer duration. Both types of lines are ancillary equipment to tank systems under WAC 173-303-040.

Conditions III.12.L.1 are for any temporary waste transfer line that may be used in the DST System. They include requirements for:

- Placing a description of installation, maintenance, and operation of each DST System temporary waste transfer line into the operating record (Condition III.12.L.1.a).
• Leak detection requirements (Condition III.12.L.1.b).
• IQRPE certification of the fitness for use after evaluating the entire configuration of the system (Condition III.12.L.1.c).

Conditions III.12.L.2 provide the requirements for HIHTLs used in the DST System. Condition III.12.L.2.a requires the Permittees to implement RPP-12711, *Temporary Waste Transfer Line Management Program Plan*. The Permittees must provide updates to Ecology for review and approval, except for the Tables A1 and A2, which are provided with the quarterly updates.

Condition III.12.L.2.b requires the Permittees to update the HIHTL tracking system information within 20 days of the end of each quarter, and to provide it to Ecology within 30 days after the end of the quarter. The requirement to submit a quarterly update to us of the HIHTL status is a corrective measure that resulted from a notice of violation for management of HIHTLs and a subsequent inspection that determined the HIHTLs were not being managed as required in RPP-12711. (*Re: Notice of Violation for Unfit-for-Use Hazardous Waste Tank System Components*, dated May 14, 2007).

The requirements for HIHTLs in RPP-12711 include how long HIHTLs can be used before they must be removed. It also contains an extension waiver process the Permittees must use if they require use of an HIHTL beyond three years if deployed in the field, or beyond 7 years if stored. HIHTLs cannot be used after 10 years. (*Re: Conditional Approval of the Updated Temporary Waste Transfer Line Management Program Plan, RPP-12711, Revision 3K, Approval of the Hose in Hose Transfer Line (HIHTL) Compliance Removal Schedule, and Resolution of Ecology’s HIHTL Outstanding Notice of Violation (NOV)*, dated May 5, 2008.)

Condition III.12.L.c requires the Permittees to provide formal notification to Ecology of the determination to extend the service life of an HIHTL. They must place the completed extension waiver package into the operating record.

**REQUESTED VARIANCES AND ALTERNATIVES**

The following variances and alternatives appear to be justified.

1. **Alternative deferred status of 204-AR Waste Unloading Station.** The 204-AR Waste Unloading Station is in deferred status. However, it does store a limited amount of waste from maintenance of drain seals and testing of the safety shower. The deferral is specific to use of the noncompliant pipeline LIQW-702.

   The 204-AR tank system, except for pipeline LIQW-702, has an IQRPE-certified integrity assessment as a compliant system. If the Permittees opt to use 204-AR Waste Unloading Station again to transfer waste to the AW Tank Farm, pipeline LIQW-702 must be brought into compliance with [WAC 173-303](http://example.com). The Permittees could then request 204-AR Waste Unloading Station be returned to active status through a permit modification.

   If the Permittees decide they will no longer use the 204-AR Waste Unloading Station, they must submit a closure plan complying with [WAC 173-303-610](http://example.com).

2. **Variance from secondary containment standards for noncompliant lines in SY tank farm.** Certain lines in the SY tank farm do not comply with [WAC 173-303-640](http://example.com). Ecology has granted a variance from secondary containment requirements for these lines. (*See letter, “Re: Request for Variance from Secondary Containment Standards for Ten Double-Shell Tank [DST] System Dangerous Waste Transfer Lines, 03-ED-127, Dated* [Example Letter](http://example.com)*)
September 4, 2003,” dated April 13, 2004). Ecology will allow the Permittees to use these lines if they follow the requirements in Condition III.12.K.3.i.

3. **Alternative to DST Closure Plan detail.** The Closure Plan in Addendum H is based on clean closure, but it does not contain all of the detail necessary to clean close the DST System as required by WAC 173-303-610 and WAC 173-303-640(8).

The DSTs cannot be closed until the wastes in them and in the noncompliant single-shell tanks have been treated, removed, and immobilized. This could take decades. The Permittees will amend the Closure Plan to submit a realistic closure plan that will reflect the best method and minimize the environmental impact of closing of the DST System while meeting Tri-Party Agreement Milestone M-42-00A. The milestone requires that closure of all DST tank farms be completed no later than September 30, 2052.

4. **Alternative leak detection monitoring method.** The Permittees may use in-pit video cameras during maintenance and testing of in-pit equipment or waste transfers as an equivalent leak detection method as long as the cameras meets the requirements of WAC 173-303-640(4)(b) and (c) (Condition III.12.K.7.n). The basis of this alternative method is that it may be too hazardous for workers to do the work hands-on.

5. **Alternative method for emergency pumping of DSTs in response to a leak.** Because the DST System tanks are so large and contain an immense volume of waste, it is not possible to comply with the emergency pumping requirements of WAC 173-303-640(7) within 24 hours. The Permittees have satisfactorily demonstrated, as required by WAC 173-303-640(7)(b)(I), that it will take 10 days from detection of a leak to begin pumping. The Permittees must comply with Addendum J, HNF-3484, Double-Shell Tank (DST) Emergency Pumping Guide, when responding to leaks from the tanks (Condition III.12.K.7.o).

**STATE ENVIRONMENTAL POLICY ACT (SEPA)**

The SEPA determination for the DST System is in the Hanford-Wide Permit Fact Sheet.
This page intentionally left blank.