Ownership matrix	**USQ # 18-1101-D**

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1.0 PURPOSE AND SCOPE

Environmental regulations specify requirements for the design, construction, installation, operation, inspection, maintenance, repair, release response, and closure of treatment, storage, and disposal (TSD) unit/components used for managing hazardous waste. These regulations provide for a distinction between "new" and "existing" TSD units. This procedure addresses design, modification, construction/installation and initial/periodic integrity assessments for existing and new, interim status and final TSD units/components operated and maintained by the Tank Operations Contractor (TOC), Washington River Protection Solutions, LLC (WRPS).

This procedure also addresses the need for Independent Qualified Registered Professional Engineer (IQRPE) certification on TSD closure and post-closure reports. An IQRPE assessment should be performed when any change affecting the primary or secondary containment boundary of a TSD system has occurred and when any change affecting a system, structure, or component that has been assessed previously by an IQRPE.

This procedure also addresses responsibilities of WRPS Environmental Protection and WRPS Engineering to properly execute statements of work, determine whether a proposed activity on a TSD unit/component requires an integrity assessment for design, construction, installation, and modification.

This procedure governs the following processes:

- IQRPE Need Determination Process (See Section 4.1)
- IQRPE Report Process (See Section 4.2).

2.0 IMPLEMENTATION

This procedure is effective on the date shown in the header.

3.0 RESPONSIBILITIES

3.1 Engineering

- Manages the overall process for IQRPE reviews.
- Reviews planned activities and coordinates with Environmental Protection (ENV) to determine the need for an assessment certified by an IQRPE.
- Determines the appropriate standards to use during the IQRPE activity.
- Involves ENV in the design process for new TSD unit/components or modifications/repairs to ensure compliance with applicable requirements.
- Initiates the IQRPE need determination process (See Section 4.1).
- Follows Figure 1 Logic for Determining Need for IQRPE Assessment and Certification
- Specifies inspection requirements and related acceptance criteria in the design and installation documents.

- Provides draft Statement of Work to ENV for review.
- Ensures the IQRPE provides WRPS with a recommended schedule for applicable periodic integrity assessments defined in Table 1.
- Ensures IQRPE involvement in, and certification of TSD unit/component closure reports.
- Requests ENV perform a permitting review for the TSD unit/component prior to commencement of field activities to make system changes.
- Ensures contracts are in place for IQRPE support (including qualified independent inspector, if required), and makes certain that the IQRPE and/or qualified independent inspector is qualified and has the appropriate knowledge, expertise, and resources to perform an IQRPE certification (e.g., corrosion expert).
- Establishes appropriate IQRPE inspection/evaluation point(s) with ENV during technical review process (TFC-ENG-DESIGN-C-52).
- Coordinates the review of the draft IQRPE report to ensure the report contains the required information.
- Ensures recommendations made by the IQRPE are followed or provide justification for not following the IQRPE recommendations and ensures the justifications are documented in the operating record.
- Provides ENV with IQRPE-certified copies of each written report.
- Within six months of assessment report completion, releases the assessment report recommendation document as an RPP-IQRPE-XXXX from SmartPlant®Foundation (SPF) and includes ENV on distribution.[1]

3.2 Environmental Protection

- Reviews planned activities and coordinates with Engineering to determine the need for an assessment certified by an IQRPE.
- Determines if the permit application or final permit modifications will be required for the proposed change, and if so, submits requisite permitting documents in accordance with TFC-ESHQ-ENV_PP-C-14.
- Reviews draft Statement of Work provided by Engineering to ensure regulatory requirements are met.
- Informs Engineering if permit/permit application modification is required prior to commencement of work in the field.

[1] Refer to RPP-RPT-58441, Rev. 1 “Double-Shell System Integrity Assessment Recommendation Dispositions, Revision 0,” for example document format.

- Ensures that work packages and other documents have provisions such as hold points that are critical for IQRPE evaluation (e.g., before covering excavated lines).
- Assesses the impact of the proposed work on other environmental requirements documents.
- Establishes appropriate IQRPE inspection/evaluation point(s) with Engineering during the technical review process (TFC-ENG-DESIGN-C-52).
- Receives IQRPE-certified copies of each IQRPE written report and assessment report recommendation document.
- Reviews the draft IQRPE report to ensure the report meets regulatory requirements.
- Identifies records required to ensure the integrity assessment program is implemented in accordance with regulatory drivers.

4.0 PROCEDURE

4.1 IQRPE Need Determination Process

Engineering

1. Consult Figure 1 and coordinate with ENV to evaluate all proposed work involving the installation or modification of tank systems, surface impoundments, containment buildings, or TSD closure to determine applicable regulatory requirements.
2. In coordination with ENV, utilize Table 1 and Figure 1 as guidance in completing Site Form A-6006-231, "IQRPE Need Determination."
   a. Obtain an IQRPE Need Determination document number (TOC-IQRPE-YY-XXX) from the Hanford Document Numbering System (HDNS).
   b. Complete the form based on the determinations made during implementation of the process described in Figure 1.
   c. Sign and date the form, and forward the form to ENV for review and approval.

NOTE: IQRPE Need Determination is an auditable record demonstrating regulatory compliance that is required to be provided when requested by Ecology.

Environmental Protection

3. Review the IQRPE determination form for compliance with the regulatory requirements and sign/date the form.
4. Transmit a copy of the completed IQRPE Need Determination form to Engineering and ^WRPS ENV Records in accordance with TFC-ESHQ-ENV-STD-07.

4.2 IQRPE Report Process

Engineering

1. In accordance with TFC-ENG-DESIGN-C-25 and the appropriate procurement procedure, issue a statement of work (SOW) to the IQRPE currently on contract with the TOC.

    a. As necessary, involve the Procurement Specialist assigned to the IQRPE contract.

2. Review the IQRPE proposal to determine that pertinent requirements in the SOW will be satisfactorily met. This includes ensuring all required certifications (see Section 3.1) will be obtained upon completion of the SOW.

3. As needed, request from the IQRPE an IQRPE Plan that explicitly addresses all elements of a project to be evaluated by the IQRPE and identifies steps such as inspection/evaluation point(s) and witness points.

4. Release the final IQRPE report(s) using as appropriate, an RPP-IQRPE-XXXX from SPF and include ENV on distribution.

NOTE 1: The identified IQRPE recommendations must have a completion due date in the PER to ensure completion in a timely manner consistent with the recommendations' significance.

NOTE 2: The task associated with the IQRPE recommendation must be completed before the PER can be closed (see WRPS-PER-2012-0600).

5. Enter each recommendation documented in the IQRPE report into the Problem Evaluation Request (PER) system in accordance with TFC-ESHQ-Q_C-C-01.

4.3 Determining the Type of Assessment(s) and Certification Statement Required for New and Existing, Interim and Final Status TSD Unit/Components

(7.1.1, 7.1.2, 7.1.3, 7.1.4, 7.1.5, 7.1.6)

IQRPE assessments and certification are required for:

- Tanks systems currently in use[2]
- Design of new tank systems or components[3]
- New tank system or component installations[4]
- Extensive repairs of existing tank systems[5]

[2] WAC 173-303-640(2)
[3] WAC 173-303-640(3)(a)
[4] WAC 173-303-640(3)(a)
[5] WAC 173-303-640(7)(f)

- Surface impoundment liners used for management of extremely hazardous waste[6]
- Surface impoundment dike structural integrity, prior to issuance of a permit or after an extended time (at least six months) during which the impoundment was not in service t[7]
- Containment buildings used for less than 90 day accumulation of dangerous waste[8].
- Closure completion of any TSD unit[9]
- Post-Closure completion of any TSD unit requiring post-closure care[10].

As appropriate, IQRPE should use Ecology guidance documents; publication No. 94-114, *Guidance for Assessing and Certifying Tank Systems that Store and Treat Dangerous Waste*, and publication No. 95-420, *Guidance for Assessing Dangerous Waste Secondary Containment Systems* in the development of integrity assessment plans and report.

Major repairs to a tank system are repairs done in accordance with Washington Administrative Code (WAC) 173-303-640(7)(f) and repairs that have been extensive (i.e., installation internal liner, repair of a ruptured primary containment or secondary containment vessel). These repairs require an IQRPE certification [WAC 173-303-640(7)(f) and 51 Federal Register 25456]. However, minor tank system repairs do not. Preventative maintenance performed under PMs is an example of minor repairs, and do not require IQRPE inspection. Minor repairs may still require an independent inspection under operation procedures. Repaired components are subject to tightness testing before they are returned to service. (7.1.6)

NOTE: Applicable PMs should be addressed in IQRPE reports to ensure they have been evaluated as part of continued operations.

Requirements for TSD unit/components pertaining to integrity assessment activities can arise from the following sources:

- Interim status regulations: Washington Administrative Code (WAC) 173-303-400(3)(a), incorporates by reference 40 CFR 265 Subpart J, "Tank Systems." WAC 173-303-400(3)(b) and WAC 173-303-400(3)(c)(ix) modify the text of 40 CFR 265 Subpart J for compliance. For the sake of brevity, a reference to 40 CFR 265.191 will mean 40 CFR 265.191 as modified by WAC 173-303' in the procedure
- Final status regulations: WAC 173-303-610, "Certification of Closure," WAC 173-303-640, Tank System; and WAC 173-303-650 Surface Impoundments
- Hanford Facility RCRA Permit, where the permit is intended to operate consistently with the final status regulations. Integrity assessment requirements in the permit usually adopt the IQRPE report and repeat schedule recommendation

[6] WAC 173-303-650(2)(a)(i)
[7] WAC 173-303-610(6)
[8] WAC 173-303-610(11)
[9] WAC 173-303-610(6)
[10] WAC 173-303-610(11)

- Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement or commonly known as the TPA) contains an enforceable milestone in Appendix D to the TPA Action Plan (i.e., M-045-91I pertaining to the Single-Shell Tank [SST] system)

- Documents developed as primary documents under the TPA or other compliance inspection agreements with the State of Washington Department of Ecology (e.g., RPP-12711).

Interim status regulations for integrity assessments (40 CFR 265.191 and 265.192) address respectively, the assessment of existing and new interim status TSD unit/components. Interim status compliance is required until such time the TSD unit/components are incorporated into the Hanford Facility RCRA Permit, or the tank systems are closed and/or removed from service. WRPS interim status tank systems include:

- Double-Shell Tank (DST) system
- 222-S Laboratory 219-S Waste Handling Facility (219-S Tank System)
- SST system
- SST retrieval systems
- Temporary waste transfer line systems covered by RPP-12711.

Final status regulations for integrity assessments (WAC 173-303-640(2) and WAC 173-303-640(3)) address respectively, the assessment of existing and new final status TSD unit/components. WRPS TSD unit/components subject to final status requirement through the Hanford Facility RCRA permit include:

- 242-A Evaporator
- LERF-ETF.

Although worded slightly different, both WAC 173-303-640(2) and -640(3) and 40 CFR 265.191/264.191 and 265.192/264.192 require a written integrity assessment(s) reviewed and certified by an IQRPE in accordance with the certification statements in WAC 173-303-810(13)(a) and 40 CFR 270.11(d), respectively. This assessment must determine that the TSD unit/component is adequately designed and has sufficient structural strength and compatibility with the waste(s) it will store or treat to ensure that the tank system will not collapse, rupture, or fail. The TPA Milestone M-45-91) may require additional assessments which includes certification of structural integrity with WAC 173-303-640(2), and potentially future integrity assessment activities.

In addition, the assessment(s) must be maintained in the operating record in accordance with TFC-ESHQ-ENV-STD-07.

Attachment A identifies the type of assessment(s) and certification statement required of an IQRPE.

4.4 Certification Statements

The following certification statements are required to satisfy the certification requirements of Attachment A.

4.5 40 CFR 270.11(d) Certification Statement for Interim Status

(7.1.1, 7.1.2, 7.1.5)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

4.6 WAC 173-303-810(13)(a) Certification Statement for Final Status
(7.1.3)

"I certify under penalty of the law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations."

4.7 Correction of Errors Discovered in Published IQRPE Reports
(7.1.1, 7.1.2, 7.1.3, 7.1.5)

Although the IQRPE is required to be independent pursuant to certain statutory and regulatory provisions, this does not absolve the U.S. Department of Energy (DOE) from its responsibility for the content of IQRPE reports. Under WAC regulations, independence refers to the IQRPE's status in relation to the entity for which the IQRPE is performing engineering work.

There are no provisions that prohibit making administrative notes in a separate document identifying items in an issued IQRPE report that require clarification. For example, if it is believed that the IQRPE inadvertently identified an incorrect revision of a referenced document in the final IQRPE report, a supplemental document can be prepared detailing this finding.[11]

To make necessary substantive changes to an issued IQRPE report (i.e., those that affect the IQRPE's conclusions) a supplemental report must be prepared by the original IQRPE or a new report must be issued by another IQRPE. This process is consistent with applicable regulatory requirements provisions which provide that when an engineer reviews work done by another professional engineer, he/she must prepare a report addressing his/her findings, including supporting details. This report would make reference to, or be attached to, the original documents reviewed by the IQRPE (WAC 196-23-020(5)).

5.0 DEFINITIONS

Ancillary Equipment. Any device including, but not limited to, such devices as piping, fittings, flanges, valves, and pumps that is used to distribute, meter, or control the flow of dangerous waste: (1) from its point of generation to a storage or treatment tank(s), (2) between dangerous

[11] An acceptable method of correcting administrative errors is to issue a supplemental document to the IQRPE report that describes and corrects the errors. See resolution of WRPS-PER-2012-0600, "RPP-28538, Volume 1, IQRPE Double-Shell Tank Integrity Assessment Report HFFACO M-48-14, Revision 5."

waste storage and treatment tanks to a point of disposal onsite, or (3) to a point of shipment for disposal offsite. (WAC 173-303-040).

Component. Either a tank or ancillary equipment of a tank system. (WAC 173-303-040).

Corrosion Expert. A person who, by reason of his knowledge of the physical sciences and the principles of engineering and mathematics, acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. Such a person must be certified as being qualified by the National Association of Corrosion Engineers (NACE) or be a registered professional engineer who has certification or licensing that includes education and experience in corrosion control on buried or submerged metal piping systems and metal tanks. (WAC 173-303-040)

Independent Qualified Registered Professional Engineer. A person who is licensed by the State of Washington, or a state which has reciprocity with the State of Washington as defined in RCW 18.43.100, and who is not an employee of the owner or operator *[i.e., the USDOE or Washington River Protection Solutions, LLC (WRPS)*] of the facility for which construction or modification certification is required. A qualified professional engineer is an engineer with expertise in the specific area for which a certification is given. (WAC 173-303-040)

New Tank System/New Tank Component. A system or component to be used for storage or treatment of dangerous waste that was installed after February 3, 1989.

Qualified Independent Inspector. An independent inspector who supports the IQRPE's certification that installation of new or modifications to existing tank system components have been inspected as required by WAC 173-303-640(3). The QII shall meet the qualifications and training requirements for the inspection to be performed.

Tank. A stationary device designed to contain an accumulation of dangerous waste, and which is constructed primarily of non-earthen materials to provide structural support (WAC 173-303-040).

Tank System. A dangerous waste storage or treatment tank and its associated ancillary equipment and containment system (WAC 173-303-040).

Treatment, Storage, or Disposal (TSD) Unit. A unit used for the treatment, storage, or disposal of hazardous waste which is required to be permitted or closed pursuant to RCRA requirements as determined in this Action Plan (Hanford Federal Facility Agreement and Consent Order, Action Plan, Appendix A). Units co-operated by WRPS include:

Table 1. Treatment, Storage, or Disposal (TSD) Units

TSD Number[12]	TSD Identification	Unit Type(s)	Permit Status
S-2-8 T-2-8	Operating Unit Group 3: Liquid Effluent Retention Facility (LERF) and 200 Area Effluent Treatment Facility (ETF)	Surface Impoundment and Tank System	Final Status
T-2-6	Operating Unit Group 4: 242-A Evaporator	Tank System	Final Status
TS-2-1	Operating Unit Group 8 222-S Dangerous and Mixed Waste TSD Unit: • 219-S Waste Handling Facility • 222-S Dangerous and Mixed Waste Storage Area (DMWSA) • Room 4-E container storage area (Room 4-E) • Northern portion of Room 2-B container storage area (Room 2-B).	Tank System	Interim Status
S-2-3 T-2-3	Operating Unit Group 12 Double-Shell Tank System and 204-AR Waste Unloading Station	Tank System	Interim Status
S-2-4	Closure Unit Group 4 Single-Shell Tank (SST) System	Tank System Closure	Interim Status

Unfit-for-Use. A tank system or component that has been determined, through an integrity assessment or other inspection, to be no longer capable of storing or treating dangerous waste without posing a threat of release of dangerous waste to the environment (WAC 173-303-040).

6.0 RECORDS

The following records could be generated during the performance of this procedure:

- IQRPE Need Determination Form, A-6006-231
- Design Assessment Report
- Construction/Installation Assessment Report
- Integrity Assessment Report
- Video Inspections that support Integrity Assessment
- Equivalent Materials Determination per Permit Condition II.R.2.

Within WRPS, Environmental records are managed and released according to the requirements, processes, and controls identified in TFC-ESHQ-ENV-STD-14, TFC-ESHQ-ENV-STD-07, TFC-BSM-IRM_DC-C-02, TFC-BSM-IRM_DC-C-04, TFC-BSM-AD-C-03, and TFC-BSM-IRM_DC-C-01.

[12]The TSD group number (TSD Number) shall be used when identifying the TSD Number to WRPS Document and Records Management, and when sending information to the TPA Administrative Records/Public Information Repository (AR/PIR). TPA Appendix B, and the AR/PIR website at http://pdw.hanford.gov/arpir/index.cfm/predefinedsearch?cantype=tsd provides a list of the TSD group numbers for each TSD unit on the Hanford Site

The records custodian identified in the Company Level Records Inventory and Disposition Schedule (RIDS) is responsible for record retention in accordance with TFC-BSM-IRM_DC-C-02.

7.0 SOURCES

7.1 Requirements

7.1.1 40 CFR 264, "Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities, Subpart J, Tank Systems.

7.1.2 40 CFR 265, "Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities," Subpart J, Tank Systems, incorporated by reference at WAC 173-303-400(3)(a), as modified by WAC 173-303-400(3)(b) and WAC 173-303-400(3)(c)(ix).

7.1.3 Hanford Facility Resource Conservation and Recovery Act Permit, WA 7890008967, Revision 8C, as amended, Washington State Department of Ecology.

7.1.4 Hanford Federal Facility Agreement and Consent Order, 89-10, as amended.

7.1.5 WAC 173-303-400, "Interim Status Facility Standards"

7.1.6 WAC 173-303-640, "Tank Systems."

7.2 References

NOTE: When published, the Plan for Development of the DST System Integrity Assessment Report will contain a listing of integrity assessments performed since December 2008, which is the date of the last revision to RPP-28538.

7.2.1 "Final RCRA Information Needs Report," Mausshardt 1995.

7.2.2 HNF-4589, "Integrity Assessment Reports of Tanks TK-101 and TK-102 (219-S)."

7.2.3 HNF-4590, "219-S Waste Handling Facility Integrity Assessment Report Design and Construction New Tank System and Components (219-S Tank 104)."

7.2.4 HNF-4737, "Consolidation of Integrity Assessment reports for Project W-087, I-E-2 Hot Cell (Project W-251), and Rooms 1J & 1K Upgrades (219-S)."

7.2.5 HNF-4849, "222-S Environmental Hot Cell Expansion Integrity Assessment Report Design& Construction (219-S)."

7.2.6 HNF-41604, "200 Area Effluent Treatment Facility Purgewater Unloading Facility Tank System Integrity Assessment."

7.2.7 HNF-41604, "200 Area Effluent Treatment Facility Purgewater Unloading Facility Tank System Integrity Assessment."

7.2.8 RPP-10435, "Single-Shell Tank System Assessment Report."

7.2.9 RPP-12711, "Temporary Waste Transfer Line Management Program Plan."

7.2.10 RPP-20556, "Volume 7, IQRPE DST Integrity Assessment – Evaluation of the Dome Load Program for Double Shell Tanks."

7.2.11 RPP-22604, "Volume 6, IQRPE DST Integrity Assessment – Evaluation and Documentation of DST Secondary Liner Issues."

7.2.12 RPP-25153, "Volume 3, IQRPE DST Integrity Assessment – Waste Compatibility."

7.2.13 RPP-25299, "Volume 4, IQRPE DST Integrity Assessment of Cathodic Protection for DST Transfer Lines."

7.2.14 RPP-27097, "Volume 5, IQRPE DST Integrity Assessment – Waste Transfer Line Encasement Integrity Technology Study."

7.2.15 RPP-27591, "Volume 2, IQRPE DST Integrity Assessment – Pipeline Integrity."

7.2.16 RPP-28538, "Volume 1, IQRPE Double-Shell Tank Integrity Assessment Report HFFACO M-48-14."

7.2.17 RPP-45569, "AW-B Rigid Jumper A-D Independent Integrity Assessment Report."

7.2.18 RPP-46637, "AY-02A Pumps and Jumpers Independent Integrity Assessment Report."

7.2.19 RPP-RPT-32094, "Integrity Assessments for 241-C-108 Waste Retrieval Project."

7.2.20 RPP-RPT-33306, "IQRPE Integrity Assessment report for the 242-A Evaporator Tank System."

7.2.21 RPP-RPT-33307, "IQRPE Integrity Assessment report for the 242-A PC-5000 Transfer Pipeline."

7.2.22 RPP-RPT-34052, "Integrity Assessments for 241-C-109 Waste Retrieval Project."

7.2.23 RPP-RPT-38997, "Integrity Assessments for 241-C-109 Waste Retrieval Project."

7.2.24 RPP-RPT-42938, "Integrity Assessments for 241-C-104 Waste Retrieval Project."

7.2.25 RPP-RPT-50836, "Project W-566 AZ-102 Jumper and Pump Integrity Assessment Report."

7.2.26 RPP-RPT-51111, "Integrity Assessment for C-108 Hard Heel Removal Waste Retrieval Project."

7.2.27 RPP-RPT-52721, "Integrity Assessment for C-104 Hard Heel Removal Waste Retrieval Project."

7.2.28 TFC-BSM-IRM_DC-C-02, "Records Management."

7.2.29 TFC-ENG-DESIGN-C-25, “Technical Document Control.”

7.2.30 TFC-ENG-DESIGN-C-52, “Technical Reviews.”

7.2.31 TFC-ESHQ-ENV_PP-C-14, “RCRA Permitting.”

7.2.32 TFC-ESHQ-ENV-STD-07, “Environmental Records.”

7.2.33 TFC-ESHQ-Q_C-C-01, “Problem Evaluation Request.”

7.2.34 TFC-ESHQ-Q_INSP-C-01, “Control of Inspections.”

7.2.35 W-291H-IAR, “200 Area Effluent BAT/AKART Implementation, ETF Truck Load-In Facility, Project W-291H, Integrity Assessment Report.”

7.2.36 WHC-SD-CP-ER-030, “219-S Aqueous Waste Disposal Facility Tank System Integrity Assessment Report (used for 219-S tank 103).”

7.2.37 WHC-SD-WM-ER-112, “Integrity Assessment Report for the 242-A Evaporator/LERF Waste Transfer Piping, Project W105.”

7.2.38 WRPS-PER-2012-0600, “RPP-28538, Volume 1, IQRPE Double-Shell Tank Integrity Assessment Report HFFACO M-48-14, Revision 5.”

7.2.39 Washington State Dept. of Ecology Publication 94-114, “Guidance for Assessing and Certifying Tank Systems,” November 2014.

Figure 1. Logic for Determining Need for IQRPE Assessment and Certification.
(7.1.1,7.1.2, 7.1.3, 7.1.5)

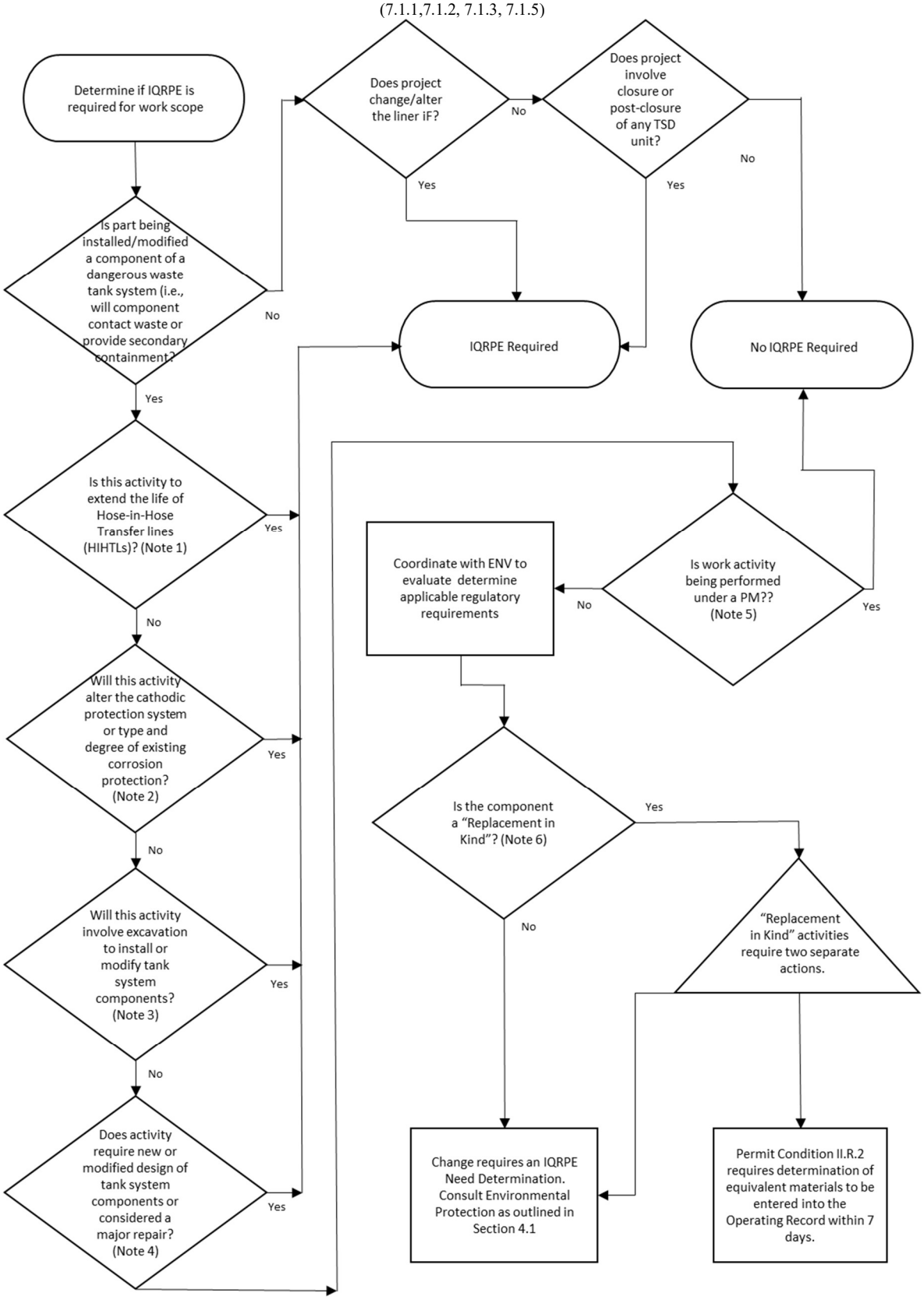

Figure 1. Logic for Determining Need for IQRPE Assessment and Certification (cont.)

Note that Engineering and ENV may consult in completing steps in Section 4.1 and arrive at a different conclusion from these explanatory steps to Figure 1.

Notes for Figure 1 (based on regulatory drivers for decision points):

1. RPP-12711, "Temporary Waste Transfer Line Management Program Plan," contains specific agreements with Ecology.

2. WAC 173-303-640(3)(g) requires corrosion protection to ensure the integrity of the tank system or component. Corrosion protection must be assessed by a corrosion expert, who may or may not be the IQRPE.

3. Final inspections of tank systems or components just prior to burial, as well as backfill material and compaction requirements, are governed by WAC 173-303-640(3)(c) and (d).

4. WAC 173-303-640(3)(a) and (c) require that an IQRPE must attest that the new component has sufficient structural integrity and is acceptable for storing and treating dangerous waste. Installing previously-reviewed components on a different tank system constitutes a "new" component. Factors to be evaluated include:

    - Waste compatibility
    - Potential for corrosion
    - Impacts of vehicular traffic
    - Effects of frost heave
    - Structural damage due to inadequate construction/installation
    - Type of backfill material used
    - Leak tightness.

    For modification of an existing component, an IQRPE must attest that the modifications will not impact the structural integrity of the component.

    New or modified tank system components likely require modification of a permit in accordance with TFC-ESHQ-ENV_P-C-14. Consult with Environmental Protection for guidance.

    NOTE: New or modified tank system components likely require modification of a permit in accordance with TFC-ESHQ-ENV_P-C-14. Consult with Environmental Protection for guidance.

Figure 1. Logic for Determining Need for IQRPE Assessment and Certification (cont.)

5. Tank system repairs are considered minor if the maintenance involves structures and components that are subject to wear and do not alter the function or design. Worked performed under PMs is an example of these activities. Repaired components are subject to tightness testing before they are returned to service. [WAC 173-303-640(7)(f) and 51 Federal Register 25456].

6. An equivalent or superior product for any equipment or materials specified in the Permit is not considered modification of the Permit. A substitution is not considered equivalent unless it is at least as effective as the original equipment or materials in protecting human health and the environment. Permit Condition II.R.2 requires determinations (i.e., documentation, explanation, and date) of equivalent materials to be placed in the Operating Record within 7 days after the change is put into effect.

   An IQRPE Needs Determination is required for equivalent equipment/materials.

Table 2. Typical Activities

Table 1 contains a summary of TOC activities that have been evaluated against the requirements and/or established agreements with the regulators. For each activity in Table 1 the basis for IQRPE certification is identified. Note that Engineering and ENV may consult in completing steps in Section 4.1 and arrive at a different conclusion from this table.

Description	IQRPE Certification Required	Basis
Preventative Maintenance Activities (PMs)	No	These are not repairs on new components.
Replacement/refurbishment of pit coating	Yes	Beyond the scope of minor repairs.
Jumper reconfiguration in the valve pits	No	This activity is not considered to be a change in design.
Jumper "Replacement-in-Kind" as a result of routine preventive maintenance	No	Minor repairs are not subject to IQRPE requirements (WAC 173-303-640(7)(f))
Jumper "Replacement-in-Kind" as a result of a leak or other failure	Yes	WAC 173-303-640(7)(e)(iii) requires repair of a component that leaks from the primary tank system into secondary containment. WAC 173-303-640(7)(f) requires certification of such repairs if considered major.
New jumper design (e.g., 242-A Evaporator Feed Jumper)	Yes	WAC 173-303-640(3) requires certification of the design and installation of new tank systems or components.
Valve funnel repair	No	An external valve part is not considered to be a tank system component.
New temporary waste transfer line installations (e.g., hose-in-hose or hose-in-sleeve)	Yes	WAC 173-303-640(3) requires certification of the design and installation of new tank systems or components.
Temporary waste transfer line connections/disconnections	No	This activity would be covered by either an existing IQRPE design assessment or previous IQRPE evaluations.
Relocation of transfer system components (e.g., temporary waste transfer line)	Yes	The IQRPE must verify that the components have not been damaged during the relocation and are still fit for use.
New diluent and flush systems (e.g., AY/AZ Infrastructure Upgrades – pit structure/lining, jumpers, isolation valves, etc.)	Yes	WAC 173-303-640(3) requires certification of the design and installation of new tank systems or components.
New transfer pump assemblies (e.g., AN061 hydraulic supernatant pump and support components)	Yes	WAC 173-303-640(3) requires certification of the design and installation of new tank systems or components.
New waste retrieval systems (e.g., C-107 MARS transfer/slurry pump installation)	Yes	WAC 173-303-640(3) requires certification of the design and installation of new tank systems or components.

Table A-1. Regulatory Integrity Assessment Requirements for Existing and New, Treatment, Storage and Disposal Unit/Components, under both Interim and Final Status.

TSD Unit/Component	Type of Assessment(s) Required	Certification Statement(s) Required
Existing, Interim-Status TSD Unit/Components		
• DST system • 219-S Tank System	Assessment per 40 CFR 265.191 and WAC 173-303-640(2) • Integrity Assessment Reports for Existing, Interim Status TSD Unit/components • Integrity Assessment Reports for Existing, Interim Status TSD Unit/components	Certification Statement in 40 CFR 270.11(d) **(Section 4.5)** and Certification Statement in WAC 173-303-810(13)(a) **(Section 4.6)**
• SST system	Assessment per WAC 173-303-640(2) as identified in TPA milestones • Integrity Assessment Reports for Existing, Interim Status TSD Unit/components Initial assessment was completed to meet TPA milestone M-23-24, June 27, 2002 (RPP-10435) Future compliance for the SST system is determined by TPA Milestone M-45-91I which requires certification of structural integrity with WAC 173-303-640(2), and potentially future integrity assessment activities.	Certification Statement in WAC 173-303-810(13)(a) **(Section 4.6)**
• SST retrieval system	Assessment per 40 CFR 265.191 • Integrity Assessment Reports for Existing, Interim Status TSD Unit/components An SST retrieval system is not subject to the WAC 173-303-640 requirements to develop a schedule to conduct integrity assessments over the life of the tank.	Certification Statement in 40 CFR 270.11(d) **(Section 4.5)**

ATTACHMENT A - IQRPE ASSESSMENT REPORT TYPES (cont.)

The following table provides the type of IQRPE that is applicable to each TSD unit and component. A description for the assessment types are also provided.

Table A-1. Regulatory Integrity Assessment Requirements for Existing and New, Treatment, Storage and Disposal Unit/Components, under both Interim and Final Status.

New, Interim Status TSD Unit/Components		
• DST system • 219-S Tank System	Design Assessment per 40 CFR 265.192 and WAC 173-303-640(3) • Design Assessment Reports for New, Interim Status TSD Unit/Components • Design Assessment Reports for New, Final Status TSD Unit/Components Construction/Installation Assessment per 40 *CFR 265.192 + WAC 173-303-640(3)* • Construction/Installation Assessment Reports for New, Interim Status TSD Unit/components • Construction/Installation Assessment Reports for New, Final Status TSD Unit/components	Certification Statement in 40 CFR 270.11(d) (**Section 4.5**) and Certification Statement in WAC 173-303-810(13)(a) **(Section 4.6)**
• SST system	Construction/Installation Assessment WAC 173-303-640(2) as identified in TPA milestones • Design Assessment Reports for New, Final Status TSD Unit/Components Future compliance for the SST system is determined by TPA Milestone M-45-91I which requires certification of structural integrity with WAC 173-303-640(2), and potentially future integrity assessment activities.	Certification Statement in WAC 173-303-810(13)(a) **(Section 4.6)**
• SST retrieval system	Design Assessment per 40 CFR 265.192 • Design Assessment Reports for New, Interim Status TSD Unit/Components Construction/Installation Assessment per 40 CFR 265.192 • Construction/Installation Assessment Reports for New, Interim Status TSD Unit/components An SST retrieval system is not subject to the WAC 173-303-640 requirements to develop a schedule to conduct integrity assessments over the life of the tank.	Certification Statement in 40 CFR 270.11(d) (**Section 4.5**)

ATTACHMENT A - IQRPE ASSESSMENT REPORT TYPES (cont.)

Table A-1. Regulatory Integrity Assessment Requirements for Existing and New, Treatment, Storage and Disposal Unit/Components, under both Interim and Final Status.

Existing, Final Status TSD Unit/Components		
• 242-A Evaporator • LERF-ETF	Assessment per WAC 173-303-640(2) • Integrity Assessment Reports for Existing, Interim Status TSD Unit/components	Certification Statement in WAC 173-303-810(13)(a) (**Section 4.6**)
New, Final Status TSD Unit/Components		
• 242-A Evaporator • LERF-ETF	Design Assessment per WAC 173-303-640(3) • Design Assessment Reports for New, Final Status TSD Unit/Components Construction/Installation Assessment per WAC 173-303-640(3) • Construction/Installation Assessment Reports for New, Final Status TSD Unit/components	Certification Statement in WAC 173-303-810(13)(a) (**Section 4.6**)

Design Assessment Reports for New, Interim Status TSD Unit/Components

Owners or operators of new, interim status TSD unit/components must ensure that the foundation, structural support, seams, connections, and pressure controls (if applicable) are adequately designed and that the TSD unit/components has sufficient structural strength, compatibility with the waste(s) to be stored or treated, and corrosion protection so that it will not collapse, rupture, or fail. A written design assessment report for new, interim status TSD unit/components must be reviewed and certified by a IQRPE in accordance with 40 CFR 265.192(a). The design assessment report should include a review of the elements identified in 40 CFR 265.192(a)

Design Assessment Reports for New, Final Status TSD Unit/Components

Owners or operators of new, final status TSD unit/components must ensure that the foundation, structural support, seams, connections, and pressure controls (if applicable) are adequately designed and that the tank system has sufficient structural strength, compatibility with the waste(s) to be stored or treated, and corrosion protection so that it will not collapse, rupture, or fail. A written design assessment report for new, final status TSD unit/components must be reviewed and certified by an IQRPE in accordance with WAC 173-303-640(3)(a). The design assessment report should include a review of the elements identified in WAC 173-303-640(3)(a).

Additionally, a schedule must be developed for conducting future integrity assessments once the component is placed into service to ensure that the tank system retains its structural integrity. The schedule must be based on the results of past integrity assessments, age, materials of construction, characteristics of the waste, and any other relevant factors (WAC 173-303-640(3)(b)).

Construction/Installation Assessment Reports for New, Interim Status TSD Unit/components

Adequate design will not necessarily ensure proper installation. For this reason, installation regulations in 40 CFR 265.192(b) require an independent qualified installation inspector or an IQRPE to inspect the new TSD unit/components before it is covered, enclosed, or placed in use. The IQRPE or independent qualified installation inspector needs to be present at the work site to observe and verify conformance to requirements for selected field activities. These activities, at the discretion of the IQRPE or independent qualified installation inspector should include a review of the elements identified in 40 CFR 265.192(a).

Construction/Installation Assessment Reports for New, Final Status TSD Unit/components
Adequate design will not necessarily ensure proper installation. For this reason, installation regulations in WAC 173-303-640(3)(c) require an independent qualified installation inspector or an IQRPE to inspect the new TSD unit/components before it is covered, enclosed, or placed in use.

The IQRPE or independent qualified installation inspector needs to be present at the work site to observe and verify conformance to requirements for selected field activities. These activities, at the discretion of the IQRPE or independent qualified installation inspector, should include a review of the elements identified in WAC 173-303-640(3)(c).

Integrity Assessment Reports for Existing, Interim Status TSD Unit/components

Integrity assessments must determine that existing TSD unit/components are adequately designed and have sufficient structural strength and compatibility with the waste to be stored or treated, to ensure that it will not collapse, rupture, or fail. For each existing TSD unit/component, it must be determined that the system is not leaking or is unfit for use [40 CFR 265.191(a)]. A written assessment reviewed and certified by an IQRPE must be obtained and maintained as a record. The integrity assessment report should include a review of the elements identified in 40 CFR 265.191(b).

Integrity Assessment Reports for Existing, Final Status TSD Unit/components

Integrity assessments must determine that existing TSD unit/components are adequately designed and have sufficient structural strength and compatibility with the waste to be stored or treated, to ensure that it will not collapse, rupture, or fail. For each existing TSD units, it must be determined that the system is not leaking or is unfit for use (WAC 173-303-640(2)(a)). A written assessment, reviewed and certified by the IQRPE, must be obtained and maintained as a record. The assessment report should include a review of the elements in WAC 173-303-640(2)(c).

A schedule must be developed for conducting future integrity assessments once the component is placed into service to ensure that the tank system retains its structural integrity. The schedule must be based on the results of past integrity assessments, age, materials of construction, characteristics of the waste, and any other relevant factors (WAC 173-303-640(2)(e)).

ATTACHMENT A - IQRPE ASSESSMENT REPORT TYPES (cont.)

Design Assessment Reports for New, Final Status TSD Unit/Components

Owners or operators of new, final status TSD unit/components must ensure that the foundation, structural support, seams, connections, and pressure controls (if applicable) are adequately designed and that the tank system has sufficient structural strength, compatibility with the waste(s) to be stored or treated, and corrosion protection so that it will not collapse, rupture, or fail. A written design assessment report for new, final status TSD unit/components must be reviewed and certified by an IQRPE in accordance with WAC 173-303-640(3)(a). The design assessment report should include a review of the elements identified in WAC 173-303-640(3)(a).

Additionally, a schedule must be developed for conducting future integrity assessments once the component is placed into service to ensure that the tank system retains its structural integrity. The schedule must be based on the results of past integrity assessments, age, materials of construction, characteristics of the waste, and any other relevant factors (WAC 173-303-640(3)(b)).

Construction/Installation Assessment Reports for New, Interim Status TSD Unit/components

Adequate design will not necessarily ensure proper installation. For this reason, installation regulations in 40 CFR 265.192(b) require an independent qualified installation inspector or an IQRPE to inspect the new TSD unit/components before it is covered, enclosed, or placed in use. The IQRPE or independent qualified installation inspector needs to be present at the work site to observe and verify conformance to requirements for selected field activities. These activities, at the discretion of the IQRPE or independent qualified installation inspector should include a review of the elements identified in 40 CFR 265.192(a).

Construction/Installation Assessment Reports for New, Final Status TSD Unit/components

Adequate design will not necessarily ensure proper installation. For this reason, installation regulations in WAC 173-303-640(3)(c) require an independent qualified installation inspector or an IQRPE to inspect the new TSD unit/components before it is covered, enclosed, or placed in use.

The IQRPE or independent qualified installation inspector needs to be present at the work site to observe and verify conformance to requirements for selected field activities. These activities, at the discretion of the IQRPE or independent qualified installation inspector, should include a review of the elements identified in WAC 173-303-640(3)(c).

Integrity Assessment Reports for Existing, Interim Status TSD Unit/components

Integrity assessments must determine that existing TSD unit/components are adequately designed and have sufficient structural strength and compatibility with the waste to be stored or treated, to ensure that it will not collapse, rupture, or fail. For each existing TSD unit/component, it must be determined that the system is not leaking or is unfit for use [40 CFR 265.191(a)]. A written assessment reviewed and certified by an IQRPE must be obtained and maintained as a record. The integrity assessment report should include a review of the elements identified in 40 CFR 265.191(b).

ATTACHMENT A - IQRPE ASSESSMENT REPORT TYPES (cont.)

Integrity Assessment Reports for Existing, Final Status TSD Unit/components

Integrity assessments must determine that existing TSD unit/components are adequately designed and have sufficient structural strength and compatibility with the waste to be stored or treated, to ensure that it will not collapse, rupture, or fail. For each existing TSD units, it must be determined that the system is not leaking or is unfit for use (WAC 173-303-640(2)(a)). A written assessment, reviewed and certified by the IQRPE, must be obtained and maintained as a record. The assessment report should include a review of the elements in WAC 173-303-640(2)(c).

Additionally, a schedule must be developed for conducting future integrity assessments once the component is placed into service to ensure that the tank system retains its structural integrity. The schedule must be based on the results of past integrity assessments, age, materials of construction, characteristics of the waste, and any other relevant factors (WAC 173-303-640(2)(e)).