EXHIBIT C
Pasco Sanitary Landfill NPL Site
Scope of Work and Schedule

This Scope of Work (SOW) implements the Cleanup Action Plan (CAP) (Exhibit B) to address soil and groundwater contamination at the Pasco Sanitary Landfill NPL Site (Site) in Franklin County, Washington, generally described in Exhibit A. The potentially liable persons (PLPs) will implement this SOW to perform Site cleanup and shall furnish all personnel, materials, and services necessary for, or incidental to, performing the cleanup action selected for the Site. All work completed for this SOW must meet the requirements of the Model Toxics Control Act (MTCA) Cleanup Regulation, Chapter 173-340 Washington Administrative Code (WAC).

Ongoing interim action (IA) operations, maintenance, monitoring, and reporting required under Agreed Order No. 9240 and Enforcement Order No. 9406 shall continue until the Washington State Department of Ecology (Ecology) determines one of the following occurs:

1) All or a portion of the ongoing operations, maintenance, monitoring, and reporting is no longer necessary.
2) All or a portion of the ongoing operations, maintenance, monitoring, and reporting is effectively replaced by requirements in this SOW as referenced in Section VI (Work to be Performed) of the Consent Decree (CD).

Ecology will notify the PLPs when the requirements of Agreed Order No. 9240 and Enforcement Order No. 9406 are fully satisfied.

This SOW is organized by the following core tasks, each of which has several sub-tasks:

The actions to be accomplished under this SOW are described in CAP Section 7 (Exhibit B) with the following clarifications. More detailed descriptions will be documented in the Zone A Removal Action Engineering Design Report (EDR) and the Post-Excavation EDR.

Task A. Cleanup Action at Industrial Waste Area Zone A

The required action at Zone A, to be further developed in the Zone A Removal Action EDR (Task A.1), provides for the excavation and sorting of all material, unless specifically excluded, to the agreed-upon

vertical (base of waste) and the expected lateral limits of the industrial waste, shown on Figure 1. Drums, drummed waste, pooled free liquids, and readily separable (by mechanical means) potentially combustible material will be managed for offsite treatment and/or disposal. Drums and drummed waste include any sludge/solid material found immediately adjacent to a drum that clearly originated from the drum based on visual observations. Remaining materials may remain within the Zone A Area of Contamination (AOC) to the extent residual contamination will not impact groundwater and/or will be amenable for in-situ treatment to levels that will protect groundwater.

In the event Ecology and the PLPs jointly determine, for any reason, that material should not remain or be placed back into Zone A, that material shall be transported offsite to an appropriate waste disposal facility (or facilities) permitted to accept the waste. All waste leaving the site will be characterized to meet requirements for waste packaging, transportation, treatment, and/or disposal at a facility authorized to manage the waste. As described in the CAP, remediation levels for in-situ treatment will be developed in the Post-Excavation EDR (Task A.5) based on the criterion of ensuring permanent attainment of groundwater cleanup levels (CULs) at the point of compliance. The final remedy must satisfy all other applicable remedial action objectives specified for Zone A as described in the CAP. Following completion of any in-situ treatment, a low-permeability geomembrane cover system (final cover system) will be installed to control precipitation infiltration and limit direct contact with residual contaminants.

The final cleanup action for Zone A will consist of the following actions, decisions, and activities:

1. Preparing the site for the Zone A vegetation/soil cover excavation. This includes, but is not limited to, engineering surveys, access road construction, fencing modifications, protecting/modifying above-ground and below-ground utilities, installing new and/or using existing perimeter soil vapor extraction (SVE) wells (see Task A.1, Subtask B below), modifying SVE conveyance piping, installing air quality engineering controls as needed, and decommissioning monitoring wells and/or other Zone A monitoring stations, etc.
2. The soil cover material located above the existing geomembrane cover system and within the lateral limit shown on Figure 1 will be removed and stockpiled outside of Zone A for reuse as cover or fill material within Zone A.
3. The engineered soil fill located below the existing geomembrane and above the Visqueen membrane and/or geogrid, and within the lateral limit shown on Figure 1, will be removed and stockpiled outside of Zone A for reuse as backfill below the final cover system, following Zone A waste removal. If the Visqueen and/or geogrid membrane is not encountered, an agreed-upon lower elevation limit will be established in the Zone A Removal Action EDR for this specific fill material interval.
4. All drums (and other containers), drummed waste, pooled free liquids, and/or readily-separable (by mechanical means), potentially combustible material will be excavated from within the lateral limit shown on Figure 1 and removed. Where drums (and other containers), drummed waste, or pooled free liquids are encountered, the excavation will proceed laterally to remove these items. Sludge/solid material found immediately adjacent to a drum that clearly originated from the drum based on visual observations will also be removed. Alternatively, similar material that is possibly sourced from a drum but not visually definitive shall be verified by Hazard Categorization (HazCat) analysis. The excavation will proceed to the base of waste as determined in the field. The actual depth of waste is expected to vary. Any pooled free liquids found at the excavation base will be removed by pumping and/or absorbents. Underlying soil will remain in place and be

treated with in-situ thermal and SVE technologies. If in-situ treatment, along with follow-on installation of a low-permeability geomembrane cover system cannot adequately achieve remediation levels established for soil, additional treatment technologies as specified in a separate EDR shall be employed as a contingent action.

To provide access to complete the excavation, Zone A contaminated media and mixed debris handled during the excavation may be temporarily staged next to Zone A within the allowable Zone A AOC footprint to be defined in the Zone A Removal Action EDR. After the excavation is complete, any temporarily staged contaminated media and mixed debris will be consolidated in the Zone A excavation or shipped offsite to a facility permitted to accept these materials. Excavated materials below the Visqueen/engineered soil fill will be handled as follows:

A. All liquids, sludges, and drummed waste, including sludge/solid material found immediately adjacent to a drum that clearly originated from the drum based on visual observations, will be removed from the excavation, sampled for compatibility and HazCat analysis, and packaged for safe onsite management until they can be transported to an appropriately permitted offsite facility. Alternatively, similar material that is possibly sourced from a drum but not visually definitive shall be verified by HazCat analysis.

B. Drums will be managed individually by transfer to overpacks at the point of excavation or to oversized boxes if the drums are too damaged or corroded to be overpacked, and then transported to an onsite container management area where they will undergo additional HazCat analysis. The container management area will be on a covered asphalt or concrete pad designed to meet WAC 173-303 spill containment requirements. The contractor will determine the location, in consultation with Ecology and the PLPs. Siting and construction requirements for a container management area will be detailed in the Zone A Removal Action EDR (Task A.1).

C. Existing site characterization data, investigation-derived waste (IDW) characterization data, and historical waste inventories will be used to develop initial waste profiles, which will be further developed and refined (as needed) during waste removal and characterization.

D. Incompatible materials, such as corrosive or reactive solids, radioactive material (excluding naturally occurring radioactive materials), and other materials such as laboratory packs, that are identified visually or through HazCat analysis will be appropriately segregated, characterized, and packaged for safe onsite management until they can be transported to an appropriate offsite facility.

E. Solids/sludge in drums (other than castings residue sands) will be transported offsite in overpacks or bulk containers (if compatible) for management and disposal at an appropriate facility. Ignitable, corrosive, and/or reactive (ICR) wastes will be managed separately for offsite disposal. Such solid/sludge drummed waste materials will be placed into overpacks (micro-encapsulation) or bulked and macro-encapsulated prior to shipment and disposal at an offsite Resource Conservation and Recovery Act (RCRA) Subtitle C facility or at an appropriately permitted facility.

F. Non-ICR wastes that are characteristically hazardous and/or dangerous, and contain contaminants at concentrations less than the pre-treatment threshold of MTCA Method C CULs or 10 times the Land Disposal Restriction value (whichever is greater)

can be disposed at an offsite RCRA Subtitle C facility without pre-treatment (for example, encapsulation) per acceptance by the offsite facility and State requirements. Special wastes (materials determined non-hazardous based on RCRA characteristics but are dangerous waste according to Washington regulations) may be disposed at an out-of-state Subtitle D landfill. This potentially includes material, such as casting residue sands, which may be transported offsite for disposal, or, at the PLPs' discretion and with Ecology's approval, may be consolidated and remain within the Zone A excavation under the AOC policy.

G. Drum carcasses, either RCRA Empty when found or RCRA Empty following content removal and triple rinsing, will be transported offsite for recycling and/or disposal at an offsite Subtitle D facility.

H. Drum carcasses not RCRA Empty and/or with waste material fused to the drum that cannot or will not be removed will be properly contained and transported offsite to a RCRA Subtitle C facility or another appropriately permitted facility.

I. Large pieces of readily-separable, potentially combustible material will be mechanically separated from other solid wastes and transported offsite for management and disposal at an appropriate facility. Larger-sized mixed debris deemed in the field to be potentially combustible material, such as (but not limited to) tires, tree stumps, scrap wood, cardboard/paper, or plastic will be mechanically removed, separated from the remaining mixed debris, and sorted/segregated. Incidental bits and scraps of potentially combustible materials not readily separable by mechanical means will be left in the matrix as found. Separated potentially combustible material will be characterized to determine disposal requirements in a manner consistent with that used for offsite waste disposal.

5. Contaminated media and mixed debris (excluding drums, drummed waste as defined above, free liquids, and/or separated potentially combustible material to be removed from the site) that is handled during the excavation will be placed back in Zone A for treatment in accordance with the Zone A Removal Action EDR and/or immobilized and contained by the Zone A engineered cap. At the PLPs' discretion, based on field observations and with Ecology's approval, casting residue sands not impacted by or blended with other Zone A hazardous substances may be placed back into the excavation. In the event Ecology and the PLPs jointly determine that any material should not be placed back into Zone A, that material shall be transported offsite to an appropriate facility.

6. Zone A will be backfilled with temporarily stockpiled material (cover soil and/or engineered fill described in items 1 and 2 above) or with clean, granular fill material from an acceptable onsite or offsite borrow source.

7. Following completion of waste removal, waste segregation, and excavation backfilling, the material within the lateral limit of Zone A, including the underlying native soil down to the water table, will be characterized per an Ecology-approved Sampling and Analysis Plan (SAP) to inform the design and implementation of subsequent in-situ treatment.

8. In-situ treatment technologies will be implemented for the contaminated media and mixed debris remaining within the footprint of Zone A, guided in part by the post-excavation characterization sampling results. The treatment performance standards will be based on achieving and maintaining remediation levels that are protective of groundwater at the point of compliance and will be developed in the Post-Excavation EDR (Task A.5).

The technologies selected will be based on the physical and chemical characteristics and material/soil depth. The in-situ treatment approach is expected to involve a combination of technologies (for example, in-situ thermal treatment, SVE, and a temporary treatment area surface membrane). These technologies must effectively treat a broad spectrum of Zone A contaminants with concentrations exceeding remediation levels. Post-excavation characterization sampling results will serve as the primary basis for determining residual contaminant concentrations beneath Zone A. A combined remedial technology approach should expedite remediation level attainment for the target contaminants. The Post-Excavation EDR shall include a detailed assessment of the likely composition of contaminant vapors/gases generated by an in-situ treatment technology and discuss appropriate technologies to treat these vapors/gases to protect human health and the environment. Stack emissions from any treatment unit must satisfy air quality permit requirements.

9. If in-situ thermal treatment with vapor/gas recovery does not achieve the remediation levels identified in the Post-Excavation EDR, the PLPs will develop and implement a contingent cleanup approach, approved by Ecology, to attain the remediation levels.
10. Following backfilling, Zone A will be covered with a final low-permeability cover system that includes a geomembrane and prevents direct contact and precipitation infiltration.

Compliance monitoring will be conducted to assess groundwater quality conditions, including CUL attainment at the point of compliance in accordance with Task G. Routine cover system inspection and maintenance will be conducted in accordance with the Operations and Maintenance Plan developed with the Post-Excavation EDR (Task A.5). Institutional controls, including access restrictions with fencing and warning signs, and maintenance of property deed restrictions that prohibit unauthorized construction, limit excavation, and restrict groundwater use will be implemented as described in the Post-Excavation EDR and documented in the Site-Wide Institutional Control Report (Task F).

The scope for Zone A cleanup includes the following tasks.

Task A.1.

Preparing a Zone A Removal Action EDR, which will include three major subtasks:

- **Subtask A**: Drum Waste/Mixed Debris/Soil Excavation, Waste Segregation, and Excavation Area Backfilling
- **Subtask B**: Modified SVE (during excavation) and Regenerative Thermal Oxidizer (RTO) System Operations
- **Subtask C**: Waste Characterization, Handling, Staging, and Disposal

The PLPs will prepare and submit a draft Zone A Removal Action EDR that addresses the planning, execution, and integration of each subtask. Following incorporation of Ecology's comments, the EDR will be finalized. These activities are generally described in the CAP Section 7 (Exhibit B). The EDR shall meet WAC 173-340-400 requirements and provide engineering concepts and design criteria for components of the Zone A cleanup.

Zone A Removal Action EDR Subtask A: Drum Waste/Mixed Debris/Soil Excavation and Backfilling

This Zone A Removal Action EDR subtask will include detailed engineering design, plans, calculations, assumptions, and specifications to safely and efficiently excavate and manage

drums, mixed debris, and contaminated media from Zone A above native soils. The documentation under this subtask shall address all elements of the excavation, sorting, and removal processes. This includes, but is not limited to, a description of each step, process, and stage in the drum/mixed debris/waste sorting and removal process:

A. Documenting baseline conditions, including a detailed site plan showing existing topography, existing IA remedial components, utilities, monitoring infrastructure, and the various operational areas (AOC, drum/debris staging and handling areas) defined and designated for this removal action.

B. Preliminary mobilization and site preparation activities.

C. Decommissioning procedures and sequencing for groundwater monitoring wells, SVE wells, gas probes, temperature thermocouples, and other monitoring infrastructure.

D. Installing one new groundwater monitoring well near the northeast corner of Zone A to better assess groundwater quality hydraulically upgradient of Zone A. The well location will be coordinated with Ecology before installation, and siting will include field consideration of potential MSW within this area.

E. Excavation area equipment, access/egress routes, loading and hauling procedures, and equipment staging.

F. Excavation, segregation, and onsite management (temporary staging and stockpiling) of Zone A vegetative cover and drainage layer soils.

G. Systematic removal of the existing geomembrane and geosynthetic clay liner.

H. Excavation, segregation, and onsite management (temporary staging and stockpiling) of granular fill material lying between the existing geomembrane and the underlying Visqueen layer/engineered soil fill above the drums.

I. Engineering analysis of a variety of control options and contingencies for air quality to ensure protection of workers and the surrounding community. The analysis will evaluate work approach and duration, equipment use, extent of open excavation, suppressants, temporary cover, and temporary structure use.

J. Temporary excavation area shoring or side trench stabilization measures.

K. Temperature monitoring and abatement (if required) within localized excavation area(s).

L. Excavation and sorting of drums, mixed debris, and waste material beneath the drums and/or mixed debris.

M. Drum/mixed debris/waste handling and segregation protocols as defined in the Performance Monitoring Plan (see Task A.2.C).

N. Backfill selection, temporary stockpiling (as necessary), placement, and compaction requirements. This may include provisions to isolate or separate some or all of the BT-2 Burn Trench wastes from in-situ thermal treatment impacts if supported by waste characterization activities described in the Zone A Removal Action EDR Subtask C, and implemented in association with tasks A.3.J, A.3.M, and A.3.O.

O. Temporary interim surface grading.

P. Characterization sampling following completion of drum/mixed debris/waste sorting and removal in accordance with the SAP.

Q. Applying additional soil material over adjacent MSW disposal areas (debris waste disposal area, Balefill Area, and/or Inert Waste Area) to satisfy minimum cover system requirements if Zone A excavation work impacts these covers.

R. Final post-construction surface grading, including temporary treatment area soil cover (if required).

S. Equipment decommissioning and demobilization.

The drum excavation and handling procedures in this Zone A Removal Action EDR subtask shall reflect well-established industry/regulatory guidance and protocols for safe and efficient management of potentially corrosive, reactive, toxic, and/or flammable hazardous substances (for example, see U.S. Environmental Protection Agency [EPA] document EPA/600/2-86/013 *Drum Handling Practices at Hazardous Waste Sites*). This Zone A Removal Action EDR subtask also will include:

- Identifying permits and the substantive requirements for exempted permits necessary for construction and/or operation of remedial systems.
- Measures to manage short-term hazards associated with cleanup action construction, including dust and volatile organic compound (VOC)/odor control.
- Stormwater runoff management plan and incidental spill response plan.
- Onsite traffic control and vehicle decontamination.
- A summary of required quality control testing (i.e., Construction Quality Assurance).
- Additional information to address applicable or relevant and appropriate state, federal, and local requirements and the substantive requirements of any applicable permits.
- A schedule of work to be performed.

The removal actions in this Zone A Removal Action EDR subtask represent the first phase of achieving final cleanup at Zone A. Additional cleanup phases will include in-situ treatment of residual contaminants in soil and mixed debris that remain or are backfilled into Zone A as well as contaminated native soils where present down to groundwater. A follow-on phase of performance and compliance monitoring is necessary to demonstrate that the overall cleanup actions are fully protective of human health and the environment — in particular, long-term groundwater protection. The in-situ treatment of residual Zone A contaminants is discussed in Task A.5.

Zone A Removal Action EDR Subtask B: Modified SVE and RTO System Operations

This Zone A Removal Action EDR subtask will include detailed engineering design, plans, calculations, assumptions, and specifications to revise, retrofit, reconfigure, modify, and/or optimize the existing SVE system. The reconfigured/retrofitted system shall be designed and operated to ensure the ongoing capture and treatment of vadose zone VOC (and limited semi-volatile organic compound [SVOC]) vapors throughout all phases of the Zone A drum/mixed debris/waste sorting and removal process. SVE well network reconfiguration will be necessary to support the Zone A removal action.

Ongoing SVE operations also will be necessary to help reduce the potential for offgassing from the open excavation area and to provide ongoing groundwater protection during construction. These actions will help protect human health and the environment and will minimize the potential for fugitive emissions of contaminant vapors and gases during the removal actions. The Zone A Removal Action EDR will discuss startup testing and optimization measures that will be developed to support the associated removal actions. Routine monitoring requirements to support the ongoing assessment of estimated RTO unit emissions also will be specified. The documentation will address when and how these SVE system changes may affect the permitted RTO operations, and will describe any associated RTO treatment system modifications, if necessary. A schedule of the work to be performed also will be included.

Zone A Removal Action EDR Subtask C: Waste Characterization, Handling, Staging, and Disposal

This Zone A Removal Action EDR subtask will include detailed engineering design, plans, calculations, assumptions, and specifications to construct a temporary waste handling and staging area that complies with WAC 173-303 requirements. This subtask will include a Waste Handling, Characterization, and Disposal Plan. This plan will detail the characterization and profiling of all wastes excavated and removed permanently from the Zone A excavation, including initial waste profiles developed from historical characterization and analysis conducted in support of IDW management; onsite handling, stockpiling, and temporary staging of wastes and debris; process for modifying waste profile codes during the course of the removal work; and describe the general process of offsite transport and disposal. This includes specifying transport routes and any intermediate loading/offloading facilities used to support the removal action work. The plan will describe expected waste characterization (onsite and offsite) and analysis procedures to properly designate the waste for potential batching, consolidation, and compatibility, and the process and responsibilities for waste manifesting. This Zone A Removal Action EDR also will include a discussion of waste acceptability considerations for each offsite disposal facility used for this cleanup. This includes the decision criteria for determining the final disposition of various wastes. The Zone A Removal Action EDR waste acceptability components will be prepared with the designated waste management contractors and disposal facilities used for this cleanup. The Zone A Removal Action EDR also will address air monitoring requirements within the drum staging and handling area(s).

Task A.2.

Preparing a Zone A Removal Action Compliance Monitoring Plan (CMP). The PLPs shall submit a draft and final CMP for the removal action work at Zone A, to be comprised of the following sub-plans:

A. Health and Safety Plan (HASP)

The HASP shall meet WAC 173-340-810 requirements and include emergency information, waste characteristics, protection levels, hazard evaluation, procedures for protecting workers from excavation and drum removal hazards, operating construction equipment, and safety procedures required in the event of systems failure, and any other applicable Site information. The HASP shall identify the cleanup action performance requirements to attain

compliance with that plan. The HASP shall include a job hazard and job safety analysis, and address emergency response actions and procedures. The HASP also will address site security, communications, and access control. Air monitoring to ensure the health and safety of onsite workers, visitors, and support personnel also will be specified for all aspects of the work: excavation, drum and debris handling and staging, material segregation, and waste/debris loading operations. The air monitoring will satisfy, in part, WAC 173-340-410 protection monitoring requirements.

B. Contingency Plan

The Contingency Plan shall address issues that may affect the local population or draw upon local emergency response resources if an accident or emergency occurs at the Site. The Contingency Plan shall include a Site Perimeter Air Monitoring Plan. The Site Perimeter Air Monitoring Plan will include details for continuous air monitoring within Zone A and at the Site perimeter, and will present action levels and conditions that warrant Contingency Plan implementation. The Contingency Plan will include the notification procedures, including the chain of communication, in the event of an emergency, a plan and timeframe for meeting with the local community and agencies involved in the cleanup and local responders, and first aid and medical information, including locations and contact information for local medical facilities, fire and rescue, police, hazardous material response teams, and local or National Emergency Response Team and other municipal or local/county government agencies (for example, Benton-Franklin Health District). Communication protocols and responsibilities for addressing media interactions or inquiries also will be included.

C. Performance Monitoring Plan

A Performance Monitoring Plan will be prepared to satisfy WAC 173-340-410(1)(b) requirements. For the Zone A removal action, the Performance Monitoring Plan will specify the metrics used to verify that the excavation activity goals and objectives have been met. This includes documenting the excavation and any additional materials that are removed to achieve the overall remedial goals of the removal action work. The plan will describe the measurement and data collection methods used to establish these excavation performance objectives (for example, surveying methods).

The Performance Monitoring Plan will include procedures for sampling and characterizing material that will remain in the Zone A subsurface for future in-situ treatment. This includes air monitoring at and around the active construction area, at the property boundaries, at the Basin Disposal, Inc. (BDI) waste transfer station south of the Site, and potentially other offsite air monitoring stations. The BDI facility was identified during a Tier 2 health impact assessment as being one of the nearest offsite receptors potentially affected by RTO emissions coming from the Site. The Performance Monitoring Plan shall contain a SAP specific to air monitoring.

D. Treatability Testing and Analysis Plan

The PLPs shall perform treatability testing to support the refinement of design criteria and engineering concepts for a full-scale in-situ thermal treatment system. The objectives and components of bench-scale and/or in-field pilot scale testing will be described in a Treatability Testing Plan. The treatability testing results and outcomes will determine the likely treatment effectiveness of the proposed remedial technology. Treatability Testing Plan development will involve close coordination with Ecology personnel to establish appropriate testing goals, evaluation criteria, waste materials or sub-areas to be included for testing, and treatability test scheduling. If the PLPs conclude that bench- and pilot-scale treatability tests are not necessary based on contractor experience, then the PLPs will provide Ecology with a detailed analysis of the technical basis for determining anticipated operational criteria for in-situ treatment that will be necessary to achieve project-specific remediation levels in Task A.5.A.

E. Groundwater Monitoring Plan (GMP)

Zone A remediation activities could cause short-term groundwater quality changes. This GMP will include provisions for assessing potential short-term changes in groundwater quality during active remediation. This may include a modified analytical suite and monitoring frequency to evaluate potential groundwater quality changes during periods of intrusive or disruptive remediation work (excavation and in-situ treatment). Monitoring results will be used to assess overall trends in groundwater quality relative to the remedial action. This GMP will include data quality objectives for these monitoring results. The sampling methods, analytical testing requirements, and quality assurance/quality control (QA/QC) components of Zone-A-specific groundwater monitoring will be consistent with Site-wide groundwater monitoring activities.

F. SAP

A SAP shall be prepared to satisfy WAC 173-340-410 and -820 requirements. The SAP shall include an appropriate quality assurance project plan (QAPP) and verify that all analyses are performed by laboratories accredited by Ecology's Manchester Laboratory. The Zone A removal actions will involve a variety of sampling activities and associated analyses (field and laboratory). This potentially includes sampling and analysis of waste materials, mixed debris, soil, and groundwater. The SAP will include specific sampling procedures, analytical methods, and associated QA/QC requirements to properly guide all these various sampling and monitoring activities.

G. Well and Probe Installation and Decommissioning Plan

The Zone A removal action will require the abandonment of at least two existing monitoring wells (MW-52S and MW-53S). These wells provide critical assessment of groundwater quality conditions beneath Zone A. A decommissioning plan shall be prepared to guide the removal or in-place decommissioning of monitoring wells, SVE wells, gas probes, and thermocouple arrays at Zone A. The decommissioning methods shall satisfy

WAC 173-160 requirements. The plan will discuss IDW management protocols and testing requirements for contaminated materials or liquids generated during the decommissioning process. Any groundwater monitoring well decommissioned to complete the Zone A cleanup work shall be replaced at Ecology's discretion. Ecology anticipates that the replacements for MW-52S and MW-53S will be next to and hydraulically downgradient of Zone A and will not be within the limits of the final Zone A cover system. An additional monitoring well also shall be installed near the northeast corner (hydraulically upgradient) of Zone A. This monitoring well shall be used to assess groundwater quality conditions from the Central Area outside the immediate influence of Zone A. Therefore, after the Zone A remedial action is complete, the monitoring results of this well would be reviewed consistent with the On-Property Central Area cleanup action in Task D below.

These plans will present applicable background information, procedures, methods, contingencies, and implementation schedules. Each plan will comply with WAC 173-340-410 and CD Section VI (Work to be Performed). The SAP and QAPP shall meet WAC 173-340-410 and -820 requirements.

Task A.3.

Executing the Approved Final Zone A Removal Action EDR and Associated CMP. Completing this work will entail parallel and sequential activities, process steps, and decision points including, but not limited to:

A. Ecology approval of the Zone A Removal Action EDR.

B. Finalization of the Air Quality Program permit modifications (if determined to be necessary).

C. Equipment mobilization, setup, and staging.

D. Preliminary site preparation (installing Storm Water Pollution Prevention Plan measures, well decommissioning, access road construction, field office, excavation limits, temporary fencing, site security and access control, vehicle fueling and decontamination areas, temporary materials handling, and staging areas, etc.).

E. Monitoring network installation and verification, including an additional monitoring well located northeast of Zone A.

F. SVE/RTO system modifications.

G. Zone A existing cover removal.

H. Establishing the air monitoring program and installing required air quality engineering controls.

I. Drum/waste excavation, overpacking, testing, segregation, and temporary staging.

J. Mixed debris excavation, segregation, testing, consolidation, and handling.

K. Waste designation, offsite transport, and disposal.

L. Confirming excavation completion.

M. Documenting construction limits and characterizing residual contamination at and below the limits of excavation.

N. Certificates of disposal/return copy of manifests.

O. Excavation backfilling and compaction, possibly including an engineered fill barrier installed to help isolate or separate some or all of the BT-2 Burn Trench wastes from possible in-situ thermal treatment impacts, if supported by waste characterization activities described in the Zone A Removal Action EDR Subtask C.

P. Site grading and covering (geomembrane or alternative low permeability cover) to prepare for in-situ thermal treatment system installation.

Q. Set-up and completion of bench-scale and/or pilot-scale in-situ thermal treatability testing if required by contractor.

Task A.3.

Preparing a Zone A Excavation, Removal, and Offsite Disposal Construction Completion Technical Memorandum. This memorandum will summarize the Zone A drum waste/mixed debris/waste sorting and removal actions, including a description of the overall work approaches, drum waste/mixed debris/waste removal and segregation methods, waste handling, waste transport, and offsite waste disposal:

A. Site mobilization, setup, and pre-construction assessment activities.

B. Overview of major construction phases:

   i. Cover system removal

   ii. Drum/waste/mixed debris excavation

   iii. Material segregation, characterization, handling and offsite disposal

   iv. Excavation backfilling and regrading

C. Description of SVE and RTO system modifications.

D. Waste materials encountered, quantities, types, and onsite waste management protocols.

E. Waste profiling, waste characterization, waste designation, and applied waste codes.

F. Site health and safety performance, engineering controls, and response actions.

G. Air monitoring results.

H. Waste/debris handling, temporary staging, loading, and offsite transport including waste packaging.

I. Offsite waste disposal facilities, treatment methods and permit documentation, disposal tickets, and waste manifest documentation.

J. Post-removal confirmation sampling results.

T. Results from bench-scale and/or pilot scale in-situ thermal treatability testing.

A comprehensive Zone A Cleanup Action Completion Report (CACR) describing the Zone A remediation work (excavation and offsite waste disposal, in-situ treatment, final cover installation) will be prepared upon completion of all phases described in this SOW (see Task A.8).

Task A.4.

Preparing a Post-Excavation EDR. This EDR will describe the treatment of residual contamination in Zone A and the construction of a final cover system. The Post-Excavation EDR will include three subtasks:

- **Subtask A**: In-Situ Treatment of Zone A Subsurface Contamination
- **Subtask B**: Zone A SVE and RTO Vapor Treatment System Modifications or Upgrades to Support In-Situ Thermal Treatment and Vapor Recovery
- **Subtask C**: Zone A Final Post-Treatment Cover System Design and Installation

The PLPs will submit a draft Post-Excavation EDR that addresses the planning, execution, and integration of these subtasks. Following incorporation of Ecology's comments, the EDR will be finalized. These activities are described in CAP Section 7 (Exhibit B). The EDR shall meet WAC 173-340-400 requirements and provide engineering concepts and design criteria. The EDR will identify permits (or substantive requirements for exempted permits) necessary for construction or remedial system operations. If the outcome of bench-scale and/or pilot-scale treatability testing indicates that in-situ thermal treatment cannot achieve the target remedial levels and cleanup goals, the PLPs will submit to Ecology a separate EDR describing an alternative cleanup approach that meets the Zone A remedial action objectives.

Post-Excavation EDR Subtask A: In-Situ Treatment of Zone A Subsurface Contamination

This Post-Excavation EDR subtask will include detailed engineering design, plans, and specifications for treating residual contaminated mixed debris and media within Zone A and contaminated native soil beneath Zone A. The documentation under this subtask shall address all work elements of the in-situ treatment process. This includes, but is not limited to, describing each anticipated step, process, and necessary engineering components to design, install, and operate an in-situ treatment system. Anticipated Subtask A Post-Excavation EDR content will include, but is not limited to:

A. In-situ treatment system engineering concepts, design criteria, and fundamental assumptions about residual contaminant types and distribution to achieve Zone A remediation levels. Remediation levels shall be developed to ensure all contaminants remaining in Zone A are treated to a level that protects groundwater. The in-situ treatment will be designed to avoid a prolonged period of post-treatment SVE operations to address residual VOC and SVOC contamination. The in-situ treatment process will broadly treat all organic compounds, including indicator hazardous substances whose respective groundwater concentrations measured near Zone A are already at or below cleanup levels. The in-situ treatment system(s) should be operated and optimized to significantly reduce the overall VOC mass, while also providing a substantive and demonstrable mass reduction for other categories of Zone A organic constituents.

B. Developing remediation levels to ensure permanent groundwater protection at the point of compliance.

C. Summary of in-situ thermal treatment treatability study results, and expected contaminant destruction and removal efficiency goals.

D. In-situ treatment system design, layout, calculations, assumptions, and specifications.

E. In-situ treatment area SVE or vapor-recovery system design, layout, and specifications.

F. RTO system modifications and/or upgrades to support in-situ treatment.

G. Temporary treatment area soil cover and geomembrane (if required).

H. Site-wide ambient air monitoring during active in-situ treatment operations.

I. Performance Monitoring Plan to verify in-situ treatment system performance goals and objectives.

J. Final post-treatment site grades and cross sections.

K. Post-treatment engineered cover system design objectives, plans, calculations, and specifications.

L. IDW management plan.

M. Decommissioning of in-situ treatment system.

If the remediation levels cannot be achieved singularly by in-situ treatment over a time period to be defined in the EDR, the PLPs shall implement a contingent cleanup approach that will be protective of human health and the environment, including protection of groundwater at the point of compliance. Any contingent cleanup approach will undergo Ecology review and approval prior to development and implementation. Any contingency cleanup approach (other than in-situ thermal treatment) will be described in a separate EDR.

Monitoring results described in the Performance Monitoring Plan will serve as the basis for gauging the design performance and remedial effectiveness of the in-situ treatment process, and guide the decision to terminate active in-situ treatment. Vapor recovery operations at Zone A will be dependent on the in-situ thermal system design criteria as defined in the Post-Excavation EDR. This supplemental phase of vapor-recovery operations, in addition to the collection and analysis of soil samples to verify that the remedial levels have been achieved, would be conducted to confirm the completeness of the in-situ thermal treatment, and to document baseline post-treatment soil gas concentrations at Zone A. Upon completion of this post-thermal treatment verification step, and with Ecology's approval, decommissioning activities for the vapor-recovery system infrastructure and the RTO treatment unit can begin. However, the SVE well and RTO treatment system infrastructure shall remain in place and operate for a period of time specified in the Post-Excavation EDR to capture and treat any residual VOCs that may remain beneath Zone A within the waste zone, vadose zone, and/or capillary fringe near the water table.

Post-Excavation EDR Subtask B: Modifications or Upgrades to the Zone A SVE and RTO Vapor Treatment Systems as Needed to Support Vapor Recovery and In-Situ Thermal Treatment

During in-situ thermal treatment operations, a subsurface negative pressure within Zone A will be maintained to collect and transfer the volatilized contaminants to the RTO for destruction. The vapour-recovery system will be designed to minimize the potential for

fugitive emissions of contaminant vapors and gases during all phases of active in-situ thermal treatment. As noted above, SVE operations after the completion of in-situ thermal treatment are expected to be a necessary protective measure to control vapor emissions and ensure potential impacts to groundwater are minimized.

This Post-Excavation EDR subtask will include detailed engineering design, plans, and specifications to revise, retrofit, reconfigure, modify, and/or optimize the existing Zone A SVE system (in particular, the downstream thermal and/or existing SVE system conveyance piping, condensate collection systems, and blower-building components and monitoring — for example, lower explosive limit meters). The conveyance piping, condensate collection and storage systems, and blower system components must be capable of safely and adequately handling the vapor stream coming from the in-situ treatment system. The condensate collection and storage systems also must be designed, operated, and managed to handle the anticipated condensate volume and composition that will be generated during this follow-on treatment phase. Condensate generated and collected during in-situ treatment operations may designate as a characteristic hazardous waste, and shall be managed accordingly.

This Post-Excavation EDR subtask also will describe any associated RTO treatment system modifications or other separate treatment modifications, enhancements, or stand-alone treatment components that will be required to properly treat vapors and gases generated by the in-situ thermal treatment activities. Anticipated Subtask B Post-Excavation EDR content will include, but is not limited to:

a. Description of vapor-recovery system and RTO treatment system modifications and/or upgrades to support in-situ thermal treatment operations.

b. Preparation of engineering designs, plans, and specifications to support substantive Zone A vapor-recovery system and/or RTO treatment system modifications or upgrades.

c. Preparation of a vapor-recovery and RTO system Operations and Maintenance (O&M) Plan Addendum. This addendum shall describe start-up testing procedures, anticipated flow rates during routine operations, periodic flow adjustments and optimization measures, and routine gas/vapor monitoring to assess the ongoing performance of the in-situ thermal treatment operations. Influent gas/vapor composition and loading also needs to be monitored and regulated to ensure that RTO emissions would not violate existing air quality permit requirements stipulated in Approval Order 16AQ-E031, or any future amended permit requirements. The O&M Plan Addendum also shall describe any supplemental RTO performance testing that may be required to verify compliance with existing air quality permit requirements. Performance monitoring requirements are further discussed below as part of the Post-Excavation CMP.

d. A schedule of the work to be performed.

Post-Excavation EDR Subtask C: Zone A Final Post-Treatment Cover System Design and Installation

This Post-Excavation EDR subtask will include detailed engineering design, plans, and specifications to install a final low-permeability cover system over the entire areal footprint of Zone A, which would take place following completion of in-situ treatment and

confirmation sampling. Documentation generated in support of this subtask shall provide for the design, installation, and maintenance of a low-permeability cover system. The cover system will be designed and constructed to limit precipitation infiltration into the zone of treatment and prevent direct contact with low-level residual contaminants. Anticipated Subtask C Post-Excavation EDR content will include, but is not limited to:

a. Cover system design objectives to achieve Zone A cleanup goals.
b. Subgrade preparation, grading, and material selection.
c. Cover system design configuration and layout.
d. Geomembrane material specifications and proposed panel layout.
e. Drainage layer, topsoil, and vegetative cover specifications.
f. Engineering submittals.
g. Construction QA/QC measures.
h. A schedule of work to be performed (design and installation).

An O&M Plan also will be prepared to address long-term monitoring, maintenance, and repair of the new Zone A cover system.

Task A.5.

Preparing a Post-Excavation CMP. The PLPs shall submit a draft and final Post-Excavation CMP for in-situ treatment work at Zone A, to be comprised of the following sub-plans:

A. HASP

The HASP shall meet WAC 173-340-810 requirements and include emergency information, characteristics of the waste, levels of protection, hazard evaluation, and procedures for protecting workers from the hazards of:

i. In-situ treatment system component installation, operation, and decommissioning
ii. Operating construction equipment and safety procedures required in the event of a failure of in-situ treatment system equipment or components
iii. Any other applicable Site information

The HASP shall identify the requirements for performance of the cleanup action to attain compliance with that plan. The HASP shall include a job hazard and job safety analysis, and address emergency response actions and procedures. The HASP also will address Site security, communications, and access control. Air monitoring to ensure the health and safety of onsite workers, visitors, and support personnel also will be specified for all aspects of the work: set-up and construction, active in-situ thermal treatment operations, post-remediation performance testing, and installation of a final Zone A cover system. The air monitoring will satisfy, in part, WAC 173-340-410 protection monitoring requirements.

B. Contingency Plan

The Contingency Plan shall address issues that may affect the local population or draw upon local emergency response resources in the event of an accident or emergency at the Site. The Contingency Plan shall include a Site Perimeter Air Monitoring Plan with details for continuous air monitoring both within Zone A, and at the Site perimeter, and will present action levels and conditions that warrant implementation of the Contingency Plan. The Contingency Plan will detail notification procedures, including the chain of communication, in the event of an emergency and/or a situation that could cause discernable odor impacts or airborne chemical exposure to people downwind of the landfill area. This includes a description of meeting/assembly locations and a timeframe for meeting with the local community and other agencies involved in the cleanup. A list of standard first aid procedures to address various chemical exposure scenarios will be included along with locations and contact information for local medical facilities, fire and rescue, police, hazardous material response teams (local or National Emergency Response Team), and other municipal or local/county government agencies (for example, Benton-Franklin Health District). Communication protocols and responsibilities for addressing media interactions or inquiries will be described. A single Contingency Plan document covering both the excavation and drum removal phase, and the in-situ treatment phase of final cleanup at Zone A may be prepared to direct possible emergency responses.

C. Performance Monitoring Plan

A Performance Monitoring Plan will be prepared to satisfy WAC 173-340-410(1)(b) requirements. The Performance Monitoring Plan will provide monitoring information and assessment metrics to verify the effectiveness of the in-situ thermal treatment activities. Specifically, the Performance Monitoring Plan will address (1) changes over time in contaminant mass removal rates from the Zone A subsurface, (2) subsurface temperature changes affected over time by the thermal treatment operations, (3) air quality conditions within the active in-situ treatment area, and (4) residual subsurface contaminant concentrations within the thermal treatment zone(s) upon completion of active thermal treatment. These performance data will provide important metrics for making interim adjustments during periods of active remediation, and for determining that the cleanup objectives (remediation levels) have been met. Additional performance monitoring metrics as determined by the in-situ treatment contractor also will be described in the Performance Monitoring Plan. It also will include a checklist of Construction Quality Assurance requirements to document and confirm satisfactory construction and completion of the final Zone A low-permeability cover system.

The Performance Monitoring Plan will also describe the necessary air monitoring at and around the active treatment area, and if necessary at the property boundaries, at the BDI transfer station located immediately south of the Pasco Landfill site, and potentially other offsite air monitoring stations.

D. GMP

A GMP shall be prepared to address potential short-term groundwater quality changes caused by remediation activities at Zone A. This GMP will include specific provisions for assessing potential short-term changes in groundwater quality during active Zone A remediation. Specifically, this will include an expanded analytical suite and monitoring frequency to support the evaluation of potential groundwater quality changes during periods of intrusive or disruptive remediation work (excavation and in-situ treatment). The sampling methods, analytical testing requirements, and QA/QC components of any Zone-A-specific groundwater monitoring will be consistent with other Site-wide groundwater monitoring activities performed in support of the overall cleanup work.

E. SAP

A SAP shall be prepared to satisfy WAC 173-340-410 and -820 requirements. This includes an appropriate QAPP and verification that all analyses are performed by laboratories accredited by Ecology's Manchester Laboratory. In-situ thermal treatment at Zone A will involve a variety of sampling activities and associated analyses (field and laboratory). Media of interest potentially include (1) vapor-recovery gas/vapor stream associated with in-situ thermal treatment, (2) soil/waste debris, and (3) groundwater. The SAP will include specific sampling procedures, analytical methods, and associated QA/QC requirements to guide the sampling and analysis of each of these media.

These above-listed plans will present applicable background information, procedures, methods, contingencies, and implementation schedules. Each plan will comply with WAC 173-340-410 and CD Section VI (Work to be Performed). The SAP and QAPP shall meet WAC 173-340-410 and -820 requirements.

Task A.6.

Executing the Post-Excavation EDR and Associated CMP. Completion of this work will entail a number of parallel and sequential activities and process steps including:

A. Ecology approval of the Post-Excavation EDR.

B. Equipment mobilization and setup.

C. Preliminary site preparation (access roads, field office, utility trenching and modifications, temporary fencing, site security and access control, equipment decontamination area, temporary materials handling and staging areas, etc.).

D. Installation of in-situ thermal treatment vapor-recovery wells, probes, and associated in-situ thermal treatment infrastructure.

E. Upgrades/modifications to existing SVE conveyance piping and condensate collection systems, if/as required by the in-situ design criteria.

F. RTO treatment system modifications (for example, scrubbers or other pre-treatment components), if/as required by the in-situ design criteria.

G. In-situ thermal treatment system start-up testing and optimization (one or more phases).

H. Performance monitoring — data collection and analysis.

I. Initial thermal treatment system shutdown.

J. Installation of replacement monitoring wells, if locations were previously inaccessible due to site activities described in Task A.3.

K. Completion of soil confirmation sampling down to groundwater (throughout the vadose zone and capillary fringe beneath Zone A) to verify attainment of remediation levels.

L. Potential targeted thermal treatment (if needed) to address subsurface areas where residual contamination still exceeds remediation levels.

M. Preparation of an In-Situ Thermal Treatment Performance Assessment Memorandum documenting remedial progress and performance (specific content and schedule to be described in the Post-Excavation EDR).

N. Potential short-term, post-thermal-treatment SVE operations.

O. Decommissioning of in-situ thermal treatment system.

P. Backfill selection and hauling.

Q. Post-treatment site grading, material compaction, and drainage control.

R. Engineered cover system installation.

S. Final fencing/institutional controls.

Ecology will approve decommissioning and removal of the Zone A SVE wells and RTO unit after confirmation that residual contaminant concentrations within the Zone A subsurface have met the contaminant reduction goals and have achieved the remediation levels specified in the Post-Excavation EDR (Task A.5).

Task A.7.

Submitting a Zone A CACR. The CACR shall be developed in accordance with WAC 173-340-400(6)(b) requirements. The PLPs shall submit a draft to Ecology within 120 days following Zone A cleanup construction completion, defined as the end of physical work at the site (demobilization). The Zone A CACR shall reference, embody, and expand upon (as applicable) other cleanup action documentation prepared and submitted per SOW requirements (EDRs and associated technical memoranda). The CACR will include final representations of the work performed, all monitoring and sampling data, laboratory analyses, any deviations from the EDRs, and construction documentation. The CACR will provide as-built design drawings for all features remaining upon completion of the remedial actions consistent with WAC 173-340-400(6)(b)(ii). The CACR will include an engineering survey of final site grades and infrastructure remaining within the Zone A remedial operations areas. The documentation generated under Task 4 (Zone A Drum/Debris Excavation, Removal, and Offsite Disposal Construction Completion Technical Memorandum) also shall be included as an attachment to the CACR. The CACR shall include a draft environmental covenant that satisfies WAC 173-340-440 and Chapter 64.70 Revised Code of Washington (RCW) requirements, and describes the institutional controls that will be necessary to limit or prohibit activities that interfere with the integrity of the cleanup actions or result in exposure to hazardous substances at the site. Following

Ecology's review and approval, the covenant will be filed and recorded in Franklin County as specified in the schedule.

Task A.8.

Submitting a Zone A O&M Plan. The O&M Plan will include the following:

A. Inspecting the cover system for erosion, localized or areal settlement, deformation, intrusion by burrowing animals, loss of vegetation health, drainage impediments, and other irregularities.

B. Inspecting the condition and integrity of physical barriers and security systems to control casual trespass (fencing, gates, etc.) and other institutional controls.

C. Inspecting the stormwater evaporation ponds for evidence of damage or irregularities.

D. Performing maintenance, as needed, to ensure proper cover system drainage (design slopes and grades) and access road functionality.

E. Performing maintenance, as needed, to ensure adequate vegetative growth, density, and plant diversity on the cover system, and controlling the proliferation of invasive plant species.

F. Inspecting and maintaining Site-wide monitoring components (wells, probes).

G. Performing laboratory testing of the cover system geomembrane at least once every 10 years to confirm long-term performance and compliance with design requirements. Specific testing methods will align with the 2015 Geosynthetic Institute White Paper #32, and/or other state-of-practice testing requirements recognized by EPA or other state agencies for evaluating the long-term integrity and functionality of cover system geomembranes.

H. Schedule of O&M activities and associated periodic reporting.

I. If the low-permeability Zone A cover system requires future repair or replacement, a separate EDR may be developed to repair or replace the current cover system. The engineering concepts, design criteria, layout, and materials for any future replacement cover systems at Zone A are expected to be similar to the construction of the cover system installed under Task A.7. Any future decision to replace the Zone A cover system likely would be triggered by information and observations compiled during a periodic review (WAC 173-340-420). Sites with institutional controls shall remain subject to periodic reviews as long as the institutional controls are required to assure that human health and the environment are being protected.

Institutional controls, including access restrictions with fencing and warning signs, and maintenance of property deed restrictions that prohibit unauthorized construction, limit excavation, and restrict groundwater use will be implemented as described in the Zone A O&M Plan and documented in the Site-Wide Institutional Control Plan (Task F). Zone A Long-term groundwater monitoring requirements are in Task G.

Task B. Cleanup Actions at Industrial Waste Area Zones C/D and E

The required cleanup actions for zones C/D and E consist of monitoring and maintaining the RCRA-compliant cover systems, groundwater monitoring, and institutional controls. This action will ensure that the Zone C/D and E remedial action objectives are met, including:

- Preventing direct exposure by humans and ecological receptors to waste materials and residual contaminants that remain within the Zone C/D and E waste repositories and subsurface soils.
- Preventing contaminant releases to the atmosphere.
- Minimizing transport of contaminants from Zone C/D and E to subsurface soils and groundwater.
- Removing and destroying contaminants from beneath the waste (via natural attenuation).
- Preventing ingestion, inhalation, or dermal absorption of groundwater contaminants.

The scope of work for the cleanup of zones C/D and E includes the following tasks.

Task B.1.

Submitting a Zones C/D and E O&M Plan. The O&M Plan will include the following:

a. Inspecting the cover system for erosion, localized or areal settlement, deformation, intrusion by burrowing animals, vegetation health, drainage impediments, and other irregularities.

b. Inspecting the condition and integrity of physical barriers and security systems to control casual trespass (fencing, gates, etc.) and other institutional controls.

c. Inspecting the stormwater evaporation ponds for evidence of damage or irregularities.

d. Performing maintenance, as needed, to ensure adequate vegetative growth, density, and plant diversity on the cover system, and controlling the proliferation of invasive plant species.

e. Performing maintenance, as needed, to ensure proper cover system drainage (design slopes and grades) and access road functionality.

f. Inspecting and maintaining Site-wide monitoring components (wells, probes).

g. Performing laboratory testing of the cover system high-density polyethylene (HDPE) geomembrane at least once every 10 years to confirm long-term performance and compliance with design requirements. Specific testing methods will align with the 2015 Geosynthetic Institute White Paper #32, and/or other state-of-practice geomembrane testing requirements recognized by EPA or other state agencies for evaluating the long-term integrity and functionality of cover system geomembranes.

h. Periodic reporting of O&M activities.

i. Schedule of O&M activities and associated periodic reporting.

j. Installing two new groundwater monitoring wells to better assess groundwater quality in the Zone C/D and E vicinity (Central Area Groundwater); one approximately midway between MW-19S and MW-27SR; the second near the

southwest corner of Zones C/D between the two BT-1 Burn Trenches (see Focused Feasibility Study Figure 2.5.5-1).

Task B.2.

Executing the Zones C/D and E O&M Plan.

Task B.3.

Possible Preparation of Zones C/D and/or E Cover System Repair/Replacement EDR. If the RCRA-compliant cover system at zones C/D and/or E requires future repair or replacement, a separate EDR may be developed to repair or replace the current cover system. The engineering concepts, design criteria, layout, and materials for any future replacement cover systems at Zone C/D or E are expected to be similar to the construction of the cover systems installed as IAs in 2001. Any future decision to replace the existing RCRA-compliant cover systems at either Zone C/D or E likely would be triggered by information and observations compiled during a periodic review (WAC 173-340-420). Sites with institutional controls shall remain subject to periodic reviews as long as the institutional controls are required to assure that human health and the environment are being protected.

Institutional controls, including access restrictions with fencing and warning signs, and maintenance of property deed restrictions that prohibit unauthorized construction, limit excavation, and restrict groundwater use will be implemented as described in the Zones C/D and E O&M Plan and documented in the Site-Wide Institutional Control Report (Task F). Tasks associated with required long-term groundwater monitoring are described in Task G.

Task C. Cleanup Action at the On-Property Central Area

The required cleanup action for the on-property groundwater in the Central Area (generally depicted on Figure 2 of Exhibit B) includes monitoring of groundwater quality, assuring compliance with institutional controls, additional source zone investigation work (if triggered as described below), and potentially implementing focused SVE treatment to capture VOCs in soil gas as a contingent action only. Historically, low-level VOC concentrations have been observed in monitoring wells positioned hydraulically downgradient from zones C/D and E. Additional source zone investigation and follow-up contingent cleanup activities would be triggered if groundwater monitoring data confirm a demonstrable change in groundwater quality within one or more Central Area wells. A demonstrable change is defined as a 12-month period of successive CUL exceedances, or a 10-fold or more increase in contaminant concentrations that results in a CUL exceedance during a 6-month period, in one or more Central Area groundwater monitoring wells. Groundwater quality changes may be identified in Central Area groundwater monitoring wells located proximal to, and hydraulically upgradient of, Zone A. If the prevailing evidence indicates a direct link to Zone A remedial actions, then these water quality changes will be evaluated separately from other Central Area wells. Additional details of the action criteria that will trigger these contingent cleanup activities will be further presented and discussed in the Site-Wide Groundwater Compliance Monitoring Plan (Task G).

The scope for the On-Property Central Area includes the following tasks.

Task C.1.

Routine Groundwater Monitoring (as Part of Overall Site-Wide Groundwater Monitoring, Task G) to Provide an Ongoing Evaluation of Central Area Groundwater Quality Conditions Following Final Remedy Implementation.

Task C.2.

Preparing a Post-Remedy Source Evaluation Work Plan. This Work Plan will be prepared if groundwater monitoring at designated Central Area monitoring wells indicates that the action thresholds have been exceeded as described above. The Work Plan, which will include a SAP developed in accordance with WAC 173-340-820, will be submitted to Ecology prior to conducting additional sampling to further assess potential sources of the exceedance(s) and evaluate appropriate actions that may be necessary to treat/reduce concentrations to below CULs. Upon Ecology approval, the PLPs will implement the Work Plan. The PLPs will prepare a technical memorandum describing the findings from any supplemental source investigation work within 90 days of completing the field work. Findings may include a PLP recommendation to proceed with the design, installation, and operation of a contingent remediation system submitted under a separate EDR.

Task C.3.

Possible Preparation of an EDR. If recommended by the technical memorandum described above, the PLPs will prepare and submit a draft EDR. Following incorporation of Ecology's comments, the EDR will be finalized. The EDR will describe a proposed cleanup approach to enhance or improve upon existing source control actions at Zone C/D and E, or to address other documented contamination source areas affecting Central Area groundwater quality. The EDR will be developed to meet WAC 173-340-400 requirements. Ecology and the PLPs will determine the most appropriate action(s) to achieve groundwater protection goals for this area.

Institutional controls, including access restrictions with fencing and warning signs, and maintenance of property deed restrictions that prohibit unauthorized construction, limit excavation, and restrict groundwater use will be implemented as described in the Site-Wide Institutional Control Report (Task F). Tasks associated with required long-term groundwater monitoring are in Task G.

Task D. Cleanup Action at the MSW Landfill

The MSW Landfill required cleanup action consists of groundwater monitoring, institutional controls, and a series of system modifications implemented progressively as environmental conditions at the MSW Landfill change. Adapting operations to these changing conditions will support the long-term operability, functionality, and integrity of the engineered components of the MSW Landfill and associated Site-wide cleanup goals. These anticipated actions and operational milestones include:

- Performing post-closure care as required under WAC 173-351-500(2), and detailed in the planned O&M Manual update.
- Installing two additional groundwater monitoring wells hydraulically downgradient (along western edge) from the MSW Landfill to improve spatial coverage of the existing monitoring network.
- Maintaining the existing engineered cover system and monitoring for potential methane gas emissions at ground surface.
- Maintaining the existing gas collection and control system (GCCS) with 24 landfill gas collection locations and the enclosed flare system.
- Maintaining the existing 13 perimeter soil gas monitoring probes as compliance points for methane gas control (WAC 173-351-200(4)).

- Transitioning from the enclosed flare system to a passive landfill gas treatment system or direct venting.
- Transitioning from active landfill gas collection to passive landfill gas collection.
- Transitioning to custodial care if and when functional stability is demonstrated using Ecology-approved metrics and monitoring data specific to the MSW Landfill.

As landfill gas generation decreases over time, changes in how landfill gas is collected and treated are anticipated. The Landfill Group estimates that by approximately 2022, the existing enclosed flare system will be oversized to meet the objective of maintaining combustible methane concentrations and continuous flare operation. Ecology will be notified if key flare replacement criteria are met; these criteria will be specified in an updated O&M Manual. Following Ecology approval, the existing enclosed flare will be replaced with an appropriately sized treatment system (smaller enclosed or candlestick flare) or an alternative passive treatment system designed to operate continuously and reliably with low methane content through the end of post-closure care. Potentially this may include directly venting landfill gas to the atmosphere if all air quality thresholds and criteria are met. This anticipated change in landfill gas treatment includes permit coordination with Ecology's Air Quality Program under WAC 173-400 and WAC 173-460. A task-specific work plan for an alternative landfill gas treatment system will be submitted for Ecology approval, per WAC 173-340-400(4), and the O&M Manual will be updated to reflect the transition from active to passive landfill gas treatment.

By approximately 2027, the Landfill Group estimates that passive landfill gas collection may be sufficient to protect groundwater and control potential methane gas migration. Ecology will be notified if key landfill gas collection criteria are met; these criteria will be specified in the updated O&M Manual. Following Ecology approval, the GCCS blower system used to maintain a net negative pressure within the interior of the landfill area will be shut off and the GCCS will be modified to allow passive landfill gas collection. The O&M Manual will be updated to reflect the transition from active to passive landfill gas collection.

The Landfill Group estimates that by approximately 2032, if a condition of functional stability has been demonstrated, the MSW Landfill will transition from post-closure care to custodial care. A report documenting functional stability will be submitted for Ecology approval prior to implementing any changes in post-closure care operations. Remaining elements of the GCCS system and environmental monitoring network will be decommissioned upon Ecology approval.

The SOW for MSW Landfill cleanup includes the following tasks.

Task D.1.

Submitting an updated MSW Disposal Areas O&M Manual. This task will include the following:

a. Installing two additional shallow groundwater monitoring wells hydraulically downgradient from the MSW Landfill (along the western perimeter) to improve spatial coverage of the existing monitoring network. Well locations will be coordinated with Ecology prior to installation.

b. Inspecting the cover system for erosion, localized or areal settlement, deformation, intrusion by burrowing animals, vegetation health, and other irregularities.

c. Inspecting the condition and functionality of GCCS wells and conveyance piping, and monitoring methane concentrations over time.

d. Inspecting the condition of the landfill flare (or replacement) system and performing maintenance, as needed.

e. Inspecting the condition of the condensate collection system and performing maintenance, as needed.

f. Inspecting the condition and functionality of the stormwater collection system conveyance lines and piping for possible drainage impediments, and the condition of the stormwater evaporation ponds for evidence of damage or irregularities.

g. Inspecting the condition and integrity of physical barriers and security systems to control casual trespass (fencing, gates, etc.) and other institutional controls.

h. Performing maintenance, as needed, to ensure proper cover system drainage (maintain design slopes and grades).

i. Inspecting and maintaining access roads.

j. Performing maintenance, as needed, to ensure adequate vegetative growth, density, and plant diversity on the cover system, and controlling the proliferation of invasive plant species.

k. Inspecting and maintaining monitoring network components (gas collection wells, perimeter gas probes, groundwater monitoring wells).

l. Performing laboratory testing of the cover system linear low-density polyethylene geomembrane at least once every 10 years to confirm long-term performance and compliance with design requirements. Specific testing methods will align with the 2015 Geosynthetic Institute White Paper #32, and/or other state-of-practice testing requirements recognized by EPA or other state agencies for evaluating the long-term integrity and functionality of cover system geomembranes.

m. Periodic reporting of O&M activities.

n. Scheduling of O&M activities and associated periodic reporting.

Task D.2.

Executing the Updated MSW Disposal Areas O&M Manual.

Task D.3.

Possible Preparation of an MSW Landfill Cover System Repair/Replacement EDR. If the RCRA Subtitle D cover system at the MSW Landfill requires future repair or replacement, a separate EDR may be developed to repair or replace the current cover system. The engineering concepts, design criteria, layout, and materials for any future replacement cover systems at the MSW Landfill are expected to be generally similar to the construction of the cover system installed as an interim action in 2001. Any future decision to replace the existing MSW Landfill cover system likely would be triggered by information and observations compiled during a periodic review (WAC 173-340-420). Sites with institutional controls shall remain subject to periodic reviews as long as the institutional controls are required to assure that human health and the environment are protected.

Task D.4.

Submitting a Work Plan to Implement Alternative Landfill Gas Treatment. If an alternative landfill gas treatment system is required, the PLPs will prepare a draft and final Work Plan to Implement Alternative Landfill Gas Treatment, developed to meet WAC 173-340-400 requirements.

Task D.5.

Submitting an MSW Landfill Functional Stability Report if functional stability is achieved.

Institutional controls, including access restrictions with fencing and warning signs, and maintenance of property deed restrictions that prohibit unauthorized construction, limit excavation, and restrict groundwater use will be implemented as described in the Site-Wide Institutional Control Report (Task F). Tasks associated with required long-term groundwater monitoring are in Task G.

Task E. Cleanup Actions at the Balefill and Inert Waste Disposal Areas and Burn Trench BT-1

Outside of the MSW Landfill, additional MSW has been landfilled at the Site. These generally contiguous disposal areas include the Balefill Waste Area and the Inert Waste Area. The required cleanup action for these areas consists of institutional controls and the following activities:

- Conducting test-pit evaluations and engineering surveys to provide pre- and post-cover installation topography, elevations, and approximate limits-of-waste determinations.
- Decommissioning in-waste gas probes and thermocouples in the Balefill Area and Inert Waste Area.
- Investigating the soil cover thicknesses and restoring the soil covers to a minimum of 30 inches.
- Installing up to six soil gas monitoring probes as compliance points for methane gas control (WAC 173-351-200(4)) in the Balefill Area and Inert Waste Area.
- Monitoring, maintenance, and reporting.
- Demonstrating functional stability and transitioning to custodial care.

The PLPs will submit an EDR for soil cover investigation and restoration for Ecology approval (per WAC 173-340-400(4)(a)). To streamline the common cleanup actions, the EDR will address the Balefill and Inert Waste Disposal Areas and Burn Trench BT-1. The EDR will describe gas probe and thermocouple decommissioning, soil cover thickness and limits-of-waste investigation, soil cover restoration requirements, on-property soil borrow areas, cover soil volumes, geotextile/gravel placement areas, permitting requirements, new compliance gas probe installation, and supporting topographic surveys (pre- and post-cover restoration). The PLPs will submit a Completion Report for Ecology approval (per WAC 173-340-400(6)) documenting soil cover investigation and restoration, and the O&M Manual will be updated to reflect as-built conditions, changes in monitoring, and maintenance requirements.

Compliance monitoring at the Balefill and Inert Waste Disposal Areas will include surface monitoring and gas probe monitoring (per WAC 173-351-200(4)). The Balefill and Inert Waste Disposal Areas will transition from post-closure care to custodial care when functional stability is demonstrated. A report documenting functional stability for these three contiguous waste disposal areas will be submitted for Ecology approval, and the gas probes will be decommissioned following Ecology approval.

Compliance monitoring at the Burn Trench BT-1 will include surface monitoring (per WAC 173-351-200(4)). The Burn Trench BT-1 will transition from post-closure care to custodial care when functional stability is demonstrated to Ecology's satisfaction. The PLPs will submit a report documenting functional stability of Burn Trench BT-1 for Ecology approval.

The scope of work for Balefill and Inert Waste Disposal Area cleanup and Burn Trench BT-1 includes the following tasks.

Task E.1.
Submitting a Balefill/Inert Waste Area/Burn Trench BT-1 Soil Cover Investigation and Restoration EDR.

Task E.2.
Executing the Balefill/Inert Waste Area/Burn Trench BT-1 Soil Cover Investigation and Restoration EDR.

Task E.3.
Submitting a Balefill/Inert Waste Area/Burn Trench BT-1 Soil Cover Investigation and Restoration Completion Report.

Task E.4.
Submitting a Balefill/Inert Waste Area And Burn Trench BT-1 Functional Stability Report if functional stability is achieved.

Institutional controls, including access restrictions with fencing and warning signs, and maintenance of property deed restrictions that prohibit unauthorized construction, limit excavation, and restrict groundwater use will be implemented as described in the Site-Wide Institutional Control Report (Task F). Tasks associated with required long-term groundwater monitoring are in Task G.

Task F. Site-Wide Institutional Controls Report

Institutional controls are measures undertaken to limit or prohibit activities that may interfere with the integrity of a cleanup action or result in exposure to hazardous substances at the Site. Institutional controls are required for continued protection of human health and the environment as well as integrity of the cleanup action. The cleanup standards established throughout the Site require implementation of Site-wide institutional controls to limit activities that could impact performance of the selected remedy.

Institutional controls for this Site will include an environmental covenant in accordance with WAC 173-340-440 and the Uniform Environmental Covenants Act (Chapter 64.70 RCW) to be recorded with the Franklin County Auditor as required by the CD. All PLPs retain the responsibility to ensure institutional controls are in place to limit or prohibit activities that may interfere with the integrity of a cleanup action or result in exposure to hazardous substances at the Site.

Groundwater restrictions in the form of zoning and/or building overlays have been implemented by the PLPs, the City of Pasco, and Franklin County, respectively, through an agreement between these jurisdictions and the other PLPs. These groundwater restrictions shall continue to apply and shall provide for appropriate access and enforcement provisions. Ecology will continue to provide guidance to the City of Pasco and/or Franklin County regarding any action taken by these jurisdictions with respect to the current groundwater restrictions. The decision to retain or lift existing restrictions on

consumptive groundwater use within the designated Groundwater Protection Area will be re-evaluated during Ecology's post-remedy periodic reviews. The PLPs retain ultimate overall responsibility for implementating institutional controls at this Site.

The PLPs prepared an updated Institutional Controls Plan in October 2013 to support the IA cleanup activities occurring at that time. The content of this previously prepared Institutional Controls Plan may include information that can help support the preparation of an updated Institutional Controls Report that will be required to satisfy the cleanup and administrative requirements of the final CD/CAP. Ecology will anticipate broad PLP participation in preparaing an Institutional Controls Report that will address onsite and offsite institutional controls, considerations, and responsibilities.

In accordance with WAC 173-340-840(5), the PLPs shall submit sampling data according to the Ecology Environmental Information Data Submittal Guide. Data shall be formatted for entry into Ecology's Environmental Information Management database.

Key institutional controls for the Site include:

- Site access controls, including fencing, signage, and environmental covenants;
- Groundwater restrictions in the form of an environmental covenant (on-property) and zoning and/or building overlays;
- Annual update of Beneficial Use Survey within the Groundwater Protection Area; and
- Contingency actions to expand the Groundwater Protection Area, if necessary, based on changes in offsite groundwater quality.

The scope of Task F includes the following tasks.

Task F.1.

Submitting an Institutional Controls Report. Documentation of the execution of the institutional controls is required above and in the following documents:

a. Final Zone A O&M Plan.

b. Final Zones C/D and E O&M Plan.

c. Final Updated MSW Disposal Areas O&M Manual.

d. Institutional Controls implemented on a Site-wide basis.

e. Institutional Controls implemented in off-property areas (e.g., offsite groundwater plume area).

Task F.2.

Periodic Verification, Inspection, and Reporting in Accordance with Task G.

Task G. Site-Wide Groundwater CMP

Compliance monitoring consists of protection monitoring, performance monitoring, and confirmational monitoring. Protection monitoring confirms that human health and the environment are adequately protected during construction and operation of the cleanup action. Performance monitoring confirms that the cleanup action has attained cleanup and/or performance standards. Confirmational monitoring confirms the long-term effectiveness of the cleanup action once cleanup

standards are attained. Protection monitoring for active remediation will be included in the area/zone-specific EDR CMPs.

The Site-wide Groundwater CMP (Site-wide CMP) will be consistent with WAC 173-340-400 and -410 requirements. The plan will include a Site-wide comprehensive groundwater CMP for all Site areas/zones, providing for both performance and confirmational monitoring. The Site-wide CMP will include the monitoring event schedule and network of monitoring wells. It will also include a SAP and QAPP, both of which will meet WAC 173-340-410 and -820 requirements. The Site-wide CMP shall describe the procedure for decommissioning groundwater monitoring wells that are no longer needed to support the groundwater monitoring network objectives. The adequacy and capability of the groundwater monitoring network to meet changing cleanup and monitoring needs will be evaluated in conjunction with routine periodic reviews (WAC 173-340-420). Considering the broad category of waste disposed at the site, the compliance monitoring plan will include the analysis of an appropriately broad suite of constituents to verify overall groundwater quality.

The scope of Task G includes the following tasks.

Task G.1.
Submitting a Site-Wide CMP.

Task G.2.
Executing the Site-Wide CMP. This includes submitting Groundwater Monitoring Reports on the schedule in the final Site-wide CMP, which may be submitted in as part of the Progress Reports described in Task H.

Task H. Progress Reports

Progress reports will be submitted monthly to Ecology during active design and construction. Progress reports will be submitted semi-annually upon completion of all remedial construction operations and commencement of routine operations and maintenance activities. Ecology and the PLPs will coordinate on the specific timing of this transition from monthly to semi-annual reporting. The progress reports will include cover system assessment reports/memoranda that document observations and findings from routine monitoring and inspections as specified in applicable area-specific O&M Plans. The progress reports also may include groundwater monitoring data reports as described in the final Site-wide CMP. The groundwater monitoring portion of the report will be developed in accordance with WAC 173-340-720(9). It is expected that two concurrent progress reports will be submitted to Ecology when due: one report for the Industrial Waste Areas of the Site, and one report for all other areas of the Site. Progress reports will include the following information:

- A list of activities that have occurred during the reporting period.
- Detailed descriptions of any deviations from required tasks not otherwise documented in project plans or amendment request.
- A description of all deviations from this SOW and schedule or from the applicable O&M Plans for the current reporting period and any planned deviations for the upcoming reporting period.
- For any deviations in the schedule, a plan for maintaining compliance with the schedule.
- All raw data (including laboratory analysis) received during the reporting period.
- A list of deliverables for the upcoming reporting period if different from the schedule.

- Institutional control inspection and verification as described in Task F.

The scope of Task G includes the following tasks on the schedule described above.

Task H.1.
Submitting an Industrial Waste Area Progress Report.

Task H.2.
Submitting a MSW Areas Progress Report.

Task H.3.
Submitting a Site-wide Groundwater Monitoring Report and Institutional Control Inspection and Verification Report. These reports may be combined with either the Industrial Waste Area or MSW Areas Progress Report.

Schedule

All required documents are subject to Ecology's review and approval. Ecology will approve, approve with conditions, or disapprove of these documents. If Ecology disapproves of a draft document, we will provide comments to the PLPs who will submit a revised document addressing the comments.

Task(s)	Deliverable/Milestone	Date Due
	Effective date of CD	Start
A.1, A.2	PLPs submit draft Zone A Removal Action EDR and CMP	30 days after start
A.1, A.2	PLPs submit final Zone A Removal Action EDR and CMP	30 days after PLPs receive Ecology's written comments on the draft documents
A.3	PLPs begin to execute the Zone A Removal Action	30 days after PLPs receive Ecology's approval of both the Zone A Removal Action EDR and CMP
A.3	PLPs complete the Zone A Removal Action construction	As described in the Zone A Removal Action EDR, but not longer than 24 months after EDR approval
A.4	PLPs submit draft Zone A Excavation, Removal, and Offsite Disposal Construction Completion Technical Memorandum	90 days after Zone A Removal Action construction completion
A.4	PLPs submit final Zone A Excavation, Removal, and Offsite Disposal Construction Completion Technical Memorandum	30 days after PLPs receive Ecology's written comments on the draft document
A.5, A.6	PLPs submit draft Zone A Post-Excavation EDR and CMP	120 days after Zone A Removal Action construction completion

Task(s)	Deliverable/Milestone	Date Due
A.5, A.6	PLPs submit final Zone A Post-Excavation EDR and CMP	30 days after PLPs receive Ecology's written comments on the draft documents
A.7	PLPs begin to execute the Zone A post-excavation work	30 days after PLPs receive Ecology's approval of both the Post-Excavation EDR and CMP
A.7	PLPs complete the Zone A post-excavation work	As described in the Zone A Post-Excavation EDR
A.7	PLPs submit draft Zone A Post-Excavation In-Situ Thermal Treatment Performance Assessment Technical Memorandum	90 days after initial shutdown of in-situ treatment system operations
A.7	PLPs submit final Zone A Post-Excavation In-Situ Thermal Treatment Performance Assessment Technical Memorandum	30 days after PLPs receive Ecology's written comments on the draft document
A.8	PLPs submit draft Zone A CACR	120 days after Zone A post-excavation construction completion (i.e., completion of Task A.7)
A.8	PLPs submit final Zone A CACR	30 days after PLPs receive Ecology's written comments on the draft document
A.8	Property owner records the Environmental Covenant with Franklin County	30 days after Ecology's written approval of the CACR
A.9	PLPs submit draft Zone A O&M Plan	90 days after Zone A post-excavation construction completion
A.9	PLPs submit final Zone A O&M Plan	30 days after PLPs receive Ecology's written comments on the draft document
B.1	PLPs submit draft Zones C/D and E O&M Plan	120 days after start
B.1	PLPs submit final Zones C/D and E O&M Plan	30 days after PLPs receive Ecology's written comments on the draft document
C.1	PLPs submit Central Area Groundwater Evaluation	In conjunction with Site-Wide Groundwater Monitoring Reporting

Task(s)	Deliverable/Milestone	Date Due
C.2	PLPs submit Central Area Groundwater Post-Remedy Source Evaluation Work Plan	90 days after triggered, as described in Task C
C.3	PLPs submit Central Area Groundwater EDR	90 days after completion of Central Area groundwater post-remedy evaluation field work
D.1	PLPs submit draft MSW Disposal Areas O&M Plan	120 days after start
D.1	PLPs submit final MSW Disposal Areas O&M Plan	30 days after PLPs receive Ecology's written comments on the draft document
E.1	PLPs submit draft Balefill and Inert Waste Area/Burn Trench BT-1 Soil Cover Investigation and Restoration EDR	120 days after start
E.1	PLPs submit final Balefill and Inert Waste Area/Burn Trench BT-1 Soil Cover Investigation and Restoration EDR	30 days after PLPs receive Ecology's written comments on the draft document
E.2	Completion of the soil cover investigation and restoration field work	As described in the Soil Cover Investigation and Restoration Field EDR
E.3	PLPs submit draft Balefill and Inert Waste Area/Burn Trench BT-1 Soil Cover Investigation and Restoration Completion Report	90 days after soil cover investigation and restoration construction completion
E.3	PLPs submit final Balefill and Inert Waste Area/Burn Trench BT-1 Soil Cover Investigation and Restoration Completion Report	30 days after PLPs receive Ecology's written comments on the draft document
E.4	PLPs submit draft and final Balefill and Inert Waste Area Functional Stability Reports	As described in the MSW Disposal Areas O&M Manual
E.5	PLPs submit draft and final Burn Trench BT-1 Functional Stability Reports	As described in the MSW Disposal Areas O&M Manual
F.1	PLPs submit draft Institutional Controls Report	120 days after Zone A post-excavation construction completion

Task(s)	Deliverable/Milestone	Date Due
F.1	PLPs submit final Institutional Controls Report	30 days after PLPs receive Ecology's written comments on the draft document
F.2	PLPs implement reporting and verification of institutional controls	In accordance with Task H
G.1	PLPs submit draft Site-wide CMP	180 days after start
G.1	PLPs submit final Site-wide CMP	30 days after PLPs receive Ecology's written comments on the draft document
G.2	PLPs implement field work and reporting outlined in final Site-wide CMP	As described in the final Site-wide CMP and in accordance with Task H
H.1	PLPs submit Industrial Waste Area Progress Report	As described in Task H and in applicable O&M Plans
H.2	PLPs submit MSW Areas Progress Report	As described in Task H and in applicable O&M plans
H.3	PLPs submit Site-Wide Groundwater Monitoring Report and Institutional Control Inspection and Verification Report	As described in Task H and in applicable O&M Plans

POTENTIAL
SITE SUPPORT

POTENTIAL
EXCAVATION
ACCESS

EXCAVATION EXTENT
MAY EXTEND PAST
GEOMEMBRANE IF
ZONE A WASTE
EXTENDS INTO AREA
REPRESENTED BY
THE DASHED LINE

LATERAL
EXTENT OF
EXCAVATION

GRAVEL ROAD

POTENTIAL AOC MATERIAL
HANDLING AREA

PROTECTION
BARRIER WALL

LOCATION OF
FORMER BALEFILL
AREA SUBSURFACE
SMOLDERING

CONCRETE-BENTONITE
BOX

VEW-05

VEW-01

DIETRICH ROAD

VEW-06I
VEW-06S
VEW-06D

DRUMMED WASTE
(STACKED DRUMS)

RANDOMLY-PLACED
DRUMS

VEW-07I
VEW-07S
VEW-07D

EVAPORATION
BASIN

EVAPORATION
BASIN

VEW-04

POTENTIAL AOC
MATERIAL
HANDLING AREA

BASIN
DISPOSAL
BUILDING

LEGEND
- FENCELINE
- GEOMEMBRANE
- NATURAL GAS LINE
- EVAPORATION BASIN
- GROUND CONTOUR 4/26/2018
- VAPOR EXTRACTION LOCATION
- INACTIVE VAPOR EXTRACTION LOCATION

Figure Source: IWAG November 2018 Draft Scope of Work

Source: TOPO CONTOURS DATED 4-26-2018 PROVIDED BY PBS ENGINEERING AND ENVIRONMENTAL INC.; LINEWORK FROM EPI FIGURES DATED 12/22/2015.

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PASCO SANITARY LANDFILL NPL SITE
PASCO, WASHINGTON

11157060-00

Nov 19, 2018

ZONE A POTENTIAL AOC MATERIAL HANDLING AREAS
AND EXCAVATION ACCESS LOCATION

FIGURE 1

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