SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:
Governmental agencies use this checklist to help determine whether the environmental impacts of the proposal are significant. This information is also helpful to determine if available avoidance, minimization, or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

A. Background [HELP]

1. Name of proposed project, if applicable:

Pasco Landfill NPL Site Cleanup Action

2. Name of applicant:

PLPs implementing the Pasco Landfill NPL Site Cleanup Action

3. Address and phone number of applicant and contact person:

Applicant:
IWAG Group III Project Coordinator
c/o Jessi Massingale — Jessi.massingale@floydsnider.com
601 Union Street, Suite 600
Seattle WA 98101
(206) 292-2078

Contact Person:
Consultant supporting IWAG Group III — Mary.McElheron@pbsusa.com
Mary McElheron
300 Bradley Blvd, Suite 106
Richland, WA 99352
(509) 375-7839

Project coordinator for MSW disposal areas:
Peter Bannister, PE — pbannister@aspectconsulting.com
Aspect Consulting LLC
350 Madison Avenue North
Bainbridge Island, WA 98110
(206) 780-7728

4. Date checklist prepared:

June 2019

5. Agency requesting checklist:

Washington State Department of Ecology (hereafter Ecology)

6. Proposed timing or schedule (including phasing, if applicable):

The Site encompasses the following landfill zones and areas at the Pasco Sanitary Landfill that include remedial actions: Industrial Waste Areas (IWAs): Zone A, C/D, E; municipal solid waste (MSW) disposal areas: MSW Landfill, Balefill Waste Area, Inert Waste Area, and Burn Trench BT-1 and BT-2; and Central Groundwater Area.

Implementation of the active Zone A remedial action is expected to begin in 2020, within 30 days of receipt of Ecology's approval of the Final Removal Action Engineering Design Report (EDR) and Compliance Monitoring Plan (CMP) for the Zone A industrial waste area. The active remedial actions for Zone A are expected to occur over a period of 2 to 3 years and over two stages. The first stage or phase includes the excavation, drum and waste removal, and transport of Zone A waste for offsite treatment and/or disposal and is expected to have an approximate 1- to 2-year duration. Excavation will be followed by the implementation of subsurface in situ thermal treatment for approximately 1 year, followed by construction of the final cover system and a limited period of post-treatment SVE operations.

The final remedial actions for the other IWAs include continued maintenance, monitoring and implementation of institutional controls. The remedial action and continued maintenance and monitoring of the Zone B industrial waste area will be described in a separate Consent Decree and SEPA Checklist.

Implementation of the active remedial action at the MSW Landfill involves on-going post-closure activities through approximately year 2032. Details of post-closure activities will be provided in an updated O&M Manual for the MSW disposal areas, including future assessment of MSW Landfill functional stability and long-term custodial care O&M obligations. Soil cover investigation and restoration at other MSW disposal areas are expected to begin and end in 2020. Details will be provided in a Soil Cover Investigation and Restoration EDR, which is scheduled for submittal 120 days after execution of the Consent Decree.

Figure 1 illustrates the Site location, and Figure 2 illustrates the landfill property and its associated waste disposal areas.

The schedule currently proposed is included in Ecology's Consent Decree Scope of Work (SOW) for the Pasco Landfill NPL Site.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

Following completion of remedial actions at the Site, continued monitoring and maintenance of the landfill covers and caps will be performed, and any potential contingent activities will be conducted as needed. Any future work on the Site will comply with the institutional controls and environmental covenants held by Ecology.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

A Consent Decree has been prepared for the Site (excluding Zone B). The Consent Decree contains an outline of Site history, current conditions, and cleanup actions that will be required, including O&M plans, Compliance Monitoring plans, and other cleanup-related documentation. Exhibits in the Consent Decree contain the Cleanup Action Plan (CAP), Scope of Work (SOW), and schedule.

Numerous documents have been prepared for the Site since 1990, when the Site was added to the National Priorities List (NPL) by the USEPA. A large number of documents are on file at Ecology's Eastern Regional Office regarding the Site, and many are available on Ecology's webpage for the Site. https://fortress.wa.gov/ecy/gsp/CleanupSiteDocuments.aspx?csid=1910

A comprehensive list of publicly available documents may be requested from:

- Ecology's Site Manager, Chuck Gruenenfelder, (509) 329-3439, email: chgr461@ecy.wa.gov
- Ecology Public Relations Coordinator, Erika Bronson, (509) 329-3546, email: ehol461@ecy.wa.gov

Recent documents include:

- Draft Final Focused Feasibility Study, Pasco Landfill National Priorities List Site, by Anchor QEA, et al., dated August 2017.
- 2018 Annual Report – Groundwater Monitoring and Interim Action Performance Monitoring – Pasco Landfill NPL Site, Pasco, Washington, by PBS Engineering and Environmental Inc., dated March 18, 2019.
- Revised Draft Focused Feasibility Study Report, Pasco Sanitary Landfill National Priorities List Site – MSW Disposal Areas, by Aspect Consulting, dated August 31, 2017.
- Draft 2018 Annual Report, Pasco Municipal Solid Waste Disposal Areas, by Aspect Consulting, dated March 15, 2019.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

No, there are no other known proposals directly affecting the property.

10. List any government approvals or permits that will be needed for your proposal, if known.

The proposed work will be performed in multiple phases. Initial approvals include the following:

Local Approvals/Permits:

- City of Pasco Building Permit, including site grading plan (Project is exempt from the procedural requirements, but must comply with the substantive requirements of WAC 173-340-710).

- City of Pasco and Franklin County Right-of-Way Permits (Project is exempt from the procedural requirements, but must comply with the substantive requirements of WAC 173-340-710).

State Approvals/Permits

- Ecology SEPA Threshold Determination
- Ecology approval of the *Zone A Excavation Engineering Design Report* and *Compliance Monitoring Plan* and the *Zone A Post-Excavation Engineering Design Report*
- Ecology Notice of Intent to Construct a Well
- Ecology Approval of Modification to the RTO Air Quality Permit (Approval Order) in support of in situ treatment vapor recovery
- L&I Electrical Inspection and Approval (required for electrical installations at a Zone A temporary structure)

No Federal Approvals/Permits are anticipated to be necessary for implementation of the remedial actions at the Site. However, additional state/local approvals or permits (including substantive requirements of such permits) may be identified during the development of various Engineering Design Reports (EDRs) prepared in support of the proposed construction/cleanup work.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The active (construction) cleanup actions selected by Ecology for the Site will occur at Zone A and the Balefill Area, Inert Waste/Mixed Debris Area, and Burn Trench BT-1. Additional groundwater monitoring well installation will occur near Zone A, the MSW Landfill, and the On-Property Central Groundwater Area near Zone E. Selected cleanup actions for the rest of the Site (Zones C/D, and Zone E) include continued monitoring and maintenance of landfill cover systems, groundwater monitoring, and implementation and maintenance of institutional controls.

Substantial active remedial construction is planned at Zone A; therefore, additional detail on this area is provided. The Zone A disposal area contains approximately 35,000 drums of industrial waste that were placed in the landfill in the early 1970s. The Zone A disposal area is approximately 3 acres in size, and wastes are present at depths of up to 38 feet below the highest surface on the Zone A cover system.

The Zone A disposal area is surrounded by the old landfill operations yard and closed MSW landfill to the north, a localized topographic depression to the northeast, a baled municipal waste landfill (Balefill Area) to the east, including an inert waste disposal area, another localized topographic depression to the southeast, the currently operating Basin Disposal Inc. (BDI) recycling facility and transfer station to the south, the Zone A landfill treatment system operations yard to the southwest, and agricultural fields to the west and northwest.

The proposed activities are required by Ecology as part of final cleanup activities at the Site (see the Consent Decree, CAP, and SOW) and are required by Washington State Model Toxics Cleanup Act (MTCA) regulations. Activities include:

- Site preparation, including engineering surveys, access road construction, fencing modifications, protection and/or modification of aboveground and belowground utilities, installation of new or use of existing perimeter soil vapor extraction (SVE) wells, modification of SVE conveyance piping and associated condensate management system, installation of engineering controls as needed, and decommissioning of monitoring wells or Zone A monitoring stations.
- Removal and stockpiling of the soil cover materials above the existing Zone A geomembrane cover system for reuse as cover fill material at Zone A.
- Removal and stockpiling of engineered soil fill located below the existing geomembrane for reuse as backfill below the final cover system.
- Excavation of approximately 35,000 drums and drummed waste, drum carcasses, free liquids, waste materials sourced from drums or containers, and/or readily separable, potentially combustible material.
- Temporary waste staging, separation, consolidation, and associated HazCat waste analysis, profiling, and manifesting.
- Waste transport for offsite treatment and/or disposal.
- Backfilling with stockpiled fill material or with clean, granular fill material.
- In situ treatment of remaining contamination within the backfilled excavation pit and underlying soil zone using thermal treatment and vapor recovery systems.
- Installation of a low-permeability geomembrane over Zone A to minimize infiltration and limit direct contact with residual contaminants.

For selected MSW disposal areas, a soil cover investigation will be conducted across approximately 5 acres of the Property. The soil cover will be restored where it is less than 30 inches thick.

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 also be implemented.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The Pasco Sanitary Landfill Site is about 1.5 miles northeast of the City of Pasco, north of the intersection of Kahlotus Road with U.S. Highway 12 in Pasco, Franklin County, Washington. The approximate address is 1901 Dietrich Road. The landfill property covers nearly 200 acres and is surrounded by agriculture and commercial businesses. The Basin Disposal transfer station on Dietrich Road is at the southern end of the landfill. The landfill no longer accepts waste and is closed to the public. Gates, fencing, and signs restrict access to this active cleanup site. Figure 1 illustrates the Site location and Figure 2 illustrates the landfill areas referenced in this document.

The Pasco Sanitary landfill is located in the SE 1/4, of the SE 1/4, of Section 15, and the northeast corner of Section 22, Township 9 North, Range 30 East. The landfill property encompasses the following Franklin County parcels owned by Pasco Sanitary Landfill:

- 113200072 (includes northern 1/3 of MSW Landfill and borrow pit areas northeast of MSW Landfill)
- 113580082 (includes southern 2/3 of MSW Landfill, MSW Landfill operations yard, east-west Burn Trenches, northern portions of north-south Burn Trench, Balefill and Inert Waste Disposal Areas, and portions of the Zone B cleanup area)
- 113580126 (southeast portion of MSW Landfill)
- 113580117 (Zones C/D)
- 113580135 (Zone E)
- 113580091 (northern 2/3 of Zone A, and portions of Balefill and Inert Waste Disposal Area)
- 113510059 (west of Dietrich Road)
- 113580064 (east of Zone E and MSW Landfill)

The following Franklin County parcel at the south end of the landfill is owned by Leonard and Glenda Dietrich:

- 113580037 (includes Basin Disposal Inc. transfer station, the southern 1/3 of Zone A, southern portions of north-south Burn Trench, and portions of Balefill and Inert Waste Disposal Area).

Parcel 113580108 (Zone B) has been removed from the current Pasco Landfill NPL Site. Cleanup activities at this parcel will be performed under a separate Consent Decree as noted above in response A.6. Parcel 113580108 is expected to require a lot line readjustment to encompass the full extent of the new Zone B cleanup site (i.e., Zone B cover and associated perimeter buffer area). Portions of Zone B currently fall within the boundaries of landfill parcel 113580082.

B. Environmental Elements [HELP]

1. *Earth [help]*

a. General description of the site:

(circle one): Flat, rolling, hilly, steep slopes, mountainous, other : flat surfaces at different elevations separated by steeper slopes between landfill areas.

The landfill property is relatively flat to rolling, sloping gently overall from the northeast (high) to the southwest (low). On-property elevations vary from approximately 470 feet above MSL to approximately 375 feet above MSL. The highest elevation areas within the interior of the Site are associated with existing waste disposal areas such as the MSW Landfill and Zone A. The MSW Landfill area rises approximately 30 to 50 feet above the surrounding grades of the Site, whereas Zone A rises 15 to 30 feet above surrounding grades. There are no water bodies adjacent to the Project Area or landfill properties.

b. What is the steepest slope on the site (approximate percent slope)?

The largest maximum relief (approximately 75 feet) occurs between the north end and the crest of the MSW Landfill. The most extensive excavation and grading activities during cleanup action implementation will occur at the Zone A disposal area. The excavation activities at Zone A associated with the planned cleanup activities will temporarily result in steepened side slopes within this waste disposal area.

Along the western side of the Zone A landfill, existing side slopes range from 40% (1:5 V:H) to as steep as 100% (1:1). Some of the steepest slopes occur along the west side of the west evaporation basin just above Dietrich Road. The sloped sides of the Zone A landfill are stable. The top of Zone A has experienced several feet of settlement over the past 7 to 8 years, and localized steep sided depressions 4 to 6 feet deep are present.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Engineered cover material on the top of all covered landfill areas consists of borrowed native soil from the project area, which is mainly fine to medium-grained sand and silty sand. Native soils in the project area consist of up to 10 feet of topsoil derived from very fine wind-blown eolian sand and silt deposits. The surface soil is underlain by 15 to 35 feet of fine-grained unconsolidated sediments representing the Touchet Formation. The Touchet Formation includes thin layered beds of fine- to medium-grained sand and silt. The Touchet Beds are underlain by 15 to 40 feet of Upper Pasco Gravels—fine- to coarse-grained sand with occasional gravel. Below the Upper Pasco Gravel is 10 to 35 feet of Lower Pasco Gravels—medium- to coarse-grained sand with gravel increasing and getting coarser with depth.

The Zone A excavation depth will terminate at the base of waste as determined in the field. The actual depth of waste is expected to vary over the excavation area and generally will terminate within Touchet Bed soils.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

Surface soils in the project area are generally stable, except for localized wind erosion or stormwater erosion (localized rill erosion following large precipitation/runoff events).

Prior to active landfill operations, the existing landfill property is not known to have included any areas of unstable slopes or soils that would be subject to landslides or mass wasting processes. Certain slope conditions (i.e., areas having localized slopes close to or greater than 1:1 V:H) have been created as part of the currently operating facility. Slope stability issues potentially could occur in these isolated areas depending on the specific soil/fill conditions, hydraulic factors, and facility operations.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

It is anticipated that approximately 2,500 CY of gravel and quarry spalls will be brought in to temporarily improve current dirt road surfaces along the north end of Zone A. Fill material will also be placed in and around the fenced area north of Zone A to allow heavy equipment and trucks to transport soil and waste to the cover soil stock pile areas, the waste management area, and offsite for disposal. The new material will be sourced from a local quarry or commercial rock and gravel supplier with requirements that the material is free from invasive species and chemical contaminants.

Excavation activities at Zone A will include the removal of 35,000 drums of industrial waste, drum carcasses, waste materials sourced from a drum or container, free liquids, and/or readily separable (by mechanical means), potentially combustible material. The drums, wastes, and combustible waste materials will be transported offsite for treatment and/or disposal at appropriately permitted facilities. The quantity of waste material to be removed from Zone A is estimated at 15,000 cubic yards.

Contaminated media and mixed debris that do not require offsite treatment and/or disposal and will remain in Zone A will be described in the Zone A Removal Action EDR. Upon completion of the drum and waste debris removal phase, the resulting Zone A excavation pit will be backfilled with the following materials:

- Acceptable categories of solid-phase contaminated materials (drummed or non-drummed wastes)
- Mixed debris containing minimal quantities of potentially combustible material
- Minimally-contaminated engineering soils from Zone A previously excavated, segregated, and stockpiled for backfilling
- Clean Zone A cover soil material, clean imported granular fill, and/or native onsite borrow material needed to establish surface grades prior to initiating in situ thermal treatment

See the response to B.1.c. for native soil descriptions.

Final grading and installation of a low permeability geomembrane at Zone A will be performed in accordance with the post-excavation in situ soil treatment EDR.

For selected MSW disposal areas, including the Balefill and Inert Waste Disposal Areas and the east-west Burn Trenches, the existing soil cover thickness and the limits of waste will be investigated across approximately 5 acres of the Property. Soil cover restoration involves adding material to ensure a minimum thickness of 30 inches. For the purpose of the Focused Feasibility Study (Aspect, 2017), it was estimated that soil cover restoration will require approximately 5,000 cubic yards of on-Property borrow material representing a range of soil types and grain sizes (silt, sand, gravel, cobbles, boulders). Details of the MSW disposal area soil cover restoration work, including anticipated fill/borrow sources, cover system design, and final target grades will be provided in a Soil Cover Investigation and Restoration EDR.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Cleanup-related construction activities will include trenching, excavation, grading, removal of existing cover vegetation, localized heavy equipment soil disturbances, road traffic, onsite soil borrow operations, and creation of temporary soil stockpiles. Any of these activities potentially can increase the potential for soil erosion to occur. Best management practices and applicable erosion control measures will be implemented during all phases of construction to help minimize the potential for water and/or wind-induced soil erosion. These measures will be outlined in the Ecology-approved Removal Action EDR and Compliance Monitoring Plan.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Impervious or low permeability surfaces cover a limited portion of the overall landfill site. The three main areas where impervious/low permeability surfaces or structures are present include:

- Dietrich Road and Basin Disposal facility Areas (asphalt)
- Waste disposal areas with low permeability RCRA-compliant cover systems (e.g., Zones A, C/D, E, and the MSW Landfill)
- Onsite buildings such as the field operations trailer, MSW Landfill Shop, BDI facility structures, SVE blower building, and former NoVOCs operations building

All cover systems over the waste disposal areas will remain in place except for the Zone A landfill cover. The existing Zone A cover system will be removed to accommodate the drum and waste removal activities. After completion of the drum/waste removal work, and subsequent execution of in situ thermal treatment, a new low permeability geomembrane cover system will be installed over Zone A.

Impervious surfaces (asphalt, concrete, buildings, or RCRA-compliant cover systems) are estimated to cover approximately 20% of the landfill property. After the cleanup actions are completed at the Site, the percentage of impervious surfaces will be approximately the same as what currently exists.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

See response to B.1.f above. Appropriate construction best management practices (BMPs) will be utilized for erosion control (water and wind) in all areas subject to earth disturbance (including clearing, grading, stockpiling, and materials or equipment storage). A Stormwater Pollution Prevention Plan will also be prepared as part of the EDR for the project.

2. Air [help]

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

The following conditions or activities associated with the proposed cleanup activities will, or potentially could, result in the emission of site-related hazardous substances or vehicle criteria pollutant emissions to the atmosphere during implementation of the proposed construction/cleanup work:

- Emissions from existing, permitted remedial treatment systems such as the regenerative thermal oxidation (RTO) system used to treat gases and vapors from the Zone A SVE system (further discussed below)
- Allowable, de minimis emissions from the existing MSW Landfill flare unit
- Automobile, truck, and heavy equipment emissions associated with construction and site cleanup operations

Best management practices (BMPs) will be employed to minimize the potential for short-term emissions from the Zone A excavation area during active phases of drum and waste debris removal and during active in situ thermal treatment operations. Potential actions to control vehicle emissions will be addressed as BMPs in the Traffic Control Plan (see also response B.14.h).

Operation of the existing, or upgraded, SVE and regenerative thermal oxidizer (RTO) systems is expected to continue under Approval Order 16AQ-E031. This operating permit limits emissions from the RTO stack to 5% opacity, 10 tons per year (tpy) of hydrogen chloride, 25 tpy of Hazardous Air Pollutants (HAP), and 0.12 pounds per hour of hydrofluoric acid. The permit also requires a volatile organic compound (VOC) destruction efficiency of no lower than 98% or an exhaust concentration of no greater than 20 parts per million by volume (ppmv) as methane, whichever is less stringent. The Approval Order may be amended, if needed, as part of proposed SVE system reconfiguration, which will occur with Ecology approval of an EDR and CMP and prior to commencement of the landfill excavation.

Removal of the Zone A cover system, and excavation of contaminated media and waste from Zone A, has a potential to produce VOC emissions to the air. The SVE system, which will continue to operate during the proposed excavation activities, will create and sustain a negative pressure beneath and around the active work areas. Maintenance of negative gas pressures within the waste and soil zone beneath and around Zone A is expected to minimize the potential for vapor emissions to the atmosphere during excavation.

Engineering controls for air quality will be implemented to ensure protection of workers and the surrounding community. Such controls will include monitoring of onsite and offsite air quality and dust monitoring. Other operational and BMP-based approaches and strategies will be employed to manage and minimize the potential for atmospheric emissions and potential site worker exposure to airborne contaminants during all phases of site cleanup.

A combination of various approaches and strategies will be evaluated within the EDR and will undergo Ecology review and approval. Dust control will be addressed through watering and stabilization of disturbed soils, stockpiles, and roads. Additional dust control measures will be implemented as necessary. Air monitoring will be performed in accordance with Ecology-approved health and safety plans and Compliance Monitoring Plans.

A flare is used to combust landfill gas collected from the MSW Landfill. The loading rates of toxic air pollutants to the flare are below the small quantity emissions rates (WAC 173-460), and continue to decrease over time (Aspect, 2019).

Once the project is completed, potential air emissions from the site are expected to be minimal.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

The BDI Transfer Station, located immediately south of the Zone A landfill, produces variable odors from trash, recycling, and septic handling. Permitted solid waste handling and recycling activities at the BDI Transfer Station are under the jurisdiction of the Benton-Franklin Health District.

Adjacent properties, mainly to the west, produce variable odors from seasonal agricultural activities. It is not anticipated that the agricultural odors will impact the proposed remedial activities, and background air quality monitoring will be conducted during construction.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Construction equipment and vehicles not in use will not be allowed to idle for prolonged periods and will be shut off.

As discussed in the response for 2.a., a reconfigured SVE system will be in operation during excavation and removal activities. The system will create negative pressure in the subsurface, which will reduce or eliminate potential air quality impacts when handling contaminated soil and/or industrial waste within the active excavation zone.

The Ecology-approved EDR and CMP will address specific measures to manage short-term hazards associated with the construction phase of the cleanup action including VOC and odor control. A Health and Safety Plan, Site Perimeter Air Monitoring Plan, Contingency Plan, Performance Monitoring Plan, and Sampling and Analysis Plan are required as part of the Removal Action Compliance Monitoring Plan. The Site Perimeter Air Monitoring Plan will include 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. 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, including:

- Excavation
- Drum and debris handling and storage
- Material segregation
- Waste/debris loading operations
- Setup, construction, and operation of the post-removal in situ soil treatment system
- RTO performance testing
- Installation of the final cover system

The air monitoring will satisfy, in part, the protection monitoring requirements of WAC 173-340-410. The Contingency Plan will include the notification procedures, including the chain of communication, in the event of an emergency and/or a situation that could cause discernable odor impacts or potential airborne chemical exposure to people downwind of the landfill property. The Performance Monitoring Plan will include perimeter and offsite air monitoring activities to ensure that the Zone A removal actions are not adversely impacting air quality in areas immediately surrounding the Site. This includes air monitoring at the nearby BDI Transfer Station located immediately south of the Site, and potentially other offsite air monitoring stations. The Performance Monitoring Plan also will address air quality conditions within the active treatment area.

Influent gas and vapor composition and loading will be monitored and regulated to ensure that RTO emissions do not violate existing air quality permit requirements stipulated in Approval Order 16AQ-E031, or any future amended permit requirements. Annual performance (stack) testing of the RTO unit also will be conducted in accordance with the Approval Order requirements. The Operations and Management (O&M) Plan describes RTO performance testing that is required to verify compliance with existing air quality permit requirements.

3. Water [help]

a. Surface Water: [help]

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

   There are no existing year-round surface water bodies on or in the immediate vicinity of the project area. There are no wetlands or surface water bodies located within at least 1,000 feet. An unnamed ephemeral creek is located approximately 1.8 miles to the east. The closest surface water features are the Snake and Columbia Rivers located approximately 2.5 miles to the southwest and south, respectively. (https://fortress.wa.gov/ecy/coastalatlas/tools/map.aspx?ZoomOptions=County|Franklin)

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

   No.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

Not applicable.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

No. The Site is not within a 100-year floodplain or flood hazard area according to Ecology's Flood Hazard Areas interactive map. https://fortress.wa.gov/ecy/coastalatlas/tools/FloodMap.aspx

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No. There are no waste discharges to surface water associated with the current proposal.

b. Ground Water: [help]

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

No groundwater will be withdrawn from the cleanup site for potable, consumptive use. Groundwater will be withdrawn from on-property and off-property monitoring wells that are used to assess landfill-associated contamination and submitted for laboratory analytical testing. Routine groundwater monitoring involves quarterly and semi-annual sampling and analysis.

No process water or waste water generated during the proposed cleanup work will be discharged to groundwater.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

No waste material will be discharged into the ground. This proposal does not include use of septic tanks, sewage, unlined ponds or trenches, injection wells, etc., to manage waste material.

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow?
Will this water flow into other waters? If so, describe.

Annual rainfall at the Site is low—approximately 8 inches per year. However, during heavy precipitation events or during periods of active snowmelt, localized stormwater runoff could occur at the Site. Asphalt covered areas such as Dietrich Road may experience the most evident surface

runoff. The proposed construction activities will incorporate specific and appropriate BMPs to properly manage the movement, diversion, and localized infiltration of stormwater runoff. An important component of the construction work will be to minimize the amount of stormwater runoff that potentially could accumulate within active excavation areas where contaminants in waste and soil may be present. The BMPs also will be designed, installed, and maintained to minimize the potential for soil erosion associated with stormwater runoff events.

Some Zone A construction activities could occur at the northern edge of the BDI property. A Stormwater Pollution Prevention Plan (SWPPP) will be developed to address stormwater runoff considerations at the nearby Basin Disposal Incorporated (BDI) waste transfer facility at the south end of the Pasco Landfill Site. Drywells are in place at this facility to support the management of stormwater runoff.

Some localized runoff potentially could occur if excess water is used for dust control on interior access roads or construction operations areas. The waste disposal areas at Zones A, C/D, E, and the MSW Landfill have low permeability landfill covers and stormwater detention/evaporation ponds to support the management of seasonal precipitation.

2) Could waste materials enter ground or surface waters? If so, generally describe.

Waste materials will be managed during the cleanup work to minimize the potential for releases to the ground surface. As the excavation activities occur, the potential will exist for some precipitation to infiltrate into the exposed soil or waste materials. As discussed in the response to 3.c.1, the BMPs applied to the excavation and waste handling activities will help prevent the incidental movement or downward transport of site contaminants to groundwater. The project proponents will be responsible for managing any spills or releases of waste materials, including but not limited to fuels, oils, lubricants, and other liquids or solids that are used to support the proposed cleanup activities. The Zone A Removal Action EDR will include preparation of a stormwater runoff management plan.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

The existing topography, soil conditions, and facility development activities have not resulted in the creation of an integrated surface water drainage pattern at the Site. Temporary and final grading during and after construction may modify the existing site topography in localized areas. Any changes to site topography caused by the proposed cleanup activities are not expected to adversely or notably influence existing local-scale drainage patterns.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

See response to 3.c.3. The proposed cleanup activities should not significantly alter the overall local-scale drainage or runoff patterns. BMPs will address runoff and potential infiltration of waste materials. The design for the new Zone A cover system will incorporate engineered stormwater drainage control features such as a detention/evaporation pond(s) similar to the existing Zone A stormwater management system.

4. Plants [help]

a. Check the types of vegetation found on the site:

____deciduous tree: alder, maple, aspen, other
____evergreen tree: fir, cedar, pine, other
_√_shrubs
_√_grass (Engineered vegetative cover is present on all landfill caps [Zone A, C/D, E and MSW landfills])
____pasture
____crop or grain
____orchards, vineyards, or other permanent crops.
____wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
____water plants: water lily, eelgrass, milfoil, other
_√_other types of vegetation (various native and invasive weeds are found throughout the site)

b. What kind and amount of vegetation will be removed or altered?

Engineered vegetative soil cover on the Zone A landfill will be removed during Site preparation for excavation. The vegetation mix on the existing Zone A cover contains a high percentage of invasive species (grasses and forbs). A new vegetative cover will be installed at Zone A following completion of the in situ thermal treatment activities and site regrading. The cover system design and installation will be described in an Ecology-approved Post Excavation EDR and associated CMP documents. The new vegetative cover will incorporate plant species that can tolerate a semi-arid environment, minimize soil erosion, and maximize evapotranspiration from the cover system.

c. List threatened and endangered species known to be on or near the site.

No threatened or endangered species are known to be on or near the areas of proposed activities. The landfill property is not a designated habitat area for active management of threatened or endangered plant species. While the Site itself is not a shrub-steppe community, the Franklin County Comprehensive Plan lists shrub-steppe as a priority habitat in the county. Washington Department of Fish and Wildlife (WDFW) maintains a state-wide Priority Habitats and Species (PHS) List. The list catalogs the habitats and species that are considered to be priorities for conservation and management purposes. Section 5.1.4.2.3 of the City of Pasco 2015 Shoreline Inventory, Analysis and Characterization Report states the following, *"The shrub-steppe habitat common to Eastern Washington and historically prevalent throughout Franklin County provides many ecosystem services including soil stabilization, wildfire moderation, and overall biodiversity…While undisturbed shrub-steppe habitat is rare in the City, disturbed shrub-steppe communities remain in spaces between agricultural fields and adjacent to the rivers, within the shoreline jurisdictional area. Such areas have been affected to various degrees by grazing, invasive plant infestations, agriculture, and development."*

A search of the Washington Natural Heritage Program list of Sections that Contain Natural Heritage Features – Data Current as of July 11, 2018, indicates that no Natural Heritage Features have been identified in any sections of T09N R30E.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

All disturbed vegetation will be replaced in accordance with the Ecology-approved EDRs, CMPs, and work plans to be prepared as required by the CAP.

e. List all noxious weeds and invasive species known to be on or near the site.

A recent vegetation evaluation (Wood Environment and Infrastructure Solutions Inc., 2019) conducted within the former Zone B portion of the Pasco Landfill Site identified a number of noxious weeds and invasive species, including:

- Kochia (Bassia scoparia)
- Cheatgrass (Bromus tectorum)
- Knapweed (Centaurea diffusa)
- Flixweed (Descurainia sophia)
- Tumbleweed (Salsola tragus)
- Saltcedar (Tamarix ramosissima)
- Puncture vine (goathead)

This broad suite of noxious weeds and invasive species likely occurs throughout the Site. Measures to control or eradicate these weeds and invasive species from the new Zone A cover system will be described in the Post Excavation EDR and associated monitoring plans.

Franklin County Noxious Weed Control Board has identified a broad list of Class A, Class B and Class C noxious weeds, and required control actions [see https://fcweedboard.com/noxious-weeds] **.** These control actions would apply to all portions of the Site.

5. Animals [help]

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.

Examples include:

birds: hawk, heron, eagle, songbirds, other: burrowing owl, Canadian geese
mammals: deer, bear, elk, beaver, other: coyote, and rabbits
fish: bass, salmon, trout, herring, shellfish, other _____None_

b. List any threatened and endangered species known to be on or near the site.

No threatened or endangered species are known to be on or near the areas of proposed activities. However, the United States Fish and Wildlife Service lists burrowing owls as a species of concern and the Washington Gap Analysis project lists them as a species-at-risk. The Washington Department of Fish and Wildlife is considering Burrowing Owl for listing.

c. Is the site part of a migration route? If so, explain.

The Site is located in the pacific flyway, but the landfill property does not provide habitat to support migratory birds.

d. Proposed measures to preserve or enhance wildlife, if any:

None.

e. List any invasive animal species known to be on or near the site.

No invasive animal species are known to live at the Site.

6. Energy and Natural Resources [help]

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

The existing SVE system uses electricity to power its various components including pumps, instrumentation, monitoring, data collection, and transmittal equipment. The existing RTO system utilizes natural gas to start and partially fuel combustion and electricity to power various components similar to the SVE system. Proposed activities include reconfiguration of the SVE system. The reconfigured systems will require natural gas and electricity as energy sources similar to the existing systems.

In situ thermal treatment will involve a sizable electrical load to create and sustain the subsurface heating conditions that will be necessary to destroy or vaporize residual contamination beneath Zone A. The in situ thermal treatment may operate for as long as one year or more to accomplish the intended cleanup goals. The overall power consumption requirements will be determined based on the sizing and duration of the in situ treatment system operations.

Existing data loggers installed at Zone A to monitor subsurface temperatures are either battery powered or wired to solar panels that help power these automated monitoring systems.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No, this project will not affect the use of solar energy at adjacent properties, as the proposed activities will not block the sun or create shade on adjacent properties.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

The SVE and RTO systems are optimized and operated to avoid wasting natural gas and electricity. When options are available, and if practical, component selection associated with the proposed cleanup activities will prefer those with lower energy requirements.

7. Environmental Health [help]

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

1) Describe any known or possible contamination at the site from present or past uses.

The Site contains multiple closed MSW and industrial waste landfills and is a USEPA National Priorities Listed (NPL) Site. The proposed work will address remaining contamination in several waste disposal areas and is being conducted in accordance with a state-issued CAP.

A brief summary of the various waste disposal areas and corresponding waste materials disposed in each area is presented below:

- MSW Landfill and Burn Trenches: contains primarily household and commercial garbage.
- Balefill/Inert Waste/Mixed Debris Area: contains household waste, tires, and construction debris. Garbage placed into the Balefill Area was compacted into bales, stacked, and buried.
- Industrial Waste Areas:
  - Zone A: contains an estimated 35,000 55-gallon drums. The drums hold solvent and paint sludges, cleaners, and a broad variety of other hazardous industrial waste.
  - Zone C/D: contains residues from disposal of approximately 3 million gallons of plywood resin waste, wood treatment and preservative waste, lime sludge, cutting oils, paint and paint solvent waste, and other bulk liquid waste. These zones were combined in 2002.
  - Zone E: contains approximately 11,000 tons of chlor-alkali waste, a mercury-enriched barium sludge from paper manufacturing.

Groundwater contamination from the Site has migrated beyond the limits of the landfill property. Contaminant concentrations in these off-property areas currently remain below cleanup levels. A City of Pasco ordinance prohibits consumptive use of groundwater within a designated groundwater protection area. This restriction on groundwater use within the City of Pasco's groundwater protection area will remain in place during and following the proposed site-wide cleanup actions. Any decision to terminate the need for off-property groundwater use restrictions will be made in conjunction with post-cleanup Periodic (5-Year) Reviews prepared by Ecology.

Project environmental field staff and contractors may come into contact with the Site soil, waste, or groundwater. Field staff will be required to have appropriate health and safety training, be enrolled in a medical monitoring program, and have current hazardous waste operations and emergency response training. Protection monitoring during remedy construction will be conducted to provide protection of human health and the environment during the construction and operation and maintenance activities required at the Site.

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

All proposed cleanup activities will involve the development of appropriate health and safety plans. Extensive construction work will be performed to complete the cleanup. This work will involve various degrees of complexity, intrinsic hazards associated with heavy equipment operations, use of electrical and mechanical systems, and the potential for worker exposure to

hazardous substances. Possible exposure hazards associated with each major work task will be evaluated, and appropriate risk mitigation measures will be described, as part of the health and safety plan development process.

Major cleanup-related activities include (but are not limited to):

- Site preparation and access road construction
- Site grading, cover system removal, and material stockpiling
- Soil and waste excavation
- Drum and waste removal, staging, testing, and offsite transport
- Drilling, well decommissioning, and well installation
- Vapor Recovery system installation and operation
- Vapor treatment system operations and monitoring
- In situ thermal treatment
- Test pitting and trenching
- Cover system installation

The Ecology-approved EDR and CMP will include requirements for hazard categorization, drum handling, and management of waste excavated from Zone A. The designs and plans will go through Ecology review and will be subject to approval before implementation.

Soil contamination may be encountered during intrusive activities such as drilling or excavation work. Contaminated groundwater may be encountered when drilling new wells or decommissioning existing wells. As noted above, any activity that potentially could result in a potential exposure to hazardous substances or hazardous conditions will be addressed in the Health and Safety Plans.

A high-pressure natural gas line travels through the Site, including the southwest corner of Zone A. Excavation near the natural gas pipeline will require coordination with Cascade Natural Gas to protect the line. Planning documents required for Zone A work will include design considerations related to this pipeline. High voltage overhead power lines also are present in the vicinity of Zone A, and appropriate measures will be required to work safely around these areas.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

The proposed cleanup work will be conducted at a contaminated site in an effort to remediate impacts to the environment from chemical wastes. Several categories of wastes containing various types of hazardous substances will be temporarily stored onsite. These materials will be placed within appropriately constructed and managed holding/staging areas prior to shipping these materials offsite for final treatment and disposal. Remedial activities such as SVE system operation will generate various types and quantities of investigation-derived wastes, including SVE condensate that contains various hazardous substances. Other activities such as drilling and well installation, groundwater sampling, and miscellaneous earth-moving activities potentially will

generate investigation-derived wastes that will require proper testing and management. See also the responses to B.7.a.1 and B.7.a.2 above.

4) Describe special emergency services that might be required.

No special emergency services are expected to be required as a result of implementing the project. Construction-related accidents or injuries may require response from local fire, police, air units, or ambulances. The work includes potential exposure to toxic and hazardous chemicals, work around heavy machinery, and potential fire or explosion from material handling and treatment system operation. Potential hazards will be evaluated, and safety controls will be required, as part of the engineering design and preparation of planning documents and operations manuals. Any emergency services that may be needed during the work will be identified and coordinated with emergency response agencies or personnel.

5) Proposed measures to reduce or control environmental health hazards, if any:

The CMP, which includes a health and safety plan, integrated contingency plan, and performance monitoring plan will address health hazards for Site workers and the public, as well as protocol for emergencies, and will be prepared for Ecology approval before starting work on each phase of the cleanup activities. The plans will evaluate potential hazards for each task and establish controls for any hazards identified for Site workers as well as any potential offsite receptors.

Control measures expected to be implemented include: HAZWOPER training for Site workers and medical clearance as required; Site security and access controls; air monitoring with action levels for dust and VOCs within Zone A and at the perimeter; engineering controls including operation of the SVE system, to create negative pressure inside Zone A, and others as needed to minimize exposure; stormwater runoff management; a spill response plan; personal protective equipment; vehicle and personnel decontamination; containment of stockpiled materials and waste handling; and treatment and disposal at permitted facilities.

See also response to B.7.a.2 above.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

The Site includes zoned areas within the City of Pasco and zoned areas lying within unincorporated Franklin County. Areas within the City of Pasco municipal boundaries are zoned light industrial (I-1). Areas within Franklin County are predominantly zoned for Agricultural Production (20 Acres). On-property areas are zoned for light industrial or agricultural production. The nearest business operation (Basin Disposal Inc. Transfer Station) includes truck and heavy equipment traffic during normal business hours. Some noise also is generated at nearby properties associated with seasonal agricultural activities. Noise coming from these adjacent properties is not expected to adversely affect the proposed cleanup activities.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

The proposed cleanup activities will result in temporary short-term increases in ambient noise levels at the Site associated with the use of construction equipment and/or heavy truck traffic. The project construction hours may vary seasonally, but all work will conform with local ordinances and restrictions on noise generation and allowable work hours. Traffic activities will largely be restricted to Dietrich Road, the nearby frontage road (N. Commercial Ave), and State Highway 12, located approximately one mile south of the landfill site. While the Zone A SVE system and RTO create some noise onsite from operation of blowers and fans, the noise from these systems is not deemed excessive or incompatible with existing land uses in the area. No long-term contributions to area noise levels should result from the completion of the proposed cleanup work.

3) Proposed measures to reduce or control noise impacts, if any:

Some natural sound buffering is afforded, in part, by the location of the cleanup site. The proposed activities will be performed in an area surrounded by agricultural fields to the west, north, and east. Besides the BDI facility directly south of the landfill, the next closest business is located at least 1,400 feet (greater than ¼ mile) away from the main gate to the landfill.

Short-term noise from construction activities will be mitigated by the use of BMPs and will adhere to the City of Pasco noise ordinance requirements. Use of a temporary cover structure over the active drum removal area will lessen potential noise from within the active construction area. Work hours may be adjusted to compensate for certain weather conditions (i.e., high heat) and/or seasonal changes in daylight to ensure safe working conditions. All work activities will be conducted in a manner that minimizes, to the extent possible, the potential for adverse noise impacts associated within onsite construction activities and offsite truck and vehicle traffic. There are no long-term noise mitigation measures proposed because the project will not change existing use.

8. Land and Shoreline Use [help]

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

The project area is currently a closed landfill subject to remedial actions under MTCA. The adjacent properties to the west, north, and east are used for agricultural purposes. One adjacent parcel to the east of the Pasco Landfill Site (Zone B) will be managed as a separate MTCA cleanup site. The BDI recycling facility and transfer station is located directly to the south. The proposed cleanup activities will require careful coordination with the BDI operations to minimize the potential for short-term interruption of transfer station services. Similarly, close coordination with local entities conducting seasonal agricultural activities in fields adjacent to the landfill will be necessary (e.g., when groundwater monitoring activities are scheduled to occur within off-property monitoring wells). Once the proposed cleanup activities are implemented, the landfill property will continue to be managed over the long-term as an actively monitored landfill site. If an alternative future land use activity is proposed for the landfill property (other than the proposed landfill cleanup and closure activities), the activity must comply with existing city and county land use and zoning restrictions,

comply with limitations imposed by environmental covenants on affected parcels, and be limited to uses that would not adversely affect nearby or adjacent properties.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or non-forest use?

The landfill property is partially undeveloped. The developed portions have been used for landfill operations since the 1950s. None of the existing landfill property will be used for, or converted to, a working farmland, and none of the Site would designate as forest land of long-term commercial significance.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

Normal business operations on the working farmland surrounding the project area will not be interrupted by the proposed work. Access to farm roads surrounding the landfill properties will not be impacted, as the fields have their own road system that does not require access from Dietrich Road or the landfill. See also response B.8.a.

c. Describe any structures on the site.

There are two small buildings within the SVE equipment compound on the west side of Dietrich Road (Figure 2) that contain treatment system equipment and associated materials for system operation and maintenance. A trailer used by operations and maintenance staff at the Site is located north of the equipment yard. A large maintenance building, located at the west end of the east-west burn trenches (BT-1) and within the fenced yard north of Zone A, is used by the property owner. Two smaller buildings located adjacent to the large shop building are unused. Several buildings and structures also are present on the BDI transfer station property located immediately south of Zone A.

d. Will any structures be demolished? If so, what?

None of the structures will be demolished as part of the proposed activities.

e. What is the current zoning classification of the site?

The Site includes zoned areas within the City of Pasco and zoned areas lying within unincorporated Franklin County. Areas within the City of Pasco municipal boundaries are zoned light industrial (I-1). Areas within Franklin County are predominantly zoned for Agricultural Production (20 Acres). On-property landfill areas are zoned for light industrial or agricultural production.

f. What is the current comprehensive plan designation of the site?

The Site is outside the urban growth boundary for Pasco. The comprehensive plan designates property use as the same as the current zoning.

g. If applicable, what is the current shoreline master program designation of the site?

Not applicable. The Site does not include a shoreline and is located more than 2 miles from the Columbia and Snake Rivers.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

No.

i. Approximately how many people would reside or work in the completed project?

Zoning in the project area does not allow residential use. Completion of project activities will reduce the number of workers needed to monitor and maintain the landfill. There will be only part-time worker presence after the cleanup work is completed.

j. Approximately how many people would the completed project displace?

None.

k. Proposed measures to avoid or reduce displacement impacts, if any:

None.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The proposed activities are part of a site-wide remedial action that will be conducted in accordance with an Ecology Cleanup Action Plan. Once completed, the landfill facility will remain in a non-operational status. As noted in response B.8.a, any projected future land use activity that may be proposed for the landfill property (other than the proposed landfill cleanup and closure activities) must comply with existing city and county land use and zoning restrictions. Other future land use considerations include limitations imposed by environmental covenants on affected parcels and constraints on activities or uses that potentially may affect nearby or adjacent properties.

Long-term cleanup remedy effectiveness will be evaluated in conjunction with routine periodic (5-year) reviews. These reviews also will assess, as applicable, any possible changes to proposed uses or activities at the Site that may be driven by local zoning or land use planning changes. Long-term stewardship/custodial care of the landfill property potentially could include activities or uses not currently planned or envisioned. Any future uses, beyond perpetuation as an inactive former landfill operation, would need to ensure that the long-term integrity and functionality of the cleanup action containment remedies are not adversely affected.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

The proposed cleanup activities are not anticipated to cause adverse impacts to nearby agricultural lands. Management of invasive plant species as part of routine, long-term site management will help minimize the potential for adverse impacts to adjacent agricultural lands. See also response B.4.e.

9. Housing [help]

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

Not applicable. This proposal does not involve housing of any kind and is located in an area that is zoned for industrial and agricultural use.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

Not applicable. This proposal does not involve elimination of housing.

c. Proposed measures to reduce or control housing impacts, if any:

Not applicable.

10. Aesthetics [help]

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

A temporary structure may be used during excavation that may have a peak height of approximately 50 feet; however, no new long-term structures are proposed as part of this project. Existing structures described in response B.8.c likely will remain following completion of the proposed cleanup/construction work.

b. What views in the immediate vicinity would be altered or obstructed?

The aesthetics may be improved after Zone A excavation in that the anticipated final surface will be lower in elevation and potentially more level with Dietrich Road.

c. Proposed measures to reduce or control aesthetic impacts, if any:

As noted above in response B.10.b, the proposed activities, and resulting changes in post-construction appearance, are not expected to adversely affect existing visual aesthetics. The proposed work is in an area zoned primarily for industrial and agricultural use. There are very few neighboring businesses, and access to the landfill property itself will be restricted to avoid nuisance or casual trespass. The nearest business is the BDI Transfer Station.

11. Light and Glare [help]

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Use of lighting may be needed to perform work on short winter days or during evening and night-time hours to avoid worker exposure to high temperatures and heat stress during the summer. Light glare will be minimized during night hours by controlling light intensity, concentration, positioning, or bulb shielding.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

There will be no light or glare after project completion.

c. What existing off-site sources of light or glare may affect your proposal?

None.

d. Proposed measures to reduce or control light and glare impacts, if any:

There will be minimal to no impact from light or glare during the proposed activities. Any artificial lighting used to extend winter hours or control sun exposure and heat stress during summer will be used before and after general working hours for adjacent facilities. Lighting will be focused on work activities and not directed offsite.

12. Recreation [help]

a. What designated and informal recreational opportunities are in the immediate vicinity?

This proposal is located in an area that is zoned primarily for industrial and agricultural use. There are no designated recreational facilities within the immediate vicinity. The property west of the PSL Site is agricultural farmland and reportedly is used seasonally for bird hunting.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No. The property is a restricted NPL site and the proposed work will not displace any potential informal recreational uses that may occur within nearby agricultural properties.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

As noted above in response B.12.b, the proposed project will not result in adverse impacts to any informal recreational uses that may occur within adjacent or nearby agricultural properties. No measures to reduce or control potential impacts to these informal recreational uses are included or necessary.

13. Historic and cultural preservation [help]

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.

No, the Site does not contain any known or existing buildings, structures, or sites that may be eligible for listings in national, state, or local preservation registers. The 1993 Phase I Remedial Investigation Report included a review of historical (pre-1955) aerial photographs to help document pre-landfill conditions. These historical photographs show that the landfill property originally included open, undisturbed grassland along with stabilized and active sand dunes in selected areas. A recent search of the Washington Information System for Architectural and Archaeological Records Data (WISAARD) webpage indicates there are no known features eligible for listing or preservation.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

No. The property has been used exclusively for waste disposal operations since the 1950s, and there are no known features of cultural importance on the landfill property. Historical aerial photos and existing site documentation do not indicate evidence of historic use or occupation before this time.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

As mentioned above, historical aerial photographs dating back to 1955 and recent WISAARD search results show no development other than landfill operations and agricultural use at the Site.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

Because there are no known areas of cultural or historic significance, no measures are necessary to control impacts associated with the planned construction activities.

14. Transportation [help]

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

The main access and egress route into and out of the landfill property is via Dietrich Road. Dietrich Road intersects with N. Commercial Avenue approximately 2500 feet south of the gated entrance to the landfill property. The most direct access to State Route 12 is via Pasco Kahlotus Road located approximately 750 east-southeast of the N. Commercial Avenue/Dietrich Road intersection. An alternative vehicle route also could include access to or from Highway 395 via N. Commercial Avenue and Commercial Avenue. The access ramp to Highway 395 via this route is approximately 2.2 miles northwest of the N. Commercial Avenue/Dietrich Road intersection.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

No, the area and Site are not currently served by public transit. The Site is on private property and not intended to be accessible to the general public. The nearest public transit stop is approximately 1.5 miles from the property.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

No parking will be added or eliminated other than temporary parking on the landfill property during the active construction phase of the project.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle, or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

The project will not require any new or improved existing roads, streets, pedestrian, bicycle, or state transportation facilities. Local access roads within the landfill property interior may be improved or

modified to best facilitate the proposed construction/cleanup activities and promote safe vehicular traffic flow.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

The project will not use water transportation. Air transport may be used to ship laboratory samples. The nearest airport is the Tri-Cities Airport located at 3601 N 20th Ave, Pasco, WA. The airport is located approximately 3 miles west of the landfill property. The use of rail transport to support the proposed construction/cleanup activities is not anticipated at this time.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and non-passenger vehicles). What data or transportation models were used to make these estimates?

There will be no additional vehicular trips generated as a result of the completed project. Construction will result in a temporary increase in traffic volumes due to haul trucks removing waste materials from the Site, and the transport of equipment and materials into the Site to support the planned cleanup operations. During construction, approximately 15,000 CY of waste material is anticipated to be transported from the Site by truck and trailer to appropriately permitted facilities. This will result in approximately 750 truck trips during an approximate 15-month construction season.

g. Will the proposal interfere with, affect, or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No, the project is not expected to adversely interfere with other traffic in the area. Similarly, the project is not expected to be adversely affected by existing agricultural activities that seasonally may involve vehicle transport along Dietrich Road. Seasonal harvest activities can result in increased truck traffic along N. Commercial Avenue. The anticipated amount of additional vehicle traffic generated by the project activities is not expected to impact the movement of agricultural products from nearby facilities on Dietrich Road or other nearby roads.

h. Proposed measures to reduce or control transportation impacts, if any:

A traffic control plan will be developed as part of the overall suite of construction documentation to establish safety procedures and operational protocols that will address the full spectrum of vehicle-related activities (both on-property and off-property) associated with the proposed project. No specific measures to control or reduce potential impacts on local transportation caused by the proposed construction/cleanup activities are anticipated.

15. Public Services [help]

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

No. This is not a development project. No additional public services will be needed beyond those currently used.

b. Proposed measures to reduce or control direct impacts on public services, if any.

There are no expected impacts on public services.

16. Utilities [help]

a. Circle utilities currently available at the site:
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other _____

The Site is serviced with electricity by Franklin County PUD and natural gas from Cascade Natural Gas. BDI services the portable toilet onsite. The number of units and frequency of service will be increased to accommodate workers for this project. Current refuse service consists of a combination of scheduled refuse service and use of the BDI facility across the street for non-dangerous non-hazardous waste and recycling.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

There is currently no municipal water service at the project area. The proposed construction/cleanup activities will use a combination of water trucks and metered water from the fire hydrant located immediately south of the BDI facility. The water from the fire hydrant is provided by the City of Pasco municipal water system. No additional services are currently anticipated.

C. Signature [HELP]

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: 

Name of signee Jessi Massingale

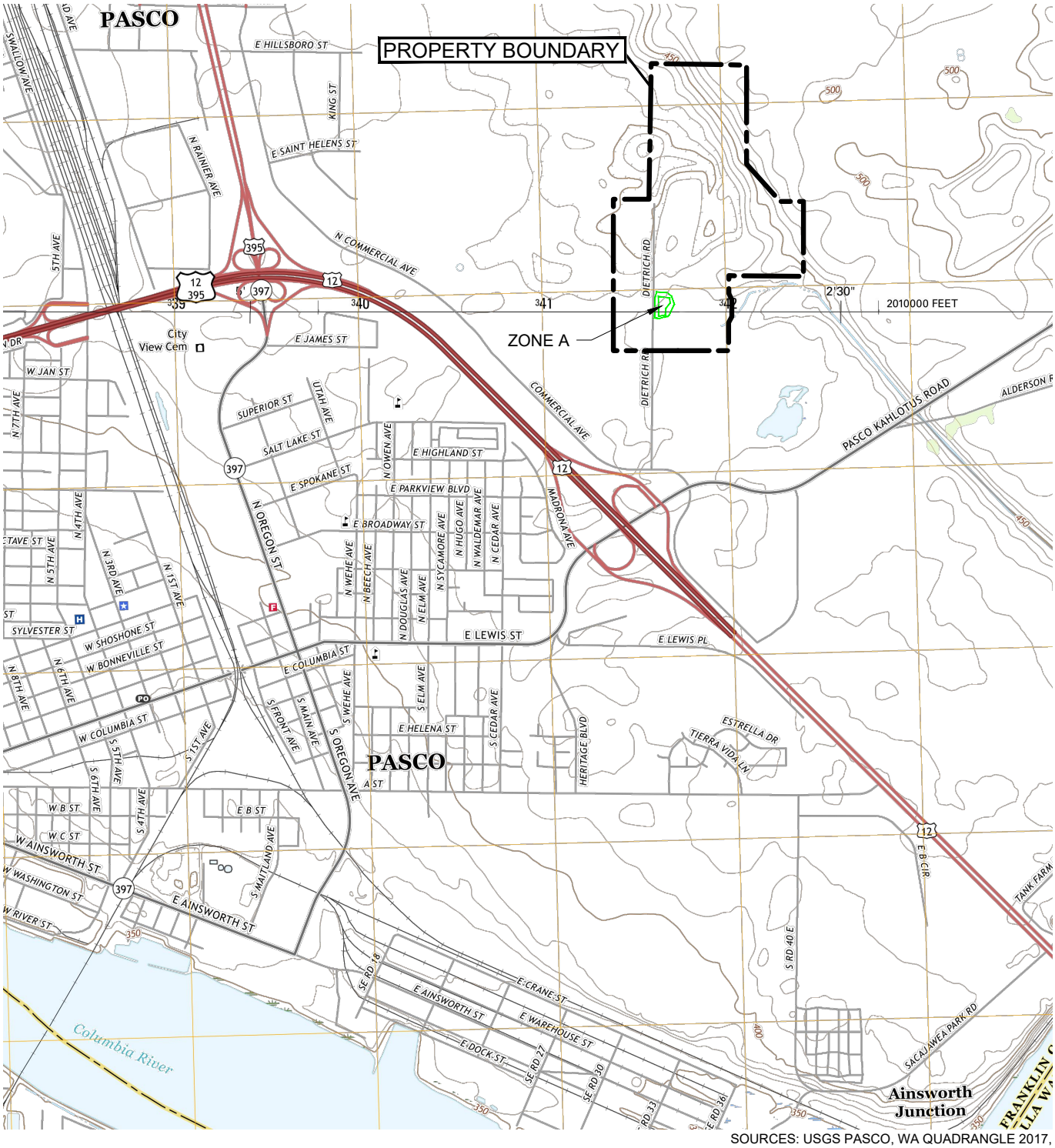
Position and Agency/Organization Project Coordinator, IWAG

Date Submitted: August 27, 2019

D. Supplemental sheet for nonproject actions [HELP]

(**IT IS NOT NECESSARY** to use this sheet for project actions)

The supplemental questions for non-project actions have been deleted.



SOURCES: USGS PASCO, WA QUADRANGLE 2017,
USGS GLADE, WA QUADRANGLE 2017.

Scale 1" = 1/2 MILE

0' 1/4 mi 1/2 mi 1 mi

PREPARED FOR: IWAG GROUP III

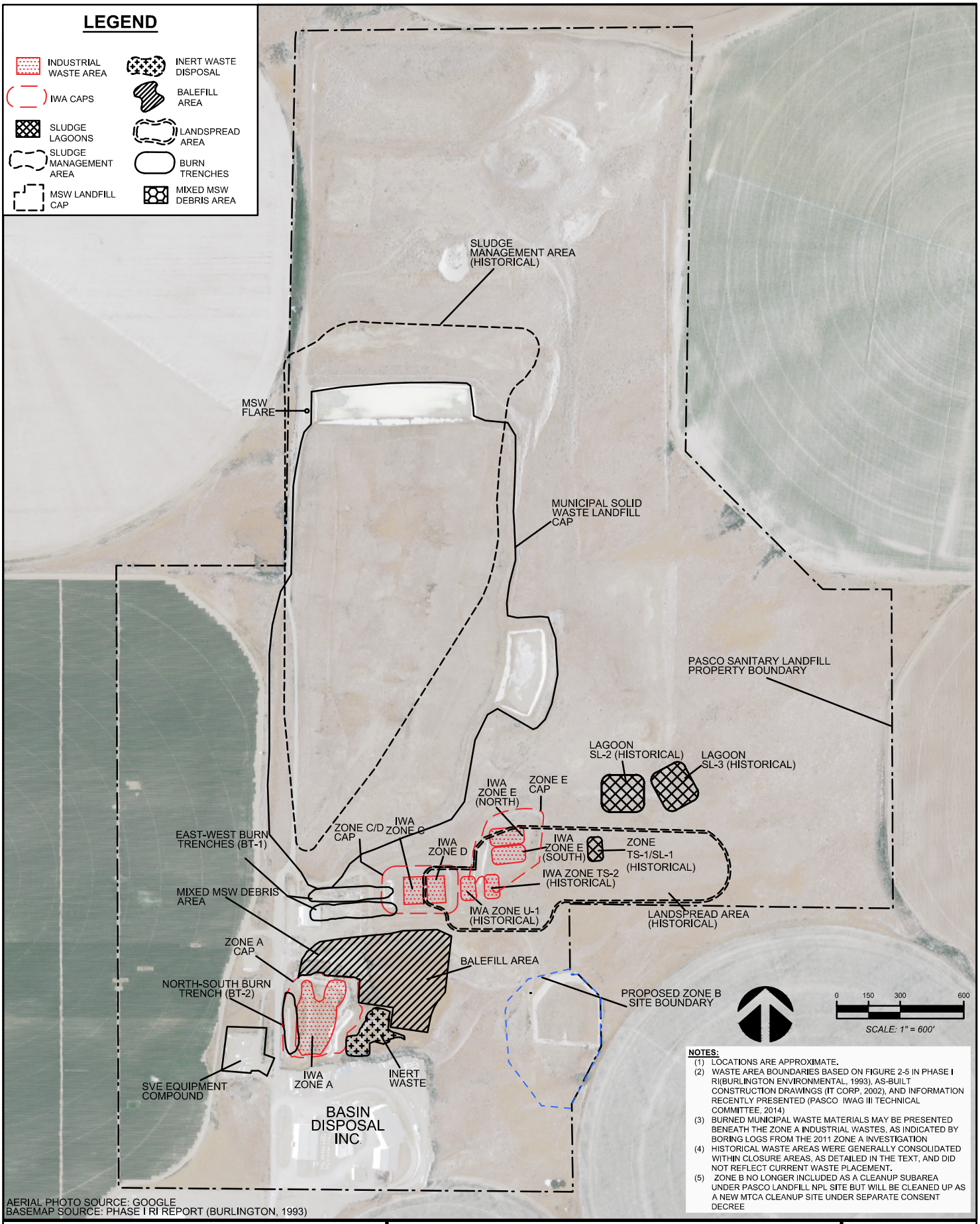
PBS

SITE LOCATION MAP

PASCO LANDFILL NPL SITE
PASCO, WASHINGTON

JUN 2019
64180.019

FIGURE
1

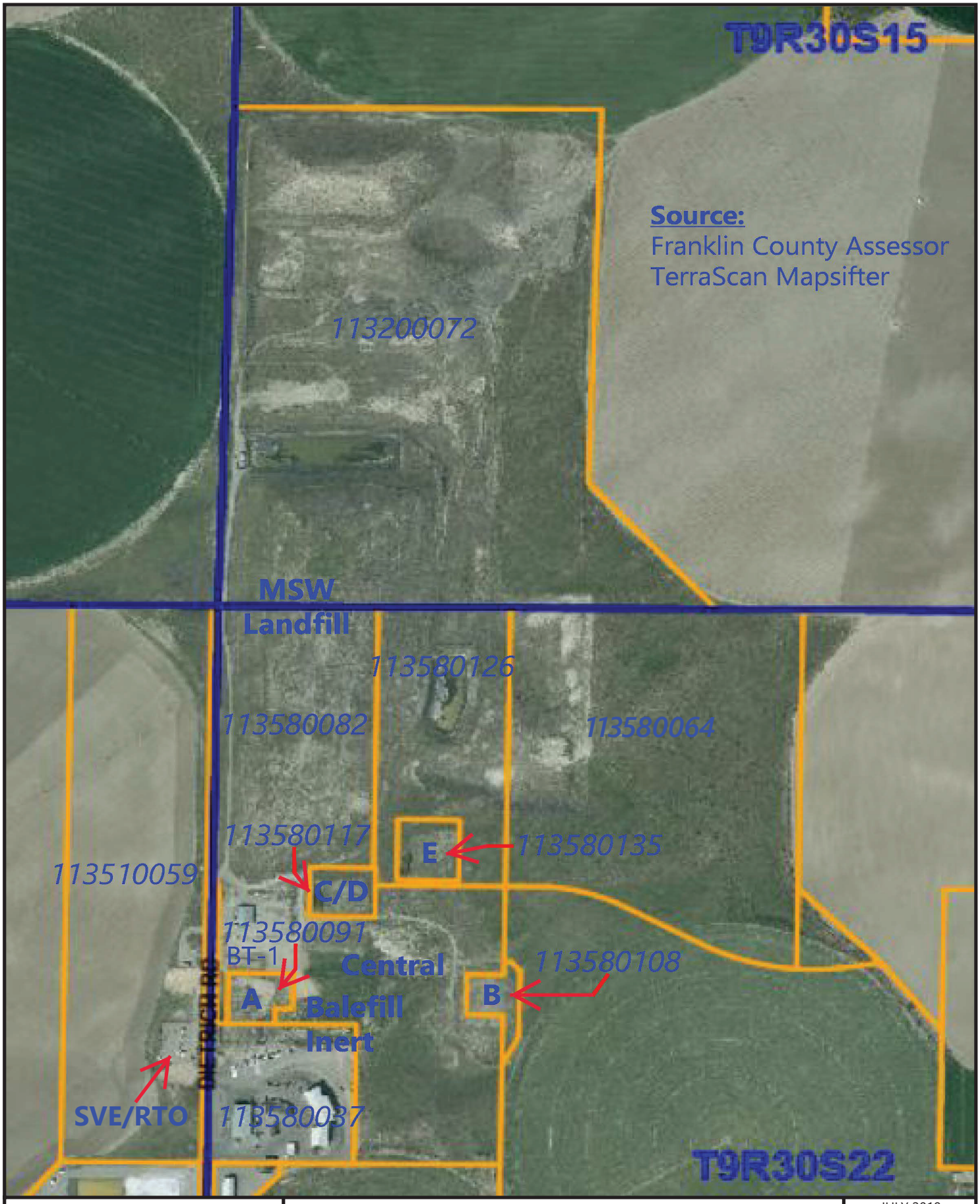


AERIAL PHOTO SOURCE: GOOGLE
BASEMAP SOURCE: PHASE I RI REPORT (BURLINGTON, 1993)

PBS Engineering and Environmental Inc.
400 Bradley Blvd, Ste 300
Richland, WA 99352
509.942.1600
pbsusa.com

PASCO LANDFILL PROPERTY

PROJECT: 64180
DATE: JULY 2019
FIGURE: 2



PBS	**FRANKLIN COUNTY PARCEL MAP** PASCO LANDFILL NPL SITE PASCO, WASHINGTON	JULY 2019 64180.019 FIGURE 3