WAC 197-11-960 Environmental checklist.

ENVIRONMENTAL CHECKLIST

Purpose of checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

Upgrades to Soil Vapor Extraction System at Zone A

Pasco Sanitary Landfill (PSL) Project Area

Pasco, Washington

2. Name of applicant:

Industrial Waste Area Generators – Group II (IWAG)

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

Richard A. DuBey, Chairman, IWAG Steering Committee

Phone: 206-470-3587

rdubey@scblaw.com

Address:
Short Cressman and Burgess, c/o Mr. Richard DuBey,
999 Third Avenue, Suite 3000
Seattle, Washington 98104-4088

Primary Contact Person:
Thomas C. Morin, L.G., Project Coordinator for IWAG
Phone: 425-395-0010
thomm@epi-wa.com

Address:
Environmental Partners, Inc.
295 NE Gilman Blvd., Suite 201
Issaquah, WA 98027

4. Date checklist prepared:

June 11, 2010

5. Agency requesting checklist:

Washington State Department of Ecology, Eastern Region (Ecology).

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

Work will commence upon Ecology issuance of a Threshold Determination and completion of the required public comment period. A project schedule is presented as Figure 13 of the Draft Final Phase II Additional Interim Actions Work Plan, Volume 1 – Soil Vapor Extraction System Upgrades and Start-Up Testing with Monitoring Well Installation, prepared by EPI and submitted to Ecology on May 14, 2010 (Work Plan), which is included as Attachment A to this SEPA Checklist. SVE upgrade field construction is expected to commence in summer 2010.

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

No future additions or expansions are planned at this time. The upgraded soil vapor extraction (SVE) system will be operated and monitored as part of ongoing interim remedial actions at the PSL Project Area.

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

1. Final Phase II Additional Interim Actions Work Plan, Volume 1 – Soil Vapor Extraction System Upgrades and Startup Testing with Monitoring Well Installation (Work Plan), prepared by EPI and dated May 14, 2010 (Attachment A);

2. 100% Submittal Engineering Design Report for SVE System Upgrades, (100% EDR) and Response to Ecology Comments letter prepared by EPI and submitted to Ecology on March 19, 2010;

3. Conditionally approved 2008 Annual Report, Ground Water Monitoring and Phase I of Additional Interim Actions, prepared by EPI and submitted to Ecology on May 20, 2009.

4. Draft 2009 Annual Report, Ground Water Monitoring and Interim Action Performance Monitoring, prepared by EPI and submitted to Ecology on April 16, 2010.

A large number of additional documents are on file with Ecology regarding past and proposed work at Zone A of the PSL Project Area. These documents are too numerous to list herein. A comprehensive list of all publically available documents regarding this Project Area may be found by contacting Ecology's Public Disclosure Coordinator, Kari Johnson, in Ecology's Eastern Region Office at:

E-mail: kari.johnson@ecy.wa.gov
Phone: 509-329-3415

or by contacting Ecology's Site Project Manager, Mr. Chuck Gruenenfelder at: (509) 329-3439.

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.

Additional interim action work will occur at Zone A in concert with the proposed SVE system upgrades and pilot testing. EPI has prepared a draft Work Plan titled: "Draft Phase II Additional Interim Actions Work Plan Volume 2 – Sub-Zone A Investigation, Downgradient Well Installation and Cap Maintenance" and dated March 31, 2010. The draft document is currently undergoing Ecology review.

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

1. Compliance with the State Environmental Policy Act;

2. Approval of Draft Final Phase II Additional Interim Actions Work Plan, Volume 1 – Soil Vapor Extraction System Upgrades and Startup Testing with Monitoring Well Installation, prepared by EPI and dated May 14, 2010 (approved May 27, 2010);

3. Approval of the 100% Submittal Engineering Design Report for SVE System Upgrades, prepared by EPI and submitted to Ecology on March 19, 2010.

4. A City of Pasco Right of Way Permit will be required to perform work in the Right of Way during trenching work across Dietrich Road.

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.)

Zone A is an approximately 350 foot long by 150 foot wide north/south trending generally rectangular landfill with an approximately 150 foot long by 100 foot wide trapezoidal node that protrudes eastward from the northeast corner of the landfill. Zone A was covered with an engineered high-density polyethylene liner (liner) and earthen cap in 2002 to cover buried 55-gallon drums of mixed industrial waste, primarily contaminated with volatile organic compounds (VOCs). The scope of work outlined in this proposal consists of upgrades to a currently operating interim SVE system at the Site to improve the capture of VOCs from the subsurface beneath Zone A, further reducing the potential for associated ground water contamination. These upgrades are proposed to address the limitations of the current interim SVE system. The current interim SVE system is performing as it was intended and is removing VOCs at a rate sufficient to reduce or eliminate the pathway for the migration of subsurface vapors to ground water. However, the current interim system uses recovery wells that are located outside of the HDPE liner and which are screened at only one depth. The proposed upgrades will provide a more robust system with sufficient flexibility to remove vapors from multiple depths, with SVE wells situated within the footprint of Zone A to draw soil vapors towards the areas of buried waste, rather than away from the waste as it does in its current configuration.

Site work will consist of the installation of two deep, two intermediate and two shallow SVE wells, one intermediate and one deep soil vapor monitoring well, and two shallow ground water monitoring wells. These wells will be installed through the engineered cap system and will be sealed to the liner. Additionally, a total of ten shallow vapor-monitoring points will be installed through the liner to monitor vapor conditions immediately beneath the liner.

Piping will be connected to the newly installed wells to convey the vapors from beneath Zone A to a treatment compound located west of Zone A and Dietrich Road. Two of the existing SVE wells will be disconnected from the piping system, and their associated moisture separators will be removed and relocated downstream of the newly installed vapor recovery wells. SVE vapor effluent will continue to be treated at a methane flare located at the closed Municipal Solid Waste landfill located on the PSL Site.

This Site use will continue unchanged, which is for the continued monitoring of environmental Site conditions and the operation and maintenance of the active remediation equipment. Additional work outside of Zone A will be performed within an approximately 100 foot wide (north to south) area north of the northern fence line of Zone A. This approximately 100 foot wide area is bounded to the north by another fence line. This small area will be primarily used for staging equipment and as a decontamination area for workers leaving the exclusion zones. Other work outside of the Zone A fence line will include the below-ground trenching and installation of (3) 6" pipes from Zone A, westerly across Dietrich Road to a separately fenced equipment compound. The work to be conducted for piping installation, including sufficient room to maneuver equipment, will be approximately 20 feet wide (north/south) and will be approximately 115 feet long (east/west). Two other small areas immediately surrounding the existing SVE well locations VEW-01 and

VMW-02D, both west of Dietrich Road, are considered part of the Project Area. Figure 2 shows the location of the wells to be installed and the proposed piping network.

The Phase II AIA - Volume 1 Work Plan is included as an attachment to this Checklist. A Draft 100% Engineering Design Report (currently under Ecology review) has also been prepared and can be made available upon request.

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.

Zone A is an approximately 1.6 acre portion of the 46.52-acre PSL. For the purposes of this SEPA Checklist, Zone A and the immediately adjacent areas are considered the Project Area. The Project Area is located in the southwest quarter of Section 15, the northeast quarter of Section 22, Township 9 North, and Range 30 East. The southwest corner of Zone A is located approximately 700 feet east and 600 feet north of the southwest property corner. The Project Area is made up of three separate parcels. All of Parcel Number 113-580-091 is included in the proposed scope of work. Only portions of Parcel Numbers 113-580-082 and 113-580-037 are included in the proposed scope of work. The legal descriptions of the three parcels are provided below:

Parcel Number: 113-580-091

This parcel is owned by the Pasco Sanitary Landfill. The Legal Description is: TR-1 PTN W2NW4 22-9-30 DAF: COMM AT SW COR SD SUBD; TH N01D05'E ALG W LN 908.81'; TH S88D54'E 77.91' TO TPOB; TH CONT S88D54'E, 295'; TH S01D05'W 167'; TH N88D54'W 79'; TH S01D05'W 73,95' TO N LN OF SW4SW4NW4 OF SD SEC; TH N89D35'W ALG SD N LN 216.02

Parcel Number: 113-580-082

This parcel is owned by the Pasco Sanitary Landfill. The Legal Description is: WW 44 RODS NW4NW4 & E2SW4NW4 & 22-9-30 NW4SWNW4, EXC TRS 1, 2 & 3.

Parcel Number: 113-580-037

This parcel is owned by Leonard and Glenda Dietrich. The address for this parcel is 1721 Dietrich Road. The Legal Description is: SW4SW4NW4 22-9-30.

Figure 1 of the SEPA Checklist shows the general location of Zone A with respect to other areas of the PSL.

Additional work outside of Zone A will be performed within an approximately 100 foot wide (north to south) area north of the northern fence line of Zone A. This approximately 100 foot wide area is bounded to the north by another fence line. This small area will be primarily used for staging equipment and as a decontamination area for workers leaving the exclusion zones. Other work outside of the Zone A fence line will include the below-ground trenching and installation of

(3) 6" pipes from Zone A, westerly across Dietrich Road to the equipment shed. The work conducted in this piping area, including sufficient room to maneuver equipment, will be approximately 20 feet wide (north/south) and will be approximately 115 feet long (east/west). Two other small areas immediately surrounding the existing SVE well locations VEW-01 and VMW-02D, both west of Dietrich Road are considered part of the Project Area. Figure 1 shows the SVE conveyance line from the SVE equipment compound to the flare. Figure 2 shows the locations of the proposed SVE wells, and conveyance piping from the wells to the SVE equipment compound.

B. ENVIRONMENTAL ELEMENTS

1. **Earth**

a. General description of the site (circle one): Flat, **rolling**, hilly, steep slopes, mountainous, other . . . . . .

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

The steepest slope at the Project Area is approximately 28% on the western shoulder of Zone A between the crest of a berm on the cap and the western evaporation basin. This slope is engineered, vegetated, and stable.

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 prime farmland.

The surface soils at the Project Area are generally a sandy loam topsoil. The uppermost named soil unit at the Project Area is the Touchet Beds, which are generally encountered at or near the surface immediately beneath the topsoil cover. The Touchet Bed soils are typically gray-brown, poorly graded, fine- to medium-grained sands that can be locally silty and gravelly.

The Pasco Gravels underlie the Touchet Beds, and consist two subunits; The Upper Pasco Gravels and the Lower Pasco Gravels.

The Upper Pasco Gravels are a gray to dark gray, mostly unconsolidated silts, sands, and gravels. The Upper Pasco Gravels are generally described as fine- to medium-grained sands with the percentage of gravel increasing with depth. The Lower Pasco Gravels immediately underlie the Upper Pasco Gravels and are generally sandy gravel to gravelly sands.

The property on which the Project Area lies is bounded to the west by farmland, however operations associated with the work to be conducted at Zone A will be in excess of approximately 500 feet from the western property boundary.

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

No.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

SVE piping that is placed on the landfill cap will lie on the ground surface. Some shallow surface grading may be performed on the cap, and limited sand bedding may be used as necessary to eliminate low spots in the pipe and maintain a consistent slope. The width of the graded areas will be sufficient to allow for the natural lateral movement induced by thermal expansion and contraction of the pipe. The addition of sand bedding material will be avoided as possible, however up to a maximum of 45 tons (30 cubic yards) of sand may be added to address the issues mentioned above. The source of the sand bedding material is undetermined at this time but will be imported from a locally available commercial source.

Minor grading activities will be performed at the northeast corner of Zone A to allow for drill rig access to the top of the Zone A landfill. The maximum anticipated quantity of structurally suitable fill material to be imported for this purpose is estimated to be approximately 100 tons (68 cubic yards), and will consist of a locally supplied sand and gravel borrow material in addition to quarry spalls, if deemed necessary, to stabilize the access and support the weight of the drilling and excavation equipment. The source of the fill material is undetermined at this time but will be imported from a locally available commercial source.

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

This is unlikely. The PSL receives less than 6 inches of rainfall per year. The removal of vegetation on the top of the landfill in preparation for the SVE piping runs will be conducted in areas of little to no slope, and the likelihood for erosion in these areas is minimal. Grading operations that will be conducted at the north end of Zone A will be immediately compacted with intentions of preparing a structurally suitable approach for drill rig access, and as a result will not likely be prone to erosion. Trenching across Dietrich Road will be performed during pipe installation activities. This work is expected to be conducted in less than one full day, and will be performed during a period when precipitation is unlikely to occur.

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

The Project Area is currently approximately 75 percent covered with an impermeable HDPE liner. There will be no added impervious surfaces as a result of this proposal.

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

As noted, the PSL receives less than 6 inches of rainfall annual and the proposed work will be performed in the late summer and early fall which are typically the driest time of the year. Silt fencing or hay bales will be installed prior to construction in areas most likely to be susceptible to potential erosion during a large precipitation event and while trenching across Dietrich Road, during pipe installation. If a rain event does occur during trenching, water on the uphill side of the trenching will be diverted to the drainage swales that border Dietrich Road. Hay bales would be positioned so that stormwater that enters the drainage swales is filtered by the hay bales to minimize suspended solids in the water.

Construction equipment that enters or leaves the Project Area via Dietrich Road will be cleaned free of loose soils as appropriate, to minimize the traction of soils onto the street.

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Dust is likely to be generated during the fill placement and grading operations on the top and side of the landfill. A drill rig will be used to install the wells within Zone A, which is diesel-powered.

Earth moving equipment will be employed to perform the grading operations, which are also diesel-powered. Gasoline and/or diesel-powered vehicles will transport personnel to and from the Project Area.

The upgraded SVE system will continue to rely upon the Municipal Solid Waste Landfill flare system for thermal destruction of the captured gases from beneath Zone A. The existing flare system treats both captured soil gas and non-hazardous SVE system condensate, which accumulates in the knockout tanks. In the event of a flare system shutdown event or interruption, extracted gases from the SVE system will be temporarily directed to a 10,000 pound granular activated carbon (GAC) treatment vessel.

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

No.

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

Vehicles and equipment not in use will be shut off. Dust that is generated during construction activities will be monitored as appropriate, and action levels will be established to ensure compliance with air quality regulations. Dust will be managed through the use of water spraying techniques as necessary to prevent the migration of airborne dust and particulates. Water used during spraying will be supplied by a water truck with city water, or may be pumped from the evaporation basins if water is present.

Destruction efficiencies of the captured SVE vapors and condensate are maintained by thermal control of the flare system and limiting total air flow from the SVE system. A variable frequency drive is utilized to control the speed of the motor that feeds methane-rich landfill gas from the municipal solid waste landfill into the flare stack. This automated system ensures that the temperature of the flare is maintained within the target range for minimum destruction percentages of the VOCs and methane. Maintaining an SVE flow rate of about 600 SCFM results in the necessary residence time within the flare stack to assure contaminant destruction.

3. Water

a. Surface:

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.

No.

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.

Does not apply.

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.

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.

b. Ground:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

Ground water generally flows west/southwest beneath Zone A and is typically encountered at approximately 65 feet below ground surface. Ground water wells at the Site are routinely sampled as part of ongoing measures to monitor the ground water impacts and assess the performance of the interim remedial measures.

Small amounts of water will be removed following installation of ground water monitoring wells to sufficiently develop the wells and allow for appropriate water sampling methodologies. Routine ground water samples will be collected from the two newly installed ground water monitoring wells following installation. Low-flow ground water sampling techniques will be employed which only require small aliquots of water removal during sampling. Approximately 55 gallons of development water will be generated from each new ground water monitoring well following installation for development purposes, and less than 5 gallons of water will be removed during each sampling event. Water generated by development of the new monitoring wells will be temporarily containerized and managed in accordance with project-specific protocols for investigation-derived waste.

The findings of continually monitored ground water data continue to strongly support a conclusion that implementing SVE upgrades would provide substantial benefit to the Site. The benefits include more focused contaminant mass recovery directly beneath Zone A. Increased contaminant mass removal rates and focused SVE proximal to the Zone A wastes will be more protective of ground water quality than the current system.

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.

None.

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.

The Zone A cover system allows infiltration of rainwater through a 2-foot thick vegetative layer made of native soils, and a one-foot thick drainage layer comprised of course gravel. Immediately underlying the drainage layer is a 40-mil thick high-density polyethylene liner. Rainwater infiltrates through these layers, and then travels across the liner, through the drainage layer toward either the east or west evaporation basins. This rainwater empties into these basins where it is allowed to naturally evaporate.

There is currently a potential for water to collect in some of the depressions on top of the Zone A cover system. These areas will be addressed in subsequent interim actions that are currently under review by Ecology. It is currently proposed that these depressions will be covered with secondary capping liners and fill material to reestablish surface slopes.

No runoff water will be collected and/or disposed of during the proposed work other than those listed above.

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

No.

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

Silt fencing or hay bales will be installed prior to construction activities to prevent erosion if a rain event occurs during trenching of soils and pipe installation activities across Dietrich Road.

4. Plants

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

_____ deciduous tree: alder, maple, aspen, other

_____ evergreen tree: fir, cedar, pine, other

__X__ shrubs

__X__ grass

_____ pasture

_____ crop or grain

_____ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other

_____ water plants: water lily, eelgrass, milfoil, other

_____ other types of vegetation

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

Areas of sparse vegetation on the landfill cover will be removed and replaced from a narrow corridor originating from the northern SVE well cluster and will extend to the southern extent of the Zone A landfill to allow for the proper grading and elevation requirements for piping installation. Up to approximately 4,125 square feet of vegetation may be removed and replaced. The replacement of this vegetative layer will be conducted by replacing the material that is removed with a seed mixture of local grasses.

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

None.

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

None proposed.

5. Animals

a. Circle any birds and animals, which have been observed on or near the site or are known to be on or near the site:

birds: **hawk**, heron, eagle, **songbirds**, other: **Canadian geese, chucker and owls**
mammals: deer, bear, elk, beaver, other: **coyote, ground squirrel and rabbit/hare**
fish: bass, salmon, trout, herring, shellfish, other:

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

EPI procured and analyzed habitat and species GIS data from the Washington Department of Fish and Wildlife (WDFW) to determine if there are any endangered species known to be on or near Zone A at the PSL. The data reviewed included the Wildlife Survey Data Management, Priority Habitats and Species Areas, Washington Lakes and Rivers Information System, and Marine Environment GIS datasets. No threatened or endangered species are known to occur on or within 1/2 mile of Zone A of the PSL.

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

The Project Area in the Pacific Flyway, but does not have habitat to support migratory birds.

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

None.

6. **Energy and natural resources**

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.

Electricity will power the SVE system equipment used to extract VOCs in soil gas from beneath Zone A. Vapors recovered from Zone A will be thermally destroyed by an enclosed landfill gas flare located north of the municipal solid waste landfill (MSL). The flare is primarily powered by the reclamation and combustion of methane gas generated from the anaerobic decomposition of organic matter within the MSL. The flare's other equipment is powered by a combination of electricity for mechanical equipment and propane for the pilot starter for the flame.

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

No.

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 blower that currently operates at Zone A will not undergo any modifications. This blower does not utilize energy conservation features, however the SVE pilot testing is intended to optimize the efficient capture of VOCs from beneath Zone A and energy consumption will be minimized by maintaining efficient operation of the mechanical components.

7. **Environmental health**

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.

Yes. This work is being conducted at a contaminated site in an effort to remediate impacts to the environment from chemical wastes. During well installation and the repair of the geomembrane liner following well installation, exposure to workers from vapors from beneath the liner may occur. The potential health risks have been evaluated and EPI has submitted a Health and Safety Plan as part of the Work Plan. The Health and Safety Plan identifies potential risks associated with this proposal and specifies appropriate actions to take to mitigate or respond to those risks. This Health and Safety Plan may be found in Section 5.0 of the Work Plan.

It is unlikely that volatile organic vapors from well installation or other tasks will be present at concentrations sufficient to create an explosion and/or fire hazard. However, a Combustible Gas Indicator (CGI) will be used during field work to assess the presence of potentially explosive atmospheres. The CGI will be used in various locations around the Project Area including near and immediately above the drilling operations.

It is anticipated that in most cases, engineering controls such as explosion-proof fans will be used to protect workers from potential volatile chemical exposures by dissipating potentially explosive atmospheres. In the event that engineering controls are not initially required to address chemical exposures, but the CGI indicates a potentially explosive atmosphere at or above 10 percent of the lower explosive limit (LEL), engineering controls will be implemented, regardless of the potential for chemical exposure.

This proposal is intended to further enhance the protectiveness of ground water by increasing mass removal of VOCs in an area where ground water is already impacted with contaminants of concern. These proposed actions seek to decrease the current and potential future risk of ground water contamination. Wells will be installed according to WAC 173-160, the Minimum Standards for Construction and Maintenance of Wells and there is only a limited potential for adverse impacts to ground water during the well installation. Furthermore, the well installation methodology to be used, rotosonic drilling technology, does not result in potential drag down of overlying impacts.

1) Describe special emergency services that might be required.

In the event an emergency situation arises during the proposed scope of work that requires immediate response from medically trained professionals, personnel will be required to call 911, to alert emergency care professionals including the Fire Department, Hazardous Material Responders, and emergency medical responders.

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

To help minimize chemical exposure, appropriate personal protective equipment (PPE) will be worn during Project Area operations where appropriately required. Breathing zone air monitoring will be conducted on a regular basis to check for the presence of volatile organic compounds. A PID and chemical-specific reactive indicator tubes (i.e., Draeger Tubes) will be used to perform this monitoring. Results of the air monitoring will be evaluated and established action levels as specified in the Health and Safety Plan will dictate proper PPE. Expected PPE use will include hard hats, Tyvek coveralls, work boots, appropriate gloves, and protective eyewear and ear protection, as necessary. The Site Health and Safety Officer may make variations of PPE use dependent on work activity and approval.

All Project Area workers will have current hazardous waste operation certification and medical clearance to wear a respirator equipped with either organic vapor or combination particulate matter/organic vapor cartridges. The use of respirators will be based on photoionization potential (PID) measurements of breathing zone air monitoring results. The Site Health and Safety Officer will specify when respirators will be required.

Explosion-proof fans will be used during intrusive work to ventilate the area and disperse potential organic vapors from worker breathing zones. The fans will be set-up as near to the intrusive work activity as possible for their most effective operation.

b. **Noise**

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

None.

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.

Intermittent short-term noise will be generated during Project Area preparation activities prior to drilling operations. Noise from dozers, excavators, rollers, etc. will be generated for an approximate 1 week period prior to drilling. It is possible that noise levels in the immediate vicinity of equipment will exceed OSHA permissible exposure levels (PEL's). Project Area work will be conducted between the hours of 7:00 a.m. and 5:00 p.m.

Short-term noise will be generated at levels above PEL's in the vicinity of active drilling operations. Exposure levels at the Project Area boundary will be well below PEL's. Drilling operations are currently estimated to take 2 to 3 weeks. Hours of drilling operations would be from 7:00 a.m to 5:00 p.m.

Intermittent short-term noise will be generated during piping installation operations from back-hoe's and other small equipment for an approximate one week period. Work will comply with Chapter 8.24 on Noise Control of the Municipal Code of Franklin County, Washington.

Long-term noise will continue to be generated within the equipment storage shed located west of Dietrich Road as a result of an operating regenerative blower and associated motors and other equipment. Noise levels within the equipment shed will exceed PEL's. Noise levels outside of the shed will not exceed PEL's.

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

Equipment will be required to have functional mufflers or other noise-reducing appurtenances as appropriate. Equipment not in use will be shut off.

All Project Area workers will be required to wear ear protection if exposed to noise levels above PEL's.

8. **Land and shoreline use**

a. What is the current use of the site and adjacent properties?

The Pasco Landfill Site is a former landfill facility which is currently undergoing a state-led cleanup action in accordance with, and under the authority of, the Model Toxics Control Act (MTCA) Chapter 70.105D RCW, and the implementing regulations, Chapter 173-340 WAC. Adjacent properties are used primarily for agricultural purposes. The property to the south of the Site is used as a municipal solid waste transfer station.

b. Has the site been used for agriculture? If so, describe.

Prior to 1955, the PSL Site was characterized as unimproved grassland characterized by both stable and active sand dunes. It is unknown whether this land was used for agricultural purposes prior to this time.

c. Describe any structures on the site.

A small, approximately 16 foot wide by 12 foot long, equipment compound building (shed) currently exists at the Project Area west of Zone A on the west side of Dietrich Road. This building houses the remediation equipment associated with the soil vapor extraction system that currently functions at the Project Area.

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

No.

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

Parcel Number 113-580-091 is currently zoned as Agricultural Production 20.
Parcel Number 113-580-082 is currently zoned as Agricultural Production 20.
Parcel Number 113-580-037 is currently zoned as I-3 Heavy Industrial.

Attachment B is a Franklin County Zoning Map that includes the Project Area.

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

The PSL Site is not currently proposed to undergo redevelopment. The Franklin County Growth Management Comprehensive Plan designates the parcels as follows:

Parcel Number 113-580-091 is designated as Agricultural.
Parcel Number 113-580-082 is designated as Agricultural.
Parcel Number 113-580-037 is designated as Industrial.

Attachment C is a copy of the Franklin County Comprehensive Land Use Map that includes the site.

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

Does not apply.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

No. The Franklin County Planning and Building Department has acknowledged in a telephone conversation that the PSL is not in an "environmentally sensitive" area as stipulated in Critical Areas Ordinance code #3-2009.

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

Approximately 10-12 people will be on Site full-time during the well installation activities. Approximately 7 people will be on Site full-time during piping and cap repair work, and approximately 3-4 people will be on Site full-time during startup and pilot testing.

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

None.

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

Does not apply.

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

The proposed scope of work is compatible with the current land use and plans for the PSL Site.

9. **Housing**

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

Does not apply.

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

Does not apply.

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

Does not apply.

10. **Aesthetics**

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

Wells installed through Zone A will be aboveground completions and will extend approximately 3 feet above the Zone A landfill surface.

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

None.

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

None. The proposal will not create aesthetic impacts.

11. **Light and glare**

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

None.

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

Does not apply.

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:

None. The proposal will not create light and glare impacts.

12. **Recreation**

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

The property west of the PSL Site is agricultural farmland and is known to be used seasonally for bird hunting.

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

No.

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

None.

13. **Historic and cultural preservation**

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

No.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

None known.

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

Does not apply.

14. **Transportation**

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

The PSL Site is accessed by heading west on E. Lewis/Pasco Kahlotus Road from the Kahlotus exit on Interstate 182/State Highway 12 and then turning west onto Commercial Avenue and north onto Dietrich Road. Figure 3 depicts these streets.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

No. It is approximately 1.5 miles to the nearest bus stop located at Elm and Lewis Streets in downtown Pasco.

c. How many parking spaces would the completed project have? How many would the project eliminate?

Does not apply. None.

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

No.

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

No.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

Currently there is less than one vehicular trip that is made to the Site per day. Upon completion of the upgrades to the SVE system, the system will be started up and tested. The startup and testing procedures that will be performed following the upgrades will be conducted over an approximate 8-week period. Approximately one or two vehicles would enter and exit the Project Area every day during the duration of this startup period. After completion of that 8-week startup period the completed project would not result in more vehicular trips than were occurring before the project was

completed. Site workers will continue to visit the Site on a regular basis. Vehicular activity likely will peak during construction-related activities for the installation and startup of the upgraded SVE system. During these times, additional personnel and vehicles will be at the Site.

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

There are no impacts to transportation anticipated with the proposed scope of work.

15. **Public services**

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

No.

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

Does not apply.

16. **Utilities**

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 the Franklin County PUD.

Basin and Disposal Inc., services the portable toilet on Site.

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.

No changes are proposed to the utilities that currently service the Project Area.

Attachments:

Attachment A - Draft Final Phase II Additional Interim Actions Work Plan, Volume 1 – Soil Vapor Extraction System Upgrades and Start-Up Testing with Monitoring Well Installation, EPI, May 14, 2010

Attachment B - Franklin County Zoning Map

Attachment C - Franklin County Comprehensive Land Use Map

Figure 1 – Pasco Sanitary Landfill Property

Figure 2 – Plan View of Proposed Well Locations, Limit of Geomembrane and General Piping Layout

Figure 3 – Pasco Landfill Aerial Photograph

C. SIGNATURE

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: Thomas C. Moore, REPRESENTATIVE OF IWATA GROUP II

Date Submitted: 6/17/2010

D. SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS

(do not use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

Proposed measures to avoid or reduce such increases are:

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

3. How would the proposal be likely to deplete energy or natural resources?

Proposed measures to protect or conserve energy and natural resources are:

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

Proposed measures to protect such resources or to avoid or reduce impacts are:

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

Proposed measures to avoid or reduce shoreline and land use impacts are:

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

Proposed measures to reduce or respond to such demand(s) are:

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

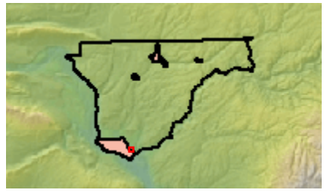
Attachment A

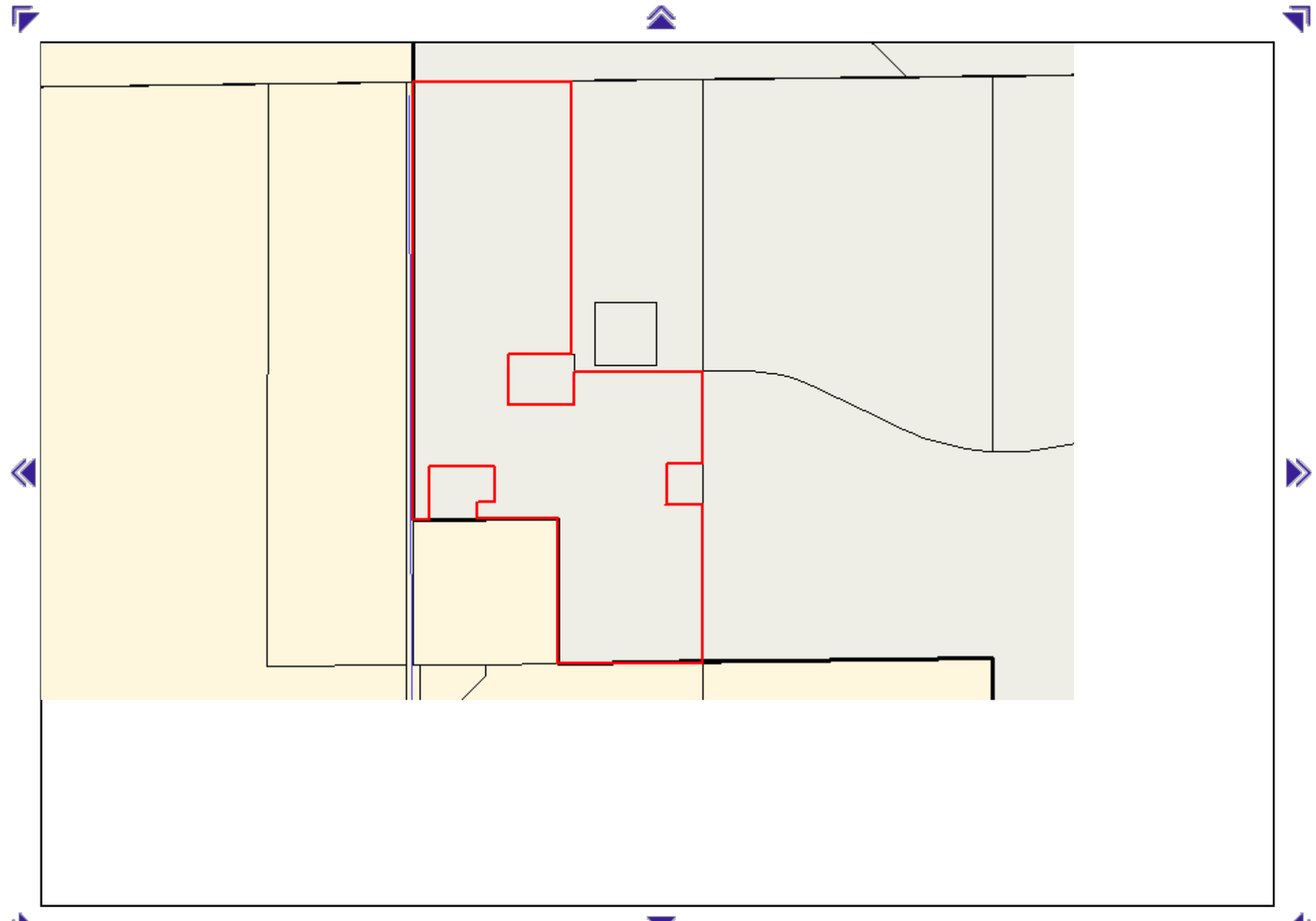
Draft Final Phase II Additional Interim Actions Work Plan
Volume I – Soil Vapor Extraction System Upgrades and
Start-Up Testing with Monitoring Well Installation

(Submitted separately)

Attachment B

Franklin County Zoning Map





- **General Use Maps**
  - Basemap
  - ZIPCode Areas
- **Planning Department**
  - Aerial Imagery
  - Ag Lands
  - Aquifer Recharge Areas
  - Comprehensive Land Use
  - Generalized Soils
  - Geological Hazards
  - Seismic Hazards
  - Zoning
- **Political Boundaries**
  - Cemetery Districts
  - City Council Districts
  - Commissioner Districts
  - Fire Districts
  - Hospital Districts
  - Port Districts
  - Legislative Districts
  - School Districts
  - Voting Precincts
- **Map Development**

- Section Numbers
- Quarter-section Monuments
- Section-center Symbols
- Section-corner Monuments
- Quarter-section Lines
- Sixteenth-section Lines
- Interstates
- US Routes
- Ramps
- State Routes
- Roadways
- Private Roads
- DOT Active Railways
- Main Waterways
- Lateral Canals
- Wasteways
- Open Drains
- Buried Drains
- Parcels with ATR Data
- Franklin County
- Section Lines
- Urban Areas
- Federal Reserves
- Rivers
- City Limits
- Townships
- Lakes
- Concomitant Agreements
- ZONING
  - AP-20
  - AP-40
  - C-1
  - C-2

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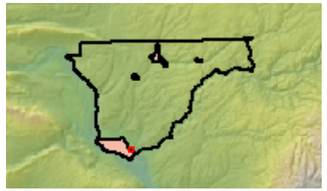
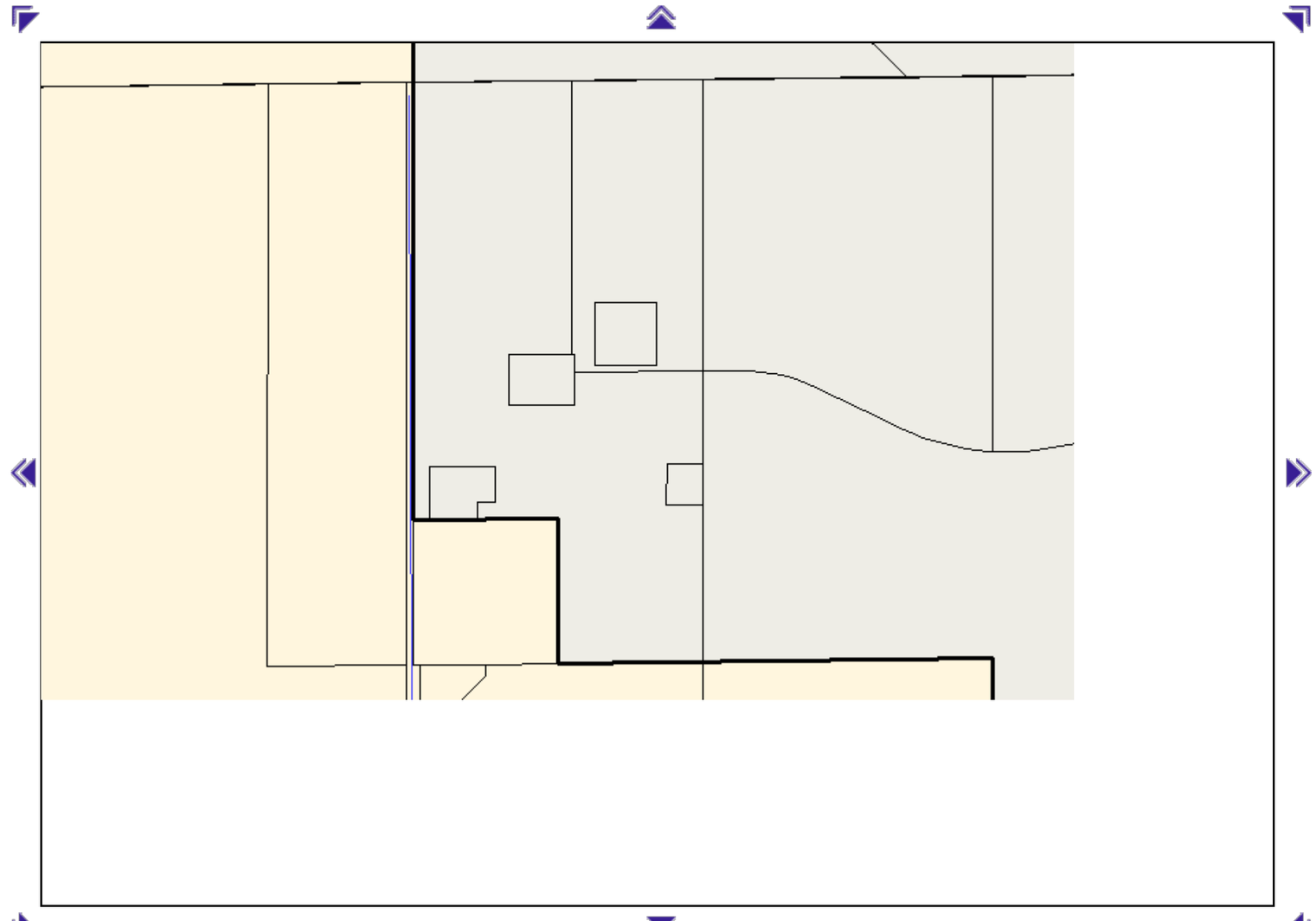
500 m

Scale 1 : 7066

Attachment C

Franklin County Comprehensive Land Use Map





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500 m

Scale 1 : 7066

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- Federal Reserves
- Rivers
- City Limits
- Townships
- Lakes
- **Comprehensive Plan - Rural**
  - Ag Service Center
  - Agricultural
  - Rural Activity Center
  - Rural Industrial
  - Rural Remote

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Figures

N

E INDUSTRIAL WASTE AREA ZONE

CONVEYANCE LINE

0 175 350 700

SCALE: 1" = 700'

ENVIRONMENTAL PARTNERS INC

295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 1

PASCO SANITARY LANDFILL PROPERTY

PROJECT	03909		
PREPARED FOR	IWAG II PASCO LANDFILL		
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON		
SHEET	**DRAWN BY**	**REVIEWED BY**	**DATE**
1 of 1	ARM	ARM	06/03/10

VEW-05

BERM

RANDOMLY PLACED DRUMS

DRUMMED WASTE AREA

VEW-01

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

VMW-50S

MW-50S

EXISTING FENCE

MW-52S

BURN TRENCH

VMW-51D
VMW-51I

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

WEST BASIN

EAST BASIN

LIMIT OF GEOMEMBRANE

MW-53S

EXISTING FENCE

OPERATIONS YARD

VMW-02D

OUT TO FLARE

ACUATOR VALVE

HEAT EXCHANGER

MOISTURE SEPARATORS

BELOW GROUND

ABOVE GROUND

MIN. 5' SEPARATION

VEW-04

PRIMARY CARBON

STAINLESS STEEL PIPE CONNECTION

SECONDARY CARBON

EXISTING FENCE

EXISTING FENCE

E 2006023.22

#	MDY	REV	DATE	DESCRIPTION	EXPLANATION

SCALE: 1" = 50'

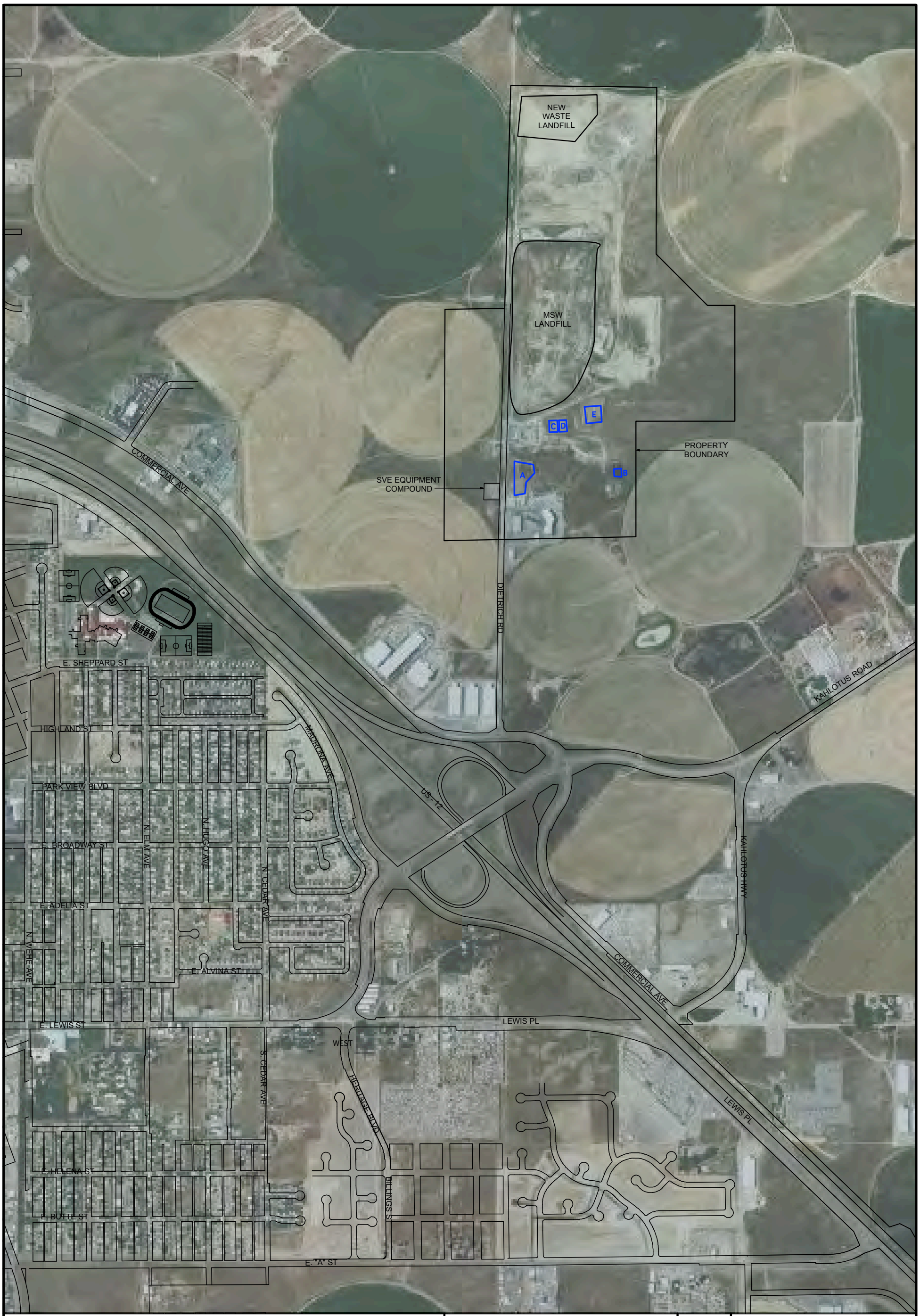
0 12.5 25 50

ENVIRONMENTAL PARTNERS INC
295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

PROJECT	03909
PREPARED FOR	IWAG GROUP II
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON
DATE DRAWN	06/03/10
REVIEWED BY	ARM
DRAWN BY	ARM
SHEET	2 of 3

FIGURE 2

PLAN VIEW OF PROPOSED WELL LOCATIONS, LIMIT OF GEOMEMBRANE AND GENERAL PIPING LAYOUT



N

E INDUSTRIAL WASTE AREA ZONE

0 250 500 1000

SCALE: 1" = 1,000'

ENVIRONMENTAL PARTNERS INC
295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 3

PASCO LANDFILL
AERIAL PHOTOGRAPH

PROJECT	03909		
PREPARED FOR	IWAG II PASCO LANDFILL		
LOCATION	1901 DIETRICH ROAD PASCO, WASHINGTON		
SHEET	DRAWN BY	REVIEWED BY	DATE
1 of 1	ARM	ARM	06/03/10