CELLS 1 AND 2 INTERIM ACTION WORK PLAN

FORMER PACIFIC WOOD TREATING CORPORATION

Prepared for

PORT OF RIDGEFIELD

LAKE RIVER INDUSTRIAL SITE

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2004 Workplan	Cells 1, 2, and 4 Remedial Investigation Workplan
ACM	asbestos-containing material
bgs	below ground surface
BNSF	Burlington Northern-Santa Fe Railway
CAMU	Corrective Action Management Unit
CFR	Code of Federal Regulations
City	City of Ridgefield
cPAH	carcinogenic polycyclic aromatic hydrocarbon
CUL	cleanup level
CWA	Clean Water Act
CWM	Chemical Waste Management
DEQ	Oregon Department of Environmental Quality
dioxins/furans	chlorinated dibenzo-p-dioxins and dibenzofurans
E&E	Ecology & Environment
Ecology	Washington State Department of Ecology
FWPCA	Federal Water Pollution Control Act
IHS	indicator hazardous substance
LDR	land disposal restrictions
LRIS	Lake River Industrial Site
MFA	Maul Foster & Alongi, Inc.
mg/kg	milligrams per kilogram
MTCA	Model Toxics Control Act
NAPL	nonaqueous-phase liquid
ng/kg	nanograms per kilogram
NGVD	National Geodetic Vertical Datum of 1929
NPDES	National Pollutant Discharge Elimination System
Order	Agreed Order No. 01TCPSR-3119
OSHA	Occupational Safety and Health Act
Pace	Pace Analytical Services, Inc.
PCP	pentachlorophenol
PHC	principal hazardous waste constituents
Plan	this interim action work plan
Port	Port of Ridgefield
PWT	Pacific Wood Treating Corporation
RCRA	Resource Conservation and Recovery Act
RCW	Revised Code of Washington
RI/FS	remedial investigation and feasibility study
RMC	Ridgefield Municipal Code
RNWR	Ridgefield National Wildlife Refuge
SEA	Sweet, Edwards and Associates
SEPA	State Environmental Policy Act
SER	steam-enhanced remediation
SWCAA	Southwest Clean Air Agency

TCLP	toxicity characteristic leaching procedure
TEC	toxicity equivalent concentration
TEE	terrestrial ecological evaluation
USC	U.S. Code
USEPA	U.S. Environmental Protection Agency
WAC	Washington Administrative Code
WISHA	Washington Industrial Safety and Health Administration
WSDOT	Washington State Department of Transportation
WWTP	wastewater treatment plant

1 INTRODUCTION

On behalf of the Port of Ridgefield (Port), Maul Foster & Alongi, Inc. (MFA) has prepared this interim action work plan (Plan) to remove selected areas of soil from several locations, grade and cap Cells 1 and 2 at the Port's Lake River Industrial Site (LRIS; see Figure 1-1), and complete polishing via the steam-enhanced remediation (SER) system. This work is being conducted in accordance with the requirements of Washington State Department of Ecology (Ecology) Agreed Order No. 01TCPSR-3119 (the Order) and the interim action requirements provided in the Model Toxics Control Act (MTCA), Washington Administrative Code (WAC) 173-340-430.

This Plan is based on the preferred alternative as submitted in the draft Cells 1 and 2 remedial investigation and feasibility study (RI/FS) report (MFA, 2011a) with the addition of soil removal above MTCA Method C cleanup levels (CULs) in areas outside the SER treatment area, as requested by Ecology (MFA, 2011b). The area within the SER treatment area will be evaluated after steaming is complete.

This Plan includes an evaluation that identifies areas where nonaqueous-phase liquid (NAPL) has been observed outside of the SER area (i.e., the concrete pond area) and compares soil sampling data collected at the LRIS to MTCA Method C CULs.

Excavated soil will be disposed of at Chemical Waste Management (CWM), a Subtitle C landfill in Arlington, Oregon. The soil to be removed from the site is currently under consideration for off-site disposal by Ecology as Corrective Action Management Unit (CAMU)-eligible waste under WAC 173-303-646920 (see Appendix A).

This Plan describes the placement of a soil cap on Cells 1 and 2, as evaluated in the draft Cells 1 and 2 RI/FS (MFA, 2011a) and identified as a component of the preferred remedial action. Soil from the Interstate 5 interchange at Exit 14 (269th Street) is being provided by the Washington State Department of Transportation (WSDOT) and its contractor. This soil was analyzed for chemicals of concern and was approved by Ecology for use as clean fill (Appendix B).

2 SITE DESCRIPTION AND OVERVIEW

2.1 Location and Background

The physical address of the LRIS is 111 West Division Street, Ridgefield, Washington. It is located in section 24, township 4 north, range 1 west, Willamette Meridian (see Figure 1-1). Cells 1 and 2 are within the Ridgefield city limits.

Cell 1 consists of an eastern section of the LRIS (see Figure 2-1). It is bordered on the west and south by Cell 2, by the City of Ridgefield's (City) wastewater treatment plant (WWTP) to the north, and by the Burlington Northern-Santa Fe Railway (BNSF) railroad tracks to the east. The BNSF railroad tracks separate Cell 1 from a residential area.

Cell 2 consists of the central part of the LRIS (see Figure 2-1). Cell 2 is bordered by Cell 4 and the Ridgefield National Wildlife Refuge (RNWR) to the north; Cell 1 and the City's WWTP and BNSF railroad tracks to the east; Lake River and the RNWR to the west; and Division Street and Cell 3 to the south. The BNSF railroad tracks separate Cell 2 from a residential area. A portion of the City's WWTP falls within the Cell 2 boundary. However, the area occupied by the City's WWTP will not be included in this interim action. Soil within the City's WWTP property does not exceed the MTCA Method C soil CULs (the industrial use standard) and is currently used for industrial purposes (MFA, 2011a).

Detailed information pertaining to zoning, topography, and stormwater drainage for Cells 1 and 2 was provided in Section 2 of the 2004 Remedial Investigation Workplan for Port of Ridgefield Lake River Industrial Site (2004 Workplan) (MFA, 2004). Cells 1 and 2 are relatively flat and stormwater currently either infiltrates or flows to the west via a system of trench drains and catch basins and discharges to Lake River through Outfalls 2, 3, and 4.

2.2 Overview of Historical Operations and Impacts

The LRIS is the former location of the Pacific Wood Treating Corporation (PWT) facility. The Port owns the property, which PWT leased from approximately 1964 to 1993. PWT filed for bankruptcy in 1993 and abandoned the site. The Port has established office spaces on the site and manages the property and its remaining assets.

Section 2 of the 2004 Workplan described the occupants and their operations in Cells 1 and 2 (MFA, 2004). The PWT tank farm, part of the retort area, and a boiler room were formerly in Cell 1 (see Figure 2-1). Most of Cell 2 was formerly used by PWT for wood product manufacturing operations, and also contained other features

such as PWT's WWTP and the concrete pond stormwater feature. Before the 1980s, the concrete pond was used to trap and collect spills that had entered the stormwater system. In the 1980s, the WWTP was constructed and used to treat wastewater generated on site. The WWTP was operated until 1993, when PWT abandoned the site. The WWTP was demolished by the Port with Ecology oversight.

PWT's former operations involved pressure-treating wood products with oil-based treatment solutions containing creosote, pentachlorophenol (PCP), and a water-based mixture of copper, chromium, and arsenic and copper, chromium, and zinc. Cell 1 was used for wood treatment and product storage.

Impacted soil in the concrete pond area is believed to have been caused by the treatment of wastewater from wood-preserving processes. Because soil in the concrete pond area is contaminated with listed wood-preserving wastes from former PWT operations, the soil must be managed as listed waste and is subject to land disposal restrictions (LDRs) (WAC 173-303-140). The following waste code (WAC 173-303-9904) applies to soil that will be removed from the concrete pond area and disposed of:

- Listed Waste code K001—Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or PCP.

As discussed above, investigations on the LRIS show that wood-treating solutions were released to the surface throughout most of the site and have impacted soil and groundwater. Impacted soil is believed to have been caused by the incidental drippage and associated activities from wood storage. Because the soil is contaminated with listed wood-preserving wastes from former PWT operations, the soil must be managed as listed waste and is subject to LDRs (WAC 173-303-140). The following waste codes (WAC 173-303-9904) apply to soil that will be removed from LRIS, excluding the concrete pond area:

- Listed Waste code F032—Preservative drippage in soil that contains chlorophenolic wastes
- Listed Waste code F034—Preservative drippage in soil that contains creosote wastes
- Listed Waste code F035—Preservative drippage in soil that contains arsenic and chromium wastes

Under WAC 173-303-646920, Ecology may approve the disposal of CAMU-eligible waste in a RCRA Subtitle C landfill located outside of the state of Washington, without the soils meeting the LDRs.

3 SOIL EVALUATION

3.1 Previous Investigations

Historical investigations include several groundwater and hydrogeologic evaluations; a Resource Conservation and Recovery Act (RCRA) preliminary assessment that identified areas of concern; site-wide evaluations of potential source areas at locations previously identified as areas of concern (including the tank farm area, the retort/drip pad area, and the concrete pond and piping system); and a focused investigation and risk assessment in the area of the City's WWTP expansion in Cell 2.

The historical investigations in Cells 1 and 2 have been conducted by multiple parties since the mid-1980s and are described in detail in Section 3 of the 2004 Workplan (MFA, 2004); they are summarized below.

- In 1985 and 1987, Sweet, Edwards and Associates (SEA) conducted a groundwater evaluation on and near the LRIS (SEA, 1986, 1987).
- In 1990, Ecology & Environment (E&E) conducted a preliminary assessment on the PWT facility (E&E, 1991)
- In 1991, Hart Crowser conducted site characterization for the U.S. Environmental Protection Agency (USEPA) (Hart Crowser, 1991).
- In 1993, Kleinfelder conducted site characterization for the USEPA (Kleinfelder, 1993).
- In 1995, E&E conducted site characterization for the USEPA (E&E, 1996).
- In 1997 through 2002, MFA conducted site characterization; the data were included in the Ecology-approved 2004 Workplan for Cells 1, 2, and 4 (MFA, 2004).

All work performed by MFA for the Port has been conducted under Ecology's oversight and in accordance with the Order. The data from the abovementioned investigations are included in the evaluation of the nature and extent of chemical impacts. The results of these investigations have established the nature and extent of site indicator hazardous substances (IHSs) and allowed evaluation of remedial options. This Plan is consistent with the findings of the preferred alternative action discussed in the draft RI/FS report for Cells 1 and 2 (MFA, 2011a), with modifications as requested by Ecology.

3.2 NAPL Observations

NAPL has historically been observed in two areas of Cells 1 and 2, the former tank farm and retort area and the former concrete pond. The NAPL plume near the former tank farm and retorts, shown as the SER area on Figure 3-1, is being remediated using an SER system. As of December 2010, the plume had been reduced in area by 92 percent with 24,700 gallons of product recovered. The Port is still operating the SER system to remove any remaining mobile product.

The second area of NAPL is in Cell 2 near the former concrete pond. Figure 3-1 shows the area near the concrete pond where NAPL was present, identified as the "concrete pond excavation." Until the early 1970s, the concrete pond was used to treat wastewater generated by site operations. NAPL identified around the former concrete pond originated from this feature. The concrete pond area will be remediated as part of this interim action.

3.3 Comparison of Soil Analytical Results to Method C CULs

In interim actions conducted in other parts of the LRIS (i.e., Cells 3 and 4), soil remediation levels were developed based on the MTCA Method C soil CULs. The interim action in Cells 1 and 2 will address soil exceeding MTCA C CULs via excavation, the SER system, and/or institutional controls.

The following locations in the SER area have confirmed detections in soil of IHSs that exceed Method C CULs, are being treated by the SER system, and are not included in the excavation areas shown on Figure 3-1:

- B-52: arsenic (101 milligrams per kilogram [mg/kg]) at 3.5 feet below ground surface (bgs)
- B-85: carcinogenic polycyclic aromatic hydrocarbons (cPAHs) toxicity equivalent concentration (TEC) (126 mg/kg) at 10.0 feet bgs
- B-306: arsenic (592 mg/kg), cPAH TEC (27.6 mg/kg), and chlorinated dibenzo-p-dioxins and dibenzofurans (collectively referred to as dioxins/furans) TEC (6,539 nanograms per kilogram [ng/kg]) at 2.5 feet bgs
- MW-11S: 2-methylnaphthalene (18,000 mg/kg), cPAH TEC (872 mg/kg), dibenzofuran (7,300 mg/kg), naphthalene (100,000 mg/kg), and PCP (1,800 mg/kg) at the surface (0.0 foot bgs)
- P-01: PCP (10,000) at the surface (0.0 foot bgs)
- P-02: PCP (13,000) at the surface (0.0 foot bgs)
- SS-3B: arsenic (294 mg/kg) and cPAH TEC (27.4 mg/kg) at 1.5 feet bgs

The following locations external to the SER area have confirmed detections of IHSs in soil that exceed Method C CULs and will be excavated:

- B-308: dioxin/furan TEC (2,850 ng/kg) at 15 feet bgs
- MFP-01: PCP (2,500 mg/kg) at 3.0 feet bgs
- SS-14: dioxin/furan TEC (2,907 ng/kg) at 0.5 foot bgs
- TP-03: PCP (2,000 mg/kg) at 0.3 foot bgs
- TP-13: arsenic (122 mg/kg) at 0.2 foot bgs

Locations B-308 and MFP-01 are in the area of the concrete pond where NAPL is present and will be removed as part of that excavation. TP-13 is outside the area of NAPL related to the concrete pond but the impacts are likely related to the former feature and will be included as part of the excavation in that area. Locations SS-14 and TP-03 will be separate excavations, unrelated to the concrete pond.

3.4 Comparison of Soil Analytical Results to Method B CULs

In soil samples collected throughout Cells 1 and 2, results from one or more of the IHSs generally exceeded MTCA Method B soil CULs, potentially posing risk to human health. IHS exceedances of ecological screening criteria also generally occurred throughout Cells 1 and 2. Of the alternative actions proposed in the draft Cells 1 and 2 RI/FS report (MFA, 2011a), capping was the preferred alternative for addressing the risk posed by the soil. As further discussed in the terrestrial ecological evaluation (TEE) (MFA, 2010b), soil capping will also be protective of potential ecological receptors.

The extent of IHSs in soil in Cells 1 and 2 was discussed in the draft Cells 1 and 2 RI/FS report (MFA, 2011a). Figures 6-2 through 6-9 from the draft Cells 1 and 2 RI/FS report show the extent of IHS soil exceedances in Cells 1 and 2 (see Appendix C).

4 SITE PREPARATION

4.1 Surveying and Mobilization

The concrete pond, SS-14, and TP-03 excavations will be located by a registered land surveyor. The surveyor will re-mark the sample locations, originally surveyed when completed, where NAPL was identified and concentrations of IHSs exceed Method C CULs. The initial dimensions of the excavations will be measured from the resurveyed sample locations, which will be used to identify the excavation centers. The final extent of the excavations will be confirmed by visual observation of NAPL and by confirmation sample results. Before excavation, the locations of subsurface utilities will be identified within 50 feet of the excavation areas by "One Call" public notification and a private utility locating company.

Exclusion zones and associated site controls will be established in accordance with the site health and safety plan.

Equipment will be mobilized to the site and is expected to include, but not be limited to, the following:

- Trackhoe excavator
- Front-end loader
- Dump truck
- Water truck
- Support vehicles and equipment

Three monitoring wells (MW-18, MW-26, and MW-52D) are in the planned area of the excavation. These monitoring wells are not included as groundwater point of compliance wells in the preferred alternative (MFA, 2011a) and will therefore be properly decommissioned by a licensed driller before soil removal.

4.2 Soil Excavation and Management

Oversight and monitoring for consistency with this Plan will be performed by a professional engineer or geologist registered in Washington State or by a qualified technician under the direct supervision of a professional engineer or geologist registered in Washington State.

Excavations will be conducted in the area as shown in Figure 3-1 and as described in the Table below. The initial extents of the excavations are also shown on the table below.

Table
Proposed Excavation Areas

Location	Approximate Excavation Dimensions (feet)	Approx. Volume (cubic yards)	IHSs
Concrete Pond Area including TP-13	190x170, 15 feet deep	9,840	NAPL, arsenic, cPAHs, PCP, and dioxins/furans
SS-14	20x20, 1 foot deep	15	Dioxins/furans
TP-03	10x10, 1 foot deep	4	PCP

The minimum lateral extent of the excavations will be delineated in the field before excavation begins. The estimated volume of in-place soil to be removed is 9,859 cubic yards. However, because the concrete pond releases occurred below the ground surface, approximately 6,240 cubic yards of overburden is expected to not exceed the Method C CULs or have NAPL impacts. The overburden soil will either be placed back in the excavation as backfill or graded into the site before the clean soil cap is constructed. It is estimated that approximately 3,633 cubic yards from the concrete pond excavation will be disposed of at a landfill. The total soil amount expected to be disposed of off site is approximately 3,652 cubic yard.

The excavation will extend to 15 feet bgs, which is 3 feet below the typical water table depth in the area, and remain open to allow removal of floating product. The excavation will be dewatered and liquid will be collected and treated in the on-site treatment system. The final extent of excavations may be expanded if visible impacts or confirmation sampling warrants. The excavation extent may be constrained by operations of the SER system, including tanks, related equipment, and the discharge line from the system to Outfall 3. Shoring will be implemented as required to protect the existing SER system and on-site treatment system. Soil will be excavated using conventional excavation equipment (e.g., trackhoe).

Once soil is removed from the excavations, it will be temporarily stockpiled or placed in drop boxes (herein both procedures are referred to as "stockpiles"). Soil stockpiles will be established in locations approved by the Port, either adjacent to the excavations or in a central location. Each soil stockpile will comprise only soils from the same profile group (these are described in Section 4.2.1).

Best management practices will be used to secure excavated material in stockpiles. Stockpiles not in drop boxes will be placed on impermeable liners and will be covered and secured at the end of each workday. Before placing liners, the contractor will clear the existing ground surface of debris and sharp objects. Soil stockpile covers will be secured to prevent displacement by wind as well as contact between precipitation and excavated soils. Berms will be constructed around stockpiles to prevent run-on and runoff. Drop boxes will be lined to reduce the risk of liquids leaking from the boxes and covered to prevent erosion by wind or precipitation. Soil will be handled to mitigate leaching from excavated soils to subsurface.

Once the excavated soils have been profiled for disposal, trucks will be loaded in a manner that prevents spilling or tracking of contaminated soil. Loose material that falls onto the truck exterior during loading or collected from the ground surface in the loading area will be placed back into the trucks before they leave the loading area. Excavated soil will be transported for off-site disposal, and treatment if needed will depend on waste profiling results. Ecology is considering whether the soil can be managed at the CWM Subtitle C Facility in Arlington, Oregon as CAMU-eligible waste.

While the excavation is open, adequate barriers will be installed to protect against unauthorized entry.

4.2.1 Stockpile Profiling Sampling and Analysis

The excavated soil will be profiled for disposal before shipment from the site. Historical analytical results from the proposed excavation locations are not adequate for waste profiling, as they represent discrete samples. As the excavations are under different waste codes, soil stockpiling and waste profiling of excavated soil will be segmented. The samples will be collected with standard industry techniques, using a properly decontaminated hand auger or stainless steel spoons.

It is estimated that based on the amount of soil excavated that seven soil samples will be adequate for profiling soil from the concrete pond area excavation. The seven samples will be randomly collected at varying depths and each discrete sample will submitted for analysis. The profile samples from the concrete pond will be tested for the constituents outlined in the K001 waste code indicated in Section 2 (see Appendix A), and will include the following:

- Semivolatile organic compounds, including naphthalene, PCP, phenanthrene, and pyrene, by USEPA Method 8270C
- Volatile organic compounds, including toluene and xylenes (sum of o-, m- and p- isomers), by USEPA Method 8260B
- Dioxin/furan congeners with tetra-, penta-, and hexa- prefixes, by USEPA Method 8290
- Arsenic and lead by toxicity characteristic leaching procedure (TCLP) USEPA Method 1311/6010B

One soil sample will be submitted for profile analyses from the combined excavations of SS-14 and TP-03. To obtain this sample, four discrete samples will be randomly collected at varying depths and homogenized to create a composite stockpile sample consistent with the profiling procedures used in the Cells 3 and 4 Interim Action performed during the summer and fall of 2010 (MFA, 2010a). The profile samples from SS-14 and TP-03 will be tested for the constituents outlined in

the waste codes indicated in Section 2 (see Appendix A), and will include the following:

- Semivolatile organic compounds, including acenaphthene, anthracene, benz(a)anthracene, benzo(b+k)fluoranthene, benzo(a)pyrene, chrysene, dibenz(a,h)anthracene, fluorene, indeno(1,2,3-c,d)pyrene, naphthalene, PCP, phenanthrene, pyrene, 2,3,4,6-tetrachlorophenol, and 2,4,6-trichlorophenol, by USEPA Method 8270C

- Dioxin/furan congeners with tetra-, penta-, and hexa- prefixes, by USEPA Method 8290

- Arsenic and chromium, by TCLP USEPA Method 1311/6010B

The soil samples will be placed on ice in a shipping container with chain-of-custody paperwork and transported to Specialty Analytical, of Clackamas, Oregon, or Pace Analytical Services, Inc. (Pace), of Minneapolis, Minnesota, for analysis. Pace will conduct analyses for dioxins/furans and Specialty Analytical will conduct analyses for all other IHSs.

Once the data have been received, they will be provided to CWM to profile the excavated soil for off-site disposal as CAMU-eligible waste.

4.2.2 Confirmation Sampling and Analysis

Analytical results, as well as visual inspection for the presence of NAPL, will be used to evaluate whether the final extent of excavation has been reached, or whether additional soil removal is necessary. Confirmation samples will be collected from the floor and side walls of each excavation and analyzed for the specific IHSs that exceeded Method C CULs at the excavation area (see the table above).

A minimum of one sample will be collected from the floor of each excavation for analysis. Discrete soil samples will be collected every 20 linear feet along the side walls of the excavation at depths that coincide with the known impacts. The samples from the concrete pond area will be collected approximately halfway between the floor of the excavation and the original ground surface (i.e., 7.5 feet bgs). The samples from the SS-14 and TP-03 excavations will be collected at approximately 1.0 feet bgs, slightly lower than the original exceedances, which were at 0.5 and 0.3 feet bgs, respectively. Soil samples will be submitted for analysis to the Port's analytical laboratory under chain-of-custody documentation.

The soil samples will be collected using stainless steel sampling equipment and new nitrile gloves. If the excavation is deeper than 3 feet bgs, the excavator or trackhoe bucket will be used to collect the soil samples. Care will be taken to make sure that no soil sample contacts the excavation equipment.

Confirmation analysis will be performed on the concrete pond soil samples for arsenic, dioxins/furans, and PCP; on the SS-14 excavation soil samples for dioxins/furans; and on the TP-03 excavation soil samples for PCP. The soil samples will be analyzed using the following methods: for arsenic, by USEPA Method 6010; for PCP, by USEPA Method 8270C; and for dioxins/furans, by USEPA Method 8290. The soil samples will be placed on ice in a shipping container with chain-of-custody paperwork and transported to either Specialty Analytical or Pace for analyses. Pace will conduct analyses for dioxins/furans and Specialty Analytical will conduct analyses for all other IHSs.

Excavations will remain open, with safety measures in place, until confirmation sampling analysis is completed and demonstrates results below MTCA Method C CULs consistent with work performed during 2010 on cells 3 and 4 (MFA, 2010a).

4.3 Backfilling

The excavations will not be backfilled until confirmation sample analysis and visual inspection for NAPL indicates that the excavation areas have been adequately addressed. Excavations will be filled using WSDOT I-5 interchange soils (discussed in Section 5), clean overburden from excavations, or fill generated from grading within the cell. If a source other than WSDOT soil or grading within the cell is used to fill the excavations, the Port will obtain Ecology approval before placement.

4.4 Demolition and Subgrade Preparation

Obstructions on Cells 1 and 2 will be removed before placement of the soil cap. In addition, Cell 2 contains areas that will require grading to facilitate capping. Actions required to address existing site features in Cells 1 and 2 include the following:

- Demolition of the covered shed (Building 6).
- Demolition of the corrugated steel warehouse (Building 10).
- Demolition of the planer building (Building 8).
- Demolition of Building 3.
- Demolition of the covered shed (Building 7).
- Concrete pads, rubble and foundations located in Cells 1 and 2 will be crushed in place or removed and crushed and then graded into the site before the soil cap and geotextile fabric are placed. Concrete will be crushed to prevent differential settling problems during future construction. The maximum particle sizes allowed will depend on the depth they are placed below the finished subgrade and will be outlined in detail in the construction technical specifications.

- Removal of the site rail lines.

- Removal of the existing galvanized and other metallic stormwater piping and trenching.

- A new stormwater system, incorporating engineering controls, will be installed.

- Grading of Cell 2, including the bank along Lake River, down to 11 feet National Geodetic Vertical Datum of 1929 (NGVD) (1 foot above ordinary high water), consistent with the interim action conducted in Cell 3 (MFA, 2010a). The grading will reduce the slope of the bank and provide floodplain storage. The soil created from the grading will be incorporated on site before the clean soil cap placement.

- Post-SER soil and groundwater sampling and analysis.

- Demobilization of the SER system.

- Decommissioning of all steam injection wells, groundwater extraction wells, pressure monitoring points (DigiPAMs™), and temperature monitoring points (DigiTAMs™) will be completed by a licensed well driller.

- Elevations of existing monitoring wells MW-38, MW-39, MW-55, MW-55D, MW-55S, MW-56, MW-57D, MW-57S, MW-58D, MW-59, and MW-62 will be adjusted by a licensed well driller to existing grade, following completion of excavation and capping. The measuring point elevation of modified monitoring wells will be surveyed after adjustment to the nearest 0.01 foot NGVD by a licensed surveyor. Bollards will be placed around these monitoring wells. Monitoring wells not listed above will be decommissioned per Ecology approval. Monitoring well decommissioning will be done by a licensed well driller.

Once Cells 1 and 2 have been graded and prepared for the soil cap, an interim survey will be conducted. A second survey will be conducted after the soil cap has been placed. The two surveys will be compared to ensure that the required minimum soil cap thickness is maintained.

4.5 SER Polishing

Steam will be injected in the entire SER area (Areas 1 through 4) to polish areas previously treated and to ensure capture of residual mobile NAPL. Steam will be applied using an outward-in approach. Steam will initially be injected at the perimeter of the SER area and progressively move toward the center. The concept of this approach is to push any remaining mobile NAPL to the center of the SER area for collection. The SER polishing step is expected to last four months. Once polishing in

the SER area is complete, and per Ecology approval, the steam will be turned off. The liquid system will continue to operate to reduce subsurface temperature and capture chemicals that have been mobilized by the heat. Subsurface temperature in the SER area is continuously monitored by in situ temperature sensors. The temperature sensors will be left in place during the liquid-extraction-only phase to confirm cooling of the subsurface. Groundwater temperatures will be cooled to approximately ambient, where minimal volatilization is expected and the solubility of chemicals is near normal site conditions.

Post-demobilization sampling will be conducted after the subsurface has cooled to inform how the soil in the SER area should best be managed (e.g., soil management plan, engineering controls, institutional controls, soil removal). A plan will be submitted to Ecology regarding assessment and management of soil containing contaminants in the SER above MTCA Method C soil cleanup levels. It is anticipated a soil cap will be installed over the SER area.

Upon completion of polishing and temperature reduction, demobilization of the SER system will be phased to coordinate with site capping activities. The SER system will be dismantled and decommissioned. Decommissioning of steam injection and groundwater extraction wells and pressure and temperature monitoring points (DigiPAMs and DigiTAMs) will be conducted by a licensed well driller.

4.6 Health and Safety Procedures

The interim action will be conducted according to WAC 173-340-810; the Occupational Safety and Health Act (OSHA) of 1970 (29 U.S. Code (USC) Sec. 651 et seq.); the Washington Industrial Safety and Health Act (Chapter 49.17 Revised Code of Washington [RCW]); and relevant regulations. Before implementation of the interim action, the Port will prepare a health and safety plan for Ecology's review and comment.

The Port will retain a contractor that will complete the interim actions in compliance with OSHA regulations. The contractor will be required to use a crew that has received Hazardous Waste Operations and Emergency Response Standard 40-hour training and received refresher training in the past year for placement of the geotextile and handling of any soil material on site besides the clean stockpile soil.

Dust-suppression techniques will be employed during handling of soil materials, as necessary.

5 CAPPING ON CELLS 1 AND 2

The Port has received approximately 130,000 cubic yards of soil from WSDOT's construction related to the interchange on Interstate 5 at 269th Street (Pioneer Street) and anticipates an additional 20,000 cubic yards of soil from WSDOT's mitigation site for the project. This material was assessed in accordance with the Ecology-approved soil acceptance plan (MFA, 2009a), and the results were presented to Ecology in a letter report (MFA, 2009b). The soil was determined to be acceptable for use as a clean soil cap and fill on the LRIS. Approximately 65,000 cubic yards of this soil was placed on the LRIS as cap material during the Cells 3 and 4 interim action. The remaining soil has been stockpiled on Cells 2 and 4.

The stockpiled soil has been managed in accordance with the Stormwater Pollution Prevention Plan submitted to Ecology (Group MacKenzie, 2009). Best management practices will be continued to control stormwater generated at the site during the interim action.

The soil capping actions are summarized below.

5.1 Upland Capping

As part of the interim action, soil will be placed on Cells 1 and 2 as a cap above the impacted surface soil. The soil cap will be constructed consistent with the soil cap options discussed in the TEE report submitted to and approved by Ecology (MFA, 2010).

A geotextile (SKAPS GE-160 Nonwoven Geotextile™ or equivalent consistent with 2010 interim action in Cells 3 and 4 [MFA, 2010a]) will be placed on a smooth, prepared surface, free of puncture obstructions, between the contaminated surface and the clean fill.

A minimum of 2 feet of soil will be placed and compacted. The cap will be deeper in certain areas to allow for additional vegetation for stabilization (e.g., the bank along Lake River in Cell 2) and to contour the cap to control stormwater. The extent of the interim action capping on Cells 1 and 2 is shown on Figure 3-1. A hard-surfaced trail will supplement the soil cap profile located at the top of slope to fulfill the substantive requirements of the City of Ridgefield.

Following its placement, the cap will be stabilized by Ecology-approved vegetation (Appendix D). Any landscaping will correspond to the shallow-rooted species specified in the TEE (MFA, 2010b), based on the thickness of the clean soil cap. The capping will be inspected and maintained in accordance with a soil management plan, yet to be completed.

Note that, before fill placement, the Port's geotechnical consultant will inspect surface conditions and evaluate the competence of the existing surface soil. The fill material will be graded and compacted according to the engineer's specifications.

6 INSTITUTIONAL CONTROLS

Institutional controls will be implemented as part of the remedial action. The institutional controls will be in the form of restrictive covenants to provide options for vapor mitigation for future construction; required adherence to a soil management plan for protection and maintenance of surface capping and management of residual contaminated soils during redevelopment or subsurface work; and prohibition of groundwater use. Upon approval from the City, historical city drinking wells east of the site will be abandoned. The City does not plan on utilizing these wells as a future drinking water supply, but their zone of influence could intersect site contaminants if used. Therefore, the wells will be abandoned.

7 APPLICABLE, RELEVANT, AND APPROPRIATE REQUIREMENTS

This interim action will protect human health and the environment by substantially reducing the potential for human and ecological exposure to soils above CULs in Cells 1 and 2 of the LRIS. The interim action will comply with federal, state, and local laws, under WAC 173-340-710.

Under WAC 173-340-710, applicable requirements are

> cleanup standards, standards of control, and other environmental protection requirements, criteria, or limitations adopted under state or federal law that specifically address a hazardous substance, cleanup action, location, or other circumstances at the site.

Relevant and appropriate requirements are

> cleanup standards, standards of control, and other environmental requirements, criteria, or limitations established under state or federal law that, while not legally applicable to the hazardous substance, cleanup action, location, or other circumstance at a site, address problems or situations sufficiently similar to those encountered at a site that their use is well suited to the particular site.

Remedial actions conducted under an agreed order are exempt from the procedural requirements of certain laws. This exemption applies to the following laws: Chapters 70.94 (Air), 70.95 (Solid Waste), 70.105 (Hazardous Waste), 75.20 (Hydraulic Permit), 90.48 (Water Quality), and 90.58 (Shorelands) RCW.

The following is a discussion of applicable, relevant, and appropriate regulatory requirements:

7.1 Summary of Generally Applicable or Relevant and Appropriate Federal Laws and Regulations

- **Clean Water Act:** Section 402 of the Clean Water Act (CWA) requires the development of comprehensive programs for preventing, reducing, or eliminating pollution in the nation's waterways. The objective of the federal CWA (33 USC 1251-1376 and 40 Code of Federal Regulations [CFR] 129 and 131) is to restore and maintain the chemical, physical, and biological integrity of the nation's waters.

  If water is discharged to Carty Lake or Lake River, it will be required to meet the federal water quality criteria. The State of Washington has been delegated the authority to implement the CWA and has corresponding

rules and regulations encompassing all of those stated in the CWA. Consequently, for the Port, any discharges to surface water will be managed under the state program.

- **Identification and Listing of Hazardous Waste and Standards for Generators:** The Solid Waste Disposal Act (42 USC 6921 Subtitle C) incorporated under RCRA (40 CFR § 260 through 266) contains requirements for "cradle to grave" management of materials that meet the RCRA definition of hazardous waste. These requirements may apply to wastes generated during the remedial action. RCRA defines hazardous wastes as either those wastes specifically listed in 40 CFR § 261 Subpart D or wastes that exhibit one of four hazardous characteristics: ignitability, corrosivity, reactivity, or toxicity as determined by TCLP. Requirements to determine whether waste being generated is hazardous, whether by sampling and analysis or by process knowledge, are listed in 40 CFR § 262.11.

  Any soil, sludge, or debris that is excavated from the site and is treated or disposed of off site will be subject to the hazardous waste requirements if it contains a hazardous waste or exhibits a characteristic of hazardous waste.

- **Land-Disposal Restrictions:** LDRs for RCRA wastes characterized as toxic (40 CFR § 268) require that the waste be treated to specified concentrations before placement in a land-based unit. LDRs would apply to wastes that are removed from the site exceeding treatment standards for waste codes or that fail a TCLP analysis. Waste generated from the site may be subject to LDRs, unless CAMU requirements dictate otherwise. Confirmation of this assumption will be made as part of the waste profiling process during the remedial action.

- **Corrective Action Management Unit:** A CAMU-eligible waste is any cleanup waste; it does not include as-generated waste from an ongoing industrial operation, according to 40 CFR § 264.552(a)(1). A CAMU-eligible waste generally may be land disposed, if the waste through treatment achieves a 90 percent reduction in the total concentrations of any nonmetal and metal principal hazardous waste constituents (PHCs) identified by the USEPA regional administrator or the authorized state where the waste is generated, capped at ten times the PHC's universal treatment standard (40 CFR § 264.555(a)(2)(i); 40 CFR § 264.552(e)(iv)). If the waste exhibits the characteristic of ignitability, corrosivity or reactivity, the waste must be treated to remove the characteristic. A state regulatory authority may also, on a case-by-case basis, lower the treatment standards, based on certain factors, including technical impracticability of treatment, local community views, short-term treatment risks, and long-term protection provided by the disposal facility.

Before shipping solid or hazardous waste to a CWM facility for disposal, the Port must ask Ecology to designate the specific waste as "CAMU-eligible." The generator making the request must provide sufficient information to enable the agency overseeing the cleanup to approve the request (40 CFR § 264.555(b)). At a minimum, this information must include: (1) the origin of the waste and how it was managed, (2) whether the waste is listed or can be considered "hazardous," and (3) whether it is otherwise subject to the LDRs (40 CFR § 264.555(b), referencing 40 CFR § 264.552(d)).

Following the request to ship the waste to a CWM facility, the overseeing agency must provide notice and a "reasonable opportunity for public comment" before approving the off-site placement of CAMU-eligible waste (40 CFR § 264.555(c)).

The CWM Subtitle C Facility in Arlington, Oregon, is permitted to accept CAMU-eligible waste. For each cleanup generating a CAMU-eligible waste, CWM must request an additional permit modification from the Oregon Department of Environmental Quality (DEQ) (40 CFR § 264.555(d)-(e)), including the source of the CAMU waste, its PHCs, and the applicable treatment requirements. Public notice by CWM is also required. The DEQ may object to the off-site placement of CAMU-eligible waste within 30 days of CWM's notification (40 CFR § 264.555(e)(3)).

The Port is requesting Ecology's determination of CAMU-eligibility.

- **U.S. Department of Transportation Hazardous Materials Regulations:** The U.S. Department of Transportation has published regulations, including requirements regarding communications and emergency response, shipping, and packaging (40 CFR 171 through 180), that govern the transportation of hazardous materials to or from the site. The provisions of 40 CFR § 263 establish minimum standards that apply to persons transporting hazardous waste by air or water. The standards will apply to those elements of the remedial action involving off-site transportation of hazardous waste.

- **National Historical Preservation Act:** Archeological evaluation and cultural resource requirements apply to the site because state funds are being used to facilitate a portion of the cleanup and are addressed under 36 CFR 800. Work to be performed in native soil will be conducted under a site cultural resource protection plan.

- **Occupational Safety and Health Administration:** Occupational Safety and Health Administration regulations pertaining to hazardous waste sites are addressed under 29 CFR 1910.120, the Hazardous Waste Operations and Emergency Response Standard. All work will be

performed under a site health and safety plan in conformance with the applicable federal and state OSHA regulations.

7.2 Summary of Generally Applicable or Relevant and Appropriate Washington State Laws and Regulations

- **Site Cleanup under Model Toxics Control Act:** In Washington State, MTCA governs the investigation and cleanup of contaminated sites (Chapter 70.105D RCW). A contaminant is defined by MTCA 173-340-200 as any hazardous substance that does not occur naturally or that occurs at concentrations greater than natural levels. All elements of the remedial design and remedial action will comply with MTCA standards.

- **Water Quality Standards for Surface Waters and Groundwaters of the State:** Water quality standards for groundwater are promulgated under Chapter 173-200 WAC. This chapter implements the Federal Water Pollution Control Act (FWPCA) and Chapters 90.48 and 90.54 of the RCW, as well as the federal Water Resources Act of 1971. Chapter 173-200 WAC applies to all groundwaters of the state that occur in a saturated zone or stratum beneath the surface of land or below a surface-water body. Any water generated during construction and discharged to Lake River would be required to meet surface water quality standards. During construction, water will be directed through erosion- and sediment-control features to meet any water quality standards. Additionally, state water quality standards are considered as screening criteria.

- **Washington Dangerous Waste Regulations:** Washington regulations identify F-listed and K-listed wastes as dangerous waste (WAC 173-303-9904). Designated dangerous wastes may be treated, stored, or disposed of at a permitted treatment, storage, and disposal facility. Material generated on site would not be considered a state-only dangerous waste. Material will be handled according to WAC 173-303, following recordkeeping and reporting and manifesting requirements.

- **National Pollutant Discharge Elimination System (NPDES) Stormwater Permit Program:** Chapter 173-220 WAC establishes a state permit program, applicable to the discharge of pollutants and other wastes and materials to the surface waters of the state, operating under state law as a part of the NPDES created by Section 402 of the FWPCA. Permits issued under this chapter are intended to satisfy the requirements for discharge permits under both Section 402(b) of the FWPCA and Chapter 90.48 RCW. The Port will conduct remedial activities under its NPDES permit.

- **State Environmental Policy Act:** The State of Washington administers and enforces the State Environmental Policy Act (SEPA), contained in Chapter 43.21C RCW, which provides the framework for agencies to consider the environmental consequences of a proposal before taking action. It also gives agencies the power to condition or deny a proposal because of identified likely significant adverse impacts. The act is implemented through the SEPA Rules and Procedures, Chapters 197-11 and 173-802 WAC, respectively. All actions affecting environmental use are potentially subject to the SEPA requirements, and are generally incorporated during a permitting application process. For the specified action, SEPA requires the preparation of an environmental checklist, which may be achieved by review of the environmental impacts and proposal of mitigation measures. The completed checklist helps to identify potential environmental impacts associated with the proposed action. Following a threshold determination, the lead agency will issue either a Determination of Non-Significance that will allow the action or permitting process to continue, or a Determination of Significance that will require that an environmental impact statement be prepared before agency action can be taken. Typically, one checklist or environmental impact statement is required for a project, although it may require modification or application of numerous permits by federal, state, or local agencies. A SEPA checklist is attached in Appendix E for Ecology's review.

- **Washington State Department of Archeological and Historic Preservation:** Under the Washington State Governor's Executive Order 05-05, archeological and cultural resources must be evaluated to satisfy federal regulations 36 CFR 800. The Washington State Department of Archeological and Historic Preservation will review a site cultural resource protection plan under which work will be conducted during the interim action.

- **Washington Industrial Safety and Health Administration:** Washington Industrial Safety and Health Administration (WISHA) regulations pertaining to hazardous waste sites are addressed under WAC 296-843, Hazardous Waste Operations. This standard applies to cleanup and corrective actions at MTCA-regulated sites. During demolition, asbestos-containing materials (ACM) may be encountered. Handling of ACM is also subject to WISHA regulations. All work will be performed under a site health and safety plan in conformance with the applicable WISHA regulations.

7.3 Local Requirements

- **Shoreline Master Program:** A cleanup action or "substantial development" performed along all shorelines of statewide significance in

the city is regulated under the Shoreline Master Program (Chapter 18.820 of the Ridgefield Municipal Code [RMC]). The remedial action will be considered a substantial development and partially completed within 200 feet of a shoreline. The interim action coincides with documents that have been submitted to the City for review and approval. Consultation with the City will confirm that the design meets the substantive requirements.

- **City of Ridgefield Critical Areas Ordinance:** The City of Ridgefield Critical Areas Ordinance restricts fill in the floodway in accordance with RMC 18.280.120. Equilibrium must be maintained by prohibiting encroachments, including fill, new construction, replacement structures, substantial improvements, and other development, unless an engineering report is provided demonstrating through hydrologic and hydraulic analyses that the proposed encroachment would not result in a net increase in base flood elevation or flood velocity. The interim action increases floodplain storage. The interim action coincides with documents that have been submitted to the City for review and approval. Consultation with the City will confirm that the design meets the substantive requirements.

- **Southwest Clean Air Agency (SWCAA)**: ACM removal activities shall be performed in accordance with SWCAA 476, Standards for Asbestos Control, Demolition, and Renovation.

The interim action will meet the substantive requirements for applicable, relevant, and appropriate requirements, as discussed above. Permits and/or documentation from the appropriate regulatory agencies will confirm that the interim action will meet substantive requirements.

8 SCHEDULE

Ecology approval is required before the interim action can begin; this approval process includes a public comment period.

The SER polishing step is currently in progress and is planned to run through June 2011, as part of the emergency action that began operating in 2004. Interim actions related to the SER system, including demobilization, will be completed following polishing and upon Ecology's approval of the Plan.

Excavation of the concrete pond area, the SS-14 area, the TP-03 area, and demolition is anticipated to start in June 2011 and continue through the summer. The SER liquid-only-extraction phase is anticipated to conclude in September 2011, followed by environmental sampling in the SER area and then demobilization of the entire SER system, beginning in approximately November 2011. Completion of demolition, subgrade preparation, grading, and capping of Cells 1 and 2 are anticipated to take place during the summer of 2012.

Upon completion of components of the interim action, technical memoranda will be submitted to Ecology, incorporating the following items:

- Descriptions of field activities and observations
- Survey showing the final lateral and vertical extent of the excavations, finished grade, and constructed soil cap thickness
- Tables summarizing the confirmation sampling analytical results
- Copies of the waste disposal manifest
- Copies of laboratory analytical results

LIMITATIONS

The services undertaken in completing this Plan were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This Plan is solely for the use and information of our client unless otherwise noted. Any reliance on this Plan by a third party is at such party's sole risk.

Opinions and recommendations contained in this Plan apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this Plan.

E&E. 1991. RCRA preliminary assessment for Pacific Wood Treating Corporation. Prepared for U.S. Environmental Protection Agency. Ecology & Environment. February.

E&E. 1996. Pacific Wood Treating site assessment report. Prepared for U.S. Environmental Protection Agency. Ecology and Environment. March.

Group MacKenzie. 2009. Stormwater pollution prevention plan. Prepared for Port of Ridgefield. Group MacKenzie. August 13.

Hart Crowser. 1991. Phase II site characterization for Pacific Wood Treating, Ridgefield, Washington. Prepared for Schwab, Hilton & Howard, Portland, Oregon. Hart Crowser, Inc., Lake Oswego, Oregon. April 10.

Kleinfelder. 1993. RFI site characterization, Pacific Wood Treating, Ridgefield, Washington. Prepared for Pacific Wood Treating. Kleinfelder, Inc., Portland, Oregon. May 10.

MFA. 2004. Remedial investigation workplan for Port of Ridgefield Lake River industrial site. Vol. I, Cells 1, 2, and 4. Prepared for the Port of Ridgefield. Maul Foster & Alongi, Inc., Vancouver, Washington. July 2.

MFA. 2009a. I-5 interchange soil acceptance plan. Prepared for the Port of Ridgefield. Maul Foster & Alongi, Inc., Vancouver, Washington. May 18.

MFA. 2009b. I-5 interchange soil sampling results. Prepared for the Port of Ridgefield. Maul Foster & Alongi, Inc., Vancouver, Washington. August 6.

MFA. 2010a. Cells 3 and 4 interim action work plan. Prepared for the Port of Ridgefield. Maul Foster & Alongi, Inc., Vancouver, Washington. May 27.

MFA. 2010b. Letter (re: final terrestrial ecological evaluation for the former Pacific Wood Co. Treating site, Agreed Order No. 01TCPSR-3119) to C. Rankine, Washington State Department of Ecology, from J. Peterson and A. Hughes, Maul Foster & Alongi, Inc. April 13.

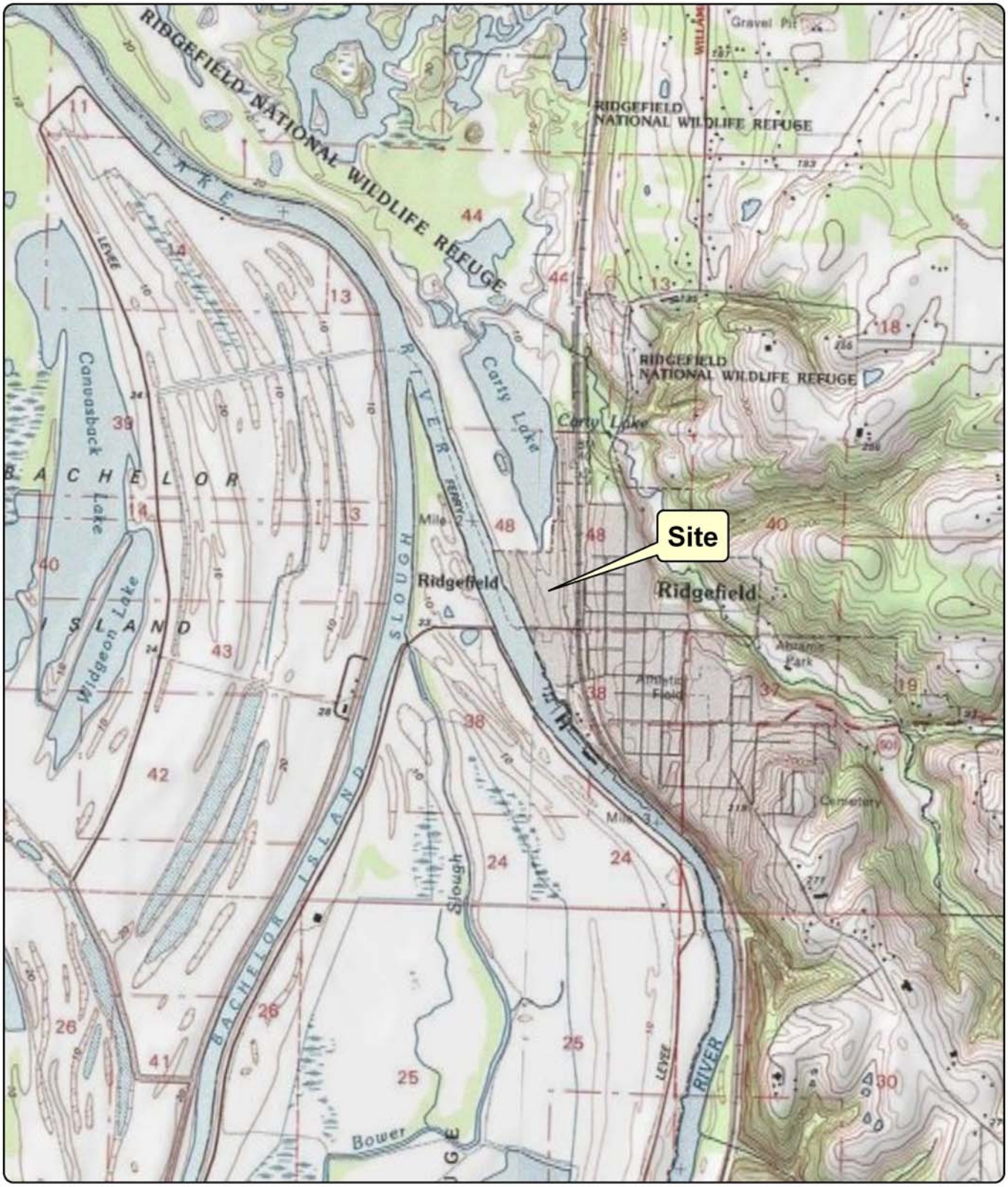
MFA. 2011a. Draft Cells 1 and 2 remedial investigation and feasibility study report. Prepared for the Port of Ridgefield. Maul Foster & Alongi, Inc., Vancouver, Washington. January 19.

MFA. 2011b. Memorandum (re: monthly meeting notes from February 15, 2011,former Pacific Wood Treating Company) to C. Rankine, Washington State Department of Ecology, from A. Hughes, Maul Foster & Alongi, Inc. February 25.

SEA. 1986. Pacific Wood Treating Corporation Phase II ground water investigation status report. Prepared for Pacific Wood Treating Corporation. Sweet, Edwards & Associates, Inc. September 18.

SEA. 1987. Pacific Wood Treating Corporation Phase II ground water investigation. Prepared for Pacific Wood Treating Corporation. Sweet, Edwards & Associates, Inc. April 6.

FIGURES



Source: Topographic quadrangle obtained from ESRI, Inc.
ArcGIS Online/USGS-NGS TOPO!

Address: Lake River Industrial Site
111 W. Division Street,
Ridgefield, WA 98642
Section: 24 Township: 4N Range: 1W Of Willamette Meridian

Figure 1-1
Site Location
Port of Ridgefield
Ridgefield, Washington

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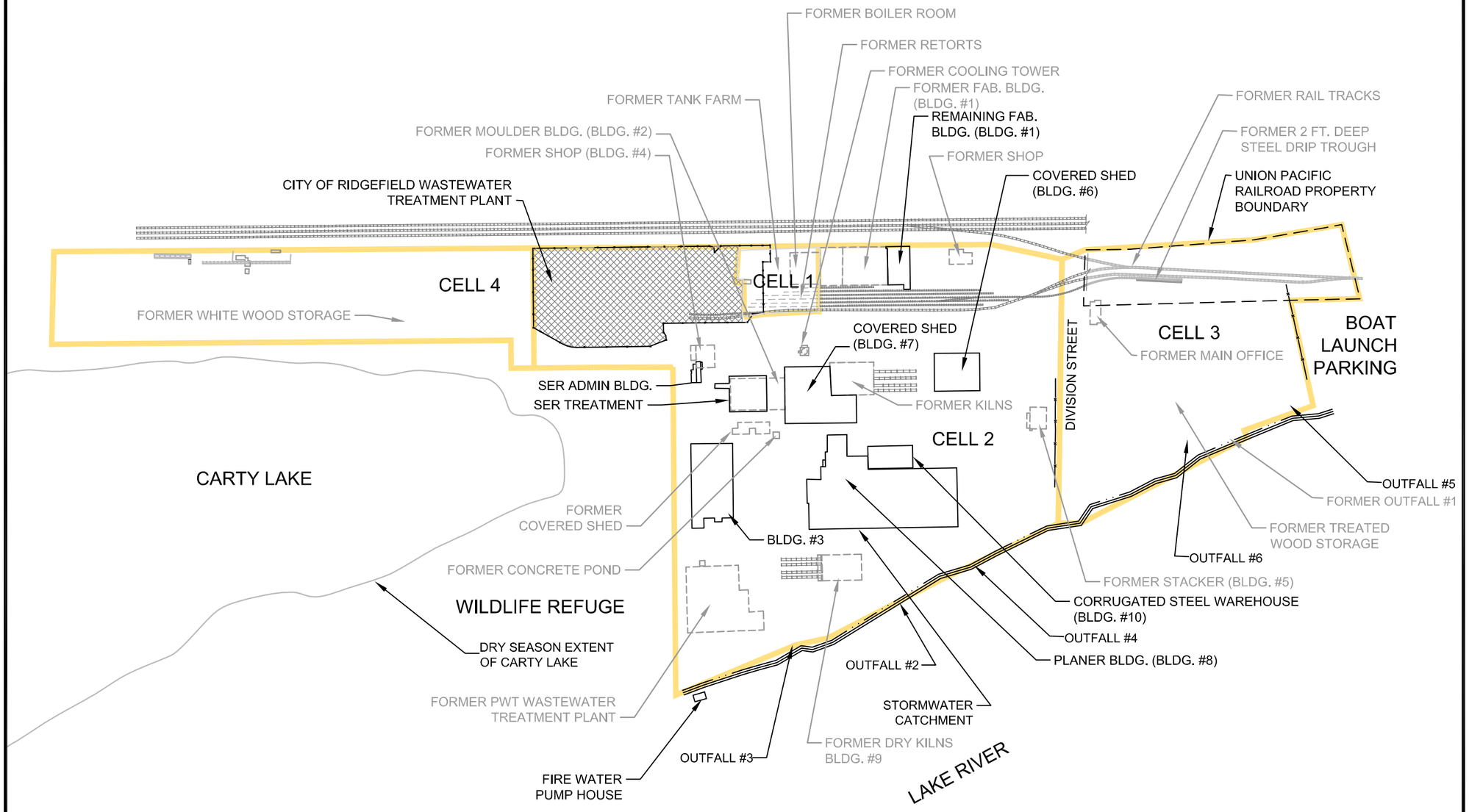
0 1,000 2,000
Feet

Project: 9003.01.28 Produced By: W. Coffey Approved By: A. Hughes Print Date: 02-08-2010 File: X:\9003.01 Port of Ridgefield\36\05\Projects\X:\9003.01 Port of Ridgefield\36\05\Figures\Cells 1 and 2 Groundwater Presentation\Fig1-1_Site Location.mxd

Figure 2-1
Site Features

Port of Ridgefield
Ridgefield, Washington



LEGEND:

- CITY OF RIDGEFIELD WASTEWATER TREATMENT PLANT
- UNION PACIFIC PROPERTY BOUNDARY
- CELL BOUNDARY
- CURRENT FEATURES
- RAIL LINE
- FENCE LINE
- FORMER PWT FEATURES

N

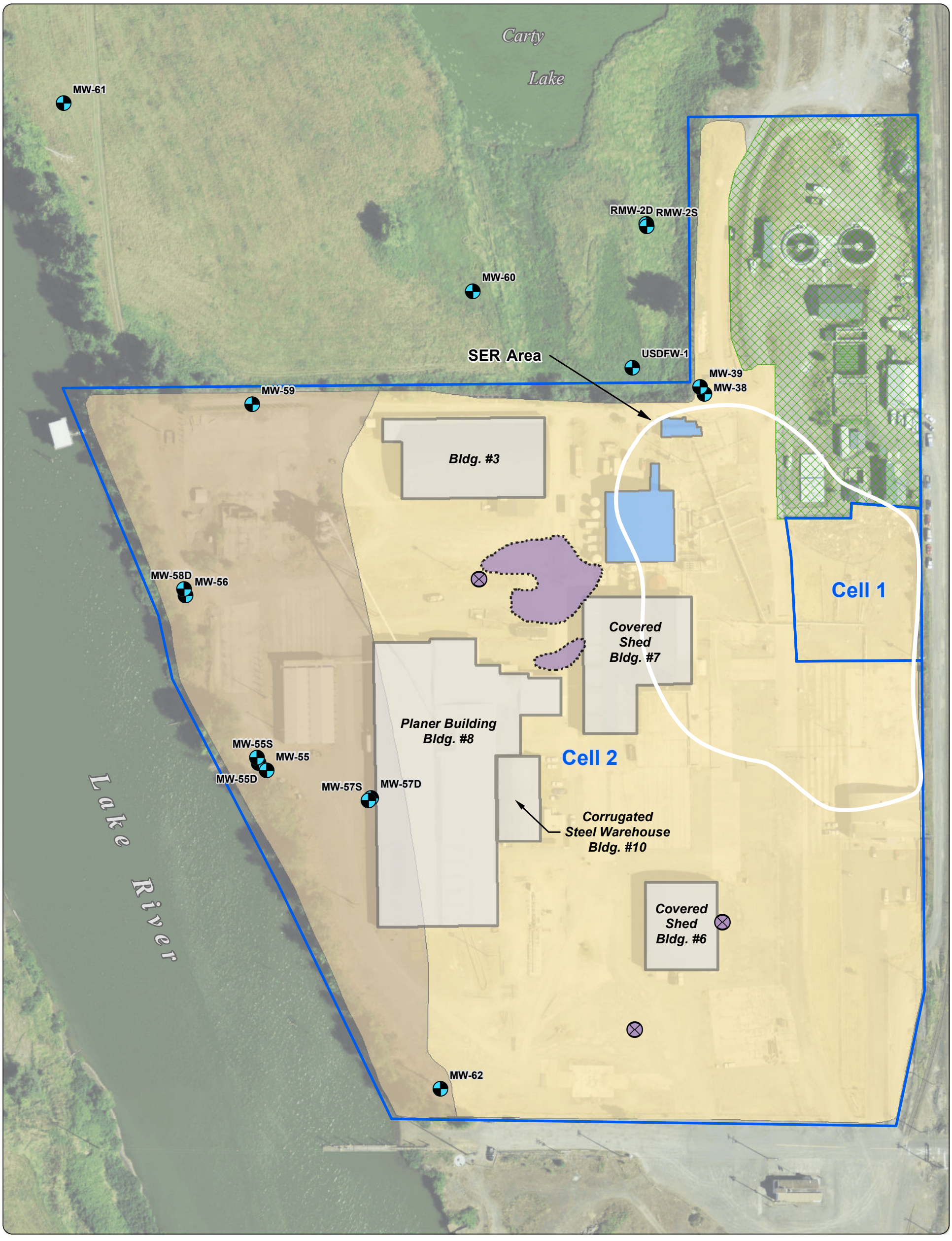
0 300 600

FEET

MAUL FOSTER ALONGI

G:\9003.01 Port of Ridgefield\47_Cells 1 & 2 Interim Action\Figures\Fig2-1_Site Features-Historic.dwg, Layout1, 4/12/2011 4:15:54 PM

Layout: 1 Project: 9003.01.47 Drawn By: J. Fisher Approved By: A. Hughes



Source: Aerial photograph obtained from Clark County GIS Department (August 2007)

Notes:
1. MTCA = Model Toxics Control Act
2. CUL = cleanup level
3. SER = Steam Enhanced Remediation
4. Purple marks Excavation Areas.

Legend

- Soil to be excavated exceeding MTCA C CULs
- Concrete Pond Excavation
- Monitoring Well
- Cap (2-foot Thickness)
- Cap (3-foot Thickness)
- Buildings to be Demolished
- SER System
- Sewage Treatment Plant
- Cell Boundaries

Figure 3-1
Cells 1 & 2 Interim Action Locations

Port of Ridgefield
Ridgefield, Washington

0 100 200
Feet

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Print Date: 04-12-2011
Approved By: J. King
Produced By: J. Schane
Project: 9003.01.47

APPENDIX A

CORRECTIVE ACTION MANAGEMENT UNIT DOCUMENTATION

MEMORANDUM

To: Kaia Petersen, Washington State Department of Ecology

Date: April 13, 2011

From: Jennifer King

Project: 9003.01.47

RE: Port of Ridgefield – Site Information

The Port of Ridgefield (Port) is requesting that the Washington State Department of Ecology consider waste at the Lake River Industrial Site (LRIS) as CAMU-eligible. The Port is preparing to conduct an interim action in Cells 1 and 2 of the LRIS during the summers of 2011 and 2012.

Per Washington Administrative Code (WAC) 173-303-64650(3)(a), "CAMU-eligible wastes" are defined as "all solid and dangerous wastes, and all media (including ground water, surface water, soils, and sediments) and debris, that are managed for implementing cleanup." Under WAC 173-303-646920, the Department of Ecology (Ecology) may approve the disposal of CAMU-eligible waste in a Resource Conservation and Recovery Act (RCRA) Subtitle C landfill located outside of the State of Washington, without the soils meeting the land disposal restrictions (LDRs) of 40 CFR 268. The following site information is provided to inform the process of making the CAMU-eligible determination.

SITE HISTORY

The physical address of the LRIS is 111 West Division Street, Ridgefield, Washington. It is located in section 24, township 4 north, range 1 west, Willamette Meridian. The LRIS is the former location of the Pacific Wood Treating Co. (PWT) facility. The Port owns the property, which PWT leased from approximately 1964 to 1993. PWT's former operations involved pressure-treating wood products with oil-based treatment solutions containing creosote, pentachlorophenol (PCP), and a water-based mixture of copper, chromium, and arsenic and copper, chromium, and zinc. Figure 1 shows the historical and current site features related to PWT's operations.

Impacts to the site occurred through different mechanisms, such as spills, drippage, storage of treated lumber, and treatment of wastes. The impacts occurred throughout PWTs operation.

Investigations on the LRIS show that wood-treating solutions were released to the surface throughout most of the site and have impacted soil and groundwater. Impacted soil is believed to have been caused by the incidental drippage and associated activities from wood storage. Because the soil contains listed wood-preserving wastes from former PWT operations, the soils have to be

managed as dangerous waste. The following waste codes (WAC 173-303-9904) apply to soil that will be removed from LRIS:

- Listed Waste code F032—Preservative drippage in soil that contains chlorophenolic wastes (listed December 6, 1990; land disposal requirements in effect August 12, 1997)
- Listed Waste code F034—Preservative drippage in soil that contains creosote wastes (listed December 6, 1990; land disposal requirements in effect August 12, 1997)
- Listed Waste code F035—Preservative drippage in soil that contains arsenic and chromium wastes (listed December 6, 1990; land disposal requirements in effect August 12, 1997)

At this time the Port plans to excavate soil with waste codes F032, F034, and F035 from two locations, SS-14 and TP-03 (see Figure 2). Additional soil from the SER treatment area as identified on Figure 2 may be generated, which would carry the same F-listed waste codes.

Site impacts also occur around a former wastewater treatment feature, the "concrete pond" (see Figure 2). Impacts in the concrete pond area (including TP-13 location) are understood to be the result of treatment of wastewater from wood preserving processes. Because soils in the concrete pond area contain listed wood-preserving wastes from former PWT operations, the soils have to be managed as dangerous waste. The following waste code (WAC 173-303-9904) applies to soil that would be removed from the concrete pond area:

- Listed Waste code K001—Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol (listed May 19, 1980; land disposal requirements in effect August 8, 1988).

The attached Table includes the proposed levels where treatment is required prior to landfilling at a Subtitle C disposal facility as a CAMU-eligible waste. The principal hazardous constituents are based on chemicals that exceeded cleanup levels and regulated hazardous constituents listed under waste codes F032, F034, F035, and K001.

Attachment: Table
Figures 1 and 2

Table
Proposed Treatment Levels for CAMU Disposal
Port of Ridgefield - Lake River Industrial Site
Ridgefield, Washington

CAS #:	Principal Hazardous Constitutents (PHCs)	Waste Codes	Proposed Treatment Levels (mg/kg unless noted as mg/L TCLP)	Source of Proposed Treatment Level
83-32-9	Acenaphthene	F032, F034	2.10E+05	Soil, Method C, Non-carcinogen[1]
120-12-7	Anthracene	F032, F034	1.05E+06	Soil, Method C, Non-carcinogen
191-24-2	Benzo(g,h,i)perylene	--	1.80E+01	10 times UTS[2]
56-55-3	Benzo[a]anthracene	F032, F034	3.40E+01	10 times UTS
50-32-8	Benzo[a]pyrene	F032, F034	3.40E+01	10 times UTS
205-99-2	Benzo[b]fluoranthene	F032, F034	6.80E+01	10 times UTS
207-08-9	Benzo[k]fluoranthene	F032, F034	6.80E+01	10 times UTS
86-74-8	Carbazole	--	6.56E+03	Soil, Method C, Carcinogen
218-01-9	Chrysene	F032, F034	2.70E+02	DEQ Direct Contact Soil, occupational[3]
53-70-3	Dibenzo[a,h]anthracene	F032, F034	8.20E+01	10 times UTS
132-64-9	Dibenzofuran	--	7.00E+03	Soil, Method C, Non-carcinogen
105-67-9	Dimethylphenol;2,4-	F032	7.00E+04	Soil, Method C, Non-carcinogen
206-44-0	Fluoranthene	--	1.40E+05	Soil, Method C, Non-carcinogen
86-73-7	Fluorene	F032, F034	1.40E+05	Soil, Method C, Non-carcinogen
193-39-5	Indeno[1,2,3-cd]Pyrene	F032, F034	3.40E+01	10 times UTS
91-57-6	Methyl Naphthalene;2-	--	1.40E+04	Soil, Method C, Non-carcinogen
91-20-3	Naphthalene	F032, F034, K001	7.00E+04	Soil, Method C, Non-carcinogen
87-86-5	Pentachlorophenol	F032, K001	1.09E+03	Soil, Method C, Carcinogen
85-01-8	Phenanthrene	F032, F034, K001	5.60E+01	10 times UTS
108-95-2	Phenol	F032	2.10E+06	Soil, Method C, Non-carcinogen
129-00-0	Pyrene	F032, F034, K001	1.05E+05	Soil, Method C, Non-carcinogen
58-90-2	Tetrachlorophenol;2,3,4,6-	F032	1.05E+05	Soil, Method C, Non-carcinogen
88-06-2	Trichlorophenol;2,4,6-	F032	1.19E+04	Soil, Method C, Carcinogen
71-43-2	Benzene	--	2.39E+03	Soil, Method C, Carcinogen
100-41-4	Ethylbenzene	--	3.50E+05	Soil, Method C, Non-carcinogen

Table
Proposed Treatment Levels for CAMU Disposal
Port of Ridgefield - Lake River Industrial Site
Ridgefield, Washington

CAS #:	Principal Hazardous Constitutents (PHCs)	Waste Codes	Proposed Treatment Levels (mg/kg unless noted as mg/L TCLP)	Source of Proposed Treatment Level
98-82-8	Isopropylbenzene (Cumene)	--	3.50E+05	Soil, Method C, Non-carcinogen
75-09-2	Methylene Chloride	--	1.75E+04	Soil, Method C, Carcinogen
100-42-5	Styrene	--	3.60E+04	EPA Screening Level, Soil, Industrial[4]
79-34-5	Tetrachloroethane;1,1,2,2-	--	6.56E+02	Soil, Method C, Carcinogen
127-18-4	Tetrachloroethylene	--	2.43E+02	Soil, Method C, Carcinogen
108-88-3	Toluene	K001	2.80E+05	Soil, Method C, Non-carcinogen
95-63-6	Trimethylbenzene;1,2,4-	--	1.75E+05	Soil, Method C, Non-carcinogen
1330-20-7	Xylenes	K001	7.00E+05	Soil, Method C, Non-carcinogen
NA	Heptachlorodibenzofurans (Hpcdfs)	--	2.50E-02	10 times UTS
NA	Heptachlorodibenzo-P-Dioxin (Hpcdd)	--	2.50E-02	10 times UTS
NA	Hexachlorodibenzofurans (Hxcdfs)	F032	1.00E-02	10 times UTS
NA	Hexachlorodibenzo-P-Dioxins (Hxcdds)	F032	1.00E-02	10 times UTS
39001-02-0	Octachlorodibenzofuran (Ocdf)	--	5.00E-02	10 times UTS
3268-87-9	Octachlorodibenzo-P-Dioxin (Ocdd)	--	5.00E-02	10 times UTS
NA	Pentachlorodibenzofurans (Pecdfs)	F032	1.00E-02	10 times UTS
NA	Pentachlorodibenzo-P-Dioxins (Pecdds)	F032	1.00E-02	10 times UTS
NA	Tetrachlorodibenzo-Furans (Tcdf)	F032	1.00E-02	10 times UTS
NA	Tetrachlorodibenzo-P-Dioxins (Tcdd)	F032	1.00E-02	10 times UTS
NA	Tph, Diesel Range Organics	--	7.00E+04	DEQ Direct Contact Soil, occupational
NA	Tph, Gasoline Range Organics	--	2.20E+04	DEQ Direct Contact Soil, occupational
7440-38-2	Arsenic, Inorganic	F032, F034, F035	5.0 mg/L TCLP	Maximum TCLP Concentration[5]

Table
Proposed Treatment Levels for CAMU Disposal
Port of Ridgefield - Lake River Industrial Site
Ridgefield, Washington

CAS #:	Principal Hazardous Constitutents (PHCs)	Waste Codes	Proposed Treatment Levels (mg/kg unless noted as mg/L TCLP)	Source of Proposed Treatment Level
7440-43-9a	Cadmium In Soil	--	1.0 mg/L TCLP	Maximum TCLP Concentration
7440-47-3	Chromium (Total)	F032, F034, F035	5.0 mg/L TCLP	Maximum TCLP Concentration
7440-50-8	Copper	--	1.30E+05	Soil, Method C, Non-carcinogen
7439-92-1	Lead	K001	5.0 mg/L TCLP	Maximum TCLP Concentration

Notes:

[1] Soil, Method C, Non-carcinogen and Carcinogen levels are from Ecology's CLARC (Cleanup Levels and Risk Calculations) Database (https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx)

[2] 10 times UTS means ten times the Universal Treatment Standard for that constituent (40 CFR 268.48 Table UTS)

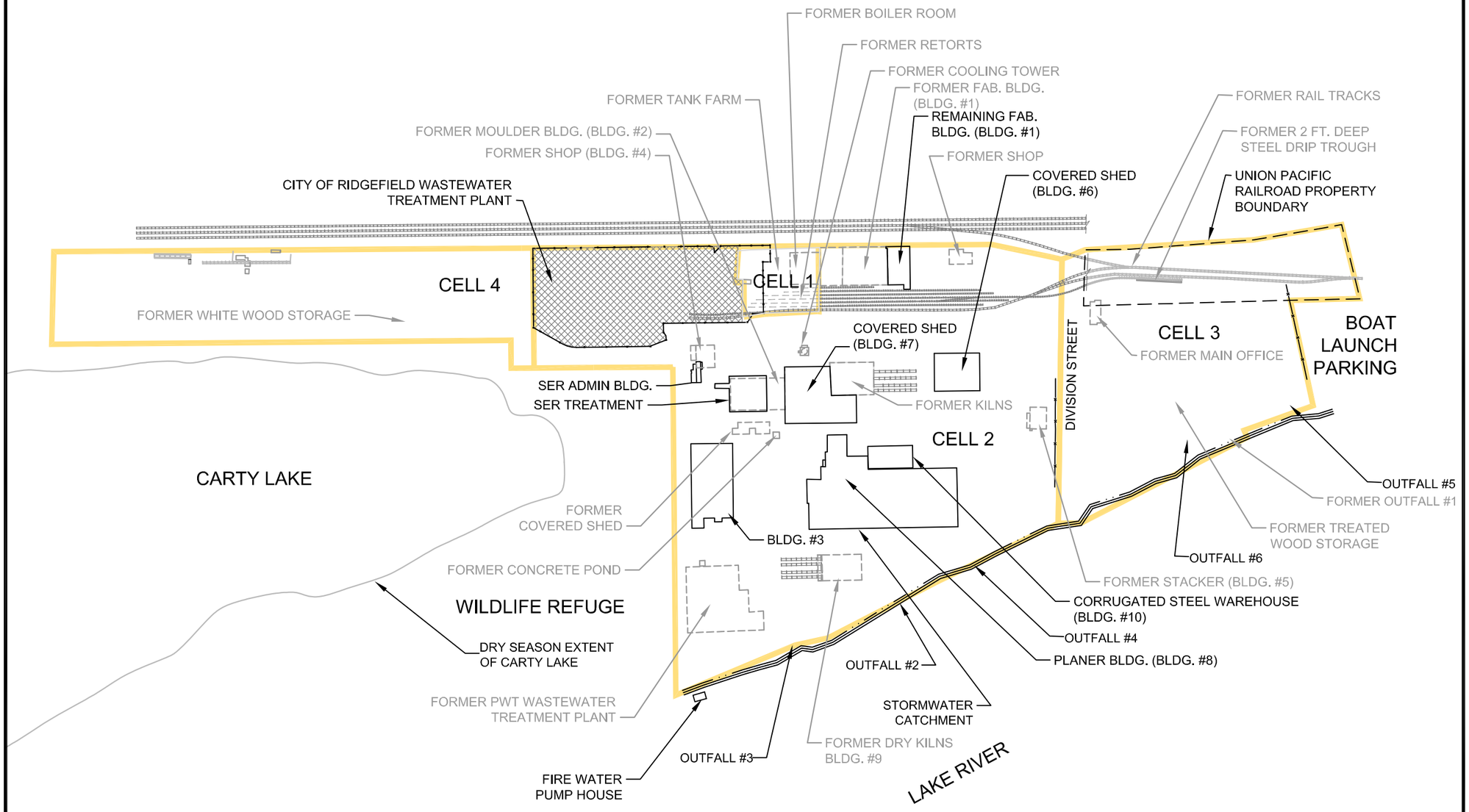
[3] DEQ Direct Contact Soil, occupational levels are from Oregon DEQ Risk-Based Concentrations (http://www.deq.state.or.us/lq/pubs/docs/RBDMTable.pdf)

[4] EPA Screening Level, Soil, Industrial (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/pdf/indsoil_sl_table_run_NOVEMBER2010.pdf)

[5] Maximum concentration of contaminant for the Toxicity Charactistic (see WAC 173-303-090(8))

Figure 1
Site Features

Port of Ridgefield
Ridgefield, Washington



LEGEND:

- CITY OF RIDGEFIELD WASTEWATER TREATMENT PLANT
- UNION PACIFIC PROPERTY BOUNDARY
- CELL BOUNDARY
- CURRENT FEATURES
- RAIL LINE
- FENCE LINE
- FORMER PWT FEATURES

N

0 300 600

FEET

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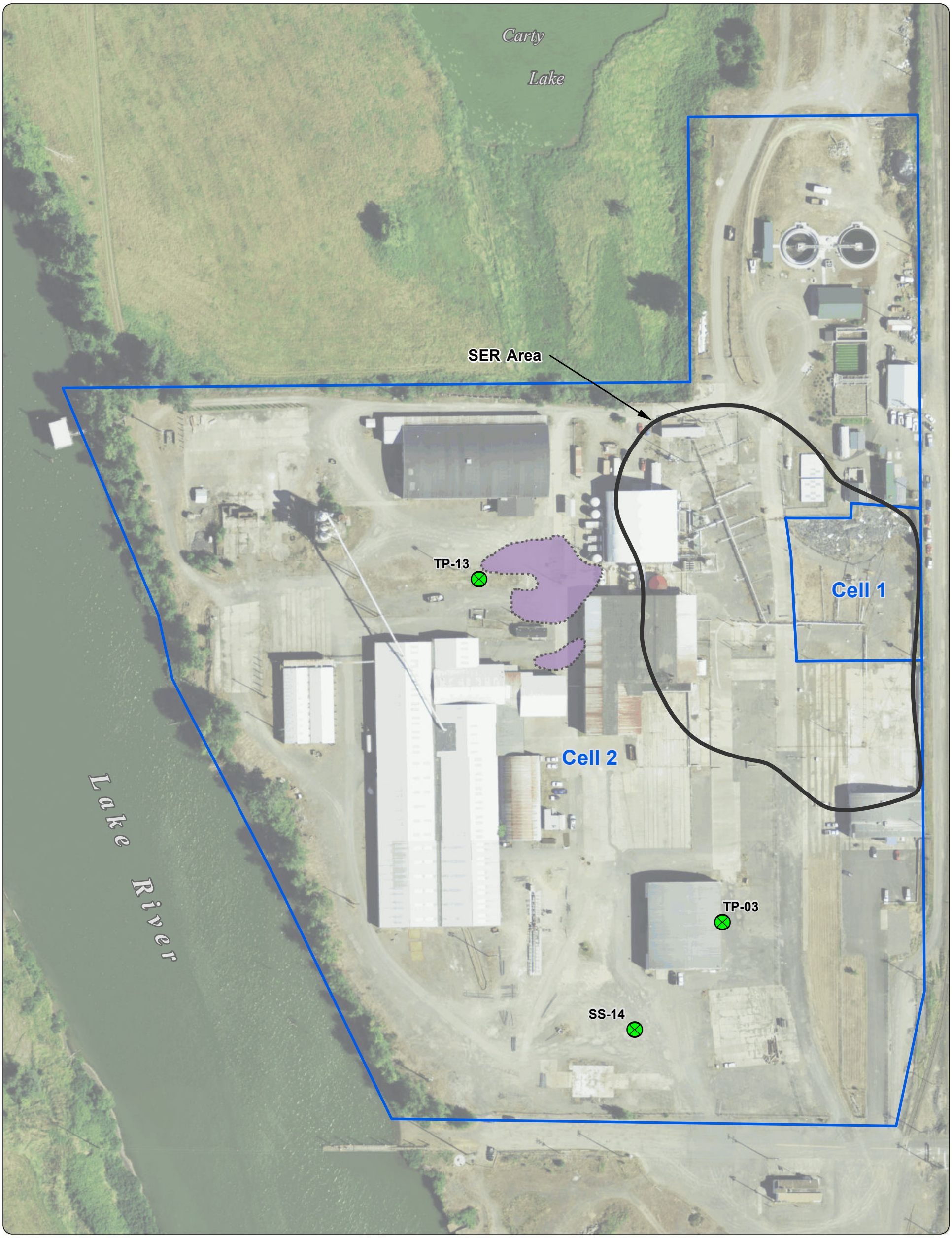
Layout: 1 Project: 9003.01.47 Drawn By: J. Fisher Approved By: A. Hughes



Source: Aerial photograph obtained from Clark County GIS Department (August 2007)

Notes:
1. MTCA = Model Toxics Control Act
2. CUL = cleanup level
3. SER = Steam Enhanced Remediation

Legend

- Soil to be excavated exceeding MTCA C CULs
- Concrete Pond Excavation
- SER treatment area: may be considered for soil removal at a later date
- Cell Boundaries

Figure 2
Cells 1 & 2 Interim Action Excavation Locations

Port of Ridgefield
Ridgefield, Washington

0 100 200
Feet

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Print Date: 04-12-2011
Approved By: J. King
Produced By: J. Schane
Project: 9003.01.47

APPENDIX B

LETTER FROM L. KLASNER, RE: ECOLOGY APPROVAL OF SOIL ACCEPTANCE, DATED JULY 17, 2009

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

July 17, 2009

Mike Clark
Engineering Services Manager
Washington State Department of Transportation
PO Box 1709
Vancouver, WA 98668-1709

Re: I-5 Interchange Soil Acceptance Plan dated May 7, 2009, Ecology Approval of Soil Acceptance, Pacific Wood Treating, FS/ID#1019

Dear Mr. Clark:

I understand that you are the contact person representing Washington State Department of Transportation (WSDOT) in negotiating and organizing the transport of excess soils expected to be generated from the I-5 interchange 14 upgrade to the Port of Ridgefield (Port) property. I work as Department of Ecology's (Ecology) Toxics Cleanup Program Site Manager for the Pacific Wood Treating Site (Site), located on the Port's property.

I am writing to you regarding Ecology's recommendations and requirements for the Port's acceptance of soil for use as fill and engineered cap material on the Site. Ecology has been working with the Port to determine the suitability of the interchange material for the Site with respect to the ongoing investigation and cleanup and has approved the above-referenced soil acceptance plan. This plan outlines testing requirements and acceptance criteria for fill estimated at up to 190,000 cubic yards in volume. We received results from recent testing of the interchange soils. There were two sample locations identified (NB-4A at 0.5 feet below ground surface (ft bgs) and SR-1A at 0.5 ft bgs) that exceeded the criteria for acceptance based on dioxin and lead concentrations. As a result, Ecology has approved the acceptance of the majority of the material, with the exception of an estimated 6,200 cubic yards in the vicinity of these two sample locations. I understand that these locations were identified to you in a July 16, 2009 email from Randy Mueller of the Port.

With respect to the approximately 6,200 cubic yards of material, Ecology recommends keeping this material on the same I-5 interchange location (ex. beneath the road). This recommendation is specific to this situation only and is consistent on the Model Toxics Control Act (MTCA, Chapter 173-340 WAC and Chapter 70.105D RCW) and Dangerous Waste policy.

Please do not hesitate to contact me with questions. I can be reached at 360-407-6265 or lkla461@ecy.wa.gov.

Sincerely,

Laura Klasner

Laura Klasner, PE
Site Manager
Toxic Cleanup Program
Southwest Regional Office

LMK/ksc:WA DOT fill acceptance letter July 2009

cc: Brent Grening, Port of Ridgefield
Laurie Olin, Port of Ridgefield
Bruce Wiseman, Port of Ridgefield
Steve Taylor, MFA
Alan Hughes, MFA
Marian Abbett, TCP-SWRO
Rebecca Lawson, TCP-SWRO

APPENDIX C

FIGURES FROM DRAFT CELLS 1 AND 2 RI/FS REPORT (6-2 THROUGH 6-9)

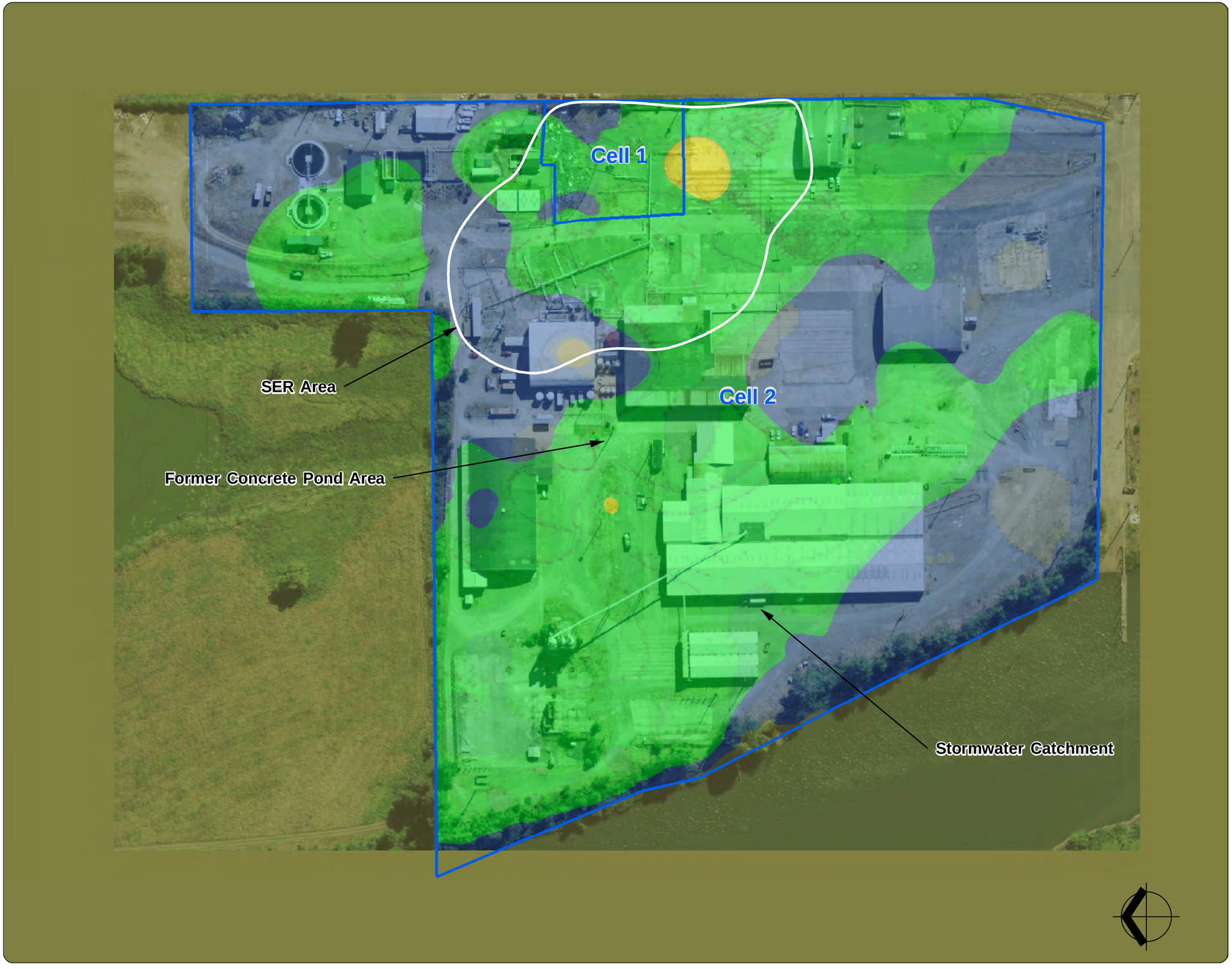

Figure 6-2
Distribution of Arsenic in Soil 0 to 6 Feet bgs

Port of Ridgefield
Ridgefield, Washington

DRAFT

Concentration Levels

- > 0.67 mg/kg MTCA B CUL
- > 5.81 mg/kg Clark County Background
- > 88 mg/kg MTCA C CUL

Notes:
1. MTCA = Model Toxics Control Act
2. CUL = cleanup level
3. mg/kg = milligrams per kilogram
4. bgs = below ground surface

Source: Aerial photograph obtained from Clark County GIS Department

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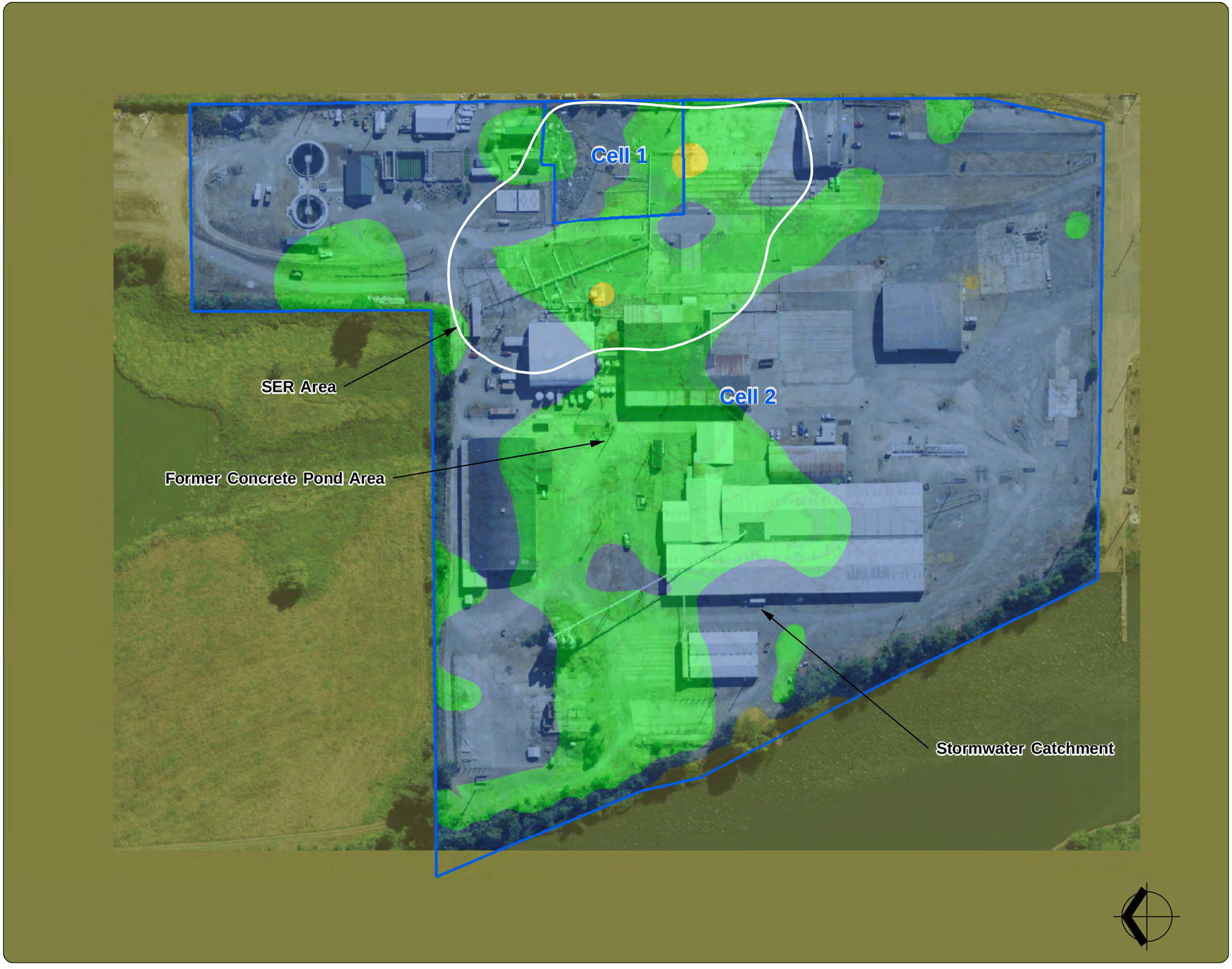

Figure 6-3
Distribution of Arsenic in Soil 6 to 15 Feet bgs

Port of Ridgefield
Ridgefield, Washington

DRAFT

Concentration Levels

- > 0.67 mg/kg MTCA B CUL
- > 5.81 mg/kg Clark County Background
- > 88 mg/kg MTCA C CUL

Notes:
1. MTCA = Model Toxics Control Act
2. CUL = cleanup level
3. mg/kg = milligrams per kilogram
4. bgs = below ground surface

Source: Aerial photograph obtained from Clark County GIS Department

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Project: 9003.01.36 #05 Produced By: J. Schane Approved By: A. Hughes Print Date: 1/19/2011

Figure 6-4
Distribution of Carcinogenic Polycyclic Aromatic Hydrocarbons in Soil - 0 to 6 Feet bgs

Port of Ridgefield
Ridgefield, Washington

DRAFT

Concentration Levels

- > 0.14 mg/kg MTCA B CUL
- > 18 mg/kg MTCA C CUL

Notes:
1. MTCA = Model Toxics Control Act
2. CUL = cleanup level
3. mg/kg = milligrams per kilogram
4. bgs = below ground surface
5. Distribution and concentration levels shown as toxicity equivalent concentration.

Source: Aerial photograph obtained from Clark County GIS Department

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Project: 9003.01.36 /05 Produced By: J. Schane Approved By: A. Hughes Print Date: 1/19/2011

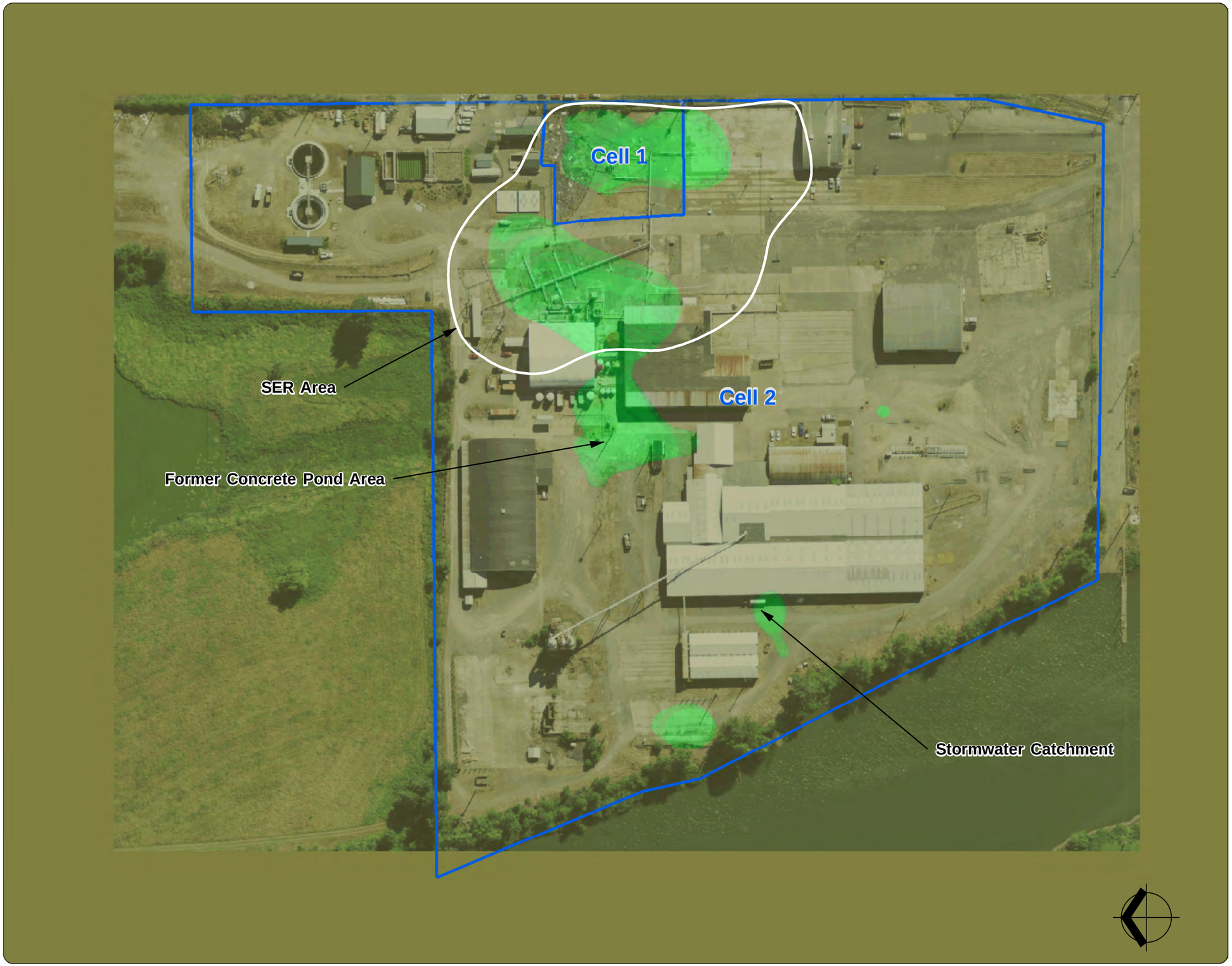

Figure 6-5
Distribution of Carcinogenic Polycyclic Aromatic Hydrocarbons in Soil - 6 to 15 Feet bgs

Port of Ridgefield
Ridgefield, Washington

DRAFT

Concentration Levels

> 0.14 mg/kg MTCA B CUL

Notes:
1. MTCA = Model Toxics Control Act
2. CUL = cleanup level
3. mg/kg = milligrams per kilogram
4. bgs = below ground surface
5. Distribution and concentration levels shown as toxicity equivalent concentration.

Source: Aerial photograph obtained from Clark County GIS Department

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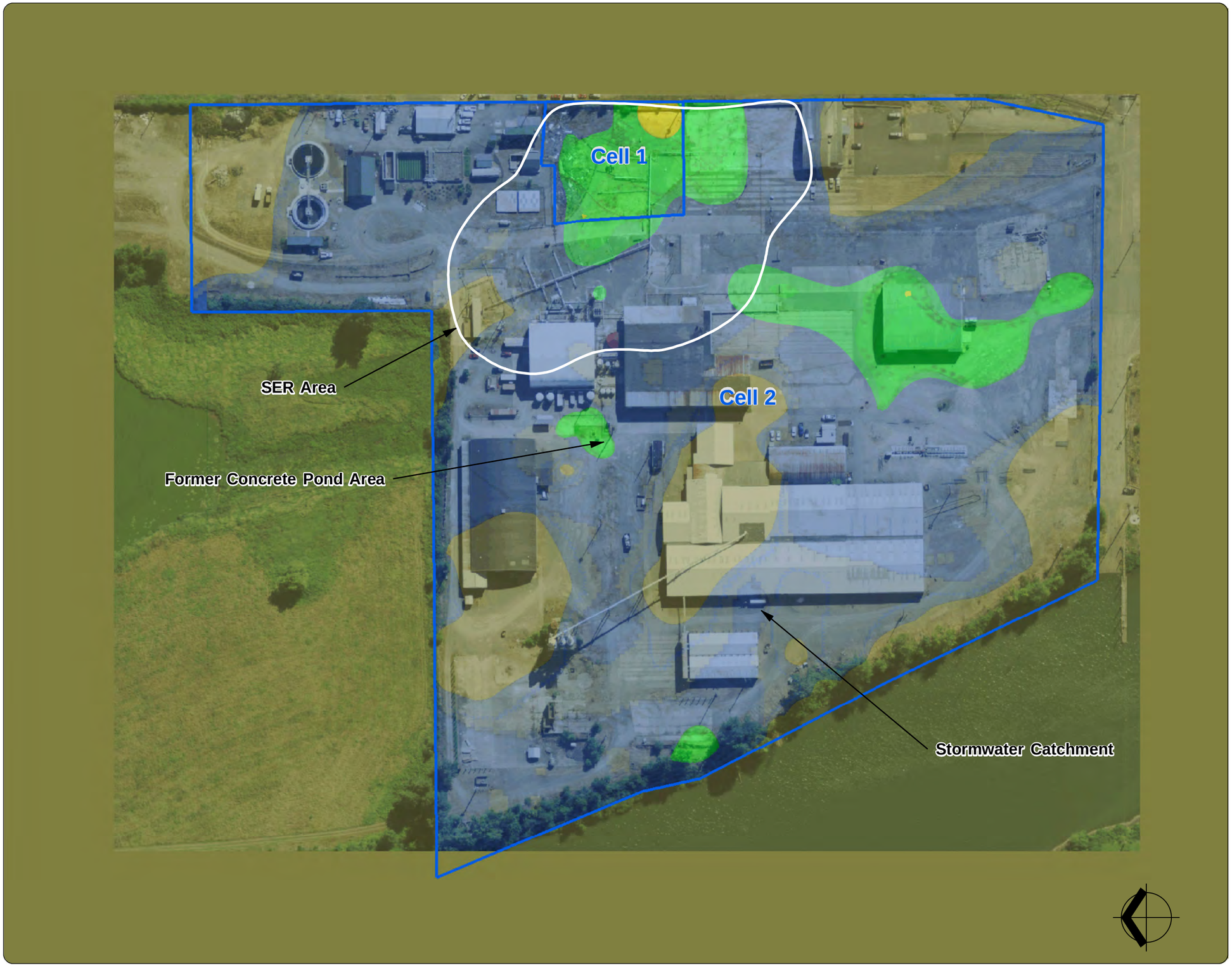

Figure 6-6
Distribution of Pentachlorophenol in Soil - 0 to 6 Feet bgs

Port of Ridgefield
Ridgefield, Washington

DRAFT

Concentration Levels

- > 0.0116 mg/kg Leaching to Groundwater
- > 8.3 mg/kg MTCA B CUL
- > 1,100 mg/kg MTCA C CUL

Notes:
1. MTCA = Model Toxics Control Act
2. CUL = cleanup level
3. mg/kg = milligrams per kilogram
4. bgs = below ground surface

Source: Aerial photograph obtained from Clark County GIS Department

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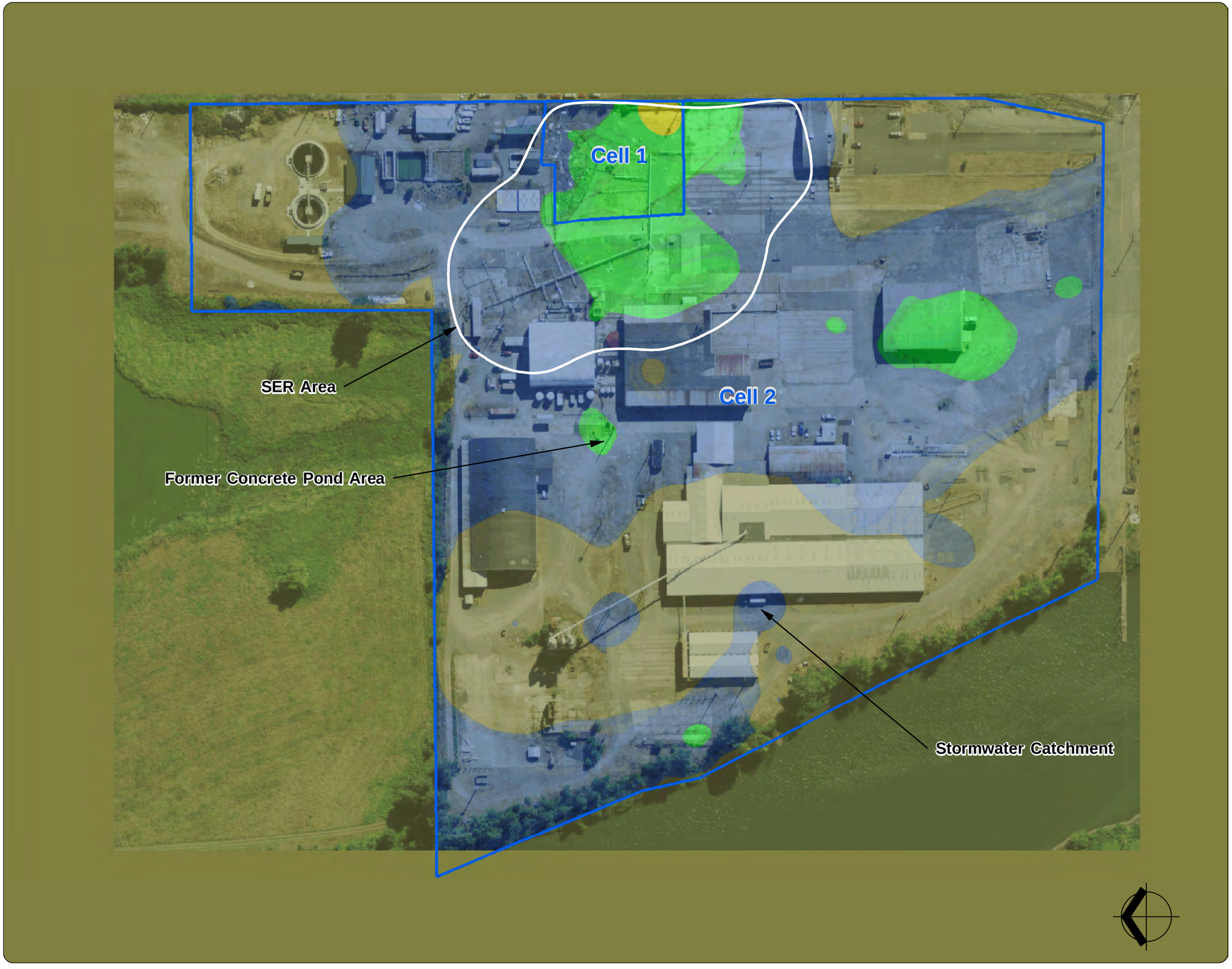

Figure 6-7
Distribution of Pentachlorophenol in Soil - 6 to 15 Feet bgs

Port of Ridgefield
Ridgefield, Washington

DRAFT

Concentration Levels

- > 0.0116 mg/kg Leaching to Groundwater
- > 8.3 mg/kg MTCA B CUL
- > 1,100 mg/kg MTCA C CUL

Notes:
1. MTCA = Model Toxics Control Act
2. CUL = cleanup level
3. mg/kg = milligrams per kilogram
4. bgs = below ground surface

Source: Aerial photograph obtained from Clark County GIS Department

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Project: 9003.01.36 /05 Produced By: J. Schane Approved By: A. Hughes Print Date: 1/19/2011

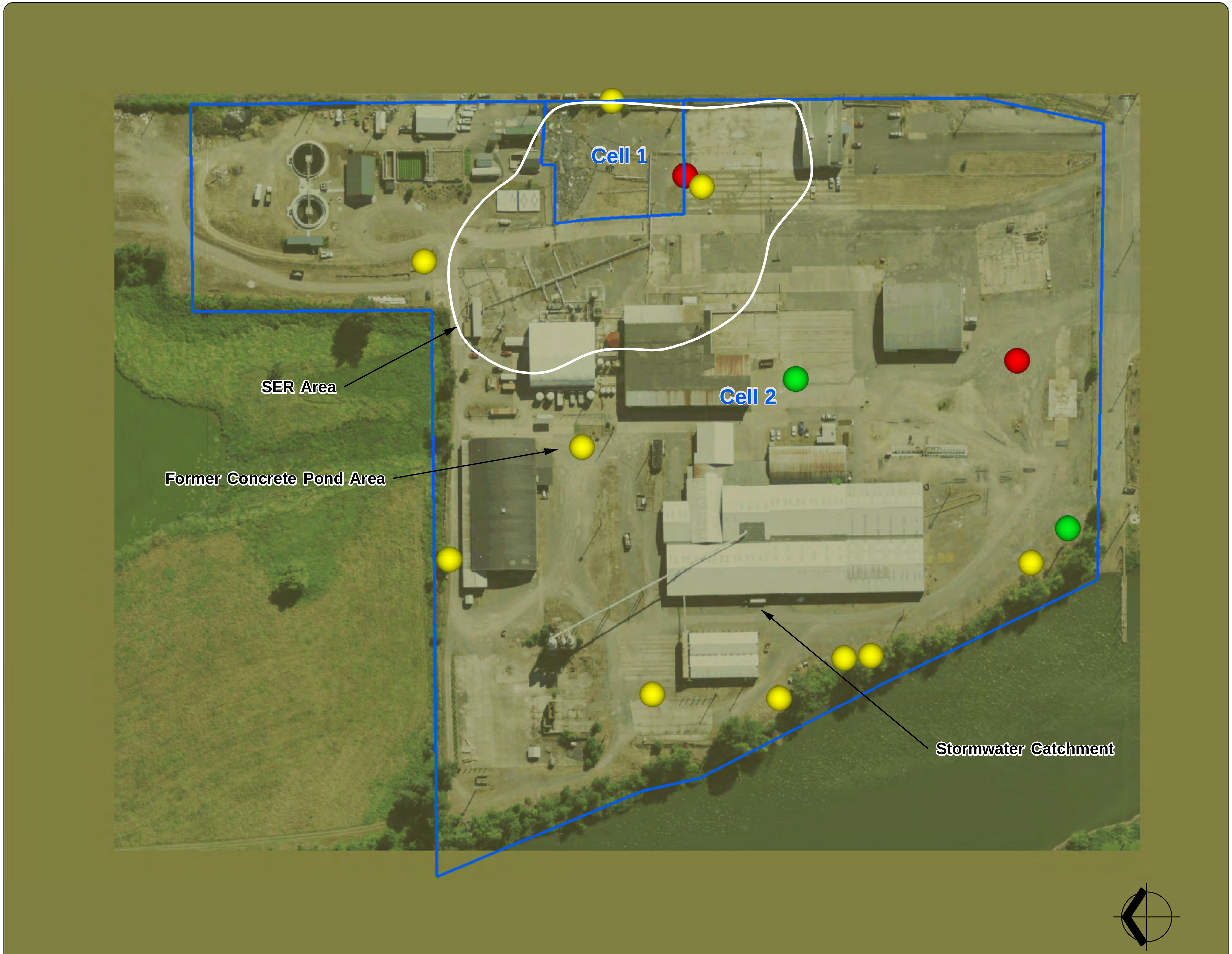

Figure 6-8 Distribution of Dioxins and Furans in Soil - 0 to 6 Feet bgs

Port of Ridgefield
Ridgefield, Washington

DRAFT

Concentration Levels

- < MTCA CUL
- > 11 ng/kg MTCA B CUL
- > 1,500 ng/kg MTCA C CUL

Notes:
1. MTCA = Model Toxics Control Act
2. CUL = cleanup level
3. ng/kg = nanograms per kilogram
4. bgs = below ground surface

Source: Aerial photograph obtained from Clark County GIS Department

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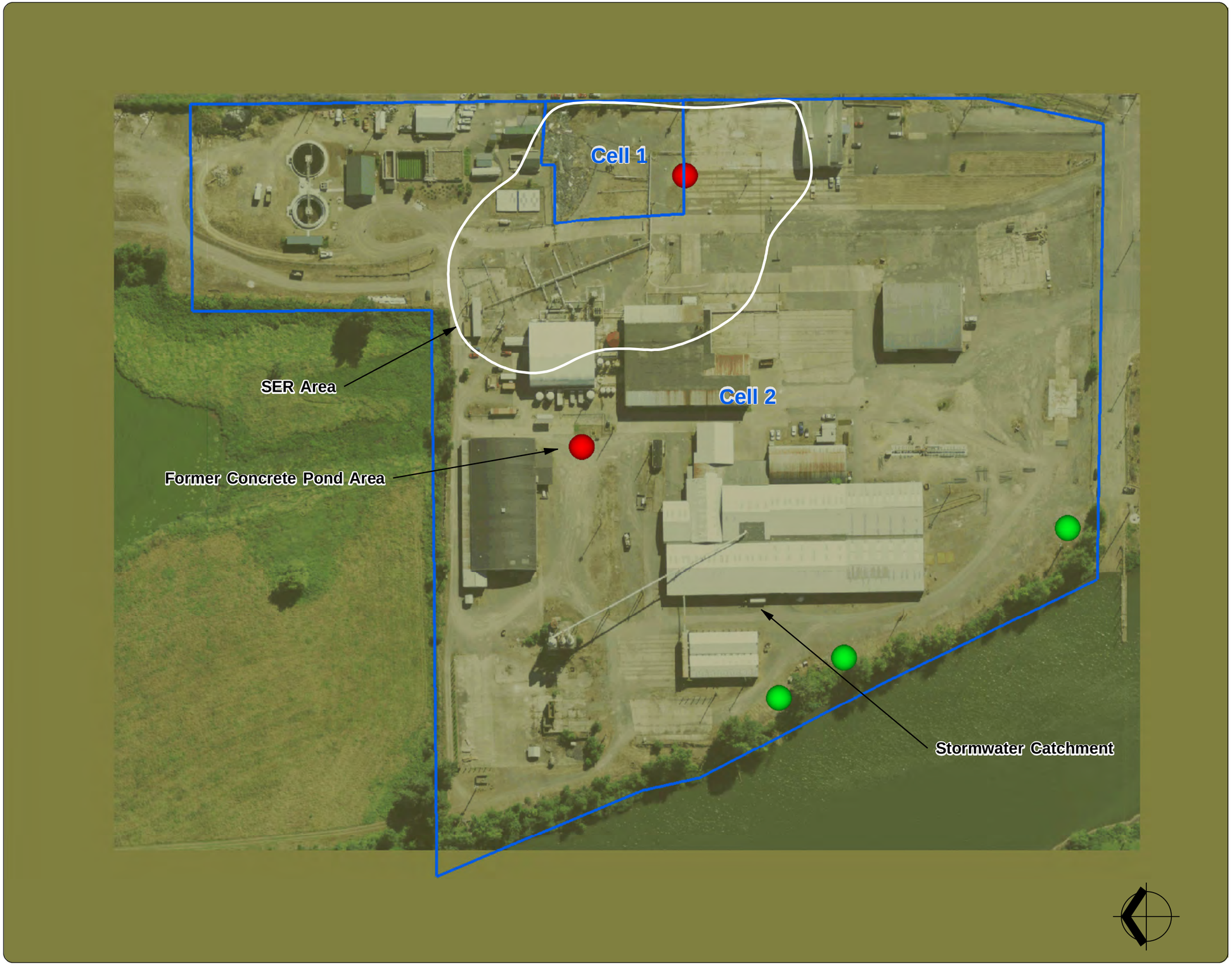

Figure 6-9
Distribution of Dioxins and Furans in Soil - 6 to 15 Feet bgs

Port of Ridgefield
Ridgefield, Washington

DRAFT

Concentration Levels

- < MTCA CUL
- > 1,500 ng/kg MTCA C CUL

Notes:
1. MTCA = Model Toxics Control Act
2. CUL = cleanup level
3. ng/kg = nanograms per kilogram
4. bgs = below ground surface

Source: Aerial photograph obtained from Clark County GIS Department

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APPENDIX D

ECOLOGY-APPROVED PLANTING LIST

Plants without a Tap Root List

Trees

Abies concolor	White Fir
Acer japonicum*	Japanese Maple
Acer macrophyllum	Big-Leaf Maple
Acer palmatum*	Japanese Maple
Acer rubrum*	Red Maple
Betula papyrifera*	Paper Maple
Betula pendula	Weeping Birch
Carpinus betulus*	European Hornbeam
Cercidiphyllum japonicum	Katsuratree
Cornus florida	Flowering Dogwood
Fagus sylvatica*	European Beech
Fraxinus pennsylvanica*	Green Ash
Larix occidentalis	Western Larch
Picea pungens*	Colorado Spruce
Picea sitchensis	Sitka Spruce
Platanus x acerfolia	London Plane Tree
Populus balsamifera	Black Cottonwood
Prunus emarginata	Bitter Cherry
Prunus serrulata	Japanese Flowering Cherry
Psuedotsug menziesii	Douglas Fir
Salix sp.	Willows
Styrax japonicas	Japanese Snowball
Thuja occidentalis*	Arborvitae
Thuja plicata	Western Red Cedar
Tilia cordata	Little Leaf Linden

Shrubs

Abelia x grandifolia	Glossy Abelia
Acer circinatum	Vine Maple
Andromeda polifolia	Bog Rosemary
Arcostaphylos uvu-ursi	Kinnikinnik
Azalea sp*	Azaleas
Berberis Thunbergii*	Japanese Barberry
Clethra alnifolia	Summersweet Clethra
Cornus alba*	Dogwood
Cornus siricea*	Redosier Dogwood
Deutzia gracilis	Slender Deutzia
Euonymus fortunei*	Wintercreeper Euonymus
Gautheria shallon	Salal
Hamamelis mollis*	Chinese Witchhazel
Hamamelis Virginia	Witch Hazel
Kalmia latifolia	Mountain Laurel
Lonicera japonica*	Japanese Honeysuckle
Mahonia aquifolium 'Compacta' - Compact Oregon Grape	
Oemleria cerasiformis	Indian plum
Physocarpus capitatus	Western Ninebark
Rosa Gymnocarpa	Baldhip Rose
Rhododendron sp.*	Rhododendrons
Sambucus cerulean	Blue elderberry
Sambucus racemosa	Red elderberry
Symphoricarpos albus	Snowberry
Vaccinium corymbosum	Highbush blueberry
Viburnum davidii - Vaccinium ovatum	Davids Viburnum Evergreen huckleberry
Viburnum lantana	Wayfaring Tree Viburnum
Viburnum opulus*	European Cranberrybush

Ground Cover

The following list includes anticipated ground cover for the site. However, other perennial herbaceous plants, annual flowers, grasses, sedges, ferns, and mosses are acceptable as well.

Aruncus dioicus	Goat's Beard	Helictotrichon sempervirens	Blue Oat Grass
Belchnum spicant	Deer fern	Miscanthus Sinensis	Maiden Grass
Calluna vulgaris*	Scotch Heather	Pennisetum alopecuroides	Fountain Grass
Camassia quamash	Common Camas	Sesleria autumnalis	Autumn Moor Grass
Cornus Canadensis	Bunchberry	Anemone hybrida	Japanese Anemone
Dicentra Formosa	Bleeding Heart	Daffodil -	Narcissus
Fragaria chiloensis	Coastal Strawberry	Echinacea purpurea -	Purple Cone Flower
Fragaria vesca	Woodland Strawberry	Hemerocallis -	Daylily
Maianthemum dilatatum	False Lily-of-the-Valley	Liriope muscari -	Lilyturf
Oxalis oregano	Wood sorrel	Rudbekia hirta -	Black-eyed Susan
Polystichum munitum	Sword fern	Sedum -	Stonecrop
Vancouveria hexandra	Inside-out flower	Lawn mixes	
Carex -	Sedges		
Deschampsia caespitosa	Tufted Hair Grass		

* Including varieties

Note: This list is not all inclusive and other plant material may be added with if they do not have a tap root.

Data for list was obtained from the following sources:

- US Forest Service Handbook 654 http://www.na.fs.fed.us/pubs/silvics_manual/table_of_contents.shtm
- US Forest Service Shrub list http://www.fs.fed.us/database/feis/plants/shrub/
- USDA Natural Resources Conservation Service – Plants Data Base- http://plants.usda.gov/index.html
- *The Complete Plant Selection Guide for Landscape Design* by Marc C. Stoecklein

APPENDIX E

SEPA CHECKLIST

SEPA Environmental Checklist
Cells 1 and 2—Lake River Industrial Site Interim Action Work Plan

WAC 197-11-960 Environmental checklist.

A. BACKGROUND

1. *Name of proposed project, if applicable:*

   Cells 1 and 2 – Lake River Industrial Site (LRIS) Interim Action Work Plan for Soils

2. *Name of applicant:*

   Port of Ridgefield

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

   Brent Grening, Executive Director
   Port of Ridgefield
   PO Box 55
   111 W. Division Street
   Ridgefield, WA 98642
   Tel: (360) 887-3873

4. *Date checklist prepared:*

   April 7, 2011

5. *Agency requesting checklist:*

   Washington State Department of Ecology (Ecology)

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

   Approval from Ecology is required before the start of the interim action. The Port anticipates proceeding with Phase 1 of the excavation activities in summer 2011 at the conclusion of the State Environmental Protection Act (SEPA) comment period for the soil interim action in Cells 1 and 2. Phase 1 of the project is expected to be completed by fall 2011. The Port anticipates proceeding with Phase 2 of the excavation activities in summer 2012. Phase 2 of the project is expected to be completed by fall 2012.

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

   This interim action is part of the larger cleanup of the LRIS. This work is being conducted consistent with the requirements of Ecology Agreed Order No. 01TCPSR-3119 (the Order). Future activities at the project site can be seen in the 2008 Comprehensive Scheme of Harbor Improvements.

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

Substantial environmental documentation has been prepared for the LRIS regarding the soil and groundwater contamination caused by a former Port tenant, Pacific Wood Treating Company.

Applicable to this requested action, a draft Cells 1 and 2 Interim Action Work Plan, dated March 14, 2011, has been prepared. Documents that were used to prepare the Interim Action Work Plan for soils on Cells 1 and 2 were:

- Volume I— Remedial Investigation Workplan for Port of Ridgefield Lake River Industrial Site. Prepared by Maul Foster & Alongi, Inc., July 2, 2004.
- Draft Cells 1 and 2 Remedial Investigation and Feasibility Study report. Prepared by Maul Foster & Alongi, Inc., January 19, 2011.

The above reports and the draft Cells 1 and 2 Interim Action Work Plan are available to the public at the Port office.

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.*

There are no pending applications for proposals directly affecting this project. However, the Port has acquired permits for future development which will also be relevant to planned interim actions. This interim action is discrete from the development, however, conditions of the permits incorporate interim actions.

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

The proposed action will be conducted as an interim action under the Order within the authority of the state Model Toxics Control Act (MTCA). The proposed action is exempt from the procedural requirements of state and local permits that would otherwise be required, per Revised Code of Washington (RCW) 70.105D.090. However, the proposed action is required to demonstrate substantive compliance with appropriate state and local permits. These include: SEPA review; NPDES Stormwater Permit for Construction Activities; shorelines and critical areas; Washington State Department of Archeological and Historic Preservation; and the City of Ridgefield drainage approvals and building and construction permits, including grading.

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 proposed project lies on the LRIS, a former wood-treating facility that is now a MTCA cleanup site (see Figure 1). The Port and Ecology have entered into the Order to investigate and develop a cleanup action plan for the site. A remedial investigation report that delineated the nature and extent of contamination in Cells 1 and 2 and draft feasibility study that evaluated remedial action alternatives has been submitted to Ecology. This interim action addresses excavation of soil contamination at the concrete pond area, TP-03 and SS-14 locations, building demolition (Buildings 3, 6, 7, 8, and 10) and subgrade preparation, and soil capping of Cells 1

and 2 to reduce risks to human health and the environment. Post-steam soil and groundwater sampling and analysis will be conducted after the SER system is complete.

The project involves excavation of contaminated soil in three discrete locations in Cell 2 (see Figure 2) on the LRIS. This work is being conducted consistent with the requirements of the Order. Approximately 9874 cubic yards of material will be excavated from the site and, of that, 3,652 cubic yards of material will be disposed of at Chemical Waste Management, a Subtitle C landfill in Arlington, Oregon. The remaining soil does not exceed the remediation levels. Soil excavation will be conducted around sample locations where prior investigation indicated the presence of NAPL and soil exceeding the MTCA Method C soil cleanup levels. The final extent of excavation will be based on visual confirmation of NAPL and the results of confirmation samples in the excavated areas.

The excavated material will temporarily be stockpiled or placed in drop boxes for profiling. After the soil has been profiled it will be transferred to an approved off-site facility. The excavations will be backfilled following the visual confirmation of NAPL removal and analytical results show that soil above the MTCA Method C cleanup levels has been removed.

Following soil excavation, site grading will be completed in preparation for soil cap installation. In Cell 2, approximately 30,000 cubic yards of soil will be removed east of the ordinary high water elevation and used to regrade the site before clean soil (clean fill) is placed on site. Approximately 81,000 cubic yards of fill will be imported and placed on Cells 1 and 2. The imported clean fill will cap over impacted surface soil. A demarcation layer (e.g., geotextile fabric) will be placed on the graded surface before covering with clean fill. The imported clean fill will come from the Washington State Department of Transportation construction at the new interchange on Interstate 5 at 269th Street (Pioneer Street).

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 LRIS occupies approximately 41 acres and is situated along Lake River and on the west side of downtown Ridgefield. The LRIS property is located in the northwest quarter of the northeast quarter of section 24, township 4 north, range 1 west of the Willamette Meridian (see Figure 1).

B. ENVIRONMENTAL ELEMENTS

1. Earth

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

The property is primarily flat. The only area with steep slopes is the river embankment.

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

The steepest slope on the LRIS is approximately 25 to 30 percent in grade. However, the excavation areas are generally flat.

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 property is located on Sauvie Series soils, according to the U.S. Department of Agriculture Soil Conservation Service soil typing for Clark County. The specific soil type is Sauvie silt loam 3 to 8 percent slopes. Most of the material that will be excavated as part of this project consists of sandy gravel fill that was historically placed on the property.

Investigations of soil and groundwater contamination have been conducted on the LRIS since 1985.

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

According to Clark County Geographic Information Systems (GIS) mapping, there are no historical, active, or potentially unstable slopes in the proposal vicinity.

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

The project involves excavation of contaminated soil in three locations on the LRIS in Cell 2 (see Figure 2). The excavation will remove contaminated material and reduce risks to environmental and public health. A total of approximately 3,633 cubic yards of material will be excavated from the concrete pond area and disposed of at Chemical Waste Management, a Subtitle C landfill in Arlington, Oregon. Approximately 19 cubic yards of material will be excavated from the SS-14 and TP-03 locations. This material will also be disposed of at Chemical Waste Management in Arlington, Oregon.

Areas of Cell 2 below the 100-year flood elevation will be graded to increase floodplain storage to balance 100-year flood plain area removed during the Cells 3 and 4 Interim Action. This will result in approximately 30,000 CY of material that will be used to grade the upland portion of the Cells 1 and 2 prior to placement of the soil cap.

The site will be capped with a minimum of 2 ft of clean soil to protect human health and the environment. The cap will be a minimum of 3 feet in certain areas to allow for additional vegetation for bank stabilization (e.g., the bank along Lake River in Cell 2).

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

Erosion is expected to be limited because of the scope of excavation activities and the topography of the site. The excavations at the concrete pond area (15 feet below ground surface [bgs]), TP-03 (1.0 foot bgs), and SS-14 (1.0 foot bgs) will be completed with sloped sides and shoring as required. Best management practices will be implemented to address any potential erosion and sediment control issues.

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

The majority of the site will not be covered with impervious surface as a result of this project. Approximately 27,000 square feet of trail will be installed, and is to be hard-surfaced per City of Ridgefield requirements.

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

An Erosion and Sediment Control Plan is included as part of the proposed plans using best management practices for inlet protection, perimeter and site sediment control, gravel construction entrances, etc. All erosion and sediment control measures are required to be in place prior to any disturbance caused by clearing and grading activities. Temporary and permanent sediment control measures have been identified to control erosion. Precautions will be taken during the excavation to make sure that excavated soils are contained. Once soil is removed from the excavation, it will be temporarily stockpiled for profiling as soil stockpiles or in drop boxes (herein both procedures are referred to as "stockpiles"). Soil stockpile areas will be placed on impermeable liners and will be covered and secured at the end of each workday. Before placing liners, the contractor will clear the existing ground surface of debris and sharp objects. Soil stockpile covers will be secured to prevent displacement by wind as well as from contact with precipitation. Berms will be constructed around stockpiles to prevent run-on and runoff. If used, drop boxes will be lined and covered to prevent runoff from the soil.

Truck loading will take place adjacent to stockpiles or excavations, just outside designated exclusion zones. Trucks will be loaded in a manner that prevents spilling or tracking of contaminated soil. Loose material that falls onto the truck exterior during loading will be removed before the truck leaves the loading area. Any material collected on the ground surface in the loading area will be placed back into the truck.

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.*

Short-term air emissions are expected to be limited to diesel and gasoline engine emissions from trucks and other heavy equipment being used for excavation,

backfilling, and disposal of material. No long-term air emissions from this proposed action will occur.

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

No. Sources of air emissions in the project area include vehicle and rail traffic. These emissions will not affect the proposal. These sources are minor and are not likely to create any adverse impacts.

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

If visible dust is created during excavation, water will be sprayed over the work area to control it. Covers will be placed over soil stockpile areas to prevent displacement by wind.

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.*

Lake River and Carty Lake are year-round water bodies in close proximity to the LRIS (see Figure 2). Lake River flows from Vancouver Lake (approximately 8 miles south) to the Columbia River (approximately 2.5 miles to the north). Lake River is tidally influenced along its entire length. Under certain conditions the direction of flow changes either south or north for weeks at a time. The change in flow direction depends on tidal elevation, discharge, the water level in the Columbia River and in Vancouver Lake, and inputs to Lake River from other streams (e.g., Salmon Creek).

Carty Lake is recharged by rainwater and is partially connected to Gee Creek during the wet months. As Gee Creek enters the Carty Unit of the Ridgefield National Wildlife Refuge, it spreads into a system of wetlands and lakes. Eventually, near the northern end of the unit, the channel reestablishes and flows to the Columbia River, near the mouth of Lake River.

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.*

In Cell 2, approximately 30,000 cubic yards of soil will be removed east of the ordinary high water elevation and used to regrade the site before clean fill is placed on site. Off-site soils will be imported and placed on

Cells 1 and 2 above the impacted surface soil. Figure 2 designates the location of the Lake River and the location of the 100-year floodplain.

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.*

None.

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

The proposed project will not require surface water withdrawals.

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

The proposed concrete pond excavation areas are not within the 100-year floodplain. Bank excavation on Cell 2 and the placement of a portion of imported soils on Cell 2 will be within the 100-year floodplain (Figure 2).

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.*

The proposal does not involve the discharge of waste materials to surface waters.

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.*

The proposal includes dewatering of the concrete pond excavation area to remove impacted groundwater. Impacted groundwater will be treated in the on-site treatment 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; 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.*

The proposal does not require the use of septic systems or discharging of waste material into the ground.

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 proposed excavation areas are unpaved but some of the site is paved. Stormwater generally flows to catch basins or trenches. Once stormwater enters the stormwater system, it flows to Outfalls 2, 3, and 4 along Lake River.

The excavation areas will create depressions that will not allow stormwater to discharge to the stormwater system. Therefore, while the excavations are completed, stormwater in the project area will not enter water bodies. Once the excavations are backfilled, rainwater will either infiltrate or sheet flow toward the stormwater system.

The project will include the removal and replacement of the stormwater system. The older portions of the stormwater system will be removed. The drainage system for Outfall 2 will be removed. Certain portions of the stormwater systems are new (i.e., Outfall 3 has new piping from the concrete pond area to Lake River and Outfall 4 is new from Catch Basin #33 to Lake River). If grading or demolition intersects any of the newer portions, they will be removed as well. The interim action will not increase the number of outfalls to Lake River.

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

Waste materials are not likely to enter ground or surface waters as a result of this proposed work. Measures such as placing impermeable layers beneath soil stockpiles, covering stockpiles to prevent contact with rainwater, creating berms around stockpiles, and sweeping areas where dump trucks are loaded will prevent waste materials from entering surface or groundwater.

3) *Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:*

Measures will be implemented to prevent precipitation from contacting the excavated soils. Soil stockpiles will be placed on impermeable liners and/or drop boxes and will be covered and secured at the end of each workday. Before placing liners, the contractor will clear the existing ground surface of debris and sharp objects. Soil stockpile covers will be secured against displacement by wind and to prevent contact between precipitation and excavated soils. Berms will be constructed around stockpiles to prevent run-on and runoff. All drop boxes will be lined and covered to prevent runoff.

Additional erosion and sediment control measures have been identified

and will be included in the Stormwater Pollution Prevention Plan (SWPPP).

4. Plants

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

X 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?

Grass and invasive plants, such as Himalayan blackberry and black cottonwood that are growing on site.

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

No federally listed threatened or endangered plant species are expected to occur within the project area, based on searches of the Washington State Department of Natural Resources Natural Heritage Data System and Clark County GIS database.

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

Once the clean soil cap has been placed on the site, it will be vegetated per the Ecology-approved planting list.

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: osprey
mammals: deer, bear, elk, beaver, other: squirrel, coyote
fish: bass, salmon, trout, herring, shellfish, other: carp

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

Coho salmon and winter steelhead are known or presumed to be present in Lake River. Both are listed as threatened species under the federal Endangered Species Act.

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

The LRIS is in the generally defined Pacific Flyway for migrating birds, a broad migratory corridor that extends from Alaska to Baja, California. The property is also in close proximity to the Ridgefield National Wildlife Refuge.

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

No such measures are necessary or proposed as part of this project.

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.

Construction equipment will be operated with gasoline and diesel fuels.

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

This project will not affect the potential use of solar energy by 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:

No specific energy conservation features are included in this proposal.

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.

There is risk of exposure to contaminated soils as part of this excavation, so work will be conducted in compliance with a health and safety plan (HASP) for the LRIS. The project also involves the typical risks, such as vehicle leaks, from operation of construction equipment. To control these risks a construction SWPPP will be implemented.

1) Describe special emergency services that might be required.

No special emergency service requirements are anticipated.

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

Implementation of the HASP and construction SWPPP will minimize potential environmental health hazards. Contractors will be required to have current hazardous materials training and personal protective equipment.

b. Noise

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

Existing noise includes freight and passenger trains using the railroad tracks adjacent to the Lake River property. The noise will not affect the project.

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 action will generate short-term noise from construction equipment and truck traffic. Phase I of the project is scheduled to begin in summer 2011 at the end of the SEPA comment period for the soil interim action and be completed by fall 2011. Phase II of the project is scheduled to being in summer 2012 and be completed by fall 2012. The normal hours of operation on the site will be from 8:00 a.m. to 5:00 p.m.

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

Construction activities will be carried out in a manner consistent with the City of Ridgefield Municipal Code.

8. Land and shoreline use

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

The LRIS property is currently used for light industrial activities and the Port's administrative, maintenance, and operations offices. A public boat launch ramp, parking area, and restrooms are located at the south end of this property. Existing uses adjacent to the property include the Ridgefield National Wildlife Refuge to the north, Lake River to the west, railroad tracks and single-family residences to the east, and a houseboat marina to the south. The City's waste water treatment plant operates to the north and east of the site.

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

Historically, areas of the LRIS were used for agriculture. The earliest recorded uses include lumber mills along Lake River in the 1910s. Early aerial photographs from the 1930s, 1940s, and 1950s show that some areas of the LRIS may have been used for agriculture. Agricultural use completely ceased on the site in the 1960s when the Pacific Wood Treating Company began operation on the site.

c. *Describe any structures on the site.*

Structures existing on the LRIS include nine industrial buildings, primarily of wood frame construction with metal roofing and siding. One of the buildings (or structures) is a large tent used to house the steam-enhanced remediation system.

There is a floating dock for canoe and kayak launch use on the LRIS at the west end of Division Street.

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

Several structures will be demolished. These include covered sheds (Buildings 6 and 7), the corrugated steel warehouse (Building 10), the planer building (Building 8), and Building 3.

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

According to the City of Ridgefield Zoning Map, the site is zoned for Waterfront Mixed Use Development (see Figure 3).

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

The current City of Ridgefield Comprehensive Plan designation for the site is Mixed Use.

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

The Clark County Shoreline Master Program designation for areas of the LRIS that fall within the shoreline jurisdiction is Urban. The City of Ridgefield has adopted the Clark County Shoreline Management Master Program.

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

The City of Ridgefield considers the following as critical areas in the municipal code: fish and wildlife habitat conservation areas, frequently flooded areas, geologic hazard areas, critical aquifer recharge areas, and wetlands. Based on Clark County GIS mapping and field observations, the project area does not contain fish and wildlife habitat conservation areas or wetlands. The project area does not meet criteria in the municipal code for landslide hazard or erosion hazard. The project area is in an area designated as moderate to high liquefaction susceptibility. The project area is within a Category 2 aquifer recharge area. Portions of the project area are located inside the 100-year floodplain.

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

The project does not directly create housing or long-term employment.

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

Approximately 15 employees of tenants will be displaced.

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

The Port of Ridgefield is attempting to make arrangements for these tenants on other Port properties.

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

The project is fully compatible with existing and projected land uses and plans of both the City and Port of Ridgefield. No additional compatibility measures are needed.

9. Housing

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

Not applicable.

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

Not applicable.

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

Not applicable.

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?

No aboveground structures are proposed as part of this project.

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

No views would be altered or obstructed by this project. Soil stockpile areas will be temporary in nature and in place to be profiled for disposal purposes.

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

Soil stockpile areas will be temporary in nature and will be removed after the soils are profiled for disposal purposes.

11. Light and glare

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

No light or glare will be produced by the proposed project.

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

Not applicable.

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

There are no existing off-site sources of light or glare that will affect the proposed project.

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

No adverse impacts from light and glare will occur from this project, so no measures are proposed to reduce or control light and glare.

12. Recreation

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

Lake River and the Columbia River provide boating, water skiing, and fishing opportunities near the property. A public boat launch ramp, parking area, and restrooms are located south of the LRIS. The Ridgefield National Wildlife Refuge provides opportunities for bird-watching, canoeing, kayaking, nature walks, and auto tours near the property.

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

No recreational uses will be displaced as a result of this proposal.

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

No adverse impacts to recreation will result from this project; therefore, no measures to reduce impacts are proposed.

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.*

Clark County GIS records indicate no places or objects existing on the property included in this proposal that are listed on, or proposed for, national, state, or local preservation registers. Historic-preservation places are known to exist on the Ridgefield National Wildlife Refuge adjacent to the LRIS property.

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

The proposed project will be conducted primarily in previously developed and disturbed areas. The Washington State Department of Archeological and Historical Preservation has identified areas of interest in Cell 2. No known archaeological sites are located within the project area.

The historic and cultural sites located on the Ridgefield National Wildlife Refuge, the Wapato Portage and the ancient Chinookan village known as Cathlapotle,

which were visited by the Lewis & Clark Expedition in 1806, will not be impacted by this proposal.

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

As the bank excavation may encounter native soils below fill, the Department of Archaeology and Historic Preservation will be consulted. The Port will contract an independent, qualified cultural resource firm to observe any excavation in native soils. In the event that any unknown archaeological resources are encountered during site work, project activities will be halted in the area of the find in accordance with RCW 27.53.060 (Archaeological Sites and Resources) and RCW 27.44.020 (Indian Graves and Records). A professional archaeologist will be called in to assess the significance of the find and the Department of Archaeological and Historic Preservation in Olympia will be notified so that a course of action can be implemented.

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 LRIS is served by Division Street, which is a City of Ridgefield right-of-way.

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

The site is not served by public transit, except for the C-Tran Ridgefield Express bus that runs between the Ridgefield Park & Ride located at NW 269th Street and NW 11th Avenue and the Salmon Creek Park & Ride at NE 134th Avenue and the I-5 freeway.

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

The proposed project would not require any new parking spaces or eliminate existing parking spaces.

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).*

The proposed project would not require any new roads.

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

The project will not use water, rail, or air transportation. The site is adjacent to Lake River, which is used by recreational boaters.

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

It is estimated that approximately six vehicle trips per day would be generated from the hauling of excavated material. Phase I of the project is tentatively scheduled to begin in summer 2011 and be completed by fall 2011. Phase II of the project is scheduled to being in summer 2012 and be completed by fall 2012.

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

The project would not create any permanent transportation impacts. Access to all facilities in the project environs would be unimpeded during construction.

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.

The proposed project will not create an increased need for public services.

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

Since there are no anticipated impacts, there are no proposed reduction or control measures.

16. Utilities

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

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.

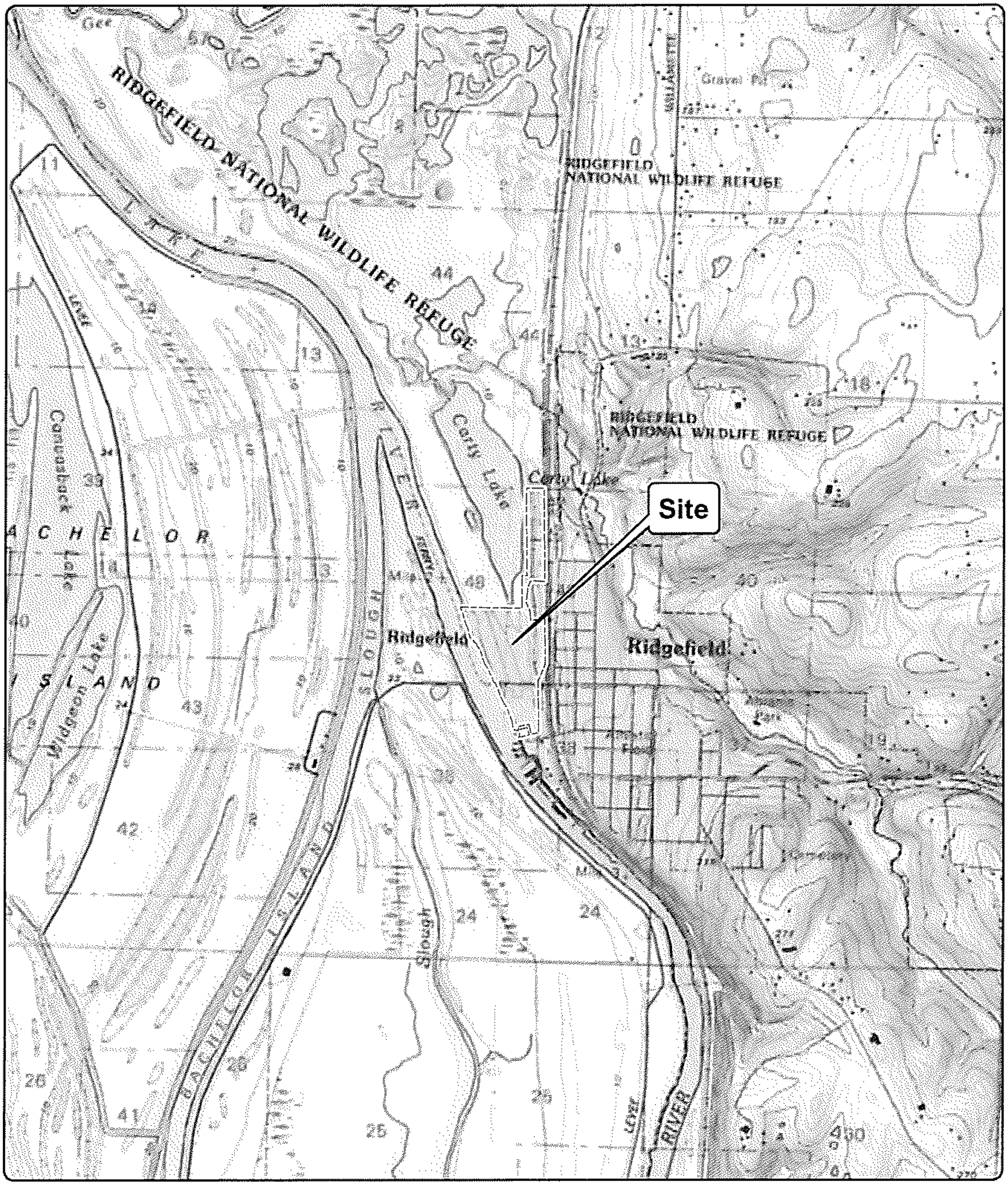
No utilities will be needed for the proposed project.

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: .....

Date Submitted: 4/11/11



Address: Lake River Industrial Site
111 W. Division Street, Ridgefield, WA 98642
Section: 24 Township: 4N Range: 1W Of Willamette Meridian

Source: Topographic Quadrangle obtained from ESRI, Inc. NGS/USGS Topo.

Legend

Site Boundary

Figure 1
Site Vicinity

Port of Ridgefield
Ridgefield, Washington

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0 1,100 2,200
Feet

Project: 9003.01.20 Port of Ridgefield Produced By: W. Coffey Approved By: M. Stringer Print Date: 05-05-2009 File: X:\9003.01 Port of Ridgefield\20Projects\Fig1_Site_Vicinity

Source: Aerial photograph (2007) and railroad, flood, wetland and tax lot data (2008) obtained from Clark County

Legend

- Soil to be excavated exceeding MTCA C CULs
- Concrete Pond Excavation
- Railroad
- Wetland
- 100-Year Flood Zone
- Site Boundary
- Cell Boundary

0 150 300
Feet

Figure 2
Plan View
Port of Ridgefield
Ridgefield, Washington

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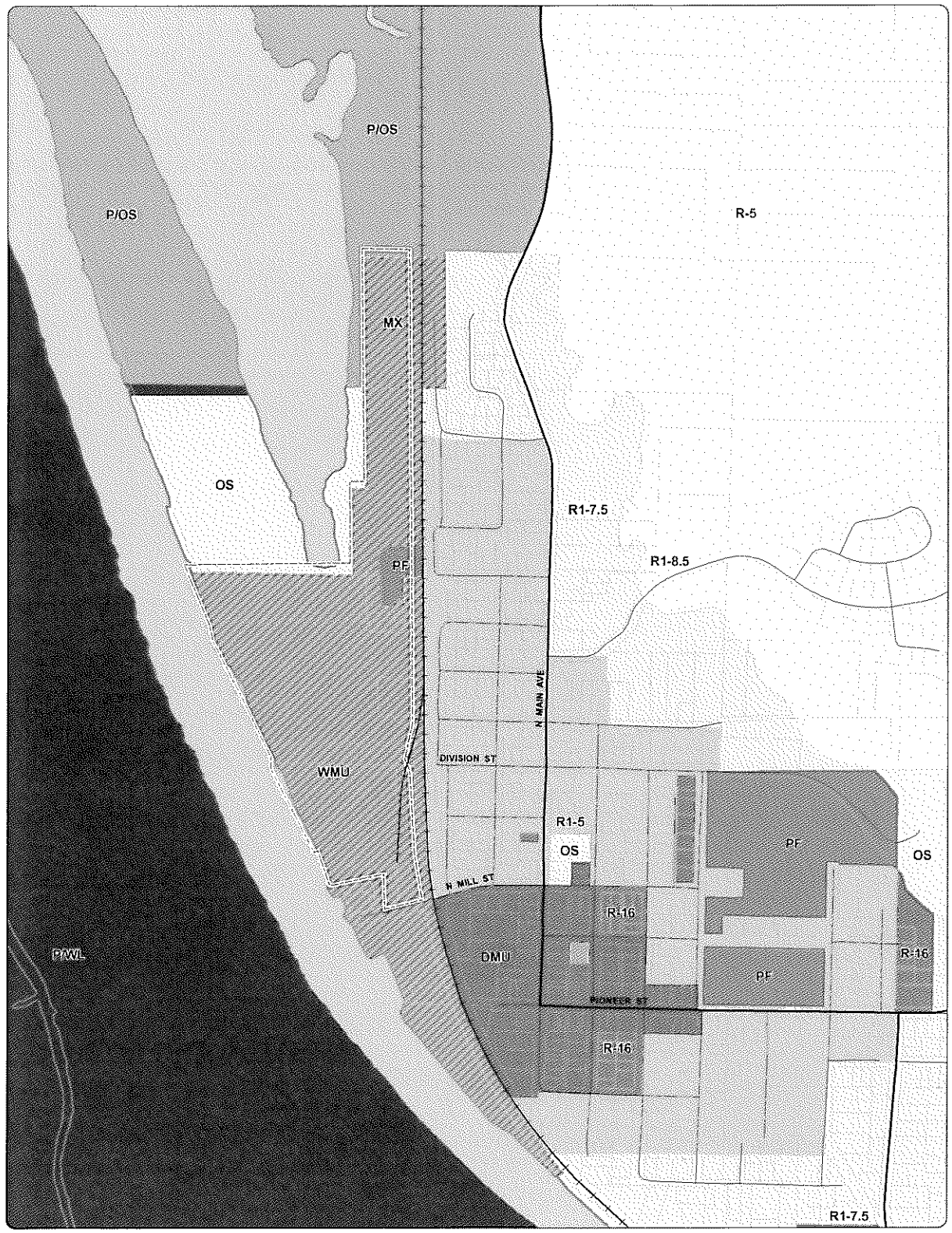

Source: Tax lot and zoning data (2008) obtained from Clark County

Legend

- Railroad
- Site Boundary
- Tax Lot Boundary

Zone Description

- Rural-5
- R1-8.5
- R1-7.5
- R1-5
- R-16
- Schools/Public Facilities
- Mixed-Use
- Waterfront Mixed-Use
- Downtown Mixed-Use
- Open Space
- Parks/Open Space
- Parks/Wildlife Refuge

0 250 500
Feet

Figure 3
Land Use
Port of Ridgefield
Ridgefield, Washington

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