SITE MANAGEMENT PLAN

FORMER WENATCHEE PUBLIC WORKS YARD SITE

Prepared for

CITY OF WENATCHEE

WENATCHEE, WA

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MAUL FOSTER ALONGI

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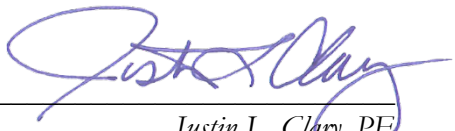
The material and data in this plan were prepared under the supervision and direction of the undersigned.

MAUL FOSTER & ALONGI, INC.



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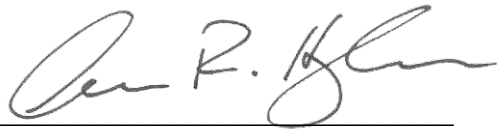

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ACRONYMS AND ABBREVIATIONS

CFR	Code of Federal Regulations
City	City of Wenatchee, Washington
cPAH	carcinogenic polycyclic aromatic hydrocarbon
CUL	cleanup level
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethylene
Ecology	Washington State Department of Ecology
HAZWOPER	Hazardous Waste Operations and Emergency Response
IHS	indicator hazardous substance
MFA	Maul Foster & Alongi, Inc.
MTCA	Model Toxics Control Act
OSHA	Occupational Safety and Health Act
PCB	polychlorinated biphenyl
RCRA	Resource Conservation and Recovery Act
Site	former Public Works Yard site
SMP	site management plan
USEPA	U.S. Environmental Protection Agency
UST	underground storage tank
VOC	volatile organic compound
WAC	Washington Administrative Code

1 INTRODUCTION

Maul Foster & Alongi, Inc. (MFA) has prepared this Site Management Plan (SMP) on behalf of the City of Wenatchee (the City) for the former Wenatchee Public Works Yard site (the Site) located at 25 North Worthen Street in Wenatchee, Washington (Chelan County parcel nos. 222003821050 and 222003821010 [Parcels A and B, respectively]; see Figures 1 and 2). The Site is listed on the Washington State Department of Ecology's (Ecology) hazardous sites list (facility site ID 98691464). The closed Worthen Street municipal landfill, which underlies a portion of the Site (specifically Chelan County parcel no. 222003821010 [Parcel B]), is a separate Ecology site (facility site ID 343) that extends north, south, and east of the Site. Figure 2 shows the location of the landfill boundary in relation to the Site. Remedial actions associated with the Site included construction of a protective cap, which was integrated with the development of a hotel with appurtenances.[1]

This SMP has been prepared in accordance with the requirement of Washington Administrative Code (WAC) 173-340-440 and related provisions of the Washington State Model Toxics Control Act (MTCA). This document provides soil management procedures to be followed in the event of future development or for any condition in which the protective cap is breached. This document also addresses monitoring and maintenance procedures associated with the Site's protective cap. An environmental covenant executed by the City and Ecology has been recorded with the Chelan County Auditor's Office and is included as Appendix A.

1.1 Purpose of Site Management Plan

The purpose of the SMP is to provide guidance for all future site activities during which a breach of the protective cap could occur and also to provide guidance for monitoring and maintenance associated with the protective cap. This SMP also provides guidelines for assessing potential environmental impacts associated with contaminated soils and groundwater that may be incurred during future construction at the Site, and outlines precautions and procedures necessary for the protection of human health and the environment. This SMP identifies indicator hazardous substances (IHSs); excavation protocols; soil handling procedures; waste characterization and disposal requirements; erosion control, dust control, and stormwater protection measures; and groundwater management requirements.

The guidelines and procedures outlined in this SMP are to be implemented during site management if groundwater is generated, the protective cap is breached, and underlying impacted soil is disturbed, or if further site development takes place.

[1] The purpose of this site management plan is to provide guidance for all site activities to ensure the integrity of the protective cap into the foreseeable future. The issuance of this plan precedes the final protective cap (hotel) construction (anticipated completion in late summer 2016), but the plan has been written as though the protective cap is in place and includes the protective cap components to which Ecology has agreed.

1.2 Site Description

The Site consists of two parcels with a combined area of approximately 3 acres, located in section 3, township 22 north, range 20 east of the Willamette Meridian. The Site is currently zoned "Waterfront Mixed Use" and has been developed as a hotel. The Site is bordered by the municipal wastewater treatment plant to the northwest, North Worthen Street to the southwest, Palouse Street and the Pybus Public Market to the southeast, and Riverfront Park and the Columbia River to the northeast. Generally, land use in the vicinity of the Site is mixed-use and commercial business. The Site is generally flat, with elevations ranging between approximately 639 and 646 feet above mean sea level.

1.3 Site History

According to historical sources and personal interviews, the Site was undeveloped until sometime between the 1930s and the 1950s, when landfill operations began. In the 1950s, the City constructed a public works facility at the Site that was used for general equipment maintenance and repair. The public works facility also maintained fueling operations, with associated underground storage tanks (USTs) that were decommissioned and removed in 1994. A heating oil UST, used to heat the former structures on the Site, has also been removed. Public works operations at the Property ceased in approximately 2009, and all building structures were demolished. A hotel is the current site use.

1.4 Remedial Action Description

Prior remedial actions conducted at the Site have been associated with removal of USTs that served Public Works facility operations (see Section 1.3). The focused site assessment (MFA, 2014) identified capping, with appropriate institutional controls (see Appendix A), as the preferred remedial action alternative at the Site. Site improvements associated with the hotel were designed to integrate the necessary capping components for protection of human health and the environment. The protective cap, which is described in greater detail in Section 4, varies across the Site, and comprises the following:

- Soil cap (minimum of 1 foot of clean fill overlying a demarcation fabric layer)
- Pavement cap (asphalt, concrete, or similar material)
- Building cap (building foundation incorporating a vapor intrusion barrier)

In addition to the protective cap, stormwater on the Site will be collected, treated in bioinfiltration swales and conveyed to the municipal system, and not allowed to infiltrate into underlying soils.

2 NATURE AND EXTENT OF RESIDUAL CONTAMINATION

2.1 Residual Contamination

The Site contains residual soil contamination beneath a protective cap. The IHSs identified for the site soils are:

- Metals: arsenic and lead
- Carcinogenic polycyclic aromatic hydrocarbons (cPAHs)
- Volatile organic compounds (VOCs): benzene

Groundwater contamination is attributed to contamination originating in the adjacent landfill migrating beneath the Site. The IHSs identified for site groundwater are:

- Metals: arsenic, barium, beryllium, cadmium, chromium, lead, manganese, nickel, and vanadium
- Petroleum hydrocarbons: diesel- and lube-oil-range
- Pesticides/polychlorinated biphenyls (PCBs): 4,4-dichlorodiphenyldichloroethane (DDD), 4,4-dichlorodiphenyldichloroethylene (DDE), and Aroclor 1260
- VOCs: 1,2-dichloroethane and methylene chloride

Soil vapor contamination is attributed to contamination originating in the adjacent landfill migrating beneath the Site. The IHSs identified for site soil vapor are:

- Combustible gas

The tables in Appendix B provide all available analytical data for soil, groundwater, and soil vapor that potentially remains on site.

2.2 Distribution of Indicator Hazardous Substances

IHSs are assumed to be present in soils and groundwater within the Site boundary at concentrations that exceed MTCA Method A cleanup levels (CULs) for soil and groundwater. IHSs identified through field parameter measurement of soil vapors (e.g., carbon dioxide, percentage of the lower explosive limit, oxygen, hydrogen sulfide, VOCs) also pose a threat to indoor/outdoor air quality.

Metals (arsenic and lead) are present in soil above CULs at the Site directly beneath the protective cap. Benzene and cPAHs are present in soil at deeper depths near the former USTs (see Figure 3).

Based on these data, there is the potential for construction workers or future occupational workers to come in contact with impacted soil on the Site.

Elevated metals, VOCs, and PCBs were identified in groundwater throughout the Site (E&E, 2000) and pesticides, diesel, and lube oil were identified in groundwater beneath the landfill (E&E, 2000; MFA, 2013). The impacts in groundwater beneath the Site are similar to and likely are related to those detected within the boundary of the landfill. Groundwater flow has been observed to be from the northeast to southwest, with variation in flow direction over time (MFA, 2014). Based on this evidence, the groundwater beneath the Site appears to be impacted by a groundwater plume originating from the landfill. Per the environmental covenant (Appendix A), use of groundwater from beneath the Site is prohibited.

Elevated soil gas readings of combustible gas and organic vapors were identified in soil gas collected within the landfill adjacent to the Site (MFA, 2011). Combustible gas and organic vapors were also identified on the Site where the landfill is not present, but at lower levels. The impacts in soil gas on the Site are the result of migration from impacts originating from the landfill site. Based on these observations, there is the potential for construction or future commercial workers to be exposed to soil gases.

3 SOIL MANAGEMENT PROCEDURES

This section describes protocols for managing potentially contaminated soils resulting from excavations and other soil-disturbing activities. All activities that disturb soil beneath the demarcation fabric, existing paved surfaces, or building foundations (i.e., soils beneath the protective cap described in Section 4) must be conducted or overseen by workers who have appropriate hazardous site operations training (see Section 6.1). For all non-emergency projects in which potentially contaminated soils will be disturbed, notify Ecology before the start of work per requirements stipulated in the environmental covenant; in emergency situations (e.g., repair of a broken water line), notify Ecology as soon as is practical to do so.

3.1 Protective Cap Soil

Depending on the type of project, construction activities may be limited to disturbance of the protective cap zone. Protective soil cap disturbances (i.e., above demarcation fabric) do not involve any special handling or health and safety requirements (outside the standard construction health and safety protocol). If the protective soil cap is disturbed, reconstruction will be required. Additional detail regarding cap construction requirements is provided in Section 4.

3.2 Potentially Contaminated Soil

If construction activities require excavation below the established cap (e.g., soil cap and demarcation fabric, pavement, concrete, building) and result in the disturbance of soil that may be contaminated,

then the protocol presented in this section should be followed. Soil below the cap may be breached during future site activities, including but not limited to the following: utility or storm sewer construction or repair, underground structure or building foundation construction, and general earthwork and earth-moving activities. Worker safety requirements pertaining to handling of contaminated soil are provided in Section 6.1.

The final cap configurations for the Site are shown in Figure 4. Further description of cap restoration for each type of capping material is provided in Section 4. If activities on the Site are expected to result in handling of contaminated soils by a method that is inconsistent with this plan or using a cap profile different from that previously approved, Ecology must be notified prior to the action in accordance with requirements stipulated in the environmental covenant.

3.2.1 Excavation and Handling

Soil from beneath the cap should be handled separately from clean soil backfill and the clean protective cap soil material in an effort to avoid cross-contamination and to allow for reuse of the protective cap material as part of restoration activities. Contaminated soil can be handled either by placing it back where it was originally excavated; by placing and capping at a new, on-site location, consistent with approved cap construction requirements (see Section 4); or by disposing of the contaminated soil off site. If soil is excavated from locations and depths of known petroleum-related contamination (see Figure 3), then Ecology's Guidance for Remediation of Petroleum Contaminated Sites (Ecology, 2011) shall dictate on-site placement or off-site re-use options. Placement of contaminated soil generated from construction activities on any portions of the clean soil cap should be avoided. Excavation will be completed in a manner that minimizes dust generation and incorporates appropriate erosion control procedures that prevents stormwater from migrating onto the protective cap or off site.

3.2.2 Stockpiling

Any soil excavated from beneath the protective cap and temporarily (less than 90 days) stockpiled at the Site will be managed in a manner that minimizes erosion, contact with stormwater runoff, dust generation, and worker or public contact, unless the soil is immediately loaded into trucks for off-site disposal. If it is necessary to stockpile contaminated soil, it is preferable to stockpile the soil on surfaces other than the clean soil cap. Soil temporarily held on site will be placed in stockpiles on impervious plastic sheeting (minimum 10-mil thickness). The stockpile shall be covered with plastic sheeting or equivalent material and secured by sandbags at the end of each workday to prevent erosion, dust generation, and direct contact by humans. The sheeting that covers the stockpile must be regularly inspected to ensure that it remains functional and protective of human health and the environment. Temporary stockpiles of contaminated soil must be managed as described in Section 3.2.5 within 90 days of completion of excavation work, unless written approval is obtained from Ecology for an alternative schedule.

Stockpiles that are disposed of off site will be characterized as described in Section 3.2.5 before removal. Following the stockpile removal, the area beneath the separation material shall be inspected

and any remaining stockpile soil shall be scraped, swept, or otherwise removed and properly disposed of.

3.2.3 Replacement at Original Excavation Location

If potentially contaminated soil is to be placed in the original excavation, stockpiles of soil are to be temporarily placed on an impermeable liner. The existing grade should be cleared of debris and any objects that have the potential to puncture the liner. A berm constructed of site soil, compost socks, or equivalent material approved by the engineer is to be installed along the perimeter of the stockpile. The bottom liner must extend up and over the perimeter berm. The cover should be secured with sandbags. Contaminated soil can be stockpiled for up to 90 days without a Resource Conservation and Recovery Act (RCRA) permit.

3.2.4 New Placement Location

If contaminated soil cannot be placed in the original excavation, then the soil may be used as backfill at other areas of the Site below an Ecology-approved cap. If soil is excavated from locations and depths of known petroleum-related contamination (see Figure 3), then Ecology's Guidance for Remediation of Petroleum Contaminated Sites (Ecology, 2011) shall dictate on-site placement or off-site re-use options. Instances that may potentially warrant a new placement location include large excavations for subgrade, footing, or utility trenches, where replacement in the original location is not possible. Upon approval of a new placement location, the material must be capped consistent with minimum capping guidelines described in Section 4. If new capping profiles or materials are proposed (outside of those listed in Section 4), preapproval from Ecology will be required.

3.2.5 Off-site Disposal

All soil originating from beneath the Site's protective cap should be assumed to contain contaminants above acceptable risk levels until sampling and analysis, described below, demonstrate otherwise. If impacted soil cannot be reused on the Site, then it must be disposed of appropriately at a licensed landfill. Soil must be characterized and managed consistent with the protocols described in this SMP or the current state and federal regulations applicable at the time of construction, if these are more restrictive.

Management of soil identified for off-site disposal will adhere to the following procedures:

- Obtain waste acceptance and disposal agreements for the material from the licensed disposal facility.
- Minimize spillage of contaminated material during truck loading; scrape, clean up, and dispose of any spilled material.
- Remove excess material from the truck, including from the tires, before leaving the loading area.
- Ensure that there are no free liquids in the material contained in the truck.

Stockpile characterization methodology and analytical requirements are provided in Appendix C.

Excavated material will be disposed of at a licensed disposal facility, depending on the results of the waste characterization.

4 PROTECTIVE CAP

Construction of a cap that protects human health and the environment from IHSs identified in the site soil, groundwater, and soil vapor was identified in the focused site assessment as the preferred remedial action (MFA, 2014). The protective cap design was integrated with the design of the hotel and appurtenances and varies across the Site, but comprises the following:

- Soil cap
- Pavement cap
- Building cap

The following table summarizes each cap type, and the following subsections describe each of the cap components, including minimum design standards that would be applicable should any of the protective caps be removed or altered as a result of future development activities. It is also possible to propose new capping material and/or thickness. If new capping profiles or material are proposed (outside of what is listed below), approval from Ecology will be required. To expedite review, Ecology should be notified well in advance of development of the proposed capping profile or material changes.

Table
Capping Options

Type of Use	Typical Section
Landscaping/green space	
1 to 3 feet soil	• Geotextile as demarcation; ground cover; any grasses
>3 feet soil	• Geotextile as demarcation layer; ground cover, shallow-rooted shrubs or trees; any grasses
Parking/driveways	Impermeable surface (min. thickness 3 inches) with clean sub-base as necessary for construction
Sidewalk/pathway	Impermeable surface (min. thickness 2.5 inches) with clean sub-base as necessary for construction
Building/structure	• Stem wall/footing foundation with min. 1-foot-thick, clean sub-base • Slab-on-grade (min. thickness 3 inches) with sub-base as necessary for construction • Ecology-approved vapor intrusion barrier system

4.1 Soil Cap Description

In general, any landscaped area of the Site consists of the protective soil cap. The soil cap profiles have been designed to ensure the appropriate degree of protectiveness for ecological and human receptors from the impacted material that remains on the Site. The following describes the separate layers of the protective soil cap, starting with the deepest:

- Demarcation layer: geotextile fabric
- Clean soil: 1-foot minimum thickness (minimum of 3 feet clean soil in areas where shallow root shrubbery and trees will be planted)
- Landscaping: topsoil/mulch/lawn/shrubbery/trees

4.1.1 Demarcation Layer

Soil cap construction will first require placement of a geotextile (Crown Resources, LLC Style R060OR Nonwoven Geotextile™ or equivalent), which will allow infiltration of surface water and will not create a hydraulic barrier. The geotextile should be placed over a smooth, prepared surface. The geotextile fabric is to serve as a delineation boundary between potentially impacted native soil and the clean protective cap and also will serve as a barrier to limit burrowing of potential ecological receptors. The presence of the fabric will alert subsequent developers when contact with impacted material occurs, and therefore, when specific contaminated-soil-handling protocols are to be followed.

4.1.2 Clean Soil Layer

In all landscaped areas, a minimum of 1 foot of clean soil will be placed directly on top of the demarcation layer where grasses or lawn may be placed. In those areas where shallow rooted shrubbery or trees will be planted a minimum of 3 feet of clean soil is required. Soil placement will be conducted in a way that prevents damage to the underlying demarcation layer. Import soil to be used as clean capping material requires approval from Ecology.

The owner of the proposed fill material must hire a qualified environmental professional to obtain representative samples of the proposed fill material for laboratory analysis. The engineer and/or environmental professional will work with the site owner and Ecology to develop an appropriate sampling schedule. Samples will be analyzed by a certified environmental testing laboratory.

Additional testing may be required in order to determine the physical characteristics of the soil for geotechnical engineering purposes. Environmental analytical results will be compared to the most conservative screening level from the Ecology MTCA Method A soil CULs for unrestricted land uses and ecological indicator soil concentrations for protection of terrestrial plants, soil biota, and wildlife (WAC 173-340-7493(2)(a)(i)), except for analytes for which a natural background concentration has been established. When background concentrations are available, the applicable soil quality criteria will not be lower than the background concentrations.

4.1.3 Landscaping

Appropriate vegetation should be selected and installed so that the underlying demarcation layer is not adversely impacted by future plant growth and is appropriate for the soil cap thickness. Native plants found in the surrounding natural areas will have the most chance of success, require the least maintenance, and are the most cost-effective in the long term. For proper revegetation of the Site, the designed cap should provide adequate soil depth to support the desired plant habitat to properly implement the revegetation of the Site. Areas where the 1-foot-minimum cap thickness occurs should be limited to vegetation containing shallow root systems such as low-growing ground cover and grasses. Shallow-rooted trees, shrubs, grasses, and ground cover are permitted in areas of 3-foot-minimum cap thickness.

4.2 Pavement Cap Description

Portions of the Site on which driveways, parking lots, patios, walkways, or sidewalks are constructed consist of the pavement cap. The pavement cap profiles have been designed to ensure the appropriate degree of protectiveness for ecological and human receptors from the impacted material that remains on the Site. The following describes the separate layers of the protective pavement cap, starting with the deepest:

- Sub-base
- Pavement (asphalt or concrete)

4.2.1 Sub-Base Layer

Before placement of clean materials, the subgrade (native soil) should be prepared consistent with geotechnical requirements. Following subgrade preparation, a base rock layer should be placed and compacted in accordance with design specifications. At a minimum, base rock should be placed in accordance with the current revision of the City of Wenatchee's Engineering Standards for Public Works Construction. The base rock should be imported from a verified clean source.

4.2.2 Asphalt Cap Construction

Asphalt used as a capping material should comply with the current revision of the City of Wenatchee's Engineering Standards for Public Works Construction.

4.2.3 Concrete Cap Construction

Concrete used as a capping material should comply with the current revision of the City of Wenatchee's Engineering Standards for Public Works Construction.

4.3 Building Cap Description

Construction of permanent buildings on the Site will effectively eliminate the potential for exposure to underlying contaminants. The following describes the separate layers of the protective building cap, starting with the deepest:

- Structural base
- Vapor intrusion barrier
- Building foundation

4.3.1 Structural Base Layer

Before placement of clean materials, the subgrade (native soil) should be prepared consistent with geotechnical requirements. Following subgrade preparation and if determined warranted by a licensed geotechnical engineer, a structural fill layer should be placed and compacted in accordance with design specifications, with the material imported from a verified clean source.

4.3.2 Vapor Intrusion Barrier

A vapor intrusion barrier approved by a licensed professional engineer as being capable of protecting against migration of water or gases (e.g., VOCs or methane) into the overlying building is required. The barrier should be installed directly on the structural base surface in a manner that does not negatively impact its design function. Barriers should be installed either subslab (slab-on-grade foundations) or between all footings (spread footing foundations).

4.3.3 Building Foundation

A licensed structural engineer should design the building foundations in accordance with the current revision of the International Building Code.

4.4 Other Capping Material

If surfacing materials other than those listed above are desired as part of future redevelopment activities, Ecology approval is required.

5 WATER

5.1 Stormwater

Stormwater will be managed and directed away from the Site. Soil is known to be impacted and infiltration of water could promote leaching of chemicals. Therefore, infiltration facilities and ponds will not be used on the Site.

5.2 Groundwater

Contaminated groundwater is known to exist beneath the Site, typically at least 20 feet below ground surface. Because of its depth, it is unlikely that groundwater will be generated during any on-site work (e.g., dewatering of excavations); however, should groundwater be generated in the future, it should be analyzed for the following to identify applicable disposal options:

- Metals (arsenic, barium, beryllium, cadmium, chromium, lead, manganese, nickel, and vanadium) by U.S. Environmental Protection Agency (USEPA) Method 6010C
- Petroleum hydrocarbons by Ecology Method NWTPH-Gx and -Dx
- PCBs (specifically Aroclor 1260) by USEPA Method 8270-SIM (selective ion monitoring)
- VOCs by USEPA Method 8260B
- Pesticides (specifically DDD and DDE) by USEPA Method 8141

6 SITE CONTROLS

The generation of contaminated material triggers the requirement to implement specific site controls. These controls are required in order to protect the adjacent environment and reduce potential exposure of the nearby public to the contaminated material that remains capped at the Site.

6.1 Worker Health and Safety

All future redevelopment activities that penetrate the cap and thereby generate contaminated soil are to be conducted according to WAC 173-340-810; the Occupational Safety and Health Act (OSHA) of 1970 (29 U.S. Code Sec. 651 et seq.); the Washington Industrial Safety and Health Act (Chapter 49.17 Revised Code of Washington); and relevant regulations. The contractor will be required, before beginning work, to prepare a health and safety plan, which is to be available for review by Ecology upon request. The health and safety plan shall, at a minimum, set forth the requirements and protections for working in areas containing soil that may be chemically impacted, and shall include the following:

- Current Hazardous Waste Operations and Emergency Response (HAZWOPER) certification for workers disturbing impacted soil
- IHSs and site background
- Personal protective equipment
- Personal hygiene and decontamination protocols
- Medical surveillance

- Hazard communication and site control
- Recordkeeping and reporting

6.1.1 Qualified Personnel

The contractor will complete construction work in compliance with OSHA regulations (29 Code of Federal Regulations [CFR] § 1910.120 and § 1926.65); workers in any area of the Site that is no longer contained by the protective cap and any workers who will come in contact with potentially contaminated material must be "qualified personnel." The qualified personnel must have received the HAZWOPER standard 40-hour training, as well as received refresher training in the past year. Managers and supervisors directly overseeing the working crew must have received additional specialized training in hazardous-waste management supervision.

6.2 Access Restriction

In the event of construction on site with the potential to generate contaminated material, fencing should be maintained in order to restrict public access to areas of the Site that are no longer contained by a cap. Signage shall be posted on the fencing separating the public from uncapped areas.

6.3 Decontamination Procedures

Soil will be removed from equipment before the equipment leaves the controlled area. Vehicle tires that travel over soil deemed contaminated must be freed of soil by brushing, wheel wash, or another method that is appropriate to the work being performed before the vehicle leaves the controlled area in order to prevent tracking of potentially contaminated soil to clean portion of the Site or off site. Decontamination will be conducted in a manner that prevents the contamination of the protective cap.

Decontamination will be managed so that washwater does not migrate from the decontamination area.

Equipment and personnel decontamination procedures will be defined in the activity-specific health and safety plan.

6.4 Soil Gas

Soil gas characterization or mitigation will be required before new structures are constructed. Soil gas characterization may be conducted in and near the footprint of planned structures to assess the risk to human health. Ecology may approve construction without vapor mitigation if risk to human health is found to be acceptable. If risk to human health is unacceptable or soil gas characterization has not been conducted, a vapor intrusion barrier system is required for new construction.

In addition, any work within subsurface confined spaces (e.g., manholes) will follow OSHA-compliant confined space entry protocol, with special consideration for gas monitoring due to the potential for migration of landfill gas into subsurface structures.

6.5 Groundwater Use Restrictions

Groundwater use is restricted per the environmental covenant (Appendix A). Groundwater management is discussed in Section 5.

6.6 Infiltration Restriction

Stormwater facilities that infiltrate water into the subsurface (beneath the cap) will not be constructed on the Site. All stormwater catch basins, conveyance systems, and other appurtenances located within the Site will be of water-tight construction (see Appendix A).

6.7 Use of Property

WAC 173-340-420 states that at sites where a cleanup action requires an institutional control, a periodic review shall be completed no less frequently than every five years after the initiation of a cleanup action. Actual review frequency at the Site will be determined by Ecology.

7 NOTIFICATION AND REPORTING

7.1 Notification and Reporting

Ecology is to be notified in accordance with requirements stipulated in the environmental covenant in advance of substantial development activities at the Site.

The contractor shall maintain weekly reports of field activities during any active construction that disturbs soil or other cap material on the Site. The Grantor per the environmental covenant (the City) will prepare a project completion report to document the management of impacted soil for each project in which such work is conducted. The report will document the management techniques used, approximate volumes of materials handled, placement or disposal information, disposal manifests, and analytical data generated during management of the impacted material.

7.2 Recordkeeping

The property owner must maintain records to provide to any subsequent property owner, documenting the following:

- On-site placement of excavated soil, including delineation of the disposal areas and estimated volumes

- Off-site disposal of excavated soil, including waste characterization, shipping manifests, and disposal certificates
- Cap breach reports, including where the cap was breached, methods for replacement, materials used, and any analytical results

8 PROTECTIVE CAP MONITORING AND MAINTENANCE

The protective cap requires regular and routine inspection for evaluation and maintenance of its integrity. Monitoring and, if required, maintenance should be conducted annually, at a minimum. This will provide an opportunity to correct small, localized failures before they become larger, more detrimental failures. In addition to annual inspection, an inspection is to take place after a large natural disaster occurs in close proximity to the Site, or any other large-scale disturbance occurs near or at the Site. As the cap is the primary barrier protecting human and ecological receptors from the remaining impacted soil, it is imperative that the cap maintain its intended integrity. This section outlines the monitoring and inspection procedure for each of the protective capping materials.

The person conducting the monitoring should complete the monitoring worksheet provided in Appendix D. The main purpose of the monitoring event is to document current conditions of capping materials. The documentation can be used as a reference to evaluate severity of cap degradation in comparison to the cap's condition during previous monitoring events and determine if corrective action is required.

8.1 Protective Cap Inspection

This section describes the minimum observation and monitoring requirements per inspection for each component of the overall protective cap.

8.1.1 Soil Cap

The following defines the minimum observation and monitoring requirements per inspection for a soil cap. All recorded observations (using the worksheet in Appendix D) should be accompanied by documenting photographs:

- Overall cap condition
- Visible rills or gullies
- Evidence of stormwater ponding or concentrated flow
- Exposed demarcation fabric

The inspection for vegetation should be qualitative and quantitative. The following lists the minimum observation and monitoring requirements per inspection for site vegetation:

- Overall vegetation condition
- Overall vegetation percent coverage
- Areas of non-established or failing vegetation
- Areas of dead or dying vegetation
- Observance of invasive species

8.1.2 Pavement Cap

The following defines the minimum observation and monitoring requirements per inspection for all pavement-related caps at the Site. All recorded observations should be accompanied by documenting photographs:

- Overall cap condition
- Evidence of cracking, buckling, or subgrade shifting
- Observed alligatored areas (areas with numerous intersecting cracks)

8.1.3 Building Cap

The following define the minimum observation and monitoring requirements per inspection for building caps. All recorded observations should be accompanied by documenting photographs:

- Overall cap condition
- Visible cracks in the foundation
- Visible punctures in the vapor intrusion barrier (spread footing foundations)

8.2 Corrective Action

If evidence of erosion or failure is observed in any of the abovementioned caps, the person conducting the inspection and reporting should consult with the engineer. The engineer may decide that additional analysis or observation may be necessary in order to determine if the damage will reduce the effectiveness of the protective cap. Corrective action will be evaluated on a case-by-case basis according to the type and/or severity of damage and the urgency. The following should be conducted in order to document damage and to evaluate a plan for corrective action:

1. Engineer's internal review of inspection reports and photographs
2. Site visit by the engineer to review damage
3. Additional measurement or analysis (survey, sample collection, or analysis)
4. Consultation with Ecology regarding the damage or deterioration and the engineering assessment
5. Proposal for repair prepared by the engineer (if determined necessary)
6. Contract with an appropriately certified and licensed contractor for completion of repair work (if needed)

8.3 Protective Cap Maintenance

This section describes the minimum maintenance requirements for each component of the overall protective cap.

8.3.1 Soil Cap

Soil cap and vegetation maintenance will be conducted dependent on the findings of the annual monitoring report. If areas of the soil cap have eroded, maintenance to replace the eroded areas with soil and vegetation will be required. This may require additional seeding and/or planting.

All vegetated areas should include a survey for invasive species as part of the routine maintenance. Observed invasive species, including Himalayan blackberry and reed canarygrass, are to be removed.

8.3.2 Pavement Cap

Pavement cap maintenance should be conducted if evidence of significant cracking or buckling (e.g., formation of pot holes) is observed. Areas that show these failures shall be maintained by the application of a corrective patch of asphalt or concrete, as appropriate.

8.3.3 Building Cap

Building foundations, as well as any vapor intrusion barriers integrated with building foundations, are not anticipated to require significant maintenance over the life of the building. Any maintenance should be completed in accordance with a licensed structural engineer's recommendations (building foundation), or manufacturer's recommendations (vapor intrusion barrier system).

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.

REFERENCES

Ecology, 2011. Guidance for remediation of petroleum contaminated sites. Publication No. 10-09-057. Washington State Department of Ecology, Olympia, Washington. September.

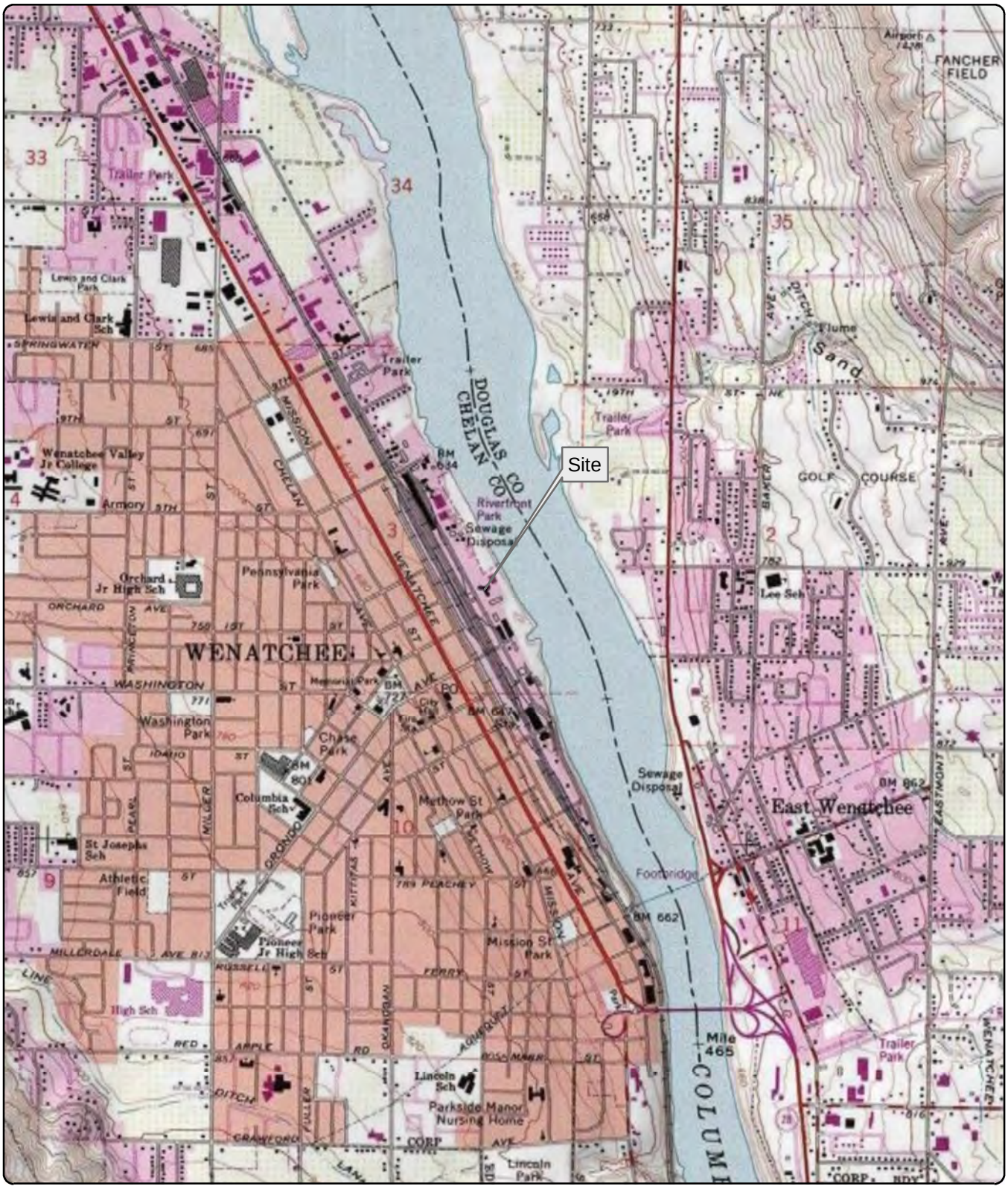
E&E. 2000. Wenatchee landfill targeted brownfield assessment report. TDD: 98-11-0007. Contract: 68-W-0008. Prepared for U.S. Environmental Protection Agency. Ecology & Environment, Inc. June.

MFA. 2011. Phase I environmental site assessment. Appendix B, subsurface evaluation. Prepared for City of Wenatchee Department of Public Works. Maul Foster & Alongi, Inc., Vancouver, Washington. August 31.

MFA. 2013. Data gap investigation summary—former public works yard property. Prepared for City of Wenatchee. Maul Foster & Alongi, Inc., Bellingham, Washington. December 17.

MFA. 2014. Focused site assessment report—former public works yard property. Prepared for City of Wenatchee. Maul Foster & Alongi, Inc., Bellingham, Washington. March 4.

FIGURES



Site Address: 25 N Worthen St, Wenatchee, WA
Source: US Geological Survey (1990) 7.5-minute topographic quadrangle: Wenatchee
Section 3, Township 22N, Range 20E

Figure 1
Site Location

Former Public Works Yard Site
Wenatchee, Washington

MAUL FOSTER ALONGI
p. 971 544 2139 | www.maulfoster.com

0 1,000 2,000
Feet

Path: X:\0380.02\Projects\Fig1 Site Location.mxd
Print Date: 01/23/2014
Approved By: J. Clary
Produced By: A. Padilla
Project: 0380.02.04-05

Figure 2
Site Map

Former Public Works Yard Site
Wenatchee, Washington

Legend

- Landfill Boundary (dashed where approximate)
- Measured Landfill Area
- Site Parcel Boundary

0 35 70
Feet

Source: Aerial photograph obtained from Esri ArcGIS Online.

MAUL FOSTER ALONGI
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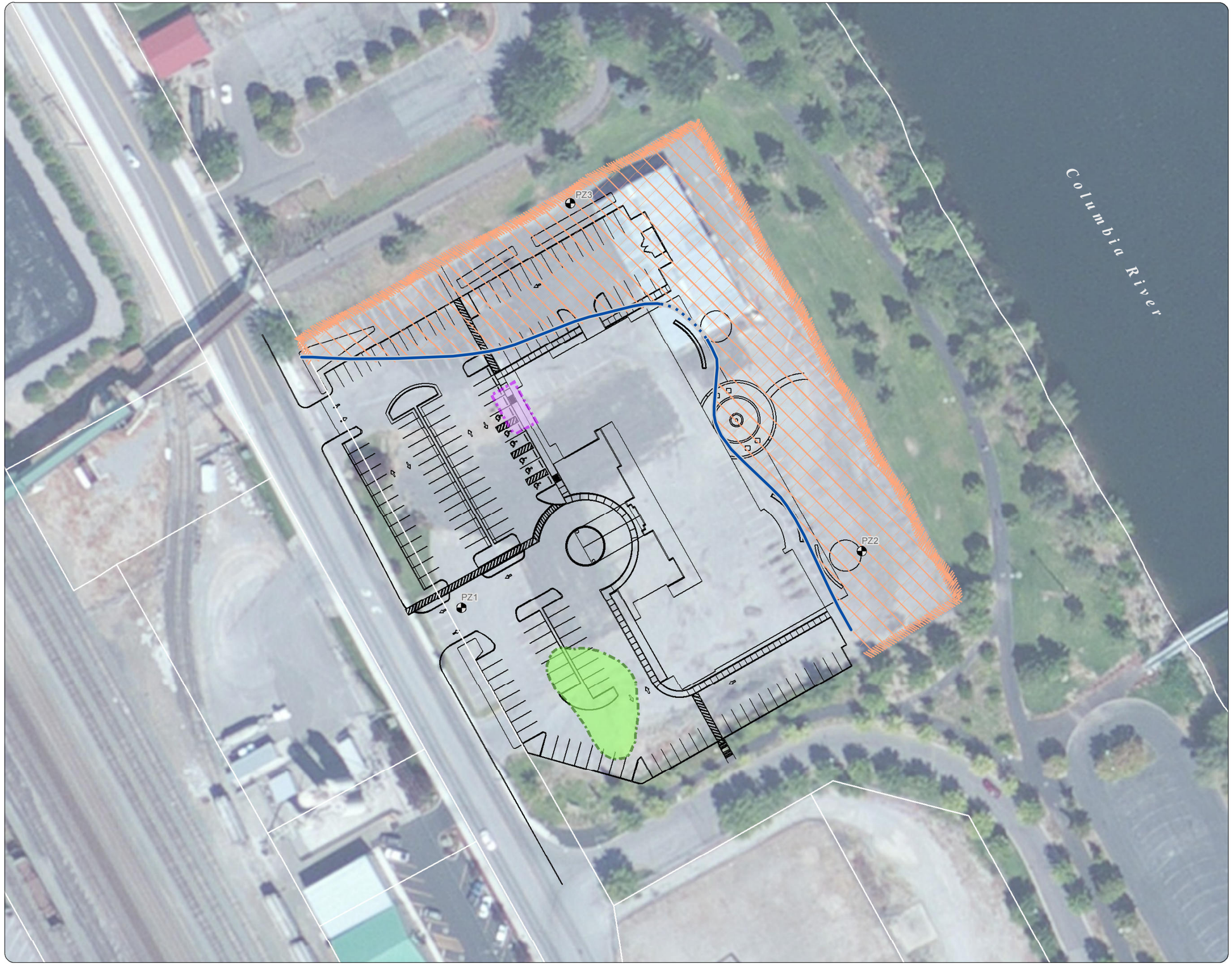
Path: X:\0380.02 City of Wenatchee\04 Data Gap Investigation\06 SMP\Projects\Fig2_Site Map.mxd
Print Date: 5/28/2014
Approved By: J. Clary
Produced By: apadilla
Project: 0380.02.04

Figure 3
Extent of Environmental Contamination

Former Public Works Yard Site
Wenatchee, Washington



Legend

- Piezometer
- Landfill Boundary (dashed where approximate)
- Approximate Lateral Extent of Benzene and cPAH Impacted Soil
- Approximate Lateral Extent of cPAH Impacted Soil
- Measured Landfill Area
- Chelan County Taxlots

Notes:
1. cPAH = Carcinogenic polycyclic aromatic hydrocarbons.
2. All site soils between 0 - 6 feet below the protective cap should be considered potentially contaminated by lead and/or arsenic at levels exceeding unrestricted land use cleanup levels.

0 35 70
Feet

Source: Aerial photograph obtained from Esri ArcGIS Online; taxlots obtained from Chelan County; 2000 sample location from targeted brownfield assessment conducted by Ecology & Environment, Inc. and is approximate; 2011 and 2013 sample locations surveyed by Maul Foster & Alongi, Inc. using GeoXH 2005.

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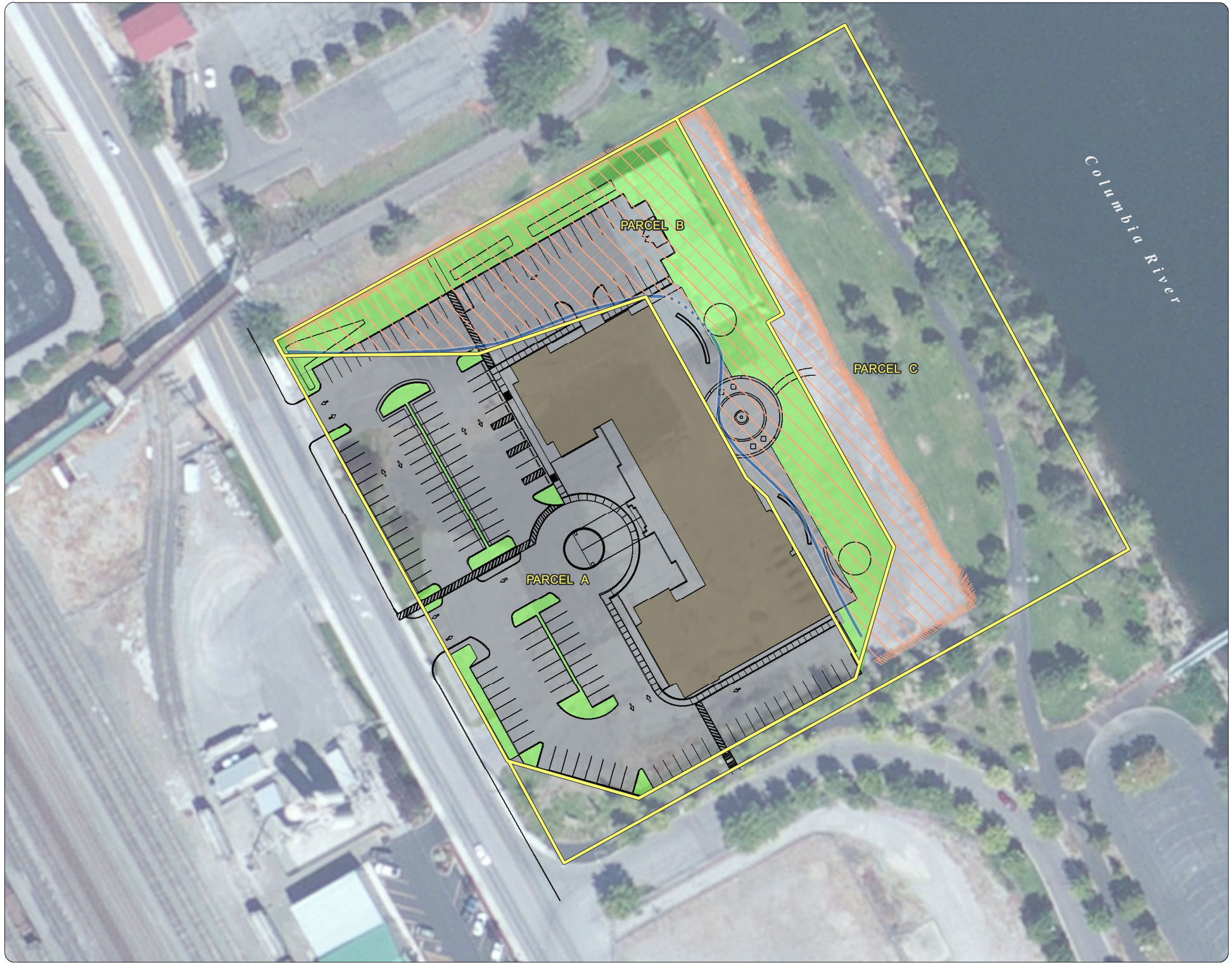
Path: X:\0380.02 City of Wenatchee\04 Data Gap Investigation\06 SMP\Projects\Fig3_Extent of Environmental Contamination v2.mxd
Print Date: 02/17/2016
Approved By: J. Clary
Produced By: jmilter
Project: 0380.02.04-03

Figure 4
Protective Cap Layout

Former Public Works Yard Site
Wenatchee, Washington



Legend

- Landfill Boundary (dashed where approximate)
- Measured Landfill Area
- Building Cap
- Pavement Cap
- Soil Cap
- Site Parcel Boundary

0 35 70
Feet

Source: Aerial photograph obtained from Esri ArcGIS Online.

MAUL FOSTER ALONGI
p. 971 544 2139 | www.maulfoster.com

Path: X:\0380.02 City of Wenatchee\04 Data Gap Investigation\06 SMP\Projects\Fig4_Protective Cap Layout v2.mxd
Print Date: 02/23/2016
Approved By: J. Clary
Produced By: jmiller
Project: 0380.02.04.03

DRAWINGS

HILTON GARDEN INN
ROUGH GRADING
25 N. WORTHEN ST. WENATCHEE, WA 98801

ABBREVIATIONS

ACP	Asphalt Concrete Pavement
ADD'L	Additional
AD	Area Drain
ADJ	Adjacent
ANSI	American National Standards Institute
APPROX.	Approximate(ly)
ARCH	Architect(ural)
ASSY	Assembly
BLDG	Building
BM	Benchmark
BNDRY	Boundary
BOW	Bottom of Wall (at finished grade)
BVC	Beginning of Vertical Curve
CTV	Cable TV
C&G	Curb and Gutter
CB	Catch Basin
CC	Concrete Curb
CD	Concrete Drive
CF	Cubic Feet (Foot)
CI	Cast Iron
CJ	Construction Joint
CL	Class
℄	Center Line
CMP	Corrugated Metal Pipe
CONC.	Concrete
CONST.	Construction
CPEP	Corrugated Polyethylene Pipe
CTR	Center(ed)
CY	Cubic Yard
DCVA	Double Check Valve Assembly
DDCV	Double Detector Check Valve
DEPT.	Department
DET	Detail
D.I.	Ductile Iron
DIA (ø)	Diameter
DIM	Dimension
DS	Down Spout
DWG	Drawing
E	East(ing)
EC	Electrical Conduit
ECC	Extruded Concrete Curb
EL.=	Elevation
EOP	Edge of Pavement
EQUIV.	Equivalent
EVC	End of Vertical Curve
EXIST.	Existing
FD	Floor Drain
FDC	Fire Department Connection
FDN	Foundation
FFE	Finish Floor Elevation
FH	Fire Hydrant
FL	Flanged
FLR	Floor
FOC	Face of Curb
F.S.	Finished Surface
FT (')	Foot (feet)
FTG	Footing
G	Gas Main
GB	Grade Break
GM	Gas Meter
GRD	Grade
GV	Gate Valve
HB	Hose Bibb
HDPE	High Density Polyethylene
HORIZ(H)	Horizontal
HT	Height
HYD	Hydrant
ID	Inside Diameter
I.E.	Invert Elevation
IN (")	Inch(es)
INV	Invert
IRR	Irrigation Water
LB	Pound(s)
LCPE	Lined Corrugated Polyethylene Pipe
LF	Linear Feet
MAT'L	Material
MAX	Maximum
MFR	Manufacturer
MH	Manhole
MJ	Mechanical Joint
MIN.	Minimum
MISC.	Miscellaneous
N	North(ing)
NO (#)	Number
OC	On Center
O/W	Oil Water
P	Power
PC	Point of Curvature
PIV	Post Indicator Valve
PP	Power Pole
PL or ℙ	Property Line
PSF	Pounds Per Square Foot
PSI	Pounds Per Square Inch
PT	Point of Tangency
PVC	Polyvinyl Chloride
PVI	Point of Vertical Inflection
QTY.	Quantity
RAD (R)	Radius
RCP	Reinforced Concrete Pipe
RD	Road
REF	Reference
REQD.	Required
RET	Retaining
ROW	Right of Way
SD	Storm Drain
S.F.	Square Feet
SHT	Sheet
SIM	Similar
SPEC	Specification(s)
SQ	Square
SS	Sanitary Sewer
STA	Station
STD	Standard
TOE	Toe of Wall, or Slope
T	Telephone Wire
TBM	Temporary Bench Mark
T.C.	Top of Curb
TG or RIM	Top of Grate
TEMP.	Temporary
TOP	Top of Slope
TOW	Top of Wall
TV	Television Wire
TYP.	Typical
VC	Vertical Curve
VERT (V)	Vertical
WM	Water Meter
w/	With
WT	Weight
WWF	Welded Wire Fabric
YD	Yard Drain

LEGEND

STORM PIPE	SD —— SD
NEW & EXISTING CATCH BASINS	CB C.B.
NEW & EXISTING DRYWELLS	DW DW
STORM MANHOLE	SDMH SDMH
SANITARY SEWER PIPE	SS —— SS
SANITARY SEWER MANHOLE	SSMH SSMH
WATER MAINS	W —— W —— W
FIRE HYDRANTS (NEW AND EXISTING) AND FDC	
WATER METERS	
WATER VALVES	
FITTINGS WITH THRUST BLOCKS	TEE 90° 45° 22.5° 11.25°
SURFACE WTR AND PIPE DIRECTION FLOW	
EXISTING CONTOUR LABELS	457
PROPOSED CONTOUR LABELS	457
EXISTING SURFACE ELEVATIONS	XXX.XX F.S. XXX.XX T.C. XXX.XX F.S.
FINISHED SURFACE ELEVATIONS	XXX.XX F.S. XXX.XX T.C. XXX.XX F.S.
NEW EASEMENT	
NEW DITCH	
TRAFFIC ARROWS	
TOP OF WALL/TOE OF WALL	TOW XXX.XX XXX.XX BOW
SLOPE INDICATORS	3:1 2:1
RIP RAP	
FILTER FABRIC FENCING	
RAIN WATER LEADERS (RWL)	
DOWNSPOUTS	DS
CLEANOUTS (C.O.) SS, AND RWL	CO
INTERCEPTOR AND BIO-SWALES	
CEMENT CONCRETE	
COORDINATES, & LEADERS	N 1000.00 E 5000.00
STUBBED & PLUGGED LINE	
CONCRETE CURB	
CONCRETE CURB & GUTTER	
NEW ASPHALT/CONCRETE PAVEMENT	
CURB INLET/UNDER SIDEWALK INLET	
DRAINAGE SWALE	
RETAINING WALL	
STRAW BALE	
ROCK CHECK DAM	

UTILITY/REGULATORY CONTACTS

CITY CED DIRECTOR
CITY OF WENATCHEE COMMUNITY & ECONOMIC DEV.
1350 MCKITTRICK ST. P.O. BOX 519
WENATCHEE, WA 98807-0519
CONTACT: STEVE KING, P.E.
PHONE: (509) 888-3203
FAX: (509) 888-3201

CITY ENGINEER
DEVELOPMENT REVIEW ENGINEER
PUBLIC WORKS, CITY OF WENATCHEE
1350 MCKITTRICK STREET, SUITE A
WENATCHEE WA 98801
CONTACT: DONALD M. NELSON, P.E.
PHONE: (509) 888-3255

CITY ENVIRONMENTAL
ENVIRONMENTAL MANAGER
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1350 MCKITTRICK STREET, SUITE A
WENATCHEE, WA 98801
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PHONE: (509) 888-3225

WATER/SEWER/STORM
CITY OF WENATCHEE PUBLIC SERVICES CENTER
1350 MCKITTRICK STREET, SUITE A
WENATCHEE WA 98801
CONTACT: MARGIE WILSON
PHONE: (509) 888-3209

CITY ENVIROMENTAL CONSULTANT
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1329 NORTH STATE STREET, SUITE 301
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CONTACT: JUSTIN CLARY, P.E.
PHONE: (360) 594-6260

POWER
CHELAN PUD
327 N. WENATCHEE AVE.
CONTACT: TAMMY FISHER
PHONE: (509) 661-8126

PHONE
FRONTIER COMMUNICATIONS
320 E. PENNY ROAD
WENATCHEE, WA 98801
CONTACT: SEAN WHITESITT
FAX: (509) 662-2337
EMAIL: SEAN.L.WHITESITT@FTR.COM

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CHARTER COMMUNICATIONS
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WENATCHEE, WA 98801
CONTACT: TY MARSHALL
FAX: (509) 663-9072
EMAIL: TY.MARSHALL@CHARTERCOM.COM

GAS
CASCADE NATURAL GAS
205 7TH STREET
WENATCHEE, WA 98801
PHONE: (509) 662-6101
EMAIL: ANDY.KUNKEL@CNGC.COM

FIRE
STATION 41 (MAIN STATION)
136 SOUTH CHELAN AVENUE
WENATCHEE, WA 98801
CONTACT: MARK YAPLE
PHONE: (509) 664-3950
FAX: (509) 664-3957

IRRIGATION
WENATCHEE RECLAMATION DISTRICT
514 EASY STREET
WENATCHEE, WA 98801
CONTACT: ---
PHONE: (509) 663-0002

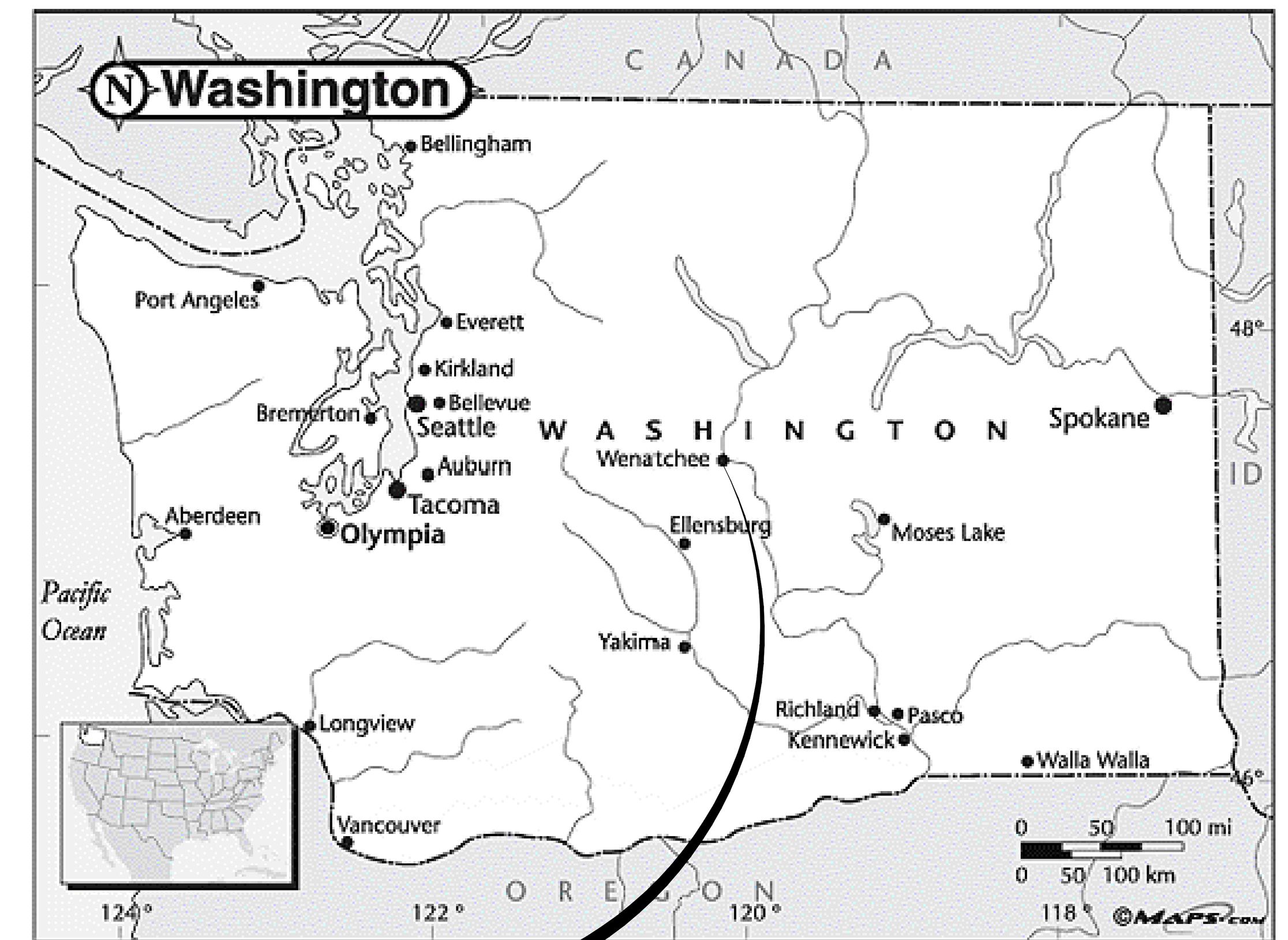
DESIGN TEAM

ARCHITECT
JENSEN/FEY
7730 LEARY WAY
REDMOND, WA 98052
CONTACTS: KURT JENSEN
PHONE: (425) 216-0318
EMAIL: info@jensenfey.com

DEVELOPER
A & A DEVELOPMENT GROUP, INC.
202 E. SPOKANE FALLS BLVD. SUITE 303
SPOKANE, WA 99202
CONTACT: RYAN RUFFCORN, AIA
(509) 381-1770
EMAIL: ryan@aadevgroup.com

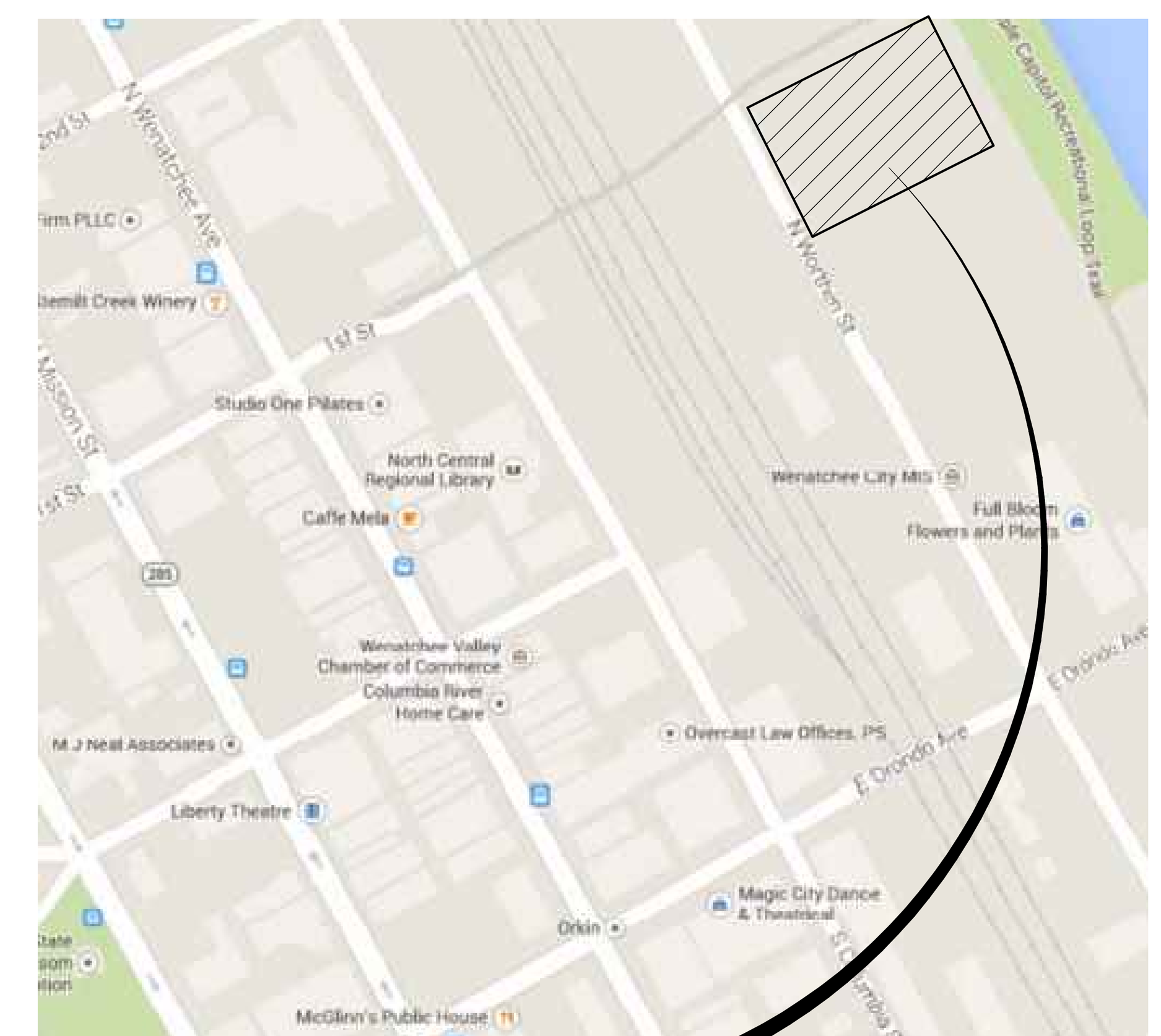
CIVIL ENGINEER
DCI ENGINEERS, INC.
707 W. 2ND AVENUE
SPOKANE, WA 99201
CONTACT: SCOTT RIVAS, P.E.
PHONE: (509) 455-4448
FAX: (509) 455-7492

GEOTECHNICAL ENGINEER
MATERIALS TESTING & CONSULTING, INC.
777 CHRYSLER DRIVE
BURLINGTON WA 98233
CONTACT: LANCE LEVINE, P.E.
PHONE: (360) 534-9777



PROJECT LOCATION:

PROJECT LOCATION MAP
NOT TO SCALE



PROJECT LOCATION:

VICINITY MAP
NOT TO SCALE

SHEET INDEX

CONTRACTOR NOTE
ALL EXISTING UTILITIES SHOWN ON PLANS ARE TO BE VERIFIED HORIZONTALLY AND VERTICALLY PRIOR TO ANY CONSTRUCTION. ALL EXISTING FEATURES INCLUDING BURIED UTILITIES ARE SHOWN AS INDICATED ON RECORD MAPS AND SURVEYS FURNISHED BY OTHERS. WE ASSUME NO LIABILITY FOR THE ACCURACY OF THOSE RECORDS AND SURVEYS. CONTACT THE UTILITY OWNER/AGENCY FOR THE FINAL LOCATION OF EXISTING UTILITIES IN AREAS CRITICAL TO CONSTRUCTION.

UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
811
CALL TWO BUSINESS DAYS BEFORE YOU DIG

SE.1/4 SECTION 3, T. 22N, R. 20E, W.M.

PREPARED BY:

DCI ENGINEERS
707 W. 2ND AVENUE
SPOKANE, WASHINGTON 99201
PHONE: (509) 455-4448 • FAX: (509) 455-7492
WEBSITE: www.dci-engineers.com
CIVIL / STRUCTURAL

SIGNATURE:
SCOTT A. RIVAS
STATE OF WASHINGTON
36605
REGISTERED PROFESSIONAL ENGINEER
11/13/2015

REVISIONS:

APPROVALS:

Job No.:	15-42-0057
Proj. Manager:	SAR
Drawn:	RTT
Reviewed:	SAR
Dwg. Chk.	JFS
Date:	11-13-15
Scale:	N/A

PROJECT TITLE:
HILTON GARDEN INN
ROUGH GRADING
25 N. WORTHEN STREET
WENATCHEE, WA 98801

SHEET TITLE:
CIVIL INFORMATION

SHEET NO.
C0.0

GENERAL CONSTRUCTION NOTES

1. UNLESS SPECIFICALLY EXCEPTED IN THE PLANS OR CONTRACT DOCUMENTS, ALL CONSTRUCTION METHODS AND MATERIALS SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS AND STANDARD PLANS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION PROMULGATED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND THE WASHINGTON CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION, (LATEST EDITION) AND THE CITY OF WENATCHEE STREET STANDARDS.
2. THE PLANS ARE SCHEMATIC AND ARE NOT INTENDED TO DEPICT ALL DETAILS OF THE WORK REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE TO FAMILIARIZE HIMSELF WITH ACTUAL SITE CONDITIONS, REQUIREMENTS AND FACTORS AFFECTING THE WORK. WHERE LACK OF DETAIL OR CONFLICT EXISTS BETWEEN THESE AND OTHER PLANS, THE CONTRACTOR SHALL NOTIFY THE OWNER TO RESOLVE THE ISSUE PRIOR TO PROCEEDING. IF THE CONTRACTOR DISCOVERS ANY DISCREPANCIES BETWEEN THE PLANS AND EXISTING CONDITIONS ENCOUNTERED, THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER AND THE ARCHITECT.
3. EXCAVATION AND EMBANKMENT SHALL BE IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF SECTION 2–03 OF THE WSDOT STANDARD SPECIFICATIONS. ALL COMPACTION SHALL BE IN ACCORDANCE WITH SECTION 2–03.3(14)C, METHOD C FOR BUILDING PADS, METHOD B FOR OTHER AREAS.
4. THIS PLAN MAY NOT SHOW ALL EXISTING UTILITIES. EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. PRIOR TO CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES. CALL THE UNDERGROUND UTILITY LOCATION SERVICE AT 811 BEFORE YOU DIG. ANY CONFLICTING UTILITIES SHALL BE RELOCATED PRIOR TO CONSTRUCTION. IN THE CASE WHEN RELOCATION IS REQUIRED, THE APPLICABLE UTILITY COMPANY SHALL BE NOTIFIED AND ANY COST REFLECTING THE RELOCATION OR ADJUSTMENTS SHALL BE AGREED UPON.
5. ALL FINISHED GRADING ELEVATIONS SHALL MATCH EXISTING ELEVATIONS AT THE SITE'S BOUNDARY, EXCEPT AS SHOWN OTHERWISE IN THE GRADING PLAN. WHERE CONFLICTS EXIST, THE CONTRACTOR SHALL NOTIFY OWNER TO RESOLVE THE ISSUE PRIOR TO PROCEEDING.
6. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL WASTE MATERIAL. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNER FOR DISPOSAL OF EXCESS EXCAVATED MATERIAL ON PROPERTY.
7. GRADING: ALL GRADING SHALL BE LIMITED TO THE AREAS IDENTIFIED IN THE GRADING PLAN AND SHALL NOT INFRINGE ON ADJACENT OWNERSHIPS, EXCEPT AS SHOWN OTHERWISE ON THE PLANS.
8. THE CONTRACTOR IS REQUIRED TO HAVE A COMPLETE SET OF THE APPROVED PLANS ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS. THE CONTRACTOR SHALL HAVE A RESPONSIBLE PARTY WHO SHALL HAVE THE AUTHORITY TO REPRESENT AND ACT FOR THE CONTRACTOR AT THE JOB SITE DURING ALL WORKING HOURS.
9. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS AND APPROVALS BY THE CITY OF WENATCHEE PRIOR TO CONSTRUCTION.
10. THE CONTRACTOR SHALL PROTECT ALL CATCH BASINS, DRYWELLS, AND OTHER STORM DRAINAGE STRUCTURES FROM BEING CONTAMINATED WITH SILT BY INSTALLING INLET PROTECTION AT ALL INLETS DURING CONSTRUCTION AND KEEPING IT IN PLACE UNTIL THE SITE HAS BEEN STABILIZED.
11. CUT SLOPES IN SOLID ROCK SHALL NOT EXCEED 1/2:1 (HORIZONTAL:VERTICAL), AND SOIL CUT SLOPES SHALL NOT EXCEED 2:1 (HORIZONTAL: VERTICAL), EXCEPT AS SHOWN OTHERWISE ON THE PLANS.
12. FILL SLOPES ACROSS THE PROPERTY SHOULD BE DESIGNED FOR A MAXIMUM SLOPE OF 2:1 (HORIZONTAL:VERTICAL), EXCEPT AS SHOWN OTHERWISE ON THE PLANS.
13. CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR AND EQUIPMENT TO CONSTRUCT AND INSTALL TO PROPER WORKING ORDER, THE DESIGN SHOWN, AS DETAILED OR CALLED OUT ON THESE PLANS AND SPECIFICATIONS.
14. A PRE–CONSTRUCTION MEETING SHALL BE HELD WITH THE CITY OF WENATCHEE CONSTRUCTION INSPECTOR PRIOR TO THE START OF CONSTRUCTION.
15. THE CONTRACTOR SHALL PROVIDE THE DESIGN ENGINEERS WITH AS–BUILT DRAWINGS PRIOR TO FINAL APPROVAL. ALL DEVIATIONS FROM THE ORIGINAL PLANS MADE DURING THE COURSE OF THE CONSTRUCTION INCLUDING LOCATION, INVERTS, AND DEPTHS OF UTILITIES SHALL BE CLEARLY MARKED IN THE AS–BUILT DRAWINGS. THE AS–BUIILT DRAWINGS SHALL INCLUDE SPOT ELEVATIONS AT EACH SPOT ELEVATION SHOWN ON THESE PLANS AND SHALL SHOW CONTOURS AT 6" INTERVAL.
16. THE SURVEY IS FOR INFORMATIONAL PURPOSES ONLY. NO CERTIFICATIONS ARE EXPRESSED OR IMPLIED. THE SURVEY WAS PROVIDED BY OTHERS.
17. IF CONSTRUCTION IS TO TAKE PLACE IN PUBLIC RIGHT–OF–WAY, THE CONTRACTOR SHALL NOTIFY THE CITY OF WENATCHEE AND OBTAIN ALL THE REQUIRED APPROVALS AND PERMITS. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL PLAN(S) IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS REQUIRED. PRIOR TO DISRUPTION OF ANY TRAFFIC, A TRAFFIC PLAN SHALL BE PREPARED AND SUBMITTED TO THE GOVERNING MUNICIPALITY FOR APPROVAL. NO WORK SHALL COMMENCE UNTIL ALL APPROVED TRAFFIC CONTROL IS IN PLACE.

17. REFER TO DRAWINGS TITLED "PUBLIC WORKS YARD REMEDIAL ACTION" BY MAUL FOSTER AONGI (ISSUED BY CITY OF WENATCHEE) FOR EROSION CONTROL, DEMOLITION, CAPPING, AND ANY OTHER RELATED WORK.

CITY OF WENATCHEE CONSTRUCTION NOTES:

GENERAL

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH LOCAL MUNICIPAL STANDARDS, SPECIFICATIONS, AND THE LATEST EDITION OF THE WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION. THE APWA GENERAL SPECIAL PROVISIONS SHALL APPLY IN ITS ENTIRETY.
2. THE CONTRACTOR SHALL CONDUCT A PRE–CONSTRUCTION CONFERENCE WITH THE CITY OF WENATCHEE AT LEAST 3 WORKING DAYS PRIOR TO THE BEGINNING OF ANY CONSTRUCTION ACTIVITY.
3. THE CONTRACTOR SHALL OBTAIN ALL RIGHT–OF–WAY, STREET CUT, UTILITY, AND/OR OTHER RELATED PERMITS NECESSARY FOR THE WORK PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY.
4. THE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL PLANS IN ACCORDANCE WITH THE MUTCD.
5. THE CONTRACTOR SHALL PREVENT THE TRACKING OF MUD AND DIRT ONTO THE ROADWAY AT ALL TIMES. FLUSHING OF THE STREET INTO THE STORM SEWER SYSTEM IS STRICTLY PROHIBITED. STOCKPILING OF MATERIAL ON CITY STREETS IS NOT ALLOWED.
6. A CONSTRUCTION ENGINEER SHALL BE IDENTIFIED PRIOR TO BEGINNING THE WORK. THE CITY OF WENATCHEE REQUIRED ALL CONSTRUCTION TO BE INSPECTED BY A LICENSED ENGINEER OR AN INSPECTOR SUPERVISED BY A LICENSED ENGINEER TO ENSURE WORK IS IN COMPLIANCE WITH THE PLANS AND SPECIFICATIONS. THE LEVEL OF INSPECTION TO ACHIEVE THIS CERTIFICATION SHALL BE DETERMINED BY THE CONSTRUCTION ENGINEER. SUBMITTAL OF STAMPED RECORD DRAWINGS IS REQUIRED AND SHALL SERVE AS THIS CERTIFICATION.

GRADING NOTES:

1. EXCAVATION AND EMBANKMENT SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT AND APPLICABLE REQUIREMENTS OF THE WSDOT STANDARD SPECIFICATIONS. ALL COMPACTION OF SUBGRADES, ROCK, AND ASPHALT SHALL BE IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATIONS.
2. ALL FINISHED GRADING ELEVATIONS SHALL MATCH EXISTING ELEVATIONS AT THE SITE'S BOUNDARY, EXCEPT AS SHOWN OTHERWISE ON THE GRADING PLAN. WHERE CONFLICTS EXIST, THE CONTRACTOR SHALL NOTIFY THE OWNER TO RESOLVE THE ISSUE PRIOR TO PROCEEDING.
3. CONTRACTOR SHALL ESTIMATE THEIR OWN EARTHWORK QUANTITIES. ALL EXCESS MATERIAL SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND DISPOSED OF IN A LEGAL MANNER. ONSITE CONTAMINATED SOILS MAY BE USED ONSITE AS FILL AS LONG AS IT MEETS THE REQUIREMENTS OF THE GEOTECHNICAL REPORT AND THE DEPARTMENT OF ECOLOGY.
4. GRADING: ALL GRADING SHALL BE LIMITED TO THE AREAS IDENTIFIED IN THE GRADING PLAN AND SHALL NOT INFRINGE ON ADJACENT OWNERSHIPS, EXCEPT AS SHOWN OTHERWISE ON THE PLANS.
5. CUT SLOPES IN SOLID ROCK SHALL NOT EXCEED 1/2:1 (HORIZONTAL:VERTICAL), AND SOIL CUT SLOPES SHALL NOT EXCEED 2:1 (HORIZONTAL:VERTICAL), EXCEPT AS SHOWN OTHERWISE ON THE PLANS.
6. FILL SLOPES ACROSS THE PROPERTY SHOULD BE DESIGNED FOR A MAXIMUM SLOPE OF 2:1 (HORIZONTAL:VERTICAL), EXCEPT AS SHOWN OTHERWISE ON THE PLANS.
7. ALL CURB AND GUTTER, STREET GRADES, SIDEWALK GRADES, AND ANY OTHER VERTICAL AND OR HORIZONTAL ALIGNMENT SHALL BE STAKED BY AN ENGINEERING OR SURVEYING FIRM CAPABLE OF PERFORMING SUCH WORK.
8. FORM AND SUBGRADE INSPECTION BY THE CITY OF WENATCHEE INSPECTOR IS REQUIRED BEFORE POURING THE CONCRETE. TWENTY–FOUR HOURS NOTICE IS REQUIRED FOR FORM INSPECTION.
9. CONTRACTOR SHALL VERIFY AND MATCH THE EXISTING GRADES. WHERE APPLICABLE GRADES MAY NEED ADJUSTING TO PROVIDE A POSITIVE DRAINAGE SLOPE.
10. TOP OF CURB (T.C.) IS 0.5' ABOVE ACP OR CCP UNLESS OTHERWISE NOTED.
11. RIM ELEVATIONS OF UTILITY AND DRAINAGE STRUCTURES SHALL BE INSTALLED SO THAT RIMS MAY BE ADJUSTED ±0.5' TO MATCH FINISHED GRADE.
12. LAYOUT CURB AND SIDEWALK BEFORE SETTING VALVE BOXES AND UTILITY APPURTENANCES TO ENSURE THERE IS NO CONFLICT BETWEEN STRUCTURES AND HARD SURFACES.
13. **THE SITE INCLUDES A LANDFILL AREA AND CONTAMINATED SOIL. THE CONTRACTOR SHALL ADHERE TO ALL WASHINGTON STATE DEPARTMENT OF ECOLOGY REQUIREMENTS. THE CITY OF WENATCHEE CONTRACTOR SHALL CAP THE SITE IN ACCORDANCE WITH ECOLOGY REQUIREMENTS. THESE DOCUMENTS DO NOT SHOW THE WORK RELATED TO INSTALLING A CAP. CONTRACTOR SHALL REFER TO THE DRAWINGS TITLED "PUBLIC WORKS YARD REMEDIAL ACTION" BY MAUL FOSTER ALONGI AND ISSUED BY THE CITY OF WENATCHEE FOR CAP INSTALLATION.**
14. **THESE DRAWINGS ARE INTENDED TO SHOW ELEVATIONS AT THE BOTTOM OF THE PROTECTIVE CAP (ELEVATIONS LABELED S.G.) BASED ON PRELIMINARY DESIGN OF THE FUTURE PROPOSED HOTEL. THE PROTECTIVE CAP WILL BE INSTALLED BEGINNING AT AND EXTENDING ABOVE THE ELEVATIONS LABELED S.G.**
15. **THE MATERIALS USED IN THE PROTECTIVE CAP WILL BE USED AS BASE ROCK FOR THE FUTURE DEVELOPMENT AND SHALL BE COMPACTED AS SPECIFIED BY THE GEOTECHNICAL REPORT PROVIDED BY THE DEVELOPER.**

CONTRACTOR NOTE

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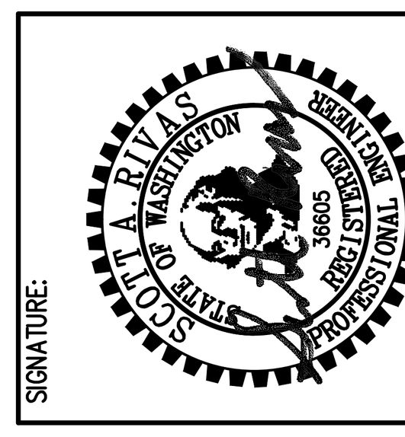


11/13/2015

REVISIONS:

APPROVALS:

Job No.:	15–42–0057
Proj. Manager:	SAR
Drawn:	RTT
Reviewed:	SAR
Dwg. Chk.	JFS
Date:	11–13–15
Scale:	N/A

PROJECT TITLE:

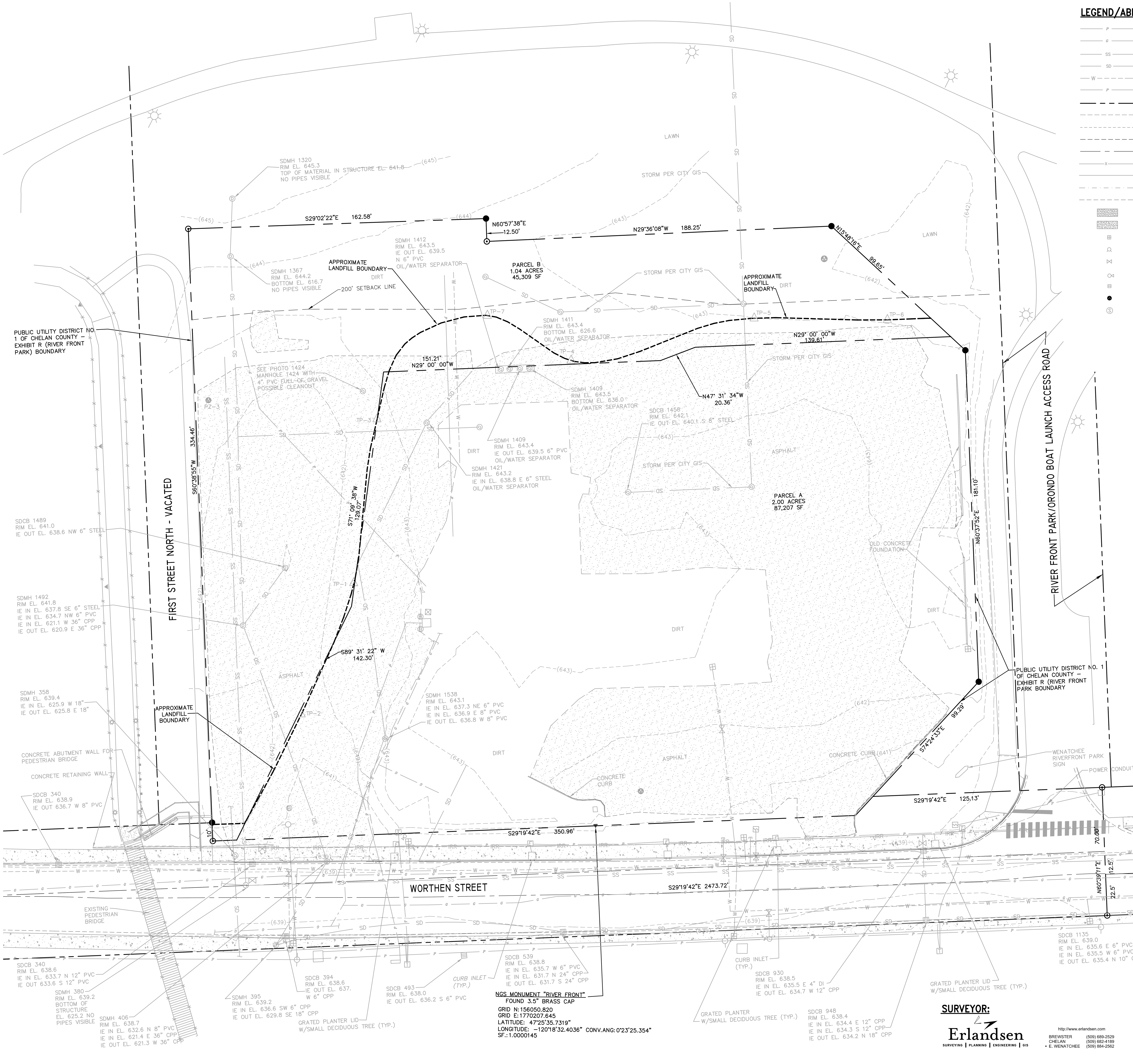
HILTON GARDEN INN
ROUGH GRADING
25 N. WORTHEN STREET
WENATCHEE, WA 98801

SHEET TITLE:

GENERAL NOTES

SHEET NO.

C0.1



LEGEND/ABBREVIATIONS

OVERHEAD ELECTRICAL LINE	STORM DRAIN MANHOLE
UNDERGROUND GAS LINE (YELLOW)	CATCH BASIN
UNDERGROUND SANITARY SEWER LINE	LUMINAIRE
UNDERGROUND STORM DRAIN LINE	ELECTRICAL POLE
UNDERGROUND DOMESTIC WATER LINE	ELECTRICAL TRANSFORMER
UNDERGROUND ELECTRICAL LINE	ELECTRICAL METER
SURVEYED PROPERTY BOUNDARY LINE	TELEPHONE PEDESTAL
PLATTED LOT & BLOCK BOUNDARY LINE	DECIDUOUS TREE
PARCEL BOUNDARY LINE	FOUND REBAR AND CAP
EASEMENT LIMIT LINE	CALCULATED POINT
STREET OR RAILROAD RIGHT OF WAY CENTERLINE	FOUND MONUMENT (AS NOTED)
FENCE	SDMH — STORM DRAINAGE MANHOLE
CONCRETE CURB	SDCB — STORM DRAINAGE CATCH BASIN
FLOWLINE	CPP — CORRUGATED PLASTIC PIPE
EDGE OF ASPHALT	PVC — POLYURETHANE VINYL PIPE
ASPHALT	N — NORTH
CONCRETE	S — SOUTH
WATER METER	E — EAST
FIRE HYDRANT	W — WEST
WATER VALVE	TYP. — TYPICAL
FROST FREE SPIGOT	640.00 — SPOT ELEVATION
UNDERGROUND WATER MARKER	TEST PIT LOCATION
MONITORING WELL	
SANITARY SEWER MANHOLE	

BASIS OF BEARING:

WASHINGTON STATE PLANE GRID NORTH ZONE BASED ON STATIC OR RAPID STATIC GPS MEASUREMENTS. ASTRONOMIC NORTH BEARS APPROXIMATELY N 00°23'29" W AT AT THE MONUMENT ON THE CENTERLINE OF ORONDO ST. & THE WESTERLY RIGHT OF WAY OF WORTHEN ST.

DATUM:

HORIZONTAL DATUM:
WASHINGTON STATE PLANE COORDINATE SYSTEM NORTH ZONE, GRID (NAD83-1991), U.S. SURVEY FEET, DERIVED FROM NGS MONUMENT "RIVERFRONT" (902GPS). THE MEASURED DISTANCES SHOWN ON THIS MAP HAVE BEEN PROJECTED TO THE WASHINGTON STATE PLANE COORDINATE GRID. MULTIPLY THE DISTANCES OR AREA SHOWN BY A COMBINED FACTOR OF 1.00001309617 TO OBTAIN THE ACTUAL GROUND DISTANCE.
VERTICAL DATUM:
NAVD 1988 DERIVED FROM NGS MONUMENT "RIVERFRONT" (902GPS). SUBTRACT ±3.7' FROM THE NAVD 1988 ELEVATIONS TO DERIVE NGVD 1929 ELEVATIONS.

EQUIPMENT AND PROCEDURES:

EQUIPMENT: LEICA SYSTEM 500 GPS & SYSTEM 1200 GPS AND VIVA ROBOTIC TOTAL STATION.

PROCEDURES: INITIAL CONTROL ESTABLISHED BY RAPID-STATIC GPS OBSERVATIONS, WITH A PRECISION OF ±2CM. CONVENTIONAL TRAVERSES WERE PERFORMED AS NEEDED BETWEEN THIS CONTROL TO OBTAIN ADDITIONAL SITE SPECIFIC DATA AND FOR CORNER MONUMENTATION. POSITIONAL ERROR ADJUSTMENTS WERE MADE USING LEAST SQUARES ANALYSIS. PROCEDURES MEET OR EXCEED W.A.C. 332-130-090 AND 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS.

DATES OF SURVEY: INITIAL CONTROL PERFORMED AND MONUMENTS VISITED: SEPTEMBER, 24 & 30, 2013; UTILITY MARKS & SITE MAPPED: SEPTEMBER 24 & 30, 2013.

NOTES:

1. UNDERGROUND UTILITIES SHOWN HEREON MAPPED AS MARKED PER UNDERGROUND UTILITY LOCATE REQUEST TICKET NUMBER 13250934. ADDITIONAL INQUIRES OF EXISTING UTILITIES WERE MADE TO THE CITY OF WENATCHEE AND ASSOCIATED CITY UTILITY CARDS. ADDITIONAL UNDERGROUND UTILITIES MAY EXIST.
2. PROPERTY BOUNDARIES SHOWN HEREON ARE BASED UPON A RETRACEMENT OF RECORD OF SURVEY RECORDED UNDER AUDITOR'S FILE NUMBER 2361609.
3. THE NORTHEASTERLY 10 FEET OF THE THE RIGHT OF WAY DEDICATED BY THE PLAT OF RIVER FRONT ADDITION TO WENATCHEE FOR WORTHEN STREET IS VACATED BY CITY ORDINANCE NO. 2008-04.
4. THE BOUNDARY PORTION OF THIS SURVEY IS BASED UPON DOCUMENTS, PLATS AND/OR SURVEYS FOUND OF PUBLIC RECORD, OR AS PROVIDED BY CLIENT, AND DOES NOT PURPORT TO SHOW OR DISCLOSE ALL RIGHTS, RIGHTS OF WAYS, EASEMENTS, RESTRICTIONS AND/OR RESERVATIONS THAT MAY BENEFIT OR BURDEN THE SUBJECT PROPERTY THAT MAY BE DISCLOSED BY A TITLE REPORT OR OTHER MEANS.

SITE INFORMATION:

ADDRESS: 25 N. WORTHEN ST.WENATCHEE, WA 98801

ASSESSOR'S PARCEL NUMBER: PART 222003821009

BOUNDARY DESCRIPTION:

AS SET FORTH AND DESCRIBED WITHIN RECORD OF SURVEY RECORDED MAY 30, 2012, UNDER AUDITOR'S FILES NUMBER 2361609.

ENGINEERS NOTES:

1. THE ENGINEER HAS MODIFIED THE UTILITIES SHOWN ON THE ORIGINAL SURVEY BASED ON INFORMATION PROVIDED BY THE CITY OF WENATCHEE. SOME OF THESE UTILITIES MAY HAVE BEEN REMOVED BUT NO SPECIFIC RECORD OF REMOVAL WAS FOUND. CONTRACTOR TO VERIFY LOCATION AND DEPTH OF EXISTING UTILITIES.
2. THE ENGINEER HAS ADDED THE NEW PEDESTRIAN PATH IMPROVEMENTS RECENTLY CONSTRUCTED BY THE CITY OF WENATCHEE TO THE NORTH SIDE OF THE SITE. CONTRACTOR TO VERIFY EXACT AS-BUILT LOCATIONS AND ELEVATIONS.
3. THE LANDFILL BOUNDARY SHOWN IS APPROXIMATE AND WAS PROVIDED BY MAUL FOSTER ALONGI LUNDER (UNDER CONTRACT WITH CITY OF WENATCHEE). THE AREA TO THE NORTH AND EAST OF THE LINE IS THE LANDFILL AREA.
4. THE PROPERTY LINE BETWEEN PARCEL A AND PARCEL B WAS PROVIDED BY THE CITY OF WENATCHEE. THE PROPERTY LINE IS APPROXIMATE ONLY.

GRAPHIC SCALE
20 0 10 20
(IN FEET)
1 inch = 20 ft.

CONTRACTOR NOTE

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Erlandsen
SURVEYING | PLANNING | ENGINEERING | GIS
http://www.erlandsen.com
BREWSTER (509) 689-2529
CHELAN (509) 682-4189
E. WENATCHEE (509) 884-2562

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WEBSITE: www.dci-engineers.com
CIVIL / STRUCTURAL

SIGNATURE:

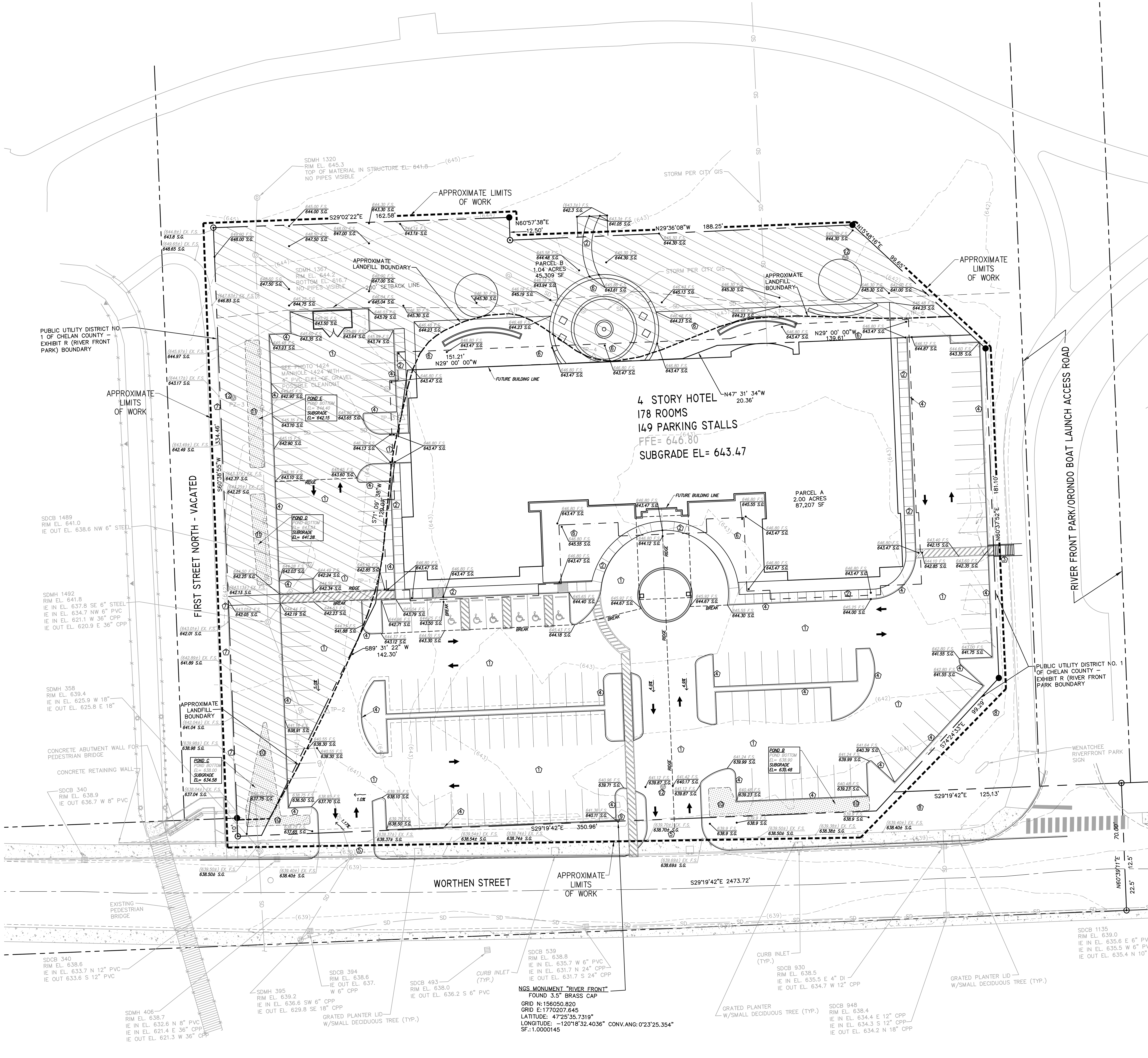
REVISIONS:

APPROVALS:
Job No.: 15-42-0057
Proj. Manager: SAR
Drawn: RTT
Reviewed: SAR
Dwg. Chk.: JFS
Date: 11-13-15
Scale: 1" = 20'

PROJECT TITLE:
HILTON GARDEN INN
ROUGH GRADING
25 N. WORTHEN STREET
WENATCHEE, WA 98801

SHEET TITLE:
EXISTING SITE SURVEY

SHEET NO.
C1.0



REFERENCE NOTES:

1. FUTURE ASPHALT CEMENT/PAVEMENT
2. FUTURE CONCRETE SIDEWALK
3. FUTURE CONCRETE STEPS PER DETAIL ARCHITECTURAL PLANS
4. FUTURE TYPE "A" CURB
5. FUTURE CONCRETE DRIVEWAY
6. FUTURE PATIO
7. CONTRACTOR TO COORDINATE GRADING WITH "PYBUS PEDESTRIAN & BICYCLE IMPROVEMENTS" PROJECT COMPLETED IN 2014. CONTACT ENGINEER IF LANDSCAPING GRADES BETWEEN PROPERTY LINE AND BACK OF CURB WILL EXCEED 3:1. SPOT ELEVATIONS SHOWN ARE FROM CONSTRUCTION DRAWINGS PROVIDED BY CITY. THEREFORE CONTRACTOR SHALL VERIFY SPOT ELEVATIONS PRIOR TO CONSTRUCTION AND CONTACT ENGINEER IF RESULTING GRADES WILL CAUSE SLOPES STEEPER THAN ALLOWED IN THE GENERAL NOTES OR IF A DEPRESSION WILL RESULT
8. PROTECT EXISTING LANDSCAPING
9. CONTRACTOR SHALL REPAIR AND REPLACE EXISTING MONUMENT AS REQUIRED BY CITY, COUNTY, AND STATE REQUIREMENTS USING A LICENSED SURVEYOR
10. FUTURE RAIN GARDEN WILL BE LINED IN FUTURE
11. FUTURE BIOINFILTRATION SWALE WILL BE LINED IN FUTURE
12. PRESERVE EXISTING MONITORING WELL, COORDINATE WITH CITY

LEGEND:

932.60 F.S. — ELEVATION OF FINISHED SURFACE FOR FINAL GRADING BY DEVELOPER
931.60 S.G. — ELEVATION OF BELOW PROTECTIVE CAP BY CITY CONTRACTOR

(932.60±) EX. F.S. — EXISTING FINISHED SURFACE ELEVATIONS
931.60 S.G. — ELEVATION OF BELOW PROTECTIVE CAP BY CITY CONTRACTOR

10' BUILDING CAP LIMITS

APPROXIMATE LANDFILL AREA SEE ENGINEERS NOTE #2.

DRAINAGE POND AREA

APPROXIMATE TEST PIT LOCATION

MONITORING WELL LOCATION

ENGINEER'S NOTE:

1. SUBGRADE ELEVATIONS WERE DETERMINED BASED ON THE FOLLOWING SECTIONS TO BE CONSTRUCTED BY DEVELOPER:
   - ACP OUTSIDE LANDFILL AREA: 3" ACP OVER 12" CSTC (12" CAP MATERIAL) OVER MIRAFI 160 N. CSTC AND MIRAFI BY CITY CONTRACTOR
   - ACP INSIDE LANDFILL AREA: 3" ACP OVER 6" CSTC OVER MIRAFI 380 RSI OVER 6" SUBBASE OVER MIRAFI 380 RSI OVER 12" CAP MATERIAL OVER MIRAFI 160 N. CAP MATERIAL AND MIRAFI 160 W BY CITY CONTRACTOR.
   - BUILDING SLAB: 4" PCC OVER STEGO WRAP 10 MIL OVER 36" CSTC (CAP MATERIAL) OVER MIRAFI 160 N. CSTC AND MIRAFI BY CITY CONTRACTOR.
   - SIDEWALKS: SAME AS ACP EXCEPT CONCRETE WILL BE 4" THICK AND DEVELOPER WILL REMOVE APPROXIMATELY 1" OF CAP MATERIAL.
2. IN THE LANDFILL AREA CITY CONTRACTOR SHALL VERIFY THAT 24" OF EXISTING SOIL IS PROVIDED BETWEEN TOP OF REFUSE AND SUBGRADE (SG) ELEVATIONS IN FUTURE PAVED AREAS (12" IN LANDSCAPED AREAS) SHOWN ON THIS DRAWING. THE 24" OF EXISTING SOIL SHALL NOT BE DISTURBED BY THE CITY CONTRACTOR. ANY DISTURBED AREAS SHALL BE BACKFILLED AND COMPACTED TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER OF RECORD (BUDINGER + ASSOCIATES). IF LESS THAN 24" OF SEPARATION EXISTS CONTRACTOR SHALL PLACE AND COMPACT FILL AS DIRECTED BY GEOTECHNICAL ENGINEER OF RECORD (BUDINGER + ASSOCIATES). IN SOME AREAS THE EXISTING LANDFILL REFUSE MAY BE ENCOUNTERED. CONTRACTOR TO COORDINATE WITH THE CITY REGARDING REMOVAL, AND DISPOSAL OF REFUSE.
3. CONTRACTOR SHALL VERIFY THE PROPOSED BUILDING FOOTPRINT IS NOT LOCATED OVER OR WITHIN 5' OF THE LANDFILL/ REFUSE AREA. CONTRACTOR TO COORDINATE WITH GEOTECHNICAL ENGINEER OF RECORD FOR SPECIFICATIONS ON HOW TO STABILIZE AND CAP THE LANDFILL IN THESE AREAS TO SUPPORT POTENTIAL BUILDING LOADS.
4. CONTRACTOR TO ADHERE TO ALL RECOMENDATIONS IN THE GEOTECHNICAL REPORT BY BUDINGER AND ASSOCIATES.
5. SUBGRADE SHALL BE COMPACTED BY A CAT816 OR VIBRATING PAD FOOT ROLLER OF SIMILAR WEIGHT AND ENERGY WITH A MINIMUM OF 6 PASSES. AFTER COMPACTION IS COMPLETE CAP MATERIAL MAY BE INSTALLED.
6. CAP MATERIAL SHALL BE COMPACTED AS SPECIFIED IN THE GEOTECHNICAL REPORT BY BUDINGER + ASSOCIATES.

CONTRACTOR NOTE

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GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

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PREPARED BY:
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SPOKANE, WASHINGTON 99201

SIGNATURE:

REVISIONS:

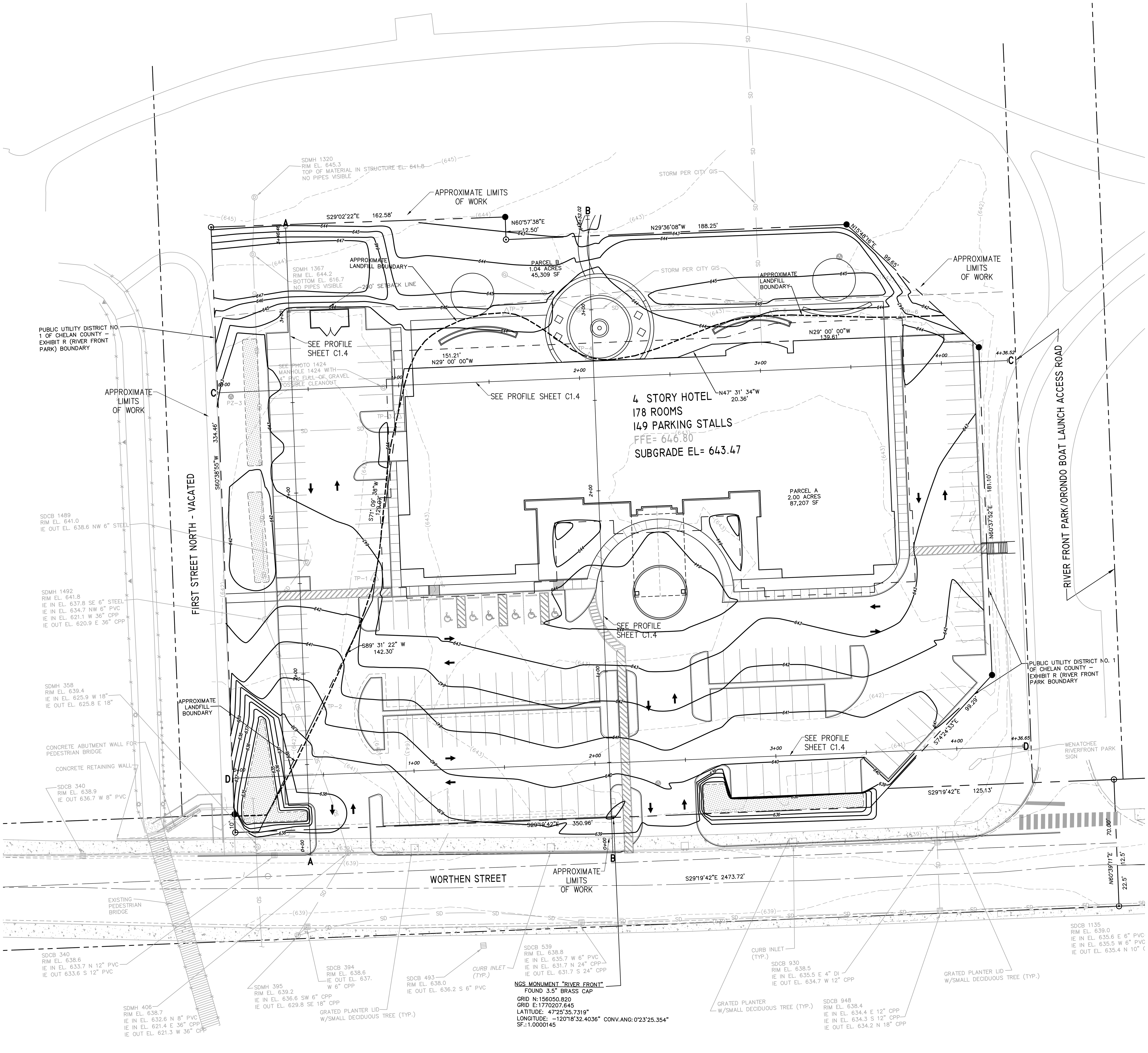
APPROVALS:

Job No.:	15-42-0057
Proj. Manager:	SAR
Drawn:	RTT
Reviewed:	SAR
Dwg. Chk.	JFS
Date:	11-13-15
Scale:	1" = 20'

PROJECT TITLE:
HILTON GARDEN INN
ROUGH GRADING
25 N. WORTHEN STREET
WENATCHEE, WA 98801

SHEET TITLE:
ROUGH GRADING PLAN

SHEET NO.
C1.1



ENGINEER'S NOTE:

1. SEE SHEET C1.4 FOR CROSS-SECTIONS NOTED ON THIS SHEET.
2. CONTOURS SHOWN ARE APPROXIMATE AND SHOWN FOR INFORMATION ONLY. SEE SHEET 1.2 FOR GRADING.
3. TEST PIT INFORMATION OBTAINED FROM DRAWING DATED 2/9/14, AND TEST PIT INFORMATION DATED 9/14/2011 AND PZ3 LOG CONSTRUCTION DATED 12/2/2010 PROVIDED BY MAUL FOSTER AND ALONGI. ELEVATIONS AND LOCATIONS ARE ESTIMATES ONLY. LINES BETWEEN TEST PITS ARE INTERPOLATIONS OF THE TEST PITS AND DO NOT REPRESENT ACTUAL OR OBSERVED FIELD CONDITIONS.

CONTRACTOR NOTE

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SPOKANE, WASHINGTON 99201
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WEBSITE: www.dci-engineers.com
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SIGNATURE: SCOTT A. RIVAS, STATE OF WASHINGTON, 36605, REGISTERED PROFESSIONAL ENGINEER 11/13/2015

REVISIONS:

APPROVALS:

Job No.:	15-42-0057
Proj. Manager:	SAR
Drawn:	RTT
Reviewed:	SAR
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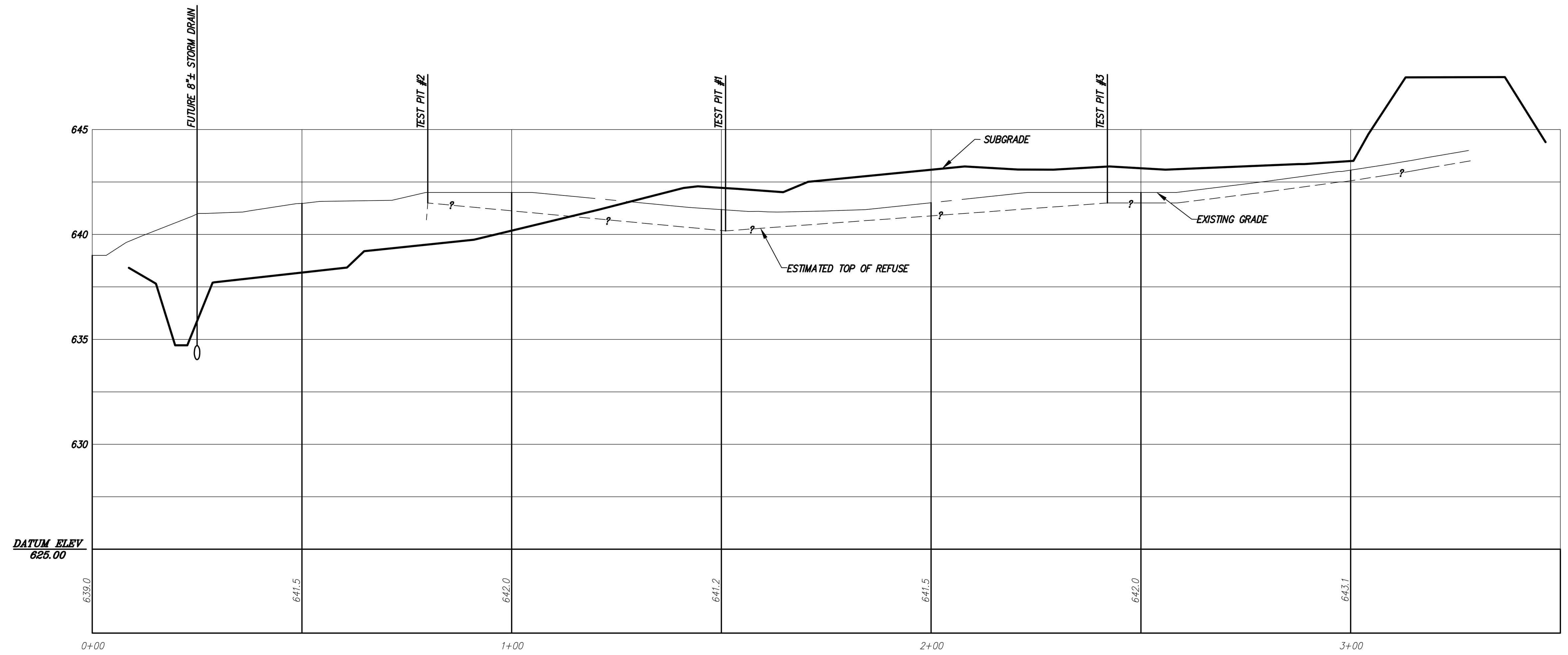
Scale:	1" = 20'

PROJECT TITLE:
HILTON GARDEN INN
ROUGH GRADING
25 N. WORTHEN STREET
WENATCHEE, WA 98801

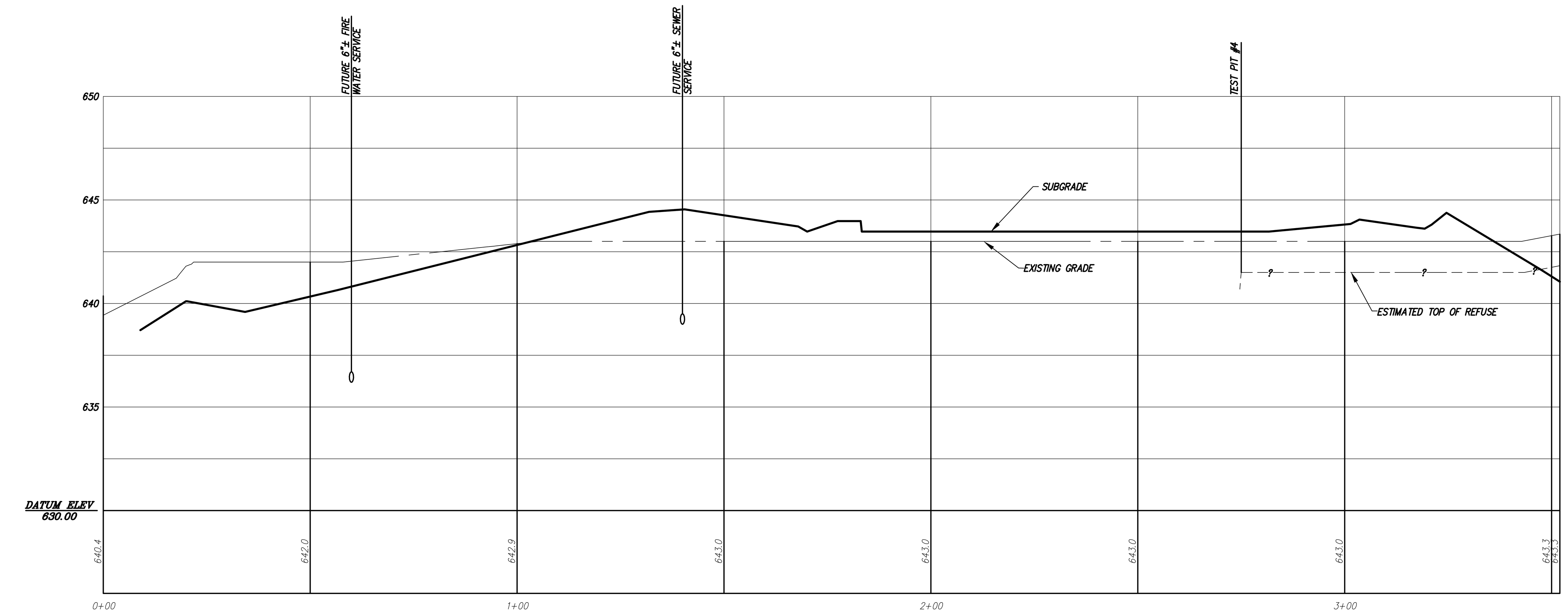
SHEET TITLE:
SUBGRADE CONTOUR PLAN

SHEET NO.
C1.2



SECTION A–A

PROFILE VIEW
1" = 20' HORIZONTAL
1" = 4' VERTICAL

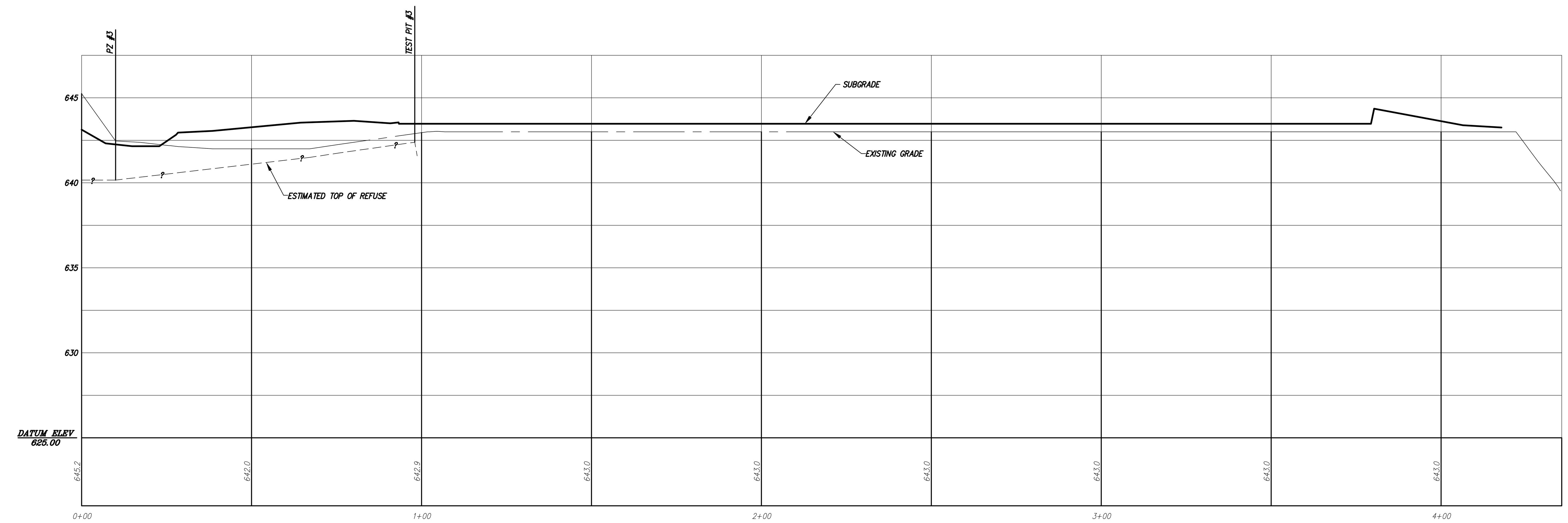


SECTION B–B

PROFILE VIEW
1" = 20' HORIZONTAL
1" = 4' VERTICAL

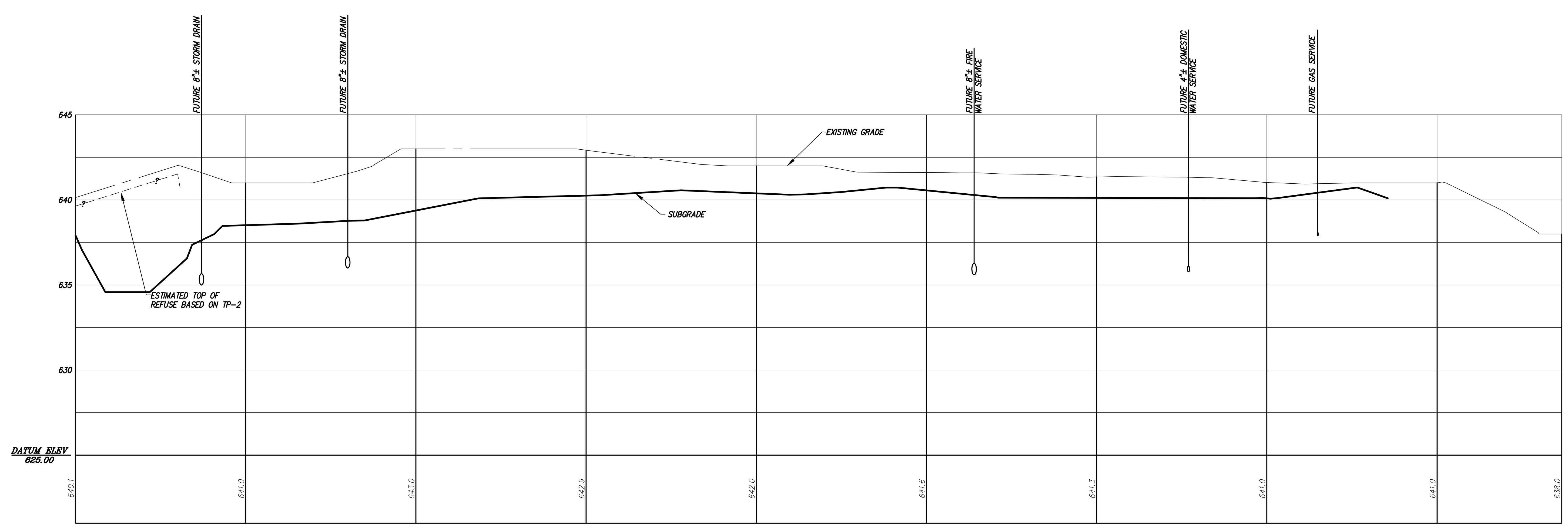
ENGINEER'S NOTE:

1. PROFILES SHOWN ARE APPROXIMATE AND SHWON FOR INFORMATION ONLY. SEE SHEET C1.2 FOR GRADING.
2. TEST PIT INFORMATION OBTAINED FROM DRAWING DATED 2/9/14, AND TEST PIT INFORMATION DATED 9/14/2011 AND PZ3 LOG CONSTRUCTION DATED 12/2/2010 PROVIDED BY MAUL FOSTER AND ALONGI. ELEVATIONS AND LOCATIONS ARE ESTIMATES ONLY. LINES BETWEEN TEST PITS ARE INTERPOLATIONS OF THE TEST PITS AND DO NOT REPRESENT ACTUAL OR OBSERVED FIELD CONDITIONS.



SECTION C–C

PROFILE VIEW
1" = 20' HORIZONTAL
1" = 4' VERTICAL



SECTION D–D

PROFILE VIEW
1" = 20' HORIZONTAL
1" = 4' VERTICAL

CONTRACTOR NOTE

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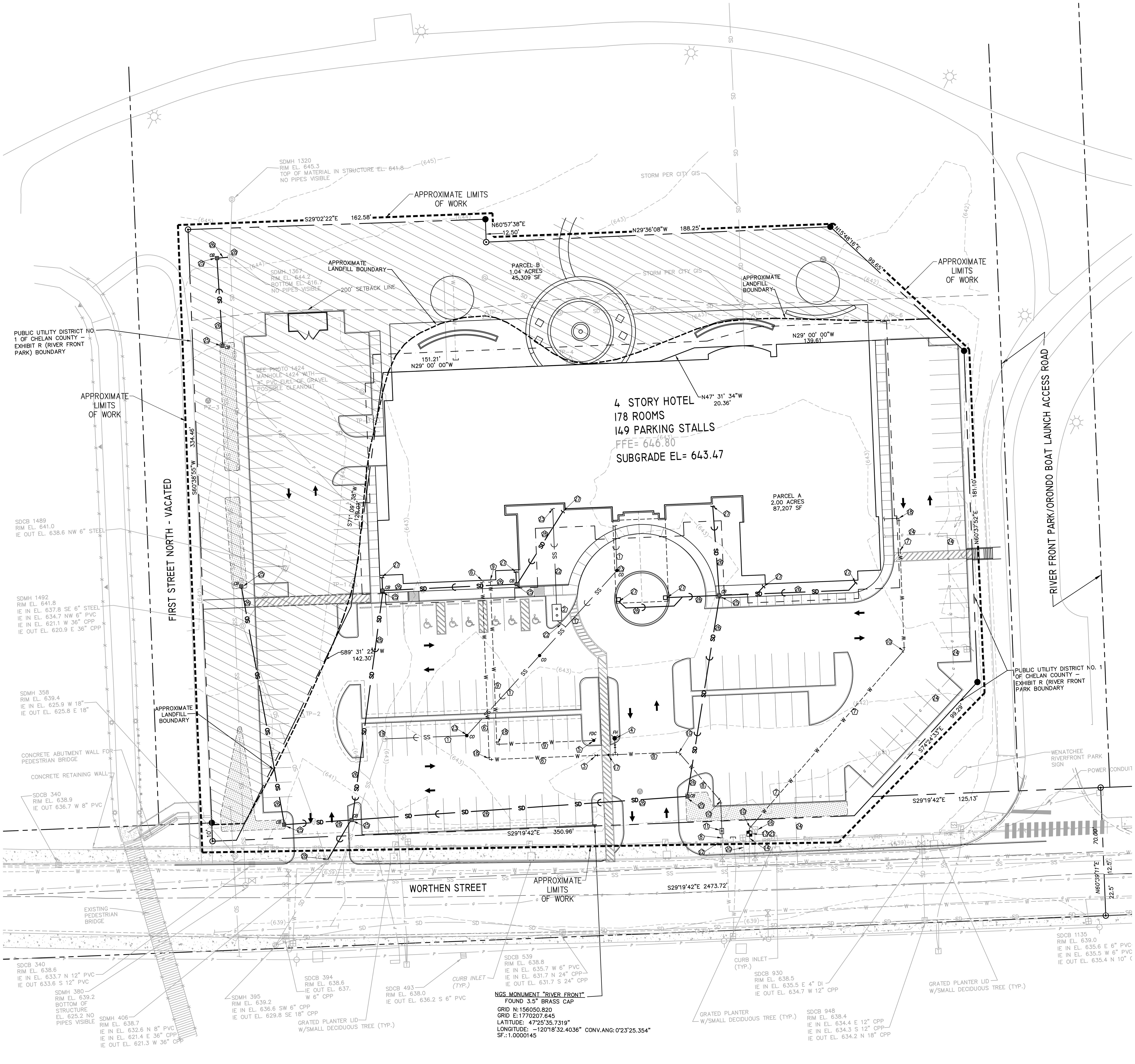
PROJECT TITLE:

HILTON GARDEN INN
ROUGH GRADING
25 N. WORTHEN STREET
WENATCHEE, WA 98801

SHEET TITLE:
SECTIONS

SHEET NO.
C1.3



REFERENCE NOTES:

1. FUTURE SEWER SERVICE
2. FUTURE GREASE TRAP, SEE PLUMBING PLANS
3. FUTURE POST INDICATOR VALVE
4. FUTURE FIRE HYDRANT ASSEMBLY
5. FUTURE FIRE DEPARTMENT CONNECTION (FDC)
6. FUTURE FIRE WATER SERVICE
7. FUTURE DOMESTIC WATER SERVICE
8. FUTURE FIRE WATER SERVICE
9. FUTURE FIRE LINE FROM FDC
10. FUTURE 45° BEND, SIZE TO MATCH PIPE DIAMETER
11. FUTURE DCVA
12. FUTURE CONNECTION TO EXISTING 8" FIRE SERVICE
13. FUTURE 1-1/2" DOMESTIC METER INSIDE NEW CONCRETE METER BOX. METER SHALL BE SENSUS OMNI2 COMPOUND METER
14. FUTURE CONNECTION TO EXISTING 6" WATER SERVICE. USE 6" x 1-1/2" REDUCER AND ADAPTERS AS NEEDED
15. EXISTING 6" WATER SERVICE TO REMAIN. (NOT IN USE)
16. EXISTING 2" IRRIGATION SERVICE
17. FUTURE 8"X6" REDUCER
18. FUTURE 90° BEND. SIZE TO MATCH PIPE DIAMETER
19. FUTURE CONNECTION INTO EXISTING SEWER MANHOLE
20. EXISTING 2" WATER SERVICE TO REMAIN. (NOT IN USE)
21. FUTURE 1-1/2"X4" REDUCER AND ADAPTERS DOWNSTREAM OF WATER METER
22. FUTURE SEWER SERVICE FOR GREASE TRAP LINE
23. FUTURE CLEANOUT TO GRADE
24. FUTURE GAS SERVICE TO GAS METER. GAS METER SIZE BY UTILITY PURVEYOR
25. FUTURE STORM DRAINAGE PIPE
26. FUTURE CATCH BASIN
27. FUTURE CONNECTION TO ROOF DRAIN.
28. FUTURE CONNECTIONS TO CITY STORM WATER SYSTEM

ENGINEER'S NOTE:

1. UTILITIES AND STORM DRAINAGE FACILITIES SHOWN ON THIS DRAWING ARE PRELIMINARY AND ARE SUBJECT TO CHANGE DURING FINAL DESIGN.

CONTRACTOR NOTE

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GRAPHIC SCALE

20 0 10 20

(IN FEET)
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SPOKANE, WASHINGTON 99201
PHONE: (509) 455-4448 • FAX: (509) 455-7492
WEBSITE: www.dci-engineers.com
CIVIL / STRUCTURAL

SIGNATURE:

SCOTT A. RIVAS — STATE OF WASHINGTON — 36605 — REGISTERED PROFESSIONAL ENGINEER
11/13/2015

REVISIONS:

APPROVALS:

Job No.:	15-42-0057
Proj. Manager:	SAR
Drawn:	RTT
Reviewed:	SAR
Dwg. Chk.	JFS
Date:	11-13-15
Scale:	1" = 20'

PROJECT TITLE:

HILTON GARDEN INN
ROUGH GRADING
25 N. WORTHEN STREET
WENATCHEE, WA 98801

SHEET TITLE:

PRELIMINARY STORM & UTILITY PLAN

SHEET NO.

C1.4

APPENDIX A

ENVIRONMENTAL COVENANT

Skip Moore, Auditor, Chelan County, WA. AFN # 2433786 Recorded 03/14/2016 at 09:15 AM, COVEN Page: 1 of 13, $85.00, CITY OF WENATCHEE

Return Address:
Matthew Durkee
Toxics Cleanup Program
Department of Ecology
1250 West Alder Street
Union Gap, WA 98903-0003

WASHINGTON STATE COUNTY AUDITOR/RECORDER'S INDEXING FORM (Cover Sheet)

Please print or type information

Document Title(s) (or transactions contained therein): 1. Environmental Covenant
Reference Number(s) of Documents assigned or released: 2430034, 2431871
Grantor(s)/Owners (Last name first, then first name and initials) 1. City of Wenatchee
Grantee(s) (Last name first, then first name and initials) 1. Department of Ecology
Legal Description (abbreviated (i.e. lot, block, plat or section, township, range) A portion of Lots 2 through 9, and S ½ of vacated First Street North, Block 3, Plat of River Front Addition to Wenatchee, City of Wenatchee, Chelan County, Washington. Additional legal is on page(s) of document. 10
Assessor's Property Tax Parcel/Account Number: **222003821050, 222003821010**
The Auditor/Recorder will rely on the information provided on the form. The staff will not read the document to verify the accuracy or completeness of the indexing information provided herein.

After Recording Return
Original Signed Covenant to:
Matthew Durkee
Toxics Cleanup Program
Department of Ecology
1250 West Alder Street
Union Gap, WA 98903-0003

Environmental Covenant

Grantor: City of Wenatchee, Washington
Grantee: State of Washington, Department of Ecology (hereafter "Ecology")
Brief Legal Description: See Exhibit A
Tax Parcel Nos.: Chelan County parcel nos. 222003821050 and 222003821010
Cross Reference: Ecology No Further Action Opinion

RECITALS

a. This document is an environmental (restrictive) covenant (hereafter "Covenant") executed pursuant to the Model Toxics Control Act ("MTCA"), chapter 70.105D RCW and Uniform Environmental Covenants Act ("UECA"), chapter 64.70 RCW.

b. The Property that is the subject of this Covenant is part or all of a site commonly known as Wenatchee City Public Works, Facility Site No. 98691464. The Property is legally described in Exhibit A, and illustrated in Exhibit B, both of which are attached (hereafter "Property"). If there are differences between these two Exhibits, the legal description in Exhibit A shall prevail.

c. The Property is the subject of remedial action conducted under MTCA. This Covenant is required because residual contamination remains on the Property after completion of remedial actions.

Specifically, the following principal contaminants remain on the Property:

Medium	Principal Contaminants Present
Soil	arsenic, lead, benzene, carcinogenic polycyclic aromatic hydrocarbons
Groundwater	arsenic, chromium, lead, manganese, nickel, vanadium, methylene chloride, polychlorinated biphenyls, 1,2-dichloroetheane and diesel-range organics and heavy oils
Surface Water/Sediment	none

d. It is the purpose of this Covenant to restrict certain activities and uses of the Property to protect human health and the environment and the integrity of remedial actions conducted at the site. Records describing the extent of residual contamination and remedial actions conducted are available through Ecology. The Focused Site Assessment prepared by Maul Foster & Alongi, Inc., dated March 4, 2014, describes the extent of residual contamination.

e. This Covenant grants Ecology certain rights under UECA and as specified in this Covenant. As a Holder of this Covenant under UECA, Ecology has an interest in real property, however, this is not an ownership interest which equates to liability under MTCA or the Comprehensive Environmental Response, Compensation, and Liability Act 42 U.S.C. § 9601 *et seq.* The rights of Ecology as an "agency" under UECA, other than its' right as a holder, are not an interest in real property.

COVENANT

City of Wenatchee, Washington, as Grantor and fee simple owner of the Property hereby grants to the Washington State Department of Ecology, and its successors and assignees, the following covenants. Furthermore, it is the intent of the Grantor that such covenants shall supersede any prior interests the GRANTOR has in the property and run with the land and be binding on all current and future owners of any portion of, or interest in, the Property.

Section 1. General Restrictions and Requirements.

The following general restrictions and requirements shall apply to the Property:

a. Interference with Remedial Action. The Grantor shall not engage in any activity on the Property that may impact or interfere with the remedial action and any operation, maintenance, inspection or monitoring of that remedial action without prior written approval from Ecology.

b. Protection of Human Health and the Environment. The Grantor shall not engage in any activity on the Property that may threaten continued protection of human health or the environment without prior written approval from Ecology. This includes, but is not limited to, any activity that results in the release of residual contamination that was contained as a part of the remedial action or that exacerbates or creates a new exposure to residual contamination remaining on the Property.

c. Continued Compliance Required. Grantor shall not convey any interest in any portion of the Property without providing for the continued adequate and complete operation, maintenance and monitoring of remedial actions and continued compliance with this Covenant.

d. Leases. Grantor shall restrict any lease for any portion of the Property to uses and activities consistent with this Covenant and notify all lessees of the restrictions on the use of the Property.

e. Preservation of Reference Monuments. Grantor shall make a good faith effort to preserve any reference monuments and boundary markers used to define the areal extent of coverage of this Covenant. Should a monument or marker be damaged or destroyed, Grantor shall have it replaced by a licensed professional surveyor within 30 days of discovery of the damage or destruction.

Section 2. Specific Prohibitions and Requirements.

In addition to the general restrictions in Section 1 of this Covenant, the following additional specific restrictions and requirements shall apply to the Property.

a. Land Use.
The remedial action for the Property is based on a cleanup designed for commercial property. As such, the Property shall be used in perpetuity only for commercial land uses as that term is defined in the rules promulgated under Chapter 70.105D RCW. Prohibited uses on the Property include but are not limited to residential uses, childcare facilities, K-12 public or private schools, parks, grazing of animals, and growing of food crops.

b. Containment of Soil/Waste Materials.
The remedial action for the Property is based on containing contaminated soil under a cap consisting of either a layer of clean soil (minimum one-foot thick) with an underlying demarcation layer, pavement and associated subgrade, or a building with a vapor intrusion barrier. The conceptual capping plan is located as illustrated in Exhibit C. The primary purpose of this cap is to minimize the potential for contact with contaminated soil and minimize airborne contaminants. As such, the following restrictions shall apply within the area illustrated in Exhibit B:

Any activity on the Property that will compromise the integrity of the cap including: drilling; digging; piercing the cap with sampling device, post, stake or similar device; grading; excavation; installation of underground utilities; removal of the cap; or, application of loads in excess of the cap load bearing capacity, is prohibited without prior written approval by Ecology. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to the cap. Unless an alternative plan has been approved by Ecology in writing, the Grantor shall promptly repair the damage and submit a report documenting this work to Ecology within thirty (30) days of completing the repairs.

The Grantor shall not alter or remove the existing structures on the Property in any manner that would expose contaminated soil, result in a release to the environment of contaminants, or create a new exposure pathway, without prior written approval of Ecology. Should the Grantor propose to remove all or a portion of the existing structures illustrated in Exhibit C so that access to the underlying contamination is feasible, Ecology may require treatment or removal of the underlying contaminated soil.

The Grantor covenants and agrees that it shall annually, or at another time as approved in writing by Ecology, inspect the cap and report within thirty (30) days of the inspection the condition of the cap and any changes to the cap that would impair its performance.

c. Stormwater Facilities.
To minimize the potential for mobilization of contaminants remaining in the soil and groundwater on the Property, no stormwater infiltration facilities or ponds shall be constructed on the Property. All stormwater catch basins, conveyance systems, and other appurtenances located within this area shall be of water-tight construction.

d. Vapor/Gas Controls.
The residual contamination on the Property includes benzene that may generate harmful vapors and soil gas migrating from the adjacent landfill, which is comprised of biodegradable wastes and chemicals that may generate methane, a combustible gas, and harmful vapors. As such, the

following restrictions shall apply on the Property to minimize the potential for exposure to these vapors:

Any building or other enclosed structure constructed on the Property shall be constructed with a sealed foundation and with a vapor/gas control system installed and maintained to prevent the migration of vapors/gas into the building or structure.

e. Groundwater Use.
The groundwater beneath the Property remains contaminated and shall not be extracted for any purpose other than temporary construction dewatering, investigation, monitoring or remediation. Drilling of a well for any water supply purpose is strictly prohibited. Groundwater extracted from the Property for any purpose shall be considered potentially contaminated and any discharge of this water shall be done in accordance with state and federal law.

Section 3. Access.

a. The Grantor shall maintain clear access to all remedial action components necessary to construct, operate, inspect, monitor and maintain the remedial action.

b. The Grantor freely and voluntarily grants Ecology and its authorized representatives, upon reasonable notice, the right to enter the Property at reasonable times to evaluate the effectiveness of this Covenant and associated remedial actions, and enforce compliance with this Covenant and those actions, including the right to take samples, inspect any remedial actions conducted on the Property, and to inspect related records.

c. No right of access or use by a third party to any portion of the Property is conveyed by this instrument.

Section 4. Notice Requirements.

a. Conveyance of Any Interest. The Grantor, when conveying any interest **in any part of the Property**, including but not limited to title, easement, leases, and security or other interests, must:

i. Provide written notice to Ecology of the intended conveyance at least thirty (30) days in advance of the conveyance.

ii. Include in the conveying document a notice in substantially the following form, as well as a complete copy of this Covenant:

NOTICE: THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL COVENANT GRANTED TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY ON March 14, 2016 **AND RECORDED WITH THE CHELAN COUNTY AUDITOR UNDER RECORDING NUMBER** 2433786 **. USES AND ACTIVITIES ON THIS PROPERTY MUST COMPLY WITH THAT COVENANT, A COMPLETE COPY OF WHICH IS ATTACHED TO THIS DOCUMENT.**

iii. Unless otherwise agreed to in writing by Ecology, provide Ecology with a complete copy of the executed document within thirty (30) days of the date of execution of such document.

b. Reporting Violations. Should the Grantor become aware of any violation of this Covenant, Grantor shall promptly report such violation in writing to Ecology.

c. Emergencies. For any emergency or significant change in site conditions due to Acts of Nature (for example, flood or fire) resulting in a violation of this Covenant, the Grantor is authorized to respond to such an event in accordance with state and federal law. The Grantor must notify Ecology in writing of the event and response actions planned or taken as soon as practical but no later than within 24 hours of the discovery of the event.

d. Notification procedure. Any required written notice, approval, reporting or other communication shall be personally delivered or sent by first class mail to the following persons. Any change in this contact information shall be submitted in writing to all parties to this Covenant. Upon mutual agreement of the parties to this Covenant, an alternative to personal delivery or first class mail, such as e-mail or other electronic means, may be used for these communications.

City Clerk City of Wenatchee 129 S. Chelan PO Box 519 Wenatchee, WA 98807-0519 (509) 888-6200	Environmental Covenants Coordinator Washington State Department of Ecology Toxics Cleanup Program P.O. Box 47600 Olympia, WA 98504 – 7600 (360) 407-6000 ToxicsCleanupProgramHQ@ecy.wa.gov

Section 5. Modification or Termination.

a. Grantor must provide written notice and obtain approval from Ecology at least sixty (60) days in advance of any proposed activity or use of the Property in a manner that is inconsistent with this Covenant. For any proposal that is inconsistent with this Covenant and permanently modifies an activity or use restriction at the site:

i. Ecology must issue a public notice and provide an opportunity for the public to comment on the proposal; and

ii. If Ecology approves of the proposal, the Covenant must be amended to reflect the change before the activity or use can proceed.

b. If the conditions at the site requiring a Covenant have changed or no longer exist, then the Grantor may submit a request to Ecology that this Covenant be amended or terminated. Any amendment or termination of this Covenant must follow the procedures in Chapter 64.70 RCW and Chapter 70.105D RCW and any rules promulgated under these chapters.

c. By signing this agreement, per RCW 64.70.100, the original signatories to this agreement, other than Ecology, agree to waive all rights to sign amendments to and termination of this Covenant.

Section 6. Enforcement and Construction.

a. This Covenant is being freely and voluntarily granted by the Grantor.

b. Within ten (10) days of execution of this Covenant, Grantor shall provide Ecology with an original signed Covenant and proof of recording and a copy of the Covenant and proof of recording to others required by RCW 64.70.070.

c. Ecology shall be entitled to enforce the terms of this Covenant by resort to specific performance or legal process. All remedies available in this Covenant shall be in addition to any and all remedies at law or in equity, including MTCA and UECA. Enforcement of the terms of this Covenant shall be at the discretion of Ecology, and any forbearance, delay or omission to exercise its rights under this Covenant in the event of a breach of any term of this Covenant is not a waiver by Ecology of that term or of any subsequent breach of that term, or any other term in this Covenant, or of any rights of Ecology under this Covenant.

d. The Grantor shall be responsible for all costs associated with implementation of this Covenant. Furthermore, the Grantor, upon request by Ecology, shall be obligated to pay for Ecology's costs to process a request for any modification or termination of this Covenant and any approval required by this Covenant.

e. This Covenant shall be liberally construed to meet the intent of MTCA and UECA.

f. The provisions of this Covenant shall be severable. If any provision in this Covenant or its application to any person or circumstance is held invalid, the remainder of this Covenant or its application to any person or circumstance is not affected and shall continue in full force and effect as though such void provision had not been contained herein.

g. A heading used at the beginning of any section or paragraph or exhibit of this Covenant may be used to aid in the interpretation of that section or paragraph or exhibit but does not override the specific requirements in that section or paragraph.

The undersigned Grantor warrants he/she holds the title to the Property and has authority to execute this Covenant.

EXECUTED this 11 day of March, 2016.

CITY OF WENATCHEE, WASHINGTON

Frank Kuntz

by: Frank Kuntz

Title: Mayor

Dated: 3/11/16

REPRESENTATIVE ACKNOWLEDGEMENT

STATE OF Washington
COUNTY OF Chelan

On this 11th day of March, 2016, I certify that Frank Kuntz personally appeared before me, acknowledged that **he** signed this instrument, on oath stated that **he** was authorized to execute this instrument, and acknowledged it as the Mayor of the City of Wenatchee, Washington to be the free and voluntary act and deed of such party for the uses and purposes mentioned in the instrument.

TAMMY L. STANGER NOTARY PUBLIC STATE OF WASHINGTON COMMISSION EXPIRES 2-08-17

Tammy L. Stanger

Notary Public in and for the State of Washington

Residing at Wenatchee

My appointment expires 2-8-17

The Department of Ecology, hereby accepts the status as GRANTEE and HOLDER of the above Environmental Covenant.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Valerie Bound
by: Valerie Bound

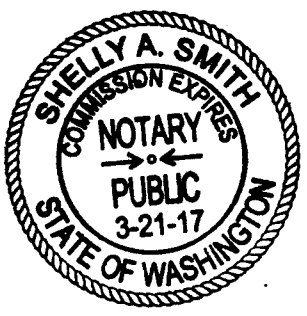
Title: Central Region Section Manager, Toxics Cleanup Program

Dated: 3/3/16

STATE ACKNOWLEDGMENT

STATE OF Washington
COUNTY OF Yakima

On this 3 day of March, 2016, I certify that Valerie Bound personally appeared before me, acknowledged that **she** is the Washington State Department of Ecology Central Region Toxics Cleanup Program Section Manager of the state agency that executed the within and foregoing instrument, and signed said instrument by free and voluntary act and deed, for the uses and purposes therein mentioned, and on oath stated that **she** was authorized to execute said instrument for said state agency.



Shelly A. Smith (Shelly A. Smith)
Notary Public in and for the State of Washington

Residing at Union Gap WA

My appointment expires 3-21-2017

Exhibit A

LEGAL DESCRIPTION

Chelan County Auditor AFN No. 2430034, Recorded 12/18/2015

New Parcel "A" Legal Description

That portion of Lots 2 through 9, Block 3, Plat of River Front Addition recorded in Book 2 of Plats at page 64 and a portion of vacated First Street North and Worthern Street described as follows:
Commencing at Point 37a as shown on survey recorded under Chelan County Auditor's File No. 8309190039 said Point 37a bears North 28°56'15" West a distance 41.07 feet, more or less from the Northwest corner of said Lot 9; thence South 61°02'36" West a distance of 10.00 feet to the West line of the East 10 feet of said Worthern Street; thence South 28°56'15" East along said West line a distance of 12.80 feet to the True Point of Beginning; thence South 28°56'15" East along said West line a distance of 338.01 feet; thence South 74°00'36" East 14.45 feet to Point 33 of said survey; thence South 74°00'36" East a distance of 84.95 feet to Point 34 of said survey; thence North 61°02'22" East a distance of 180.99 feet; thence North 16°15'30" East a distance of 10.74 feet; thence North 29°00'00" West a distance of 139.61 feet; thence North 47°31'34" West a distance of 20.36 feet; thence North 29°00'00" West a distance of 151.21 feet; thence South 71°09'38" West a distance of 129.07 feet; thence South 89°31'22" West a distance of 142.30 feet to the True Point of Beginning.

Parcel containing 2.00 acres, more or less.

New Parcel "B" Legal Description

That portion of Lots 2 through 9, Block 3, Plat of River Front Addition recorded in Book 2 of Plats at page 64 and a portion of vacated First Street North and Worthern Street described as follows:
Beginning at Point 37a as shown on survey recorded under Chelan County Auditor's File No. 8309190039 said Point 37a bears North 28°56'15" West a distance 41.07 feet, more or less from the Northwest corner of said Lot 9; thence South 61°02'36" West a distance of 10.00 feet to the West line of the East 10 feet of said Worthern Street; ; thence South 28°56'15" East along said West line a distance of 12.80 feet; thence North 89°31'22" East a distance of 142.30 feet; thence North 71°09'38" East a distance of 129.07 feet; thence South 29°00'00" East a distance of 151.21 feet; thence South 47°31'34" East a distance of 20.36 feet; thence South 29°00'00" East a distance of 139.61 feet; thence North 16°15'30" East a distance of 88.94 feet; thence North 29°13'34" West a distance of 188.28 feet; thence North 61°23'22" East a distance of 12.50 feet; thence North 28°36'38" West a distance of 162.60 feet to a point on line between Points 36a and 37a of said survey; thence South 61°02'36" West along said line a distance of 324.57 feet to the True Point of Beginning.

Parcel containing 1.04 acres, more or less.

Exhibit B

PROPERTY MAP

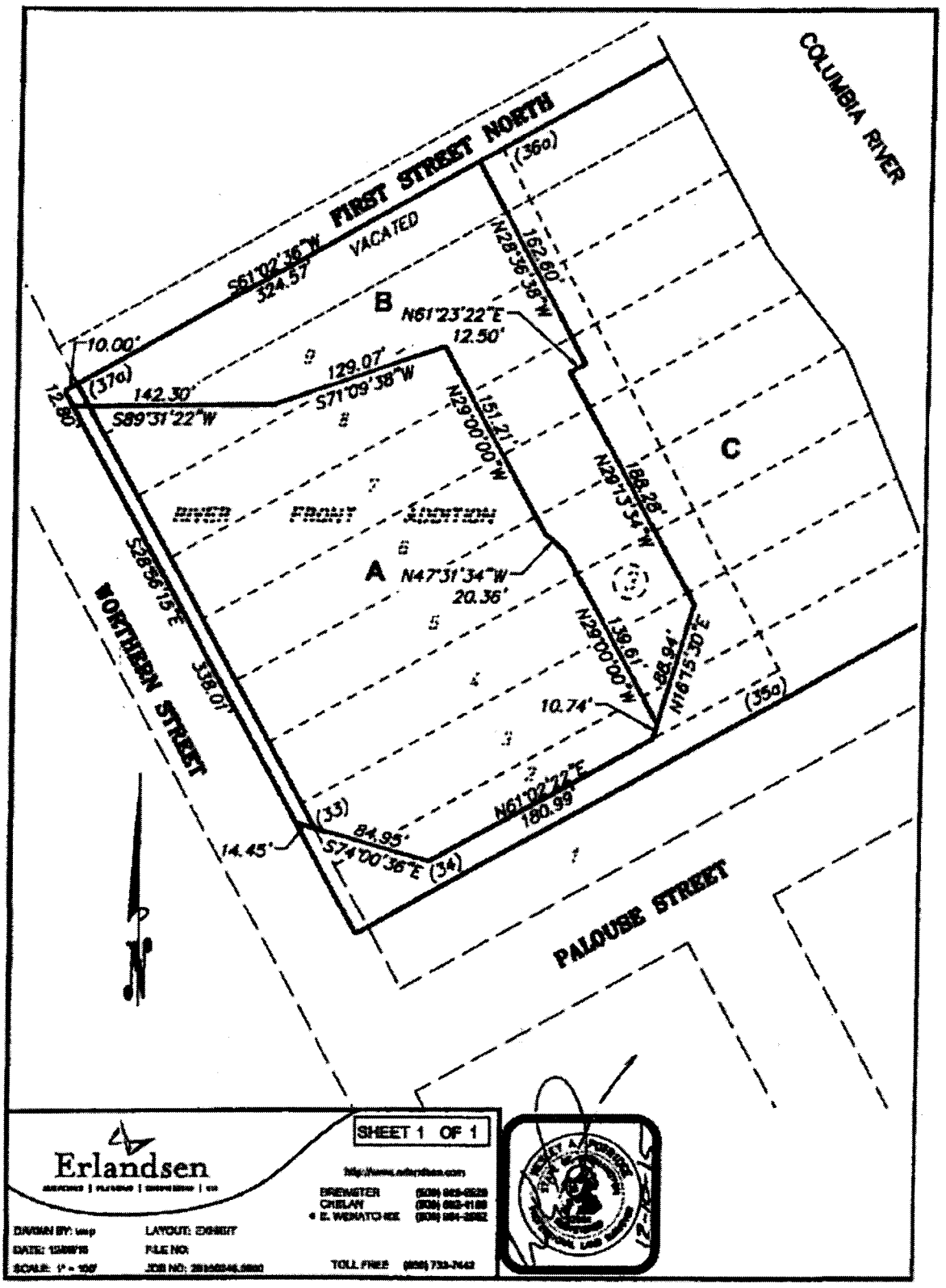
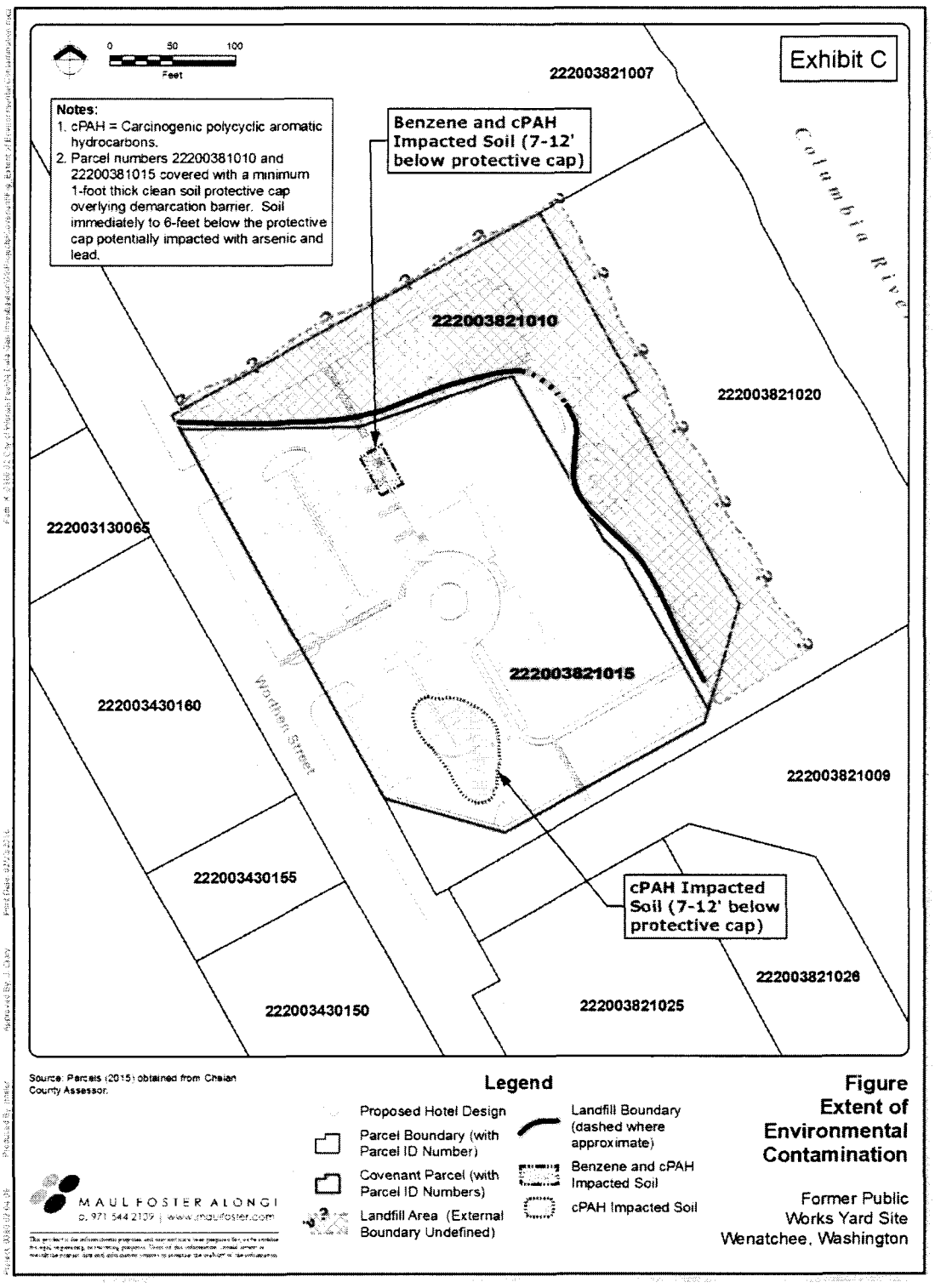


Exhibit C

MAPS ILLUSTRATING LOCATION OF RESTRICTIONS



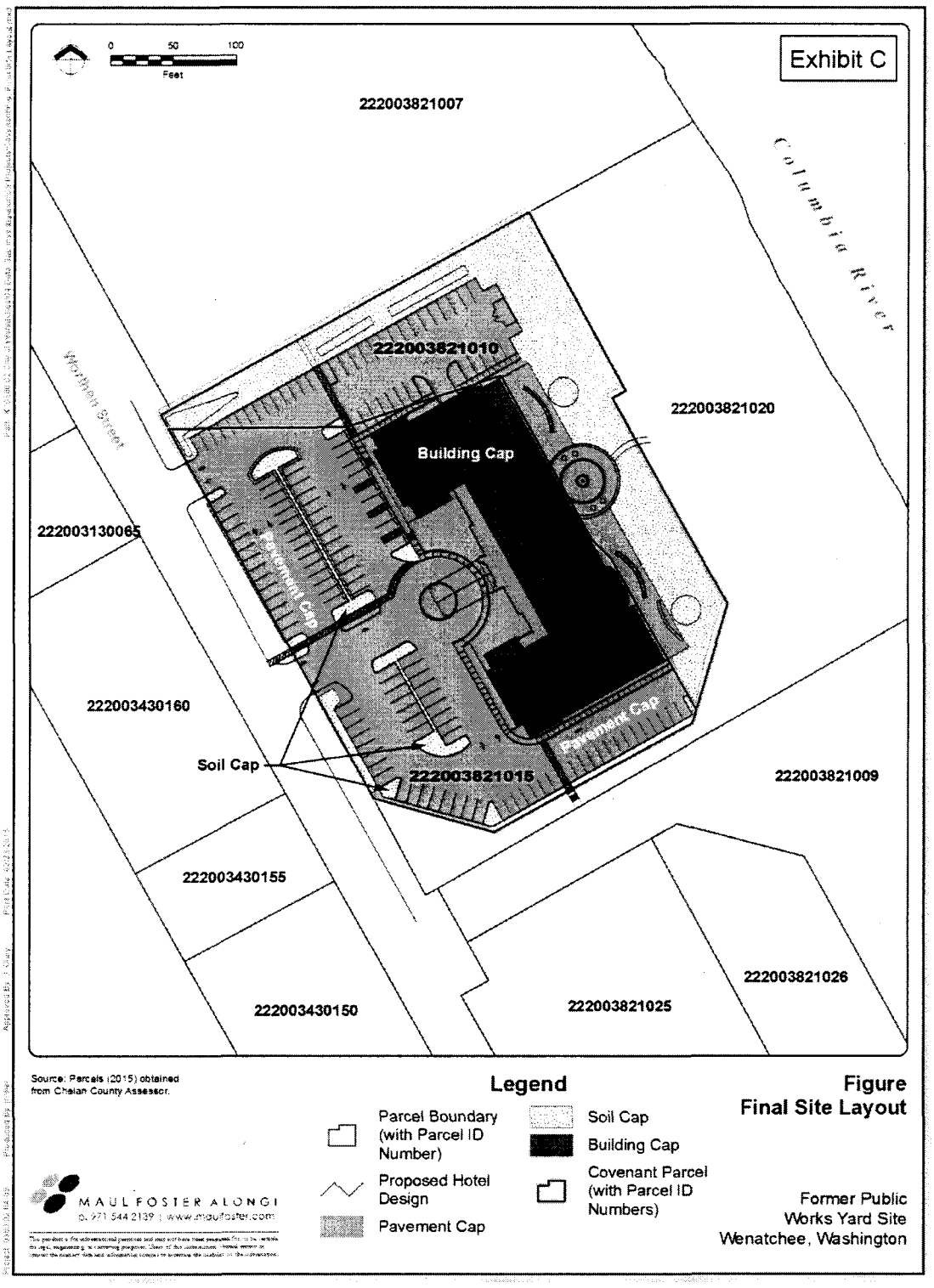


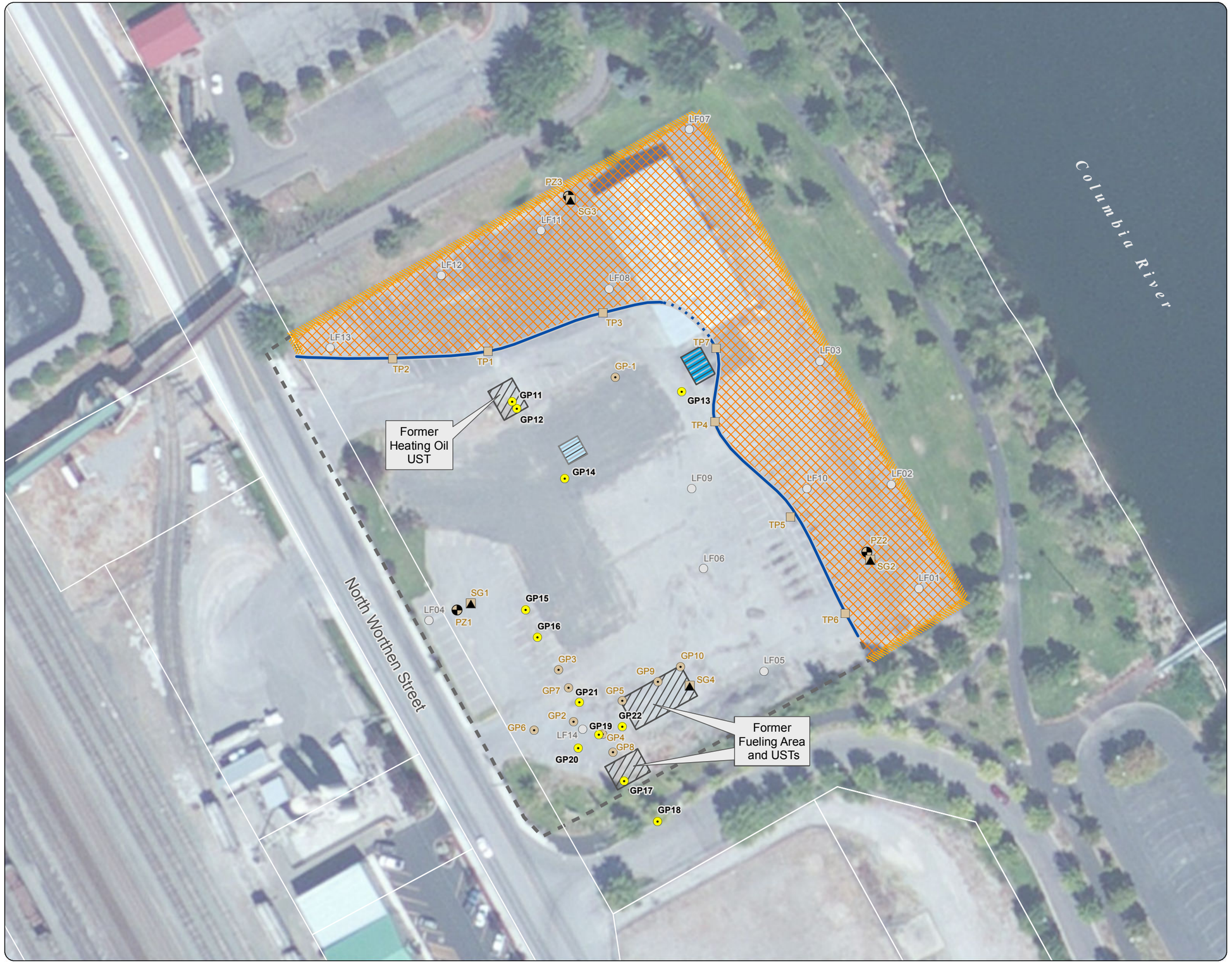
Exhibit C
0
50
100
Feet
222003821007
Columbia River
Wenatchee Street
222003821010
222003821020
Building Cap
222003130065
Pavement Cap
222003430160
Soil Cap
222003821015
Pavement Cap
222003821009
222003430155
222003821026
222003430150
222003821025
Source: Parcels (2015) obtained from Chelan County Assessor.
Legend
Parcel Boundary (with Parcel ID Number)
Proposed Hotel Design
Pavement Cap
Soil Cap
Building Cap
Covenant Parcel (with Parcel ID Numbers)
Figure
Final Site Layout
Former Public Works Yard Site
Wenatchee, Washington
MAUL FOSTER ALONGI
(p) 971 544 2139 | www.maulfoster.com

APPENDIX B

PREVIOUS INVESTIGATION RESULTS

Figure 2
Site Features and Investigation Locations

Former Public Works Yard Site
Wenatchee, Washington



Legend

- 2000 Sample Location

2010/2011 Sample Locations

- Geoprobe Boring
- Test Pit
- Soil Gas Sample
- Piezometer

2013 Investigation Locations

- Geoprobe

- Landfill Boundary (dashed where approximate)
- Measured Landfill Area
- Former USTs
- Oil-Water Separator
- Former Oil-Water Separator
- Property
- Chelan County Taxlots

Notes:
1. USTs = Underground storage tanks

0 35 70
Feet

Source: Aerial photograph obtained from Esri ArcGIS Online; taxlots obtained from Chelan County; 2000 sample locations from targeted brownfield assessment conducted by Ecology & Environment, Inc. and are approximate; 2011 and 2013 sample locations surveyed by Maul Foster & Alongi, Inc. using GeoXH 2005.

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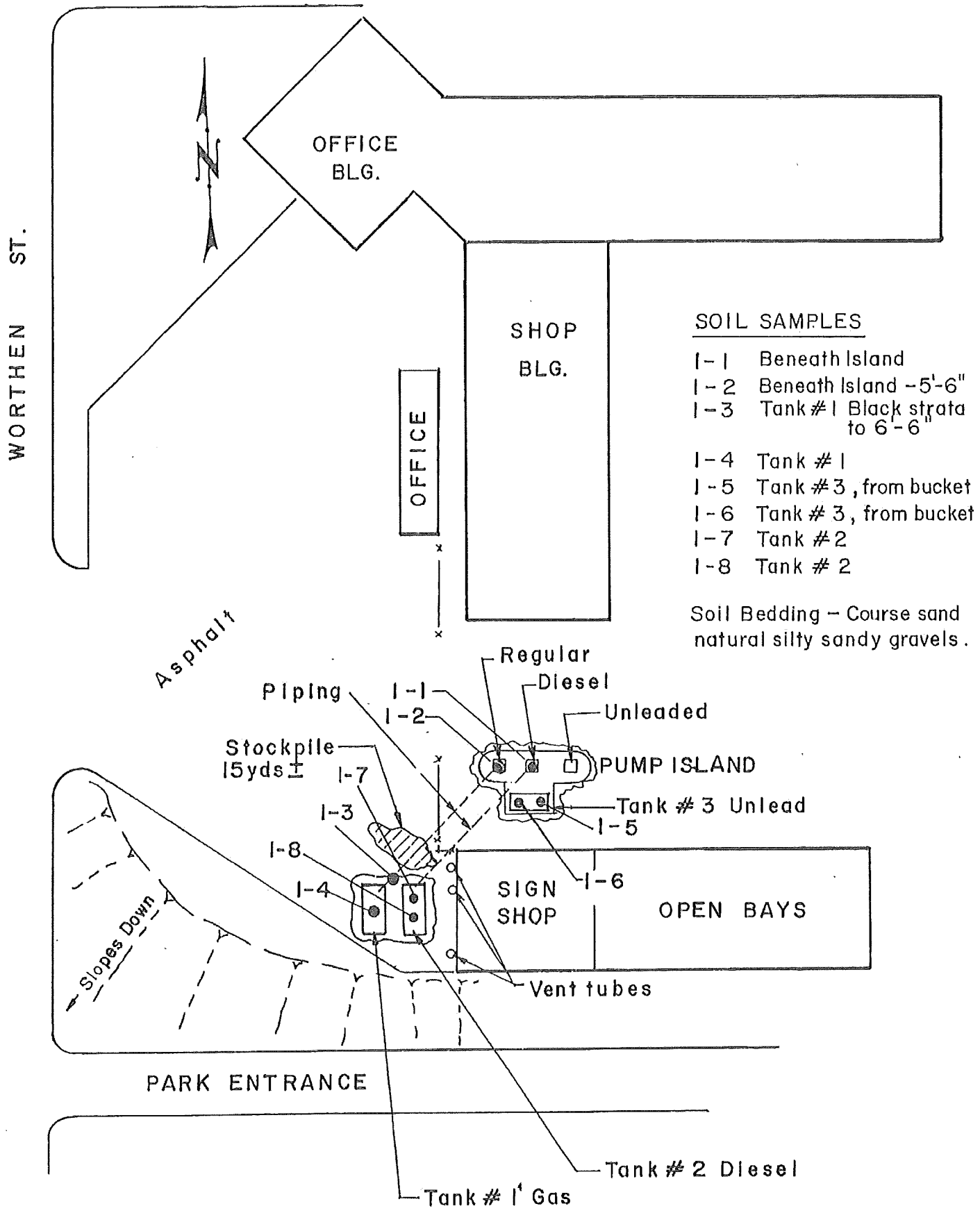
p. 971 544 2139 | www.maulfoster.com

Path: X:\0380.02 City of Wenatchee\04 Data Gap Investigation\05 Projects\Fig2_Site Features and Investigation Locations.mxd
Print Date: 1/31/2014
Approved By: J. Clary
Produced By: apadilla
Project: 0380.02.04

SITE CHECK/SITE ASSESSMENT FOR PERMANENT CLOSURE OF UNDERGROUND STORAGE TANKS ANALYTICAL RESULTS (FORSGREN, 1995)



SITE MAP

FORSGREN ASSOCIATES/P.A.

Anatek Labs
1917 S. Main Moscow, ID 83843 (208) 883-BTEX (2839) FAX: (208) 882-9246

December 20, 1994

Forsgren Associates / P.A.
125 McGee Street, S.E.
East Wenatchee, WA 98802
Attn: Scott Morrill

Items: Results of analysis for samples received 12/14/94.
Sample Log-in number: **20595**
Project Name: City of Wenatchee
Date Sampled: 12/13/94
Report # 94-1220-FAP Page 1 of 2

Diesel by WTPH-D; Gasoline by WTPH-G; BTEX by EPA 8020
Lead by EPA 3050 & 7420; mg/Kg = ppm

Sample Name	*Matrix*	*Analysis Date*	*Analyte*	*Concentration*
# 1-1	Soil	12/14/94	Diesel	510 mg/Kg
# 1-2	Soil	12/15/94	Gasoline	< 5.0 mg/Kg
			Benzene	< 0.005 mg/Kg
			Toluene	< 0.005 mg/Kg
			Ethylbenzene	< 0.005 mg/Kg
			Xylene(total)	< 0.015 mg/Kg
		12/19/94	Lead	8.7 mg/Kg
# 1-3	Soil	12/15/94	Gasoline	< 5.0 mg/Kg
			Benzene	< 0.005 mg/Kg
			Toluene	< 0.005 mg/Kg
			Ethylbenzene	< 0.005 mg/Kg
			Xylene(total)	< 0.015 mg/Kg
		12/19/94	Lead	140 mg/Kg
# 1-4	Soil	12/15/94	Gasoline	< 5.0 mg/Kg
			Benzene	< 0.005 mg/Kg
			Toluene	< 0.005 mg/Kg
			Ethylbenzene	< 0.005 mg/Kg
			Xylene(total)	0.034 mg/Kg
		12/19/94	Lead	1,920 mg/Kg

Anatek Labs
1917 S. Main Moscow, ID 83843 (208) 883-BTEX (2839) FAX: (208) 882-9246

Sample Name	*Matrix*	*Analysis Date*	*Analyte*	*Concentration*
# 1-5	Soil	12/15/94	Gasoline	< 5.0 mg/Kg
			Benzene	< 0.005 mg/Kg
			Toluene	< 0.005 mg/Kg
			Ethylbenzene	< 0.005 mg/Kg
			Xylene(total)	< 0.015 mg/Kg
# 1-6	Soil	12/15/94	Gasoline	< 5.0 mg/Kg
			Benzene	< 0.005 mg/Kg
			Toluene	< 0.005 mg/Kg
			Ethylbenzene	< 0.005 mg/Kg
			Xylene(total)	< 0.015 mg/Kg
# 1-7	Soil	12/14/94	Diesel	< 25.0 mg/Kg
# 1-8	Soil	12/14/94	Diesel	90 mg/Kg

Mike Pearson
Laboratory Director

Anatek Labs
1917 S. Main Moscow, ID 83843 (208) 883-BTEX (2839) FAX: (208) 882-9246

February 27, 1995

Forsgren Associates / P.A.
125 McGee Street, S.E.
East Wenatchee, WA 98802
Attn: Scott Morrill

Items: Results of analysis for samples received 2/16/95.
Sample Log-in number: **20753**
Project Name: City of Wenatchee Shops
Date Sampled: 2/15/95
Report # 95-0227-FAP

Total Lead by EPA 3050 & 7420; TCLP Lead by EPA 1311 & 7420
mg/Kg & mg/L = ppm

Sample Name	*Matrix*	*Analysis Date*	*Analyte*	*Concentration*
# 1	Soil	2/21/95	Total Lead	166 mg/Kg
		2/24/95	TCLP Lead	0.3 mg/L
# 2	Soil	2/21/95	Total Lead	181 mg/Kg
		2/24/95	TCLP Lead	0.2 mg/L
# 3	Soil	2/21/95	Total Lead	197 mg/Kg
# 4	Soil	2/21/95	Total Lead	272 mg/Kg

Mike Rearson
Laboratory Director

WENATCHEE LANDFILL TARGETED BROWNFIELD ASSESSMENT REPORT ANALYTICAL RESULTS (E&E, 2000)

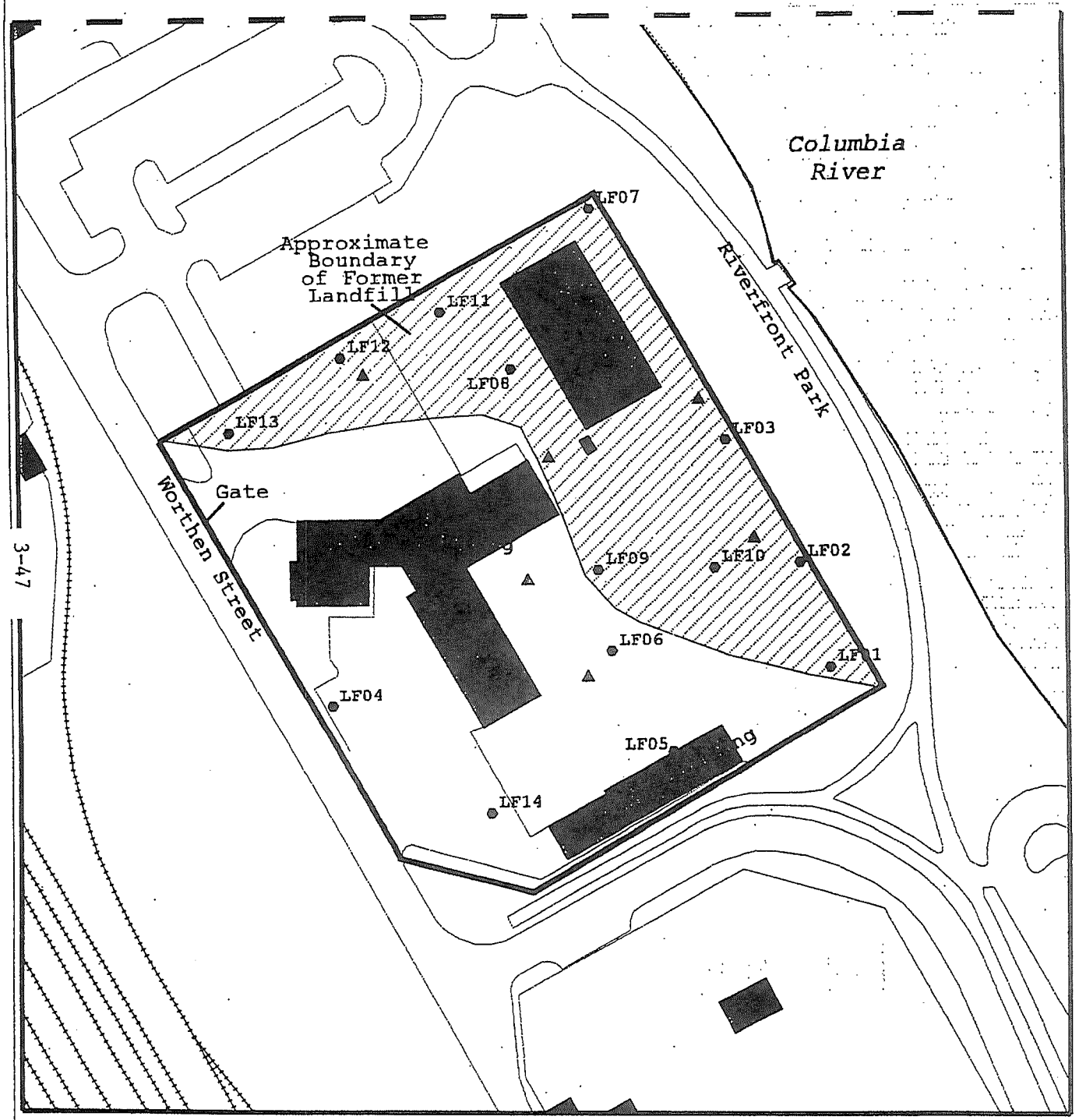


Figure 3-1

Sample Location Map

Wenatchee, Washington

Legend

- PWD Property
- Sample Location
- Building
- Approximate Boundary of Former Landfill
- Railroad
- Storm Drain

N

100 0 100

Feet

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Table 3-1

SAMPLE COLLECTION INFORMATION
WENATCHEE, WASHINGTON

Date	Time	Station ID	Matrix	Depth[a]	Sample Description	Analyses
6/29/99	0800	LF01TB00	Water	N/A	Trip blank	VOCs
6/29/99	0800	LF01TB01	Water	N/A	Trip blank	VOCs
6/29/99	0930	LF01SB04	Subsurface soil	0' - 4' bgs	Dry gray to brown sand/gravel fill	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
6/29/99	1000	LF01SB12	Subsurface soil	8' - 12' bgs	Moist brown sand with silt and gravel; Red brick 9' - 10'; Wood at 10'.	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
6/29/99	1030	LF01SB22	Subsurface soil	18' - 22' bgs	Dry gray clay 18'; medium brown sand 19' - 20'; fine gray sand 22'	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
6/29/99	1120	LF02SB04	Subsurface soil	0' - 4' bgs	Dry brown sand, little silt	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
6/29/99	1145	LF02SB12	Subsurface soil	8' - 12' bgs	Dry brown silt and sand, clay to 9'; dry white coarse sand 9' - 10'; dry brown silt and sand 10' - 11'	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
6/29/99	1215	LF02SB22	Subsurface soil	18' - 22' bgs	Dry brown/gray sand	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
6/29/99	1430	LF02SB32	Subsurface soil	28' - 32' bgs	Dry brown/gray sand	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
6/29/99	1545	LF02GW32	Groundwater	32' bgs	Groundwater	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
6/30/99	0900	LF03SB04	Subsurface soil	0' - 4' bgs	Dry brown and gray sand with gravel	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
6/30/99	0920	LF03SB12	Subsurface soil	8' - 12' bgs	Brown sand, little gravel, clay, and silt; wood fragments 10' - 10.5'	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
6/30/99	1740	LF03SB22	Subsurface soil	18' - 22' bgs	Dry black sand, rocks, and wood; wet at 22'; some garbage debris	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs
6/30/99	1800	LF03SB32	Subsurface soil	28' - 32' bgs	Wet black organic sand with brown sand at 30' grading to gray sand at bottom; few fines	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs

Key is at the end of the table.

Table 3-1 (CONTINUED)

SAMPLE COLLECTION INFORMATION
WENATCHEE, WASHINGTON

Date	Time	Station ID	Matrix	Depth[a]	Sample Description	Analyses
6/30/99	1900	LF03GW32	Groundwater	32' bgs	Groundwater	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
6/30/99	1000	LF04SB04	Subsurface soil	0' - 4' bgs	Dry brown sand, little silt, trace gravel	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
6/30/99	1145	LF04SB12	Subsurface soil	8' - 12' bgs	Dry brown sand, trace silt and gravel	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
6/30/99	1400	LF04GW24	Groundwater	24' bgs	Groundwater	VOCs, SVOCs, CL Pesticides/PCBs, TAL metals, PCDDs/PCDFs
7/1/99	1100	LF05SB04	Subsurface soil	0' - 4' bgs	Dry brown sand with gravel	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs
7/1/99	1140	LF05SB12	Subsurface soil	8' - 12' bgs	Dry brown sand with gravel	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs
6/30/99	0830	LF01TB02	Water	N/A	Trip blank	VOCs
6/30/99	0830	LF01TB03	Water	N/A	Trip blank	VOCs
7/1/99	1240	LF06SB04	Subsurface soil	0' - 4' bgs	Dry brown sand with little gravel	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs
7/1/99	1330	LF06SB12	Subsurface soil	8' - 12' bgs	Dry brown sand with trace gravel	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs
7/1/99	1415	LF07SB04	Subsurface soil	0' - 4' bgs	Brown sand with gravel; little glass and paper from 3' - 3.5'	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs
7/1/99	1445	LF07SB12	Subsurface soil	8' - 12' bgs	Dry brown sand with gravel; Styrofoam and paper 8' - 10.5'	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs
7/1/99	1455	LF07SB22	Subsurface soil	18' - 22' bgs	Dry brown sand with gravel; wood chips and paper; Wet below 20'.	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs
7/1/99	1620	LF08SB04	Subsurface soil	0' - 4' bgs	Dry brown sand, trace gravel and silt	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs
7/1/99	1710	LF08SB12	Subsurface soil	8' - 12' bgs	Dry brown sand, gravel and silt	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs

Key is at the end of the table.

Table 3-1 (CONTINUED)

SAMPLE COLLECTION INFORMATION
WENATCHEE, WASHINGTON

Date	Time	Station ID	Matrix	Depth[a]	Sample Description	Analyses
7/2/99	0839	LF01RB00	Water	N/A	Rinsate blank	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs
7/2/99	0845	LF01RB01	Water	N/A	Rinsate blank	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs
7/6/99	1625	LF14SS00	Subsurface soil	0' - 4' bgs	Dry brown sand, gravel and silt	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
7/6/99	1720	LF14SB08	Subsurface soil	8' - 12' bgs	Dry brown sand, gravel and silt	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs
7/7/99	1000	LF14GW24	Groundwater	24' bgs	Groundwater	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
7/799	1000	LF01TB04	Water	N/A	Trip blank	VOCs
7/799	1415	LF11SS00	Subsurface soil	0' - 4' bgs	Dry brown and gray sand	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
7/799	1505	LF11SB12	Subsurface soil	8' - 12' bgs	Dry dark gray/black sand with brown and white glass; charcoal 9' - 11'	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
7/799	1540	LF11SB22	Subsurface soil	18' - 22' bgs	Dry gray sand and gravel to cobbles 18' - 21'; gray gravel 21' - 22'	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
7/799	1625	LF11GW24	Groundwater	24' bgs	Groundwater	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
7/8/99	0910	LF12SB04	Subsurface soil	0' - 4' bgs	Dry dark gray sand with a small interval of electric blue debris	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
7/8/99	0920	LF12SB12	Subsurface soil	8' - 12' bgs	Moist dark gray sandy loam	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
7/8/99	0935	LF12SB22	Subsurface soil	18' - 22' bgs	Dry gray sandy silt 18' - 20'; white quartzitic sand 20' - 20.5'; poorly sorted gray sand 20.5' - 22'	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
7/8/99	1000	LF12SB29	Subsurface soil	25' - 29' bgs	Dry quartzitic gravel and very fine well-sorted sand; Geoprobe™ refusal at 29'	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs
7/8/99	0800	LF01TB05	Water	N/A	Trip blank	VOCs

Key is at the end of the table.

Table 3-1 (CONTINUED)

SAMPLE COLLECTION INFORMATION
WENATCHEE, WASHINGTON

Date	Time	Station ID	Matrix	Depth[a]	Sample Description	Analyses
7/8/99	1340	LF13SB04	Subsurface soil	0' - 4' bgs	Dry dark gray sand with gravel 0' -2'; dry dark brown well-sorted sand 2' - 3'; dry light brown fine sand 3' - 4'; 1" diameter quartzitic rock	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
7/8/99	1400	LF13SB12	Subsurface soil	8' - 12' bgs	Dry dark gray very fine sand 8' - 10'; dry light brown quartzitic sand 10' - 12'	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
7/8/99	1440	LF13SB22	Subsurface soil	18' - 22' bgs	Dry brown gravel 18' - 18.5'; Moist gray fine sorted sand 18.5' - 22';	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
7/8/99	1625	LF13SB32	Subsurface soil	24' - 25' bgs	Moist dark gray well-sorted sand	TAL metals, VOCs, SVOCs
7/8/99	1745	LF06SB04B	Subsurface soil	0' - 4' bgs	Dry brown sand with little gravel	PCDDs/PCDFs
7/9/99	0900	LF09SB04	Subsurface soil	0' - 3' bgs	Dry fine sand and cobbles with white quartzitic rocks	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs
7/9/99	0945	LF09SB12	Subsurface soil	8' - 12' bgs	Dry gray fine sand and pebbles 8' - 9.5'; Dry red-stained soil 9.5' - 10'; Dry gray fine well-sorted sand 10'-12'	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs
7/9/99	0930	LF09SB22	Subsurface soil	18' - 21' bgs	Dry dark brown sand and gravel; cobbles up to 3" diameter with white and black ground up quartzitic granite	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
7/9/99	0700	LF01TB06	Water	N/A	Trip blank	VOCs
7/9/99	0705	LF01TB07	Water	N/A	Trip blank	VOCs
7/9/99	1350	LF01RB03	Water	N/A	Rinsate blank	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
7/9/99	1500	LF10SB04	Subsurface soil	0' - 4' bgs	Asphalt, gravel and sand	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs
7/9/99	1530	LF10SB12	Subsurface soil	8' - 12' bgs	Woody debris	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs, PCDDs/PCDFs

Key is at the end of the table.

Table 3-1 (CONTINUED)

SAMPLE COLLECTION INFORMATION
WENATCHEE, WASHINGTON

Date	Time	Station ID	Matrix	Depth[a]	Sample Description	Analyses
7/9/99	1600	LF011DWA	Water	N/A	Investigation-derived waste	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs
7/9/99	1605	LF011DWB	Water	N/A	Investigation-derived waste	TAL metals, VOCs, SVOCs, CL Pesticides/PCBs

[a] The soil samples were composite samples except as listed in Section 3.3.1 for the VOC aliquots

Key:

bgs = Below ground surface.
CL Pesticides = Chlorinated pesticides.
CLP = Contract Laboratory Program.
EPA = United States Environmental Protection Agency.
Geoprobe™ = Geoprobe™ direct-push sampler.
ID = Identification.
N/A = Not applicable.
PCBs = Polychlorinated biphenyls.
PCDDs = Polychlorinated dibenzo-dioxins.
PCDFs = Polychlorinated dibenzo-furans.
SVOCs = Semivolatile organic compounds.
TAL = Target analyte list.
VOCs = Volatile organic compounds.

Table 3-2

LANDFILL SUBSURFACE SOIL SAMPLE ANALYTICAL RESULTS SUMMARY
WENATCHEE, WASHINGTON

LOCATION ID	Residential Cleanup	Industrial Cleanup	LF01SB04	LF01SB12	LF01SB22	LF02SB04	LF02SB12	LF02SB22	LF02SB32
DEPTH	Standards	Standards	0 - 4 ft bgs	8 - 12 ft bgs	18 - 22 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	18 - 22 ft bgs	28 - 32 ft bgs
VOCs (µg/kg)									
2-Butanone	6,900,000[d]	27,000,000[d]	4 J	3 J	13 J	2 J	11 U	31	2 J
Acetone	8,000,000[b]	350,000,000	32 U	14 U	150 U	12 U	11 U	110	11 U
Benzene	500[a]	500[a]	11 U	12 U	14 U	11 U	11 U	13 U	11 U
Chlorobenzene	1,600,000[b]	70,000,000[c]	11 U	12 U	14 U	11 U	11 U	4 J	11 U
Ethylbenzene	20,000[a]	20,000[a]	11 U	2 J	14 U	11 U	11 U	8 J	11 U
Xylene (total)	20,000[a]	20,000[a]	3 J	14	14 U	2 J	2 J	43	11 U
SVOCs (µg/kg)									
2-Methylnaphthalene	-	-	350 UJ	99 J	460 U	350 U	350 U	420 U	380 U
Acenaphthene	4,800,000[b]	210,000,000	350 UJ	400 UJ	460 U	350 U	350 U	420 U	380 U
Anthracene	24,000,000[b]	100,000,000	350 UJ	400 UJ	460 U	350 U	350 U	420 U	380 U
Benzo(a)pyrene	137[b]	18,000[c]	58 J	400 UJ	460 U	350 U	350 U	44 J	380 U
Benzo(b)fluoranthene	137[b]	18,000[c]	350 UJ	400 UJ	460 U	350 U	350 U	48 J	380 U
Benzo(k)fluoranthene	137[b]	18,000[c]	350 UJ	400 UJ	460 U	350 U	350 U	48 J	380 U
Bis(2-ethylhexyl)phthalate	71,400[b]	9,370,000[c]	90 J	460 J	460 U	350 U	350 U	120 J	380 U
Butylbenzylphthalate	16,000,000[b]	700,000,000	350 UJ	400 UJ	460 U	350 U	350 U	420 U	380 U
Carbazole	50,000[b]	6,560,000[c]	350 UJ	400 UJ	460 U	350 U	350 U	420 U	380 U
Chrysene	137[b]	18,000[c]	350 UJ	77 J	460 U	350 U	350 U	420 U	380 U
Di-n-butylphthalate	8,000,000[b]	350,000,000	350 UJ	400 UJ	460 U	350 U	350 U	420 U	380 U
Dimethylphthalate	80,000,000[b]	350,000,000	350 UJ	400 UJ	460 U	350 U	350 U	420 U	380 U
Fluoranthene	3,200,000[b]	140,000,000	350 UJ	60 J	460 U	350 U	350 U	48 J	380 U
Fluorene	3,200,000[b]	140,000,000	350 UJ	50 J	460 U	350 U	350 U	420 U	380 U
Naphthalene	3,200,000[b]	140,000,000	350 UJ	160 J	460 U	350 U	350 U	420 U	380 U
Phenanthrene	-	-	350 UJ	140 J	460 U	350 U	80 J	420 U	380 U
Pyrene	2,400,000[b]	105,000,000	59 J	87 J	460 U	350 U	52 J	57 J	380 U

Key is at the end of the table.

Table 3-2 (CONTINUED)

LANDFILL SUBSURFACE SOIL SAMPLE ANALYTICAL RESULTS SUMMARY
WENATCHEE, WASHINGTON

CLP INORGANIC NUMBER	Residential	Industrial							
LOCATION ID	Cleanup	Cleanup	LF01SB04	LF01SB12	LF01SB22	LF02SB04	LF02SB12	LF02SB22	LF02SB32
DEPTH	Standards	Standards	0 - 4 ft bgs	8 - 12 ft bgs	18 - 22 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	18 - 22 ft bgs	28 - 32 ft bgs
Pesticides/PCBs (µg/kg)									
4,4'-DDD	4,170[b]	547,000[c]	21	86	8.1	48	47	230 J	0.91 J
4,4'-DDE	2,940[b]	386,000[c]	12	100	6.1 J	42	23	180	0.87 J
4,4'-DDT	1,000[a]	5,000[a]	43	4.0 U	3.0 J	3.5 J	52	18	0.67 J
Aldrin	58.8[b]	7,720[c]	2.1 J	2.0 U	2.4 U	1.8 U	1.8 U	8.2	1.9 U
Alpha-BHC	159[b]	20,800[c]	1.8 U	2.0 U	2.4 U	1.8 U	1.8 U	4.4 U	1.9 U
Alpha-chlordane	769[b]	101,000[c]	1.8 U	4.5	1.1 J	3.7 J	1.8 U	6.1 J	1.9 U
Aroclor1242	1,000[a]	10,000[a]	35 U	40 U	46 U	35 U	35 U	85 U	38 U
Aroclor1254	1,000[a]	10,000[a]	35 U	40 U	46 U	35 U	35 U	85 U	38 U
Beta-BHC	556[b]	72,900[c]	1.8 U	2.2 J	2.4 U	1.8 U	1.8 U	5 J	1.9 U
Delta-BHC	-	-	1.8 U	2.0 U	2.4 U	1.8 U	1.8 U	5.0 J	1.9 U
Dieldrin	62.5[b]	8,200[c]	5.6	7.1 J	4.6 U	4.9	3.5 U	21	3.8 U
Endosulfan I	480,000[b]	21,000,000[c]	5.2	2.0 U	2.4 U	1.8 U	1.8 U	51	1.9 U
Endosulfan sulfate	-	-	4.9 J	4.0 U	4.6 U	3.5 U	3.5 U	8.5 U	3.8 U
Endrin	24,000[b]	1,050,000[c]	9.0 J	4.0 U	4.6 U	3.5 U	3.5 U	8.5 U	3.8 U
Endrin aldehyde	-	-	3.5 U	4.0 U	4.6 U	3.5 U	4.6 J	8.5 U	3.8 U
Endrin ketone	-	-	11 J	4.0 U	4.6 U	3.5 U	3.5 U	8.5 U	3.8 U
Gamma chlordane	-	-	1.9 J	7.6 J	1.8 J	3.0	2.0 J	13	1.9 U
Inorganics (µg/kg)									
Antimony	30[d]	750[d]	R	R	R	R	R	R	R
Arsenic	20[a]	200.0[a]	6.7 J	17.3 J	7.1 J	11.9 J	6.6 J	19.4 J	3.9 J
Barium	5,600[b]	245,000[c]	92.1	112	202	94.8	92.9	137	169
Beryllium	0.233[b]	30.5[c]	0.26 J	0.24 J	0.34 J	0.29 J	0.24 J	0.27 J	0.49 J
Cadmium	2[a]	10.0[a]	0.11 U	0.27 J	0.12 U	0.11 U	0.11 U	0.13 U	0.13 U
Chromium	100[a]	500.0[a]	20.4	22.8	62.5	18.4	19.1	26	29.7
Cobalt	3,300[d]	29,000[d]	6.8 J	6.4 J	13.7	6.9 J	6.7 J	7.9 J	14.7

Key is at the end of the table.

Table 3-2 (CONTINUED)

LANDFILL SUBSURFACE SOIL SAMPLE ANALYTICAL RESULTS SUMMARY
WENATCHEE, WASHINGTON

CLP INORGANIC NUMBER	Residential	Industrial							
LOCATION ID	Cleanup	Cleanup	LF01SB04	LF01SB12	LF01SB22	LF02SB04	LF02SB12	LF02SB22	LF02SB32
DEPTH	Standards	Standards	0 - 4 ft bgs	8 - 12 ft bgs	18 - 22 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	18 - 22 ft bgs	28 - 32 ft bgs
Inorganics (µg/kg)									
Copper	2,960[b]	130,000[c]	16.2	20.2	40.3	15.4	14.5	24.2	26.2
Lead	250[a]	1,000.0[a]	64.6 J	103 J	39.3 J	62.2 J	29.8 J	127 J	24.3 J
Manganese	11,200[b]	490,000[c]	316	344	462	349	308	420	1,780
Mercury	1.0[a]	1.0[a]	0.13	0.05 U	0.06 U	0.05 U	0.05 U	0.06 U	0.06 U
Nickel	1,600[b]	70,000[c]	14.9	15.0	61.9	13.7	12.0	23.6	31.5
Selenium	400[b]	17,500[c]	1.4 U	1.7 U	2.5 U	1.5 U	1.4 U	2.3	2.2
Silver	400[b]	17,500[c]	0.56 J	0.69 J	1.2 J	0.64 J	0.62 J	1.1 J	1.3 J
Thallium	5.6[b]	245[c]	0.87 J	1.1 J	1.7 J	1.0 J	0.96 J	0.93 J	2.1 J
Vanadium	560[b]	24,500[c]	36.2	37.4	71.8	35.8	35.6	41.2	74.1
Zinc	24,000[b]	1,050,000[c]	58.0 J	93.2 J	120 J	59.9 J	54.7 J	186 J	73.0 J
Dioxins/Furans (ng/kg)									
1,2,3,4,6,7,8-HpCDD	-	-	17.823 J	55.530	17.605	8.273	6.546	67.457	0.374
1,2,3,4,6,7,8-HpCDF	-	-	3.854 J	11.487	12.375	2.586	2.736 J	20.229	0.095 U
1,2,3,4,7,8,9-HpCDF	-	-	1.776 U	0.694 U	1.629 J	0.274 U	0.642 U	1.393	0.133 U
1,2,3,4,7,8-HxCDD	-	-	0.581 U	3.754 J	1.183 U	0.273 U	0.290 U	0.471 U	0.200 U
1,2,3,4,7,8-HxCDF	-	-	2.749 J	4.377 J	13.473 J	2.354 J	2.168 J	8.953 J	0.091 U
1,2,3,6,7,8-HxCDD	-	-	0.391 U	1.329 J	0.797 U	0.184 U	0.195 U	1.713	0.135 U
1,2,3,6,7,8-HxCDF	-	-	0.557 U	0.176 U	0.565 U	0.461 U	0.433 U	1.055 J	0.068 U
1,2,3,7,8,9-HxCDD	-	-	0.449 U	0.181 U	0.913 U	0.211 U	0.224 U	0.870	0.155 U
1,2,3,7,8-PeCDD	-	-	0.530 U	1.027 J	1.975 U	0.243 U	0.398 U	0.775 U	0.180 U
2,3,4,6,7,8-HxCDF	-	-	0.652 U	0.206 U	1.044	0.730 U	0.506 U	1.361	0.080 U
2,3,4,7,8-PeCDF	-	-	0.538 UJ	0.372 U	1.693	0.209 U	0.301 J	1.851 J	0.093 U
2,3,7,8-TCDD	-	-	0.306 U	1.119 J	0.251 U	0.144 U	0.388 J	0.322 U	0.097 U
2,3,7,8-TCDF	-	-	0.224 UJ	0.7219	1.705	0.499	0.3798	1.880	0.414
OCDD	-	-	178.019 J	756.461	269.807	79.196	71.891	827.747	3.764 U
OCDF	-	-	5.307	23.689	30.361	3.743	4.122	53.484	0.212 U
Total toxicity equivalency	6.67[b]	875[c]	0.675	4.03	3.09	0.432	0.924	4.28	0.045

Key is at the end of the table.

Table 3-2 (CONTINUED)

LANDFILL SUBSURFACE SOIL SAMPLE ANALYTICAL RESULTS SUMMARY
WENATCHEE, WASHINGTON

LOCATION ID	Residential Cleanup	Industrial Cleanup	LF03SB04	LF03SB12	LF03SB22	LF03SB32	LF07SB04	LF07SB12	LF07SB22
DEPTH	Standards	Standards	0 - 4 ft bgs	8 - 12 ft bgs	18 - 22 ft bgs	28 - 32 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	18 - 22 ft bgs
VOCs (µg/kg)									
2-Butanone	6,900,000[d]	27,000,000[d]	28	32	21	26	11 U	12	10 J
Acetone	8,000,000[b]	350,000,000	120	100	150	130	11 U	72 U	64 U
Benzene	500[a]	500[a]	11 U	12 U	18 U	13 U	11 U	11 U	12 U
Chlorobenzene	1,600,000[b]	70,000,000[c]	11 U	12 U	18 U	1 J	11 U	11 U	12 U
Ethylbenzene	20,000[a]	20,000[a]	11 U	12 U	18 U	13 U	11 U	11 U	12 U
Xylene (total)	20,000[a]	20,000[a]	11 U	12 U	18 U	13 U	11 U	11 U	12 U
SVOCs (µg/kg)									
2-Methylnaphthalene	-	-	360 U	380 U	200 J	420 U	720 U	66 J	58 J
Acenaphthene	4,800,000[b]	210,000,000	360 U	380 U	91 J	420 U	720 U	350 U	410 U
Anthracene	24,000,000[b]	100,000,000	360 U	380 U	91 J	420 U	720 U	350 U	410 U
Benzo(a)pyrene	137[b]	18,000[c]	360 U	380 U	420 UJ	420 U	720 U	350 U	410 U
Benzo(b)fluoranthene	137[b]	18,000[c]	360 U	380 U	420 UJ	420 U	720 U	54 J	410 U
Benzo(k)fluoranthene	137[b]	18,000[c]	360 U	380 U	420 UJ	420 U	720 U	350 U	410 U
Bis(2-ethylhexyl)phthalate	71,400[b]	9,370,000[c]	620	380 U	4,900 J	140 J	720 U	330 J	270 J
Butylbenzylphthalate	16,000,000[b]	700,000,000	360 U	380 U	1,600 J	420 U	320 J	350 U	410 U
Carbazole	50,000[b]	6,560,000[c]	360 U	380 U	190 J	420 U	720 UJ	350 U	410 U
Chrysene	137[b]	18,000[c]	360 U	57 J	120 J	420 U	720 U	350 U	410 U
Di-n-butylphthalate	8,000,000[b]	350,000,000	360 U	380 U	150 J	420 U	720 U	350 U	410 U
Dimethylphthalate	80,000,000[b]	350,000,000	360 U	380 U	420 UJ	420 U	720 U	350 U	410 U
Fluoranthene	3,200,000[b]	140,000,000	360 U	380 U	210 J	420 U	120 J	350 U	410 U
Fluorene	3,200,000[b]	140,000,000	360 U	380 U	130 J	420 U	720 U	350 U	410 U
Naphthalene	3,200,000[b]	140,000,000	360 U	380 U	160 J	420 U	720 U	54 J	410 U
Phenanthrene	-	-	360 U	380 U	610 J	420 U	720 U	38 J	66 J
Pyrene	2,400,000[b]	105,000,000	360 U	39 J	230 J	420 U	210 J	79 J	410 U

Key is at the end of the table.

Table 3-2 (CONTINUED)

LANDFILL SUBSURFACE SOIL SAMPLE ANALYTICAL RESULTS SUMMARY
WENATCHEE, WASHINGTON

CLP INORGANIC NUMBER	Residential	Industrial							
LOCATION ID	Cleanup	Cleanup	LF03SB04	LF03SB12	LF03SB22	LF03SB32	LF07SB04	LF07SB12	LF07SB22
DEPTH	Standards	Standards	0 - 4 ft bgs	8 - 12 ft bgs	18 - 22 ft bgs	28 - 32 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	18 - 22 ft bgs
Pesticides/PCBs (µg/kg)									
4,4'-DDD	4,170[b]	547,000[c]	38	120	660	0.51 J	13	51	110
4,4'-DDE	2,940[b]	386,000[c]	97	210	95 J	0.63 J	92	19	33
4,4'-DDT	1,000[a]	5,000[a]	8.5	8.7	9.3 J	5.7	7.3 J	7.7	5.9 J
Aldrin	58.8[b]	7,720[c]	1.8 U	4.0 U	2.2 U	2.2 U	1.8 U	1.8 U	2.1 U
Alpha-BHC	159[b]	20,800[c]	1.8 U	4.0 U	22 J	0.22 U	1.8 U	1.8 U	4.2
Alpha-chlordane	769[b]	101,000[c]	1.8 U	4.0 U	9.6 J	2.2 U	1.8 U	1.8 U	2.1 U
Aroclor1242	1,000[a]	10,000[a]	36 U	77 U	42 U	42 U	36 U	35 U	41 U
Aroclor1254	1,000[a]	10,000[a]	36 U	77 U	470	42 U	36 U	35 U	40 J
Beta-BHC	556[b]	72,900[c]	1.8 U	4.0 U	16 J	2.2 U	1.8 U	3.4 J	10 J
Delta-BHC	-	-	1.8 U	4.0 U	2.2 U	2.2 U	1.8 U	1.8 U	2.1 U
Dieldrin	62.5[b]	8,200[c]	6.1	7.5 J	10 J	4.2 U	5.5	3.5 U	4.1 U
Endosulfan I	480,000[b]	21,000,000[c]	1.8 U	4.0 U	2.2 U	2.2 U	1.8 U	1.8 U	2.1 U
Endosulfan sulfate	-	-	3.6 U	7.7 U	11 J	4.2 U	3.7 J	3.5 U	4.1 U
Endrin	24,000[b]	1,050,000[c]	3.6 U	7.7 U	4.2 U	0.97 J	3.6 U	3.5 U	4.1 U
Endrin aldehyde	-	-	3.6 U	7.7 U	4.2 U	4.2 U	5.4 J	3.5 U	4.1 U
Endrin ketone	-	-	3.6 J	7.7 U	4.2 U	4.2 U	8.1 J	3.5 U	4.1 U
Gamma chlordane	-	-	1.8 U	2.2 J	18 J	2.2 U	1.8 U	1.8 U	2.1 U
Inorganics (µg/kg)									
Antimony	30[d]	750[d]	R	R	2.5 J	R	R	1.7 J	2.9 J
Arsenic	20[a]	200.0[a]	20.7 J	43.9 J	9.3 J	1.6 J	28.9 J	12.1 J	13.4 J
Barium	5,600[b]	245,000[c]	89.6	126	182	137	94.2	99.5	284
Beryllium	0.233[b]	30.5[c]	0.23 J	0.36 J	0.16 J	0.32 J	0.30 J	0.28 J	0.33 J
Cadmium	2[a]	10.0[a]	0.11 J	0.44 J	0.24 J	0.13 U	0.11 U	0.11 U	1.2
Chromium	100[a]	500.0[a]	17.4	17.5	28.8	19.1	17.3	19.4	28.2
Cobalt	3,300[d]	29,000[d]	6.6 J	6.6 J	8.8 J	11.0 J	6.8 J	6.7 J	8.7 J

Key is at the end of the table.

Table 3-2 (CONTINUED)

LANDFILL SUBSURFACE SOIL SAMPLE ANALYTICAL RESULTS SUMMARY
WENATCHEE, WASHINGTON

CLP INORGANIC NUMBER	Residential	Industrial							
LOCATION ID	Cleanup	Cleanup	LF03SB04	LF03SB12	LF03SB22	LF03SB32	LF07SB04	LF07SB12	LF07SB22
DEPTH	Standards	Standards	0 - 4 ft bgs	8 - 12 ft bgs	18 - 22 ft bgs	28 - 32 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	18 - 22 ft bgs
Inorganics (mg/kg)									
Copper	2,960[b]	130,000[c]	15.1	15.3	35.8	18.3	13.0	17.1	85.7
Lead	250[a]	1,000.0[a]	88.8 J	385 J	165 J	13.2 J	132	35.6	437
Manganese	11,200[b]	490,000[c]	395	420	377	547	352	325	477
Mercury	1.0[a]	1.0[a]	0.05 U	0.05 U	0.06 U	0.06 U	0.05 U	0.05 U	0.08 J
Nickel	1,600[b]	70,000[c]	13.0	12.8	23.3	26.4	26.8 J	22.6 J	30.5 J
Selenium	400[b]	17,500[c]	1.5 U	1.7 U	2.6 U	1.8 U	1.5	1.1	2.2
Silver	400[b]	17,500[c]	0.79 J	0.71 J	1.3 J	0.93 J	0.69 J	0.84 J	1.6 J
Thallium	5.6[b]	245[c]	0.71 U	1.2 J	2.2 J	1.4 J	0.70 U	0.71 U	1.0 J
Vanadium	560[b]	24,500[c]	35.6	36.4	37.4	60.6	33.4	34.8	43.8
Zinc	24,000[b]	1,050,000[c]	57.1 J	227 J	248 J	69.0 J	78.3	160	505
Dioxins/Furans (ng/kg)									
1,2,3,4,6,7,8-HpCDD	-	-	25.827	8.306	NA	1.091	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	-	-	5.727	3.609	NA	0.090 U	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	-	-	0.940 U	0.370 U	NA	0.127 U	NA	NA	NA
1,2,3,4,7,8-HxCDD	-	-	0.414 U	0.259 U	NA	0.145 U	NA	NA	NA
1,2,3,4,7,8-HxCDF	-	-	3.382 J	1.630 J	NA	0.096 U	NA	NA	NA
1,2,3,6,7,8-HxCDD	-	-	0.279 U	0.174 U	NA	0.098 U	NA	NA	NA
1,2,3,6,7,8-HxCDF	-	-	0.190 U	0.133 U	NA	0.072 U	NA	NA	NA
1,2,3,7,8,9-HxCDD	-	-	0.320 U	0.200 U	NA	0.112 U	NA	NA	NA
1,2,3,7,8-PeCDD	-	-	0.384 U	0.280 U	NA	0.102 U	NA	NA	NA
2,3,4,6,7,8-HxCDF	-	-	0.222 U	0.156 U	NA	0.084 U	NA	NA	NA
2,3,4,7,8-PeCDF	-	-	0.265 U	0.123 U	NA	0.077 U	NA	NA	NA
2,3,7,8-TCDD	-	-	0.175 U	0.183 U	NA	0.091 U	NA	NA	NA
2,3,7,8-TCDF	-	-	0.200 U	0.173 U	NA	0.417	NA	NA	NA
OCDD	-	-	356.889 J	67.347	NA	7.548 U	NA	NA	NA
OCDF	-	-	15.725	7.591	NA	0.168 U	NA	NA	NA
Total toxicity equivalency	6.67[b]	875[c]	1.02	0.357	NA	0.001	NA	NA	NA

Key is at the end of the table.

Table 3-2 (CONTINUED)

LANDFILL SUBSURFACE SOIL SAMPLE ANALYTICAL RESULTS SUMMARY
WENATCHEE, WASHINGTON

LOCATION ID	Residential Cleanup	Industrial Cleanup	LF08SB04	LF08SB12	LF11SS00	LF11SB12	LF11SB22	LF12SB04	LF12SB12
DEPTH	Standards	Standards	0 - 4 ft bgs	8 - 12 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	18 - 22 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs
VOCs (µg/kg)									
2-Butanone	6,900,000[d]	27,000,000[d]	11 U	3 J	21 U	1 J	11 U	11 UJ	9 J
Acetone	8,000,000[b]	350,000,000	11 U	19 U	100 U	15 U	43	49 U	37 U
Benzene	500[a]	500[a]	11 U	12 U	11 U	11 U	11 U	11 U	2 J
Chlorobenzene	1,600,000[b]	70,000,000[c]	11 U	12 U	11 U	11 U	11 U	11 U	12 U
Ethylbenzene	20,000[a]	20,000[a]	11 U	12 U	17	11 U	11 U	11 U	24
Xylene (total)	20,000[a]	20,000[a]	11 U	12 U	46	11 U	11 U	11 U	90
SVOCs (µg/kg)									
2-Methylnaphthalene	-	-	350 U	410 U	290 J	94 J	350 U	360 U	120 J
Acenaphthene	4,800,000[b]	210,000,000	350 U	410 U	350 U	380 U	350 U	360 U	400 U
Anthracene	24,000,000[b]	100,000,000	350 U	410 U	350 U	380 U	350 U	360 U	400 U
Benzo(a)pyrene	137[b]	18,000[c]	350 U	410 U	350 U	380 U	350 U	360 U	400 U
Benzo(b)fluoranthene	137[b]	18,000[c]	350 U	410 U	350 U	52 J	350 U	360 U	100 J
Benzo(k)fluoranthene	137[b]	18,000[c]	350 U	410 U	350 U	380 U	350 U	360 U	87 J
Bis(2-ethylhexyl)phthalate	71,400[b]	9,370,000[c]	86 J	68 J	72 J	300 J	230 J	64 J	820
Butylbenzylphthalate	16,000,000[b]	700,000,000	350 U	410 U	350 U	380 U	350 U	360 U	92 J
Carbazole	50,000[b]	6,560,000[c]	350 U	410 U	350 U	380 U	350 U	360 U	400 U
Chrysene	137[b]	18,000[c]	350 U	410 U	350 U	71 J	350 U	360 U	130 J
Di-n-butylphthalate	8,000,000[b]	350,000,000	350 U	410 U	350 U	380 U	350 U	360 U	50 J
Dimethylphthalate	80,000,000[b]	350,000,000	350 U	410 U	350 U	380 U	350 U	360 U	400 U
Fluoranthene	3,200,000[b]	140,000,000	350 U	410 U	350 U	120 J	350 U	360 U	75 J
Fluorene	3,200,000[b]	140,000,000	350 U	410 U	140 J	380 U	350 U	360 U	400 U
Naphthalene	3,200,000[b]	140,000,000	350 U	410 U	48 J	150 J	350 U	360 U	170 J
Phenanthrene	-	-	350 U	410 U	250 U	92 J	350 U	360 U	85 J
Pyrene	2,400,000[b]	105,000,000	350 U	410 U	36 J	120 J	350 U	360 U	90 J

Key is at the end of the table.

Table 3-2 (CONTINUED)

LANDFILL SUBSURFACE SOIL SAMPLE ANALYTICAL RESULTS SUMMARY
WENATCHEE, WASHINGTON

CLP INORGANIC NUMBER	Residential	Industrial							
LOCATION ID	Cleanup	Cleanup	LF08SB04	LF08SB12	LF11SS00	LF11SB12	LF11SB22	LF12SB04	LF12SB12
DEPTH	Standards	Standards	0 - 4 ft bgs	8 - 12 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	18 - 22 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs.
Pesticides/PCBs (ug/kg)									
4,4'-DDD	4,170[b]	547,000[c]	29	100	37	31	3.5 U	57	46
4,4'-DDE	2,940[b]	386,000[c]	52	24	17	17	2.6 J	54	36
4,4'-DDT	1,000[a]	5,000[a]	3.5 U	7.2 J	3.5 U	2.1 J	3 J	2.2 J	4.1 J
Aldrin	58.8[b]	7,720[c]	1.8 U	2.1 U	1.8 U	2.0 U	1.8 U	1.9 U	2.1 U
Alpha-BHC	159[b]	20,800[c]	1.8 U	2.1 U	1.8 U	2.0 U	1.8 U	1.9 U	2.1 U
Alpha-chlordane	769[b]	101,000[c]	2.0	26 J	5.5 J	2.0 U	1.8 U	1.9 UJ	3.4 J
Aroclor1242	1,000[a]	10,000[a]	35 U	41 U	35 U	38 U	35 U	36 U	150 J
Aroclor1254	1,000[a]	10,000[a]	35 U	41 U	35 U	38 U	35 U	36 U	40 U
Beta-BHC	556[b]	72,900[c]	1.8 U	3.3 J	1.9 U	4.1 J	1.8 U	1.9 U	2.1 U
Delta-BHC	-	-	1.8 U	2.1 U	1.8 U	2.0 U	1.8 U	1.9 U	2.1 U
Dieldrin	62.5[b]	8,200[c]	1.6 J	5.8 J	2.7 J	1.1 J	3.5 U	3.6 U	4.2
Endosulfan I	480,000[b]	21,000,000[c]	1.8 U	2.1 U	1.8 U	2.0 J	1.8 U	1.9 U	2.1 U
Endosulfan sulfate	-	-	3.5 U	4.1 U	3.5 U	3.8 U	3.5 U	3.6 U	4.0 U
Endrin	24,000[b]	1,050,000[c]	3.5 U	4.1 U	3.5 U	3.8 U	0.95 J	3.6 U	4.0 U
Endrin aldehyde	-	-	3.5 U	4.1 U	3.5 U	3.8 U	3.5 U	3.6 U	4.0 U
Endrin ketone	-	-	3.5 U	4.1 U	3.5 U	3.8 U	3.5 U	3.6 U	4.0 U
Gamma chlordane	-	-	2.6 J	28	6.2 J	2.6	1.8 U	1.9 U	4.6
Inorganics (ug/kg)									
Antimony	30[d]	750[d]	R	R	R	1.0 J	1.5 J	R	R
Arsenic	20[a]	200.0[a]	7.1 J	7.4 J	6.5 J	7.1 J	4.6 J	9.3 J	13.6 J
Barium	5,600[b]	245,000[c]	93.5	394	102	120	96.1	92.8	107
Beryllium	0.233[b]	30.5[c]	0.32 J	0.48 J	0.25 J	0.23 J	0.21 J	0.36 J	0.46 J
Cadmium	2[a]	10.0[a]	0.11 U	0.11 U	0.11 U	0.24 J	0.11 U	0.11 U	0.12 U
Chromium	100[a]	500.0[a]	21.6	34.9	21.6 J	21.4 J	18.3 J	18.7 J	18.2 J
Cobalt	3,300[d]	29,000[d]	6.8 J	8.6 J	6.8 J	6.6 J	6.7 J	6.7 J	7.1 J

Key is at the end of the table.

Table 3-2 (CONTINUED)

LANDFILL SUBSURFACE SOIL SAMPLE ANALYTICAL RESULTS SUMMARY
WENATCHEE, WASHINGTON

CLP INORGANIC NUMBER	Residential	Industrial							
LOCATION ID	Cleanup	Cleanup	LF08SB04	LF08SB12	LF11SS00	LF11SB12	LF11SB22	LF12SB04	LF12SB12
DEPTH	Standards	Standards	0 - 4 ft bgs	8 - 12 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	18 - 22 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs
Inorganics (µg/kg)									
Copper	2,960[b]	130,000[c]	16.1	42.7	26.3	42.9	23.2	15.5	22.9
Lead	250[a]	1,000.0[a]	92.3	164	230 J	104 J	20.2 J	35.5 J	121 J
Manganese	11,200[b]	490,000[c]	313	353	310	299	201	260	284
Mercury	1.0[a]	1.0[a]	0.05 U	0.05 U	0.05 U	0.90	0.05 U	0.05 U	0.06 U
Nickel	1,600[b]	70,000[c]	14.5 J	26.2 J	18.2	27.6	19.8	14.3	15.4
Selenium	400[b]	17,500[c]	1.6	1.9	1.6	1.7	1.4	1.5	1.7
Silver	400[b]	17,500[c]	0.87 J	1.1 J	0.76 J	1.3 J	0.77 J	0.75 J	1.0 J
Thallium	5.6[b]	245[c]	0.98 J	1.6 J	1.1 J	1.0 J	0.7 U	0.99 J	0.77 U
Vanadium	560[b]	24,500[c]	32.7	41.2	31.8	37.4	34.1	34.1	32.8
Zinc	24,000[b]	1,050,000[c]	59.4	151	96.8 J	269 J	80.7 J	50.5 J	134 J
Dioxins/Furans (ng/kg)									
1,2,3,4,6,7,8-HpCDD	-	-	NA	NA	51.369	106.124 J	1.333 J	44.210 J	55.006
1,2,3,4,6,7,8-HpCDF	-	-	NA	NA	11.381	23.511	0.553	0.857 U	7.549
1,2,3,4,7,8,9-HpCDF	-	-	NA	NA	2.036 U	1.656 U	0.225 U	1.207 U	0.904 U
1,2,3,4,7,8-HxCDD	-	-	NA	NA	0.602 U	1.205 U	0.413 U	1.097 U	1.120 U
1,2,3,4,7,8-HxCDF	-	-	NA	NA	25.284 J	4.127 J	1.521 J	0.571 U	1.706 J
1,2,3,6,7,8-HxCDD	-	-	NA	NA	1.712 J	2.254 J	0.278 U	0.739 U	0.754 U
1,2,3,6,7,8-HxCDF	-	-	NA	NA	1.173	1.144 U	0.185 U	0.428 U	0.766 U
1,2,3,7,8,9-HxCDD	-	-	NA	NA	1.744 J	0.930 U	0.319 U	0.847 U	0.864 U
1,2,3,7,8-PeCDD	-	-	NA	NA	0.998 U	0.694 U	0.340 U	0.660 U	0.930 U
2,3,4,6,7,8-HxCDF	-	-	NA	NA	3.079	1.337 U	0.217 U	0.500 U	0.895 U
2,3,4,7,8-PeCDF	-	-	NA	NA	0.543 U	0.530 U	0.257 U	0.663 U	0.428 U
2,3,7,8-TCDD	-	-	NA	NA	0.331 U	0.553 U	0.308 U	0.369 U	0.413 U
2,3,7,8-TCDF	-	-	NA	NA	3.6197	0.341 U	0.148 U	0.288 U	0.328 UJ
OCDD	-	-	NA	NA	386.564 J	1,255.142 J	8.960	373.338 J	649.029
OCDF	-	-	NA	NA	19.036 J	35.485 J	0.423 U	8.921 J	28.63
Total toxicity equivalency	6.67[b]	875[c]	NA	NA	4.332	3.225	0.180	0.824	1.474

Key is at the end of the table.

Table 3-2 (CONTINUED)

LANDFILL SUBSURFACE SOIL SAMPLE ANALYTICAL RESULTS SUMMARY
WENATCHEE, WASHINGTON

LOCATION ID	Residential Cleanup Standards	Industrial Cleanup Standards	LF12SB22	LF12SB29	LF13SB04	LF13SB12	LF13SB22	LF13SB32	LF09SB04
DEPTH			18 - 22 ft bgs	25 - 29 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	18 - 22 ft bgs	24 - 25 ft bgs	0 - 3 ft bgs
VOCs (µg/kg)									
2-Butanone	6,900,000[d]	27,000,000[d]	10 U	12 U	11 U	15 U	11 U	12 UJ	40 J
Acetone	8,000,000[b]	350,000,000	13 U	14 U	11 U	15 U	29 U	12 UJ	170
Benzene	500[a]	500[a]	10 U	12 U	11 U	15 U	11 U	12 U	11 U
Chlorobenzene	1,600,000[b]	70,000,000[c]	10 U	12 U	11 U	15 U	11 U	12 U	11 U
Ethylbenzene	20,000[a]	20,000[a]	10 U	12 U	11 U	15 U	11 U	12 U	11 U
Xylene (total)	20,000[a]	20,000[a]	1 J	12 U	11 U	15 U	11 U	12 U	11 U
SVOCs (µg/kg)									
2-Methylnaphthalene	-	-	350 U	390 U	350 U	500 U	370 U	380 U	350 U
Acenaphthene	4,800,000[b]	210,000,000	350 U	390 U	350 U	500 U	370 U	380 U	350 U
Anthracene	24,000,000[b]	100,000,000	350 U	390 U	350 U	500 U	370 U	380 U	350 U
Benzo(a)pyrene	137[b]	18,000[c]	350 U	390 U	350 U	500 U	370 U	380 U	350 U
Benzo(b)fluoranthene	137[b]	18,000[c]	350 U	390 U	350 U	500 U	370 U	380 U	350 U
Benzo(k)fluoranthene	137[b]	18,000[c]	350 U	390 U	350 U	500 U	370 U	380 U	350 U
Bis(2-ethylhexyl)phthalate	71,400[b]	9,370,000[c]	50 J	44 J	41 J	89 J	49 J	43 J	64 J
Butylbenzylphthalate	16,000,000[b]	700,000,000	350 U	390 U	350 U	500 U	370 U	380 U	350 U
Carbazole	50,000[b]	6,560,000[c]	350 U	390 U	350 U	500 U	370 U	380 U	350 U
Chrysene	137[b]	18,000[c]	350 U	390 U	350 U	500 U	370 U	380 U	350 U
Di-n-butylphthalate	8,000,000[b]	350,000,000	350 U	390 U	350 U	500 U	370 U	380 U	350 U
Dimethylphthalate	80,000,000[b]	350,000,000	350 U	390 U	350 U	500 U	370 U	80 J	350 U
Fluoranthene	3,200,000[b]	140,000,000	350 U	390 U	350 U	500 U	370 U	380 U	350 U
Fluorene	3,200,000[b]	140,000,000	350 U	390 U	350 U	500 U	370 U	380 U	350 U
Naphthalene	3,200,000[b]	140,000,000	350 U	390 U	350 U	500 U	370 U	380 U	350 U
Phenanthrene	-	-	350 U	390 U	350 U	500 U	370 U	380 U	350 U
Pyrene	2,400,000[b]	105,000,000	350 U	390 U	350 U	500 U	370 U	380 U	350 U

Key is at the end of the table.

Table 3-2 (CONTINUED)

LANDFILL SUBSURFACE SOIL SAMPLE ANALYTICAL RESULTS SUMMARY
WENATCHEE, WASHINGTON

CLP INORGANIC NUMBER	Residential	Industrial							
LOCATION ID	Cleanup	Cleanup	LF12SB22	LF12SB29	LF13SB04	LF13SB12	LF13SB22	LF13SB32	LF09SB04
DEPTH	Standards	Standards	18 - 22 ft bgs	25 - 29 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	18 - 22 ft bgs	24 - 25 ft bgs	0 - 3 ft bgs
Pesticides/PCBs (µg/kg)									
4,4'-DDD	4,170[b]	547,000[c]	11	3.9 U	14	5.0 U	3.2 J	NA	2.7 J
4,4'-DDE	2,940[b]	386,000[c]	18	3.9 U	28	2.2 J	4.8	NA	6.9
4,4'-DDT	1,000[a]	5,000[a]	7.4	2.1 J	3.5 U	5.0 U	0.89 J	NA	2.6 J
Aldrin	58.8[b]	7,720[c]	1.8 U	2.0 U	1.8 U	2.6 U	1.9 U	NA	1.8 U
Alpha-BHC	159[b]	20,800[c]	1.8 U	2.0 U	1.8 U	2.6 U	1.9 U	NA	1.8 U
Alpha-chlordane	769[b]	101,000[c]	1.8 U	2.0 U	1.8 U	2.6 U	1.9 U	NA	1.8 U
Aroclor1242	1,000[a]	10,000[a]	35 U	39 U	35 U	50 U	37 U	NA	35 U
Aroclor1254	1,000[a]	10,000[a]	35 U	39 U	35 U	50 U	37 U	NA	35 U
Beta-BHC	556[b]	72,900[c]	1.8 U	2.0 U	1.8 U	2.6 U	1.9 U	NA	2.3 J
Delta-BHC	-	-	1.8 U	2.0 U	1.8 U	2.6 U	1.9 U	NA	1.8 U
Dieldrin	62.5[b]	8,200[c]	3.5 U	3.9 U	3.5 U	5.0 U	3.7 U	NA	3.5 U
Endosulfan I	480,000[b]	21,000,000[c]	1.8 U	2.0 U	1.8 U	2.6 U	1.9 U	NA	1.8 U
Endosulfan sulfate	-	-	3.5 U	3.9 U	3.5 U	5.0 U	3.7 U	NA	3.5 U
Endrin	24,000[b]	1,050,000[c]	5.5	0.80 J	3.5 U	5.0 U	3.7 U	NA	3.5 U
Endrin aldehyde	-	-	3.5 U	3.9 U	3.5 U	5.0 U	3.7 U	NA	3.5 U
Endrin ketone	-	-	0.65 J	3.9 U	3.5 U	5.0 U	3.7 U	NA	3.5 U
Gamma chlordane	-	-	1.8 U	2.0 U	1.8 U	2.6 U	1.9 U	NA	1.8 U
Inorganics (µg/kg)									
Antimony	30[d]	750[d]	R	R	1.8 J	R	1.3 J	R	R
Arsenic	20[a]	200.0[a]	3.2 J	0.68 U	41.4 J	6.1 J	7.0 J	0.69 UJ	2.7 J
Barium	5,600[b]	245,000[c]	70.4	52.8	194	130	93.0	80.6	106
Beryllium	0.233[b]	30.5[c]	0.20 J	0.22 J	0.68 J	0.53 J	0.43 J	0.30 J	0.31 J
Cadmium	2[a]	10.0[a]	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.12 U	0.11 U
Chromium	100[a]	500.0[a]	8.8 J	16.8 J	45.8	31.6	24.8	30.2	17.0
Cobalt	3,300[d]	29,000[d]	4.5 J	6.6 J	7.5 J	8.3 J	7.5 J	6.5 J	6.6 J

Key is at the end of the table.

Table 3-2 (CONTINUED)

LANDFILL SUBSURFACE SOIL SAMPLE ANALYTICAL RESULTS SUMMARY
WENATCHEE, WASHINGTON

CLP INORGANIC NUMBER	Residential	Industrial							
LOCATION ID	Cleanup	Cleanup	LF12SB22	LF12SB29	LF13SB04	LF13SB12	LF13SB22	LF13SB32	LF09SB04
DEPTH	Standards	Standards	18 - 22 ft bgs	25 - 29 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	18 - 22 ft bgs	24 - 25 ft bgs	0 - 3 ft bgs
Inorganics (µg/kg)									
Copper	2,960[b]	130,000[c]	10.0	22.7	21.4	15.8	16.5	9.4	15.1
Lead	250[a]	1,000.0[a]	18.3 J	4.5 J	39.6	8.7	18.7	3.5	23.4
Manganese	11,200[b]	490,000[c]	220	217	401	251	283	242	284
Mercury	1.0[a]	1.0[a]	0.06 U	0.06 U	0.05 U	0.06 U	0.06 U	0.06 U	0.05 U
Nickel	1,600[b]	70,000[c]	11.4	11.3	26.2 J	18.1 J	26.6 J	17.1 J	23.5 J
Selenium	400[b]	17,500[c]	0.90 J	1.3	2.0	1.9	1.5	1.5	1.1
Silver	400[b]	17,500[c]	0.43 J	0.72 J	0.99 J	0.81 J	0.71 J	0.71 J	0.60 J
Thallium	5.6[b]	245[c]	0.69 U	0.74 U	1.5 J	1.2 J	1.0 J	1.0 J	0.70 U
Vanadium	560[b]	24,500[c]	23.8	34.1	60.0	46.3	33.5	40	24.7
Zinc	24,000[b]	1,050,000[c]	43.3 J	44 J	72.7	53.6	77.2	39.7	50.8
Dioxins/Furans (ng/kg)									
1,2,3,4,6,7,8-HpCDD	-	-	2.489 J	NA	0.511 U	3.448	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	-	-	0.591	NA	0.505 U	0.405 J	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	-	-	0.354 U	NA	0.712 U	0.130 U	NA	NA	NA
1,2,3,4,7,8-HxCDD	-	-	0.457 U	NA	0.617 U	0.249 U	NA	NA	NA
1,2,3,4,7,8-HxCDF	-	-	0.348 U	NA	1.012 J	0.168 U	NA	NA	NA
1,2,3,6,7,8-HxCDD	-	-	0.308 U	NA	0.415 U	0.295	NA	NA	NA
1,2,3,6,7,8-HxCDF	-	-	0.261 U	NA	0.340 U	0.126 U	NA	NA	NA
1,2,3,7,8,9-HxCDD	-	-	0.353 U	NA	0.476 U	0.192 U	NA	NA	NA
1,2,3,7,8-PeCDD	-	-	0.303 U	NA	0.578 U	0.221 U	NA	NA	NA
2,3,4,6,7,8-HxCDF	-	-	0.305 U	NA	0.398 U	0.147 U	NA	NA	NA
2,3,4,7,8-PeCDF	-	-	0.210 U	NA	0.235 U	0.165 U	NA	NA	NA
2,3,7,8-TCDD	-	-	0.370 U	NA	0.408 U	0.164 U	NA	NA	NA
2,3,7,8-TCDF	-	-	0.421 UJ	NA	0.305 U	0.146 U	NA	NA	NA
OCDD	-	-	34.759	NA	12.649	37.974	NA	NA	NA
OCDF	-	-	1.357 J	NA	0.634 U	1.157	NA	NA	NA
Total toxicity equivalency	6.67[b]	875[c]	0.067	NA	0.114	0.107	NA	NA	NA

Key is at the end of the table.

Table 3-2 (CONTINUED)

LANDFILL SUBSURFACE SOIL SAMPLE ANALYTICAL RESULTS SUMMARY
WENATCHEE, WASHINGTON

LOCATION ID	Residential Cleanup	Industrial Cleanup	LF09SB12	LF09SB22	LF10SB04	LF10SB12
DEPTH	Standards	Standards	8 - 12 ft bgs	18 - 21 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs
VOCs (µg/kg)						
2-Butanone	6,900,000[d]	27,000,000[d]	11 UJ	12 UJ	11 UJ	13 UJ
Acetone	8,000,000[b]	350,000,000	62 U	37 U	78 U	13 U
Benzene	500[a]	500[a]	11 U	12 U	11 U	13 U
Chlorobenzene	1,600,000[b]	70,000,000[c]	11 U	12 U	11 U	13 U
Ethylbenzene	20,000[a]	20,000[a]	11 U	12 U	11 U	13 U
Xylene (total)	20,000[a]	20,000[a]	11 U	12 U	11 U	13 U
SVOCs (µg/kg)						
2-Methylnaphthalene	-	-	360 U	390 U	**750 J**	**160 J**
Acenaphthene	4,800,000[b]	210,000,000	360 U	390 U	350 UJ	420 U
Anthracene	24,000,000[b]	100,000,000	360 U	390 U	350 UJ	420 U
Benzo(a)pyrene	137[b]	18,000[c]	360 U	390 U	350 UJ	**70 J**
Benzo(b)fluoranthene	137[b]	18,000[c]	360 U	390 U	350 UJ	420 U
Benzo(k)fluoranthene	137[b]	18,000[c]	360 U	390 U	350 UJ	420 U
Bis(2-ethylhexyl)phthalate	71,400[b]	9,370,000[c]	360 U	**2,400**	350 UJ	420 U
Butylbenzylphthalate	16,000,000[b]	700,000,000	360 U	390 U	350 UJ	420 U
Carbazole	50,000[b]	6,560,000[c]	360 U	390 U	350 UJ	420 U
Chrysene	137[b]	18,000[c]	360 U	390 U	350 UJ	540
Di-n-butylphthalate	8,000,000[b]	350,000,000	360 U	390 U	350 UJ	420 U
Dimethylphthalate	80,000,000[b]	350,000,000	360 U	390 U	350 UJ	420 U
Fluoranthene	3,200,000[b]	140,000,000	360 U	390 U	350 UJ	420 U
Fluorene	3,200,000[b]	140,000,000	360 U	390 U	350 UJ	420 U
Naphthalene	3,200,000[b]	140,000,000	360 U	390 U	**180 J**	**120 J**
Phenanthrene	-	-	360 U	390 U	350 UJ	420 U
Pyrene	2,400,000[b]	105,000,000	360 U	390 U	**49 J**	**97 J**

Key is at the end of the table.

Table 3-2 (CONTINUED)

LANDFILL SUBSURFACE SOIL SAMPLE ANALYTICAL RESULTS SUMMARY
WENATCHEE, WASHINGTON

CLP INORGANIC NUMBER	Residential	Industrial				
LOCATION ID	Cleanup	Cleanup	LF09SB12	LF09SB22	LF10SB04	LF10SB12
DEPTH	Standards	Standards	8 - 12 ft bgs	18 - 21 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs
Pesticides/PCBs (µg/kg)						
4,4'-DDD	4,170[b]	547,000[c]	90	3.9 U	16	44
4,4'-DDE	2,940[b]	386,000[c]	24	3.9 U	12	25
4,4'-DDT	1,000[a]	5,000[a]	7.2 U	3.9 U	3.5 U	4.3 U
Aldrin	58.8[b]	7,720[c]	3.7 U	2.0 U	1.8 U	2.2 U
Alpha-BHC	159[b]	20,800[c]	3.7 U	2 U	1.8 U	2.2 U
Alpha-chlordane	769[b]	101,000[c]	3.7 U	2.0 UJ	1.8 U	3.9 U
Aroclor1242	1,000[a]	10,000[a]	72 U	39 U	35 U	43 U
Aroclor1254	1,000[a]	10,000[a]	72 U	39 U	35 U	43 U
Beta-BHC	556[b]	72,900[c]	3.7 U	2.0 U	1.8 U	2.2 U
Delta-BHC	-	-	3.7 U	2.0 U	1.8 U	2.2 U
Dieldrin	62.5[b]	8,200[c]	7.2 U	3.9 U	3.5 U	4.3 U
Endosulfan I	480,000[b]	21,000,000[c]	3.7 U	2.0 U	1.8 U	2.2 U
Endosulfan sulfate	-	-	7.2 U	3.9 U	3.5 U	4.3 U
Endrin	24,000[b]	1,050,000[c]	7.2 U	3.9 U	3.5 U	4.3 U
Endrin aldehyde	-	-	7.2 U	3.9 U	3.5 U	4.3 U
Endrin ketone	-	-	7.2 U	3.9 U	3.5 U	4.3 U
Gamma chlordane	-	-	2.4 J	2.0 U	0.60 J	4.6 J
Inorganics (µg/kg)						
Antimony	30[d]	750[d]	0.88 J	R	R	4.3 J
Arsenic	20[a]	200.0[a]	8.0 J	1.9 J	5.3	9.1
Barium	5,600[b]	245,000[c]	141	152	94.5	106
Beryllium	0.233[b]	30.5[c]	0.41 J	0.35 J	0.19 J	0.30 J
Cadmium	2[a]	10.0[a]	0.11 U	0.11 U	0.11 U	0.11 U
Chromium	100[a]	500.0[a]	28.9	40.5	24.6 J	22.4 J
Cobalt	3,300[d]	29,000[d]	8.2 J	6.4 J	7.5 J	7.0 J

Key is at the end of the table.

Table 3-2 (CONTINUED)

LANDFILL SUBSURFACE SOIL SAMPLE ANALYTICAL RESULTS SUMMARY
WENATCHEE, WASHINGTON

CLP INORGANIC NUMBER	Residential	Industrial				
LOCATION ID	Cleanup	Cleanup	LF09SB12	LF09SB22	LF10SB04	LF10SB12
DEPTH	Standards	Standards	8 - 12 ft bgs	18 - 21 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs
Inorganics (ug/kg)						
Copper	2,960[b]	130,000[c]	34.4	15.3	16.5	19.1
Lead	250[a]	1,000.0[a]	81.5	5.3	33.8 J	97.6 J
Manganese	11,200[b]	490,000[c]	315	306	320 J	388 J
Mercury	1.0[a]	1.0[a]	0.08 J	0.05 U	0.05 U	0.05 U
Nickel	1,600[b]	70,000[c]	25.2 J	34.8 J	19.2	17.6
Selenium	400[b]	17,500[c]	1.7	1.7	1.9 UJ	1.6 UJ
Silver	400[b]	17,500[c]	1.1 J	0.89 J	0.72 J	1.3 J
Thallium	5.6[b]	245[c]	1.3 J	0.89 J	0.90 J	0.99 J
Vanadium	560[b]	24,500[c]	43.7	43.8	38.2	38.7
Zinc	24,000[b]	1,050,000[c]	163	41.5	48.6 J	68.7 J
Dioxins/Furans (ng/kg)						
1,2,3,4,6,7,8-HpCDD	-	-	NA	0.315 U	4.648	45.687
1,2,3,4,6,7,8-HpCDF	-	-	NA	0.211 U	1.951	10.253
1,2,3,4,7,8,9-HpCDF	-	-	NA	0.297 U	0.897 U	1.729 U
1,2,3,4,7,8-HxCDD	-	-	NA	0.325 U	0.687 U	2.461 J
1,2,3,4,7,8-HxCDF	-	-	NA	0.232 U	0.636 U	3.476 J
1,2,3,6,7,8-HxCDD	-	-	NA	0.219 U	0.463 U	0.521 U
1,2,3,6,7,8-HxCDF	-	-	NA	0.174 U	0.477 U	0.622 U
1,2,3,7,8,9-HxCDD	-	-	NA	0.251 U	0.530 U	0.597 U
1,2,3,7,8-PeCDD	-	-	NA	0.367 U	0.414 U	0.696 U
2,3,4,6,7,8-HxCDF	-	-	NA	0.203 U	0.558 U	0.727 U
2,3,4,7,8-PeCDF	-	-	NA	0.182 U	0.485 U	0.463 U
2,3,7,8-TCDD	-	-	NA	0.293 U	0.355 U	0.405 U
2,3,7,8-TCDF	-	-	NA	0.181 U	0.258 U	0.383 U
OCDD	-	-	NA	4.186	39.274	698.404
OCDF	-	-	NA	0.377 U	5.248	34.709
Total toxicity equivalency	6.67[b]	875[c]	NA	0.004	0.111	1.886

Key is at the end of the table.

[a] WDOE Method A cleanup level.

[b] WDOE Method B cleanup level.

[c] WDOE Method C cleanup level.

[d] EPA, Region 9, PRG.

Note: Bold type indicates concentrations above sample quantitation limits or detection limits.
Underline indicates concentrations above one or more comparison standards.

Key:

bgs = Below ground surface.
CLP = Contract Laboratory Program.
EPA = United States Environmental Protection Agency.
ft = Feet.
ID = Identification.
J = The analyte was positively identified. The associated numerical value is an estimate.
µg/kg = Micrograms per kilogram.
NA = Not analyzed.
ng/kg = Nanograms per kilogram.
PCBs = Polychlorinated biphenyls.
PRG = Preliminary remediation goal.
R = Rejected.
SVOCs = Semivolatile organic compounds.
U = Not detected.
UJ = The associated numerical value is an estimate of the quantitation limit of the analyte in this sample.
VOCs = Volatile organic compounds.
WDOE = Washington Department of Ecology.

Table 3-3

LANDFILL SUBSURFACE SOIL SAMPLE SCREENING LEVEL SUMMARY
WENATCHEE, WASHINGTON

Analyte	Range of Detection Limits	Range of Detected Concentrations*	Frequency of Detection	Frequency of Exceedence of Screening Level	Screening Level Source	Residential Cleanup Standards	Industrial Cleanup Standards
VOCs (µg/kg)							
2-Butanone	10 - 21	1 - 40	16 / 32	0 / 32	EPA Region 9 PRG	6,900,000[d]	27,000,000[d]
Acetone	10 - 150	43 - 170	7 / 32	0 / 32	MTCA Method B	8,000,000[b]	350,000,000[c]
Benzene	10 - 18	2	1 / 32	0 / 32	MTCA Method A	500[a]	500[a]
Chlorobenzene	10 - 18	1 - 4	2 / 32	0 / 32	MTCA Method B	1,600,000[b]	70,000,000[c]
Ethylbenzene	10 - 18	2 - 24	4 / 32	0 / 32	MTCA Method A	20,000[a]	20,000[a]
Xylene (total)	10 - 18	2 - 90	8 / 32	0 / 32	MTCA Method A	20,000[a]	20,000[a]
SVOCs (µg/kg)							
2-Methylnaphthalene	350 - 720	58 - 750	9 / 32	NA	NA	NA	NA
Acenaphthene	350 - 720	91	1 / 32	0 / 32	MTCA Method B	4,800,000[b]	210,000,000[c]
Anthracene	350 - 720	91	1 / 32	0 / 32	MTCA Method B	24,000,000[b]	100,000,000[c]
Benzo(a)pyrene	350 - 720	44 - 70	3 / 32	0 / 32	MTCA Method B	137[b]	18,000[c]
Benzo(b)fluoranthene	350 - 720	48 - 100	4 / 32	0 / 32	MTCA Method B	137[b]	18,000[c]
Benzo(k)fluoranthene	350 - 720	48 - 87	2 / 32	0 / 32	MTCA Method B	137[b]	18,000[c]
Bis(2-ethylhexyl)phthalate	350 - 720	41 - 4900	23 / 32	0 / 32	MTCA Method B	71,400[b]	9,370,000[c]
Butylbenzylphthalate	350 - 720	92 - 1600	3 / 32	0 / 32	MTCA Method B	16,000,000[b]	700,000,000[c]
Carbazole	350 - 720	190	1 / 32	0 / 32	MTCA Method B	50,000[b]	6,560,000[c]
Chrysene	350 - 720	57 - 540	6 / 32	1 / 32	MTCA Method B	137[b]	18,000[c]
Di-n-butylphthalate	350 - 720	50 - 150	2 / 32	0 / 32	MTCA Method B	8,000,000[b]	350,000,000[c]
Dimethylphthalate	350 - 720	80	1 / 32	0 / 32	MTCA Method B	80,000,000[b]	350,000,000[c]
Fluoranthene	350 - 720	48 - 210	6 / 32	0 / 32	MTCA Method B	3,200,000[b]	140,000,000[c]
Fluorene	350 - 720	50 - 140	3 / 32	0 / 32	MTCA Method B	3,200,000[b]	140,000,000[c]
Naphthalene	350 - 720	48 - 180	8 / 32	0 / 32	MTCA Method B	3,200,000[b]	140,000,000[c]
Phenanthrene	350 - 720	38 - 610	7 / 32	0 / 32	NA	NA	NA
Pyrene	350 - 720	36 - 230	13 / 32	0 / 32	MTCA Method B	2,400,000[b]	105,000,000[c]

Key at end of the table.

Table 3-3 (CONTINUED)

LANDFILL SUBSURFACE SOIL SAMPLE SCREENING LEVEL SUMMARY
WENATCHEE, WASHINGTON

Analyte	Range of Detection Limits	Range of Detected Concentrations*	Frequency of Detection	Frequency of Exceedence of Screening Level	Screening Level Source	Residential Cleanup Standards	Industrial Cleanup Standards
Pesticides/PCBs (ug/kg)							
4,4'-DDD	1.8 - 9.6	0.51 - 660	27 / 32	0 / 32	MTCA Method B	4,170[b]	547,000[c]
4,4'-DDE	1.8 - 9.6	0.63 - 210	29 / 32	0 / 32	MTCA Method B	2,940[b]	386,000[c]
4,4'-DDT	1.8 - 9.6	0.67 - 52	22 / 32	0 / 32	MTCA Method A	1,000[a]	5,000[a]
Aldrin	1.8 - 9.6	2.1 - 8.2	2 / 32	0 / 32	MTCA Method B	58.8[b]	7,720[c]
Alpha-BHC	1.8 - 9.6	4.2 - 22	2 / 32	0 / 32	MTCA Method B	159[b]	20,800[c]
Alpha-chlordane	1.8 - 9.6	1.1 - 26	9 / 32	0 / 32	MTCA Method B	769[b]	101,000[c]
Aroclor1242	35 - 190	150	1 / 32	0 / 32	MTCA Method A	1,000[a]	10,000[a]
Aroclor1254	35 - 190	40 - 470	2 / 32	0 / 32	MTCA Method A	1,000[a]	10,000[a]
Beta-BHC	1.8 - 9.6	2.2 - 16	8 / 32	0 / 32	MTCA Method B	556[b]	72,900[c]
Delta-BHC	1.8 - 9.6	5	1 / 32	NA	NA	NA	NA
Dieldrin	3.5 - 19	1.1 - 21	13 / 32	0 / 32	MTCA Method B	62.5[b]	8,200[c]
Endosulfan I	1.8 - 9.6	2.0 - 51	3 / 32	0 / 32	MTCA Method B	480,000[b]	21,000,000[c]
Endosulfan sulfate	3.5 - 19	3.7 - 11	3 / 32	NA	NA	NA	NA
Endrin	3.5 - 19	0.80 - 9.0	5 / 32	0 / 32	MTCA Method B	24,000[b]	1,050,000[c]
Endrin aldehyde	3.5 - 19	4.6 - 5.4	2 / 32	NA	NA	NA	NA
Endrin ketone	3.5 - 19	0.65 - 11	4 / 32	NA	NA	NA	NA
Gamma chlordane	1.8 - 9.6	0.60 - 28	16 / 32	NA	NA	NA	NA
Inorganics (mg/kg)							
Antimony	0.60 - 0.88	0.88 - 4.3	9 / 32	0 / 32	EPA Region 9 PRG	30[d]	750[d]
Arsenic	0.66 - 0.89	1.6 - 43.9	30 / 32	4 / 32	MTCA Method A	20[a]	200.0[a]
Barium	0.14 - 0.21	52.8 - 394	33 / 32	0 / 32	MTCA Method B	5,600[b]	245,000[c]
Beryllium	0.08 - 0.21	0.16 - 0.68	33 / 32	24 / 32	MTCA Method B	0.233[b]	30.5[c]
Cadmium	0.10 - 0.11	0.24 - 1.2	5 / 32	0 / 32	MTCA Method A	2[a]	10.0[a]
Chromium	0.20 - 0.30	8.8 - 62.5	32 / 32	0 / 32	MTCA Method A	100[a]	500.0[a]
Cobalt	0.44 - 0.67	4.5 - 14.7	32 / 32	0 / 32	EPA Region 9 PRG	3,300[d]	29,000[d]

Key at end of the table.

Table 3-3 (CONTINUED)

LANDFILL SUBSURFACE SOIL SAMPLE SCREENING LEVEL SUMMARY
WENATCHEE, WASHINGTON

Analyte	Range of Detection Limits	Range of Detected Concentrations*	Frequency of Detection	Frequency of Exceedence of Screening Level	Screening Level Source	Residential Cleanup Standards	Industrial Cleanup Standards
Inorganics (mg/kg)							
Copper	0.50 - 0.76	9.4 - 85.7	32 / 32	0 / 32	MTCA Method B	2,960[b]	130,000[c]
Lead	0.34 - 0.52	3.5 - 437	32 / 32	2 / 32	MTCA Method A	250[a]	1,000.0[a]
Manganese	0.12 - 0.18	201 - 1780	32 / 32	0 / 32	MTCA Method B	11,200[b]	490,000[c]
Mercury	0.05 - 0.06	0.08 - 0.90	4 / 32	0 / 32	MTCA Method A	1.0[a]	1.0[a]
Nickel	0.50 - 0.76	11.3 - 61.9	32 / 32	0 / 32	MTCA Method B	1,600[b]	70,000[c]
Selenium	1.1 - 2.7	0.90 - 2.3	21 / 32	0 / 32	MTCA Method B	400[b]	17,500[c]
Silver	0.28 - 0.42	0.43 - 1.6	32 / 32	0 / 32	MTCA Method B	400[b]	17,500[c]
Thallium	0.65 - 0.88	0.87 - 2.2	24 / 32	0 / 32	MTCA Method B	5.6[b]	245[c]
Vanadium	0.28 - 0.42	23.8 - 74.1	32 / 32	0 / 32	MTCA Method B	560[b]	24,500[c]
Zinc	0.48 - 0.73	39.7 - 505	32 / 32	0 / 32	MTCA Method B	24,000[b]	1,050,000[c]
Dioxins/Furans (ng/kg)							
1,2,3,4,6,7,8-HpCDD	0.32 - 0.51	0.374 - 106.124	19 / 21	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	0.09 - 2.4	0.405 - 23.511	16 / 21	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	0.13 - 2.0	1.393 - 1.629	2 / 21	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	0.14 - 1.2	2.461 - 3.754	2 / 21	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	0.09 - 0.64	1.012 - 25.284	14 / 21	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	0.09 - 0.8	0.295 - 2.254	5 / 21	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	0.07 - 1.1	1.055 - 1.173	2 / 21	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	0.1 - 2.2	0.870 - 1.744	2 / 21	NA	NA	NA	NA
1,2,3,7,8-PeCDD	0.1 - 2.0	1.027	1 / 21	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	0.08 - 0.9	1.044 - 3.079	3 / 21	NA	NA	NA	NA
2,3,4,7,8-PeCDF	0.08 - 4.8	0.301 - 1.851	3 / 21	NA	NA	NA	NA
2,3,7,8-TCDD	0.09 - 0.55	0.388 - 1.119	2 / 21	NA	NA	NA	NA

Key at end of the table.

Table 3-3 (CONTINUED)

LANDFILL SUBSURFACE SOIL SAMPLE SCREENING LEVEL SUMMARY
WENATCHEE, WASHINGTON

Analyte	Range of Detection Limits	Range of Detected Concentrations*	Frequency of Detection	Frequency of Exceedence of Screening Level	Screening Level Source	Residential Cleanup Standards	Industrial Cleanup Standards
Dioxins/Furans (ng/kg)							
2,3,7,8-TCDF	0.12 - 0.42	0.3798 - 3.6197	8 / 21	NA	NA	NA	NA
OCDD	3.7 - 15.9	4.186 - 1255.142	19 / 21	NA	NA	NA	NA
OCDF	0.16 - 12.0	1.157 - 53.484	16 / 21	NA	NA	NA	NA
Total toxicity equivalency	-	0.001 - 4.332	21 / 21	0 / 21	MTCA Method B	6.67[b]	875[c]

* Detected concentrations less than the associated detection limits are considered estimated quantities

[a] WDOE Method A cleanup level.

[b] WDOE Method B cleanup level.

[c] WDOE Method C cleanup level.

[d] EPA, Region 9, PRG.

Key:

EPA = United States Environmental Protection Agency.
µg/kg = Micrograms per kilogram.
mg/kg = Milligrams per kilogram.
MTCA = Model Toxics Control Act.
NA = Not analyzed.
ng/kg = Nanograms per kilogram.
PCBs = Polychlorinated biphenyls.
PRG = Preliminary remediation goal.
SVOCs = Semivolatile organic compounds.
VOCs = Volatile organic compounds.
WDOE = Washington Department of Ecology.

Table 3-4

LANDFILL GROUNDWATER SAMPLE ANALYTICAL RESULTS SUMMARY WENATCHEE, WASHINGTON

LOCATION ID	Groundwater Cleanup Standards	LF02GW32	LF03GW32	LF11GW24
DEPTH		32 ft bgs	32 ft bgs	24 ft bgs
VOCs (µg/L)				
1,2-Dichloroethane	0.481[b]	10 U	100 U	21
Acetone	800[b]	2 J	130	10 U
Benzene	5[a]	2 J	100 U	10 U
Carbon Disulfide	800[b]	2 J	100 U	10 U
Chlorobenzene	160[b]	5 J	100 U	10 U
Methylene Chloride	5[a]	10 U	420	10 U
Tetrachloroethene	5[a]	10 U	100 U	1 J
Xylene (total)	20[a]	2 J	100 U	10 U
SVOCs (µg/L)				
2-Methylnaphthalene	-	10 U	2 J	10 U
2-Methylphenol	800[b]	5 J	10 U	10 U
4-Methylphenol	80[b]	3 J	1 J	10 U
Bis(2-ethylhexyl)phthalate	6.25[b]	10 U	6 J	10 U
Diethylphthalate	12,800[b]	10 U	2 J	3 J
Naphthalene	320[b]	1 J	3 J	10 U
Phenol	9,600[b]	3 J	10 U	10 U
Pesticides/PCBs (µg/L)				
4,4'-DDD	0.365[b]	0.10 U	1.3 J	0.041 J
4,4'-DDE	0.257[b]	0.10	0.61 J	0.10 U
Aroclor1260	0.1[a]	1.0 U	1.0 U	0.41 J
Inorganics (µg/L)				
Antimony	15[c]	6.8 J	3 UJ	3.0 UJ
Arsenic	5[a]	27.5	45.6	7.1 J
Barium	1,120[b]	1,330 J	1,930 J	621 J
Beryllium	0.0203[b]	0.40 U	2 J	0.82 J
Cadmium	5[a]	2.4 J	5.2	1.1 J
Chromium	50[a]	74.9	370	541
Cobalt	2,200[c]	38.9 J	64.8	30.8 J
Copper	592[b]	69.1	200	92.1
Lead	5[a]	130 J	487 J	16.5 J
Manganese	2,240[b]	1,880 J	2,430 J	2,470 J
Mercury	2[a]	0.16 J	0.45	0.10 UJ
Nickel	320[b]	73.3	306	363
Selenium	80[b]	5.8 J	19.7 J	5.8 J
Silver	80[b]	1.4 UJ	4.2 J	1.4 UJ

Key is at the end of the table.

Table 3-4 (CONTINUED)

LANDFILL GROUNDWATER SAMPLE ANALYTICAL RESULTS SUMMARY WENATCHEE, WASHINGTON

	Groundwater			
LOCATION ID	**Cleanup**	**LF02GW32**	**LF03GW32**	**LF11GW24**
DEPTH	**Standards**	**32 ft bgs**	**32 ft bgs**	**24 ft bgs**
Inorganics (ug/L)				
Vanadium	112[b]	66.2	192	96.9
Zinc	4,800[b]	**551 J**	**2,600 J**	**140 J**
Dioxins/Furans (pg/L)				
1,2,3,4,6,7,8-HpCDF	-	6.746 UJ	32.134 J	4.390 U
1,2,3,4,7,8-HxCDF	-	6.531 UJ	11.583 J	2.998 U
OCDD	-	433.420 UJ	1,037.870	13.882 U
OCDF	-	11.998 UJ	122.027	3.598 U
Total Toxicity Equivalency	0.583[b]	0.000	1.6	0.000

Note: Bold type indicates concentrations above sample quantitation limits or detection limits.
Underline indicates concentrations above one or more comparison standards.

Key:

a = WDOE Method A cleanup level.
b = WDOE Method B cleanup level.
c = EPA, Region 9, PRG (Tap Water).
bgs = Below ground surface.
CLP = Contract Laboratory Program.
EPA = United States Environmental Protection Agency.
ft = Feet.
ID = Identification.
J = The analyte was positively identified. The associated numerical value is an estimate.
mg/L = Micrograms per liter.
NA = Not analyzed.
pg/L = Picograms per liter.
PCBs = Polychlorinated biphenyls.
PRG = Preliminary remediation goal.
SVOC = Semivolatile organic compounds.
U = Not detected.
UJ = The associated numerical value is an estimate of the quantitation limit of the analyte in this sample.
VOCs = Volatile organic compounds.
WDO = Washington Department of Ecology.

Table 3-5

LANDFILL GROUNDWATER SAMPLE SCREENING LEVEL SUMMARY
WENATCHEE, WASHINGTON

Analyte	Range of Detection Limits	Range of Detected Concentrations*	Frequency of Detection	Frequency of Exceedence of Screening Level	Screening Level Source	Groundwater Cleanup Standards
VOCs (µg/L)						
1,2-Dichloroethane	10 - 100	21	1 / 3	1 / 3	MTCA Method B	0.481[b]
Acetone	10 - 100	2 - 130	2 / 3	0 / 3	MTCA Method B	800[b]
Benzene	10 - 100	2	1 / 3	0 / 3	MTCA Method A	5[a]
Carbon Disulfide	10 - 100	2	1 / 3	0 / 3	MTCA Method B	800[b]
Chlorobenzene	10 - 100	5	1 / 3	0 / 3	MTCA Method B	160[b]
Methylene Chloride	10 - 100	420	1 / 3	1 / 3	MTCA Method A	5[a]
Tetrachloroethene	10 - 100	1	1 / 3	0 / 3	MTCA Method A	5[a]
Xylene (total)	10 - 100	2	1 / 3	0 / 3	MTCA Method A	20[a]
SVOCs (µg/L)						
2-Methylnaphthalene	10	2	1 / 3	-	NA	NA
2-Methylphenol	10	5	1 / 3	0 / 3	MTCA Method B	800[b]
4-Methylphenol	10	1 - 3	2 / 3	0 / 3	MTCA Method B	80[b]
Bis(2-ethylhexyl)phthalate	10	6	1 / 3	0 / 3	MTCA Method B	6.25[b]
Diethylphthalate	10	2 - 3	2 / 3	0 / 3	MTCA Method B	12,800[b]
Naphthalene	10	1 - 3	2 / 3	0 / 3	MTCA Method B	320[b]
Phenol	10	3	1 / 3	0 / 3	MTCA Method B	9,600[b]
Pesticides/PCBs (µg/L)						
4,4'-DDD	0.098 - 0.11	0.041 - 1.3	2 / 3	1 / 3	MTCA Method B	0.365[b]
4,4'-DDE	0.098 - 0.11	0.10 - 0.61	2 / 3	1 / 3	MTCA Method B	0.257[b]
Aroclor1260	0.98 - 1.1	0.41	1 / 3	1 / 3	MTCA Method A	0.1[a]
Inorganics (µg/L)						
Antimony	3	6.8	1 / 3	0 / 3	EPA Region 9 PRG	15[c]
Arsenic	3	7.1 - 45.6	3 / 3	3 / 3	MTCA Method A	5[a]
Barium	0.7	621 - 1930	3 / 3	2 / 3	MTCA Method B	1,120[b]
Beryllium	0.4	0.82 - 2	2 / 3	2 / 3	MTCA Method B	0.0203[b]
Cadmium	12.6	1.1 - 5.2	3 / 3	1 / 3	MTCA Method A	5[a]
Chromium	1	74.9 - 541	3 / 3	3 / 3	MTCA Method A	50[a]
Cobalt	2.2	30.8 - 64.8	3 / 3	0 / 3	EPA Region 9 PRG	2,200[c]
Copper	2.5	69.1 - 200	3 / 3	0 / 3	MTCA Method B	592[b]
Lead	1.7	16.5 - 487	3 / 3	3 / 3	MTCA Method A	5[a]
Manganese	0.6	1880 - 2470	3 / 3	2 / 3	MTCA Method B	2,240[b]
Mercury	0.1	0.16 - 0.45	2 / 3	0 / 3	MTCA Method A	2[a]
Nickel	2.5	73.3 - 363	3 / 3	1 / 3	MTCA Method B	320[b]
Selenium	2.3	5.8 - 19.7	3 / 3	0 / 3	MTCA Method B	80[b]
Silver	1.4	1.4 - 4.2	2 / 3	0 / 3	MTCA Method B	80[b]
Vanadium	1.4	66.2 - 192	3 / 3	1 / 3	MTCA Method B	112[b]
Zinc	2.4	140 - 2600	3 / 3	0 / 3	MTCA Method B	4,800[b]

Key at end of the table.

Table 3-5 (CONTINUED)

LANDFILL GROUNDWATER SAMPLE SCREENING LEVEL SUMMARY
WENATCHEE, WASHINGTON

Analyte	Range of Detection Limits	Range of Detected Concentrations*	Frequency of Detection	Frequency of Exceedence of Screening Level	Screening Level Source	Groundwater Cleanup Standards
Dioxins/Furans (pg/L)						
1,2,3,4,6,7,8-HpCDF	1.7 - 8.4	32.134	1 / 3	NA	NA	NA
1,2,3,4,7,8-HxCDF	2.1 - 6.5	11.583	1 / 3	NA	NA	NA
OCDD	9.7 - 516	1037.870	1 / 3	NA	NA	NA
OCDF	3.4 - 12	122.027	1 / 3	NA	NA	NA
Total toxicity equivalency	-	1.6	1 / 1	1 / 1	MTCA Method B	0.583[b]

* Detected concentrations less than the associated detection limits are considered estimated quantities.

[a] WDOE Method A cleanup level.

[b] WDOE Method B cleanup level.

[c] EPA, Region 9, PRG.

Key:

EPA = United States Environmental Protection Agency.
MTCA = Model Toxics Control Act.
µg/L = Micrograms per liter.
pg/L = Picograms per liter.
PRG = Preliminary remediation goal.

Table 3-6

PUBLIC WORKS DEPARTMENT PROPERTY SUBSURFACE SOIL SAMPLE ANALYTICAL RESULTS SUMMARY WENATCHEE, WASHINGTON

LOCATION ID	Residential Cleanup Standards	Industrial Cleanup Standards	LF04SB04	LF04SB12	LF05SB04	LF05SB12	LF06SB04	LF06SB12	LF14SS00	LF14SB08	LF06SB04B
DEPTH			0 - 4 ft bgs	8 - 12 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	0 - 4 ft bgs
VOCs (µg/kg)											
2-Butanone	6,900,000[d]	27,000,000[d]	11 U	11 U	2 J	11 U	11 U	9 J	11 U	10 U	NA
Acetone	8,000,000[b]	350,000,000[c]	11 U	11 U	11 U	11 U	34	51	11 U	10 U	NA
SVOCs (µg/kg)											
2-Methylnaphthalene	-	-	380 U	360 U	350 UJ	350 UJ	350 U	55 J	350 U	54 J	NA
4-Nitroaniline	-	-	950 U	900 U	890 UJ	880 UJ	890 U	940	890 U	860 U	NA
Acenaphthene	4,800,000[b]	210,000,000[b]	380 U	360 U	350 UJ	350 UJ	350 U	380 U	350 U	410	NA
Anthracene	24,000,000[b]	105,000,000[b]	380 U	360 U	350 UJ	350 UJ	350 U	380 U	350 U	1,500	NA
Benzo(a)anthracene	137[b]	18,000[b]	380 U	360 U	350 UJ	350 UJ	350 U	42 J	51 J	3,200	NA
Benzo(a)pyrene	137[b]	18,000[c]	380 U	360 U	350 UJ	350 UJ	350 U	380 U	93 J	2,200	NA
Benzo(b)fluoranthene	137[b]	18,000[c]	380 U	360 U	350 UJ	350 UJ	350 U	380 U	95 J	1,100	NA
Benzo(g,h,i)perylene	-	-	380 U	360 U	350 UJ	350 UJ	350 U	380 U	120 J	480	NA
Benzo(k)fluoranthene	137[b]	18,000[c]	380 U	360 U	350 UJ	350 UJ	350 U	380 U	350 U	1,200	NA
Bis(2-ethylhexyl)phthalate	71,400[b]	9,370,000[c]	380 U	360 U	5,200 J	320 J	54 J	380 U	580	39 J	NA
Carbazole	16,000,000[b]	7,000,000[c]	380 U	360 U	350 UJ	350 UJ	350 U	380 U	350 U	1,200	NA
Chrysene	137[b]	18,000[c]	380 U	360 U	350 UJ	350 UJ	350 U	61 J	59 J	3,200	NA
Di-n-butylphthalate	8,000,000[b]	350,000,000[c]	380 U	360 U	350 UJ	350 UJ	170 J	52 J	350 U	340 U	NA
Dibenzofuran	1,100,000[d]	10,000,000[d]	380 U	360 U	350 UJ	350 UJ	350 U	380 U	350 U	210 J	NA
Dibenz(a,h)anthracene	137[b]	18,000[c]	380 U	360 U	350 UJ	350 UJ	350 U	380 U	350 U	420	NA
Fluoranthene	3,200,000[b]	140,000,000[c]	380 U	360 U	350 UJ	350 UJ	350 U	68 J	140 J	6,400	NA
Fluorene	3,200,000[b]	140,000[c]	380 U	360 U	350 UJ	350 UJ	350 U	380 U	350 U	360	NA
Indeno(1,2,3-cd)pyrene	137[b]	18,000[c]	380 U	360 U	350 UJ	350 UJ	350 U	380 U	67 J	1,200	NA
Phenanthrene	-	-	380 U	360 U	350 UJ	350 UJ	350 U	60 J	68 J	5,600	NA
Pyrene	2,400,000[b]	105,000,000[c]	380 U	360 U	350 UJ	350 UJ	350 U	110 J	190 J	6,200	NA
Pesticides/PCBs (µg/kg)											
4,4'-DDD	4,170[b]	547,000[c]	26	17	6.7	3.5 U	210	230	5.6	4.6	NA
4,4'-DDE	2,940[b]	386,000[c]	60	15	6.0	1.9 J	73	62	31	3.4 U	NA
4,4'-DDT	1,000[a]	5,000[a]	7.2	2.6 J	4.5	3.5 U	3.9 J	5.8 J	19	2.0 J	NA

Key is at the end of the table.

Table 3-6 (CONTINUED)

PUBLIC WORKS DEPARTMENT PROPERTY SUBSURFACE SOIL SAMPLE ANALYTICAL RESULTS SUMMARY WENATCHEE, WASHINGTON

LOCATION ID	Residential Cleanup Standards	Industrial Cleanup Standards	LF04SB04	LF04SB12	LF05SB04	LF05SB12	LF06SB04	LF06SB12	LF14SS00	LF14SB08	LF06SB04B
DEPTH			0 - 4 ft bgs	8 - 12 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	0 - 4 ft bgs	8 - 12 ft bgs	0 - 4 ft bgs
Inorganics (ug/kg)											
Antimony	30,000[d]	750,000[d]	R	R	R	R	R	R	R	R	NA
Arsenic	20[a]	200.0[a]	28.7 J	5.0 J	3.4 J	2.9 J	15.9 J	18.8 J	17.4 J	4.2 J	NA
Barium	5,600[b]	245,000[c]	85.5	82.2	105	119	99.7	92.9	149	78.5	NA
Beryllium	0.233[b]	30.5[c]	0.34 J	0.27 J	0.29 J	0.25 J	0.25 J	0.36 J	0.36 J	0.35 J	NA
Chromium	100[a]	500.0[a]	15.2	17.2	31.6	28.5	19.8	19.5	25.3 J	20.7 J	NA
Cobalt	3,300[d]	29,000[d]	6.8 J	6.5 J	9.2 J	8.1 J	8.1 J	6.6 J	8.9 J	6.2 J	NA
Copper	2,960[b]	130,000[c]	14.7	17.0	20.8	19.7	30.2	17.0	18.1	13.8	NA
Lead	250[a]	1,000.0[a]	134 J	23.0 J	10.2 J	8.9 J	130 J	162 J	71.2 J	17.0 J	NA
Manganese	11,200[b]	490,000[c]	337	345	360	340	348	333	410	343	NA
Mercury	1.0[a]	1.0[a]	0.05 U	0.16	0.05 J	0.05 U	0.05 U	0.06 U	0.05 U	0.43	NA
Nickel	1,600[b]	70,000[c]	11.7	12.7	23.3	23.3	19.7	14.1	15.6	13.7	NA
Selenium	400[b]	17,500[c]	1.5 U	1.5 U	2.0 U	1.9 U	1.6 U	1.5 U	1.5	1.9	NA
Silver	400[b]	17,500[c]	0.73 J	0.74 J	0.77 J	0.70 J	0.70 J	0.78 J	0.86 J	0.77 J	NA
Thallium	5.6[b]	245[c]	1.1 J	1.2 J	1.1 J	1.1 J	0.72 J	1.4 J	0.98 J	1.3 J	NA
Vanadium	560[b]	24,500[c]	37.0	36.2	45.6	40.7	39.4	36.5	47.7	33.7	NA
Zinc	24,000[b]	1,050,000[c]	58.6 J	79.0 J	59.5 J	53.1 J	76.9 J	84.0 J	63.7 J	90.3 J	NA
Dioxins/Furans (ng/kg)											
1,2,3,4,6,7,8-HpCDD	-	-	1.833	1.014	NA	NA	NA	NA	5.513	0.400 U	2.931
1,2,3,4,6,7,8-HpCDF	-	-	0.627 J	2.034	NA	NA	NA	NA	1.834	0.218 U	1.364
1,2,3,4,7,8-HxCDD	-	-	0.154 U	0.135 U	NA	NA	NA	NA	0.567	0.357 U	0.466 U
1,2,3,4,7,8-HxCDF	-	-	1.022 J	1.282 J	NA	NA	NA	NA	13.630 J	0.233 U	0.997 J
1,2,3,6,7,8-HxCDF	-	-	0.196 U	0.140 U	NA	NA	NA	NA	0.902 J	0.174 U	0.273 U
2,3,4,7,8-PeCDF	-	-	0.113 U	0.114 U	NA	NA	NA	NA	0.359 J	0.233 U	0.217 U
OCDD	-	-	15.904 U	9.754 U	NA	NA	NA	NA	49.865	1.293	18.653
OCDF	-	-	1.129	0.925 J	NA	NA	NA	NA	4.353	0.351 U	1.488
Total Toxicity Equivalency	6.67[b]	875[c]	0.128	0.159	NA	NA	NA	NA	1.756	0.001	0.163

Key is at the end of the table.

[a] WDOE Method A cleanup level.

[b] WDOE Method B cleanup level.

[c] WDOE Method C cleanup level.

[d] EPA, Region 9, PRG.

Note: Bold type indicates concentrations above sample quantitation limits or detection limits.
Underline indicates concentrations above one or more comparison standards.

Key:

bgs	= Below ground surface.
CLP	= Contract Laboratory Program.
EPA	= United States Environmental Protection Agency.
ft	= Feet.
ID	= Identification.
J	= The analyte was positively identified. The associated numerical value is an estimate.
µg/kg	= Micrograms per kilogram.
NA	= Not analyzed.
ng/kg	= Nanograms per kilogram.
PCBs	= Polychlorinated biphenyls.
PRG	= Preliminary remediation goal.
R	= Rejected.
SVOCs	= Semivolatile organic compounds.
U	= Not detected.
UJ	= The associated numerical value is an estimate of the quantitation limit of the analyte in this sample.
VOCs	= Volatile organic compounds.
WDOE	= Washington Department of Ecology.

Table 3-7

PUBLIC WORKS DEPARTMENT PROPERTY
SUBSURFACE SOIL SAMPLE SCREENING LEVEL SUMMARY
WENATCHEE, WASHINGTON

Analyte	Range of Detection Limits	Range of Detected Concentrations*	Frequency of Detection	Frequency of Exceedence of Screening Level	Screening Level Source	Residential Cleanup Standards	Industrial Cleanup Standards
VOCs (µg/kg)							
2-Butanone	10 - 21	2-9	2 / 8	0 / 8	EPA Region 9 PRG	6,900,000[d]	27,000,000[d]
Acetone	10 - 150	34 - 51	2 / 8	0 / 8	MTCA Method B	8,000,000[b]	350,000,000[c]
SVOCs (µg/kg)							
2-Methylnaphthalene	350 - 720	54 - 55	2 / 8	NA	NA	NA	NA
4-Nitroaniline	350 - 720	940	1 / 8	NA	NA	NA	NA
Acenaphthene	350 - 720	410	1 / 8	0 / 8	MTCA Method B	4,800,000[b]	210,000,000[b]
Anthracene	350 - 720	1500	1 / 8	0 / 8	MTCA Method B	24,000,000[b]	105,000,000[b]
Benzo(a)anthracene	350 - 720	42 - 3200	3 / 8	1 / 8	MTCA Method B	137[b]	18,000[b]
Benzo(a)pyrene	350 - 720	93 - 2200	2 / 8	1 / 8	MTCA Method B	137[b]	18,000[c]
Benzo(b)fluoranthene	350 - 720	95 - 1100	2 / 8	1 / 8	MTCA Method B	137[b]	18,000[c]
Benzo(g,h,i)perylene	350 - 720	120 - 480	2 / 8	NA	NA	NA	NA
Benzo(k)fluoranthene	350 - 720	1200	1 / 8	0 / 8	MTCA Method B	137[b]	18,000[c]
Bis(2-ethylhexyl)phthalate	350 - 720	54 - 5200	5 / 8	0 / 8	MTCA Method B	71,400[b]	9,370,000[c]
Carbazole	350 - 720	1200	1 / 8	0 / 8	MTCA Method B	16,000,000[b]	7,000,000[c]
Chrysene	350 - 720	59 - 3200	3 / 8	1 / 8	MTCA Method B	137[b]	18,000[c]
Di-n-butylphthalate	350 - 720	52 - 170	2 / 8	0 / 8	MTCA Method B	8,000,000[b]	350,000,000[c]
Dibenzofuran	350 - 720	210	1 / 8	0 / 8	EPA Region 9 PRG	1,100,000[d]	10,000,000[d]
Dibenz(a,h)anthracene	350 - 720	420	1 / 8	1 / 8	MTCA Method B	137[b]	18,000[c]
Fluoranthene	350 - 720	68 - 6400	3 / 8	0 / 8	MTCA Method B	3,200,000[b]	140,000,000[c]
Fluorene	350 - 720	360	1 / 8	0 / 8	MTCA Method B	3,200,000[b]	140,000[c]
Indeno(1,2,3-cd)pyrene	350 - 720	67 - 1200	2 / 8	1 / 8	MTCA Method B	137[b]	18,000[c]
Phenanthrene	350 - 720	60 - 5600	3 / 8	NA	NA	NA	NA
Pyrene	350 - 720	110 - 6200	3 / 8	0 / 8	MTCA Method B	2,400,000[b]	105,000,000[c]

Key at end of table.

Table 3-7 (CONTINUED)

PUBLIC WORKS DEPARTMENT PROPERTY
SUBSURFACE SOIL SAMPLE SCREENING LEVEL SUMMARY
WENATCHEE, WASHINGTON

Analyte	Range of Detection Limits	Range of Detected Concentrations*	Frequency of Detection	Frequency of Exceedence of Screening Level	Screening Level Source	Residential Cleanup Standards	Industrial Cleanup Standards
Pesticides/PCBs (µg/kg)							
4,4'-DDD	1.8 - 9.6	4.6 - 230	7 / 8	0 / 8	MTCA Method B	4,170[b]	547,000[c]
4,4'-DDE	1.8 - 9.6	1.9 - 73	7 / 8	0 / 8	MTCA Method B	2,940[b]	386,000[c]
4,4'-DDT	1.8 - 9.6	2.0 - 19	7 / 8	0 / 8	MTCA Method A	1,000[a]	5,000[a]
Inorganics (mg/kg)							
Antimony	0.60 - 0.88	-	-	-	EPA Region 9 PRG	30,000[d]	750,000[d]
Arsenic	0.66 - 0.89	2.9 - 28.7	8 / 8	0 / 8	MTCA Method A	20[a]	200.0[a]
Barium	0.14 - 0.21	78.5 - 149	8 / 8	0 / 8	MTCA Method B	5,600[b]	245,000[c]
Beryllium	0.08 - 0.21	0.25 - 0.36	8 / 8	8 / 8	MTCA Method B	0.233[b]	30.5[c]
Chromium	0.20 - 0.30	15.2 - 31.6	8 / 8	0 / 8	MTCA Method A	100[a]	500.0[a]
Cobalt	0.44 - 0.67	6.2 - 9.2	8 / 8	0 / 8	EPA Region 9 PRG	3,300[d]	29,000[d]
Copper	0.50 - 0.76	13.8 - 30.2	8 / 8	0 / 8	MTCA Method B	2,960[b]	130,000[c]
Lead	0.34 - 0.52	8.9 - 162	8 / 8	0 / 8	MTCA Method A	250[a]	1,000.0[a]
Manganese	0.12 - 0.18	333 - 410	8 / 8	0 / 8	MTCA Method B	11,200[b]	490,000[c]
Mercury	0.05 - 0.06	0.05 - 0.43	3 / 8	0 / 8	MTCA Method A	1.0[a]	1.0[a]
Nickel	0.50 - 0.76	11.7 - 23.3	8 / 8	0 / 8	MTCA Method B	1,600[b]	70,000[c]
Selenium	1.1 - 2.7	1.5 - 1.9	2 / 8	0 / 8	MTCA Method B	400[b]	17,500[c]
Silver	0.28 - 0.42	0.70 - 0.86	8 / 8	0 / 8	MTCA Method B	400[b]	17,500[c]
Thallium	0.65 - 0.88	0.72 - 1.4	8 / 8	0 / 8	MTCA Method B	5.6[b]	245[c]
Vanadium	0.28 - 0.42	33.7 - 47.7	8 / 8	0 / 8	MTCA Method B	560[b]	24,500[c]
Zinc	0.48 - 0.73	53.1 - 90.3	8 / 8	0 / 8	MTCA Method B	24,000[b]	1,050,000[c]

Key at end of table.

Table 3-7 (CONTINUED)

PUBLIC WORKS DEPARTMENT PROPERTY
SUBSURFACE SOIL SAMPLE SCREENING LEVEL SUMMARY
WENATCHEE, WASHINGTON

Analyte	Range of Detection Limits	Range of Detected Concentrations*	Frequency of Detection	Frequency of Exceedence of Screening Level	Screening Level Source	Residential Cleanup Standards	Industrial Cleanup Standards
Dioxins/Furans (ng/kg)							
1,2,3,4,6,7,8-HpCDD	0.32 - 0.51	1.014 - 5.513	4 / 5	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	0.09 - 2.4	0.627 - 2.034	4 / 5	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	0.14 - 1.2	0.567	1 / 5	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	0.09 - 0.64	0.997 - 13.630	4 / 5	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	0.07 - 1.1	0.902	1 / 5	NA	NA	NA	NA
2,3,4,7,8-PeCDF	0.08 - 4.8	0.359	1 / 5	NA	NA	NA	NA
OCDD	3.7 - 15.9	1.293 - 49.865	3 / 5	NA	NA	NA	NA
OCDF	0.16 - 12.0	0.925 - 4.353	4 / 5	NA	NA	NA	NA

* Detected concentrations less than the associated detection limits are considered estimated quantities

[a] WDOE Method A cleanup level.

[b] WDOE Method B cleanup level.

[c] WDOE Method C cleanup level.

[d] EPA, Region 9, PRG.

Key:

EPA = United States Environmental Protection Agency.
µg/kg = Micrograms per kilogram.
mg/kg = Milligrams per kilogram.
MTCA = Model Toxics Control Act.
NA = Not analyzed.
ng/kg = Nanograms per kilogram.
PCBs = Polychlorinated biphenyls.
PRG = Preliminary remediation goal.
SVOCs = Semivolatile organic compounds.
VOCs = Volatile organic compounds.
WDOE = Washington Department of Ecology.

TABLE 3-8

PUBLIC WORKS DEPARTMENT PROPERTY GROUNDWATER SAMPLE ANALYTICAL RESULTS SUMMARY WENATCHEE, WASHINGTON

	Groundwate		
LOCATION ID	**Cleanup**	**LF04GW24**	**LF14GW24**
DEPTH	**Standards**	**24 ft bgs**	**24 ft bgs**
VOCs(µg/L)			
2-Butanone	4,800[b]	3 J	10 U
Acetone	800[b]	18	10 U
Benzene	5[a]	1 J	10 U
Methylene Chloride	5[a]	23	10 U
Toluene	40[a]	2 J	10 U
Pesticides/PCBs(µg/L)			
4,4'-DDD	0.365[b]	0.040 J	0.11 U
4,4'-DDE	0.257[b]	0.036 J	0.11 U
Aroclor1260	0.1[a]	1.0 U	0.37 J
Inorganics(µg/L)			
Arsenic	5[a]	28.4	18.3
Barium	1,120[b]	1,390 J	1,930 J
Beryllium	0.0203[b]	2.8 J	2.8 J
Cadmium	5[a]	2.1 J	2.0 J
Chromium	50[a]	762	234
Cobalt	2,200[c]	83.7	90.0
Copper	592[b]	324	238
Lead	5[a]	86.3 J	45.1 J
Manganese	2,240[b]	5,190 J	6,240 J
Mercury	2[a]	0.24	0.16
Nickel	320[b]	565	283
Selenium	80[b]	16.6 J	7.5 J
Silver	80[b]	4.6 J	3.3 J
Vanadium	112[b]	222	155
Zinc	4,800[b]	1,160 J	333 J
Dioxins/Furans(pg/L)			
1,2,3,4,6,7,8-HpCDF	-	4.542 J	2.912 U
OCDF	-	16.634	3.355 U
Total Toxicity Equivalen	0.583[b]	0.0062	0.000

Key at end of table.

[a] WDOE Method A cleanup level.

[b] WDOE Method B cleanup level.

Note: Bold type indicates concentrations above sample quantitation limits or detection limits.
Underline indicates concentrations above one or more comparison standards.

Key:

CLP	EPA, Region 9, PRG (Tap Water).
bgs	Below ground surface.
CLP	Contract Laboratory Program.
EPA	United States Environmental Protection Agency.
ft	Feet.
ID	Identification.
J	The analyte was positively identified. The associated numerical value is an estimate.
NA	Not analyzed.
pg/L	Picograms per liter.
PCBs	Polychlorinated biphenyls.
PRG	Preliminary remediation goal.
SVOCs	Semivolatile organic compounds.
µg/L	Micrograms per liter.
U	Not detected.
VOCs	Volatile organic compounds.
WDOE	Washington Department of Ecology.

Table 3-9

PUBLIC WORKS DEPARTMENT PROPERTY
GROUNDWATER SAMPLE SCREENING LEVEL SUMMARY
WENATCHEE, WASHINGTON

Analyte	Range of Detection Limits	Range of Detected Concentrations	Frequency of Detection	Frequency of Exceedence of Screening Level	Screening Level Source	Groundwater Cleanup Standards
VOCs (µg/L)						
2-Butanone	10 - 100	3	1 / 2	0 / 2	MTCA Method B	4,800[b]
Acetone	10 - 100	18	1 / 2	0 / 2	MTCA Method B	800[b]
Benzene	10 - 100	1	1 / 2	0 / 2	MTCA Method A	5[a]
Methylene Chloride	10 - 100	23	1 / 2	1 / 2	MTCA Method A	5[a]
Toluene	10 - 100	2	1 / 2	0 / 2	MTCA Method A	40[a]
Pesticides/PCBs (µg/L)						
4,4'-DDD	0.098 - 0.11	0.040	1 / 2	0 / 2	MTCA Method B	0.365[b]
4,4'-DDE	0.098 - 0.11	0.036	1 / 2	0 / 2	MTCA Method B	0.257[b]
Aroclor1260	0.98 - 1.1	0.37	1 / 2	1 / 2	MTCA Method A	0.1[a]
Inorganics (µg/L)						
Arsenic	3	18.3 - 28.4	2 / 2	2 / 2	MTCA Method A	5[a]
Barium	0.7	1390 - 1930	2 / 2	2 / 2	MTCA Method B	1,120[b]
Beryllium	0.4	2.8	2 / 2	2 / 2	MTCA Method B	0.0203[b]
Cadmium	12.6	2.0 - 2.1	2 / 2	0 / 2	MTCA Method A	5[a]
Chromium	1	234 - 762	2 / 2	2 / 2	MTCA Method A	50[a]
Cobalt	2.2	83.7 - 90.0	2 / 2	0 / 2	EPA Region 9 PRG	2,200[c]
Copper	2.5	238 - 324	2 / 2	0 / 2	MTCA Method B	592[b]
Lead	1.7	45.1 - 86.3	2 / 2	2 / 2	MTCA Method A	5[a]
Manganese	0.6	5190 - 6240	2 / 2	2 / 2	MTCA Method B	2,240[b]
Mercury	0.1	0.16 - 0.24	2 / 2	0 / 2	MTCA Method A	2[a]
Nickel	2.5	283 - 565	2 / 2	1 / 2	MTCA Method B	320[b]
Selenium	2.3	7.5 - 16.6	2 / 2	0 / 2	MTCA Method B	80[b]
Silver	1.4	3.3 - 4.6	2 / 2	0 / 2	MTCA Method B	80[b]
Vanadium	1.4	155 - 222	2 / 2	2 / 2	MTCA Method B	112[b]
Zinc	2.4	333 - 1160	2 / 2	0 / 2	MTCA Method B	4,800[b]
Dioxins/Furans (pg/L)						
1,2,3,4,6,7,8-HpCDF	1.7 - 8.4	4.542	1 / 2	NA	NA	NA
OCDF	3.4 - 12	16.634	1 / 2	NA	NA	NA

* Detected concentrations less than the associated detection limits are considered estimated quantities

[a] WDOE Method A cleanup level.

[b] WDOE Method B cleanup level.

[c] EPA, Region 9, PRG.

Key:

EPA = United States Environmental Protection Agency.
MTCA = Model Toxics Control Act.
µg/L = Micrograms per liter.
pg/L = Picograms per liter.
PCBs = Polychlorinated biphenyls.
PRG = Preliminary remediation goal.
VOCs = Volatile organic compounds.

PHASE I ENVIRONMENTAL SITE ASSESSMENT
SUBSURFACE EVALUATION ANALYTICAL RESULTS
(MFA, 2011A)

to the existing former maintenance building (see Figure 1). These soil boring locations were also used for the combustible gas monitoring, which is described below.

Piezometer well design and construction methods conformed to requirements and specifications outlined in Washington Administrative Code (WAC) 173-160 for "resource protection wells" in the State of Washington. The wells were installed to depths ranging from approximately 28 feet to 35 feet below ground surface (bgs). As-built schematics and descriptions of subsurface conditions encountered during soil boring activities are presented in Attachment A. Water levels were measured in October and November 2010 to aid in the creation of a potentiometric surface map for the shallow subsurface groundwater conditions at the Property. The October and November 2010 potentiometric surface maps are presented in Figures 2 and 3, respectively. The potentiometric surfaces indicate that groundwater flow is to the south-southwest, away from the Columbia River.

COMBUSTIBLE GAS ASSESSMENT

Four soil borings (SG1 through SG4) advanced at the Property were used to field screen for the presence of combustible soil gas in the subsurface. Locations of SG1 through SG3 coincided with piezometers PZ1 through PZ3, while SG4 was advanced in the south-central portion of the Property near the approximate location of the former public works fueling site (refer to Figure 1). Locations SG1 and SG4 were outside the area of the landfill, and locations SG2 and SG3 were within the area of the landfill.

Soil gas was screened using a combustible gas indicator and a photoionization detector (PID). Field parameters measured include carbon dioxide (CO_2) measured in volumetric parts per million (Vppm); the lower explosivity limit (LEL) of the soil gas as a percent (%); oxygen (O_2) as a percent; and hydrogen sulfide (H_2S) measured as Vppm. PID readings are also measured as Vppm. The table below shows the results of the soil gas screening at each sample point:

Table
Soil Gas Measurements

Location	CO_2 (Vppm)	LEL (%)	O_2 (%)	H_2S (Vppm)	PID (Vppm)
SG1	155	8	7.3	0.0	5.3
SG2	385	49-100	2.7	0.0	34.3
SG3	509	>100	8.2	0.0	5.5
SG4	46	1.0	5.8	0.0	2.8
NOTE: >100 = greater than the LEL.					

Specialty Analytical

11711 SE Capps Road
Clackamas, OR 97015
(503) 607-1331
Fax (503) 607-1336

October 13, 2010

Alan Hughes
Maul, Foster & Alongi
7223 NE Hazel Dell Avenue
Suite B
Vancouver, WA 98665

TEL: (360) 694-2691
FAX: (360) 906-1958

RE: City of Wenatchee / 0380.02.01

Dear Alan Hughes: Order No.: 1010052

Specialty Analytical received 1 sample on 10/7/2010 for the analyses presented in the following report.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,

Cindy Hillyard
Project Manager

Technical Review

Specialty Analytical

Date: *13-Oct-10*

CLIENT: Maul, Foster & Alongi
Project: City of Wenatchee / 0380.02.01
Lab Order: 1010052

Lab ID: 1010052-01
Client Sample ID: GP1-S-3.0
Collection Date: 10/5/2010 3:00:00 PM
Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NWTPH-DX		**NWTPH-DX**				Analyst: **jrp**
Diesel	45.5	17.2		mg/Kg-dry	1	10/8/2010
Lube Oil	115	57.3		mg/Kg-dry	1	10/8/2010
Surr: o-Terphenyl	123	50-150		%REC	1	10/8/2010
PAH'S BY GC/MS-OARSIM (8270C)		**8270SIM**				Analyst: **bda**
Acenaphthene	ND	7.64		µg/Kg-dry	1	10/13/2010 9:40:00 AM
Acenaphthylene	ND	7.64		µg/Kg-dry	1	10/13/2010 9:40:00 AM
Anthracene	22.1	7.64		µg/Kg-dry	1	10/13/2010 9:40:00 AM
Benz(a)anthracene	14.5	7.64		µg/Kg-dry	1	10/13/2010 9:40:00 AM
Benzo(a)pyrene	11.5	7.64		µg/Kg-dry	1	10/13/2010 9:40:00 AM
Benzo(b)fluoranthene	ND	7.64		µg/Kg-dry	1	10/13/2010 9:40:00 AM
Benzo(g,h,i)perylene	13.0	7.64		µg/Kg-dry	1	10/13/2010 9:40:00 AM
Benzo(k)fluoranthene	ND	7.64		µg/Kg-dry	1	10/13/2010 9:40:00 AM
Chrysene	18.3	7.64		µg/Kg-dry	1	10/13/2010 9:40:00 AM
Dibenz(a,h)anthracene	ND	7.64		µg/Kg-dry	1	10/13/2010 9:40:00 AM
Fluoranthene	9.93	7.64		µg/Kg-dry	1	10/13/2010 9:40:00 AM
Fluorene	8.40	7.64		µg/Kg-dry	1	10/13/2010 9:40:00 AM
Indeno(1,2,3-cd)pyrene	ND	7.64		µg/Kg-dry	1	10/13/2010 9:40:00 AM
Naphthalene	ND	7.64		µg/Kg-dry	1	10/13/2010 9:40:00 AM
Phenanthrene	77.9	7.64		µg/Kg-dry	1	10/13/2010 9:40:00 AM
Pyrene	59.6	7.64		µg/Kg-dry	1	10/13/2010 9:40:00 AM
Surr: 2-Fluorobiphenyl	56.9	42.6-128		%REC	1	10/13/2010 9:40:00 AM
Surr: Nitrobenzene-d5	39.4	21.7-155		%REC	1	10/13/2010 9:40:00 AM
Surr: p-Terphenyl-d14	84.3	44.9-155		%REC	1	10/13/2010 9:40:00 AM
PCB'S IN SOIL		**SW8082**				Analyst: **jrp**
Aroclor 1016	ND	1.53		µg/Kg-dry	1	10/11/2010
Aroclor 1221	ND	1.53		µg/Kg-dry	1	10/11/2010
Aroclor 1232	ND	1.53		µg/Kg-dry	1	10/11/2010
Aroclor 1242	ND	1.53		µg/Kg-dry	1	10/11/2010
Aroclor 1248	ND	1.53		µg/Kg-dry	1	10/11/2010
Aroclor 1254	ND	1.53		µg/Kg-dry	1	10/11/2010
Aroclor 1260	ND	1.53		µg/Kg-dry	1	10/11/2010
Aroclor 1262	ND	1.53		µg/Kg-dry	1	10/11/2010
Aroclor 1268	ND	1.53		µg/Kg-dry	1	10/11/2010
Surr: Decachlorobiphenyl	103	56.5-130		%REC	1	10/11/2010

CLIENT: Maul, Foster & Alongi
Work Order: 1010052
Project: City of Wenatchee / 0380.02.01

ANALYTICAL QC SUMMARY REPORT

TestCode: 8082LL_S

Sample ID: **MB-26765**	SampType: **MBLK**	TestCode: **8082LL_S**	Units: **µg/Kg**	Prep Date: **10/8/2010**	Run ID: **GCK_101011A**
Client ID: **ZZZZZ**	Batch ID: **26765**	TestNo: **SW8082**		Analysis Date: **10/11/2010**	SeqNo: **702141**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	1.33									
Aroclor 1221	ND	1.33									
Aroclor 1232	ND	1.33									
Aroclor 1242	ND	1.33									
Aroclor 1248	ND	1.33									
Aroclor 1254	ND	1.33									
Aroclor 1260	ND	1.33									
Aroclor 1262	ND	1.33									
Aroclor 1268	ND	1.33									
Surr: Decachlorobiphenyl	12510	0	13330	0	93.8	56.5	130	0	0		

Sample ID: **LCS-26765**	SampType: **LCS**	TestCode: **8082LL_S**	Units: **µg/Kg**	Prep Date: **10/8/2010**	Run ID: **GCK_101011A**
Client ID: **ZZZZZ**	Batch ID: **26765**	TestNo: **SW8082**		Analysis Date: **10/11/2010**	SeqNo: **702142**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016/1260	116	1.33	133.3	0	87	44.3	137	0	0		

Sample ID: **1010052-01AMS**	SampType: **MS**	TestCode: **8082LL_S**	Units: **µg/Kg-dry**	Prep Date: **10/8/2010**	Run ID: **GCK_101011A**
Client ID: **GP1-S-3.0**	Batch ID: **26765**	TestNo: **SW8082**		Analysis Date: **10/11/2010**	SeqNo: **702143**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016/1260	149.7	1.53	152.7	0	98	56.6	123	0	0		

Sample ID: **1010052-01AMSD**	SampType: **MSD**	TestCode: **8082LL_S**	Units: **µg/Kg-dry**	Prep Date: **10/8/2010**	Run ID: **GCK_101011A**
Client ID: **GP1-S-3.0**	Batch ID: **26765**	TestNo: **SW8082**		Analysis Date: **10/11/2010**	SeqNo: **702144**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016/1260	152.7	1.53	152.7	0	100	56.6	123	149.7	2.02	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Maul, Foster & Alongi
Work Order: 1010052
Project: City of Wenatchee / 0380.02.01

ANALYTICAL QC SUMMARY REPORT

TestCode: 8082LL_S

Sample ID: **CCV**	SampType: **CCV**	TestCode: **8082LL_S**	Units: **µg/Kg**	Prep Date:	Run ID: **GCK_101011A**
Client ID: **ZZZZZ**	Batch ID: **26765**	TestNo: **SW8082**		Analysis Date: **10/11/2010**	SeqNo: **702140**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016/1260	124	1.33	133.3	0	93	85	115	0	0		

Sample ID: **CCV**	SampType: **CCV**	TestCode: **8082LL_S**	Units: **µg/Kg**	Prep Date:	Run ID: **GCK_101011A**
Client ID: **ZZZZZ**	Batch ID: **26765**	TestNo: **SW8082**		Analysis Date: **10/11/2010**	SeqNo: **702146**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016/1260	125.3	1.33	133.3	0	94	85	115	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Maul, Foster & Alongi
Work Order: 1010052
Project: City of Wenatchee / 0380.02.01

ANALYTICAL QC SUMMARY REPORT

TestCode: NWTPHDX_S

Sample ID: MB-26762	SampType: MBLK	TestCode: NWTPHDX_S	Units: mg/Kg	Prep Date: 10/8/2010	Run ID: GC-M_101008A
Client ID: ZZZZZ	Batch ID: 26762	TestNo: NWTPH-Dx		Analysis Date: 10/8/2010	SeqNo: 701939

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	ND	15.0									
Lube Oil	ND	50.0									
Surr: o-Terphenyl	37.12	0	33.33	0	111	50	150	0	0		

Sample ID: LCS-26762	SampType: LCS	TestCode: NWTPHDX_S	Units: mg/Kg	Prep Date: 10/8/2010	Run ID: GC-M_101008A
Client ID: ZZZZZ	Batch ID: 26762	TestNo: NWTPH-Dx		Analysis Date: 10/8/2010	SeqNo: 701940

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	181.9	15.0	166.6	0	109	76.3	125	0	0		
Lube Oil	160.2	50.0	166.6	0	96.1	69.9	127	0	0		

Sample ID: 1010050-02ADUP	SampType: DUP	TestCode: NWTPHDX_S	Units: mg/Kg-dry	Prep Date: 10/8/2010	Run ID: GC-M_101008A
Client ID: ZZZZZ	Batch ID: 26762	TestNo: NWTPH-Dx		Analysis Date: 10/8/2010	SeqNo: 701942

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	101.9	27.8	0	0	0	0	0	105.1	3.11	20	A1
Lube Oil	444.3	92.8	0	0	0	0	0	457.8	3.00	20	A2

Sample ID: CCV	SampType: CCV	TestCode: NWTPHDX_S	Units: mg/Kg	Prep Date:	Run ID: GC-M_101008A
Client ID: ZZZZZ	Batch ID: 26762	TestNo: NWTPH-Dx		Analysis Date: 10/8/2010	SeqNo: 701938

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	1127	15.0	1019	0	111	85	115	0	0		
Lube Oil	491.7	50.0	514.9	0	95.5	85	115	0	0		

Sample ID: CCV	SampType: CCV	TestCode: NWTPHDX_S	Units: mg/Kg	Prep Date:	Run ID: GC-M_101008A
Client ID: ZZZZZ	Batch ID: 26762	TestNo: NWTPH-Dx		Analysis Date: 10/8/2010	SeqNo: 701944

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	1500	15.0	1359	0	110	85	115	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Maul, Foster & Alongi
Work Order: 1010052
Project: City of Wenatchee / 0380.02.01

ANALYTICAL QC SUMMARY REPORT

TestCode: NWTPHDX_S

Sample ID: **CCV**	SampType: **CCV**	TestCode: **NWTPHDX_S**	Units: **mg/Kg**	Prep Date:	Run ID: **GC-M_101008A**
Client ID: **ZZZZZ**	Batch ID: **26762**	TestNo: **NWTPH-Dx**		Analysis Date: **10/8/2010**	SeqNo: **701944**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lube Oil	657.6	50.0	686.6	0	95.8	85	115	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Maul, Foster & Alongi
Work Order: 1010052
Project: City of Wenatchee / 0380.02.01

ANALYTICAL QC SUMMARY REPORT

TestCode: PAHLL_S

Sample ID: **MB-26766**	SampType: **MBLK**	TestCode: **PAHLL_S**	Units: **µg/Kg**	Prep Date: **10/8/2010**	Run ID: **5973G_101013A**
Client ID: **ZZZZZ**	Batch ID: **26766**	TestNo: **8270SIM**		Analysis Date: **10/13/2010**	SeqNo: **702496**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	ND	6.67									
Acenaphthylene	ND	6.67									
Anthracene	0.6667	6.67									J
Benz(a)anthracene	1.333	6.67									J
Benzo(a)pyrene	0.6667	6.67									J
Benzo(b)fluoranthene	0.6667	6.67									J
Benzo(g,h,i)perylene	2.667	6.67									J
Benzo(k)fluoranthene	0.6667	6.67									J
Chrysene	0.6667	6.67									J
Dibenz(a,h)anthracene	2	6.67									J
Fluoranthene	0.6667	6.67									J
Fluorene	ND	6.67									
Indeno(1,2,3-cd)pyrene	2	6.67									J
Naphthalene	2	6.67									J
Phenanthrene	1.333	6.67									J
Pyrene	0.6667	6.67									J
Surr: 2-Fluorobiphenyl	3553	0	6667	0	53.3	42.6	128	0	0		
Surr: Nitrobenzene-d5	3094	0	6667	0	46.4	21.7	155	0	0		
Surr: p-Terphenyl-d14	5837	0	6667	0	87.6	44.9	155	0	0		

Sample ID: **LCS-26766**	SampType: **LCS**	TestCode: **PAHLL_S**	Units: **µg/Kg**	Prep Date: **10/8/2010**	Run ID: **5973G_101013A**
Client ID: **ZZZZZ**	Batch ID: **26766**	TestNo: **8270SIM**		Analysis Date: **10/13/2010**	SeqNo: **702498**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	214.7	6.67	333.3	0	64.4	39.6	107	0	0		
Benzo(g,h,i)perylene	218.7	6.67	333.3	0	65.6	49.7	135	0	0		
Chrysene	278	6.67	333.3	0	83.4	57.1	130	0	0		
Naphthalene	222.7	6.67	333.3	0	66.8	29.1	109	0	0		
Phenanthrene	218.7	6.67	333.3	0	65.6	48.4	115	0	0		
Pyrene	278	6.67	333.3	0	83.4	47.2	134	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Maul, Foster & Alongi
Work Order: 1010052
Project: City of Wenatchee / 0380.02.01

ANALYTICAL QC SUMMARY REPORT

TestCode: PAHLL_S

Sample ID: 1010052-01AMS	SampType: MS	TestCode: PAHLL_S	Units: µg/Kg-dry	Prep Date: 10/8/2010	Run ID: 5973G_101013A
Client ID: GP1-S-3.0	Batch ID: 26766	TestNo: 8270SIM		Analysis Date: 10/13/2010	SeqNo: 702500

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	337.5	7.64	381.8	5.346	87	33.7	111	0	0		
Benzo(g,h,i)perylene	290.2	7.64	381.8	12.98	72.6	15	128	0	0		
Chrysene	342.9	7.64	381.8	18.33	85	37.5	125	0	0		
Naphthalene	272.6	7.64	381.8	0	71.4	27.7	108	0	0		
Phenanthrene	399.4	7.64	381.8	77.89	84.2	20.2	139	0	0		
Pyrene	414.7	7.64	381.8	59.56	93	26.8	142	0	0		

Sample ID: 1010052-01AMSD	SampType: MSD	TestCode: PAHLL_S	Units: µg/Kg-dry	Prep Date: 10/8/2010	Run ID: 5973G_101013A
Client ID: GP1-S-3.0	Batch ID: 26766	TestNo: 8270SIM		Analysis Date: 10/13/2010	SeqNo: 702499

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	287.9	7.64	381.8	5.346	74	33.7	111	337.5	15.9	20	
Benzo(g,h,i)perylene	264.2	7.64	381.8	12.98	65.8	15	128	290.2	9.37	20	
Chrysene	294.8	7.64	381.8	18.33	72.4	37.5	125	342.9	15.1	20	
Naphthalene	225.3	7.64	381.8	0	59	27.7	108	272.6	19.0	20	
Phenanthrene	377.2	7.64	381.8	77.89	78.4	20.2	139	399.4	5.70	20	
Pyrene	398.6	7.64	381.8	59.56	88.8	26.8	142	414.7	3.94	20	

Sample ID: CCV-26766	SampType: CCV	TestCode: PAHLL_S	Units: µg/Kg	Prep Date:	Run ID: 5973G_101013A
Client ID: ZZZZZ	Batch ID: 26766	TestNo: 8270SIM		Analysis Date: 10/13/2010	SeqNo: 702495

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	69.33	6.67	66.67	0	104	70	130	0	0		
Acenaphthylene	76	6.67	66.67	0	114	70	130	0	0		
Anthracene	74	6.67	66.67	0	111	70	130	0	0		
Benz(a)anthracene	54.67	6.67	66.67	0	82	70	130	0	0		
Benzo(a)pyrene	57.33	6.67	66.67	0	86	70	130	0	0		
Benzo(b)fluoranthene	53.33	6.67	66.67	0	80	70	130	0	0		
Benzo(g,h,i)perylene	57.33	6.67	66.67	0	86	70	130	0	0		
Benzo(k)fluoranthene	70	6.67	66.67	0	105	70	130	0	0		
Chrysene	64	6.67	66.67	0	96	70	130	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Maul, Foster & Alongi
Work Order: 1010052
Project: City of Wenatchee / 0380.02.01

ANALYTICAL QC SUMMARY REPORT

TestCode: PAHLL_S

Sample ID: **CCV-26766**	SampType: **CCV**	TestCode: **PAHLL_S**	Units: **µg/Kg**	Prep Date:	Run ID: **5973G_101013A**
Client ID: **ZZZZZ**	Batch ID: **26766**	TestNo: **8270SIM**		Analysis Date: **10/13/2010**	SeqNo: **702495**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dibenz(a,h)anthracene	58.67	6.67	66.67	0	88	70	130	0	0		
Fluoranthene	66	6.67	66.67	0	99	70	130	0	0		
Fluorene	67.33	6.67	66.67	0	101	70	130	0	0		
Indeno(1,2,3-cd)pyrene	56	6.67	66.67	0	84	70	130	0	0		
Naphthalene	67.33	6.67	66.67	0	101	70	130	0	0		
Phenanthrene	64.67	6.67	66.67	0	97	70	130	0	0		
Pyrene	69.33	6.67	66.67	0	104	70	130	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

KEY TO FLAGS

Rev. May 12, 2010

A	This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was quantified against gasoline calibration standards
A1	This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was quantified against diesel calibration standards.
A2	This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was quantified against a lube oil calibration standard.
A3	The result was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.
A4	The product appears to be aged or degraded diesel.
B	The blank exhibited a positive result great than the reporting limit for this compound.
CN	See Case Narrative.
D	Result is based from a dilution.
E	Result exceeds the calibration range for this compound. The result should be considered as estimate.
F	The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.
G	Result may be biased high due to biogenic interferences. Clean up is recommended.
H	Sample was analyzed outside recommended holding time.
HT	At clients request, samples was analyzed outside of recommended holding time.
J	The result for this analyte is between the MDL and the PQL and should be considered as estimated concentration.
K	Diesel result is biased high due to amount of Oil contained in the sample.
L	Diesel result is biased high due to amount of Gasoline contained in the sample.
M	Oil result is biased high due to amount of Diesel contained in the sample.
MC	Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.
MI	Result is outside control limits due to matrix interference.
MSA	Value determined by Method of Standard Addition.
O	Laboratory Control Standard (LCS) exceeded laboratory control limits, but meets CCV criteria. Data meets EPA requirements.
Q	Detection levels elevated due to sample matrix.
R	RPD control limits were exceeded.
RF	Duplicate failed due to result being at or near the method-reporting limit.
RP	Matrix spike values exceed established QC limits; post digestion spike is in control.
S	Recovery is outside control limits.
SC	Closing CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.
*	The result for this parameter was greater that the maximum contaminant level of the TCLP regulatory limit.

CHAIN OF CUSTODY RECORD

Specialty Analytical

11711 SE Capps Road
Clackamas, OR 97015
Phone: 503-607-1331
Fax: 503-607-1336

Contact Person/Project Manager: Alan Hughes
Company: MFA
Address: 2001 NW 19th Ave
Portland OR
Phone: _____ Fax: _____
Project No. 0350.02.01 Project Name: City of Woodburn
Project Site Location OR: _____ WA: X Other: _____
Invoice To: MFA P.O. No.: _____

Collected By:
Signature: [signature]
Printed: Justin Pounds

Signature: _____
Printed: _____

Turn Around Time
☑ Normal 5-7 Business Days
☐ Rush _____
Specify
Rush Analyses Must Be Scheduled With The Lab In Advance

For Laboratory Use
Lab Job No. 1010052
Shipped Via: Specialty
Air Bill No. _____
Temperature On Receipt 0 °C
Specialty Analytical Containers? Y / N
Specialty Analytical Trip Blanks? Y / N

Date	Time	Sample I.D.	Matrix	No. of Containers	Analyses: NWTPH-Dx	Analyses: PAHs by 8270SIM	Analyses: PCBs 8082A	Comments	Lab I.D.
10/5/10	1500	GP1-S-3.0	S	3	X	X	X	hold extra soil	
								for additional analysis	
								- pending results	

Relinquished By:	Date	Time	Received By:	Relinquished By:	Date	Time
Company: MFA	10/7/10	1300	Company: Specialty	Company:	10/7/10	1510

Unless Reclaimed, Samples Will Be Disposed of 60 Days After Receipt.
Samples held beyond 60 days subject to storage fee(s)

Received For Lab By: Nikki Bappes Date: 10/7/10 Time: 1510

Copies: White-Original Yellow-Project File Pink-Customer Copy

FOCUSED SITE CHARACTERIZATION ANALYTICAL RESULTS (MFA, 2011B)

Table 1
Carcinogenic Polycyclic Aromatic Hydrocarbons in Soil (µg/kg)
25 North Worthen Street
Wenatchee, Washington

Location	Sample Name	Date Collected	Depth (ft bgs)	1-Methyl-naphthalene	2-Methyl-naphthalene	Acenaph-thene	Acenaph-thylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(ghi) perylene
MTCA Method A CUL (Unrestricted Land Use)				NV	NV	NV	NV	NV	NV	100	NV	NV
MTCA Method A CUL (Industrial Land Use)				NV	NV	NV	NV	NV	NV	2000	NV	NV
2011 Focused Site Characterization												
GP2	GP2-S-10.0	09/13/2011	10.0	10.5	11.9	6.99 U	6.99 U	6.99 U	21	25.8	29.3	16.8
GP3	GP3-S-11.0	09/13/2011	11.0	7.03 U	8.43	41.4	7.03 U	202	445	**493**	571	274
	GP3-S-14.0	09/13/2011	14.0	7.21 U	7.21 U	7.21 U	7.21 U	7.21 U	7.21 U	7.21 U	7.21 U	7.21 U
GP4	GP4-S-10.0	09/13/2011	10.0	7.21 U	7.21 U	7.21 U	7.21 U	18.7	65.6	**102**	109	74.9
GP5	GP5-S-11.0	09/13/2011	11.0	13	12.3	15.9	7.96	83.9	246	**278**	310	154
GP7	GP7-S-10.0	09/13/2011	10.0	7.18 U	7.18 U	7.18 U	7.18 U	7.18 U	7.18 U	7.18 U	10.8	8.61
GP8	GP8-S-9.0	09/13/2011	9.0	72.2	102	15.9	83	147	320	**438**	475	456
GP9	GP9-S-9.5	09/13/2011	9.5	7.3 U	7.3 U	7.3 U	7.3 U	7.3 U	7.3 U	7.3 U	7.3 U	7.3 U
2000 Targeted Brownfields Assessment												
LF14	LF14SS00	1999	0 to 4	*	350 U	350 U	*	350 U	51 J	97 J	95 J	21 J
	LF14SB08	1999	8 to 12	*	54 J	410	*	1500	3200	**2200**	1100	480

Table 1
Carcinogenic Polycyclic Aromatic Hydrocarbons in Soil (µg/kg)
25 North Worthen Street
Wenatchee, Washington

Location	Sample Name	Date Collected	Depth (ft bgs)	Benzo(k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3- cd) pyrene	Naph-thalene	Phen-anthrene	Pyrene	cPAH TEC
MTCA Method A CUL (Unrestricted Land Use)				NV	NV	NV	NV	NV	NV	5000	NV	NV	100
MTCA Method A CUL (Industrial Land Use)				NV	NV	NV	NV	NV	NV	5000	NV	NV	2000
2011 Focused Site Characterization													
GP2	GP2-S-10.0	09/13/2011	10.0	10.5	25.1	11.2	18.2	6.99 U	14.7	6.99 U	20.3	21	34.72
GP3	GP3-S-11.0	09/13/2011	11.0	218	479	107	949	34.4	273	8.43	775	730	**659**
	GP3-S-14.0	09/13/2011	14.0	7.21 U	7.21 U	7.21 U	7.21 U	7.21 U	7.21 U	7.21 U	7.21 U	7.21 U	5.44 U
GP4	GP4-S-10.0	09/13/2011	10.0	49	68.4	32.4	56.9	7.21 U	64.1	7.21 U	32.4	56.2	**135**
GP5	GP5-S-11.0	09/13/2011	11.0	113	253	64.4	487	15.9	150	7.24 U	320	385	**369**
GP7	GP7-S-10.0	09/13/2011	10.0	10.8	7.18 U	7.18 U	7.18 U	7.18 U	7.18 U	9.33	7.18 U	7.18 U	6.86
GP8	GP8-S-9.0	09/13/2011	9.0	195	392	104	729	39.7	343	85.1	712	636	**586**
GP9	GP9-S-9.5	09/13/2011	9.5	7.3 U	7.3 U	7.3 U	7.3 U	7.3 U	7.3 U	7.3 U	7.3 U	7.3 U	5.51 U
2000 Targeted Brownfields Assessment													
LF14	LF14SS00	1999	0 to 4	350 U	59 J	350 U	140 J	350 U	67 J	*	68 J	190 J	**154**
	LF14SB08	1999	8 to 12	1200	3200	420	6400	360	1200	*	5600	6200	**2944**

NOTES:

Bold number indicates a detected concentration that exceeds MTCA Method A CUL.

cPAH = carcinogenic polycyclic aromatic hydrocarbon.

CUL = cleanup level.

ft bgs = feet below ground surface.

MTCA = Washington State Model Toxics Control Act.

µg/kg = micrograms per kilogram (parts per billion).

NV = no value.

TEC = toxicity equivalent concentration, calculated using toxicity equivalent factors in Washington Administrative Code 173-340-900 and half of the method reporting limits for nondetect congeners.

U = not detected at or above method reporting limit.

J = estimated concentration

* = Analyte not reported.

DATA GAP INVESTIGATION ANALYTICAL RESULTS (MFA, 2013)

Table 1
Soil Analytical Results
25 North Worthen Street Property
Wenatchee, Washington

Location:		GP11			GP12		GP13		GP14		
Sample Name:		GP11-COMP	GP11-S-13	GP11-S-17.5	GP12-S-7	GP12-S-11	GP13-S-10	GP13-S-13	GP14-COMP	GP14-S-7.5	GP14-S-11.5
Collection Date:		11/05/2013	11/05/2013	11/05/2013	11/05/2013	11/05/2013	11/05/2013	11/05/2013	11/05/2013	11/05/2013	11/05/2013
Collection Depth (ft bgs):			13	17.5	7	11	10	13		7.5	11.5
	MTCA A										
Total Metals (mg/kg)											
Arsenic	20	10.2	--	--	--	--	--	--	**30.3**	--	--
Lead	250	38.1	--	--	--	--	--	--	190	--	--
Volatile Organic Compounds (mg/kg)											
Benzene	0.03	--	**0.064**	0.025 UJ	0.029	0.022 UJ	0.018 U	0.021 UJ	0.0279 U	0.019 U	0.022 UJ
Ethylbenzene	6	--	0.17 U	0.25 UJ	0.2 U	0.22 UJ	0.18 U	0.21 UJ	0.112 U	0.19 U	0.22 UJ
m,p-Xylene	9	--	0.51 U	0.75 UJ	0.59 U	0.66 UJ	0.53 U	0.64 UJ	0.335 U	0.57 U	0.65 UJ
Toluene	7	--	0.17 U	0.25 UJ	0.2 U	0.22 UJ	0.18 U	0.21 UJ	0.112 UJ	0.19 U	0.22 UJ
Polychlorinated Biphenyls (mg/kg)											
Aroclor 1016	NV	0.000372 U	0.000379 U	--	0.000387 U	--	0.000393 U	--	--	0.00039 U	--
Aroclor 1221	NV	0.000372 U	0.000379 U	--	0.000387 U	--	0.000393 U	--	--	0.00039 U	--
Aroclor 1232	NV	0.000372 U	0.000379 U	--	0.000387 U	--	0.000393 U	--	--	0.00039 U	--
Aroclor 1242	NV	0.000372 U	0.000379 U	--	0.000387 U	--	0.000393 U	--	--	0.00039 U	--
Aroclor 1248	NV	0.000372 U	0.000379 U	--	0.000387 U	--	0.000393 U	--	--	0.00039 U	--
Aroclor 1254	NV	0.000372 U	0.000379 U	--	0.000387 U	--	0.000393 U	--	--	0.00039 U	--
Aroclor 1260	NV	0.000372 U	0.000379 U	--	0.000387 U	--	0.000393 U	--	--	0.00039 U	--
Aroclor 1262	NV	0.000372 U	0.000379 U	--	0.000387 U	--	0.000393 U	--	--	0.00039 U	--
Aroclor 1268	NV	0.000372 U	0.000379 U	--	0.000387 U	--	0.000393 U	--	--	0.00039 U	--
Total PCBs	1	ND	ND	--	ND	--	ND	--	--	ND	--
cPAHs (mg/kg)											
Benzo(a)anthracene	NV	0.00744 U	0.00759 U	--	0.507	0.00758 U	0.0109	--	0.00745 U	0.00781 U	--
Benzo(a)pyrene	0.1	0.00744 U	0.00759 U	--	**0.668**	0.00895	0.0141	--	0.00883	0.00781 U	--
Benzo(b)fluoranthene	NV	0.00988	0.00759 U	--	0.611	0.00919	0.0158	--	0.00891	0.00781 U	--
Benzo(k)fluoranthene	NV	0.00744 U	0.00759 U	--	0.164	0.00758 U	0.00788 U	--	0.00745 U	0.00781 U	--
Chrysene	NV	0.0115	0.00874	--	0.584	0.0104	0.0162	--	0.00745 U	0.00781 U	--
Dibenzo(a,h)anthracene	NV	0.00744 U	0.00759 U	--	0.101	0.00758 U	0.00788 U	--	0.00745 U	0.00781 U	--
Indeno(1,2,3-cd)pyrene	NV	0.00744 U	0.00759 U	--	0.372	0.00758 U	0.00788 U	--	0.00745 U	0.00781 U	--
cPAH TEQ	0.1	0.0063	0.0058	--	**0.85**	0.011	0.018	--	0.011	ND	--
ncPAHs (mg/kg)											
1-Methylnaphthalene	NV	0.0188	0.00759 U	--	0.0212	0.0138	0.155	--	0.00989	0.0274	--
2-Methylnaphthalene	NV	0.0174	0.00759 U	--	0.0159	0.0157	0.216	--	0.00921	0.0285	--
Acenaphthene	NV	0.00744 U	0.00759 U	--	0.024	0.0112	0.0161	--	0.00745 U	0.00781 U	--
Acenaphthylene	NV	0.00744 U	0.00759 U	--	0.151	0.00758 U	0.00788 U	--	0.00745 U	0.00781 U	--
Anthracene	NV	0.00744 U	0.00759 U	--	0.235	0.00758 U	0.0121	--	0.00745 U	0.00781 U	--
Benzo(ghi)perylene	NV	0.00919	0.00906	--	0.504	0.0122	0.0157	--	0.0206	0.00781 U	--
Fluoranthene	NV	0.0107	0.0101	--	0.86	0.0126	0.027	--	0.0108	0.00872	--

Table 1
Soil Analytical Results
25 North Worthen Street Property
Wenatchee, Washington

Location:		GP11			GP12		GP13		GP14		
Sample Name:		GP11-COMP	GP11-S-13	GP11-S-17.5	GP12-S-7	GP12-S-11	GP13-S-10	GP13-S-13	GP14-COMP	GP14-S-7.5	GP14-S-11.5
Collection Date:		11/05/2013	11/05/2013	11/05/2013	11/05/2013	11/05/2013	11/05/2013	11/05/2013	11/05/2013	11/05/2013	11/05/2013
Collection Depth (ft bgs):			13	17.5	7	11	10	13		7.5	11.5
	MTCA A										
Fluorene	NV	0.01	0.00759 U	--	0.0456	0.017	0.024	--	0.00745 U	0.00937	--
Naphthalene	5	0.0101	0.00759 U	--	0.0132	0.00758 U	0.0532	--	0.00906	0.0148	--
Phenanthrene	NV	0.0301	0.0192	--	0.298	0.0411	0.0646	--	0.0133	0.0166	--
Pyrene	NV	0.0285	0.0183	--	1.29	0.0343	0.0466	--	0.0208	0.0152	--
NWTPH-HCID											
Diesel	NV	ND	DETECT	--	DETECT	--	DETECT	--	DETECT	DETECT	--
Gasoline	NV	ND	ND	--	ND	--	ND	--	ND	ND	--
Kerosene	NV	ND	ND	--	ND	--	ND	--	ND	ND	--
Lube Oil	NV	DETECT	DETECT	--	DETECT	--	DETECT	--	DETECT	DETECT	--
Mineral Spirits	NV	ND	ND	--	ND	--	ND	--	ND	ND	--
NWTPH-Dx (mg/kg)											
Diesel	2000	46.5 J	137 J	87.1 J	162 J	463 J	114 J	149 J	51.9 J	116 J	53.1 J
Lube Oil	2000	137	277	254	342	567 J	192	276	216	211	132
TPH	2000	183.5 J	414 J	341.1 J	504 J	1030 J	306 J	425 J	267.9 J	327 J	185.1 J

Table 1
Soil Analytical Results
25 North Worthen Street Property
Wenatchee, Washington

Location:		GP15		GP16	GP17			GP19	GP20		GP21	GP22
Sample Name:		GP15-COMP	GP15-S-14	GP16-S-14	GP17-COMP	GP17-S-12.5	GP17-S-16	GP19-S-16	GP20-COMP	GP20-S-16	GP21-S-16	GP22-S-16
Collection Date:		11/05/2013	11/05/2013	11/05/2013	11/06/2013	11/06/2013	11/06/2013	11/05/2013	11/06/2013	11/06/2013	11/05/2013	11/06/2013
Collection Depth (ft bgs):			14	14		12.5	16	16		16	16	16
	MTCA A											
Total Metals (mg/kg)												
Arsenic	20	**68.4**	--	--	2.08 U	--	--	--	16	--	--	--
Lead	250	**313**	--	--	23.2	--	2.14 U	2.24	68	3.21	2 U	10.1
Volatile Organic Compounds (mg/kg)												
Benzene	0.03	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	6	--	--	--	--	--	--	--	--	--	--	--
m,p-Xylene	9	--	--	--	--	--	--	--	--	--	--	--
Toluene	7	--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyls (mg/kg)												
Aroclor 1016	NV	0.00037 U	--	--	0.000346 U	--	--	--	--	--	--	--
Aroclor 1221	NV	0.00037 U	--	--	0.000346 U	--	--	--	--	--	--	--
Aroclor 1232	NV	0.00037 U	--	--	0.000346 U	--	--	--	--	--	--	--
Aroclor 1242	NV	0.00037 U	--	--	0.000346 U	--	--	--	--	--	--	--
Aroclor 1248	NV	0.00037 U	--	--	0.000346 U	--	--	--	--	--	--	--
Aroclor 1254	NV	0.00037 U	--	--	0.000346 U	--	--	--	--	--	--	--
Aroclor 1260	NV	0.00037 U	--	--	0.000346 U	--	--	--	--	--	--	--
Aroclor 1262	NV	0.00037 U	--	--	0.000346 U	--	--	--	--	--	--	--
Aroclor 1268	NV	0.00037 U	--	--	0.000346 U	--	--	--	--	--	--	--
Total PCBs	1	ND	--	--	ND	--	--	--	--	--	--	--
cPAHs (mg/kg)												
Benzo(a)anthracene	NV	0.00741 U	--	0.00719 U	0.0451	0.00767 U	--	--	0.00729 U	--	--	--
Benzo(a)pyrene	0.1	0.00741 U	--	0.00719 U	0.062	0.00767 U	--	--	0.00967	--	--	--
Benzo(b)fluoranthene	NV	0.00741 U	--	0.00719 U	0.0707	0.00767 U	--	--	0.0106	--	--	--
Benzo(k)fluoranthene	NV	0.00741 U	--	0.00719 U	0.0215	0.00767 U	--	--	0.00729 U	--	--	--
Chrysene	NV	0.00741 U	--	0.00719 U	0.0587	0.00767 U	--	--	0.00729 U	--	--	--
Dibenzo(a,h)anthracene	NV	0.00741 U	--	0.00719 U	0.0161	0.00767 U	--	--	0.00729 U	--	--	--
Indeno(1,2,3-cd)pyrene	NV	0.00741 U	--	0.00719 U	0.0415	0.00767 U	--	--	0.00729 U	--	--	--
cPAH TEQ	0.1	ND	--	ND	0.082	ND	--	--	0.012	--	--	--
ncPAHs (mg/kg)												
1-Methylnaphthalene	NV	0.00741 U	--	0.00719 U	0.00694 U	0.00767 U	--	--	0.00729 U	--	--	--
2-Methylnaphthalene	NV	0.00859	--	0.00719 U	0.00915	0.00767 U	--	--	0.00729 U	--	--	--
Acenaphthene	NV	0.00741 U	--	0.00719 U	0.00694 U	0.00767 U	--	--	0.00729 U	--	--	--
Acenaphthylene	NV	0.00741 U	--	0.00719 U	0.0169	0.00767 U	--	--	0.00729 U	--	--	--
Anthracene	NV	0.00741 U	--	0.00719 U	0.0222	0.00767 U	--	--	0.00729 U	--	--	--
Benzo(ghi)perylene	NV	0.00741 U	--	0.00731	0.061	0.00767 U	--	--	0.0139	--	--	--
Fluoranthene	NV	0.00988	--	0.00719 U	0.0937	0.00767 U	--	--	0.00729 U	--	--	--

Table 1
Soil Analytical Results
25 North Worthen Street Property
Wenatchee, Washington

Location:		GP15		GP16	GP17			GP19	GP20		GP21	GP22
Sample Name:		GP15-COMP	GP15-S-14	GP16-S-14	GP17-COMP	GP17-S-12.5	GP17-S-16	GP19-S-16	GP20-COMP	GP20-S-16	GP21-S-16	GP22-S-16
Collection Date:		11/05/2013	11/05/2013	11/05/2013	11/06/2013	11/06/2013	11/06/2013	11/05/2013	11/06/2013	11/06/2013	11/05/2013	11/06/2013
Collection Depth (ft bgs):			14	14		12.5	16	16		16	16	16
	MTCA A											
Fluorene	NV	0.00741 U	--	0.00719 U	0.00797	0.00767 U	--	--	0.00729 U	--	--	--
Naphthalene	5	0.0232	--	0.00719 U	0.0127	0.00767 U	--	--	0.00729 U	--	--	--
Phenanthrene	NV	0.0205	--	0.00719 U	0.0873	0.00767 U	--	--	0.0108	--	--	--
Pyrene	NV	0.0122	--	0.00719 U	0.142	0.00767 U	--	--	0.0136	--	--	--
NWTPH-HCID												
Diesel	NV	ND	--	--	ND	--	--	--	DETECT	--	--	--
Gasoline	NV	ND	--	--	ND	--	--	--	ND	--	--	--
Kerosene	NV	ND	--	--	ND	--	--	--	ND	--	--	--
Lube Oil	NV	ND	--	--	ND	--	--	--	DETECT	--	--	--
Mineral Spirits	NV	ND	--	--	ND	--	--	--	ND	--	--	--
NWTPH-Dx (mg/kg)												
Diesel	2000	--	16.6 U	--	--	17.2 U	--	--	27.7 J	--	--	--
Lube Oil	2000	--	55.3 U	--	--	57.5 U	--	--	127 J	--	--	--
TPH	2000	--	ND	--	--	ND	--	--	154.7 J	--	--	--

NOTES:
Detections that exceed MTCA screening level values are in **bold** font. Non-detect results are not evaluated against MTCA screening level values.
-- = not analyzed.
cPAH = carcinogenic polycyclic aromatic hydrocarbon.
cPAH TEQ = cPAH toxic equivalency quotient.
ft bgs = feet below ground surface.
J = Result is an estimated value.
mg/kg = milligrams per kilogram.
MTCA = Model Toxics Control Act.
MTCA A = MTCA Method A unrestricted land use screening values.
ncPAH = noncarcinogenic polycyclic aromatic hydrocarbon.
ND = not detected.
NV = no value.
NWTPH Dx = Northwest Total Petroleum Hydrocarbons—diesel.
NWTPH-HCID = Northwest Total Petroleum Hydrocarbon Identification.
Total PCBs = sum of polychlorinated biphenyls Aroclors. Non-detect results are not summed.
TPH = Total petroleum hydrocarbons calculated using both diesel and lube oil range.
U = Result is non-detect at or above method reporting limit.
UJ = Result is non-detect at or above method reporting limit. Reported value is estimated.

Table 2
Groundwater Analytical Results
25 North Worthen Street Property
Wenatchee, Washington

	Location:	GP18	PZ1	PZ2	PZ3
	Sample Name:	GP18-W	PZ1-W	PZ2-W	PZ3-W
	Collection Date:	11/06/2013	11/05/2013	11/07/2013	11/06/2013
	MTCA A				
NWTPH-HCID					
Diesel	NV	ND	ND	DETECT	DETECT
Gasoline	NV	ND	ND	ND	ND
Kerosene	NV	ND	ND	ND	ND
Lube Oil	NV	ND	ND	DETECT	DETECT
Mineral Spirits	NV	ND	ND	ND	ND
NWTPH-Dx (µg/L)					
Diesel	500	--	--	**4110** J	**1950** J
Lube Oil	500	--	--	**3490** J	**1740** J
TPH	500	--	--	**7600** J	**3690** J

NOTES:

Detections that exceed MTCA screening level values are in **bold** font.

-- = not analyzed.

J = Result is an estimated value.

MTCA = Model Toxics Control Act.

MTCA A = MTCA Method A unrestricted land use screening values.

ND = the result is non-detect.

NWTPH-Dx = total petroleum hydrocarbons—diesel and lube oil.

NWTPH-HCID = Hydrocarbon Identification.

µg/L = micrograms per liter (parts per billion).

TPH = Total petroleum hydrocarbons calculated using both diesel and lube oil range.

APPENDIX C

STOCKPILE CHARACTERIZATION METHODOLOGY

Stockpile Characterization Methodology

Material that is removed from the former Public Works Yard Site for disposal may contain levels of indicator hazardous substances (IHSs) that are regulated under the Resource Conservation and Recovery Act (RCRA) and the Washington State Model Toxics Control Act (MTCA). The material must be adequately characterized before its removal from the Site to ensure compliance with federal and state waste management regulations, including Code of Federal Regulations (CFR) 261.24 (RCRA). Excavated material should be stockpiled methodically in order to facilitate the sampling method and organization. Composite sampling is conducted in order to best characterize each stockpile to complete a waste profile for the landfill. Waste characterization samples are to be obtained directly from the excavated material stockpiles at a frequency of approximately one composite sample per a maximum 100 cubic yards of material (before conducting any characterization sampling, confirm with the waste disposal facility that the sample collection frequency and analytical methods prescribed in the Soil Management Plan are appropriate).

Five-point composite samples will be obtained from each 100-cubic-yard stockpile section that is to be disposed of off site. In order to develop a representative sample of each delineated section, five discrete subsamples of equal size will be collected from within the section. A standard stainless-steel hand auger will be used to collect samples from various depths within the stockpile (the sampler should avoid collecting samples from the stockpile surface). The stockpile section will be divided into four quadrants, with one subsample collected from within each quadrant and the fifth subsample collected from the center of the 100-cubic yard section. Of the first four subsamples, at least one should be collected from a shallow depth, one from mid-depth, one near the bottom of the stockpile, and one from a randomly selected depth.

Samples will be composited using a stainless-steel bowl with a stainless-steel spoon. A portion of the composited sample will be placed in the laboratory-provided containers, which will then be sealed (rocks and other debris should not be placed in the container). The sampling equipment is to be decontaminated after each composite sample is collected. The samples will be placed on ice in a shipping container with chain-of-custody paperwork and transported to an accredited laboratory for analysis.

Obtaining samples in this manner is intended to result in data that are representative of the contaminants in that particular section of the stockpile, and accounts for the variability of the waste generated from different excavation locations. The material in each stockpile is expected to be homogenized through the on-site handling procedures of excavating, placing in a dump truck, and dumping into a pile. Composite sampling, combined with the on-site homogenization, should result in a sample that is representative of the pile. Variability of the soil from different excavations will be addressed by collecting one composite sample per every 100 cubic yards of soil. Laboratory quality assurance and quality control (QA/QC) data, along with sample results, will be validated before handling procedures are determined for any soil. This review will be conducted as laboratory reports are received so that management of the soil can proceed rapidly.

The data quality objectives for this sampling approach address precision, accuracy, representativeness, comparability, and completeness:

- The term "precision" refers to the ability of an analytical method or instrument to reproduce a measurement. Review of laboratory-generated QA/QC documentation will allow assessment of laboratory precision.
- Accuracy is assessed by evaluating how close a measurement is to the true or expected value. Accuracy is evaluated by reviewing laboratory QC data, such as blank and spiked samples.
- Representativeness of the data is an indication of how well data represent an expected environmental condition. The compositing approach has been designed to obtain samples that are representative of the individual stockpile sections.
- Comparability, or the confidence in evaluating one data set in relation to another, will be established through the use of consistent field techniques, standard analytical methods, standard reporting formats, equipment calibration, and analysis of reference materials.
- The data will be assessed for completeness by summarizing the number of valid results versus the total number of samples collected. Because only valid laboratory results will be acceptable for disposal determination, the results will be 100 percent complete.

Stockpile Analysis

Analysis of material on the Site is required before off-site disposal. Any and all soil that is generated and intended for off-site disposal is to be analyzed by an accredited laboratory for the following constituents:

- Gasoline- and diesel-range petroleum hydrocarbons by Washington State Department of Ecology (Ecology) Methods NWTPH-Gx and NWTPH-Dx
- Benzene, ethylbenzene, toluene, and total xylenes by U.S. Environmental Protection Agency (USEPA) Method 8260B
- Polycyclic aromatic hydrocarbons by USEPA Method 8270C
- Arsenic and lead by toxicity characteristic leaching procedure USEPA Method 1311/6010B

It is the responsibility of the party generating the impacted soil to verify current disposal requirements with the disposal facility.

APPENDIX D

SITE INSPECTION SUMMARY REPORT FORM

SITE INSPECTION SUMMARY REPORT
FORMER WENATCHEE PUBLIC WORKS YARD CAP VISUAL MONITORING

Date:	
Weather:	
Precipitation (prior 24 hrs)	
Completed By:	

Photograph Requirements:

Overview photograph of each cap component to capture composite view of entire cap.

Any noted changes or damage to the cap.

General Observations:

General cap condition.

Stormwater flow characteristics (if monitoring conducted during wet weather).

Activity on the site.

Visible changes since previous inspection.

Standing water or areas of concentrated surface water flow.

Visible demarcation fabric.

Specific Observations: To be noted with photographs, measurements, and locations:

Soil Cap:

- Vegetative cover with estimated coverage.
- Areas of surface erosion (rills/gullies, concentrated sediment deposits).
- Standing water or concentrated surface water flow.
- Invasive species present (location and quantity).

Pavement Cap:

- Pavement Cap:
- Cracking or buckling indicating lateral expansion or contraction.

Building Cap:

- Cracking of foundation.
- Penetration of vapor intrusion barrier (spread footing foundations).

Measurements:

Length and depth of any surface erosion or damage.

Estimated areal coverage of vegetation/landscaping material on soil cap.

Depth of soil cap at edges adjacent to pavement/building cap.

SITE INSPECTION SUMMARY REPORT
FORMER WENATCHEE PUBLIC WORKS YARD CAP VISUAL MONITORING

Date:	
Weather:	
Precipitation (prior 24 hrs)	
Completed By:	

General Observations:

Specific Observations: To be noted with photographs, measurements, and locations:

Soil Cap:

Pavement Cap:

Building Cap:

Measurements:

SITE INSPECTION SUMMARY REPORT
FORMER WENATCHEE PUBLIC WORKS YARD CAP VISUAL MONITORING

Date:	

Location (Station or Coordinates)	Observations	Photo Log