DRAFT

Thea Foss Uplands
Site-Specific Remedial Investigation
Work Plan

HARTCROWSER
Delivering smarter solutions

- Parcels 1B, 1C, and 1D
- Hicks-Bull Property, Coast Iron Works, and Steam Plant
- Investco/Looney and Colonial Fruit and Produce (Non-City-Owned Properties)
- Johnny's Seafood
- Dock Street ROW (North)

Prepared for
City of Tacoma

May 25, 2000
J-4676-13

V—JOHNNY'S SEAFOOD

As shown on Figure V-1, Johnny's Seafood comprises Lots 21 through 24 of Block 62. Johnny's Seafood building is currently located on Lots 23 and 24. The remaining area of this parcel is vacant.

PROPOSED LAND USE AND DEVELOPMENT

Future land use for this parcel includes a continuation of the esplanade and public access area along the Thea Foss Waterway. The property portion fronting on Dock Street would be a private development site currently envisioned as mixed-use commercial/residential. Structures built within the development parcels could include multi-story buildings with commercial development on the ground floor. Excavations for pile caps and/or footings, subsurface parking structures, and new utility locations are the most likely future subsurface disturbance.

LAND USE HISTORY - THE CITY DOCK AREA

As with the other properties to the north, the Johnny's Seafood parcel was originally tideland. The tideland was filled with dredge material by 1893 as railroad lines developed along the shoreline in this area.

One of the first businesses recognized on this parcel was Griffin's Transfer Company, which apparently had a coal operation on Lot 22 in the 1890s. Their facility included a long, narrow coal shed, office, storage, and a railroad spur. By 1901, the property was sold by the Northern Pacific Railway Company to the City of Tacoma for establishing a farmers' market and city dock. The large, segmented building, called City Dock, was used by food wholesalers into the 1960s. Tenants included Northern Fish Products Company, a seafood distributor; Williams Brothers; and West Coast Fruit and Produce Company. City Dock may not have been used only for produce; in 1910, the American Fish Company subleased a portion of their space to Henry Cowell Lime and Cement Company.

In the mid-1960s, the sign shop for the Tacoma Department of Public Works moved into City Dock, initially sharing the building with the Northern Fish Products Company. This lasted until 1970 when a fire occurred causing substantial damage. A new smaller building for the sign shop was then constructed. Circa 1975, the sign shop was replaced with a larger building constructed for Johnny's Seafood. In 1977, Johnny's Seafood received a permit to dredge the waterway and place dredge spoils as site fill. According to

undated real estate drawings, Johnny's Seafood's operations included a gasoline UST and pump, located on the east side of the building. The UST may still exist on site, as TPCHD and Ecology have no record of UST closure or removal.

Although the long-term use as a City Dock suggests minimal environmental concerns, there are potential concerns associated with former coal storage and associated PAHs, residual materials from the City Dock fire which may have released SVOCs into the soils, and the occurrence of an UST and attendant soil and groundwater concerns associated with potential petroleum fuel leakage the tank.

SUMMARY OF PREVIOUS INVESTIGATIONS

Two sources of subsurface environmental data are reported for the Johnny's Seafood properties. These data were used in conjunction with historical land use information to interpret environmental site conditions. Collectively, the completed studies provide a preliminary source of environmental data for each parcel. These studies are outlined below.

Thea Foss Waterway Round 1 Sampling (1995)

Hart Crowser completed Round 1 waterway sediment and bank sampling of the Thea Foss Waterway in 1994 as part of the Thea Foss Waterway Pre-Remedial Design (City of Tacoma, 1995). Two composite sediment samples, RD-B27 and RD-B28, were collected along the shoreline bank (See Figure V-1). Chemical analyses included total metals, SVOCs, PAHs, and PCBs/pesticides.

Thea Foss Waterway Round 2 Sampling (1997)

During the Round 2 phase of sediment sampling work conducted in 1995 for the Thea Foss Waterway remedial design effort (City of Tacoma, 1996), four additional discrete bank sediment samples, RD2-B01, RD2-B02, RD2-B03, and RD2-B04, were collected. The sampling locations are shown on Figure V-1. Analyses included total metals.

SUBSURFACE CONDITIONS

Although no soil logs have been identified for the site, the underlying soils are expected to consist of fill over native soil. The fill material is expected to primarily include dredged sands and silts based on the turn-of-the-century filling, and subsequent filling in 1977 by Johnny's Seafood. Layers of mixed fill may also occur, particularly at the depth and location of former ground surface(s)

during earlier land use activities. This layer will be the target horizon for any subsurface investigation on this parcel. Below the fill, the native soil contact is likely to be silty or sandy soil with a distinct organic-rich horizon at the native surface.

Groundwater is expected to be encountered at depths of between 5 and 10 feet below ground surface. Groundwater is likely to be encountered just above the native soil contact. Easterly groundwater flow toward the Thea Foss Waterway is expected. Tidal fluctuations in the waterway may cause groundwater elevation fluctuations beneath the entire parcel (to some degree), with less response farther from the waterway.

Soil Quality Results

Review of the bank sample analytical results indicates the potential for the occurrence of PAHs. Except for the low level detections of PAHs, few other contaminants were detected. Table V-2 summarizes the chemical analyses performed on the sediment samples and Table V-3 identifies those that exceed Consent Decree or MTCA cleanup levels. The detected PAHs appear to be associated with debris noted at some locations.

For the purpose of this work plan, we are considering that the bank materials may exist in the subsurface beneath the subject upland property; therefore, these data were compared to the upland Consent Decree cleanup levels. Please note that the bank sample data are more appropriately compared the sediment quality standards, and are compared here to Consent Decree levels exclusively to consider potential upland issues. In addition, concentrations in the intertidal zone do not necessarily indicate a source from the adjacent upland property because of the potential for transport within the surface water system.

DATA GAPS

Although the long-term use as a City Dock suggests limited potential for significant contamination issues, there is a potential for contamination based on historical uses including:

- Former use as a coal yard;
- The potential for PAHs in residual burnt materials;
- Use of the property for sign making; and
- The potential for an unidentified UST.

Given the lack of any upland data and these potential sources, we recommend a limited remedial investigation to include subsurface explorations with soil sampling and limited groundwater sampling.

As with the other sites, soil characterization should occur to the base of the fill where practical, and at a minimum, to the water table surface. Soil sampling should focus on conditions above and below depths of 3 feet for consistency with likely cleanup options and the likely plan for commercial/open space land use on at least a portion of these properties. Groundwater sampling is proposed to identify any significant soil source issues, and provide assurance that waterway quality is protected from any unidentified or residual sources.

SAMPLING AND ANALYSIS PLAN

This section describes the sampling and analysis proposed to address the data gaps identified above. Table V-1 summarizes the proposed soil and groundwater-sampling program listing the types of explorations to be completed and numbers of samples and chemical analyses to be performed. Field activities will be conducted in accordance with Appendices B, C, and D in Volume II Final Thea Foss Uplands Site-specific Remedial Investigation Work Plan (Hart Crowser, 1997).

Excavate Four Test Pits

Test pits (JS-TP01 through JS-TP04) will be excavated at the four locations shown on Figure V-1. Each test pit will be excavated to the water table or the contact between fill materials and underlying native soil. Soil samples will be collected at 3-foot-depth intervals for field screening and potential physical and chemical testing, and/or at suspect soil horizons. The test pit explorations are intended to identify any historical site activities which left residual contamination.

Up to two soil samples from each exploration will be submitted for chemical analysis for petroleum hydrocarbons (NWTPH-D), total metals (antimony, arsenic, cadmium, chromium, copper, mercury, lead, nickel, zinc, and silver), and SVOCs (EPA Method 8270). An assessment of visual and olfactory indications of contamination will be conducted in the field. Field screening for volatile organic vapors using a PID will also be performed. Samples with a PID reading above background will also be submitted for NWTPH-G and VOCs analysis (EPA Method 8260).

Drill Two Strataprobe™ Borings

Strataprobe™ explorations (JS-B01 through JS-B02) will be drilled at two locations to characterize soil and groundwater quality downgradient of the Tank and sign shop and the coal storage/burned building area (See Figure V-1 for approximate locations). Drilling will continue to the approximately 4 feet below the water table encountered during drilling to allow collection of groundwater samples.

Soil samples will be collected continuously during drilling for lithologic logging and potential laboratory chemical testing. Up to three soil samples will be analyzed for NWTPH-D, SVOCs, and metals (antimony, arsenic, cadmium, chromium, copper, mercury, lead, nickel, zinc, and silver). NWTPH-G and VOCs will only be analyzed if field screening indicates organic vapors.

Collect Groundwater Grab Sample

After penetrating the water table at each Strataprobe™ location, a temporary well point will be installed and developed to remove suspended sediment and improve hydraulic connection with the groundwater zone. Groundwater samples will be collected as close as practical to a low-low tide for analysis for (in order of importance) dissolved metals (EPA 7000 series), petroleum hydrocarbons (NWTPH-D), SVOCs (EPA Method 8270), and TSS (EPA Method 160.2). Samples will be collected for analysis of NWTPH-G and VOCs only if vapors were indicated during field soil screening. Field parameters (pH, temperature, conductivity, and dissolved oxygen) will also be measured. Sample volumes may be limited so sample containers will be filled as practical in the order listed here.

Table V-1 - Summary of Field Exploration Program - Johnny's Seafood

Exploration Number	Characterization Objective[1]	Exploration Type/ Sampling Interval	Total Depth in Feet[3]	Approx Chemical Analysis Depth Interval in Feet	Chemical Analysis	Number of Soil/ Groundwater Samples
JS-TP01	Former City Dock (burned)	Test Pit/ Continuous	6	0 to 3, 3 to 6	TPH-D, TPH-G/VOA[2], SVOC	2/0
JS-TP02	Former City Dock (burned)	Test Pit/ Continuous	6	0 to 3, 3 to 6	TPH-D, TPH-G/VOA[2], SVOC	2/0
JS-TP03	Former Coal Storage Shed	Test Pit/ Continuous	6	0 to 3, 3 to 6	TPH-D, TPH-G/VOA[2], SVOC	2/0
JS-TP04	Former Coal Storage Shed	Test Pit/ Continuous	6	0 to 3, 3 to 6	TPH-D, TPH-G/VOA[2], SVOC	2/0
JS-B01	Former City Dock (burned)/ Coal Storage	Strataprobe/ Continuous Soil and Groundwater Grab	15	1 to 3, 8 to 10, and optional[4]	TPH-D, TPH-G/VOA[2], SVOC	2/1
JS-B02	Suspected Former UST, downgradient of sign shop	Strataprobe/ Continuous Soil and Groundwater Grab	15	1 to 3, 8 to 10, and optional[4]	TPH-D, TPH-G/VOA[2], SVOC	2/1
QA samples						
JS-BA	blind duplicate	NA	NA	NA	TPH-D, TPH-G/VOA[2], SVOC	1/0

1) See text for description of historical issues and Figure V-1 for locations of exploration and historical features.
2) Optional TPHG/VOA will be analyzed if field screening indicates PID reading above background.
3) Approximate depth, 18-inch interval above contact with native tideflat horizon targeted or 3 to 4 feet below water table.
4) Optional sample analyzed if slag, staining, discoloration, etc observed.

F:\docs\jobs\467613\WorkPlan.doc

Table V-2 - Soil Chemistry Results Count
Johnny's Seafood

Sample Location	Sample Date	Depth in Feet	Metals Total	SVOAs	cPAH	PAH	Pest/PCBs	Grain Size
RD-B27	8/19/94	0 - 0.3	12	21	6	10	17	4
RD-B28	8/18/94	0 - 0.3	12	21	6	10	17	4
RD2-B01	9/7/95	0 - 0.3	3					
RD2-B02	9/7/95	0 - 0.3	3					
RD2-B03	9/7/95	0 - 0.3	3					
RD2-B04	9/7/95	0 - 0.3	3					

F:\467613\Req-4-3.xls\Count

Table V-3 - Summary of Soil Exceedences by Analyte
Johnny's Seafood

Sample Location	Analyte Name	SL (1)	SL Value	Value (2)	Qual	Units	Depth in Feet	Sample Date
RD-B27	Total cPAHs (1/2 DL)	CD	0.137	2.582		mg/kg	0 - 0.3	8/19/94
RD-B28	Total cPAHs (1/2 DL)	CD	0.137	2.69		mg/kg	0 - 0.3	8/18/94

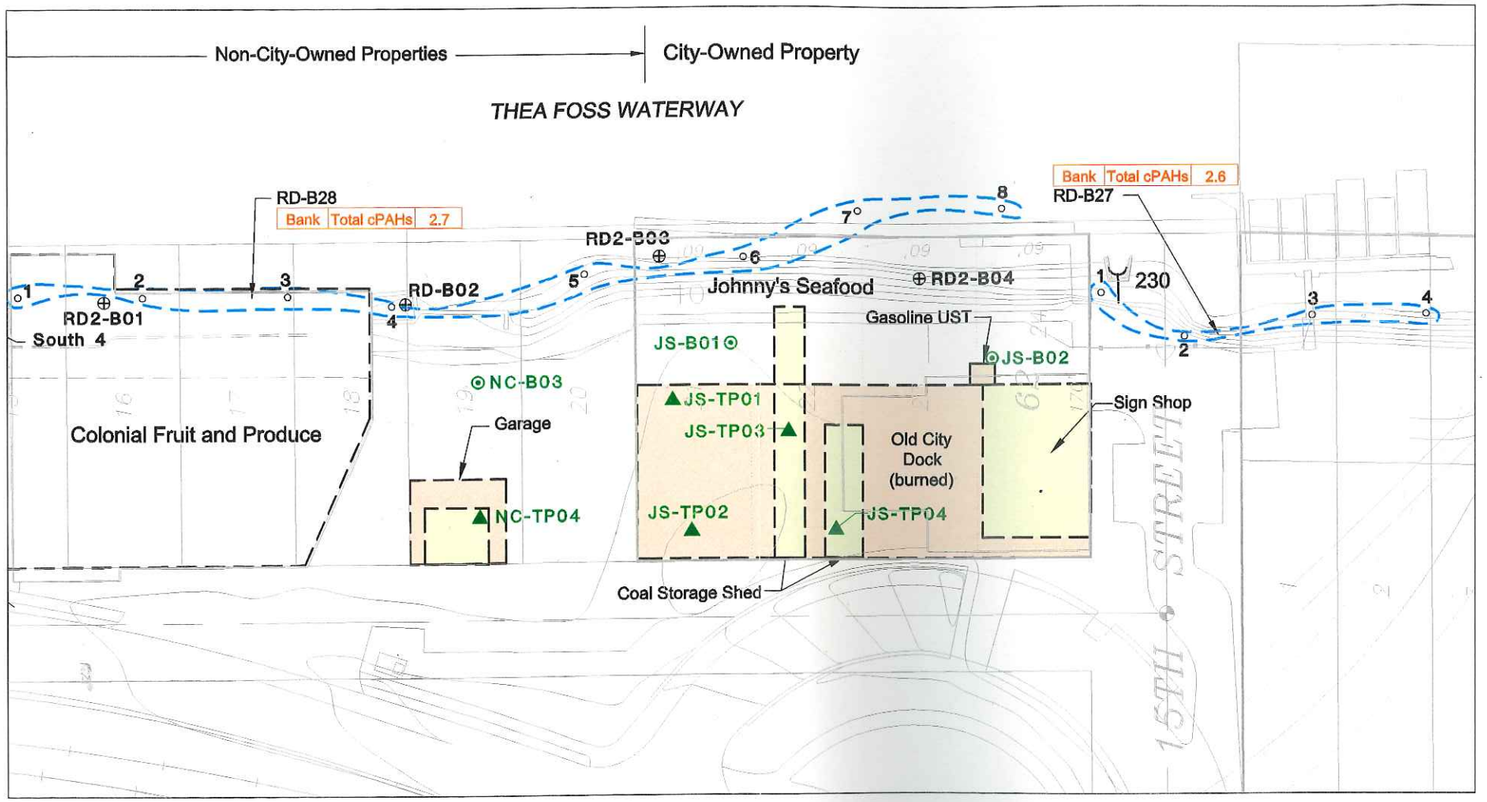
(1) SL represents the screening level; CD indicates a Consent Decree screening level; MB indicates MTCA Method B Direct Contact Criteria for soils.

(2) Only detected values exceeding the screening level (SL) are displayed.

F:\467613\Req-4-3.xls\Exceed

Proposed Exploration Plan with Significant Historical Features

Johnhny's Seafood Property



Previous Exploration Location and Number

- o1 — Composite Bank Sample (Hart Crowser, 1994)
- ⊕ RD2-B01 — Discrete Bank Sample (Hart Crowser, 1996)
- 230 — Storm Water Outfall Location and Number
- Potentially Significant Historical Area
- – – – Former Building

Proposed Exploration Location and Number

- ▲ NC-TP01 — Proposed Test Pit
- ⊙ NC-B01 — Proposed Boring with Groundwater Grab Sample

Chemical data identified where soil concentration exceeds Consent Decree cleanup levels. Note that Consent Decree cleanup levels are not applicable to cleanup of bank.

Depth in Feet
Analysis
Bank | Total cPAHs | 2.7 — Concentration in mg/kg

N

0 80 160

Scale in Feet

HARTCROWSER

J-4676-13 5/00

Figure V-1

CVD 5/25/00 1=1 color.pc2 xref=see drawing
4676131