
APPENDIX A

DRAIN-BY-DRAIN ANALYSIS OF SOURCE CONTROL ACTIVITIES

A.0 SOURCE CONTROL EVALUATION

This section presents the source control evaluation for the seven major outfalls discharging to the waterways. For each of the seven outfalls, the following Sections A.1 through A.7 will:

- Review source control investigations and other studies from **Table 2-1** and Section 2.1;
- Review baseflow, stormwater and SSPM data from Section 3; and
- Recommend future source control activities;

For each outfall drainage area, source control investigations and other activities will be discussed including a description of the action, end results of the action, and identifying any follow-up action(s). Each subsection includes a presentation of baseflow, stormwater and SSPM data. SSPM data help to provide information on extremely hydrophobic constituents such as mercury, HPAHs, DDTs, and PCBs, which have a strong affinity for sediments but are poorly soluble and often not detectable in whole-water samples. In conjunction with base flow and stormwater data, storm sediment data are used to help the City, EPA, and Ecology identify and trace unusually elevated sources of contaminants in the municipal drainages.

Spatial trend analysis includes identification of particular municipal storm drains that may be significantly higher or lower in concentration compared to other storm drains in the Thea Foss basin. Temporal trend analysis includes identification of increases or decreases in stormwater concentrations over time that may be caused by source control actions, construction activities, changes in source strength, land use, or other characteristics of the drainage basins over time.

Temporal trend analysis also includes an evaluation of seasonality, and whether significantly higher stormwater or base flow concentrations are observed during certain parts of the year. Conventional wisdom suggests higher concentrations might be expected during dry season conditions because there is more time for contaminants to accumulate on drainage basin surfaces between runoff events.

It should be noted that the spatial patterns observed in base flow are not always consistent with those observed in stormwater and storm sediment. Discrepancies between these data sets may be caused by differential transport of pollutants in dissolved and particulate phases or how the source is introduced into the system (i.e., below ground leak, illicit connection, contact with stormwater, etc.).

Based on the review of the source control investigations and evaluation of whole-water and SSPM data, additional source control activities will be identified. General priorities for these activities will be set for each outfall in Sections A.1 through A.7. General priorities will be established as:

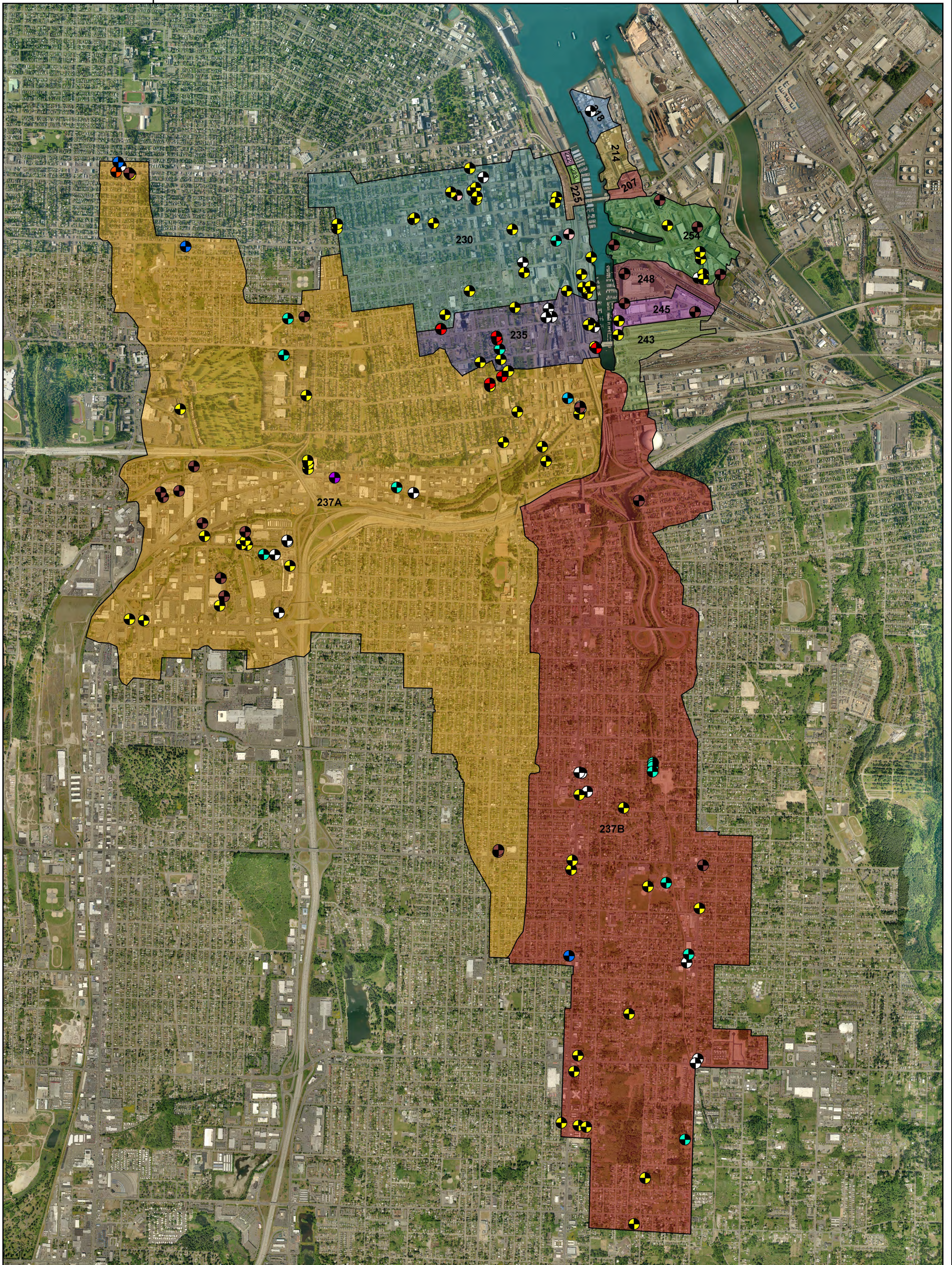
- Higher than some outfalls (i.e., sources unknown, water and/or SSPM concentrations higher than some outfalls, additional source control may be needed but at a lower priority in comparison to other locations determined to be of greater impact); or
- Higher than most outfalls (i.e., point source known, water and/or SSPM concentrations greater in comparison to all other outfalls/locations).

For the entire watershed, priorities and schedule are established in Sections 5 and 6.

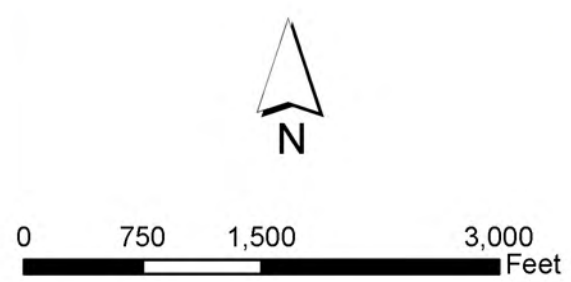
**Table A1
THEA FOSS WATERSHED 2010 BMP INSPECTIONS**

OUTFALL	DATE	PARCEL #	FACILITY NAME	ADDRESS	TREATMENT DEVICE	INSPECTION #
230		N/A				
235	4/14/2010	2019130080, 2019130070	Christ Church		3-filter CB	10-BI-0614
	4/15/2010	5004210310	23rd Townhomes	2145 S G ST	2-filter CB	10-BI-0627
	3/26/2010	under 509 bridge	Esplanade Parking	2000 dock street	2-filter CB	10-BI-0496
	4/15/2010	202116011	City Steps	2102 YAKIMA	3 Stormfilter CBs: 2-w/ 1- stormfilters &1-CB w/ 2 stormfilters	
237A	6/7/2010	320181047	TITUS-WILL	3606 S SPRAGUE AVE	Stormfilter Vaults 3 & 49 filters	10-BI-1602
	12/15/2010	North of Center St.	WSDOT SR-16	2200 Center Street	3-detention ponds	10-BI-1760
	5/13/2010	9710001222	DAFFODIL STORAGE	3501 S 38TH	Stormfilter Vault 9-filters	10-BI-0761
	5/13/2010	2605010010	Griots	3333 38TH ST	Stormfilter Vault 12-filters	10-BI-0747
	12/21/2010	2890001344	WO-6-19602	4346 LAWRENCE ST	3 CB filters 2ea	10-BI-1764
	5/10/2010	SAP ID 6003181	ENV-00362	23rd & Ferry	Stormfilter Vaults 226-filters	10-BI-0728
	4/19/2010	2018210052	NW MEDICAL PLAZA	1812 J ST	2-filter CB	10-BI-0656
	4/15/2010	2805000410	ELIZA MCCABE	2315 YAKIMA AVE	1-filter CB	10-BI-0625
237B	6/29/2010	5004500050	LARCHMOUNT COURT	310 LARCHMOUNT COURT	Stormfilter CBs/ Detention Pond	10-BI-1002
	8/19/2010	5004100030	Builder's of America	4810 E ST E	Bio-Filtration Swale	10-BI-1300
	8/19/2010	5004100050	Builder's of America	4818 E ST E	Bio-Filtration Swale	10-BI-1299
	8/19/2010	5004100070	Builder's of America	4826 E ST E	Bio-Filtration Swale	10-BI-1298
	8/19/2010	5004100040	Builder's of America	4814 E ST E	Bio-Filtration Swale	10-BI-1297
243		N/A				
245/ 248	9/21/2010	8950001652	SUPERVALU	1801 D ST E	3-(Coalescing Plate) OWS	
254		N/A				

Water Quality Devices in the Thea Foss Basin (2010)



TREATMENT DEVICES



- | | | | | |
|---------------------|----------|-------------------|-------------|-----------------|
| Oil/Water Separator | CB/Sump | Infiltration Pond | Stormceptor | Vortechs System |
| CB Filter | Bioswale | Fossil Filter | Sock Filter | Stormfilter |

Figure A-1



OF 230

A.1 OUTFALL 230

A.1.1 Outfall 230 Drainage Basin

Basin 230 is located on the mid-portion of the west side of Thea Foss Waterway. The basin boundaries are shown on **Figure 1-3**. The area is approximately 513 acres and discharges to the waterway through a 60-inch outfall pipe located at S. 15th Street and Dock Street on the side of Johnny's Seafood (retail). The general basin boundaries are S. 8th Street to the north, S. 17th Street to the south, S. Ainsworth Avenue to the west, and Dock Street to the east. Most of the storm drainage is channeled to S. 15th Street via a main trunk line along Market Street. Because of the steep downhill grade, overflow pipes exist in manholes along Market Street directing excess water to downstream trunk lines. Trunk lines along Dock Street are susceptible to saltwater intrusion from high tides.

Basin 230 is heavily developed with roughly 58 percent of the land used for commercial purposes (see **Figure 1-3**). Street right-of-ways account for over 42 percent of the basin. Residential development is generally confined to the western end of the basin accounting for 30 percent of the total land use with multi-family at 11 percent.

The northern portion of the University of Washington –Tacoma (UWT) discharges to OF230. The drainage area for UWT is bounded by Pacific Avenue, South 21st Street, Tacoma Avenue and South 17th Street. Also included in the basin is Tacoma Light Rail – LINK, Tacoma Convention and Trade Center, downtown revitalization (condos and retail), Dock Street redevelopment and the Foss Waterway Public Esplanade from South 17th Street to South 11th Street.

Baseflow at the OF230 monitoring location is continuous and approximately 0.12 cubic feet per second at ½-inch in depth (City of Tacoma 2008a). Two sources of the baseflow have been confirmed, however, other sources may be present. Since 2004, groundwater from footings for the Tacoma Convention Center has been pumped to the storm drain. During the 2010 Water Year, investigations led to a discovery of an eight inch lateral connection on S. 11th Street between Commerce and Pacific. This discharge appears to be a continuous flow of clear water at ¼-inch in depth. City staff was unable to locate the source of the lateral due to a collapse pipe.

A.1.2 2002-2010 Source Control Activities

Since 2002, significant work has been accomplished in Basin 230 including intense business inspections, complete line cleaning, and identification and removal of point sources (see **Table 2-1**). A discussion of specific activities and any supporting chemistry data are provided in the following paragraphs.

Summary of Actions. Source control activities completed through 2010 are listed in **Table 2-1**. From August 2001 through 2010, approximately 69 actions have occurred within Basin 230. The types of actions taken in Basin 230 are as follows:

Action	Thea Foss	230	235	237A	237B	243	245	254
Construction	60	23	14	13	3	2	--	5
Inspection ¹	76	12	12	21	7	5	5	14
Facilities	43	6	7	12	7	3	3	5
Maintenance	37	10	7	3	1	4	6	6
Point sources	39	4	3	14	10	--	2	6
UST	19	7	2	3	2	2	3	--
Cleanup actions	17	2	2	4	--	5	2	2
Spill ¹	17	1	--	5	1	3	5	2
Fines ¹	4	--	--	1	--	--	2	1
Education	5	4	1	--	--	--	--	--
Total	355	69	48	76	31	24	28	41

¹The number reported includes notable actions only. Number of all inspections and spills are provided in Section 2.2.2.

By the end of 2010, 50 percent of businesses and multi-family were inspected in this drainage basin. As part of the City-wide business inspections program, 260 additional business inspections were conducted in Basin 230 in 2010. These business inspections through education and implementation of nonstructural BMPs help prevent materials from coming into contact with stormwater and to promote activities that reduce pollutants in stormwater.

Stormwater treatment devices currently in place also remove solids and the associated particulate-bound chemical from stormwater. The locations of private onsite stormwater treatment devices in Basin 230 are shown on **Figure A-1**. In 2010, there were no new BMPs installed and inspected in Basin 230 (see **Table A-1**). Tacoma is currently updating the list of private onsite stormwater treatment devices and our BMP inspection program (which includes new BMP inspection signoffs and periodic maintenance inspections). This program will improve the effectiveness of these devices through initial inspections, training on operation and maintenance, and periodic follow-up inspections. With future redevelopment in Basin 230, more of these onsite treatment systems will be installed and over time decrease the solids load and the associated particulate chemical load to the waterway.

Mercury Source Tracing Investigation. The FD3A branch was TV'ed and cleaned in June 2006 (Tacoma 2007b). The FD3A branch was one of the oldest stormwater lines in the City of Tacoma (75 to 100 years old). It is believed to have never been cleaned prior to 2006. Since the stormwater lines had never been cleaned, one of the possible sources of COCs in past sampling is likely residual accumulated storm sediments from historical sources.

Starting in April 2006, a source control inspector collected mercury samples from all branches in FD3A, FD18 and FD18B. A point source of mercury was found in a private catch basin near S. 11th and Yakima, a private parking area by Bates Technical College in July 2006. The CB and private system was cleaned (2006). Post cleaning samples confirmed that the mercury source was removed. As shown in **Figures A-2a** and **2-1a**, mercury concentrations at FD18 and FD18B have generally decreased from 2004 to present which is believed to be partially due to the removal of the point source. Mercury concentrations at FD18B increased slightly in 2010 to 0.248 mg/kg.

The TVing revealed that the pipe along Court A from 15th to 13th Streets was in disrepair. This pipe section was abandoned and filled with CDF. The stormwater was redirected to a new pipe on A Street (Summer 2007).

CHB Auto Care Pie Grant. In 2006, CHB conducted a public education program on Basin 230 (Tacoma 2007b). The program was completed as part of a PIE Grant and included a survey, working with school children, meeting with neighborhood organizations and providing residents with material on proper automobile care with coupons for neighborhood services. Curb marking with drains to stream was also completed by CHB and the City in the basin. Public surveys showed some improvement in public awareness. However, there was no measurable difference in stormwater data between OF230 and the control OF235 where no public education was offered.

Storm System Cleaning. At a cost of \$300,000, the entire municipal storm drainages, OFs 235 and 230, were cleaned and TV inspected by the City's Transmission Maintenance crews during 2007. One hundred years of accumulated historical stormwater particulate matter in the trunk lines and laterals, 220 cubic yards, was removed. Eighty thousand feet of 8 to 56 inch lines were cleaned over 14 weeks (May15 - June 25, 2007). Throughout the duration of the project, standardized cleaning practices were used (i.e., plugs downstream of vactor truck) to prevent any mobilized materials from entering Thea Foss Waterway. The decant water from the vactor trucks was diverted to settling tanks prior to discharge to the sanitary sewer.

As shown in **Figure 3-6c**, phenanthrene shows a statistically significant improvement in stormwater quality from 2001 to present. **Figure 5-1a** also shows a consistent decrease from 2007 to 2010 that occurred following cleaning of the storm lines. The best-fit regression equations result in an estimated 81 to 92 percent reduction for each of the three index PAHs (pheanthrene, pyrene, and indeno[1,2,3-cd]pyrene) in OF230 in a ten year period (see **Table 3-8**). As shown in **Figures A-2a** and **2-1a**, mercury concentrations at FD18 and FD18B have generally decreased from 2004 to 2009 which is believed to be partially due to the storm line cleaning project. Mercury concentrations at FD18B increased slightly in 2010 to 0.248 mg/kg.

With over three full years of post-cleaning monitoring data, statistical analysis was conducted on the pre-cleaning versus post-cleaning data sets to assess the effectiveness of basin-wide sewer line cleaning. Basin 230 showed statistically significant reductions in PAHs (see **Table 2-3** and **Figure 2-2a**). Differences in PAH composition are remarkable, and provide the best evidence for the effectiveness of storm line cleaning. Statistically significant reductions were evident for each of the three index PAHs (pheanthrene, pyrene, and indeno[1,2,3-cd]pyrene). Sewer line cleaning consistently resulted in 67 to 71 percent reductions in PAH concentrations. In summary, sewer line cleaning appears to have been most effective at removing lead and PAHs (both light and heavy PAH fractions). However, no significant reductions in TSS, lead, zinc and DEHP can be discerned from these data for OF230. These statistical comparisons will continue to be updated as more post-cleaning data are collected. The statistical power of this test should increase over time, and quite possibly statistical differences that can't be resolved today may be distinguishable in the future.

Stormwater Pipe Retrofit Project. From June 2010 to November 2010, 13,500 linear feet of existing storm sewer main was structurally rehabilitated in the downtown district. The main segments targeted were tributary to OF230 (Thea Foss Waterway). Defects (cracks, holes, etc.) in the aging system allow potentially contaminated groundwater and soil from historic "hot spots" to enter the system and ultimately discharge to the Thea Foss Waterway. Rehabilitation of the existing main segments was accomplished by means of Cured-In-Place Pipe (CIPP) construction technologies. Resin impregnated liners were inserted into the main segments through existing manholes, the liner was pressurized causing it to expand and form to the inside of the existing main segment, then a source of heat was applied which caused the resins to

catalyze. The end result was a new pipe within the existing pipe that has similar strength and durability characteristics of PVC pipe.

When properly installed, the CIPP liner results in continuous stormwater pipe segments with no joints (except for manhole connections), that are free of leaks associated with structural defects. The resulting reduction in inflow and infiltration is expected to reduce the contaminant load to waters of the state. Final project costs are estimated to be \$924,234. This project was funded by a \$1,000,000 Ecology grant. Tacoma will review pre-construction and post-construction monitoring data in OF230 to evaluate the effectiveness of pipe relining and replacement on reducing contaminant concentrations in stormwater.

Sauro's Cleanerama Site Remediation. The Sauro's Cleanerama, now closed, released dry cleaning solvents into the environment. Under Ecology oversight, the Sauro Property Interim Action cleanup was completed during December 2009. During the Interim Action, Tacoma removed and disposed of 12,010 tons contaminated soil designated as hazardous waste (3,493 tons) and non-hazardous waste (8,517 tons). Under a Consent Decree with Ecology, Tacoma is proceeding with the final cleanup action which will consist of installing an additional groundwater monitoring well and groundwater remediation by monitor natural attenuation.

A.1.3 Outfall 230 Water and SSPM Quality

The following paragraphs summarize 2001-2010 monitoring results for Basin 230. Annual and seasonal data for baseflow, stormwater and SSPM for some of the COCs and other parameters is used to identify ongoing COCs and their pathway (water, SSPM, seasonality, etc.) and to narrow where to look for sources. The following paragraphs discuss how and where COCs in Basin 230 are different than other Thea Foss drainage basins, and where subsequent source control activities may be focused.

TSS and Metals. TSS concentrations in OF230 baseflow (1) are slightly above average (see **Table 3-4A**). The highest overall concentration of TSS in baseflow was reported in OF230 Year 8 (319 mg/L in March 2009). TSS concentrations appear to be fairly consistent until March 2009 value (see **Figures G-21A, G-31A** and **5-1a**). During this period, City of Tacoma was constructing the Broadway LID. It is highly suspected that the Broadway LID construction is the source of the anomaly; however, no direct linkage to this source could be confirmed.

Baseflow quality in OF230 (+4) is most elevated in zinc as compared to the other outfalls (see **Tables 3-2** and **3-4A** and **Figures F-23** and **F-33**). These baseflow concentrations have remained fairly consistent from year to year until Year 9 (see **Figures G-23A** and **G-33A**). Year 9 zinc concentrations are some of the lowest measured to date. The continued monitoring record will show if the Year 9 decrease is a result of ongoing source control activities or if there is an ongoing source(s) of zinc in Basin 230 especially since levels are above and beyond those found throughout the Thea Foss Watershed. However, these chemicals are not COCs in Thea Foss Waterway and as a result source control will not be a high priority for these chemicals.

In stormwater, TSS concentrations in OF230 were some of the lowest mean and median observed in all the drainages (see **Table 3-3** and **Figures F-1** and **F-11**). Stormwater TSS concentrations in OF230 (-2) is below average (see **Table 3-5A**).

Inorganics seasonal effects were much less pronounced in OF230 for baseflow (TSS, lead, zinc) and stormwater (TSS and lead) (see boxplots, **Figures H-1A, H-2A, H-11A, H-12A, H-21A** to **H-23A** and **H-31A** to **H-33A**). In stormwater, zinc showed occasional evidence of

seasonality, i.e., higher median, mean, and/or peak concentrations during dry season months in OF230 (see **Figures H-3A** and **H-13A**). This may be caused by more isolated storms and longer antecedent dry periods between storms.

Storm sediment in OF230 is generally elevated in lead, mercury, and zinc (+2, +3 and +3) as compared to the other outfalls (see **Table 3-6** and **Figures F-29 to F-31** and **F-41 to F-43**). Some of the highest SSPM concentrations for mercury were found in FD3-New (see **Figure 2-1a**). Within Basin 230, mercury concentrations were higher at upline sediment trap locations FD18B and FD18 (2.23 and 1.68 ug/kg, respectively), FD3A (0.915 ug/kg in 2004) and FD16 (0.516 ug/kg in 2008) (see **Figures 2-1a** and **A-2a**). One mercury point source was located and removed, however, this indicates that there may be other source(s) of mercury in these subdrainages (see Section A.1.2). As shown in **Figures A-2a** and **2-1a**, mercury concentrations at all these locations except FD18B have generally decreased from 2004 to present which is believed to be due to the storm line cleaning project and removal of the point source (see Section A.1.2). Mercury concentrations at FD18B increased slightly in 2010 to 0.248 mg/kg. The priority for additional source control for mercury is high in Basin 230.

PAHs. OF230 had similar levels of phenanthrene and pyrene concentrations in baseflow as compared to all the smaller drainages (see **Table 3-4A**). Most PAH concentrations appear to have decreased in the last four years (see **Figures 5-1a, G-4A to G-9A, G-14A to G-19A G-24A to G-29A** and **G-34A to G-39A**). OF230 stormwater is slightly above average in PAHs (+1) (see **Table 3-5A** and **Figures F-4 to F-6** and **F-11 to F-13**) and showed weak evidence of seasonality (see **Figures H-4A to H-9A** and **G-14A to G-19A**). As shown in **Figures 3-6c, 3-6e** and **3-6g**, PAHs (phenanthrene, pyrene and indeno[123-cd]pyrene) show a statistically significant improvement in stormwater quality from 2001 to present. The best-fit regression equations result in an estimated 81 - 92 percent reduction in PAHs in OF230 in a ten year period (see **Table 3-8**). In particular is the consistent decrease from 2007 to 2010 (see **Figures 5-1a, G-4A to G-9A** and **G-14A to G-19A**) that occurred following cleaning of the storm lines (see Section A.1.2).

SSPM quality in OF230 is enriched in HPAH, indeno(1,2,3-cd)pyrene (+3) (see **Table 3-6** and **Figures F-34** and **F-46**). SSPM quality in OF230 is slightly elevated in phenanthrene and pyrene (+1) (see **Table 3-6** and **Figures F-32, F-33, F-44** and **F-45**). As shown in **Figure 5-1a**, SSPM PAH concentrations have continued to increase since Water Year 2005. The 2010 data indicates there is an ongoing possible source(s) of PAHs in this Basin 230.

As shown in **Figure A-2b**, the higher concentrations for total HPAHs and LPAHs in SSPM were found in FD3A with total PAHs ranging from 80,000 to 249,000 ug/kg. The 2010 FD18 data is the highest total LPAHs found to date. However, these concentrations are similar to those found in the Thea Foss Watershed (see **Figure 2-1b**) and are a lower priority for source control.

DEHP. The highest mean and maximum concentrations of DEHP in baseflow occurred in OFs 235 and 230, respectively (see **Table 3-2** and **Figures F-21** and **F-28**). As a result, these outfalls exhibit elevated total phthalate concentrations. However, DEHP is fairly ubiquitous and consistent in baseflow throughout all drainages except OF235 (see **Table 3-4A**). Most of the peak phthalate concentrations occurred earlier in the monitoring program (2002 through 2005).

In stormwater, the second highest mean, median, and maximum concentrations of DEHP were observed in OF230 (4.5, 5.4, and 44 µg/L, respectively) (see **Table 3-3** and **Figures F-10** and **F-20**). Unusually high peak concentrations of DEHP were observed in Year 7 in OF230, but these appear to be isolated occurrences (see **Figures G-10A** and **20A**). OF230 (+5) contains

significantly elevated DEHP concentrations in stormwater, higher than almost all other outfalls (see **Table 3-5A**). OF230 also showed weak evidence of seasonality for DEHP (see **Figures H-10A** and **H-20A**).

OF230 SSPM quality is the only outfall where DEHP concentrations are slightly enriched (+2) (see **Table 3-6** and **Figures F-35** and **F-49**). DEHP is consistent in stormwater throughout all the other drainages. Within the 230 basin, some of the highest concentrations of phthalates were found in FD3A (36,000 to 161,500 ug/kg) from 2002-2007 and in FD18 from 2008-2010 (34,000 to 100,500 ug/kg) (see **Figures 2-1a** and **A-2b**). The highest concentration found to date (162,000 ug/kg) was in 2010 at FD16. As shown in yellow and red on **Figure 2-1a**, some of the highest concentrations of phthalates in the Thea Foss Watershed were found at FD3B, FD3A, FD18 and FD16 SSPM (also see **Figure A-2b**). There may be a source(s) of phthalates at these locations within the 230 Basin. The priority would be set as additional source control is needed but at a medium priority in comparison to other locations determined to be of greater impact.

Pesticides and PCBs. Pesticides and PCBs are not detected at the reporting limits in whole-water samples. In SSPM samples, the highest concentrations of DDT and PCBs were found in Basin 230 (see **Figures F-50, F-51, F-63** and **F-63**). However, very little difference in DDT concentrations was observed among outfalls (see **Table 3-6**). DDT was found at 220 and 260 ug/kg at FD3A (2002-2003, OF 230), which was at least 15 times greater than the other SSPM samples (see Appendix D, **Tables D-15** and **D-16**). DDT was not detected in 2007 to 2010. DDT concentrations appear to be decreasing.

When detected, total PCBs consisted mainly of Aroclor 1254 and 1260 at concentrations ranging from 492 to 3,400 ug/kg. These concentrations are approximately 5 to 10 times greater than those observed in the other basins (see **Figures F-51** and **F-63**). Storm sediment in OF230 is significantly enriched (+3) in PCBs relative to other outfalls (see **Table 3-6**). As shown on **Figure 2-1d**, PCBs concentrations at FD3A, FD3-New, FD18B, and FD16 were red before the 2007 cleaning project and are now green (also see **Figure A-2a** and Section A.1.2). However, PCBs concentrations at FD3A (620 ug/kg) are once again red in 2010 indicating that there is an ongoing source. PCBs concentrations at FD18 are fluctuating from green to red and now green 2010. Tacoma will continue to redeploy all upline sediment trap locations to verify if the main source of PCBs in the system was from historic sediment buildup. The priority would be set as additional source control is needed but at a lower priority in comparison to other locations determined to be of greater impact.

A.1.4 Basin 230 Conclusions and Recommendations

Many activities occurred in Basin 230 some of which are showing improvements in baseflow, stormwater and SSPM quality, especially PAHs, and others have source(s) linked to water quality concentrations. Cleaning of the entire storm system has shown statistically significant improvement in stormwater quality for the entire monitoring record and was evident for PAHs and lead when comparing pre- and post-cleaning stormwater data. Differences in PAH composition are remarkable, and provide the best evidence for the effectiveness of storm line cleaning. PCBs also show some improvement with the reduction in SSPM data except at FD3A where there appears to be an ongoing source. Removal of the mercury point source also appears to have reduced SSPM concentrations at FD18 and FD18B until 2010.

Pipe rehabilitation projects were focused on the aging pipe in OF230. The FD3A branch was replaced in 2007 and the \$1,000,000 Ecology grant CIPP project was completed in November

2010. It is anticipated that these projects will also result in improvements to water and SSPM quality by isolating potentially contaminated groundwater and soil from historic “hot spots” that now enters the system through existing defects (cracks, holes, etc.).

In 2011, it is recommended to:

- Review of the 2010-2011 SSPM data to confirm existing conditions in the basin.
- Monitor the major construction activities in Basin 230
- OF230 mercury, PCBs, PAHs and phthalates source tracing in the area draining to FD3A.
- OF230 mercury, PCBs, PAHs and phthalates source tracing in the area draining to FD18
- OF230 phthalates source tracing in the area draining to FD3B and FD16.

If needed, the City will use the screening methods for source tracing of mercury and PCBs. The screening method will provide data of gross magnitude only. This will be solely used for source tracing and, if necessary, standard EPA analytical laboratory methods will be used for follow-up quantification. If needed, the City and Tacoma Public Utilities will review the City’s data to locate possible sources of PCBs and other COCs including but not limited to utility vaults. Other possible sources of PCBs have been identified including: old Bennett labs (three different locations), leaching from old brick sewers, TPU vaults, Bates Vocational (FD16B), and Jail/Armory/ Co. City Building (FD18B).

Figure A-2a
 Analysis of Monitoring Trends in Storm Sediment
 OF-230

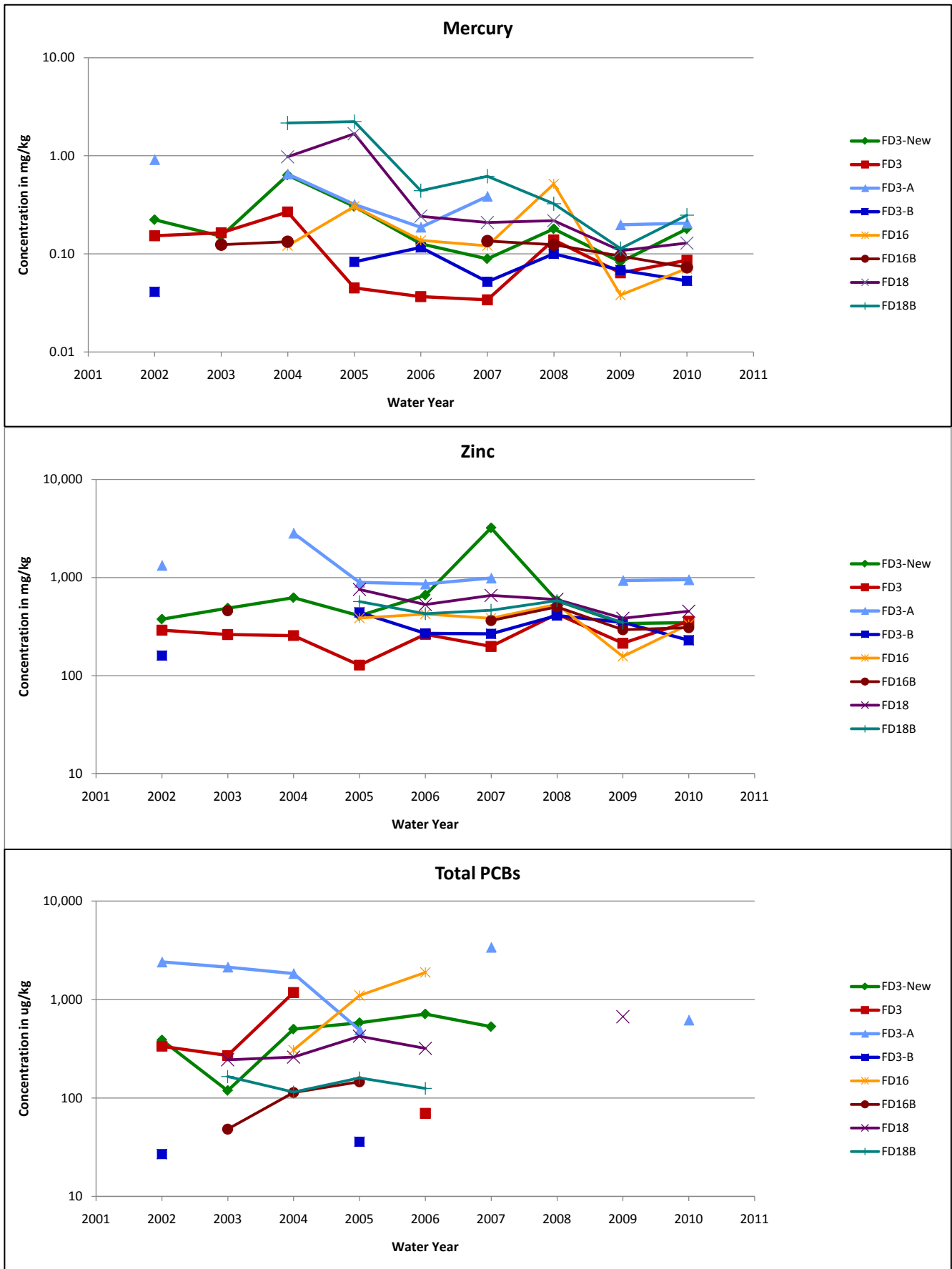
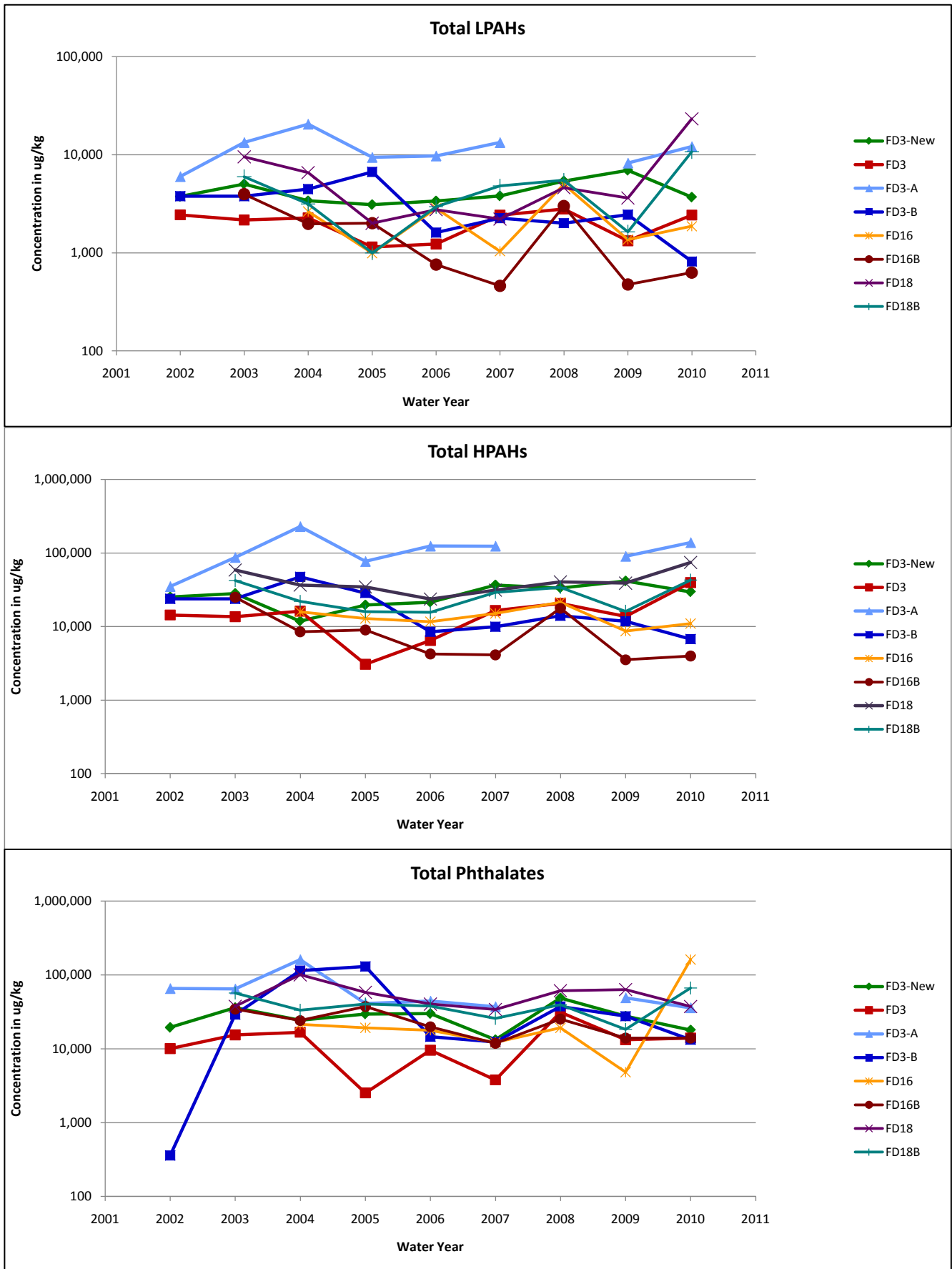


Figure A-2b
 Analysis of Monitoring Trends in Storm Sediment
 OF-230



Project Name: City of Tacoma Stormwater Pipe Retrofit Project

Project No.: ENV-00361

Specification No.: PW09-0312F

Description:

The purpose and initial scope of this project was to structurally rehabilitate approximately 17,000 linear feet of existing storm sewer main in the downtown district. The main segments targeted were tributary to Outfall 230 (Thea Foss Waterway). A secondary benefit of the rehabilitation was to prevent groundwater infiltration into the storm sewer collection system, thereby preventing point sources of potentially contaminated groundwater from discharging to the Thea Foss Waterway.

Rehabilitation of the existing main segments was accomplished by means of Cured-In-Place Pipe (CIPP) construction technologies. CIPP rehabilitation is a non-destructive process whereby open cut construction/trenching is not necessary. Resin impregnated liners are inserted into the main segments through existing manholes, the liner is pressurized causing it to expand and form to the inside of the existing main segment, then a source of heat is applied which causes the resins to catalyze. The end result is a new pipe within the existing pipe that has similar strength and durability characteristics of PVC pipe.

Some of the targeted main segments had structural defects which prevented lining. In the end we were able to rehabilitate approximately 13,500 linear feet of existing main.

Dates:

Construction activities on this project occurred during the months of June 2010 to November 2010

Cost:

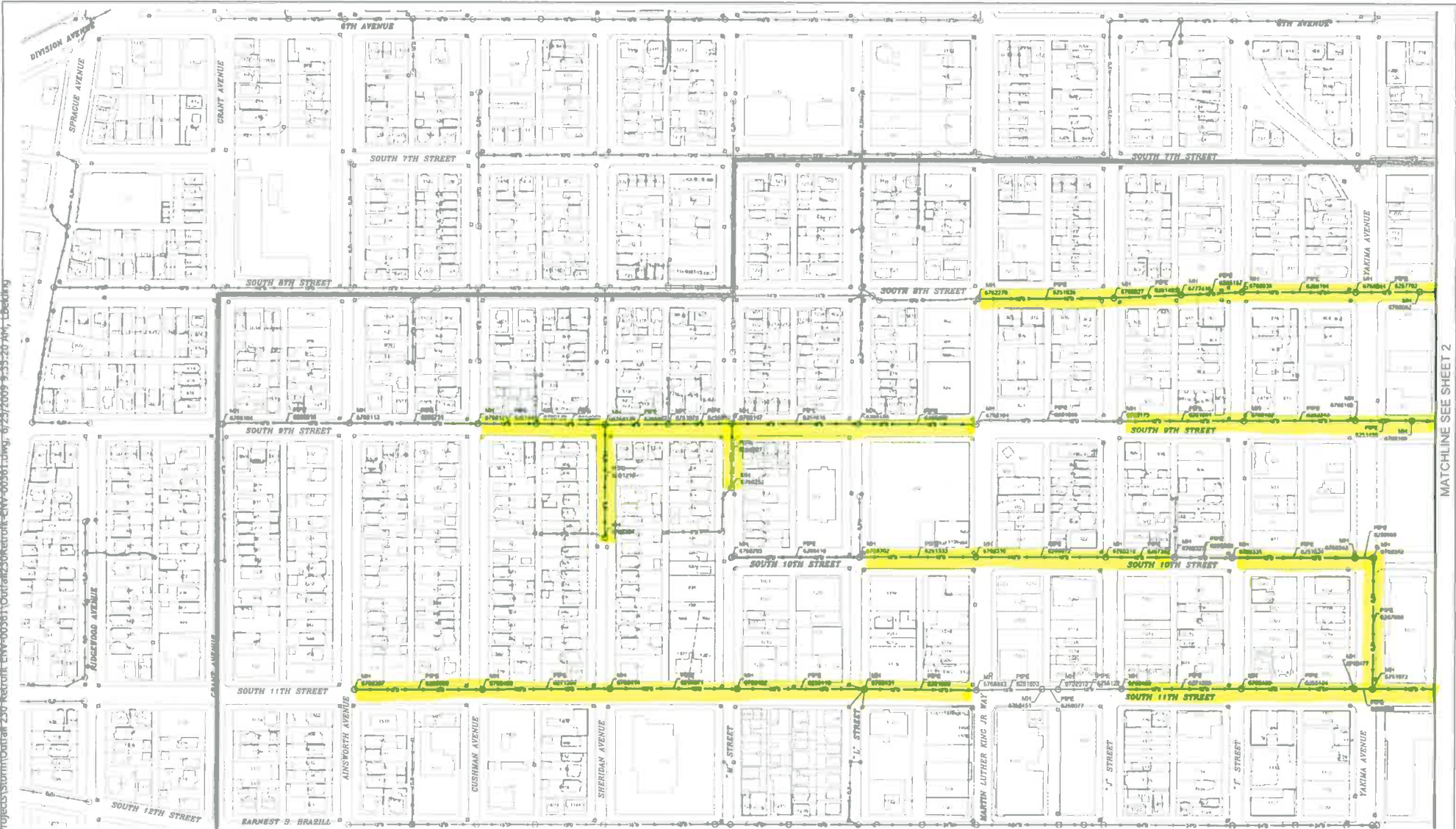
Construction activities on this project are complete; however, final contract quantities have not been verified and agreed on. There are, therefore, outstanding monies due to the Contractor. However, at this point the contract amounts are as follows.

- Authorized Project Limit - \$924,234
- Current Payments - \$360,903
- Outstanding Payments – To Be Determined

Map:

See attached

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MATCHLINE SEE SHEET 2

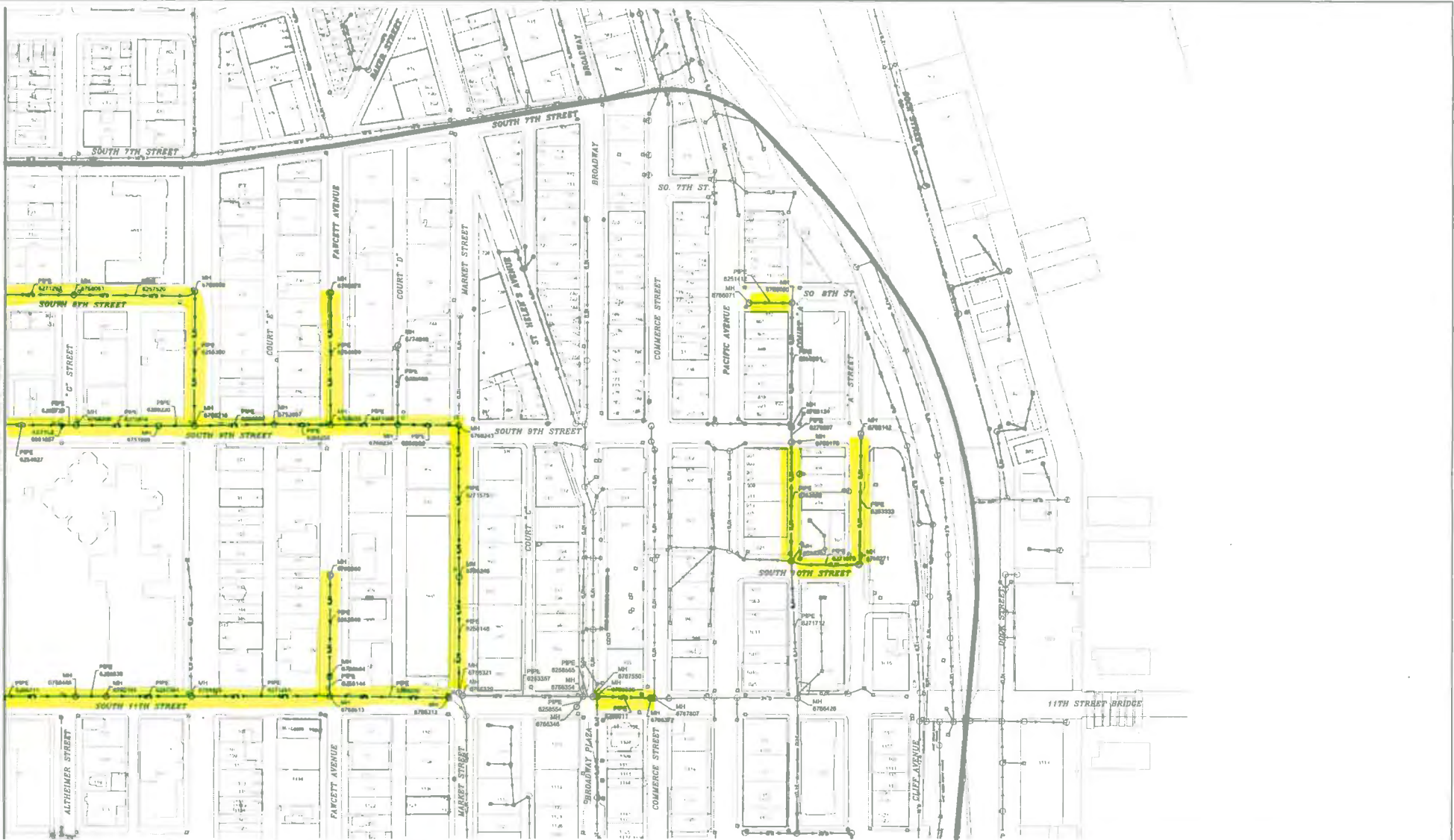


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CITY OF TACOMA
 DEPARTMENT OF PUBLIC WORKS

CITY OF TACOMA STORMWATER PIPE RETROFIT PROJECT

OUTFALL 230 TRIBUTARY BASIN
 STORM PLAN VIEWS

ENV-00361
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BUSINESS

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Tacoma's Elks project takes big step

McMenamins: Developers, Tacoma announce pick of Bellevue builder, Seattle architectural firm

JOHN GILLIE; STAFF WRITER

Last updated: February 23rd, 2010 02:29 PM (PST)

A plan that would transform the site next door to downtown Tacoma's historic but tattered former Elks Temple into a structure including a garage and apartment building took a big step forward.

The City of Tacoma and developers Grace Pleasants and Rick Moses announced Monday that they've picked a Bellevue construction company and a Seattle architectural firm to design and build the garage, retail and apartment structure adjacent to the venerable lodge building near Old City Hall.

The design-build team of GLY Construction Co. of Bellevue and Zimmer Gunsul Frasca Architects of Seattle will design the new structure and manage its construction if the Tacoma City Council ratifies the selection next month.

The GLY-ZGF team was among four contractor-architect groups that responded to the city's request for qualifications to create the project.

"We were very pleased at the expertise and experience that the two firms will bring to this project," said Ellie Walkowiak, project manager for the city's Community and Economic Development Department.

Pleasant, one of the co-developers for the Elks project, said the two companies have an extensive portfolio of major projects they've created.

"Grace and I are beyond pleased to have such a highly qualified team working on the Elks project," said Pleasants' development partner Rick Moses in an e-mail. "GLY and ZGF are the best in the business, and we are confident they will deliver an outstanding product for the City of Tacoma."

GLY has built much of Microsoft's corporate headquarters campus and is currently building the first phase of [Amazon.com's](#) new headquarters near Lake Union. ZGF has designed Safeco's corporate office expansion; major university buildings at the University of Oregon, the University of Arizona and Washington State University; the Oregon Convention Center; and Portland International Airport's expansion.

The Elks project has three major partners. [The City of Tacoma will build the 280-stall garage north of the former Elks Temple.](#) That garage will support [a six-story retail and apartment structure](#) that Pleasants and her partner, Southern California entrepreneur Moses, will build.

Oregon-based McMenamins, a hotel and entertainment company, will [remodel the old temple into a hotel, restaurant, brewpub and entertainment venue.](#)

The city-owned garage will serve the hotel, the apartments and the retail space, which Pleasants and Moses hope to lease to an upscale grocer.

The total project cost is expected to be about \$42 million – \$12 million for the hotel, \$9 million for the garage and \$21 million for the 70-unit apartment structure. The GLY-ZGF group is expected to design and build the apartment-retail complex that will sit atop the garage. McMenamins has selected Ankrom Moisan Associated Architects of Portland to design the hotel and entertainment center.

If the council approves the contract, said Walkowiak, design work will begin with a groundbreaking for the new structure set for November. Construction contracts for the structure will be bid this summer.

Before the groundbreaking can happen, Moses and Pleasants must secure financing for their portion of the project. Pleasants said the two are making good progress in securing financing and a grocery store tenant. Two grocery chains are considering the Broadway level as the site for a 25,000-square-foot store, she said.

Moses said the two are looking for a federal Housing and Urban Development loan guarantee.

If the new project breaks ground in November and the McMenamins portion of the project begins somewhat later, both should be ready to open their doors in 2012, Pleasants said.

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Outfall 230



BUSINESS

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McMenamins hotel and rooftop bar for Elks project in Tacoma

Elks complex: It gains height, cost, maybe a Whole Foods; timeline longer

KATHLEEN COOPER; STAFF WRITER
Last updated: April 17th, 2010 11:51 AM (PDT)

Add a 100-room McMenamins hotel and a rooftop bar, and possibly a Whole Foods grocery store to the new building being planned for the lot next to the downtown Elks entertainment complex.

Developers Grace Pleasants and Rick Moses announced Friday that they had reached an agreement with the Oregon-based hotel and entertainment company to move the hotel out of the historic Elks hall and into the mixed-use structure they're planning.

The plan raises the cost of the entire Elks project about \$16 million, to a total of about \$58 million. It also means the groundbreaking, once planned for this fall, will be pushed into the spring of next year. The grand opening then will be in fall 2012 instead of St. Patrick's Day that year.

While adding the hotel makes the Pleasants and Moses project more expensive, it might help them in their quest for financing. People familiar with commercial loans said Friday that a lender might look more favorably on a pre-construction commitment on a hotel, and the income it would generate, than on a retailer.

The City of Tacoma's commitment is unchanged. The parking structure is the same size and will cost about \$9 million, and the city's contract with the developers stipulates that the garage won't be built unless the mixed-use portion is financed.

The Elks complex sits across from Old City Hall on Stadium Way. The city's height limit in that area is about 35 stories. The new building now is planned for 14 stories: a five-story city-owned parking garage, a three-story hotel, five stories for 70 apartments, and one story for a large retail store, such as a grocery.

Several downtown sources said the developers, known as Elks on Broadway, have been courting Austin, Texas-based Whole Foods. Pleasants and Moses would not confirm that Friday.

Pleasants said in February that two grocery store chains were considering the site, and she said Friday that "it's down to one."

"It's in their court now. We've delivered everything possible to get them to say yes," she said, declining to name the chain or give any details about them.

Pierce County Executive Pat McCarthy sent a letter in December, in care of Elks on Broadway, to Whole Foods CEO John Mackey. In it she extols the virtues of downtown Tacoma and mentions the Elks project specifically.

"I am excited to hear that you are considering bringing a Whole Foods Market to downtown Tacoma," McCarthy wrote.

Pierce County spokesman Hunter George said Friday that McCarthy has sent letters to no other grocers.

City of Tacoma spokesman Rob McNair-Huff said that the city has not been in contact with any grocery stores.

"We're not really privy to exactly who the developers have been talking with in terms of talks with a grocery," he said Friday. "We know that that's been a goal all along, but we haven't been involved in any large way with those conversations."

A Whole Foods spokeswoman said by e-mail Friday that the company is "always looking at potential new store sites but there are no plans to open in Tacoma currently."

A Whole Foods in a dense development is not without precedent in the Pacific Northwest. The Whole Foods Westlake store in Seattle is in a development that includes the Pan Pacific Hotel and 247 condominiums.

Moses and McMenamin officials said moving the hotel to the new building made business sense.

If the hotel went in the temple, they could fit only about 40 rooms, and it would have been built in what was a ballroom. Moving the hotel next door keeps a historic feature intact, and also creates an entire additional event space and enough hotel rooms to meet the demand of people using that space.

"We do a lot of weddings on our properties," McMenamin said earlier this week. "Likewise we could have two musical events go on at the same time. And that makes the hotel work, which makes the restaurant work, which makes the whole thing work."

The temple now will have a brewery, a restaurant, a pool, a game room, and several bars and events spaces.

On Friday, Pleasants and Moses wouldn't provide specifics about how the hunt for money is going. They estimate their project would cost roughly \$31 million to build apartments and the retail and hotel structure.

"We're working on that right now," Moses said. "We do have investors, and certain programs are likely to be very helpful," including a federal Housing and Urban Development loan guarantee.

McMenamin said they already had partial commitments for financing their portion, which Moses estimates to be roughly \$18 million for renovating the Temple and finishing the hotel and rooftop bar.

Another hurdle for the new building is that part of the site rests in the Old City Hall Historic District. The design will go before Tacoma's Landmarks Preservation Commission, an 11-member volunteer board made up of residents and professionals.

Reuben McKnight, the city's historic preservation officer, said the review is to ensure that the new building is compatible with the area.

"That doesn't mean that someone will have to design an historic-looking building," he said. "It just means that it needs to be sensitive to the surrounding context."

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Staff writers David Wickert, Lewis Kamb and John Gillie contributed to this report.



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- These artist's renderings of the Elks on Broadway project were presented Friday to the Tacoma Pierce County City Club. They show a roof-top bar and a 100-room hotel integrated into the building at right.

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Read more: <http://www.thenewstribune.com/2010/04/17/1151279/hotel-site-now-next-door.html#ixzz0leVfj00>



BUSINESS

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Revised design for Marriott on Tacoma's Foss waterway gets board approval

Obstacles: City Council's OK, rival hotel's opposition stand in way

JOHN GILLIE; STAFF WRITER

Last updated: January 29th, 2010 10:09 AM (PST)

Construction of an eight-story Marriott Residence Inn on Tacoma's near-downtown Thea Foss Waterway has moved a step closer to reality.

The Foss Waterway Development Authority board on Wednesday night gave its unanimous approval to a revised design for the hotel.

The authority's Design Review Committee last week had given its own recommendation for approval subject to a few refinements to the design. Those refinements, which include such items as more contrast between the building's brick and stucco colors, a clearer pathway for pedestrians from Dock Street to the waterfront esplanade and a revised decorative treatment to two windowless exterior walls, must be incorporated in the final design before construction may begin.

Two issues still block the start of hotel construction on a lot north of the Thea's Landing condominiums. The Tacoma City Council must approve an environmental indemnification agreement for the former industrial site, and a rival hotel's appeal of the Marriott's shoreline permit must be resolved.

The board Wednesday had no major reservations about the revised design and passed the new plan without much additional comment.

The Tacoma Council last fall put the construction plan on ice when it tabled the attempt to obtain the environmental indemnification agreement, an agreement that the hotel owner, Hollander Investments of Bellingham, thought was a mere formality.

But opposition from the downtown rival Hotel Murano and its hotel workers' union kept the environmental pact on the shelf.

Issues revolved not around the environmental agreement itself, but about the hotel's appearance and character and its labor status.


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Elks Temple would shine under McMenamins' plan

renewal: Latest design could add solar panels

KATHLEEN COOPER; STAFF WRITER

Last updated: July 16th, 2010 04:29 AM (PDT)

McMenamins' early plans for the Elks Temple's renovation show a company intent not just on returning the building to its former glory, but surpassing it.

A renovated swimming pool. A "tiki" bar. At least three "pub" spaces and dining spaces on top of that. Two major event stages. A brewery. And, perhaps, rooftop solar panels to help the historic building be, in a modern word, green.

Tacoma's Landmarks Preservation Commission received an informational presentation Wednesday night from Portland architects Mario Espinosa and George Signori of the firm Ankrom Moisan. Flanking them at the table were one of the owners of the 1916 Temple, Mike McMenammin, and Tacoma historic preservation consultant Michael Sullivan.

"This just proves that if you just have the patience to wait 30 to 40 years, the perfect tenant will come along for your historic building," Sullivan said in introductory remarks.

The building has suffered decades of neglect since the Elks built a new lodge and campus near Allenmore Hospital. Weather and vandals have left most of the inside almost unrecognizable from its heyday.

"The interior of the building is pretty depressing," Sullivan said, but it appears to be no worse than Union Station was before its renovation into a federal courthouse.

The McMenamins hotel and brewpub developer seems to be following the "no surprises" rule with the commission, which has approval authority over final plans for the historic building's renovation. Espinosa and Signori went through drawings for the interior and exterior, repeatedly asking commissioners to interrupt if they had questions.

"Feedback is always good, and when it's early, it's even better," Espinosa told them.

Signori said McMenamins' approach to renovation is to restore, repair or replace every historic element. Most of the original fixtures are lost, but the architects will draw on historic documents and other material to recreate items.

For example, the firm is considering replacing the concrete-plaster medallions that used to march around the outside of the building. Signori said he believes they were removed for fear of falling off the building onto someone's head during an earthquake, and they're gone now. Newer materials could be used to make medallions that are lighter but would have the same look.

Another idea presented was solar panels on the south-facing roof. Signori said that is an ideal spot to catch the light, but designers initially weren't sure how it would be received. He said city preservation staffers encouraged a discussion about it to show that sustainable features can be done well.

Finally, sketches showed McMenamins-style landscaping around the city-owned Spanish Steps. Espinosa said McMenamins was interested in designing and maintaining the gardens, since the steps are so closely tied to the Temple's business.

The commission took in the presentation without comment. Afterward, two members commended McMenamins for taking the building on. One asked for more details on the landscaping, saying it shouldn't obscure the steps. Another asked for details about the project to the north of the Temple, the new building planned by developers Grace Pleasants and Rick Moses.

McMenamin said the project is going well, and he acknowledged its importance to the success of a renovated temple. Holding events for a thousand people puts you in the position of needing some place for them to stay, he said. "Hopefully we'll have some hotel rooms next door," he said. "The likelihood of that happening is very strong."

Espinosa said Thursday that his firm is working in concert with Seattle-based ZGF, hired by Pleasants and Moses. Elements added to the temple, such as a fire escape from the sixth floor ballroom, will require consultation with that firm since the buildings are only 25 feet apart. McMenamins also will be designing the inside of the hotel, since the company will run it.

Pleasants and Moses are in the design phase for their mixed-use building, recently holding a series of focus groups from potential residents for the apartments there. The building, if financed, will sit atop a city-owned parking garage and have retail space and a McMenamins-run rooftop bar.

Groundbreaking is tentatively set for spring of next year, with a grand opening in the fall of 2012.

McMenamin has said that no matter the fate of the building to the north, renovation of the Temple will proceed. He repeated that Wednesday night. "We'll do the Elks, no matter what," he said.

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Read more: <http://www.thenewtribune.com/2010/07/16/v-printerfriendly/1265725/elks-temple-would-shine-under.html#ixzz0vUVUWWji>



ANKROM MOISAN - McMenamin brothers architects include this rendering in their plans for the Elks Temple renovation offered at a Tacoma Landmarks Preservation Commission meeting Wednesday night. They emphasized that the drawings were preliminary but give an idea of where the renovation is headed.

Read more: <http://www.thenewtribune.com/2010/07/16/1265725/elks-temple-would-shine-under.html#ixzz0vUVOlfSz>



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McMenamins' transformation of Tacoma Elks building starts with Spanish steps

McMenamins: Spanish Steps getting new top flight because of cracks

KATHLEEN COOPER; STAFF WRITER

Last updated: September 25th, 2010 07:03 AM (PDT)

The transformation of the downtown Elks building into an entertainment complex has started with 32 steps.

Workers on Friday began pouring concrete to replace the top flight of the historic Spanish Steps after preservation officials determined the old ones were cracked beyond repair.

Meanwhile, Portland-based brewpub developer McMenamins' plans for the temple's rehabilitation have been approved, and developers Grace Pleasants and Rick Moses have made progress lining up the money for the new mixed-use building next door.

The new steps are the same dimensions as the originals, said Darius Thompson, the city engineer working on the renovation. The contractor is using the best match to the original material available.

The other two flights of stairs are in better shape and will be repaired, Thompson said.

The new stairs will cost about \$20,000, he said, which is easily absorbed because the contractor's bid came in so low. Pease Construction of Lakewood was awarded the approximately \$400,000 contract earlier this summer. The project has a budget of just over \$1 million, though city officials have said they don't expect to spend nearly that much.

Rehabilitating the steps was one of the things the city agreed to do as part of the McMenamins brothers' renovation of the historic Elks Temple. On Wednesday, the Tacoma Landmarks Preservation Commission approved the McMenamins' plans for that building.

The Temple and the Spanish Steps will be painted the same off-white color. The building will have black and red accents, such as new and repaired ironwork and repainted wooden elements around the windows. Red vertical McMenamins signs will be attached to the building on both Broadway and Commerce streets.

The design also calls for awnings and an entry canopy on the Broadway side, which McMenamins considers the main entrance. Architect George Signori of Portland's Ankrom Moisan firm told the commission they plan to install 136 new medallions on a frieze toward the top of the building. They'll be designed to look like the originals, which were removed years ago and then lost.

The design presentation contained one surprise. Signori said they had discovered a vault on the east side of the Elks building, underneath the sidewalk on Broadway. He said it once had skylights that now are filled with concrete. The designers plan to turn the vault into a small bar, and are looking into installing new skylights.

In McMenamins style, the team will keep developing artistic touches for the building that city historic preservation officer Reuben McKnight will have to approve or refer to the commission. Signori used the elk hanging over the Commerce Street entrance as an example of a design feature they might have a little fun with.

"It's a rather sad looking elk. Without his antlers, he looks like a goat," Signori said. They might embellish the statue a bit – a drawing showed a new elk with long, elaborate antlers.

As for the new building next door, which is to contain apartments, retail space and the McMenamins hotel and rooftop bar, developer Moses said Friday that he and Pleasants have made good progress on financing.

He said they are working on a complicated package that includes a federally guaranteed loan. If approved, it would be issued through commercial real estate firm CB Richard Ellis. The funds from the loan come from

an institutional investor the firm has lined up, though Moses said he couldn't reveal the name yet. He also said they had other direct private investors.

They plan to break ground this spring, Moses said.

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PETER HALEY/ STAFF PHOTOGRAPHER - Construction workers, including carpenter's apprentice Brian Pease of Edgewood, foreground, prepare forms for pouring concrete steps Friday, part of the rebuilding of the Spanish Steps adjacent to the old downtown Tacoma Elks building, which is being redeveloped by McMennamins.
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RENDERINGS COURTESY OF ANKROM MOISAN ARCHITECTURE/INTERIORS/PLANNING - The Commerce side could include new antlers for the elk over the door.

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- An artist's rendering shows the planned McMenamins Elks Temple from the Broadway side, which new owners consider the main entrance.

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Tacoma officials disagree on parking lot for DaVita

planning: Design is faulty, critics complain

LEWIS KAMB; STAFF WRITER

Last updated: November 27th, 2010 01:22 PM (PST)

By the end of June, the former site of the Sauro's Cleanerama in downtown Tacoma will be transformed into a 35-stall parking lot with landscaping, new lighting and a vaulted wooden boardwalk. It will be encircled on three sides by new tree-lined sidewalks.

That's the prevailing design to emerge this week from city public works engineers for a project that has become a point of contention among some city officials.

Total cost of the new parking lot: \$700,000 – an amount fully covered by a state grant meant to create local jobs.

But over the past several months, the project has turned into a philosophical debate over the vision of downtown and good fiscal stewardship.

Councilmen David Boe and Ryan Mello, the dissenters, view the new lot as a bad idea that adds no value to a property in which the city already has invested nearly \$3 million with hopes to some day sell it to developers. The idea of another parking lot downtown – essentially, creating another dead spot in a struggling area – runs counter to good urban planning, they say.

"While we've improved it in the short term," Boe said of the latest design this week, "we've not improved the development potential of the site."

Meanwhile, City Manager Eric Anderson – with the tepid support of remaining council members – views the project as the fulfillment of a commitment to a major Tacoma employer, DaVita Inc.

"The agreement is with the state, and it's built upon the request of (DaVita Vice President Jim Hilger) to have a parking lot on this location," Anderson said.

The lot will be built through a grant Gov. Chris Gregoire originally promised to entice Russell Investments to stay put. After Russell announced last year it was moving, Gregoire reaffirmed committing the grant to Tacoma by agreeing to find a different project that would meet the money's legislative intent.

City staff members sought to use the money for a parking lot on the 15,000-square-foot site of the former dry cleaner, now a fenced-off pit next to DaVita's Pacific Avenue offices.

With DaVita also considering relocation last year, Anderson and some council members previously had agreed to find more parking for the kidney dialysis company, which in turn agreed not to move its 900 jobs and expansion plans elsewhere.

In May, a newly configured council unanimously authorized a state contract for the grant, but some members weren't happy about spending it on a parking lot. The contract approval came with a condition that Anderson get the council's blessing on the lot's design before going to bid.

This summer, city staff came back with an initial design, but a council committee responded by directing Anderson to take a list of other options for the site – including creating a park – to the DaVita vice president for consideration.

"He was very adamant that he did not want a park," Anderson said this week. "... He wanted an at-grade parking lot to serve his employees."

On Tuesday, city staff came back with its latest lot design. It includes filling the Sauro site to grade and installing an underground retaining wall parallel to and about 14 feet from the aging DaVita building to keep fill dirt from pushing against it.

But that design also creates a roughly 13-foot-deep gap that would run along the side of the building. Designers propose to cap the gap with a wooden boardwalk.

That design befuddles Boe, an architect by trade who says creating a cavern covered by wood decking is sure to cause trouble.

"That's going to be full of rats and horrible creatures," said Boe, adding the boardwalk will be slippery, grow moss and create other potential hassles.

Boe also noted the lot's per-stall cost – roughly \$20,000 – is some \$12,500 more than that of a typical surface parking lot.

"This is an expensive set of parking stalls, if you think of it simply as a parking lot," Anderson countered. "But it's really the culmination of several things. It's the completion of a remediation, the completion of an economic development project that kept a lot of jobs in town and the arrangement with the governor."

Other council members said they wish they had more time to come up with a better design.

"I may not like a specific drawing or arrangement here of this particular parking lot and ... the fact it compromises further development," Councilman Jake Fey said. "But, on the other hand, we made an agreement."

With the council's verbal approval, Anderson can put the project to bid. Authorization likely will be brought before the council in December, with the state contract calling for the project's completion by June 30, he said.

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BUSINESS

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McMenamin developers promise 'fun' for Elks project

Forum: Planned complex won't have grocery, but it might have a park

KATHLEEN COOPER; STAFF WRITER

Last updated: December 9th, 2010 09:07 AM (PST)

The downtown Elks entertainment complex won't have a grocery store, but it could have a park.

Those were the biggest revelations Wednesday night at a public forum on the progress of the McMenamain brothers' planned renovation of the historic Elks Temple and developers Grace Pleasants and Rick Moses' plans for the new building next door, which will include a hotel, apartments and retail.

"There is not going to be a grocery store in this project," Moses said in response to an audience member's question. "If we have one, it will be a small speciality store.

"It was a choice between bringing forth the project or waiting for who knows how long for the right grocer," he said.

About 100 people attended the meeting, hosted by the Theater District Association in the Tacoma City Council chambers on Market Street. Former News Tribune editorial page editor David Seago asked the key question: "Is financing for both these projects locked down?"

"Locked down is a pretty specific term," Moses replied. "On our side, it's pretty complex." He went on to explain the financing plan, which is a federal Housing and Urban development loan for the retail and apartments. That loan is working through the approval process, he said. The hotel could be financed through another federal bond program.

Under its agreement with the developers, the city will pay for the parking garage only when financing for the rest of the building is assured.

The developers are moving forward confidently, hiring Seattle-based architecture firm ZGF and general contractor and financial partner GLY, and holding several focus groups earlier this year to determine what amenities potential apartment tenants want. They launched a website Wednesday morning, elksonbroadway.com.

Moses said the project is on schedule to start construction in summer 2011, which puts the opening in fall 2012. He said the project will create 290 jobs during construction and 125 long-term, permanent positions.

Mike McMenamain said his company is working with an investment group on the Elks rehabilitation.

The developers first made brief presentations. McMenamain showed the audience dozens of photos of other McMenamain properties to give them a feel for the company's approach, but he said the Elks Temple was unique.

"Nothing (we've done elsewhere) is going to be exactly what happens at this space at all," he said. "That's the fun part of this business. We don't do things the same way twice."

Architect Randal Bennett of ZGF discussed the new building, which is a city-owned garage under one story of retail, three stories of McMenamain-operated hotel and five stories of apartments.

The parking garage is designed to handle the 35-foot height difference between Broadway and Commerce streets, Bennett said. Four levels of parking are pushed into the hillside. The new building nestles closely to the Temple until the Broadway level, when the building pulls away and gives the temple "breathing room."

"We wanted to enhance the temple, not compete with it," Moses said. "We're the setting and the temple's the jewel."

The apartments will have an "industrial lofty modern feel to them," Bennett said. Moses said they will be 500

square feet to 1,100 square feet and won't have private balconies because people in focus groups said they preferred a large shared common area with amenities, including showers for their dogs.

Pleasants said after the meeting that they simply ran out of time when negotiating with the grocer, who she didn't name but The News Tribune has reported to be Austin-based Whole Foods.

Because a large retailer isn't headed for the new building, the space devoted to retail shrank by half to 15,000 square feet. That opened up space for a "pocket park" on top of the parking garage, facing Commencement Bay.

"We would love to see it happen," Moses said. "Grace has been talking to some council members about finding sources of funding. We can't at this point promise it until we find the funding source for it."

Pleasants said they estimate it would cost \$700,000 to \$1 million.

One person asked whether the noise and smells from the McMenamins Elks Temple might be a drag for the people renting next door. Moses said he thought the people who choose to live there would accept that as part of the experience. Pleasants said they're working on perks such as hotel room service available to tenants and early concert ticket sales.

"The beauty of this building is we've never done anything quite like this before, so it offers a huge pallet, a huge opportunity to go out there and have some fun," McMenamin said.

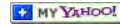
"When's the last time we heard the word 'fun' used so often in the neighborhood?" asked Theater District President Blaine Johnson.

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PETER HALEY/STAFF PHOTOGRAPHER - Mike McMenamin of McMenamins Pubs and Breweries updates the public Wednesday evening on his company's latest plans for the renovation of the old Elks Temple in downtown Tacoma and the construction of a new building next door. Others are, from left, Grace Pleasants and Rick Moses, developers of the new building, and Blaine Johnson, president of The Theater District Association.
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PETER HALEY/STAFF PHOTOGRAPHER - Audience members listen to a presentation Wednesday evening about developments in the planned renovation of the old Elks Temple in downtown Tacoma and the construction of a new building next door that would house apartments, a hotel and retail space. Construction is scheduled to begin next summer.
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Published December 07, 2010

Public can get peek at downtown projects

Kathleen Cooper, staff writer

Two major Tacoma projects will receive an airing this week.

On Wednesday evening the subject will be the renovation of downtown's Elks Temple and the new building next door.

The Theater District Association will host a public meeting on the McMenamins brewpub project at 6 p.m. in the Tacoma City Council Chambers, on the first floor of the Tacoma Municipal Building, 747 Market St.

The developers will give updates on the transformation of the Elks Temple, the parking structure, and plans for retail, apartment and hotel components of the new construction. Design concepts will be revealed as well. Groundbreaking for the new building is tentatively set for spring of next year, with a grand opening in fall 2012.

On Thursday the focus turns to conceptual designs for Pacific Avenue's makeover.

The City of Tacoma is inviting the public to see the plans for improving the right of way between South Seventh and 17th streets. The first phase of the project will incorporate stormwater management design; complete streets concepts; car, bus, light rail and bike transportation; and better signage. The second phase of the project will look at improvements to the Hood Street corridor and Tollefson Plaza.

See the ideas from 9 a.m.-noon at Tacoma Art Museum, 1701 Pacific Ave.



BUSINESS

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State adds to Sauro's cleanup effort

Outfall 230

Cleanup: Funds slated for Russell stay in Tacoma

KATHLEEN COOPER; THE NEWS TRIBUNE

Last updated: January 16th, 2010 08:18 AM (PST)

The \$700,000 of state money once intended to keep Russell Investments in Tacoma will now go to the cleanup of the Sauro's dry cleaner site, Gov. Chris Gregoire announced Friday.

The money comes from an economic development account funded by unclaimed state lottery winnings. Gregoire originally committed it to Tacoma in February 2008 to help with the effort to retain Russell. The incentive package contained a list of downtown improvements that included the Sauro's site, at South 14th Street and Pacific Avenue.

Since Russell announced late last year that the company would move to Seattle, many downtown leaders had hoped the funds would still be used on the contaminated site.

Gregoire's announcement Friday at the Tacoma-Pierce County Chamber's City Center luncheon affirmed that.

"What was dedicated to Tacoma stays in Tacoma," she said.

The fund is intended for use at the governor's discretion to help recruit jobs or keep them in Washington. After the announcement, Gregoire acknowledged the difficult perception of seeing any state money used this way while the budget is swimming in red ink.

But the only thing that will get the state out of the recession is jobs, she said, and an investment of \$700,000 will pay off far beyond that with jobs and subsequent sales tax revenue.

The Sauro's site got the last of the fund money, she said.

"The account is dry. This is the last of the fund unless the legislature reauthorizes unclaimed money to go there," she said.

Sauro's Cleanerama was in business for nearly 40 years before closing in 2000. By then, used dry cleaning solvent that had been dumped into a dry well on the site had tainted groundwater below four city blocks.

The City of Tacoma bought the 15,000-square-foot site from the heirs of the cleaners' owner and is cleaning it to make the plot ready for development. The money Gregoire committed to the city on Friday will be used for aesthetic improvements to the site, such as sidewalk repair.

The site is next door to the former Schoenfeld Furniture Building, where kidney treatment giant DaVita recently signed a new lease for its business offices. DaVita also is leasing three floors of the nearby Columbia Bank Building.

The company now employs some 900 workers in Tacoma, and it expects to add more over the next decade. Its decision to stay in the city has been celebrated in downtown circles.

DaVita vice president Jim Hilger and Tacoma Mayor Marilyn Strickland stood next to Gregoire as she made her announcement.

"This (type of) support helped drive our decision to stay here in Tacoma and to grow and to create new jobs in Tacoma," Hilger said after Gregoire's remarks.

Strickland, alluding to the secrecy surrounding the reason for Gregoire's visit, said she would have prepared longer remarks but no one would tell her what was being announced.

"So to the governor, I have two words: Thank you," she said.

Kathleen Cooper: 253-597-8546

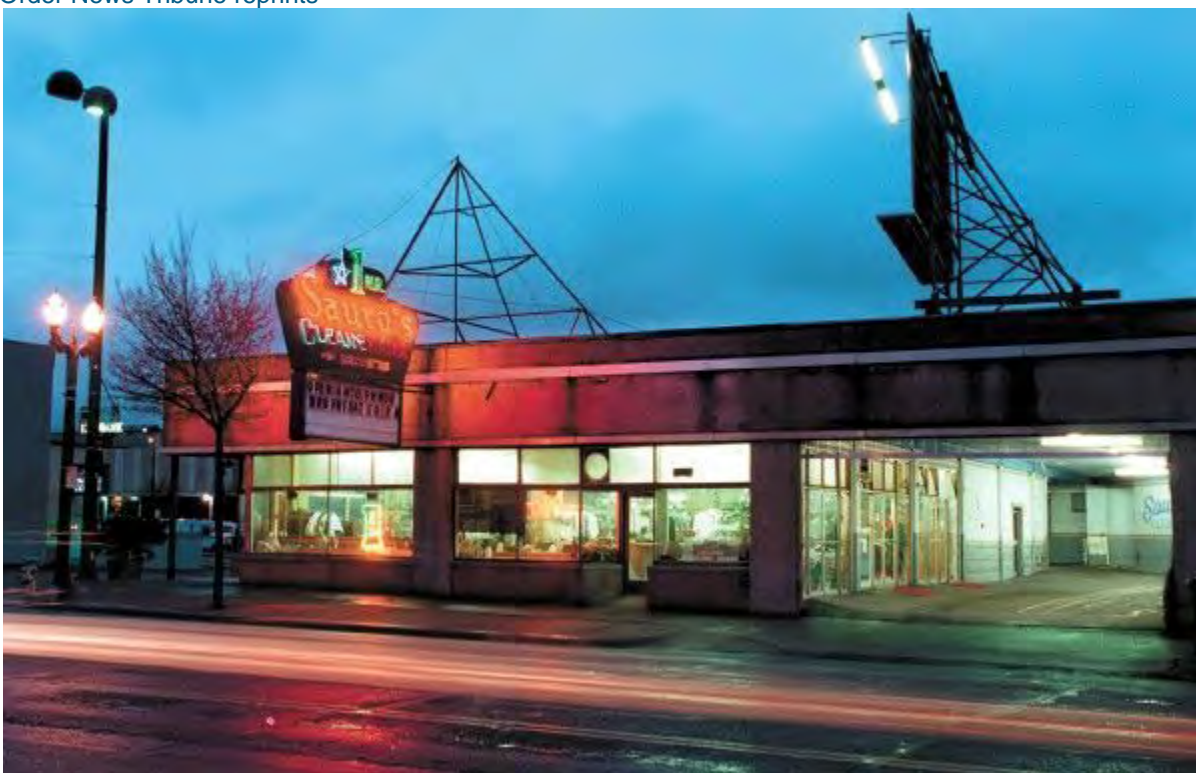
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JANET JENSEN/THE NEWS TRIBUNE - Funds slated for efforts to retain Russell Investments will be used to clean up the vacant lot on Pacific Avenue in Tacoma that used to be the Sauro's Cleanerama.
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JANET JENSEN/THE NEWS TRIBUNE - Funds slated for efforts to retain Russell Investments will be used to clean up the vacant lot on Pacific Avenue in Tacoma that used to be the Sauro's Cleanerama.
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BUSINESS

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Banner Bank takes over Jackson Building

Jackson: Banner Bank unsure of plans for half-built complex on Hilltop

KATHLEEN COOPER, STAFF WRITER

Last updated: December 31st, 2010 11:03 AM (PST)

The half-built apartment and retail complex stands exposed to the winter above downtown Tacoma, and the bank that now owns it isn't saying what it plans to do with the Jackson Building.

Banner Bank bought the seven-story structure at South 25th Street and Yakima Avenue this week with a \$19.4 million credit bid. The sale was held after Banner exercised its rights under an agreement reached with the former developer in May. That deal, approved by a bankruptcy judge, allowed the bank to complete its foreclosure if it didn't receive a payment by August.

Banner Bank spokesman Doug Bain said Thursday that the bank is evaluating its options.

The building was owned by a state limited liability company controlled by Gwen Ingels. The LLC filed for bankruptcy in late March. The bank was the primary creditor, and it now owns the only asset. The question remains unanswered whether the project subcontractors, who collectively are owed about \$2 million, will be paid.

Ingels said Thursday that she plans to pay them. She said she has financing to finish the project, and it's from the same source she's been working with for months: Lake Forest, Calif.-based Irvine Funding Corp. Documents filed with the bankruptcy court in August indicate Irvine planned to lend \$23.5 million on several conditions, including the use of emeralds from Ingels' business partner as collateral.

Irvine was supposed to have provided \$13.5 million to buy out Banner's interest under the terms of that May agreement, but the payment wasn't made. That led to the sale Monday. When asked why the financing deal is more secure now, Ingels said Irvine's funds are no longer tied up and she can provide proof of financing.

Ingels said she tried to contact the bank to delay the sale.

"Starting on Monday we're going to contact the bank and work out hopefully a very positive scenario where all of our subs will be taken care of, and we can hopefully deal directly with the bank on the project," she said. "If they choose not to work with us I really don't know what their plan is because they do now own the property. We are ready to work with them."

A longtime Tacoma bankruptcy attorney not involved in the case said the bank's sale and subsequent credit bid changed the playing field.

Banner "owns the property and it controls the action now," said William Beecher, who has practiced commercial bankruptcy law since 1975. "Quite frankly, standing in the shoes of the bank, it might say 'We don't want to get a bunch of strange subcontractors in here who don't know anything about the project.'"

"It might make sense to keep them rather than reinventing the wheel," he said. "It's a salvage job at this point. The bank is free to enter into any of those kind of arrangements if (that's) in its best interest."

Beecher said most Chapter 11 bankruptcy cases fail, especially in this economy.

"Years ago there was money in the market, called exit financing. It was big business to invest into signature Chapter 11 cases because lenders could turn the loan into ownership," he said. "But now many Chapter 11s are failing because there's no way to bail them out."

Construction stopped on the apartment-retail complex at the end of February. Plywood has been nailed over major entrances and a 6-foot chain-link fence surrounds the project.

The building has some siding, but is mostly covered in yellow sheathing. Some of that is covered with black building paper, much of which has begun to peel away.

Jeff Stroud, vice president of Mountain Construction in Tacoma, has looked on as the project faded. His company is not involved as a subcontractor.

He said nothing on the outside of the building indicates that leaving the building unfinished for so long has caused major problems. Moisture is always a concern, and some of the nail screws are rusted.

"Does that in and of itself make you run away? No. But (the sheathing isn't) meant to be in the weather that long," he said. "Wood will get wet, but it will dry out.

"This certainly it isn't the first time a project's been left at a less than ideal stage," Stroud said. "You just have to be realistic about ... the things that need to be done to bring it back."

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PHOTOS BY DEAN J. KOEPFLER/STAFF PHOTOGRAPHER - Banner Bank became the owner of the seven-story Jackson Building this week with a \$19.4 million credit bid. It hasn't announced what it plans to do with the half-built structure at the corner of South 25th Street and Yakima Avenue. A contractor who was not involved with the project said nothing on the outside of the building indicates that leaving the building unfinished for so long has caused major problems.

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- With much of the siding work yet to be done and building paper exposed to the elements, the Jackson building shows signs of wear.

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EDUCATION NEWS

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Facility makeovers under way in 5 districts

Education: Area schools, colleges to get updates

DEBBIE CAFAZZO; STAFF WRITER
Last updated: January 1st, 2011 01:04 AM (PST)

Students in five South Sound school districts, as well as several colleges in Pierce County, will be getting new or remodeled academic homes in 2011 or early 2012.

There also are new roofs, weatherization and energy-saving projects – including \$5 million in energy upgrades at three Bates Technical College campuses and \$2.2 million in energy efficiency improvements in the Puyallup School District – coming this year.

Here are some of the larger projects separated by school district and institution:

BETHEL

SPANAWAY ELEMENTARY SCHOOL

Location: 215 166th St. S., Spanaway.

Completion date: Aug. 20, 2011.

Size: 48,000 square feet.

Total cost: \$18 million.

Background: Replacing the existing building on same site to meet earthquake standards and current codes.

Progress report: Broke ground fall 2010; site work largely complete, utility infrastructure substantially done, foundations poured.

More info: 253-683-6041, director of construction, Jim Hansen; or jhansen@bethelsd.org

Other: The School District also is making \$920,000 in improvements with state energy grants to several schools, spending \$700,000 on site improvements at Evergreen Elementary and plans to spend \$2 million at Bethel High for improvements to the band and music rooms, the auditorium and other facilities.

CLOVER PARK

LAKES HIGH SCHOOL

Location: 10320 Farwest Drive, Lakewood.

Completion date: August 2011 (estimated).

Size: 242,724 square feet.

Total cost: \$80.2 million.

Background: The project is part of a bond measure voters approved in February 2006. The new school was built on the same site as the old one. The Student Success Building is part of a second phase of construction and includes classrooms and laboratories, a cafeteria and kitchen, gymnasium and pool, locker rooms and a student store.

Progress report: Staff members began moving into phase 2 of the project over the holiday break; students and staff will officially occupy the building Monday. The auxiliary gym is 90 percent complete and will be finished in January for occupancy in February.

More info: www.cpsd.construction.org.

FEDERAL WAY

LAKELAND ELEMENTARY SCHOOL

Location: 35827 32nd Ave. S., Auburn.

Completion date: Fall 2011.

Total cost: \$17.5 million.

Background: Lakeland Elementary is one of the last of five schools to be rebuilt with funds from a construction bond measure passed in 2007. Groundbreaking was in June. Students have attended classes in the old building, which dates from 1952, while the new one is built behind it. The new school is designed to make use of natural light and will include state-of-the-art wiring for technology, radiant heat flooring and new earthquake safety features.

Progress report: Onsite work is progressing on utilities while contractors build framing offsite.

More info: www.fwps.org/info/bond/lakeland.

SUNNYCREST ELEMENTARY SCHOOL

Location: 24629 42nd Ave. S., Kent.

Completion date: Fall 2011.

Total cost: \$17.5 million.

Background: Like Lakeland, Sunnycrest Elementary (built in 1965) is one of the last of five schools to be rebuilt with 2007 bond dollars. Groundbreaking was in June. The new school will include many of the same physical features as Lakeland.

Progress report: Underground mechanical and electrical work is complete. Walls are being built and roofing has begun. Framing is being assembled on-site.

More info: www.fwps.org/info/bond/sunnycrest.

TACOMA

BAKER MIDDLE SCHOOL

Location: 8001 S. J St., Tacoma.

Completion date: (estimated) January 2012 .

Size: 13 acres.

Total cost: \$32 million (construction cost).

Background: Replacing the existing middle school, which was constructed in 1954.

Progress report: Project broke ground in July 2010 and is on schedule.

More info: Watch construction progress via Web cam at www.tacoma.k12.wa.us. Click on "Baker" under Middle Schools, then on the "construction camera" link.

UNIVERSITY PLACE

AQUATIC CENTER ADDITION AND RENOVATION

Location: Curtis High School Campus, 8425 40th St. W., University Place.

Completion date: Fall 2011.

Size: About 30,000 square feet.

Total cost: \$10.4 million.

Progress report: The project is about one-third complete and about a month behind schedule. School officials say they hope to open in time for the start of school in September.

More info: 253-566-5600 .

Pacific Lutheran University

PERFORMING ARTS CENTER AND CHAPEL AT EASTVOLD HALL

Location: Parkland.

Completion date: August 2011 (estimated).

Size: 6,478 square feet.

Total cost: \$5.7 million.

Background: The preliminary phase of the project – including a new roof and exterior work – began last summer and is complete.

Progress report: Phase I begins in January. It includes a complete rebuild of the north wing of the building to include a studio theater and scene shop.

More info: 253-535-7121.

PIERCE COLLEGE

CASCADE BUILDING RENOVATION

Location: Pierce College Fort Steilacoom.

Completion date: February 2011 (estimated).

Size: 75,000 square feet.

Total project cost: \$11.6 million.

Background: This is the second phase of a renovation of the 247,000-square-foot-structure originally built in 1973. Renovation includes remodeling the library and a former science wing, and relocating offices.

Progress report: The project is about six months behind schedule, but is nearing completion. Funding was reduced during the 2009 legislative session, creating a delay while the project was modified. Delays in delivering supplies and adjustments to minimize effects on occupants also put the project behind schedule.

Also: Another \$3.7 million project will remove and replace moisture-damaged exterior walls of the Cascade Building. This project is on schedule.

More info: Jim Taylor, director of facilities, 253-964-6588.

UNIVERSITY OF PUGET SOUND

Project name: Center for Health Sciences.

Location: North 11th Street, across from Memorial Fieldhouse, Tacoma.

Completion date: August 2011.

Size: 42,500 square feet.

Total cost: \$22 million (estimated).

Background: The center will prepare students for work in the fields of health and behavioral sciences, including psychology, exercise science, and occupational and physical therapy. In addition, it will provide services for 300 patients referred to outpatient clinics each year.

Progress report: The exterior is nearing completion; work on the outdoor mobility park will begin soon.

More info: 253.879.3905; www.pugetsound.edu/chs.

UNIVERSITY OF WASHINGTON TACOMA

JOY BUILDING

Location: 1716-1730 Pacific Ave., Tacoma.

Completion date: March 2011.

Size: 47,000 square feet.



Total cost: \$29 million.

Background: This is the last of the vacant buildings on the university's Pacific Avenue face to be renovated. It will contain classrooms, faculty offices and retail on the Pacific Avenue side's ground floor.

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OF235

A.2 OUTFALL 235

A.2.1 Outfall 235 Drainage Basin

Basin 235 is the fourth largest basin in the Thea Foss Watershed. The drainage basin encompasses a section of downtown between Basins 230 and 237A (see **Figure 1-3**). Basin 235 is heavily developed and covers an area of approximately 180.7 acres which drains through a 42-inch outfall pipe located on the west bank of the Waterway at 21st and East Dock Street under the SR509 Bridge. The general basin boundaries are South 18th to the north, South 23rd to the south, South “L” Street to the west and E. Dock Street to the east.

Commercial land use accounts for approximately 68 percent, residential approximately 25 percent, and multi-family at 7 percent (see **Figure 1-3**). A small portion of freeway right-of-way is in the lower part of this basin including I-705 and the entire I-705 and I-509 interchange. Most of the stormwater runoff from the freeways discharges to an infiltration pond and not to the city-owned storm drains. Prior to 2001, this basin consisted of approximately 35 percent industrial land use, 30 percent residential and 2 percent commercial with street, parks, and open or undeveloped property for the remaining land uses.

The southern portion of the University of Washington –Tacoma (UWT) and a portion of the Saint Joseph Medical Complex discharges to OF235. The drainage area for UWT is bounded by Pacific Avenue, South 21st Street, Tacoma Avenue and South 17th Street. Also included in the basin is Tacoma Light Rail – LINK, downtown revitalization, Dock Street redevelopment and The Foss Waterway Public Esplanade from South 21 Street to South 17th Street.

Baseflow in OF235 was originally thought to originate from the old railroad tunnel. In January 2011, Tacoma confirmed that the railroad tunnel spring discharges to the 23rd Street Lateral and OF237Anew. The baseflow in OF235 is unknown and now believed to be mainly from noncontact cooling water. The flow is continuous at approximately 0.23 cubic feet per second.

A.2.2 2002-2010 Source Control Activities

Since 2002, significant work has been accomplished in Basin 235 including intense business inspections, complete line cleaning, and identification and removal of point sources (see **Table 2-1**). A discussion of specific activities and any supporting chemistry data are provided in the following paragraphs.

Summary of Actions. Source control activities completed through 2010 are listed in **Table 2-1**. From August 2001 through 2010, approximately 48 actions have occurred within Basin 235. The types of actions taken in Basin 235 are as follows:

Action	Thea Foss	230	235	237A	237B	243	245	254
Construction	60	23	14	13	3	2	--	5
Inspection ¹	76	12	12	21	7	5	5	14
Facilities	43	6	7	12	7	3	3	5
Maintenance	37	10	7	3	1	4	6	6
Point sources	39	4	3	14	10	--	2	6
UST	19	7	2	3	2	2	3	--
Cleanup actions	17	2	2	4	--	5	2	2
Spill ¹	17	1	--	5	1	3	5	2
Fines ¹	4	--	--	1	--	--	2	1
Education	5	4	1	--	--	--	--	--
Total	355	69	48	76	31	24	28	41

¹The number reported includes notable actions only. Number of all inspections and spills are provided in Section 2.2.2.

By the end of 2010, the area from the waterway up to Allenmore Golf Course has been inspected, that is 100 percent of businesses and multi-family in this drainage basin. As part of the City-wide business inspections program, 56 additional business inspections were conducted in Basin 235 in 2010. These business inspections through education and implementation of nonstructural BMPs help prevent materials from coming into contact with stormwater and to promote activities that reduce pollutants in stormwater.

Stormwater treatment devices currently in place also remove solids and the associated particulate-bound chemicals from stormwater. The locations of private onsite stormwater treatment devices in Basin 235 are shown on **Figure A-1**. In 2010, media filter BMPs were installed on four sites in this drainage basin (see **Table A-1**). Tacoma is currently updating the list of private onsite stormwater treatment devices and our BMP inspection program (which includes new BMP inspection signoffs and periodic maintenance inspections). This program will improve the effectiveness of these devices through initial inspections, training on operation and maintenance, and periodic follow-up inspections. With future redevelopment in Basin 235, more of these onsite treatment systems will be installed and over time decrease the solids load and the associated particulate-bound chemical load to the waterway.

July and August 2006 discharge. In baseflow, the highest chemical concentrations were observed in OF235 in 2006 (Year 5), (see **Table 3-2** and **Figures 5-1b** and **G-21A** to **G-40A**). On June 14 and 27 and July 31, 2006, turbid water was observed discharging from OF235 (Tacoma 2006c). A follow-up inspection on July 31, 2006 found that the discharge was not associated with a sanitary sewer cross-connection. The source of the discharge was not located. These outliers appear to be relatively isolated occurrences.

Storm System Cleaning. At a cost of \$300,000, the entire municipal storm drainages for OFs 235 and 230 were cleaned and TV inspected by the City's Transmission Maintenance crews during 2007. One hundred years of accumulated historical stormwater particulate matter in the trunk lines and laterals, 220 cubic yards, was removed. Eighty thousand feet of 8 to 56 inch lines were cleaned over 14 weeks (May15 - June 25, 2007) using Tacoma's standardized cleaning practices (i.e., plugs downstream of vacor truck).

The 2007 TV inspection also revealed eroded pipe segments and other pipe drilled through the storm lines. Relining or replacement of some pipe section have been added the City's list of Capital Improvement Projects. At this time, it is unknown when this project will be completed. Basin 235 now has over three full years of post-cleaning monitoring data. Statistical analysis

was conducted on the pre-cleaning versus post-cleaning data sets to assess the effectiveness of basin-wide sewer line cleaning. Basin 235 showed statistically significant reductions in TSS, with an estimated 47 percent reduction in mean TSS concentrations and in lead and zinc, with an estimated 37 and 31 percent reduction, respectively, in mean concentrations (see **Table 2-3** and **Figure 2-2**).

Differences in PAH composition are remarkable, and provide the best evidence for the effectiveness of storm line cleaning. Statistically significant reductions were evident for each of the three index PAHs (pheanthrene, pyrene, and indeno[1,2,3-cd]pyrene). Sewer line cleaning consistently resulted in 62 to 67 percent reductions in PAH concentrations. There is evidence of a 59 percent reduction of DEHP in Basin 235. In summary, sewer line cleaning appears to have been most effective at removing TSS, lead, zinc, PAHs and DEHP (including both light and heavy PAH fractions).

Hood Street Treatment Retrofit Project. City of Tacoma was awarded a \$1M FY 2011 Stormwater Retrofit and LID Competitive Grant from Ecology for a \$1.54M regional stormwater treatment facility in the Hood Street Corridor through the Brewery District (S 23rd through S 21st). An urban bioinfiltration swale will provide regional treatment for stormwater runoff discharged from Tacoma's urban downtown area, 21 acres of Basin 235. The Hood Street Treatment Retrofit project is proposed in cooperation with the development of the Prairie Line Trail. The project is a rail-to-trail conversion of Tacoma's historic freight corridor through the heart of downtown. The Prairie Line Trail has been planned to develop a landmark urban trail for pedestrians and bicyclists.

A.2.3 Outfall 235 Water and SSPM Quality

The following paragraphs summarize 2001-2010 monitoring of Basin 235. Annual and seasonal data for baseflow, stormwater and SSPM for some of the COCs and other parameters is used to identify ongoing COCs and their pathway (water, SSPM, seasonality, etc.) and to narrow where to look for sources. The following paragraphs discuss how and where COCs in Basin 235 are different than other Thea Foss drainage basins, and where subsequent source control activities may be focused.

TSS and Metals. For inorganic constituents (TSS, total lead, and total zinc), baseflow concentrations during dry season conditions appear to be higher than baseflow concentrations during wet season conditions (see **Figures H-21A to H-23A** and **H-31A to H-33A**). In baseflow, some of the highest TSS concentrations (258 and 246 mg/L) was observed in OF235 in 2006 (see **Table 3-2** and **Figures F-21** and **F-31**). TSS in OF235 baseflow is above average (+2) compared to other outfalls in the Thea Foss watershed (see **Table 3-4A**).

OF235 also had the highest average, median and maximum baseflow concentrations of lead (15, 7 and 112 ug/L, respectively) (see **Table 3-2** and **Figures F-22** and **F-32**) and in fact is most elevated in lead (+4) as compared to the other outfalls (see **Table 3-4A**). When only the last two years of monitoring data are evaluated, the higher concentrations of lead in OF235 is slightly above average (+1) (see **Table 3-4B**). It is therefore possible that Tacoma's source control efforts have helped to reduce lead in OF235.

In stormwater, total lead showed occasional evidence of seasonality, i.e., higher median, mean, and/or peak concentrations during dry season months in OF235 (**Figures H-2A** and **H-12A**). This may be caused by more isolated storms and longer antecedent dry periods between storms. Comparatively higher TSS concentrations were observed in OF235 stormwater with

elevated maximum (441 mg/L), mean (89 mg/L), and median (69 mg/L) TSS concentrations. The highest maximum TSS concentration (441 mg/L) was observed in OF235 in 2001, (see **Table 3-3** and **Figures F-1** and **F-11**).

TSS in OF235 is somewhat above average (+2) compared to other outfalls in the Thea Foss watershed (see **Table 3-5A**). As shown in **Figure 3-6a**, TSS shows a statistically significant improvement in stormwater quality from 2001 to present with an estimated 57 percent reduction of TSS in 10 years (see **Table 3-8**). The trend is gradual over time and does not lend itself to be a direct result of any one action. **Figures 5-1b, G-1A** and **G-11A** also show the gradual trends of TSS including.

Comparatively higher mean, median and maximum lead concentrations were observed in OF235 stormwater. Zinc appears to be relatively consistent among outfalls, although mean values are somewhat elevated in OF235 (see **Tables 3-3** and **3-5**). OF235 is significantly elevated in lead (+6) and zinc (+3) compared to all other outfalls. When only the last year of monitoring data is evaluated, lead is still significantly elevated (+4) in OF235 (see **Table 3-5B**). As shown in **Figure 3-6b**, lead and zinc show a statistically significant improvement in stormwater quality from 2001 to present with an estimated 49 and 40 percent reduction, respectively, in 10 years (see **Table 3-8**). The trend is gradual over time and does not lend itself to be a direct result of any one action. **Figures G-2A, G-3A G-12A** and **G-13A** also show the gradual trends of lead and zinc. It is therefore possible that Tacoma's source control efforts have helped to reduce lead and zinc in OF235. However, these stormwater concentrations indicate that there may be a source(s) of lead and zinc (stormwater only) in Basin 235 since levels are above and beyond those found throughout the Thea Foss Watershed. Lead and zinc are not COCs in Thea Foss Waterway and as a result source control will not be a high priority for these chemicals.

Even though, lead and zinc concentrations in OF235 are significantly elevated in stormwater (+3 to +6), in storm sediment, average concentration is relatively neutral (-1 to +1) compared to the other outfalls (see **Tables 3-5** and **3-6**). Discrepancies between these two data sets may be caused by differential transport of pollutants in dissolved and particulate phases. Source control investigations will look at sources that lend themselves transport in dissolved phases.

As shown in **Figure 2-1a**, the SSPM concentrations in Basin 235, FD6 and FD6A prior to 2009, indicate that there may be a source(s) of mercury in Basin 235 (also see **Figures A-3a, F-30** and **F-42**). In 2010, FD6A once again shows a medium level (yellow) of mercury. However, 2009 SSPM data was low levels, green, and SPMM mercury average concentration is relatively neutral (-1) compared to the other outfalls (see **Table 3-6**). As a result, source control will be given a lower high priority for mercury.

PAHs. OF235 had similar levels of phenanthrene and pyrene concentrations in baseflow as compared to all the smaller drainages. Similar to TSS, the highest mean or maximum concentrations of several HPAHs were reported in OF235 (including benzo(a)pyrene, benzo(ghi)perylene, indeno(123-cd)pyrene, and dibenz(a,h)anthracene), mainly in Water Year 2006 (Year 5, Jan and Aug 2006) (see **Table 3-2**). This appears to have been an anomaly because such extreme concentrations have not been reproduced in the last four monitoring years.

OF235 stormwater contained the highest mean, median, and/or maximum concentrations of the very light end compounds naphthalene, 2-methylnaphthalene, phenanthrene and total LPAHs. Comparatively higher concentrations of other LPAHs were observed in OF235 (see **Table 3-3**).

ANOVA results (+1) showed that OF235 is slightly above average for pyrene and indeno[123-cd]pyrene (see **Table 3-5A** and **Figures F-4, F-5, F-11, and F-12**).

Even though PAHs in OF235 are elevated in stormwater (+1 to +3), in storm sediment, average concentration is relatively neutral (-1 to +1) compared to the other outfalls. The whole-water concentrations indicate that there may be a source(s) of PAHs in the Basin 235.

DEHP. For DEHP, baseflow concentrations during dry season conditions appear to be higher than baseflow concentrations during wet season conditions (see **Figures H-30A and H-40A**). The highest mean and maximum concentrations of DEHP in baseflow occurred in OFs 235 and 230, respectively (see **Table 3-2** and **Figures 5-1b, F-30, F-40, G-30A and G-40A**). Similar to TSS, the highest concentration occurred in August 2006 (21.3ug/L). This appears to have been an anomaly because such extreme concentrations have not been reproduced in the last three monitoring years. OF235 (+4) contains significantly elevated DEHP concentrations in baseflow, higher than almost all other outfalls (see **Table 3-4A**). When only the last two years of monitoring data are evaluated, the higher concentrations of DEHP in OF235 are significantly elevated (+4) (see **Table 3-4B**) indicating there is a possible ongoing source.

This same pattern is observed in stormwater data. The highest median, mean, and maximum stormwater concentrations of DEHP were observed in OF235 (5, 7, and 97 µg/L, respectively). Unusually high peak concentrations of DEHP were observed in Year 2 in OF235, but these appear to be isolated occurrences (Oct 2002 and Dec 2002) and are not evident in recent years (see **Table 3-3** and **Figures 5-1b, F-10, F-20, G-10A and G-20A**). The cause of the outliers during Year 2 is unknown.

DEHP is usually the phthalate compound with most frequent detections and the highest median concentrations. However, higher maximum concentration of diethylphthalate was detected in OF235 stormwater (590 ug/L). OF235 (+5) contains significantly elevated DEHP concentrations, higher than almost all other outfalls (see **Table 3-5A**). When only the last two years of monitoring data are evaluated, DEHP concentrations in OF235 remains elevated in recent years (+3) (see **Table 3-5B**). It is therefore possible that Tacoma's source control efforts and the storm drain cleaning have helped to reduce but not controlled DEHP in OF235.

Even though DEHP in OF235 was significantly elevated in stormwater (+5), in storm sediment, average concentration is relatively neutral (0) compared to the other outfalls (0) (see **Table 3-6** and **Figures F-47 and F-59**). Discrepancies between these two data sets may be caused by differential transport of pollutants in dissolved and particulate phases. Source control investigations will look at sources that lend themselves transport in dissolved phases.

Within Basin 235, total phthalate concentrations at location FD6A remain greater than phthalate concentrations at FD6B (see **Figure A-3b**). In 2010, the highest levels to date were detected at FD6A. This indicated a possible source of phthalates in the area draining to FD6A. However, OF235 SPM total phthalate concentration is consistent in storm sediment throughout the various drainages and as a result source control will be given a lower priority for phthalates (see **Table 3-6**).

A.2.4 Basin 235 Conclusions and Recommendations

Many activities occurred in Basin 235 some of which are showing improvements in baseflow, stormwater and SSPM quality, especially TSS, and others that have source(s) linked to water quality concentrations. In baseflow, unusually high concentrations of lead and DEHP in OF235

are not evident in recent years. In stormwater, statistically significant improvement in TSS, metals and PAHs stormwater quality was evident for the entire monitoring record. It is therefore possible that Tacoma's source control efforts have helped to reduce these constituents in OF235.

Cleaning of the entire storm system has shown statistically significant improvement for TSS, lead, zinc, DEHP and PAHs (including both light and heavy PAH fractions) when comparing pre- and post-cleaning stormwater data. Differences in PAHs are remarkable, and provide the best evidence for the effectiveness of storm line cleaning with 92 percent reductions.

Starting in 2011, Tacoma will begin design of the Hood Street Treatment Retrofit project. Pipe rehabilitation projects have been identified on the City's CIP list for the aging pipes in OF235. It is anticipated that these projects will result in improvements to water and SSPM quality by isolating potentially contaminated groundwater and soil from historic "hot spots" that now enters the system through existing defects (cracks, holes, etc.). At this time, it is unknown when these projects will be completed.

In 2011, it is recommended to:

- OF235 construct pipe rehabilitation projects have been identified on the City's CIP list.
- Design and construct the Hood Street Treatment Retrofit Project in 2011 and 2012.
- Review of the 2010-2011 SSPM data to confirm existing conditions in the basin.
- Monitor the major construction activities in Basin 235
- OF235 phthalates source tracing in the area draining to FD6A
- OF235 PCBs and mercury source tracing in the area draining to FD6. Review of the 2010-2011 SSPM data to confirm existing conditions.

If needed, the City will use the screening methods for source tracing of PCBs and mercury. The screening method will provide data of gross magnitude only. This will be solely used for source tracing and, if necessary, standard EPA analytical laboratory methods will be used for follow-up quantification. If needed, the City and Tacoma Public Utilities will review the City's data to locate possible sources of PCBs and other COCs including but not limited to utility vaults.

Figure A-3a
 Analysis of Monitoring Trends in Storm Sediment
 OF-235

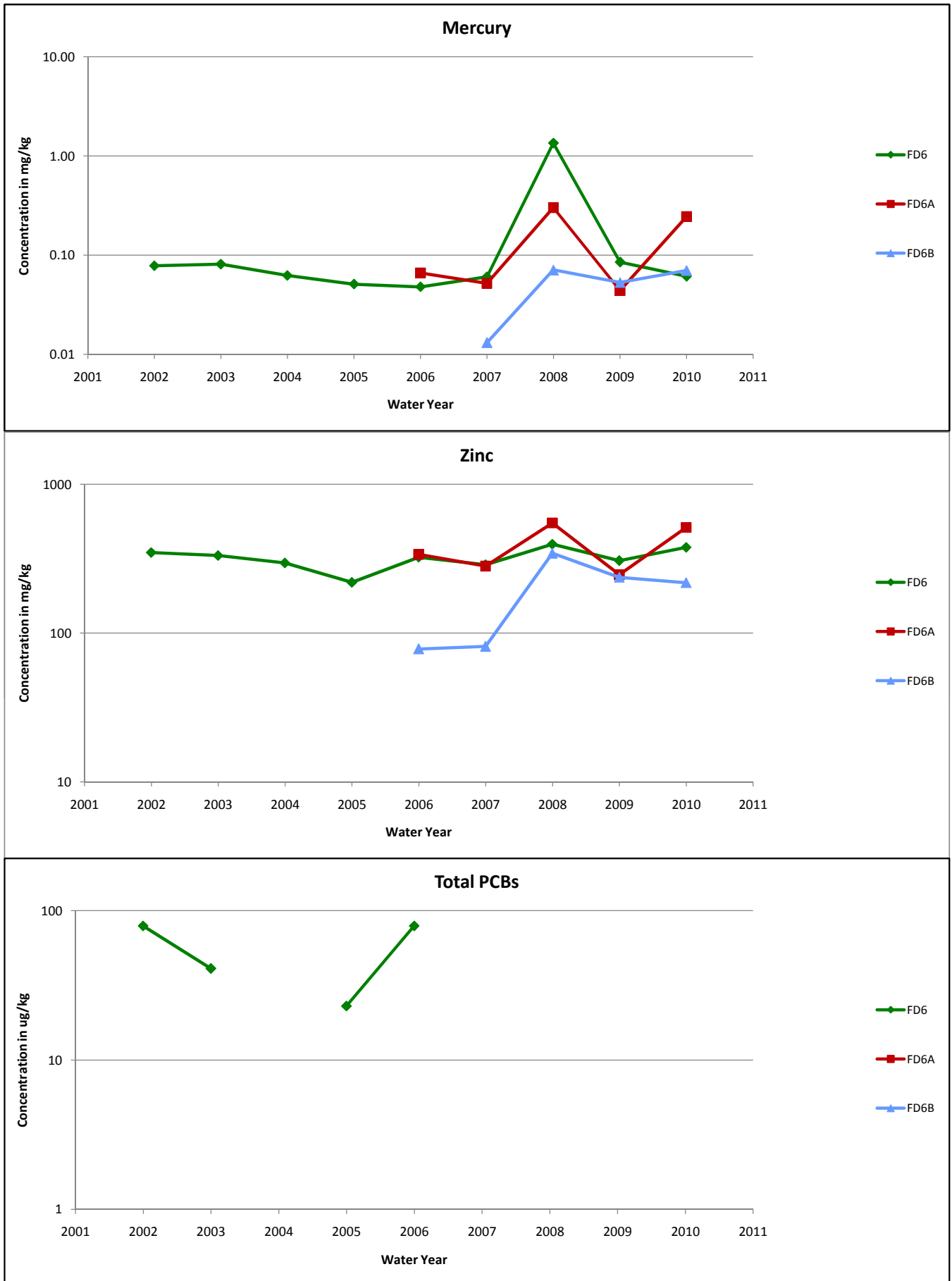
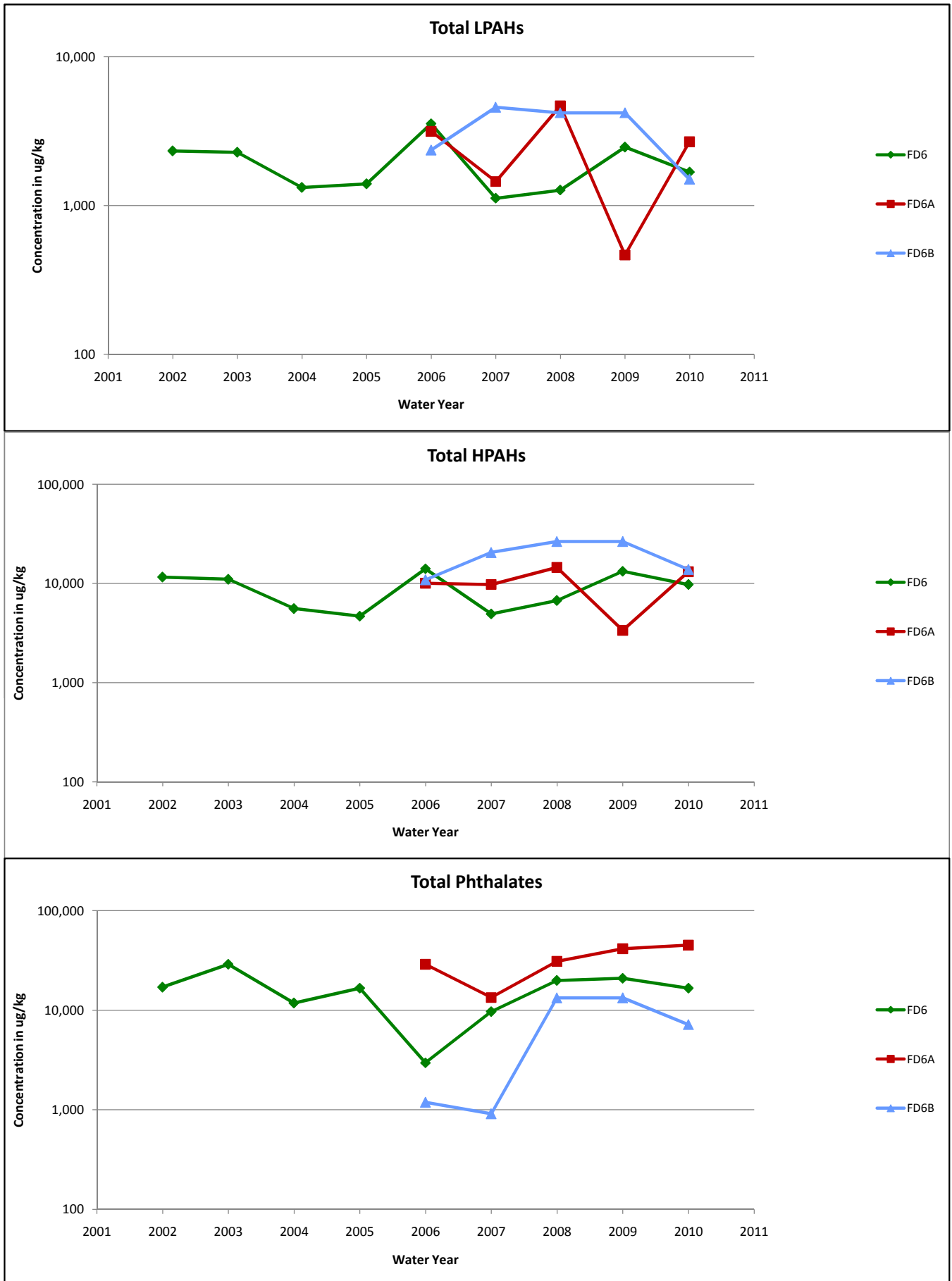


Figure A-3b
 Analysis of Monitoring Trends in Storm Sediment
 OF-235



Tacoma board OKs Brewery District hotel

Preservation: With new design, work could begin this year on 160-room, 8-story Holiday Inn

KATHLEEN COOPER; STAFF WRITER

Last updated: July 16th, 2010 01:40 PM (PDT)

Almost three years after the city's Landmarks Preservation Commission heard, and shredded, the design of a hotel in the Brewery District, the board now has approved the final plans.

One of the hotel's owners said construction on the 160-room Holiday Inn Express will begin after the city processes the permits, possibly by the end of the year.

"We intend to go full speed ahead," Faruq Ramzanalli said Wednesday evening. The long process "has been challenging, but looking back, it's been a good thing."

Ramzanalli said he's confident that financing for the \$21 million hotel will be settled by the time Seattle-based Hotel Concepts Inc. is ready to break ground. "We think that by the time (the city permits) are ready, we'll be ready," he said.

Hotel Concepts principal Han Kim said in an interview last month that financing was secured and that construction, once begun, would take about 15 months. The hotel will be about 88,000 square feet and offer rooms for about \$100 a night, he said.

The design review process was a long haul. The developers first came to the commission in December 2007 with preliminary plans. Based on that initial feedback, the developers presented a new concept in September 2008 for two hotels. The commission remained concerned that the hotels would clash with the architecture in the warehouse area.

The final design is for a single hotel at 21st and C streets that occupies an existing parking lot and the site of an old, featureless building attached to the former Heidleberg Brewery. That building will be demolished. The hotel will be eight stories high: six floors of hotel atop two floors of parking.

Seven stories will be a single-color brick, with only the top floor stucco. The original design had a lot more stucco, and commissioners wanted to avoid the look of Pacific Avenue's Marriott Courtyard hotel, which looks like it came from a corporate catalog.

The windows also were significantly redesigned to more closely resemble windows in other warehouse buildings. The windows also incorporate heating and air conditioning units instead of having those be separate grills penetrating the walls.

Wednesday's decision was not without a few more points of inquiry. Commissioner Pamela Sundell said she didn't like the ground floor canopies, asked for clarification of the height of the cupolas, and asked Ramzanalli whether he or the other owners have talked to the University of Washington Tacoma.

Ramzanalli said they hadn't.

"The city needs hotel rooms," he said. "The convention center is screaming for rooms. We've been trying to get rooms online since 2007," since there are only three other hotels in the downtown district.

"So I'm sure they're for it," he said.

The commission voted unanimously to approve the design.

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COURTESY OF HOTEL CONCEPTS INC. - Architects have been designing and redesigning the Tacoma Holiday Inn Express Grand Hotel for about three years.

Read more: <http://www.thenewstribune.com/2010/07/16/1265774/board-oks-brewery-district-hotel.html#ixzz0vUTxbIMa>



EDITORIALS

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The UW Tacoma, 20 years and 10,000 diplomas later

THE NEWS TRIBUNE

Last updated: June 20th, 2010 12:32 AM (PDT)

The University of Washington Tacoma is passing two momentous milestones this year.

A week ago, it awarded its 10,000th diploma at commencement ceremonies in the Tacoma Dome. And 2010 happens to be the school's 20th birthday; it first opened in 1990, in rented downtown office space. Its first graduating class consisted of four students; this year's graduates numbered more than 1,200.

The creation and growth of the UWT may be the single most important development in the South Sound over the last quarter century.

The school was conceived in the 1980s as part of a grand strategy to expand college opportunity to corners of the state that suffered from the lack of it. In Washington's pioneering days, such cities as Seattle, Cheney, Ellensburg and Bellingham looked like big comers; anticipating their growth into major metropolitan areas, the state's founders gave them the public colleges.

They got Seattle right but failed to provide for Tacoma, Olympia, the Tri-Cities, Spokane, Vancouver and the dense populations between Bothell and Everett. Olympia ultimately got The Evergreen State College, but the rest went without affordable public four-year schools.

It hurt – badly. The Tacoma area suffered the greatest imbalance between population and opportunity; unsurprisingly, Pierce County's high-schoolers wound up with a self-perpetuating culture of not moving on to college. In particular, family breadwinners, single mothers and the poor lacked the means to move away and enroll in traditional four-year schools.

This is precisely the problem the UWT was created to solve. If it hasn't done enough, it's only because it isn't yet large enough. For good reasons and bad, the Legislature hasn't expanded the university on the original schedule.

Few universities are so intimately connected to their communities. The South Sound was so hungry for a public university that it embraced the UWT fiercely by the time it finally arrived. Civic leaders and philanthropists have showered financial and political support on the school. A single gift of \$15 million from the Milgard family in 2003, for example, put booster rockets on the UWT's young business administration program.

Urban renewal is another reason to love the UWT.

The school's campus, which opened in 1997, was created in the then-decrepit historical district across Pacific Avenue from Union Station. After derelict old buildings were rehabilitated and filled with classrooms and offices, their century-old elegance and grandeur – and the influx of students, faculty and retailers – turned a blight into a vibrant and beautiful urban center.

The campus' growth has paralleled the Foss Waterway restoration as one of the largest and most successful redevelopment projects in the Northwest.

Still, that transformation is only a byproduct of the UWT's original mission: to help ensure that aspiring college students are not frozen out of opportunity by accidents of geography. Those 10,000 diplomas show how much the school has done to make good on its promise.



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OF237A

A.3 OUTFALL 237A

A.3.1 Outfall 237A Drainage Basin

Basin 237A is approximately 2,794 acres and drains to Thea Foss Waterway through the west 96-inch outfall located in the 2300 block of E. Dock Street at the head of the waterway. As shown in **Figure 1-3**, the drainage basin generally extends in a westerly direction from the outfall. The general boundaries are South 19th Street on the north, South 40th Street on the south, Lawrence Street on the west, and Tacoma Avenue on the east. Industrial land use, nearly 13 percent of this basin, is mainly located in the Nalley Valley area between SR-16 and I-5. Freeway right-of-way, which may increase with 2005 to 2011 expansions and HOV lanes on SR-16 and I-5, which includes the entire SR-16 interchange, and a portion of the I-5:I-705 interchange. Residential land use is 60 percent of the basin with commercial land use at 22 percent and multi-family at 3 percent.

Baseflow in OF237A is continuous from former creeks that were piped. The flows originate from seeps in three major areas: seeps near the railroad tracks along South Tacoma Way in Gallagher's Gulch, a seep in Nalley Valley, and a railroad tunnel spring and seeps in ditch along the Hood Street corridor from S 25th Street to S 23rd Street (see Appendix B, Figure B-2). Baseflow for OF237A is approximately 2.8 cubic feet per second (City of Tacoma 2008a).

Baseflow in OF235 was originally thought to originate from the old railroad tunnel. In January 2011, Tacoma confirmed that the railroad tunnel spring discharges to the 23rd Street lateral of Basin 237A and OF237A-New, not OF235. In 2011, the artesian well baseflow in the old 237A pipe will be rerouted from 237B to 237A during construction of the Sounder Corridor (see Section A.4.1). The baseflow rate in OF237A should increase after construction of the new pipe is complete.

During periods of increased precipitation, the Leach Creek Holding Basin is pumped to the 237A storm drainage system. The Leach Creek Holding Basin is located west of Tacoma and has functioned as a stormwater facility since 1961, when a dike was constructed along the southern edge of the current site (see **Figure 1-3**). Several storm pipelines feed the basin draining approximately 2,450 acres of residential, commercial, highways, and other high use developed properties in Tacoma and Fircrest. The primary outflow from the holding basin is a gated 42-inch outlet pipe which conveys stormwater to Leach Creek. As levels in the holding basin rise, the secondary outlet is a pump station which directs stormwater through Nalley Valley to the Thea Foss Waterway.

The pump station was constructed in 1991 and consists of four pumps, each with a capacity of 24 cubic feet per second (cfs) and maximum combined capacity of 96 cfs. During more intense rain events, stormwater from the Leach Creek Holding Basin is pumped through a 42-inch pipe to the Nalley Valley trunk line and discharged into the Thea Foss Waterway through OF 237A. The number of pumps operating depends on the intensity of a given storm event; any number of the four pumps could potentially operate. According to the City's best estimation, for up to about ¾-inch of precipitation in a 24-hour period, no pumps operate and the water discharges to Leach Creek. At increased levels of precipitation, pumps sequentially engage up to a maximum four pumps. The range of flow to the Nalley Valley system from the Leach Creek Holding Basin is from 0 to 96 cfs. Emergency overflow from the holding basin is provided by a 40-foot wide emergency spillway which discharges to Leach Creek.

In 2005, 60 feet of the OF237A outfall pipe was replaced by Burlington Northern Railroad as part of their rail track realignment project. Construction included extending the outfall, constructing a new manhole structure and replacing pipe from the City's sanitary pump station yard known as Dock Street to the outfall. The new manhole was constructed downstream of the current stormwater sampling location and FD2 and FD2A. The 23rd Street lateral (FD2A) was rerouted to the new manhole structure in the 237A main trunk line. The new manhole is used as the new end-of-pipe sampling location for OF237A, baseflow and stormwater. The new manhole represents discharge from the entire drainage basin.

A.3.2 2002-2010 Source Control Activities

Since 2002, significant work has been accomplished in Basin 237A including intense business inspections, complete line cleaning in many subbasins, and identification and removal of point sources (see **Table 2-1**). A discussion of specific activities and any supporting chemistry data are provided in the following paragraphs.

Summary of Actions. Source control activities completed through 2010 are listed in **Table 2-1**. From August 2001 through 2010, approximately 76 actions have occurred within Basin 237A. The types of actions taken in Basin 237A are as follows:

Action	Thea Foss	230	235	237A	237B	243	245	254
Construction	60	23	14	13	3	2	--	5
Inspection ¹	76	12	12	21	7	5	5	14
Facilities	43	6	7	12	7	3	3	5
Maintenance	37	10	7	3	1	4	6	6
Point sources	39	4	3	14	10	--	2	6
UST	19	7	2	3	2	2	3	--
Cleanup actions	17	2	2	4	--	5	2	2
Spill ¹	17	1	--	5	1	3	5	2
Fines ¹	4	--	--	1	--	--	2	1
Education	5	4	1	--	--	--	--	--
Total	355	69	48	76	31	24	28	41

¹The number reported includes notable actions only. Number of all inspections and spills are provided in Section 2.2.2.

By the end of 2010, 100 percent of businesses and multi-family were inspected in this drainage basin. As part of the City-wide business inspections program, 261 additional business inspections were conducted in Basin 237A in 2010. These business inspections through education and implementation of nonstructural BMPs help prevent materials from coming into contact with stormwater and to promote activities that reduce pollutants in stormwater.

Stormwater treatment devices currently in place also remove solids and the associated particulate-bound chemicals from stormwater. The locations of private onsite stormwater treatment devices in Basin 237A are shown on **Figure A-1**. In 2010, media filter and detention BMPs were installed on eight sites in this drainage basin (see **Table A-1**). Tacoma is currently updating the list of private onsite stormwater treatment devices and our BMP inspection program (which includes new BMP inspection signoffs and periodic maintenance inspections). This program will improve the effectiveness of these devices through initial inspections, training on operation and maintenance, and periodic follow-up inspections. With future redevelopment in Basin 237A, more of these onsite treatment systems will be installed and over time decrease the solids load and the associated particulate-bound chemical load to the waterway.

PAHs Concentrations Declining in Basin 237A. As shown in **Figures 3-6c** and **3-6e**, phenanthrene and pyrene show a statistically significant improvement in stormwater quality from 2001 to present. There is an estimated 92 percent reduction for both in 10 years (see **Table 3-8**). The trend is gradual over time and does not lend itself to be a direct result of any one actions. **Figures G-4A to G-9A, G-14A to G-19A** also shows the gradual trends of PAH concentrations in stormwater.

This decrease in PAH concentrations appears to result from not only removal/control of point sources but the culmination of many other activities. Activities that appear to have a direct or indirect impact on reducing PAHs concentrations include: intense inspections, construction of stormwater treatment devices, storm line cleaning and removal of two point sources. Each of these activities is further discussed below. Other activities that are believed to decrease PAH concentrations in stormwater are implementation of the City's Surface Water Management Program (system maintenance, redevelopment, education, etc) and an increase in Ecology stormwater permitting requirements (Construction and Industrial Stormwater Permits) requirements.

Targeted businesses inspections in the basin were conducted from 2003 to present including (see **Table 2-1**):

- 2003-2004 and 2009 in the South Tacoma Ground water Protection District and FD10 sub-basins,
- 2003-2004 and 2009-2010 in the FD13 sub-basin
- 2005 and 2008 in the South Tacoma Trunkline
- 2007-2010 completed 100 percent inspections of the basin.

Ecology and TPCHD also conduct construction and industrial/business inspections in this basin. As part of the inspection programs, stormwater treatment devices are inspected for proper installation, maintenance and operations. Other site BMPs are also reviewed. Improvements to stormwater quality discharging from these sites may be realized with proper maintenance and implementation of these BMPs.

Cleaning of the 237A system was completed in April 28th- August 8th, 2008. Targeted areas of the storm sewer system including trunk lines, laterals and CBs were cleaned and TVed at a cost of \$374,000. 320 cubic yards of accumulated historical SSPM over 100 years was removed from 157,200 feet of lines and 754 catch basins using Tacoma's standardized cleaning practices (i.e., plugs downstream of vacor truck). The TV inspection revealed a large void in the pipe at the intersection of So. 26th and Jefferson. The City's Transmission and Streets and Grounds Divisions repaired the storm pipe at this location.

Figure A-4b appears to show an immediate decrease of SSPM PAH concentrations around the same time period with LPAH and HPAH concentrations decreasing in 2008 at FD10 and FD10B. Statistically significant reductions in zinc can now be seen Basin 237A with an estimated 24 percent reduction in mean zinc concentrations. Differences in PAH composition are remarkable, and provide the best evidence for the effectiveness of storm line cleaning. Statistically significant reductions were evident each of the three index PAHs (pheanthrene, pyrene, and indeno[1,2,3-cd]pyrene). Sewer line cleaning resulted in 85 to 88 percent reductions in PAH concentrations. Statistically significant reductions in DEHP were seen in Basin 237A with an estimated 56 percent reduction. In summary, sewer line cleaning appears to have been effective at removing zinc, PAHs and DEHP.

The Coal Tar Site, formerly the Standard Chemical Site (So. 23rd and “A” Street), was remediated in May 2003. As part of this remediation in February and March 2003, WSDOT removed and sealed the DA-1 line French drain system that crossed through the Standard Chemical Site and underlying coal tar deposits. The DA-1 line was believed to be a source of PAHs which discharges to OF237A FD2A branch (Tacoma 2005b). As shown in **Figure 5-1c**, PAHs concentrations in baseflow decreased in Water Year 2003 and 2004 after the DA-1 line was plugged (also see boxplots **Figures G-34A to G-39A**).

Key Bank, the owner, completed a voluntary cleanup under Ecology in 2007. A return fuel line from a back-up generator ruptured and leaked diesel into surrounding soils and eventually seeped into a catch basin that drains to FD13B. As shown in **Figure 5-1c**, PAHs concentrations in baseflow decreased in Water Year 2008 (October 2007-September 2008) (also see **Figures G-24A to G-29A and G-34A to G-39A**). After the storm system cleaning, the baseflow concentrations were less than those detected in the previous five years and continued to decrease each year. Even with removal of this diesel leak, **Figure 2-1b** indicates that another source of PAHs exists in this subbasin. The 2009 and 2010 SSPM data at FD13B, indicated by yellow, shows a significant source of PAHs still exists in this area (also see **Figure A-4b**).

An Ecology Grant was awarded to the City to construct a Capital Improvement Project (CIP) for the FD13 subbasin. In 2010, the City completed construction of the media filtration system that will treat stormwater from the FD13 subbasin, approximately 50 acres in size. Targeted business inspections were also completed in 2010 in the subbasin. Correction to a fueling island and its drainage were required.

A.3.3 Outfall 237A Water and SSPM Quality

The following paragraphs summarize 2001-2010 monitoring results for Basin 237A. Annual and seasonal data for baseflow, stormwater and SSPM for COCs and other parameters is used to identify ongoing COCs and their pathway (water, suspended sediments, seasonality, etc.) and to narrow where to look for sources. The following paragraphs discuss how and where COCs in Basin 237A are different than other Thea Foss drainage basins, and where subsequent source control activities may be focused.

TSS and Metals. Storm drains 237A and 237B, by far the largest of the base flow discharges, exhibit the lowest concentrations of TSS and metals, compared to the smaller drains 230, 235, 243, 245, and 254 (see **Figures F-1 to F-3, F-11 to F-13, F-21 to F-23, and F-31 to F-33**). This may be caused by significant contributions from inflowing surface water (creeks) and groundwater (springs) to the base flow in these two drainages (see Appendix B, **Figure B-2**). In fact, OF237A (-4 to -5) exhibited consistently lower TSS, lead and zinc concentrations in baseflow compared to the other outfalls (see **Table 3-4A**). The number of statistically significant differences is considerably lower when only the last two years of monitoring data are evaluated (see **Table 3-4B**). Using this more limited data set, OF237A still exhibit lower than average concentrations of TSS and zinc (-1).

Stormwater TSS and lead concentrations at OF237A (-3 and -4, respectively) are also well below average (see **Table 3-5A**). In stormwater, OF237A generally had the lowest mean and median TSS concentrations; however an unusually high TSS concentration (400 mg/L) was observed in OF237A in May 2009 (see **Figures F-1** and **F-11**). The source of this concentration is unknown. As shown in **Figure 3-6a**, TSS shows a statistically significant improvement in stormwater quality from 2001 to present. There is an estimated 53 percent reduction, respectively, in 10 years (see **Table 3-8**). The trend is gradual over time and does not lend itself to be a direct result of any one action. **Figures G-1A** and **G-11A** also show the gradual trends of TSS.

OF237A also exhibits lower concentrations of lead and mercury in SSPM, compared to the smaller drains 230, 243, 245, and 254 (see **Figures F-41** to **F-43** and **F53-F55**). ANOVA statistical tests on SSPM showed that OF237A is relatively neutral (-1 to -2) in metals (lead, mercury, and zinc) (see **Table 3-6**).

Within the 237A basin, mercury was detected at one of the higher concentrations at FD-2A in 2002, 2005, 2008 and 2010 data (see **Figures 2-1a** and **A-4a**). In 2005, the mercury concentration at FD10B was the highest concentration measured to date in Basin 237A at 0.54 ug/kg but has not been repeated since. The mercury concentrations were 0.03 to 0.20 ug/kg, for the most part, at FD10 and FD10C (see **Figure A-4a**). This was also the case at FD13B where 2005 mercury concentration was the highest concentration measured to date in branch FD13 at 0.3 ug/kg and hasn't been repeated since. These concentrations are considered lower levels (except 2005 which were medium levels) to those found throughout the Thea Foss Watershed. Thus, the priority for additional source control is lower in comparison to other outfalls. Mercury concentrations at FD2A are periodically higher. Based on the 2010 data, the priority for additional source control is lower at this location.

PAHs. The mean concentrations of PAHs in storm drains 237A and 237B are generally lower than most of the smaller drains, and are characterized by fewer extreme values and outliers. ANOVA tests show that OF237A baseflow concentrations were somewhat depleted in pyrene (-3) (see **Table 3-4A**). The number of statistically significant differences is considerably lower when only the last two years of baseflow monitoring data are evaluated (see **Table 3-4B**). Using this more limited data set, OF237A still exhibits lower than average pyrene concentrations (-1).

Unusually high concentrations of LPAHs were reported in OF237A in Year 1 (Feb 2002), including naphthalene, 2-methylnaphthalene, flourene, and total LPAHs (see **Table 3-2** and **Figures G-28A** and **G-38A**). The source of LPAHs during baseflow conditions appears to have been the DA-1 line French drain system as discussed in Section A.3.2. These extreme concentrations have not been reproduced in the last six monitoring years. Year 5 concentrations were once again higher for 2-methylnaphthalene (0.041 ug/L) and naphthalene (0.081 ug/L) and appear to be associated with the diesel leak from Key Bank (see Section A.3.2). There is a suggestion that PAH concentrations may be decreasing in OF237A baseflow (see Section 3.5.1 and **Figures G-28A, G-29A, G-38A** and **G-39A**).

The average concentrations of several of the lighter PAH compounds were relatively similar in baseflow and stormwater samples. In particular, average concentrations of 2-methylnaphthalene (0.077 and 0.020 ug/L, respectively) and naphthalene (0.107 and 0.034 ug/L, respectively) were elevated by unusually high baseflow concentrations in Year 2 and Year 5 (see **Tables 3-2** and **3-3** and **Figure 5-1c**). These baseflow concentrations were greater than

the average stormwater concentrations at OF237A but appear to be associated with the two point sources, DA-1 line and Key Bank (see Section A.3.2).

OF237A stormwater quality also shows evidence of being enriched in HPAHs. Comparatively higher mean, median and/or maximum concentrations of HPAHs were observed in OF237A (see **Table 3-3** and **Figures F-5, F-6, F-12, and F-13**). ANOVA results showed that OF237A is enriched in pyrene (+3) relative to other drainages (see **Table 3-5A**). Statistical analysis of the growing monitoring record indicates OF237A has more HPAHs at greater concentrations than some of the other outfalls in Thea Foss watershed except OF254 which shows similar levels of enrichment. Therefore, a high priority is assigned to HPAHs in Basin 237A.

As shown in **Figure 3-6c** and **3-6e**, phenanthrene and pyrene show a statistically significant improvement in stormwater quality from 2001 to present. There is an estimated 92 percent reduction for both in 10 years (see **Table 3-8**). The trend is gradual over time and does not lend itself to be a direct result of any one action. **Figures G-4A, G-6A, G-14A** and **G-4A** also show the gradual trends of phenanthrene and pyrene in stormwater.

As shown in **Table 3-6**, storm sediment in OF237A is somewhat enriched in indeno[(123-cd)pyrene (+3)]. In 2002-2008, PAHs concentrations in Basin 237A were 400,000-700,000 ug/kg HPAHs and 48,000-110,000 ug/kg LPAHs at FD13B (see **Figures A-4b**). Even with the Key Bank cleanup, **Figure 2-1b** continues to show that PAH concentrations at FD13B are elevated in comparison to all other locations (yellow). Locations FD13, FD10, FD10B and FD10C also had somewhat elevated concentrations of PAHs in SSPM (see **Figures A-4b**). This indicates there is a possible source(s) of PAHs in these subdrainages. The priority for additional source control would be higher in comparison to other outfalls.

DEHP. DEHP and total phthalate concentrations are fairly ubiquitous and consistent throughout the various drainages; few or no statistically significant differences were identified (see **Tables 3-2** through **3-6** and **Figures F-10, F-20, F-30, F-40, F-47** to **F-49** and **F-59** to **F-61**). OF237A baseflow exhibits elevated total phthalate concentrations due to highest diethylphthalate concentrations of all outfalls. As shown in **Figure 5-1c**, average annual concentrations of total phthalate peaked in Water Year 2003 in stormwater, baseflow and SSPM.

In February and March 2003, WSDOT removed the DA-1 line French drain system and constructed a new drainage system for stormwater runoff (see **Table 2-1**). During this period, extreme phthalates concentrations were measured in stormwater (March 11) and baseflow (February 5 and March 24) data. It is believed that these values are outliers caused from the construction activities. These values will be further evaluated as outliers in 2010 and recommendations will be presented on the use of these specific data points.

At all but two sites, total phthalate concentrations in Basin 237A SSPM were detected at similar concentrations as those found throughout Thea Foss Waterway (see **Figure 2-1c**). At location FD10C, total phthalate concentrations are the highest observed in Basin 237A (44,000 to 100,000 ug/kg) (see **Figure A-4b**). The concentrations have remained consistent indicating that there is an ongoing source(s) in this basin.

PCBs. When compared to the other outfalls, PCBs were detected at average concentrations in FD2 and FD2A (see **Table 3-6** and **Figures 2-1d, F-51** and **F-63**). In 2006, PCBs concentrations at all locations were the highest yet measured in Basin 237A, ranging from 177 to 390 ug/kg (see **Figure A-4a**). Overall, PCB concentrations in Basin 237A are similar to those

found throughout the Thea Foss Watershed. Thus, the priority for additional source control is low.

A.3.4 Basin 237A Conclusions and Recommendations

Many of Tacoma's source control efforts have been targeted in Basin 237A and are showing improvements in baseflow, stormwater and SSPM quality, especially PAHs. TSS and PAH concentrations have shown a statistically significant improvement in stormwater quality from 2001 to present with an estimated 53 in TSS and 92 percent reduction of phenanthrene and pyrene in 10 years. The decrease in these concentrations appears to result from not only removal/control of point sources but the culmination of many other activities. However, a few subbasins have shown chemicals of concern including mercury, PAHs and phthalates.

Mercury was intermittently detected at concentrations of concern in FD2A, FD10C and FD13B. Source control for mercury in these areas is recommended if mercury is once again detected at those concentrations. The areas draining to FD-10C were also higher in PAHs and phthalates. The area draining to FD10C consists mainly of automobile lots and other automobile based businesses, which may be sources of PAHs and phthalates. Source control in these areas is recommended.

Activities that appear to have a direct or indirect impact on reducing PAH concentrations include: intense inspections, construction of stormwater treatment devices, storm line cleaning, removal of two point sources, implementing the City's Surface Water Management Program and an increase in Ecology stormwater permitting requirements (Construction and Industrial Stormwater Permits) requirements.

The removal of two point sources has shown improvements in baseflow and stormwater quality, 2003 removal of the DA-1 line and Key Bank diesel leak cleanup. Even with removal of this diesel leak, SSPM data at FD13B indicates that another source of PAHs exists in this subbasin. In response to the ongoing PAH concentrations in FD13B, Tacoma focused business inspections and constructed a CIP for the entire FD13 subbasin in 2010. The media filtration system treats stormwater from the FD13 subbasin, approximately 50 acres in size, which will further protect the sediments in The Foss Waterway. It is expected that over time even more improvements to stormwater quality discharging from these sites may be realized with proper maintenance and implementation of BMPs from these businesses.

In 2011, it is recommended to:

- OF237A PAHs and mercury in the area draining to FD13 and FD13B. Review of the 2010-2011 SSPM data to confirm improvement from the stormwater treatment retrofit.
- Review of the 2010-2011 SSPM data to confirm existing conditions in the basin.
- Monitor the major construction activities related to the WSDOT, Nalley Valley Viaduct/SR-16 rebuild and construction of the Sounder corridor, Freighthouse to South 56th Street.
- OF237A mercury in the area draining to FD2A.
- OF237A mercury in the area draining to FD10.
- OF237A PAHs and phthalates in the area draining to FD10C.

If needed, the City will use the screening methods for source tracing of mercury. The screening method will provide data of gross magnitude only. This will be solely used for source tracing and, if necessary, standard EPA analytical laboratory methods will be used for follow-up quantification.

Figure A-4a
 Analysis of Monitoring Trends in Storm Sediment
 OF-237A

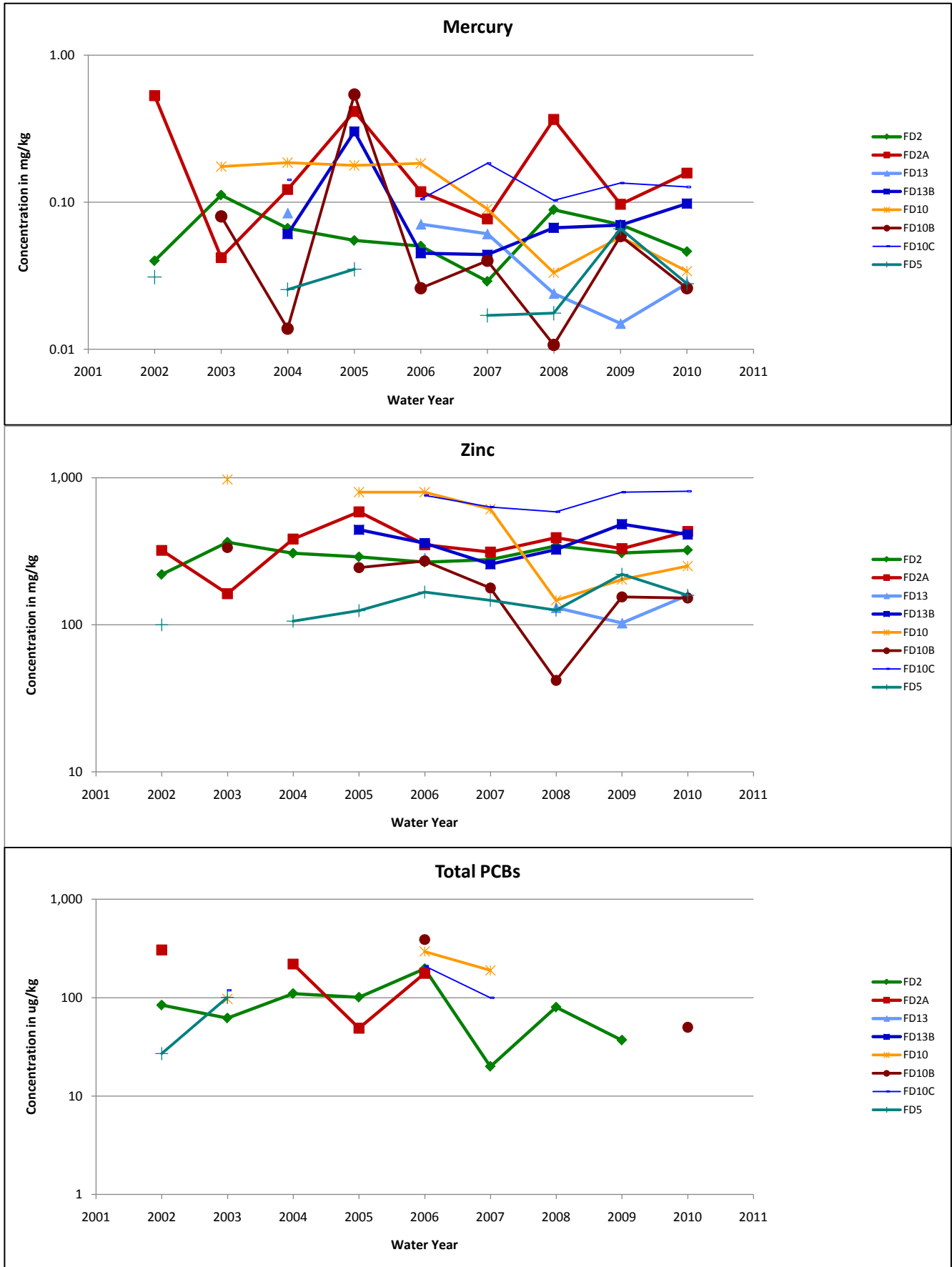
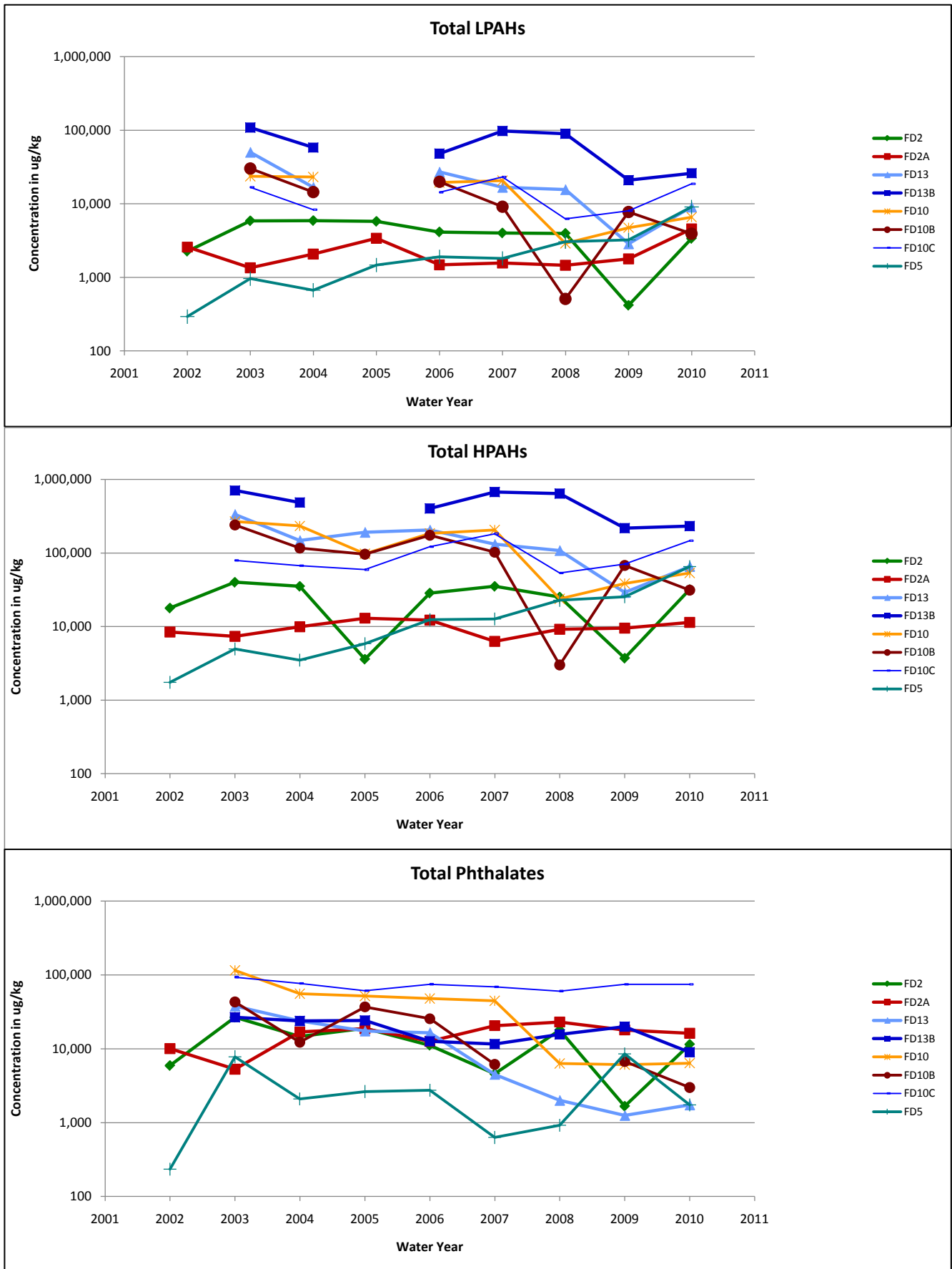


Figure A-4b
 Analysis of Monitoring Trends in Storm Sediment
 OF-237A



JANUARY 30, 2010

Nalley Valley road project takes shape

TRAFFIC: Years to go before I-5/Highway 16 work is done

BY DAVID WICKERT
Staff writer

A year into the mammoth reconstruction of the Interstate 5/Highway 16 interchange, progress is evident even to drivers whisking by at freeway speeds.

Dozens of enormous columns rise from the Nalley Valley floor. Colossal viaducts have been demolished, and new ones are rising in their place. Lumbering cranes and scores of workers crawl over mountains of gravel, concrete and steel.

Pretty soon the real work will begin.

Construction on the \$120 million replacement of westbound Highway 16 lanes over Nalley Valley started last January. So far 51 of 77 bridge columns have been built, 12,000 cubic yards of concrete have been poured, 70,000 cubic yards of soil have been excavated and 140,000 tons of gravel have been hauled to the site.

But much of the work to date has been preliminary and focused on keeping traffic moving, according to Karri Workman, spokeswoman for the Washington State Department of Transportation.

Workers have created new temporary eastbound lanes, which in November began carrying traffic from Highway 16 onto I-5. Now they're building temporary westbound lanes that should open in April.

Please see **PROJECT**, back page

Standing on a rebar grid 70 feet above the ground, workers finish the form work this week for the concrete cross beam of Pier 6, one of a series of piers that will support the new span carrying northbound Interstate 5 traffic across Nalley Valley to westbound Highway 16. The existing Nalley Valley bridge is to the left.



DEAN J. KOEPLER/Staff photographer

PROJECT

CONTINUED FROM A1

When that happens, westbound traffic will shift to the new temporary lanes right in the middle of the Nalley Valley viaduct. The temporary lanes will rejoin the existing westbound lanes at Union Avenue.

"It's going to look different, feel different and drive different," said Jon Deffenbacher, project engineer for the Transportation Department.

Not surprisingly, you can expect traffic delays until people get used to the new alignment.

Also in April, the Sprague Avenue interchange on Highway 16 will be completely closed. That means you won't be able to get off on Sprague Avenue from westbound Highway 16.

That will affect about 12,000 drivers a day who use the Sprague Avenue exit. Transportation department officials expect many of them will exit instead at Union Avenue.

Already drivers can't get onto Highway 16 at Sprague.

To prepare for the April traffic shift, workers have been widening the existing Nalley Valley viaduct up to 14 feet.

The temporary eastbound and westbound lanes are needed to keep goods and people moving during construction of the permanent westbound lanes. Each day an average of 131,000 vehicles cross the Nalley Valley viaduct.

The new westbound lanes should be finished in fall 2011. Two westbound Highway 16 Sprague Avenue exits – one each from northbound and southbound I-5 – will reopen at the same time.

But that's just the first phase of the project.

Construction of the new eastbound Highway 16 lanes will begin in 2011 and should be done in 2013. A third phase, connecting high-occupancy vehicle lanes on I-5 to Highway 16, is scheduled to go out for bid in 2020 and will be finished in 2022.

The point of all of this work is to eliminate



Workers build forms for roadway slab of the future Interstate 5 offramp northbound to Sprague Avenue. Their perch gives them a bird's-eye view of traffic on the existing Nalley Valley viaduct this week.

one of the worst traffic bottlenecks in Pierce County. And it's part of a larger plan to build a system of HOV lanes that stretches from Gig Harbor to Everett.

The bottom line: Get used to watching those gigantic columns rise and fall in Nalley Valley.

"It looks impressive, and, frankly, it is impressive," said Troy Watts, field engineer for the Transportation Department. "But we've got a long way to go."

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THE PROJECT SO FAR

A look at what's been accomplished during the first year of construction on the Interstate 5/Highway 16 interchange:

- Sprague Avenue ramps demolished
 - New temporary eastbound lanes built
 - 68 of 84 deep-bore foundation shafts drilled
 - 51 of 77 bridge columns complete
 - 28 bridge girders set
 - Seven stormwater ponds dug
 - 12,000 cubic yards of concrete placed
 - 70,000 cubic yards of soil excavated
 - 140,000 tons of gravel hauled to the site
- For more information, go to www.tacomattraffic.com.

Source: Washington State Department of Transportation



TACOMA

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New Nalley Valley viaduct's roadway begins to take shape

Route 16: Wind is enemy when placing huge girders in the dark of night

MIKE ARCHBOLD; STAFF WRITER
Last updated: April 4th, 2010 10:45 PM (PDT)

The gray girders appear in the night, spanning the tall concrete columns built to hold up the roadways and ramps of Tacoma's new Nalley Valley viaduct.

The columns mark the path of the nearly 18-month-old westbound state Route 16 project across the valley. It has scrambled traffic in both directions, but relief is promised by summer 2011, when the new westbound lanes open.

Bristling with two rows of reinforced steel rods on top and steel cables sticking out of one or both ends, 98 of the thin, I-shaped concrete girders will go airborne in the next three weeks.

The entire project calls for 220 girders of varying lengths to make the viaduct bridges. The longest is 174.29 feet and weighs 194,200 pounds.

The columns or piers that they sit on range in height from 70 feet to 98 feet. Another 60 feet is buried in the valley floor.

Getting the 7-foot-tall girders up there at night from a narrow rock road between two lines of columns is daunting. The skill and experience of the carpenters, welders, truck drivers and crane operators make it appear easy.

"This is a little tight in here and these are big girders," Mike Emerson, a supervisor with Atkinson Construction of Renton, said Wednesday night. Their job that night: raise five girders.

Each night for the past week, weather permitting, Atkins Construction workers have raised five to six of the pre-stressed beams.

Beneath the columns, crews are bathed by bright lights that push back the night, leaving sharply angled shadows.

The work is now centered off South Tacoma Way at Sprague Avenue, next to Atlas Foundry. Overhead, state Route 16 traffic still makes its noisy way across the existing 50-year-old viaduct.

Girders already span South Tacoma Way, which is closed between Wilkeson and Pine streets at night to accommodate trucks hauling the girders from Concrete Technology's Corp.'s yard on the Tacoma Tidelfats.

Concrete Technology, the oldest pre-stressed concrete company in the state, is making all the girders.

The beams are so big it takes two drivers to deliver each one. One driver operates a traditional tractor-trailer while the second driver operates a smaller vehicle that trails behind. The girders are placed between the two vehicles. Having steerable wheels on the back end makes it easier to maneuver the beams through tight places.

"It's a very big job," said Barry Hunt with V. Van Dyke Inc. of Seattle, which specializes in transporting large loads. "It's been running very smoothly."

Lifting a girder takes five to 10 minutes.

Cranes – a 500-ton model and a smaller 280-ton one – attach to the ends of the girder where two looped straps stick up. A supervisor aloft keeps in touch with the crane operators below by cell phone.

Girders can be lifted in the rain, said Troy Watts, field engineer in charge of the project, but wind is the enemy.

A girder is heavy, but its size also makes it a great sail in a wind, he explained. Girders aren't lifted in winds above 20 mph, he added.

Accidents can happen, Watts said. He has heard of them tipping off a column or buckling and shattering while being raised on other projects.

Once they're up, workers then can spend up to an hour connecting the girders to the towers.

Fireworks erupt, and sparks cascade to the ground as welding crews temporarily attach the girders to the towers with metal braces. They'll be permanently attached later with concrete.

On every fourth column is an expansion joint that will allow the girders to slide back and forth a few inches as they expand and



Staff photographer - After two girders are already in place atop columns, left, a worker reaches to strap a third girder to cranes that will lift it more than 70 feet a top the columns, in Tacoma, Wednesday night. By summer 2011, when the new highway 16 westbound viaduct lanes open, 220 girders will be used to form the roadway.

contract with the temperature.

The girders will provide the support for the 8-inch thick concrete roadway eventually to be placed on top. The steel rods on the top of the girders are bent in loops to better tie them to the concrete roadway.

There is little time for workers to admire the spectacle. As they finish, another truck is hauling another girder into place.

Wednesday's work ended without a hitch at 2:30 a.m.

Watts said motorists can finally start to see real roadways coming into view.

"We've spent a year preparing substructure, and there was not a lot visible," he said. "We are seeing some things come together. And they are fitting together like everything else with this project: At a systematic pace and safely."

There's not much more an engineer can ask for.

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BUSINESS

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New owner not making any changes at Nalley's for now

JOHN GILLIE: THE NEWS TRIBUNE

Last updated: January 12th, 2010 06:29 AM (PST)

If the new owner of Nalley's Fine Foods makes any changes at the Tacoma-based food producer, they won't be happening immediately, a spokeswoman for Pinnacle Food Group said Monday.

"We're still assessing how we go forward," said Alice Nathanson, Pinnacle spokeswoman.

"It's going to be business as usual at Nalley's while we study the situation," she said.

Nalley's, part of Birds Eye Foods Inc., was acquired just before Christmas along with Birds Eye's other brands by Pinnacle in a \$1.3 billion deal.

Pinnacle brands include such well-known products as Duncan Hines cake mixes, Aunt Jemima pancake mix, Log Cabin and Mrs. Butterworth's syrups, Vlasic pickles, Armour meats and now Birds Eye vegetables and Nalley's chili and mayonnaise.

John Gillie, The News Tribune



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Tanker truck fire blocks rush-hour traffic on I-5

Hazmat: Most recent haul was gasoline, but tank empty at time of blaze

COLE COSGROVE; STAFF WRITER

Last updated: July 16th, 2010 06:12 AM (PDT)

A burning tanker truck closed both directions of Interstate 5 in Tacoma for about an hour Thursday afternoon, just in time for rush-hour traffic.

The driver and a passenger escaped without injury. The truck's tank was empty, but had most recently carried gasoline.

Robert Jager, 32, of Lakewood, was driving the Kenworth tanker for Lee & Eastes Tank Lines on northbound I-5 near Pacific Avenue when he saw smoke coming from the engine about 4:30 p.m., Washington State Patrol spokesman J.J. Gundermann said.

Jager began to pull over when the engine became engulfed in flames, Gundermann said. Tacoma fire crews responded, and initially gave the truck space in case there was an explosion. Crews then put out the fire.

When asked what might have happened, Lee & Eastes Vice President Wayne Botts said, "Don't even know. I haven't even seen the truck yet." Crews will inspect the roadway to determine what will happen next, Department of Transportation spokeswoman Victoria Tobin said Thursday night. The right northbound lane was damaged by the fire and will need to be repaired. It is unknown when the right lane will reopen.

Southbound I-5 traffic was backed up past Fife, and northbound traffic was backed up to the 72nd Street exit, the state DOT said. Nearby surface streets in Tacoma were clogged as drivers tried to find a detour.

Some drivers caught in the backup on I-5 near the fire got out of their cars as they waited. A few men stood in the beds of trucks, trying to get a view and talking on their cell phones. All lanes of southbound I-5 reopened by 5:45 p.m. The two left lanes of northbound I-5 were opened at 8:15 p.m.

"That's exactly why I won't do hazmat," Russell McDonald of Tacoma, a trucker for 25 years, said of hauling hazardous materials while he took photos of the fire with his cell phone from the nearby 34th Street Bridge.

"We pray it never happens," he said. "Sometimes it does."

Staff writers Kris Sherman and Joyce Chen contributed to this report.

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Read more: <http://www.thenewstribune.com/2010/07/16/v-printerfriendly/1265808/tanker-truck-fire-blocks-rush.html#ixzz0vUUng3xu>



PETER HALEY/STAFF PHOTOGRAPHER - A fire in a tanker truck is allowed to burn out during rush hour Thursday on northbound Interstate 5 just east of Pacific Avenue in Tacoma.

Read more: <http://www.thenewstribune.com/2010/07/16/1265808/tanker-truck-fire-blocks-rush.html#ixzz0vUUdj7RX>

Rail project to close part of Tacoma arterial

Pacific Avenue: Work on roadway, bridge expected to begin in fall

LEWIS KAMB; STAFF WRITER

Last updated July 21st, 2010 03:13 AM (PDT)

Part of a key arterial south of downtown Tacoma will be closed for 10 months beginning early next year, while crews construct a long-awaited segment of the Sounder commuter rail line, Sound Transit officials told the Tacoma City Council on Tuesday.

Pacific Avenue between 25th and 26th streets is expected to be closed that long while crews build the so-called D-to-M Street Line connecting Tacoma's Dome District to Lakewood, the officials said.

As part of a briefing on the 1.2-mile project, Eric Beckman, rail program manager for the regional transit authority, gave council members a rough timetable for its construction. The project, likely to kick off in September or October, is planned to be built in three phases over 20 months.

Off-street groundwork likely will kick off in late September or early October, Beckman said, followed three months later by the road closure. Crews will then build a railroad bridge over Pacific and drop the avenue by 6 feet to accommodate vehicle traffic to pass beneath the new span, he said.

The final part of the project – to occur off-street – will take several more months, Beckman said.

Exact construction dates and detour routes have yet to be determined, Beckman said, largely due to a delay in awarding the project's contract.

Sound Transit's board had planned to award the contract this month to MidMountain of Kirkland, the lowest of seven bidders. But that bid was disqualified after the firm failed to submit required paperwork, Beckman said. The board now plans to award the contract to the next-lowest bidder, PCL Construction Services, at its Aug. 26 meeting.

Despite the contract hitch, Sound Transit expects to save about \$25 million on construction. Project engineers had estimated the cost at \$66.4 million. MidMountain's bid came in at \$40.8 million; PCL's at \$41.6 million.

Councilman David Boe asked whether those savings could be used to install a retaining wall against the earthen berm planned to be built to elevate the track. Boe said such a wall would help maximize density and development of adjacent vacant parcels.

"We're not looking at changes," responded Beckman. With Sound Transit facing a region-wide shortfall of up to \$4 billion in coming years, he added, the priority for the savings will go toward cutting Pierce County's portion of the overall deficit.

Still, Councilman Ryan Mello asked city staff to prepare a report on what adjacent properties could be developed, in case "policy-makers decided that would be a priority" for the money.

Councilman Jake Fey, a Sound Transit board member, said any ideas for changes should be clarified quickly, noting that the transit board would have to approve them.

Also Tuesday, Sound Transit and Tacoma Dome officials said they've yet to hammer out a plan for alternative parking and traffic routes for scheduled Dome events during construction. Complicating the issue is ongoing construction of the LeMay Automobile Museum on a former parking lot next to the Dome. Councilman Marty Campbell, who noted that both the LeMay and Sound Transit projects have been planned for more than a decade, rhetorically asked: "We get here and we don't have a plan for parking?"

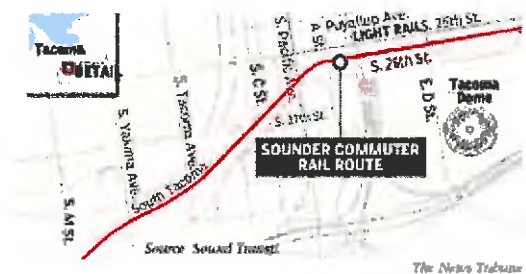
Wilbert Santos, Sound Transit Community Outreach Coordinator, said the agency is now strategizing with local neighborhood and merchant groups on how best to minimize project impacts on the community. Keith Stone, president of the Dome District neighborhood group, said such outreach has been good.

But Stone, who last year helped lead an unsuccessful campaign to oppose the planned rail line's berm design, said many of the other concerns now emerging – adjacent development and cost overestimates – were raised by his group to the council last year before it signed off on the project.

"It feels good that the truth about what we've said all along is starting to come out," he said. "But none of us are happy with the way this is going."

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Read more: <http://www.thenewstribune.com/2010/07/21/v-printerfriendly/1271174/rail-project-to-close-street.html#ixzz0vUTFzPXc>





NORTHWEST PARTNERS

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Bridge only looks like it's to nowhere

STATE ROUTE 16: Gaps being closed with sections cantilevered in the sky

BY MIKE ARCHBOLD, STAFF WRITER
Last updated: October 1st 2010 10:01 AM (PDT)

Crews are closing in on the gaps, both long and short, in the cantilevered highway in the sky that curves through Tacoma's Nalley Valley.

One gap is over northbound and southbound Interstate 5. Next week, 6-foot-wide concrete segments weighing many tons will begin to creep out over the freeway.

The work will require 11 p.m.-to-4 a.m. closures of the northbound and southbound freeway exits to state Route 16 on Monday, Tuesday and Friday. The ramps will be closed on other nights as needed. Center Street will be closed under the state Route 16 viaduct from 9 p.m.-5 a.m. Monday through Friday.

A 650-ton crane will move onto I-5 each night to hoist a cantilevered segment into place before returning to the median in time for the morning commute.

As the gaps are closed, drivers will have a front-row seat. Each morning, they'll see new lengths of roadway hanging over I-5 with nothing visible supporting them.

But not to worry.

The bridge design employs a so-called "balanced cantilever" technique to place lengths of roadway atop concrete columns.

To hold the hollow, 12-foot-high segments in place, hundreds of steel cables are threaded through the segments and then are pulled tight to compress each segment to the other.

One advantage of the design is that, by spanning a wide area without a forest of support columns underneath the roadway, the bridge can be built without lengthy closures of busy I-5.

When completed next June, the \$10.4 million bridge will connect northbound I-5 to westbound state Route 16 and provide an exit to Sprague Avenue. It is part of the \$184 million remake of westbound state Route 16 through Nalley Valley.

The balanced cantilevered design – suggested and designed by Atkinson Construction, which is rebuilding the viaduct – is a first for Washington, and state engineers appeared happy with the result and its progress.

Steve Roark, construction manager for the state Department of Transportation's Olympic Region, led a recent tour to the top of the bridge.

A scaffold containing a staircase allowed access to one of the cantilevers that hung like an island of roadway off both sides of a column.

Down below, the one-lane roadway that for decades has laken traffic for northbound I-5 to westbound state Route 16 was choked with stop-and-go traffic.

The cantilevered roadway was both banked and curved. Each segment had been precast on the ground and engineered to marry up exactly with the one next to it. Cranes have been lifting them into place since June.

The segments, when finally connected, will be covered with concrete, Roark said. Side barriers of concrete will be poured in place.

Roark pointed out a 2-foot gap between two hanging segments. One side was about 5 inches lower than the other.

"When these things come together they don't match up," he said. "We would be stunned if they did."




That's because extending a balanced cantilevered roadway is like "putting out a measuring tape and attempting to hold it perfectly still," he said.

To bring the two roadways together, steel beams are placed across the gap and a jack raises or lowers each side until they are even. Then concrete forms are installed and cement placed into the gap. More steel cables are threaded through the segments between two pillars, pulled tight and made fast to a steel plate called an anchorage.

"Then we are done," said Troy Watts, the Transportation Department's field engineer on the project.

He estimated the cantilever bridge will be connected sometime this winter.

"It's really pretty neat," Roark said.

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The Olympian - Les Dubois, an engineer with the state Department of Transportation, inspects a cantilevered section of a bridge Wednesday that will carry vehicles from northbound I-5 to westbound state Route 16 and to the Sprague Street exit.

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The Olympian - Cantilevered bridge sections tower over ramps and overpasses in Tacoma's Nalley Valley. Twenty-two concrete sections weighing as much as 80 tons are cantilevered of 100-foot-high supports. When finished, the bridge will carry traffic from northbound I-5 to westbound state Route 16.

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BUSINESS

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Former downtown Tacoma dairy will house Social Security offices

Foremost: Renovation started in late summer before tenant was signed

KATHLEEN COOPER: STAFF WRITER
Last updated: November 20th 2010 11:00 AM (PST)

Starting next fall, downtown Tacoma's renovated Foremost Dairy building will be home to some offices of the Social Security Administration.

Commercial real estate broker Laura Fox announced the tenant Friday at the Tacoma-Pierce County Chamber's quarterly City Center Luncheon.

Operations at the Social Security offices near the Tacoma Mall will not be affected, agency spokesman Mike Webb said. The people who will work in the renovated dairy building are with the agency's Office of Disability and Adjudication Review, which serves people who have requested a hearing on disability denials. The hearings are now held in Seattle, Webb said.

Fox estimated about 50 people will work in the offices after a \$10 million renovation is completed in September.

The building at 2415 Pacific Ave., across from the Elephant Car Wash, is owned by Henry Liebman. His Seattle-based company, American Life Inc., solicits immigrant investors through a federal program that encourages job creation through foreign investment.

Renovation work has been going on since late summer. Fox said Friday that American Life started work on the building, which hasn't been used since the mid-1970s, on faith.

"They committed to doing it without a tenant," she said. "They're long-term (owners), which is what that building needs."

Fox said the Social Security offices will take up the second floor and part of the first. About 6,000 square feet on the first floor is still available to lease.

Other downtown updates:

- Tacoma City Manager Eric Anderson said renovations on Pacific Avenue will begin in the fourth quarter of 2011. "That's a very aggressive schedule," he said. Preliminary design work is happening now. The plans, which include bike lanes, landscaping and other amenities, are being made in conjunction with work planned by the Tacoma Art Museum.

Anderson said the city also wants the design to complement the coming Prairie Line Trail. "They won't look exactly alike, but they will be complementary," he said. The public can weigh in from 9 a.m. -noon Dec. 9 at the Tacoma Art Museum.

- City engineer Kurtis Kingsolver said work on the new downtown Link stop probably will begin next summer. Its design is almost completed. The southbound stop will be just north of South 12th Street, the northbound stop closer to South 11th Street. The city has applied for a \$350,000 grant to pay for the construction. Kingsolver said results of that application should come in December.

Kathleen Cooper: 253-597-8546 kathleen.cooper@thenewstribune.com



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BUSINESS

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Nalley's Fine Foods to close after 92 years

160 employees: Parent of company once known for making pickles and chips will close cannery in 2011

KATHLEEN COOPER; STAFF WRITER
Last updated: December 04, 2010 09:26 AM (PST)

The pickles and brine haven't tickled noses in the Nalley Valley for years, but the company that gave the central Tacoma industrial neighborhood its name remains a proud presence as its 160 employees continue to produce chili and beans.

In the second half of next year, the cannery for Nalley's Fine Foods will close and the last workers at the manufacturer born in Tacoma in 1918 will move on.

New Jersey-based Pinnacle Foods Group LLC, the owner of Nalley's parent company, Birds Eye Foods, announced Friday that it would close the Tacoma canned meat plant in 2011 and consolidate those operations at the Armour canned meat plant in Fort Madison, Iowa. About 430 people work at that plant, and the consolidation will add about 65 jobs, making the facility one of the area's top three manufacturers.

Pinnacle bought Birds Eye Foods just before Christmas in 2009. The sale gave Pinnacle two meat canning plants producing similar products, said company spokeswoman Michelle Weese.

Tacoma had excess capacity, Weese said, and Fort Madison is closer to the ingredients.

"We're really saddened because that plant has been there for a long time. The majority of those impacted are Teamsters and have been working there for a really long time," said Tracey Thompson, secretary-treasurer of Teamsters Local 117, which represents about 120 Nalley's workers. Thompson said close to 50 of those are eligible for retirement.

The Teamsters and two other unions representing about 80 percent of the hourly employees will bargain with Pinnacle on the effects of the closure at the facility on South 35th Street. Weese said qualified Tacoma employees will have the first opportunity to apply at other Pinnacle plants, not just the one in Fort Madison. The only other Pinnacle-owned plant in Washington is Tim's Cascade Snacks in Algona.

"We're working on the additional offerings for salaried employees," she wrote in an e-mail Friday.

Weese said the company doesn't have a firm closure date for the Tacoma operations. State law requires companies with 100 or more employees to notify the state 60 days prior to closures and layoffs. A spokeswoman for the Employment Security Department said Friday that the company hadn't yet made that official notification.

A Pinnacle news release said the move "is contingent upon the final approval of applicable state and local incentives in Iowa." Neither Weese nor a Lee County, Iowa, economic development official would provide specifics, though Weese said the incentives were under discussion. Regardless of the incentives, Weese said, Pinnacle's competitive analysis of the Tacoma and Fort Madison sites showed Fort Madison was the location better suited to meet the company's needs.

Pinnacle is best known for its national brands, including Duncan Hines, Vlasic, Mrs. Butterworth's, Log Cabin, Armour, Swanson, Van de Kamp's and Mrs. Paul's.

Nalley's once had about 700 employees, and facilities spread over 26 acres along South Tacoma Way. The company has shrunk steadily as it changed hands among corporations. It's now No. 119 on the list of Pierce County's major employers.

Nalley's was founded in 1918 by immigrant Marcus Nalley. In 1966, the company was sold to W.R. Grace and Co. It resold Nalley's in 1975 to Curtice Burns Inc. In the mid-'90s, Curtice-Burns was bought by Pro-Fac. Curtice-Burns was renamed Agrilink Foods Inc. in 1997. Vestar Capital Partners acquired a majority ownership of Agrilink in 2002. Pro-Fac Cooperative, however, continued to supply food to Agrilink. In 2003,

Agrilink was renamed Birds Eye Foods Inc., which was bought by Pinnacle in 2009

City and local economic development officials learned of Pinnacle's decision to close the last part of an iconic Tacoma business on Friday morning when they received an e-mailed news release

"It's incredibly devastating to hear that 160 people have lost their jobs," said Tacoma Mayor Marilyn Strickland. But "when you look at the history of consolidation of owners, it's not too big a surprise."

"In the global economy, in the way businesses are run, it probably is not unusual that the parent corporation looks at all their operations and makes some bottom-line decisions," said Susan Suess of the Economic Development Board for Tacoma-Pierce County.

Business retention is part of the mission of the EDB. Suess said penetrating a billion-dollar multinational company that's not headquartered locally about retention efforts is a major challenge, and the EDB tries to use its resources wisely.

"We try to focus on locally owned companies," she said.

The EDB plans to increase its parent-company outreach next year, she said.

The loss of a business with such deep roots in Tacoma, despite its out-of-state ownership, leaves a sting with at least one longtime Tacoman.

"I have a hard time not being emotional about it," said Dale Wirsing, a board member of the Tacoma Historical Society. Regional companies such as Nalley's, which developed here, are bought by "out-of-town interests with no concern for the welfare of the community."

Suess said a number of food companies call Pierce County home, including candymakers Brown & Haley and Ames International, and pasta maker Medallion Foods.

"Because we do have other food processing companies, maybe others will decide to move or expand," she said.

Kathleen Cooper: 253-597-8546 kathleen.cooper@thenewstribune.com



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TNT - Next year, Pinnacle Foods Group will close the Nalley's plant that produces chili and beans in the Tacoma industrial valley that bears its name.

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TRAFFIC

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Nalley Valley project in line

Phase 1: Workers take break before push to finish; 1st portion to end by summer

ROB CARSON, STAFF WRITER
Last updated: December 28th 2010 07:26 AM (PST)

The small army of construction workers reconfiguring the snarl of freeway lanes over Tacoma's Nalley Valley will stay home this week.

Most workers are in the midst of a 10-day holiday vacation that started Christmas Eve. It's only their second extended break since the highway construction project began two years ago.

Atkinson Construction, the prime contractor, is pausing with most of the heavy lifting done on the first phase of the project and the end clearly in sight. Work started on the \$183 million initial phase Jan. 5, 2009.

"We're on schedule to deliver this summer," said Jon Deffenbacher, the state Department of Transportation's project engineer.

The first phase consists primarily of connecting traffic on Interstate 5 with westbound state Route 16, heading toward the Tacoma Narrows bridges.

Stage two, scheduled to begin next year and continue through 2013, will cost \$124 million and complete the realignment for traffic eastbound on SR 16.

Together, the two phases will comprise one of the most complex freeway intersections in Washington, according to Deffenbacher.

Beyond that, WSDOT plans to incorporate high-occupancy vehicle lanes in the interchange, a \$213 million revamp that, at this point, is to take place from 2020 to 2022.

The centerpiece of the first phase has been a 1,060-foot-long, curved bridge, vaulting over I-5 and Nalley Valley.

The bridge, a "balanced, cantilever segmental" design, is a first for the Transportation Department. It was pieced together in midair by lifting 112 vertebrae-shaped concrete sections, built off site in Tacoma and trucked to the job.

All the segments are in place, cantilevered and balanced on concrete columns.

When workers return next week, they'll continue aligning and filling in the last remaining 2- to 4-foot-wide gaps between cantilevered sections.

They'll also continue laying down the final roadway surface — 7 1/2 inches of concrete — and pouring the traffic barriers at the edges of the roadways.

So far, said WSDOT spokeswoman Claudia Cornish, the final roadway surfacing has been completed on 30 of the 47 spans of bridge decks, and barriers have been poured on 20 of the 47 spans (about 4,200 linear feet).

One of the biggest tasks still coming up in the next few months, Deffenbacher said, is building the approach to the new bridge along the northbound lanes of I-5.

That merging point will replace the old, road-rage inspiring alignment that funneled northbound vehicles on I-5 heading for SR 16 into a single lane, then merged them with traffic exiting from I-5's southbound lane in a quick, dangerous weave to the old exit at Sprague Avenue.

Accomplishing that transition without interrupting the heavy flow of I-5 will take some serious effort, Deffenbacher said.

"It will be a big impact piece of work," he said.

The plan calls for taking vehicles bound for SR 16 off northbound I-5 and onto a new, temporary roadway. Once the vehicles are out of the way, the contractor will grade and fill for the new approach.

The temporary roadway will be in use for 2 1/2 to 3 months, Deffenbacher said.

'SIMPLER AND SAFER'

If completing the cantilevered bridge was the high point of Phase One construction, the low point no doubt was the expensive and embarrassing misalignment of an exit ramp from SR 16 to Sprague Avenue.

The error made it necessary to tear out and reconstruct 700 feet of the ramp, at a cost of \$890,000, plus \$45,000 in labor costs.

The mistake did not delay the project, according to WSDOT, because the repair took place concurrently with other work. The cost came out of a portion of the budget designated for contingencies.

Last week, in a construction trailer beneath the partially completed Nalley Valley viaduct, Deffenbacher laid out a poster-sized plan of the finished project from an aerial perspective.

Seen that way, the interwoven freeways, onramps and exits look like a badly snarled fishing line.

That's not how it will appear to drivers who use it, Deffenbacher promised. For them, he said, it will be well-marked and easily negotiated.

"When you look at it on paper, it's very complex," he said, "but the purpose is to make it simpler and safer for drivers."

Rob Carson. 253-597-8693 rob.carson@thenewstribune.com



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Staff photographer - A worker climbs a construction tower last week to work on the new lanes of westbound state Route 16, left, and the new ramp from southbound Interstate 5, right, supported by massive piers on Center Street in Tacoma.

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DEAN J. KOEPFLER/STAFF PHOTOGRAPHER - A worker climbs a construction tower last week to work on the new lanes of westbound state Route 16, left, and the new ramp from southbound Interstate 5, right, supported by massive piers on Center Street in Tacoma.

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WASHINGTON STATE DEPARTMENT OF TRANSPORTATION - An aerial view of the westbound Interstate 5/state Route 16 interchange construction in Tacoma taken in December 2010, right, shows the dramatic changes that have taken place since the project began in the Nalley Valley 2009. The photo at left was taken in October of 2005. The first phase of the project is scheduled to be completed next summer.
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Business Inspection ID: 09-BI-1950
Business Partner/SapID: 31051
Business Inspection: VERTICAL WORLD
Business Site Address: 102 S 24TH ST Suite: NA
Business Mail Address: 102 S. 24TH STR., TACOMA, WA 98402

Inspection Information

Activity Type	Site Inspection	Activity Date	11/9/2009
Inspector	Larry Dunn	Sample No.	
2nd Inspector	None	Contact	Ryan Spence
		Owner	

Collection System Information

Catch Basin	0 Lease	Oil/Water Separator	0
Grass Swales	0	SW Management	0
Retention Pond	0	Stormcepter	0
Drywell	0	UG Vault	0
Filter	0	Infiltration	0
Other	0	Shared System	0
<input checked="" type="checkbox"/> No Further Action Required		No Treatment	0
<input type="checkbox"/> Non-Domestic Discharge			

Notifications / Actions

<input type="checkbox"/> Notify EPA DOE	<input type="checkbox"/> Enforcement Authority	<input type="checkbox"/> Photos Taken 0
<input type="checkbox"/> Notify Fire	<input type="checkbox"/> Haz Mat Storage	<input type="checkbox"/> Records Inspection
<input type="checkbox"/> Notify Owner	<input type="checkbox"/> Maintenance Contract	<input type="checkbox"/> Sample Collected
<input type="checkbox"/> Notify Tax & License	<input type="checkbox"/> PreTreatment BMP	<input type="checkbox"/> Sample Split
<input type="checkbox"/> Notify TPCHD	<input type="checkbox"/> Storm BMPs	

Detailed Concerns and Other Information

History Site: Vertical World, 102 S. 24th Str POC: Ryan Spence, 320.8289 Waters: Thea Foss 237A Par: 2074140010 NAICS: 713940

Opening Conference Introductions and tour of business: -Climbing gym -Manufactured walls with handholds for simulated rock climbing -Climbing wall manufacturing moved from Seattle to this new site

Compliance Concern or Nature of Problem -55 gallon plactic barrel of polymer has no 2nd containment -Drain in mixing room connected to storm -Possible cross connect in restroom

Action Required -Provide 2nd containment for polymer barrel -Seal storm drain in mixing room -Allow city crew to investigate possible cross conect in restroom -----Completed-----

Hazardous Materials -Polymer used in climbing wall manufacturing

Comments 11/10/09 ld: Sewer to storm connect verified. Tony Miller's I&I crew tested the system and found the toilet connected to storm. Tony will write the letter to the business. -----Repair Completed-----

Closing Conference Mr. Spence signed off on the inspection report.

Follow Up / Re-Inspection Needed?

Completion Date: 4/22/2010



City of Tacoma
Public Works

August 12, 2010

SENT VIA CERTIFIED MAIL

Kevin Keating
The Bronze Works LLC.
2506 South Fawcett Avenue
Tacoma, WA 98409-3164

Subject: **Notice of Violation with Corrective Action**

Dear Mr. Keating:

Under the legal authority granted in Tacoma Municipal Code Chapter (TMC) 12.08, The Bronze Works LLC., located at 2506 South Fawcett Avenue, is hereby issued this Notice of Violation with Corrective Action.

The City of Tacoma Environmental Services' Compliance Support staff has documented a violation of City surface water management regulations (TMC 12.08) at The Bronze Works located at 2506 South Fawcett Avenue. Enclosed, you will find a *Notice of Violation with Corrective Action* describing The Bronze Works' failure to control the discharge of a pollutant from its location to the municipal storm system.

Appeal Process

This Notice of Violation represents a determination by the Director that violations of Chapter 12.08 TMC have occurred, which is final unless you appeal this Notice of Violation with Corrective Action Order to the City of Tacoma's Hearing Examiner and request a hearing. If you decide to file an appeal, you must do so within thirty (30) days from the date of receipt of this Notice. (Pursuant to TMC 12.08.675.C, "Proof of service [receipt by you] shall be established by the date and signature of the addressee on the certified mail "return receipt" form, or upon the third day following the date upon which the notice of violation was placed in the mail, unless the third day falls on a Saturday, Sunday, or legal holiday, in which event service shall be deemed complete on the end of the next day which is neither Saturday, Sunday, or a legal holiday.") The procedures for filing an appeal are set forth in TMC 12.08.675 and TMC 12.08.678. Appeals must be directed to:

City of Tacoma
Tacoma Municipal Building
Office of the Hearing Examiner
747 Market Street
Tacoma, WA 98402

If you file an appeal, any hearing scheduled as a result of your appeal may be canceled if the Director finds that The Bronze Works has complied with the actions required by this Notice of Violation with Corrective Action Order.

The Bronze Works, LLC.
Notice of Violation with Corrective Action
August 12, 2010
Page 2

With this Notice of Violation, you are hereby notified that future violations of this nature shall result in escalated enforcement actions that may include additional monitoring and sampling requirements, clean-up costs and fines and/or monetary penalties in accordance with the City's Stormwater Compliance Policy.

Sincerely,



Geoffrey M. Smyth, P.E.
Division Manager

GMS:BB:KF:cfp
Enclosures(4)

Cc: David Knight, Department of Ecology
Vincent McGowan, Department of Ecology
Pinky Feria, Department of Ecology
Doug Mosich, City of Tacoma
Michael L. Kennedy, City of Tacoma
Brett W. Burrows, City of Tacoma
Jim Healy, Property Owner

By First Class and Certified Mail: 7001 1140 0001 4249 7760

\\FS005\Group\EnviroCompliance\PERMITS\BronzeWorks\Enforcement\Bronze Works NOV with CA Cover Letter
August 2010.doc

City of Tacoma
Department of Public Works
Environmental Services Compliance Support

IN THE MATTER OF)
NOTICE OF VIOLATION with)
CORRECTIVE ACTION)

No. 2010-006

Mr. Kevin Keating
The Bronze Works LLC.
2506 South Fawcett Avenue
Tacoma, WA 98402

Authority and Violations

In accordance with Tacoma Municipal Code (TMC) 12.08.675, the City of Tacoma Public Works Department ("City") is issuing this Notice of Violation with Corrective Action Order to The Bronze Works LLC., 2506 South Fawcett Avenue, Tacoma, WA 98402 for:

- The unlawful illicit discharge of pollutants into the City of Tacoma Municipal Storm Sewer System in violation of TMC 12.08.080 A.

Background

On March 10, 2010, during an inspection of The Bronze Works, the following items of concern were noted:

- An accumulation of white particulate was found in the street, at the stormwater gutter and on the sidewalk at the edge of the paved pad with a stormwater catch basin.
- White particulate and chunks from the destructed molds on the paved pad with a stormwater catch basin.
- Uncovered pallets of molds (silica sand) and metals were found outside.
- A garbage dumpster containing molds (silica sand) and debris with an open lid and no cover was found outside.
- Two white plastic totes with metal frames that were once used for storage of patina wastewater, and two cut-off blue plastic barrels stored upside down were found outside.

In a letter dated March 15, 2010, City of Tacoma Environmental Services requested that The Bronze Works clean up the spilled particulate from the street, the stormwater gutter, the sidewalk and the paved pad; sweep or vacuum the area at the end of each work day as additional material is spilled, close the lid of the garbage dumpster when not actively in use, and cover the molds, scrap metals and other material stored outside.

On March 16, 2010, Environmental Services' staff Kurt Fremont and Brett Burrows met with The Bronze Works' owner, Mr. Kevin Keating, to discuss current operations at the facility and the progress being made at the facility with the Washington State Department of Ecology's "Clean Closure" directive. City staff inspected the facility's catch basin which is the point of connection

between the private stormwater side sewer and the City's collection system. The Environmental Services' personnel collected samples of sediment and wastewater from the private stormwater catch basin located in the concrete pad in front of the facility storage bay under standard Chain of Custody. All samples were analyzed by the City's accredited laboratory for total metals: arsenic, cadmium, chromium, copper, lead, nickel and zinc. Analysis of the sample indicated a level of copper at 4590 ug/L in the stormwater and a level of copper at 89700 mg/Kg in the sediments.

On March 25, 2010, The Bronze Works was notified of the elevated concentration of copper in the stormwater catch basin by telephone. Mr. Keating agreed to remove the sediments and water from the catch basin for proper disposal. Mr. Keating also offered to place a plug in the catch basin to capture all of the materials onsite.

On March 26, 2010, City staff confirmed that the water and sediment from the catch basin had been removed, a rubber plug placed in the outlet pipe and a small piece of plywood placed under the catch basin grate.

On May 21, 2010, Environmental Services' staff Chris Burke and Brett Burrows met briefly with Mr. Kevin Keating to notify him of the intent to collect samples from the area stormwater catch basins. City staff collected samples of sediment and water from the stormwater catch basin #6506496 (upstream CB2) and #6506673 (downstream CB1) located at South Fawcett Avenue and South 25th Street under standard chain of custody. Samples of sediment and wastewater were also collected from the private stormwater catch basin located in the concrete pad of the facility under standard chain of custody. All samples were analyzed by the City's accredited laboratory for total metals: arsenic, barium, cadmium, chromium, copper, lead, nickel, selenium, silver, and zinc. Analysis of the sediments from the private catch basin indicated elevated levels of copper at 31100 mg/Kg and cadmium at 2.49 mg/Kg. Elevated levels of arsenic, barium, chromium, lead, nickel, selenium, silver, and zinc were detected in the private stormwater catch basin owned by The Bronze Works and were also detected in the downstream municipal stormwater catch basin #6506673. Sample analysis showed a match between the material in the private stormwater catch basin and the downstream municipal stormwater catch basin #6506673. (Sample analysis demonstrated a significantly lower amount of metals in the upstream municipal stormwater catch basin #6506496.) The municipal stormwater system in this area discharges to the Thea Foss Waterway, a superfund site.

Notice of Violation

Whereas TMC 12.08.080 Matter excluded from storm drains, special approved discharges states:

"Only unpolluted stormwater, surface water or groundwaters and such other waters as may be specifically authorized by this section, may be discharged into the storm drains. Under no circumstances may those materials enumerated in TMC 12.08.020 and 12.08.040 through 12.08.060, inclusive, be discharged into storm drains."

The Bronze Works, by discharging elevated levels of arsenic, barium, chromium, lead, nickel, selenium, silver, and zinc from its operations to the City storm drains, has exceeded the specific parameters enumerated by TMC 12.08.040, which is a prohibited illicit discharge.

Corrective Action Required

In response to the above noted violation, The Bronze Works shall take the following Corrective Actions:

Within 30 calendar days from receipt of this Notice of Violation complete the following: (site map enclosed)

- Remove the wastewater and sediments from the private stormwater catch basin and surrounding concrete pad.
- Clean the private stormwater system along the east side of the building serving the roof drains, as well as the connecting pipe from the private catch basin to the municipal stormwater catch basin #6506673.
- Clean the sidewalk and street immediately adjacent the property at 2506 Fawcett Avenue, also identified as parcel #2025100010.
- Clean the municipal stormwater catch basin #6506673, manhole #6765265 and the connecting municipal sewer lines.

All material contained within the catch basin, manhole and discharge pipe shall be contained, collected and characterized for appropriate disposal by a waste disposal company approved to handle said waste. Notify this office when the maintenance is scheduled to take place in order for a City representative to be present.

Within 45 calendar days from the date the Corrective Actions have been completed, submit copies of the receipt(s) for the work completed as well as waste disposal manifest(s).

Appeal Process

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City of Tacoma
Tacoma Municipal Building
Office of the Hearing Examiner
747 Market Street
Tacoma, WA 98402

If you file an appeal, any hearing scheduled as a result of your appeal may be canceled if the Director finds that The Bronze Works has complied with the actions required by this Notice of Violation with Corrective Action Order.

By Order of the Director of Public Works:

Signed this 11th day of Aug, 2010.



Richard E. McKinley, Director
Public Works Department



City of Tacoma

Environmental Services Laboratory

Center for Urban Waters

326 East D Street Tacoma WA 98421

Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-05439

Sample ID: Bronze Works - Pad

Sample Type: Surface Water

Sample Collect Date: 5/21/2010

14:10

Sample Receipt Date: 5/21/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>CASH</u>
ICP-MS							
Arsenic	6/22/2010	200.8	1.70	ug/L	0.500	0.061	7440-38-2
Barium	6/22/2010	200.8	37.7	ug/L	0.50	0.12	7440-39-3
Cadmium	6/22/2010	200.8	0.560	ug/L	0.500	0.037	7440-43-9
Chromium	6/22/2010	200.8	7.19	ug/L	0.500	0.033	7440-47-3
Copper	6/22/2010	200.8	5220	ug/L	2.50	1.05	7440-50-8
Lead	6/22/2010	200.8	12.4	ug/L	0.500	0.060	7439-92-1
Nickel	6/22/2010	200.8	7.46	ug/L	0.50	0.17	7440-02-0
Selenium	6/22/2010	200.8	3.22	ug/L	0.50	0.13	778-49-2
Silver	6/22/2010	200.8	2.28	ug/L	0.500	0.015	7440-22-4
Zinc	6/22/2010	200.8	219	ug/L	0.50	0.48	7440-66-6

- Flags: U: The analyte was not detected at or above the reported value.
 UJ: The analyte was not detected at or above the reported estimated result. See QC Report.
 NJ: TIC There is evidence the analyte is present. The associated value is an estimate.
 J: The analyte was positively identified. The associated value is an estimate. See QC Report.
 B: The analyte was detected but is less than the Project Reporting Limit Goal.
 R: The value is unusable.

Lori Zboralski

Wednesday, June 23, 2010

Reviewed By: Lori Zboralski

Date



City of Tacoma

Environmental Services Laboratory

Center for Urban Waters

326 East D Street Tacoma WA 98421

Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-05440

Sample ID: Bronze Works - CB 1

Sample Type: Surface Water

Sample Collect Date: 5/21/2010

14:10

Sample Receipt Date: 5/21/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>CAS#</u>
ICP-MS							
Arsenic	6/22/2010	200.8	1.05	ug/L	0.500	0.061	7440-38-2
Barium	6/22/2010	200.8	23.9	ug/L	0.50	0.12	7440-39-3
Cadmium	6/22/2010	200.8	0.160 J	ug/L	0.500	0.037	7440-43-9
Chromium	6/22/2010	200.8	0.450 J	ug/L	0.500	0.033	7440-47-3
Copper	6/22/2010	200.8	87.9	ug/L	0.50	0.21	7440-50-8
Lead	6/22/2010	200.8	1.95	ug/L	0.500	0.060	7439-92-1
Nickel	6/22/2010	200.8	4.92	ug/L	0.50	0.17	7440-02-0
Selenium	6/22/2010	200.8	1.26	ug/L	0.50	0.13	778-49-2
Silver	6/22/2010	200.8	0.040 U	ug/L	0.500	0.040	7440-22-4
Zinc	6/22/2010	200.8	38.7	ug/L	0.50	0.48	7440-66-6

Flags: U: The analyte was not detected at or above the reported value.

UJ: The analyte was not detected at or above the reported estimated result. See QC Report.

NJ: TIC There is evidence the analyte is present. The associated value is an estimate.

J: The analyte was positively identified. The associated value is an estimate. See QC Report.

B: The analyte was detected but is less than the Project Reporting Limit Goal.

R: The value is unusable.

Lori Zboralski

Wednesday, June 23, 2010

Reviewed By: Lori Zboralski

Date



City of Tacoma

Environmental Services Laboratory

Center for Urban Waters

326 East D Street Tacoma WA 98421

Phone: 253.591.5588 Fax: 253.507.2170

Lab#: 2010-05441

Sample ID: Bronze Works - CB 2

Sample Type: Surface Water

Sample Collect Date: 5/21/2010

14:10

Sample Receipt Date: 5/21/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
ICP-MS							
Arsenic	6/22/2010	200.8	1.83	ug/L	0.500	0.061	7440-38-2
Barium	6/22/2010	200.8	11.9	ug/L	0.50	0.12	7440-39-3
Cadmium	6/22/2010	200.8	0.060 J	ug/L	0.500	0.037	7440-43-9
Chromium	6/22/2010	200.8	1.56	ug/L	0.500	0.033	7440-47-3
Copper	6/22/2010	200.8	24.3	ug/L	0.50	0.21	7440-50-8
Lead	6/22/2010	200.8	4.92	ug/L	0.500	0.060	7439-92-1
Nickel	6/22/2010	200.8	1.63	ug/L	0.50	0.17	7440-02-0
Selenium	6/22/2010	200.8	0.13 U	ug/L	0.50	0.13	778-49-2
Silver	6/22/2010	200.8	0.015 U	ug/L	0.500	0.015	7440-22-4
Zinc	6/22/2010	200.8	37.6	ug/L	0.50	0.48	7440-66-6

Flags: U: The analyte was not detected at or above the reported value.

UJ: The analyte was not detected at or above the reported estimated result. See QC Report.

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R: The value is unusable.

Wednesday, June 23, 2010

Reviewed By: Lori Zboralski

Date



TO: Michael L. Kennedy, Asst. Division Manager, Compliance Support Section

FROM: Christopher L. Getchell, Asst. Division Manager, Env. Services Laboratory

SUBJECT: Source Control SAP Element ENV-04004-13-01

DATE: June 21, 2010

Attached are the analysis results for the Bronze Works Sediment samples collected May 21, 2010. Grab samples were collected for Total Solids and Total Metals.

The Environmental Services Laboratory analyzed the samples. A detailed Quality Control Data Review report was prepared and is attached for your review.

The TCLP and water samples are still in the process of being analyzed and will be reported separately.

If you have any questions concerning these results, call me at (253) 502-2252. Please note that the sample associated with this report will be discarded six months from the date of this report unless requested otherwise.

Christopher L. Getchell
Asst. Division Manager

CLG:MB

L:\LABGROUP\QC\GROUP\Shared\wd\2010\2010-05436.docx

Fs005:\Lab_Reports\Wastewater\Industrial\Monitoring\BronzeWorks\2010-05436.pdf



City of Tacoma

Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421
Phone: 253.591.3588 Fax: 253.502.2170

Lab#: 2010-05436

Sample ID: Bronze Works - Pad

Sample Type: Soil

Sample Collect Date: 5/21/2010

13:55

Sample Receipt Date: 5/21/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method</u>	<u>Result</u>	<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>CASH</u>
CONVENTIONAL							
Total Solids	5/25/2010	SM2540B/G	24.6	percent	5.0	1.0	
ICP-MS							
Arsenic	6/11/2010	6020A	5.50	mg/Kg	0.981	0.040	7440-38-2
Barium	6/11/2010	6020A	159	mg/Kg	0.981	0.060	7440-39-3
Cadmium	6/11/2010	6020A	2.49	mg/Kg	0.981	0.061	7440-43-9
Chromium	6/11/2010	6020A	120	J mg/Kg	0.981	0.039	7440-47-3
Copper	6/11/2010	6020A	31100	J mg/Kg	19.6	3.7	7440-50-8
Lead	6/11/2010	6020A	55.1	mg/Kg	0.981	0.036	7439-92-1
Nickel	6/11/2010	6020A	71.0	J mg/Kg	0.981	0.025	7440-02-0
Selenium	6/11/2010	6020A	12.9	mg/Kg	0.98	0.11	7782-49-2
Silver	6/11/2010	6020A	19.1	J mg/Kg	0.981	0.0076	7440-22-4
Zinc	6/11/2010	6020A	985	J mg/Kg	4.9	2.1	7440-66-6

- Flags: U: The analyte was not detected at or above the reported value.
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 NJ: TIC There is evidence the analyte is present. The associated value is an estimate.
 J: The analyte was positively identified. The associated value is an estimate. See QC Report.
 B: The analyte was detected but is less than the Project Reporting Limit Goal.
 R: The value is unusable.

Monday, June 21, 2010

Reviewed By: Mark Bozlee

Date



City of Tacoma

Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421

Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-05437

Sample ID: Bronze Works - CB 1

Sample Type: Soil

Sample Collect Date: 5/21/2010

13:35

Sample Receipt Date: 5/21/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>CAS#</u>
CONVENTIONAL							
Total Solids	5/25/2010	SM2540B/G	59.7	percent	5.0	1.0	
ICP-MS							
Arsenic	6/11/2010	6020A	4.29	mg/Kg	0.782	0.032	7440-38-2
Barium	6/11/2010	6020A	84.2	mg/Kg	0.782	0.048	7440-39-3
Cadmium	6/11/2010	6020A	0.516 J	mg/Kg	0.782	0.048	7440-43-9
Chromium	6/11/2010	6020A	38.9 J	mg/Kg	0.782	0.031	7440-47-3
Copper	6/11/2010	6020A	9440 J	mg/Kg	7.8	1.5	7440-50-8
Lead	6/11/2010	6020A	65.3	mg/Kg	0.782	0.029	7439-92-1
Nickel	6/11/2010	6020A	28.9 J	mg/Kg	0.78	0.02	7440-02-0
Selenium	6/11/2010	6020A	1.30	mg/Kg	0.782	0.086	7782-49-2
Silver	6/11/2010	6020A	1.03 J	mg/Kg	0.782	0.0060	7440-22-4
Zinc	6/11/2010	6020A	418 J	mg/Kg	3.9	1.6	7440-66-6

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 J: The analyte was positively identified. The associated value is an estimate. See QC Report.
 B: The analyte was detected but is less than the Project Reporting Limit Goal.
 R: The value is unusable.

Monday, June 21, 2010

Reviewed By: Mark Bozlee

Date



City of Tacoma

Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421

Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-05438

Sample ID: Bronze Works - CB 2

Sample Type: Soil

Sample Collect Date: 5/21/2010

14:10

Sample Receipt Date: 5/21/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>CAS#</u>
CONVENTIONAL							
Total Solids	5/25/2010	SM2540B/G	67.1	percent	5.0	1.0	
ICP-MS							
Arsenic	6/11/2010	6020A	3.86	mg/Kg	0.684	0.028	7440-38-2
Barium	6/11/2010	6020A	54.9	mg/Kg	0.684	0.042	7440-39-3
Cadmium	6/11/2010	6020A	0.363 J	mg/Kg	0.684	0.042	7440-43-9
Chromium	6/11/2010	6020A	17.3 J	mg/Kg	0.684	0.027	7440-47-3
Copper	6/11/2010	6020A	70.9 J	mg/Kg	0.68	0.13	7440-50-8
Lead	6/11/2010	6020A	31.4	mg/Kg	0.684	0.025	7439-92-1
Nickel	6/11/2010	6020A	16.6 J	mg/Kg	0.684	0.017	7440-02-0
Selenium	6/11/2010	6020A	0.075 U	mg/Kg	0.684	0.075	7782-49-2
Silver	6/11/2010	6020A	0.0479 J	mg/Kg	0.684	0.0053	7440-22-4
Zinc	6/11/2010	6020A	174 J	mg/Kg	3.4	1.4	7440-66-6

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B: The analyte was detected but is less than the Project Reporting Limit Goal.

R: The value is unusable.

Reviewed By: Mark Bozlee

Monday, June 21, 2010

Date



City of Tacoma

Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421

Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-02816

Sample ID: Bronze Works

Sample Type: Surface Water

Sample Collect Date: 3/16/2010

14:56

Sample Receipt Date: 3/16/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>CAS#</u>
CONVENTIONAL							
pH	3/16/2010	SM 4500-H+	6.2	Std. Units	0.5	0.1	
ICP-MS							
Arsenic	3/23/2010	200.8	2.70 J	ug/L	5.00	0.53	7440-38-2
Cadmium	3/23/2010	200.8	1.00 J	ug/L	5.00	0.41	7440-43-9
Chromium	3/23/2010	200.8	8.50	ug/L	5.00	0.22	7440-47-3
Copper	3/23/2010	200.8	4590	ug/L	5.00	0.66	7440-50-8
Lead	3/23/2010	200.8	9.50	ug/L	5.00	0.63	7439-92-1
Nickel	3/23/2010	200.8	14.3	ug/L	5.00	0.50	7440-02-0
Zinc	3/23/2010	200.8	460	ug/L	5.0	2.1	7440-66-6

- Flags: U: The analyte was not detected at or above the reported value.
 UJ: The analyte was not detected at or above the reported estimated result. See QC Report.
 NJ: TIC There is evidence the analyte is present. The associated value is an estimate.
 J: The analyte was positively identified. The associated value is an estimate. See QC Report.
 B: The analyte was detected but is less than the Project Reporting Limit Goal.
 R: The value is unusable.

Lori B. Zboralski

Wednesday, March 24, 2010

Reviewed By: Lori Zboralski

Date



City of Tacoma

Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421

Phone: 253.591.5588 Fax: 253.302.2170

Lab#: 2010-02817

Sample ID: Bronze Works

Pad Catch Basin

Sample Type: Sediment

Sample Collect Date: 3/16/2010

14:56

Sample Receipt Date: 3/16/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
CONVENTIONAL							
Total Solids	3/18/2010	SM2540B/G	61.5	percent	5.0	1.0	
ICP-MS							
Arsenic	3/18/2010	6020A	8.27	mg/Kg	0.58	0.14	7440-38-2
Cadmium	3/18/2010	6020A	1.19	mg/Kg	0.581	0.030	7440-43-9
Copper	3/18/2010	6020A	89700	mg/Kg	116	48	7440-50-8
Lead	3/18/2010	6020A	49.7	mg/Kg	0.581	0.027	7439-92-1
Nickel	3/18/2010	6020A	43.0	mg/Kg	0.58	0.13	7440-02-0
Zinc	3/18/2010	6020A	1870	mg/Kg	5.8	1.2	7440-66-6

- Flags: U: The analyte was not detected at or above the reported value.
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 NJ: TIC There is evidence the analyte is present. The associated value is an estimate.
 J: The analyte was positively identified. The associated value is an estimate. See QC Report.
 B: The analyte was detected but is less than the Project Reporting Limit Goal.
 R: The value is unusable.

Lori A. Zboralski _____ Wednesday, March 24, 2010 _____
 Reviewed By: Lori Zboralski Date



City of Tacoma
Public Works Department

March 15, 2010

Kevin Keating
Bronze Works
2506 South Fawcett Avenue
Tacoma WA 98402

Subject: Facility Inspection – Request

Dear Mr. Keating:

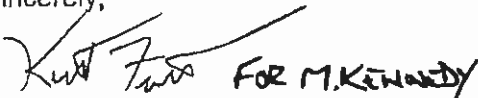
On Wednesday, March 10, 2010, this office conducted an inspection of the property located at 2506 South Fawcett Avenue. A copy of the resulting inspection report is attached.

Based upon inspection observations, this office is requesting that The Bronze Works **immediately** do the following to protect the private and municipal stormwater system:

1. Clean up the spilled particulate from the street, the stormwater gutter, the sidewalk and the paved pad.
2. Sweep or vacuum the area at the end of each work day as additional material is spilled.
3. Close the lid of the garbage dumpster when not actively in use.
4. Cover the molds, scrap metals and other material stored outside.

Thank you for your time and attention to this aspect of your business operations. Should you have any questions regarding the contents of this letter or the report, please feel free to call your Source Control Representative Brett Burrows at (253) 502-2189.

Sincerely,



FOR M. KENNEDY

Michael L. Kennedy
Assistant Division Manager
Environmental Science and Engineering

mlk:bwb:cfp

Enclosure: Inspection report
BMP S105

By First Class and Certified Mail: 7003 2280 0006 6662 9454

Cc: Pinky Feria, DOE

G:\EnviroCompliance\PERMITS\BronzeWorks\Correspondence\Inspection REQ 031010.doc

**City of Tacoma
Environmental Services Compliance Support
INSPECTION REPORT**

Name of Industry: The Bronze Works

Date/Time of Visit: March 10, 2010 9:30 a.m.

Inspector(S): B. Burrows, L. Dunn

Purpose of Inspection: Facility Pretreatment Inspection

Site Address: 2506 South Fawcett Avenue, Tacoma Washington 98402

Contact Person/Title: Mr. Kevin Keating, General Manager

Industry Phone: (253) 396-0396

Type of Business: Metal Finishing – metal casting with patina coating

Sic Code: 3471 **NAICS:** 332813
(Electroplating, Plating, Polishing, Anodizing and Coloring)

Discharge To: Central Treatment Plant #1

Pretreatment Type: None

**Industrial Wastewater
Zero Discharge Permit:** TAC-006-2008 (previously 011-069-002)

**Process Discharge
To Storm Sewer:** Prohibited

Stormwater Discharge To: Thea Foss drainage basin, Outfall 237A

Accidental Spill Prevention Plan: Letter received January 22, 2010

Hazardous Waste Generator: Yes

HISTORY: Operations at the Bronze Works produce a regulated categorical process waste stream. Wastewater generated during the patina process, including spent patina waste, is federally regulated under 40 CFR Part 433 *Metal Finishing* effluent guideline. The Bronze Works has chosen not to discharge the wastewater and spent wastes associated with the patina process.

The Bronze Works is no longer operating the casting or patina coating processes. The site is undergoing a Clean Closure Process under the direction of the Washington State Department of Ecology.

- All site process equipment and structures shall be cleaned/decontaminated.
- All wash water shall be collected and evaporated onsite. The condensed wastewater and sediment shall be disposed with the use of an appropriate licensed waste disposal company.
- The patina solutions shall be offered to previous employees who may form their own molding, casting and patina coating business. Any patina chemicals or solutions not sold shall be added to the evaporation barrel or disposed with a licensed waste disposal company.
- The chemicals in the storage rooms shall require proper disposal.
- All chemical and wastewater disposal shall be documented.

Industrial wastewater permit TAC-006-2008 shall remain in full force and affect. The permit specifically prohibits the discharge of all site process wastewaters to the sanitary or stormwater sewer systems. This applies to all wastewater generated during the Site Closure process.

OPENING CONFERENCE:

This unannounced inspection was conducted in response to a report that material from castings was present on the paved yard of the property and may impact the stormwater system.

Source Control Representative Larry Dunn and I arrived at the site to investigate. There was no answer at the door, the facility was dark and we were unable to locate Mr. Kevin Keating.

FACILITY INSPECTION:

There was an accumulation of white particulate in the street, at the stormwater gutter and on the sidewalk at the edge of the paved pad.

The paved pad contained the following:

- Garbage dumpster full of molds (silica sand) and debris with the lid open. Garbage dumpsters are required to be closed or under cover while not actively in use to prevent rainwater accumulation and minimizing the potential for drips and leakage.
- White particulate and chunks from the destructed molds
- Two white plastic totes with metal frames that once were used for the storage of patina wastewater
- Two cutoff blue plastic barrels stored upside down
- Wood pallet of molds
- Wood pallet of metal scrap
- Stacked wood pallets

The private stormwater catch basin contained standing water and the immediate area appeared to be free of mold particulate.

HAZARDOUS MATERIALS: The building was secured and no entrance to the storage or process areas was obtained.

RECORDS INSPECTION: No records were reviewed during this inspection.

CLOSING CONFERENCE:

On March 11, 2010, a telephone message was left at the facility business number explaining the concern with the open garbage dumpster, the uncovered stored material and the spilled particulate at the write-a-way and paved pad.

SAMPLES: No samples were collected during this inspection event.

COMPLIANCE CONCERNS:

- The accumulation of white particulate in the street, at the stormwater gutter and on the sidewalk at the edge of the paved pad
- White particulate and chunks from the destructed molds on the paved pad with a stormwater catch basin
- Uncovered pallets of molds (silica sand) and metals
- Garbage dumpster full of molds (silica sand) and debris with an open lid and no cover
- Two white plastic totes with metal frames that were once used for the storage of patina wastewater
- Two cutoff blue plastic barrels stored upside down

DATE AND INSPECTOR'S SIGNATURE:

Brett Burrows 3.12.10
Brett Burrows Date

25TH

MH SAP 6765265

CB SAP 6506505

CB SAP 6506496

CB ON PRIVATE PROPERTY
(THE BRONZE WORKS)

DRAINAGE TO THEA FOSS WATERWAY

CB SAP 6506673
SMOKE TEST PERFORMED THIS LOCATION
TV & LOCATE PERFORMED FROM THIS LOCATION

6" CONCRETE PIPE

LOCATION B
APPROXIMATE DEPTH - 21"

APPEARS TO BE 4" CONCRETE PIPE

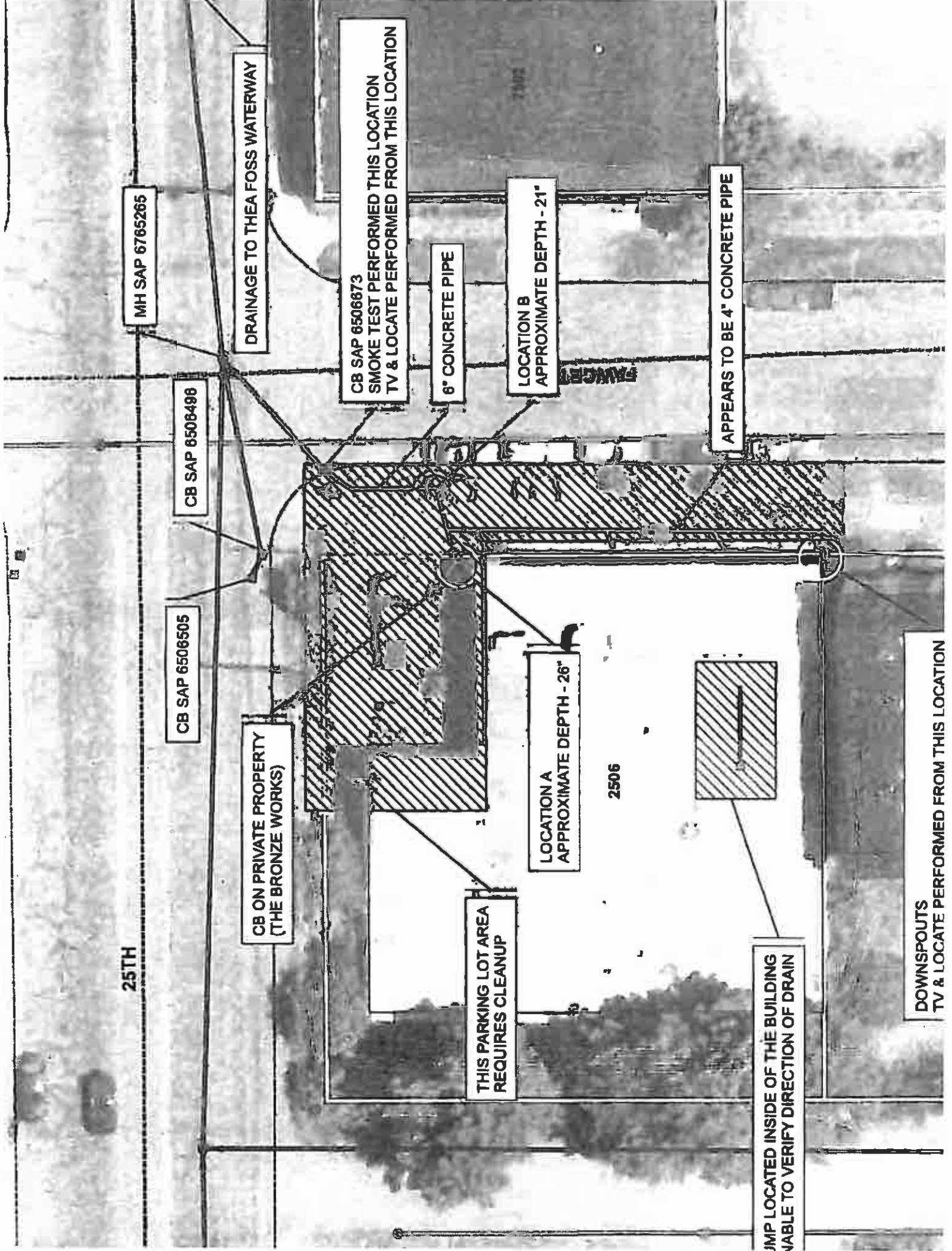
LOCATION A
APPROXIMATE DEPTH - 26"

THIS PARKING LOT AREA
REQUIRES CLEANUP

2506

JMP LOCATED INSIDE OF THE BUILDING
ABLE TO VERIFY DIRECTION OF DRAIN

DOWNSPOUTS
TV & LOCATE PERFORMED FROM THIS LOCATION



UNITED STATES POSTAL SERVICE
 TACOMA WA - COLUMBIA
 WA 98409
 2010 0000 0000 0000

First-Class Mail
 Postage & Fees Paid
 USPS
 Permit No. G-10

• Sender: Please print your name, address, and ZIP+4 in this box •

City of Tacoma
 Environmental Services
 326 East D Street
 Tacoma WA 98421-1801
 Attn: Fremont

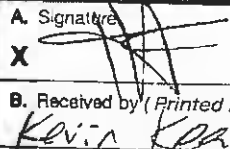
SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Kevin Keating
 The Bronze Works LLC.
 2506 South Fawcett Avenue
 Tacoma, WA 98409-3164

COMPLETE THIS SECTION ON DELIVERY

A. Signature
 X 

Agent
 Addressee

B. Received by (Printed Name)
 Kevin Keating

C. Date of Delivery
 8-25-2010

D. Is delivery address different from item 1? Yes
 If YES, enter delivery address below: No

3. Service Type

Certified Mail Express Mail
 Registered Return Receipt for Merchandise
 Insured Mail C.O.D.

4. Restricted Delivery? (Extra Fee) Yes

2. Article Number (Transfer from service label) 7001 1140 0000 7760



City of Tacoma

Science and Engineering Division
Environmental Compliance

June 17, 2010

Thomas Lomis, President
Bill's Towing and Garage, Inc.
1240 South Sprague Avenue
Tacoma WA 98405

HAND CARRIED

Received By Date 6/21/2010

Subject: **Notice of Violation with Civil Penalties**
Bill's Towing & Garage, Inc. 1651 Center Street Tacoma, WA

Dear Mr. Lomis:

On April 28, 2010, City of Tacoma Environmental Services Compliance Support Staff documented surface water management code violations at the Bill's Towing & Garage, Inc. facility located at 1651 Center Street.

Enclosed, you will find a Notice of Violation with Civil Penalties describing Bill's Towing & Garage's failure to control the discharge of a pollutant from its location, at 1651 Center Street, to the municipal sewer system which, in turn, impacted the head of the Thea Foss Waterway, a superfund site. This discharge was a violation of TMC 12.08.080.D, which states that, "Illicit discharges to the City storm drains are prohibited and are subject to all penalties prescribed by this chapter." A second violation was documented due to Bill's Towing and Garage's failure to notify the appropriate party. TMC 12.08.230.C states, "dischargers are required to notify the Director immediately upon the occurrence of an excessive discharge of contaminants regulated by TMC 12.08."

This Notice of Violation with Civil Penalties represents a determination by the Director that violations of Chapter 12.08 TMC have occurred, which is final unless you appeal this Notice of Violation with Civil Penalties to the City of Tacoma's Hearing Examiner and request a hearing. If you decide to file an appeal, you must do so within thirty (30) days from your receipt of this Notice. (Pursuant to TMC 12.08.675.C, "Proof of service [receipt by you] shall be established by the date and signature of the addressee on the certified mail "return receipt" form, or upon the third day following the date upon which the notice of violation was placed in the mail, unless the third day falls on a Saturday, Sunday, or legal holiday, in which event service shall be deemed complete on the end of the next day which is neither Saturday, Sunday, or a legal holiday.") The procedures for filing an appeal are set forth in TMC 12.08.675 and TMC 12.08.678. Appeals must be directed to:

City of Tacoma
Tacoma Municipal Building
Office of the Hearing Examiner
747 Market Street
Tacoma, WA 98402

Sincerely,


for Michael L. Kennedy

Assistant Division Manager
Environmental Compliance Support
MLK:JS:KF:cfp

Enclosures

Cc: Richard E. McKinley, City of Tacoma Public Works Director
Michael L. Kennedy, City of Tacoma Assistant Division Manager
Jim Sachel, Washington Department of Ecology
Vincent McGowan, Washington Department of Ecology

CITY OF TACOMA
Department of Public Works

IN THE MATTER OF }
NOTICE OF VIOLATION }
And CIVIL PENALTIES }

No. 2010-004

Thomas Lomis, President
Bill's Towing and Garage, Inc.
1240 Sprague Ave.
Tacoma WA 98405

Authority and Violations

In accordance with Tacoma Municipal Code (TMC) 12.08.675, the City of Tacoma Public Works Department ("City") is issuing this Notice of Violation with Civil Penalties of \$10,000 to Bill's Towing and Garage, Inc., 1651 Center Street, Tacoma, for:

- Unlawful Illicit Discharge of Polluting matter into the City of Tacoma Municipal Storm Sewer System TMC 12.08.080.D
- Failure to immediately notify the Director of an excessive discharge to the Municipal Sewer System TMC 12.08.230.C.

Background

A. On Wednesday, April 28, 2010, a milky white plume entering the Thea Foss Waterway from City stormwater outfall 237A was reported to the City of Tacoma through the Washington State Department of Ecology Environmental Reporting Tracking System (ERTS).

B. John Sunich and Shawn Madison, City Source Control Inspectors, responded to this report and traced the large milky discharge, which extended several hundred square feet into the Foss Waterway, to a private stormwater connection on the north side of Center Street. The inspectors observed a dump truck, located inside of a locked gate at Bill's Towing yard, leaking an unknown white substance into a private storm system which was draining into municipal curb inlet no. 6503875, and then into the municipal storm sewer line at manhole no. 6763842, located at the corner of Center Street and Asotin Street.

C. The City inspectors alerted Bill's Towing to the situation via a phone call to the main office. Assistant Manager John Lomis arrived onsite shortly after the phone call, and explained to City inspectors that the unknown liquid was non-dairy coffee creamer from a commercial semi-truck trailer that had been damaged in a fire. According to John Lomis, the non-dairy creamer had been unloaded from a large dumpster and reloaded to a smaller dump truck using a small skid steer tractor with a bucket loader attached to the front. The inspectors observed a large stain surrounding a loading dock which was coated with the spilled product. During the process of transferring the bottles, many were broken and crushed from being driven over by the tractor allowing the liquid to enter the storm

drain. The dump truck full of the crushed bottles was parked on a slope which allowed any remaining liquid in the dump truck to drain out and into the storm drain. The inspectors observed a steady stream of product draining from the dump truck when they were let inside of the locked gate by John Lomis.

D. Mr. Lomis indicated that neither he nor other employees attempted to clean up the mess because they did not believe it was a problem because it was "only coffee creamer." The City inspectors gave Mr. Lomis instructions to have the storm system on his site cleaned and to stop the stream of product from dripping onto the ground. Mr. Lomis hired Drain-Pro to clean out all of the affected storm drains and pipes on his property. He also relocated the leaking dump truck to level ground which stopped the source of the spilled product. Drain-Pro completed cleaning the storm system to the satisfaction of the inspectors at around midnight on April 29, 2010.

E. Samples were taken by City staff downstream from Bill's Towing in the City stormwater system and from a private catch basin at Bill's Towing yard. The samples were sent to Minner Lab for comparison. Results confirmed the milky product downstream was of the same nature and make-up as the non-dairy creamer at Bill's towing yard.

F. TMC 12.08.007 J. and TMC 12.08.090 B., authorize the City to regulate direct and indirect discharges to the municipal storm drain system.

G. The City is also required by Special Condition S5.C.7 of its Phase I Municipal Stormwater National Pollutant Discharge Elimination System and State Waste Discharge Permit to administer a program to reduce pollutants in runoff from areas that discharge to its municipal storm drain system by requiring best management practices, among other things, to control pollution generating sources.

H. City of Tacoma Source Control staff has provided ample technical assistance to the owners and operators of Bill's Towing to educate them regarding the connectivity of their storm system to the City's system and the environment, the prohibitions of allowing polluting matter to enter their storm drains and the responsibility of the company to report to the City when polluting matter enters the storm drains.

I. In enforcement actions, under TMC 12.08, where a civil penalty is assessed, the civil penalty for each separate violation per day or portion thereof shall be in an amount not to exceed \$5,000. Each and every violation shall be a separate and distinct offense. In case of a continuing violation, every day's continuance shall be a separate and distinct violation.

NOTICE OF VIOLATION and CIVIL PENALTIES

A. For the documented insult to the City system and the Thea Foss Waterway which occurred on April 28, 2010, and the failure of the owners or operators of Bill's Towing and Garage Inc. to immediately notify the Director of an excessive discharge to the City system, this Notice of Violation with Civil Penalties for \$5,000 for one violation of TMC 12.08.080.D and for one violation TMC 12.08.230.C, for a total of \$10,000, is issued to Thomas Lomis, owner of Bill's Towing and Garage, Inc., in accordance with TMC

Bill's Towing and Garage, Inc
Notice of Violation and Civil Penalties
Page 3

June 4, 2010

12.08.200 Enforcement Procedures and TMC 12.08.675 Notice of Violation – Civil Penalties.

B. The civil penalty constitutes a personal obligation of the person to whom the notice of civil violation is directed. Any civil penalty assessed shall be paid to the City of Tacoma within 30 calendar days of receipt of such notice or, if appealed, within 30 calendar days of receipt of the Hearing Examiner's decision or a notice from the City that penalties are due.

Appeal Process


This Notice of Violation represents a determination by the Director that violations of Chapter 12.08 TMC have occurred, which is final unless you appeal this Notice of Violation with Civil Penalties to the City of Tacoma's Hearing Examiner and request a hearing. If you decide to file an appeal, you must do so within thirty (30) days from the date of receipt of this Notice. (Pursuant to TMC 12.08.675.C, "Proof of service [receipt by you] shall be established by the date and signature of the addressee on the certified mail "return receipt" form, or upon the third day following the date upon which the notice of violation was placed in the mail, unless the third day falls on a Saturday, Sunday, or legal holiday, in which event service shall be deemed complete on the end of the next day which is neither Saturday, Sunday, or a legal holiday.") The procedures for filing an appeal are set forth in TMC 12.08.675 and TMC 12.08.678. Appeals must be directed to:

City of Tacoma
Tacoma Municipal Building
Office of the Hearing Examiner
747 Market Street
Tacoma, WA 98402

If you file an appeal, any hearing scheduled as a result of your appeal may be canceled if the Director finds that Bill's Towing and Garage, Inc. has complied with the actions required by this Notice of Violation with Civil Penalties.

By Order of the Director of Public Works:

Signed this 17th day of June, 2010, at Tacoma Washington



Richard E. McKinley
Public Works Director

cc: Michael L. Kennedy, City of Tacoma
Jim Sachet, WDOE
Vincent McGowan, WDOE



City of Tacoma
Public Works

August 11, 2010

SENT VIA CERTIFIED MAIL

Steve Nichols
WM Dickson Co.
3315 South Pine St
Tacoma, WA 98409

Subject: Warning Letter—Illicit discharge of asphalt cooling water / wash water to the storm drainage system on Jefferson Avenue between South 25th and Fawcett

Dear Mr. Nichols:

On August 4, 2010, City of Tacoma Environmental Services staff witnessed the flooding of Jefferson Avenue, between South 25th and the intersection of Fawcett, in what was believed to be an attempt to both wash the street of debris and to cool the freshly applied asphalt. It was noted that no protective measures were in place to prevent the debris, turbid water or petroleum sheen from entering the City of Tacoma Storm water conveyance system.

Illicit discharges of pollutants to the City stormwater system is prohibited by Tacoma Municipal Code Chapter (TMC) 12.08. The municipal stormwater drain system for this area discharges to the Thea Foss Waterway, a federal Superfund site, without treatment.

WM Dickson Co. and subcontractors under the control or operation of WM Dickson Co. must immediately cease the practice of discharging of asphalt cooling and cleaning wastewater, or any materials other than clean stormwater, to the City stormwater system.

Failure to adequately address the concerns of this warning letter with City of Tacoma Environmental Services will result in escalating enforcement actions, including but not limited to, Notices of Violation with Civil Penalties of up to \$5,000 per day for each violation of TMC 12.08.

If you have any questions regarding this matter, please contact Shawn Madison at (253) 502-2120 or smadison@cityoftacoma.org.

Sincerely,

Michael L. Kennedy
Assistant Division Manager
Environmental Compliance Support

MLK:SM:cfp
Enclosures (4)

cc: Russ Post, City of Tacoma
Jim Harteau, City of Tacoma

By First Class and Certified Mail: 7001 1140 0001 4249 7784
\\fs005\group\EnviroCompliance\Enforcement\Warning Letters\WM Dickson Warning letter.doc

10-0514 Environmental Services Spill Response / Complaint Form

Recorder: SMADISON
 Date: 8/5/2010
 Anonymous:
 Reported by: Rick Fuller CoT
 Address:
 Home Phone: Rick Fuller CoT
 Work Phone:
 Best Call Time:

COMPLAINT

Material: Petroleum Product
 Source: Construction Site
 Receiving Waters: Thea Foss Waterway
 Drainage Basin:
 Incident Date: 8/4/2010
 Activity: Unsafe / Improper Operation
 Quantity: 5-500 Gallon

ALLEGED VIOLATOR / BUSINESS

Complaint Title: Asphalt curing/cooling water to storm
 Business: W.M Dickson
 Address: Corner of S 25th and Jefferson
 Parcel No.:
 Comments: At 5:05 received call from Rick Fuller of CoT indicating he had just witnessed WM Dickson Co. flooding the street with water, that they were doing it in an attempt to cool the fresh asphalt they had just placed. Rick indicated the oily turbid water was going down the storm drains.
 Contact:
 Phone:

NOTIFICATIONS / ACTIONS

Investigator: Shawn Madison
 Date: 8/4/2010
 Site Visit &

ACTION(S) TAKEN:

- Enforcement
- Investigate
- No Action
- Voluntary Compliance
- In Compliance
- Written Response
- Technical Assistance
- Refer to WDOE
- Refer to TPCPD
- Hazard Material
- Photos Taken
- Samples Taken

Narrative:
 Comments: 5:15 Departed office and drove to the 237A outfall. Oily residue was observed on east side of waterway, no residue observed coming down the pipe. Traveled to the corner of South 25th and Jefferson and met with Rick F. of CoT. The contractor had already departed site on my arrival. Rick explained that when he was driving up Jefferson he witnessed a water truck washing the street down. Rick indicated there were no catch basin socks or oil absorbing pads in place to capture the rock petroleum debris. Rick spoke to a gentleman that identified himself only as a job supervisor, and asked him what he was doing and why no BMPs were in place. The supervisor indicated he would take care of it. After Rick filled me in on the history we walked up the street and showed me where the incident took place. It was at this time we noted freshly installed catch basin socks in each of the street catch basins. After this observation we departed site to check a downstream manhole under 509. Turbid water was observed with a slight oil sheen. No samples taken. Photo log 1 Taken by Rick F. picture of Jefferson just past the 2500 block looking south. Note the water truck in the background, the heavy debris moving towards the catch basin and the absence of a filter sock. 2 Taken of the truck applying the water to the street 3 Taken approx 45 minutes after the first two photos and Rick F talking with the contractor. Picture is looking north along Jefferson. Note the now installed catch basin filters 4 Picture is looking north along Jefferson. Note the now installed catch basin filters 5 Picture is looking north at intersection of South 25th and Jefferson. Note the newly installed catch basin filters 6 Picture is looking north at intersection of South 25th and Jefferson. Note the now installed catch basin filters 7 Manhole under 509, trunk line water from this area of town goes through. 8 Manhole under 509, trunk line water from this area of town goes through. Note the turbid water and slight oil sheen. JO 8/9/10 Understand paving project was for TPU Water Dept. JO Left a message for Russ Post, TPU Environmental Mgr. (502-8300) related to event/case and seeking contact in their const. div. and/or project mgr.

FOLLOW UP ACTION(S):

- Owner Notified Letter
- Cleanup Required
- Transmission Notified
- Caller Notified 8/4/2010
- Cost Recovery
- Streets & Grounds Notified
- BMPs
- Inspection Required
- Others City Dept Notified

OTHER:

sso

Approved By:
 Completed

Date:



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Steve Nichols
 WM Dickson Co.
 3315 South Pine St
 Tacoma, WA 98409

PS Form 3800, January 2001
 See Reverse for Instructions

7001 1240 0001 4249 7784
 7001 1240 0001 4249 7784



CERTIFIED MAIL

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	<p>A. Signature <input checked="" type="checkbox"/> <i>Jamie Hayes</i> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) <i>Jamie Hayes</i></p> <p>C. Date of Delivery</p>
<p>1. Article Addressed to:</p> <div style="border: 1px solid black; padding: 5px; margin: 5px;"> <p>Steve Nichols WM Dickson Co. 3315 South Pine St Tacoma, WA 98409</p> </div>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input checked="" type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p> <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>
<p>2. Article Number (Transfer from service label)</p>	<p>7001 1140 0001 4249 7784</p>
PS Form 3811, August 2001	Domestic Return Receipt

102995-02-M-1540

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City of Tacoma
Environmental Services
326 East D Street
Tacoma WA 98421-1801
Attn: Madison

301



10-0416 Environmental Services Spill Response / Complaint Form

Recorder: JSUNICH
 Date: 6/16/2010
 Anonymous:
 Reported by: TFD Hazmat 44 Ed Hyleson
 Address:

Home Phone: TFD Hazmat 44 Ed Hyleson
 Work Phone: 973-0049
 Best Call Time:

COMPLAINT

Material: Petroleum Product
 Source: Accident
 Receiving Waters: Thea Foss Waterway
 Drainage Basin:

Incident Date: 6/16/2010
 Activity: Unknown / Other
 Quantity: >500 Gallon

ALLEGED VIOLATOR / BUSINESS

Complaint Title: Garage Fire, Vegetable/Biodiesel to storm
 Business: Residential
 Address: 3508 S 13TH ST
 Parcel No.:
 Comments: Call from TFD Hazmat 44 Ed Hyleson 973-0049 that garage had caught fire at 3508 S. 13th. Garage contained large amounts of cooking oil and tenant suspected in producing biodiesel.

Contact:
 Phone:

NOTIFICATIONS / ACTIONS

Investigator: John Sunich

Site Visit &
 Date: 6/15/2010

ACTION(S) TAKEN:

Enforcement
 Investigate
 No Action

Voluntary Compliance
 In Compliance
 Written Response

Technical Assistance
 Refer to WDOE
 Refer to TPCHD

Hazard Material
 Photos Taken
 Samples Taken

Narrative
 Comments:

JS-6/15/2010-Call from Ed Hyleson at 9pm that there was a fire at S. 14th and Puget Sound due to garage biodiesel project. See complaint from earlier in the day 10-0413. During fire large quantities of biodiesel/cooking oil drained to storm system. Fire department deployed oil skimmers and a tarp over the top of the CB to prevent oil from entering. When I arrived on site only a small quantity of oil was. According to On scene fire commander there was approximately 400-600 gallons of product that got away and headed down the alley towards puget sound and then south towards CB at the corner of 14th and Puget sound. Some of the product did burn up. Water from fire suppression also helped to push the product further down. Contacted Rodger Sensa with WDOE and requested assistance with clean up. ERTS#620574. Called Shawn Madison in for back up at 10pm. Shawn checked out the head of the water way and noted some fire foam coming in. Shawn met with me on site and Rodger Sensa also arrived from WDOE at approximately 11pm. Rodger coordinated NRC to come out and help with the clean up and prevent any further immediate release of product. Also met with Fire Investigator Lt. Sue Boczar who let me know the names of the people operating the biodiesel business. Amitai Blatt 206-605-8145 and Julio Cerdeira 206-432-0287. Sue determined she would not be able to investigate source of fire during the night. Property Owner: Duke York 253-752-3189. NRC met with WDOE and City and were given direction to clean up the gross product around the Storm drains at S. 14th and Puget Sound. Also sucked out the catch basins. Coordinated with streets for sanding truck to prevent cars from spinning out on the spill scene which was very slippery. Shawn Madison and I rechecked the waterway and did find some product coming out of 237A. Deployed sausage boom around kayakers dock. To catch whatever product. Also collected sample of product at CB prior to NRC cleaning and down at kayakers dock in case of finger print. When NRC finished made several phone calls to Streets and they were having technical difficulties with the truck. Gave them the instruction of which area to sand and left site. Logged samples into the lab and departed for the evening. 6/16/2010-JS and SM- Returned to site at 11:30 and met with Ron Holcomb. Walked site and came up with game plan for clean up, Removal of product, cleaning street, and removing contaminated soil. Ron, Shawn and I met with Duke York and the operators of the business and explained what we needed to have completed. Encouraged that Duke hire an env. clean up firm to help with the work due to th complex nature of the work. Duke agreed to get the work done and said he would call around and get some quotes to get the job done. Later in the day Duke called and said he contracted Emerald Services to come in and start work on 6/18/2010 in the morning. They would be doing soil testing and pressure washing the street. Duke Planned on doing the alley way excavation himself with his own equipment and having Emerald provide the roll off bins to dispose of the contaminated soil. JS/SM-6/18/2010- Arrived on site and found Emerald services cleaning the street with steam cleaners and vactoring up the water. CB was plugged while work being completed and truck collected water. Met with Eric Orwoll with Emerald and gave him an outline of expectations. Also met with Chris Gese of York enterprises who was supervising for Duke. At the end of the day Chris called and let me know the pressure washing had finished and that he had dug a trench in the alley to prevent any runoff from leaving should it rain heavily over the weekend. He also had scraped off some of the material with an excavator and stored in roll off box. Chris stated he would probably be finishing the soil removal on the following monday. JS/SM-6/21/2010- Returned to site and found that workers from York enterprises were cleaning up fire debris.

Trench was dug across the alleyway and sausage booms were deployed. Chris Gese of York enterprises was planning to remove the remaining contaminated soil and put into roll off bins if the rain held off. General BioDiesel was on site looking at remaining product in the 4 steel tanks and said it appeared as if the product was something they could recover and take off site. S. Puget Sound Street appeared to have damages resulting from the oily fire. Reported issue to Rich Barber of Streets and Grounds. Also gave direction to Chris Gese to have TPCHD take split samples for testing for them to ensure that they are from the same location. Will follow up later in the day to see progress of work.

FOLLOW UP ACTION(S):

- | | | |
|---|---|--|
| <input checked="" type="checkbox"/> Owner Notified In Person | <input checked="" type="checkbox"/> Cleanup Required | <input type="checkbox"/> Transmission Notified |
| <input checked="" type="checkbox"/> Caller Notified 6/21/2010 | <input type="checkbox"/> Cost Recovery | <input checked="" type="checkbox"/> Streets & Grounds Notified |
| <input checked="" type="checkbox"/> BMPs | <input checked="" type="checkbox"/> Inspection Required | <input checked="" type="checkbox"/> Others City Dept Notified |

OTHER:

SSO

Approved By:

Date:

Completed









27



28



29



30







43



46





49



50



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52



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10-0415 Environmental Services Spill Response / Complaint Form

Recorder: PSTAFFOR
Date: 6/16/2010
Anonymous:
Reported by: Jeff Barney, CHB
Address:
Home Phone: Jeff Barney, CHB
Work Phone: 253-255-3895
Best Call Time:

COMPLAINT

Material: Petroleum Product
Source: Fire
Receiving Waters: Thea Foss Waterway
Drainage Basin:
Incident Date: 6/16/2010
Activity: Unknown / Other
Quantity: Unknown Unknown / Other

ALLEGED VIOLATOR / BUSINESS

Complaint Title: Biodiesel fire results in diesel sheen on Foss Waterway
Business: Residential
Address: 3805 South 13th
Parcel No.:
Contact:
Phone:
Comments: Jeff Barney called to report diesel sheen on Foss waterway. He believes it is related to biodiesel fire.

NOTIFICATIONS / ACTIONS

Investigator: Mark Stafford
 Site Visit & Date: 6/16/2010

ACTION(S) TAKEN:

Enforcement
 Investigate
 No Action
 Voluntary Compliance
 In Compliance
 Written Response
 Technical Assistance
 Refer to WDOE
 Refer to TPCHD
 Hazard Material
 Photos Taken
 Samples Taken

Narrative: A residential biodiesel operation located at 3805 South 13th catches on fire and residual diesel flows to Foss Waterway. Sheen is very light, almost invisible and can be seen throughout entire waterway. A slight smell of diesel is present at 237 A+B. Sheen is considered to be nonrecoverable. Ecology was notified about fire and release to Foss waterway. Complaint # 10-0413 is related to fire. -6/16/10-MS- 13:20 Andrea Unger called to report that Conoco Phillips and Nustar complained of a sheen on waterway. The sheen is believed to be related to the fire.

FOLLOW UP ACTION(S):

Owner Notified
 Caller Notified
 BMPs
 Cleanup Required
 Cost Recovery
 Inspection Required
 Transmission Notified
 Streets & Grounds Notified
 Others City Dept Notified

OTHER:

SSO
Approved By:
 Completed

Date:





City of Tacoma
Public Works

May 22, 2010

Brad McKinley RPA
Sierra Property Management, LLC.
P.O. Box 400
Arlington WA 98223

CERTIFIED MAIL: 7003 2260 0006 6662 5609

RE: 1949 and 2121 South State Street, Tacoma

Dear Mr. McKinley:

Two buildings you manage for NGP Centennial Tacoma LLC. were inspected on May 14, 2010, by Mr. Rick Norberg of this office, as part of the City of Tacoma's obligation, under permits issued by the Washington State Department of Ecology (WDOE), to monitor and protect its municipal storm and sanitary sewer systems. A copy of Mr. Norberg's inspection report is enclosed.

As noted in the report, there are some items of concern that need to be addressed. The two cooling towers on the roof of 1949 South State Street discharge blowdown water to the roof and into the roof drains. These drains are connected to the storm drainage system. It is our understanding that these two towers are annually treated with a chemical, the coils pressure washed and the contents of the towers drained to the roof. As required by Tacoma Municipal Code Chapter 12.08.080, only unpolluted water may be discharged to the storm drainage system.

The other item of concern is the catch basins that are located throughout the parking areas. Many of the basins in both the indoor (2121) and outside (both 1949 & 2121) parking areas are in need of cleaning. Catch basins should be cleaned whenever the sump becomes 60 percent full of sediment.

Please have the catch basins cleaned and cease discharging the waste water from the annual cleaning of the cooling towers at 1949 South State Street to the roof drains. This water must be either captured and sent to a licensed treatment facility, or if it meets local limits, it may be discharged to the sanitary sewer system. **Within 30 days of receipt of this letter, please clean the catch basins throughout the two facilities and provide us with a written plan on how the cooling tower water will be handled in the future.**

Please contact Mr. Norberg at (253) 502-2164, or via email at rnorberg@cityoftacoma.org, when each phase of the requested work has been completed or if you have any questions.

Sincerely,

Michael L. Kennedy
Assistant Division Manager
Environmental Compliance Support

MLK:RN:cfp

Enclosures (3)

Cc: NGP Centennial Tacoma, LLC
Jeff Stender, Facilities Coordinator

G:\EnviroCompliance\Norberg\Inspection Reports\2010 Inspections\DSHS 1949 & 2121 S State St Cvr Ltr.doc

Business Inspection ID: 10-BI-0768
Business Partner/SapID: 28354
Business Inspection: DEPARTMENT OF SOCIAL AND HEALTH SERVICES
Business Site Address: 1949 SOUTH STATE ST. Suite: NA
Business Mail Address: TACOMA, WA

Inspection Information

Activity Type	Site Inspection	Activity Date	5/14/2010
Inspector	Rick Norberg	Sample No.	
2nd Inspector	None	Contact	
		Owner	

Collection System Information

Catch Basin	17	Oil/Water Separator	0
Grass Swales	0	SW Management	0
Retention Pond	0	Stormceptor	0
Drywell	0	UG Vault	0
Filter	0	Infiltration	0
Other	1 Grease trap	Shared System	0
<input type="checkbox"/> No Further Action Required		No Treatment	0
<input type="checkbox"/> Non-Domestic Discharge			

Notifications / Actions

<input type="checkbox"/> Notify EPA DOE	<input type="checkbox"/> Enforcement Authority	<input checked="" type="checkbox"/> Photos Taken 5
<input type="checkbox"/> Notify Fire	<input type="checkbox"/> Haz Mat Storage	<input type="checkbox"/> Records Inspection
<input type="checkbox"/> Notify Owner	<input type="checkbox"/> Maintenance Contract	<input type="checkbox"/> Sample Collected
<input type="checkbox"/> Notify Tax & License	<input type="checkbox"/> PreTreatment BMP	<input type="checkbox"/> Sample Split
<input type="checkbox"/> Notify TPCHD	<input type="checkbox"/> Storm BMPs	

Detailed Concerns and Other Information

History Drains to Thea Foss Waterway, OF 230 NAICS: 624190 Other Individual and Family Services
 Contact for DSHS: Jeff Stender, Facilities Coordinator, 253-905-4452 (mobile) Contact for Property:
 Brad McKinley, Sierra Property Management, 425-508-2603

Opening Conference This was a routine, announced inspection of the DSHS site. See the attached copy of my inspection report for full details.

Compliance Concern or Nature of Problem Some of the catch basins in the parking and driveway areas need to be cleaned. The hydromechanical grease interceptor in Gloria's Oasis Cafe had over 4 inches of grease and oil in it and needs to be cleaned. The roof-top cooling towers blowdown to the roof drains. I was also told that these towers are cleaned annually and that the cleaning wastewater is discharged to the same roof drains. Cooling tower blowdown, if it contains any treatment chemicals, and tower cleaning wastewater must be directed to the sanitary sewer. Trash compactor was leaking some juice, but it wasn't getting into the nearby catch basin. This same issue was noted in a September 2007 inspection of this facility. 6/16/10-RN-Through a series of emails I learned from Mr. McKinley that no chemicals are used in the cooling towers during their regular operation. However, a product from CH2O called Clean-N-Flush is used annually to remove scale from the coils in the tower.

Action Required Clean catch basins within 30 days. Clean or repair seal on trash compactor to keep liquids inside and out of storm drainage system. Clean grease trap at Gloria's Oasis Cafe within 30 days. Capture for off-site disposal or route annual cooling tower cleaning waste water to a sewer connection.

Hazardous Materials

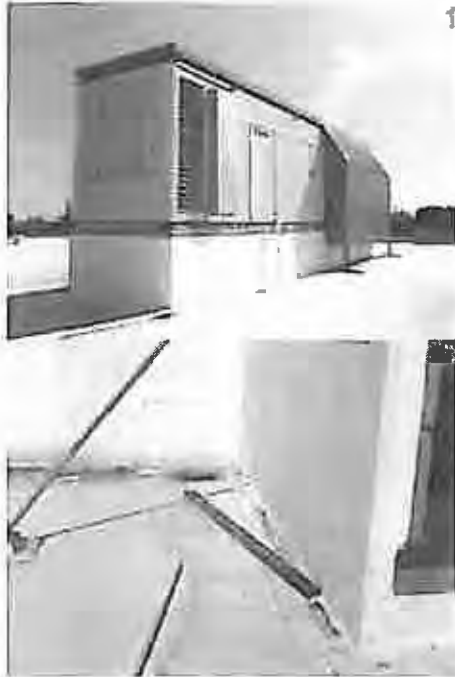
Comments 5/17/10-RN-I sent an email to Gloria Walling, owner of Gloria's Oasis Cafe, to have grease trap cleaned within 30 days (6/17/10) 5/20/10-RN-Received reply email from Mr. McKinley saying they

do not use chemicals in the cooling towers on a regular basis, but the towers are cleaned with a chemical and pressure wash once per year. He promised more details when he returned. 6/4/10-RN-Gloria called to say the grease trap will be cleaned on June 14th, after 2 PM. 6/10/10-RN-Received email from Mr. McKinley saying that "CH2O (Dan Merritt 360 440 8084) applies the cleaning solution for us, then it is left to sit for a few days. TCMS then pressure washes the system with cold water, and it is allowed to flow down the bulking downspouts." CH2O uses their Clean-N-Flush product, which is mixture of potassium hydroxide and phosphonic acid. A 1% solution has a pH between 6.0 - 8.5 units.

Closing Conference 6/17/10-RN-Confirmed that grease trap at Gloria's Cafe has been cleaned.

Follow Up / Re-Inspection Needed?

Completion Date:



Business Inspection ID: 10-BI-0769
Business Partner/SapID: 31755
Business Inspection: DEPARTMENT OF SOCIAL & HEALTH SERVICES
Business Site Address: 2121 S STATE ST Suite: NA
Business Mail Address: TACOMA, WA 98405

Inspection Information

Activity Type	Site Inspection	Activity Date	5/14/2010
Inspector	Rick Norberg	Sample No.	
2nd Inspector	None	Contact	
		Owner	

Collection System Information

Catch Basin	18 B outside, 10 in garage	Oil/Water Separator	0
Grass Swales	0	SW Management	0
Retention Pond	0	Stormcepter	0
Drywell	0	UG Vault	0
Filter	0	Infiltration	0
Other	0	Shared System	0
<input type="checkbox"/> No Further Action Required		No Treatment	0
<input type="checkbox"/> Non-Domestic Discharge			

Notifications / Actions

<input type="checkbox"/> Notify EPA DOE	<input type="checkbox"/> Enforcement Authority	<input checked="" type="checkbox"/> Photos Taken 1
<input type="checkbox"/> Notify Fire	<input type="checkbox"/> Haz Mat Storage	<input type="checkbox"/> Records Inspection
<input type="checkbox"/> Notify Owner	<input type="checkbox"/> Maintenance Contract	<input type="checkbox"/> Sample Collected
<input type="checkbox"/> Notify Tax & License	<input type="checkbox"/> PreTreatment BMP	<input type="checkbox"/> Sample Split
<input type="checkbox"/> Notify TPCHD	<input type="checkbox"/> Storm BMPs	

Detailed Concerns and Other Information

History Drains to Thea Foss Waterway, OF 230 NAICS: 624190 Other Individual and Family Services
 Contact for DSHS: Jeff Slender, Facilities Coordinator, 253-905-4452 (mobile) Contact for Property: Brad McKinley, Sierra Property Management, 425-508-2603

Opening Conference This was a routine, announced, inspection of this facility. This building is used by DSHS to house Child Protective Services and the child support payment section of the department. The building is all offices with an under-building parking garage. The building is electrically heated and is cooled using roof-top closed-loop chillers. The chillers do not blowdown to the roof. There are no sumps or drains in the elevator shafts. The under-building garage has area drains, but I did not find an oil/water separator. I confirmed by dye test that the roof drains from the building discharge into the garage area drains, which are connected to the storm drainage system. Some of the catch basins in the garage and in the outdoor parking areas need to be cleaned.

Compliance Concern or Nature of Problem Catch basins in the garage and in the outdoor parking areas need to be cleaned.

Action Required Clean catch basins in parking garage and outdoor parking areas within 30 days

Hazardous Materials

Comments

Closing Conference

Follow Up / Re-Inspection Needed? Completion Date:



Business Inspection ID: 10-BI-0768
Business Partner/SapID: 28354
Business Inspection: DEPARTMENT OF SOCIAL AND HEALTH SERVICES
Business Site Address: 1949 SOUTH STATE ST. Suite: NA
Business Mail Address: TACOMA, WA

Inspection Information

Activity Type	Site Inspection	Activity Date	5/14/2010
Inspector	Rick Norberg	Sample No.	
2nd Inspector	None	Contact	
		Owner	

Collection System Information

Catch Basin	17	Oil/Water Separator	0
Grass Swales	0	SW Management	0
Retention Pond	0	Stormcepter	0
Drywell	0	UG Vault	0
Filter	0	Infiltration	0
Other	1 Grease trap	Shared System	0
<input type="checkbox"/> No Further Action Required		No Treatment	0
<input type="checkbox"/> Non-Domestic Discharge			

Notifications / Actions

<input type="checkbox"/> Notify EPA DOE	<input type="checkbox"/> Enforcement Authority	<input checked="" type="checkbox"/> Photos Taken 5
<input type="checkbox"/> Notify Fire	<input type="checkbox"/> Haz Mat Storage	<input type="checkbox"/> Records Inspection
<input type="checkbox"/> Notify Owner	<input type="checkbox"/> Maintenance Contract	<input type="checkbox"/> Sample Collected
<input type="checkbox"/> Notify Tax & License	<input type="checkbox"/> PreTreatment BMP	<input type="checkbox"/> Sample Split
<input type="checkbox"/> Notify TPCHD	<input type="checkbox"/> Storm BMPs	

Detailed Concerns and Other Information

History Drains to Thea Foss Waterway, OF 230 NAICS: 624190 Other Individual and Family Services
 Contact for DSHS: Jeff Stendor, Facilities Coordinator, 253-905-4452 (mobile) Contact for Property: Brad McKinley, Sierra Property Management, 425-508-2603

Opening Conference This was a routine, announced inspection of the DSHS site. See the attached copy of my inspection report for full details.

Compliance Concern or Nature of Problem Some of the catch basins in the parking and driveway areas need to be cleaned. The hydromechanical grease interceptor in Gloria's Oasis Cafe had over 4 inches of grease and oil in it and needs to be cleaned. The roof-top cooling towers blowdown to the roof drains. I was also told that these towers are cleaned annually and that the cleaning wastewater is discharged to the same roof drains. Cooling tower blowdown, if it contains any treatment chemicals, and tower cleaning wastewater must be directed to the sanitary sewer. Trash compactor was leaking some juice, but it wasn't getting into the nearby catch basin. This same issue was noted in a September 2007 inspection of this facility. 6/16/10-RN-Through a series of emails I learned from Mr. McKinley that no chemicals are used in the cooling towers during their regular operation. However, a product from CH2O called Clean-N-Flush is used annually to remove scale from the coils in the tower.

Action Required Clean catch basins within 30 days. Clean or repair seal on trash compactor to keep liquids inside and out of storm drainage system. Clean grease trap at Gloria's Oasis Cafe within 30 days. Capture for off site disposal or route annual cooling tower cleaning waste water to a sewer connection.

Hazardous Materials

Comments 5/17/10-RN-I sent an email to Gloria Walling, owner of Gloria's Oasis Cafe, to have grease trap cleaned within 30 days (6/17/10) 5/20/10-RN-Received reply email from Mr. McKinley saying they

City of Tacoma
Wastewater Management Operations Division
INSPECTION REPORT

NAME OF INDUSTRY: Washington State Department of Social and Health Services

DATE/TIME OF VISIT: May 14, 2010 @ 0830 hours

INSPECTOR(S): Norberg

PURPOSE OF INSPECTION: Routine business inspection

SITE ADDRESS: 1949 and 2121 South State Street

MAILING ADDRESS: Brad McKinley, Sierra Property Management, P.O. Box 400, Arlington, WA 98223

CONTACT PERSON/TITLE: Jeff Stender, Facilities Coordinator for the DSHS

INDUSTRY PHONE: Mr. Stender - (253) 983-6063 or (253) 905-4452
Mr. McKinley - (425) 508-2603

TYPE OF BUSINESS: Social Services

NAICS CODE: 624190 Other Individual and Family Services

40 CFR CATEGORY: N/A

DISCHARGE TO STP#: 1 **PROCESS DISCHARGE TO STORM SEWER:** Yes

STORM DRAIN TO WATERWAY: Thea Foss, OF 237 A

PRETREATMENT: None **TYPE:** N/A

ENVIRONMENTAL PERMITS: None

SPILL PLAN REQUIRED: None **SPILL PLAN RECEIVED:** N/A

HAZARDOUS WASTE GENERATOR: N/A

HISTORY: These two buildings were last inspected September of 2007. Liquid coming from the trash compactor at 1949 South State Street was noted as a problem to be corrected. Mr. Stender said that neither building has a back-up generator. Both buildings use hydraulic elevators.

OPENING CONFERENCE: This was an announced inspection. Mr. Stender told me that the outdoor parking areas are hand swept as needed, and that the maintenance of the two buildings is the responsibility of the building owner. The property is managed by Sierra Property Management.

FACILITY INSPECTION:

2121 South State Street: We started the inspection at the 2121 South State Street building. Currently, about 250 employees work here. This building has gas/electric heat and a closed-loop chiller system that is maintained by the property manager. The two chillers are on the roof and it does not appear that there is any blowdown from these units. There are no sumps or drains in the elevator shafts. The building has a parking garage under it that extends out under a plaza on the north side of the building. There are catch basins located throughout the garage. Many of these basins were in need of cleaning. The roof drains discharge into these basins. It was confirmed by dye test that the interior basins are connected to the storm drainage system.

Also seen in the garage was a fairly large collection of new and used paint and office equipment that was being temporarily stored in some of the parking stalls. Mr. Stender said this material was surplus and should be sent out as surplus in a week or two.

1949 South State Street: This building houses 500 to 600 employees and a privately run café called Gloria's Oasis Café. This building is heated by electricity and is cooled using two hybrid cooling towers. These towers cascade water over copper coils and automatically blowdown to the roof and nearby roof drains. Based upon emails received from Mr. Brad McKinley, the property manager, no chemicals are used in the towers during normal operations. However, his service provider, CH2O, adds a chemical called Clean-N-Flush to the towers once a year to remove scale. The chemical mixture is allowed to sit for a few days and another company, TCMS, then pressure washes the system with cold water and the entire contents is discharged to the roof drains.

There are no sumps or drains in the elevator shafts. The hydraulic pumps and reservoirs are in rooms adjacent to the elevator shafts. These rooms do not have any drains or containment.

The café has a hydromechanical grease interceptor that was in need of cleaning. I discussed this with the café owner, Ms Gloria Walling, and requested that it be cleaned within 30 days. Ms. Walling said that the grease interceptor had last been cleaned seven months ago. The hoods are cleaned by RT Hood & Duct Services, (206) 726-0940.

There is a trash compactor located at the loading dock on the south side of the building. I noted some liquid collecting under it. I discussed this with Mr. Stender when I returned to dye test the roof drains at 2121. He told me that his office is responsible for the compactor and that he would speak to café staff about keeping wet waste out of the compactor.

HAZARDOUS MATERIALS STORAGE: None noted.

RECORDS INSPECTION: None inspected.

CLOSING CONFERENCE: I thanked Mr. Stender for his time and cooperation. Because most of the items of concern noted had to do with the building and not with DSHS operations, I will contact the property manager to get them corrected.

SAMPLES: None.

COMPLIANCE CONCERNS: For 1949 S. State St.: Clean the catch basins in the parking and driveway areas around the building. The discharge from the annual cleaning of the cooling towers must either be captured for disposal off-site, or if it meets local discharge limits, may be discharged to the sanitary sewer. The seal on the trash compactor needs to be cleaned or replaced to contain any free liquids that accumulate in the compactor.

For 2121 S. State St.: Clean the catch basins in the parking garage and the outdoor parking areas around the building.

DATE AND INSPECTOR'S SIGNATURE:



Rick Norberg Date

UNITED STATES POSTAL SERVICE



First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

• Sender: Please print your name, address, and ZIP+4 in this box •

City of Tacoma
Environmental Services
326 East D Street
Tacoma WA 98421-1801
Attn: Norberg



SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<p>1 Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired</p> <p>2 Print your name and address on the reverse so that we can return the card to you</p> <p>3 Attach this card to the back of the mailpiece or on the front if space permits</p> <p>4 Article Addressed to</p>	<p>A Signature <input checked="" type="checkbox"/> Agent <input type="checkbox"/> Addressee</p> <p>B Received by (Printed Name) C Date of Delivery</p> <p>D Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below <input type="checkbox"/> No</p>
<p>Brad McKinley RPA Sierra Property Management, LLC P.O. Box 400 Arlington WA 98223</p>	<p>J. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input checked="" type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> COD</p> <p>4 Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>
<p>2 Article Number (Transfer from service label)</p>	<p>7003 2260 0006 6662 5609</p>

PS Form 3811, August 2001

Domestic Return Receipt

102595-02-04-1640



City of Tacoma
Public Works Department

February 12, 2010

Brent Yerton
The News Tribune
1950 South State Street
Tacoma, WA 98405

RE: Infrastructure Mapping and Inspection

Dear Mr. Yerton,

Thank you for the time and cooperation you and your staff extended to Rick Norberg during the recent inspection of your facility and mapping of The News Tribune's storm and sanitary sewer systems. A copy of the sewer system map produced has already been delivered and a copy of the inspection report is enclosed. The stormwater drainage from your facility ultimately reaches the Thea Foss Waterway, an EPA superfund site.

As noted in the inspection report, there are some items that need to be corrected. First, it was confirmed that a least one catch basin in the parking area between the main building and the Cascade Building is connected to the sanitary sewer that runs through this area. As was discussed with Mr. Norberg, you believe that there may be at least one other catch basin connected to that sewer line. Please investigate and re-route any catch basins connected to the sanitary sewer **within 90 days of the date of this letter.**

Second, it was discovered in a conversation with one of your employees that the cooling tower is drained to the roof during its annual maintenance. This practice must stop and that water must go to the sanitary sewer. Please remove or permanently cap the line that allows discharge to the roof **within 30 days of the date of this letter.**

Third, it was noted during the inspection that waste antifreeze generated in the vehicle maintenance shop is stored without containment. Please provide secondary containment for any drums of new or used antifreeze **with 30 days of the date of this letter.**

Fourth, as we have shared with your company in the past, the fuel island should be protected with a drain that flows to an oil water separator that is connected to the sanitary sewer.

The News Tribune
Infrastructure Mapping and Inspection
February 12, 2009
Page 2

Lastly, it is highly recommended that you clean the two drywells that take roof and surface water run-off at the Cascade Building. There was approximately 12 inches of sediment in the drywell located near the northeast corner of the building and there was still a pond of water around it after a short period of dry weather.

If you have any questions about the items that need correction or if you note any inaccuracies in the inspection report please contact Rick Norberg at (253) 502-2164.

Sincerely,



Michael L. Kennedy
Assistant Division Manager
Environmental Compliance Support

mlk:m:cfp

Enclosure: Inspection report

By Certified and First Class Mail: 7003 2260 0006 6662 9102

Cc: Nannette Brooks, WDOE

File: G:\EnviroCompliance\Norberg\Inspection Reports\2010 Inspections\The News Tribune Insp Cover Ltr.doc

**CITY OF TACOMA
SCIENCE & ENGINEERING DIVISION**

INSPECTION REPORT

Purpose of Inspection: Routine site inspection

Date/Time of Visit: January 11, 15, and February 4, 2010

Inspectors: Norberg

Name of Industry: **The News Tribune**
Site Address: 1950 South State Street, Tacoma, WA 98405

Mailing Address: Same

Contact Person, Title: Brent Yerton, Facilities & Operations Manager
Phone: (253) 597-8790

Type of Business: Daily Newspaper

NAICS Code(s): 511110 Newspaper Publishers

40 CFR Category: N/A

Discharge to STP#: 1

Pretreatment: Yes, but zero discharge

Type: Electrostatic silver recovery filters and evaporation

Industrial Wastewater
Discharge Permit No.: N/A

Process Discharge to
Storm Drainage System: No

Direct: Indirect: Storm Drainage to: Thea Foss Waterway

	Yes	No
Spill Plan Required	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Spill Plan Received:	Reviewed on-site	

History: The News Tribune (TNT) facility occupies three parcels addressed as 1950 and 2316 S. State and 2302 S. Steele Streets. The inspection of this facility was spread over three separate days, which was initiated by the removal of an underground waste oil tank in the vehicle maintenance shop. The City was contacted by the Tacoma/Pierce County Health Department because the dirt being removed was contaminated with sewage as well as oil. It is supposed that a past sewer backup came up through the tank vent line, which was connected to the sewer through the indoor oil/water separator. A break in the line to connecting to the tank allowed the sewage to enter the ground around the tank.

Over the course of two days in January the City's Inflow & Infiltration (I & I) crew mapped the private storm and sanitary sewer systems on the various properties. They verified that at least one, and possibly up to three, catch basins are connected to the sanitary sewer. The two oil/water separators and the grease interceptor were inspected during this time.

This inspector then set up an appointment to inspect the interior of the various buildings owned and operated by the TNT.

Opening Conference: This was an announced inspection. I met with Mr. Brent Yerton in his office and discussed what I need to see and why I needed to see it.

Mr. Yerton told me that the storm system was last cleaned about two years ago. He said they plan to clean it every one to three years. Except for the dry wells located at 2316 S. State Street, none of the catch basins I checked had more than a couple of inches of sediment in them.

We reviewed the map of the private storm and sanitary systems that the I & I crew put together. Mr. Yerton said that he believed that a second catch basin that was believed to have a blocked discharge pipe was probably connected to the sanitary sewer. I told him that I would be sending him a copy of my inspection report and would include the re-direction of the catch basins as items to be corrected.

Mr. Yerton showed me the disaster plan that employees are asked to read when they are hired. He also said that he meets with his maintenance crew once a month to discuss if there have been any spills and what they can do to minimize a spill from happening again.

Mr. Yerton told me that they have greatly reduced the amount of hazardous waste they generate. Last year they only had one shipment of fixer sludge and spent flammable solvents (blanket wash) to Clean Harbors. No shipments have yet occurred this year.

TNT has a cooling tower and two chillers to provide air conditioning to most of the main building. We were told by a maintenance worker that the tower is cleaned once per year in the spring by draining the contents of the tower to the roof and letting the water evaporate.

TNT operates 24 hours a day, 7 days a week, and currently employs about 300 people.

Facility Inspection:

Plate Making Area: TNT still uses photographic film to make their printing plates. Mr. Yerton told me that they hope to purchase and install direct-to-plate equipment within five years. This would eliminate the need for the photodevelopers and the resulting fixer waste that is generated. Until that time, an imager is used to expose a sheet of film with layout. The exposed film is developed with one of three automatic photodevelopers. Used developer is discharged to the sewer without treatment. Used fixer is routed through Metafix silver recovery unit and then to a collection barrel downstairs. The contents of the barrel are further reduced in their evaporator and the sludge is sent off-site as hazardous waste. New fixer and developer are mixed from a dry powder by TNT personnel on-site.

The developed film is then used to make a plate, which is used in one their 18 presses to print the paper. They use Fujifilm FN-6 to coat the plate and Fujifilm DN-5M to remove the unexposed coating from the plate.

Press Area: The finished plates are put on rollers in the presses. The digitally controlled printing presses use soy-based colored inks and a petroleum-based black ink to print the paper. Page packs meter the ink onto the rolls. Under each page pack is a tray to capture fugitive ink. If the ink in the trays is not too contaminated with paper fibers, it is recycled by mixing it with new black ink. Ink that is too contaminated to reuse is collected in a barrel and shipped out as hazardous waste.

Scrap paper is used under and around each of the presses to capture drips of ink, lubricating oil, and blanket wash. The paper is put into solid waste.

The rollers in the printing presses are primarily cleaned using solvent-based blanket wash. Drums of blanket wash are kept in flammable locker. Kerosene (diesel) is also used on occasion.

For some cleaning jobs they use a water soluble detergent that is stored on a barrel cart with a drip pan.

There is one parts washer in this area that uses blanket wash for its solvent.

A water-based solution called Advance Edition 2000A is automatically mixed and dispensed to the presses from the Ryco line. The solution is used as a fountain wash on the presses to prevent the paper from sticking to the rollers. Excess solution is discharged to the sanitary sewer.

Uniforms and shop towels used by the press and maintenance staff are laundered by Aramark.

Ink Storage Areas: Black ink is pumped into one of two 4,000-gallon storage tanks. The tanks are in a blind sump within an enclosed room. The tanks are filled via a pipe

that runs out to the loading dock area on the east side of the building. The floor of the room slopes to the sump. Drums and five-gallon buckets of lubricating oil are also stored in this room.

Colored ink is stored in a separate room. On the day of my visit there were six tanks – two of each color (yellow, blue, red). Each skid-mounted tank holds approximately 300 gallons (2575 pounds) of ink. The ink is pumped upstairs to a filling station where smaller containers are filled and connected to the presses. There is also a 2,000-gallon black ink overfill tank in this room. There is a blind sump (trench drain) at one end of the room where the transfer pumps are located. There is also a great number of small containers of specialty colors stored along one wall. Mr. Yerton told me these specialty colors are no longer used and are slowly being recycled into the black ink.

Compressor Area: On the same floor as the ink storage rooms is a fenced-in storage area that houses two air compressors used for the presses. The air compressors blow down to a blind sump. The sumps appeared to have not been cleaned for quite awhile. Saturated oil absorbent pads and rolls were seen floating in the sump.

Hazardous Waste Storage Area: This area is protected by a concrete berm and blind sump. It holds the Arkay evaporator, which is used to concentrate the fixer waste after it has been through the Metafix silver recovery units. The evaporator sits in a containment pan. There is also a flammables locker in this area that holds a drum of new blanket wash.

Boiler & Chiller Room: TNT has three boilers. One is for their recirculating hot water system and the other two recirculate a glycol mixture for heat. The boilers are occasionally blown down to a drain in that room.

Adjacent to the boiler room is the mechanical room that houses the two chillers used to provide cooling to the building. The chillers use a freon-like gas as a refrigerant.

There is also a chemical dosing station for the roof-top cooling tower that is located in this room. The dosing station is in a small containment pan and is managed by Chem-Aqua.

Maintenance shops: TNT has two maintenance shops. The small one is rarely used. The large shop has one parts washer in it.

Roof-top Cooling Tower: The cooling tower is drained for cleaning every spring. I was told that it is drained onto the roof and left to evaporate, but there are two roof drains located some distance away. It is not likely that none of the water makes it to one of those drains. Even if the water were to evaporate the next time it rains that material would be washed down those same roof drains to the storm drainage system. Blowdown during normal operations is directed to the sanitary sewer. I informed Mr. Yerton that discharging the cooling tower to the roof must cease and that this water must be directed to the sanitary sewer. Mr. Yerton said he would see that this practice was discontinued. He also told me that they have a submeter that measures the incoming water and that they call in the meter readings to the City every month.

Vehicle Maintenance Shop & Fuel Island: The fuel island is located at the east end of the vehicle maintenance facility. The fuel is stored in an underground tank. The fuel pad area drains to the parking lot and, therefore, the storm drainage system. The pad is not protected by draining to an oil/water separator and then to the sanitary sewer. Mr. Yerton did show me that the spill kit at the fuel island now has two mats that can be placed over nearby catch basins in case of a spill. He also said that he would prefer to pull the underground tank because of his experience with the leaking waste oil tank in the vehicle maintenance shop.

The excavation for the removal of the waste oil tank has expanded to the point that they will have to remove a portion of the concrete block wall in order to excavate the remaining contamination. They also plan on replacing the interior oil/water separator with a modern unit. It will still be used to treat any discharges from the floor drains in the maintenance shop.

They are also in the process of using up the new oil in two 250-gallon storage tanks that are kept inside the building. Once the tanks are empty they will be removed and replaced with drums on containment pallets.

Waste antifreeze is stored in drums in the back part of the shop, but these drums need to be kept over containment.

There is one parts washer in this shop.

Along the south side of this building is a wash pad with oil/water separator that is connected to the sanitary sewer. Apparently, the wash pad is only used occasionally. The larger trucks are washed by a mobile washer. Mr. Yerton requested a list of the currently approved mobile washers.

Back-up Generators: TNT has two back-up generators. One is located on the west side of the main building and is a package unit which sits on top of its diesel fuel tank. It is on a paved peninsula, surrounded by a curb that projects out into a row of parking stalls. There are a couple of bollards protecting the outboard end.

The second generator is located behind (west) of the Cascade Building (2316 S. State Street). There are actually two small generators located inside a concrete building. These generators are fueled by propane. The propane tank is on a raised pad inside a locked fence.

Paper Storage (Cascade Building): The Cascade Building is located just to the south of the main building and is addressed as 2316 South State Street. The front office areas are rented out to other tenants. The back warehouse area is used by TNT for bulk dry storage of the rolls of paper used by the printing presses. The warehouse area has trench drains in the floor that run from wall to wall and are presumed to be connected to the sanitary sewer. The parking areas on the east and south sides of this building flow to two drywells. Unfortunately, the roof drains along these sides also drain to the drywells. Mr. Yerton said it was common for small lakes to form around these drywells.

during heavy or extended periods of rain. I inspected the drywell on the east side and it had sediment almost up to the grate.

Hazardous Materials Storage: Drums of blanket wash are stored in flammable storage lockers around the facility. Bulk quantities of ink are stored in tanks in areas that provide containment.

Records Inspection: TNT's Disaster Plan and hazardous waste manifests were reviewed.

Samples: No samples were taken.

Closing Conference: I told Mr. Yerton I would be sending him a copy of my inspection report and would be requesting that the catch basins connected to the sanitary sewer be re-routed to the storm drainage system.

We also discussed the proper disposal of the cooling tower water. Mr. Yerton said he would tell his men to stop discharging to the roof.

Mr. Yerton requested that I email him a list of the currently approved mobile washers.

Compliance Concerns:

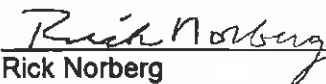
One or more catch basins were found connected to the sanitary sewer. These must be re-directed to the storm drainage system.

Discharging cooling tower to roof must cease. This discharge must go to the sanitary sewer.

New and waste antifreeze being stored in the vehicle maintenance shop needs to be in or on containment.

The drywells in parking lot of Cascade Building are quite full of sediment and should be cleaned.

The covered fuel island at the maintenance shop should be bermed or sloped so that it flows to a drain that is connected to an oil/water separator and then to the sanitary sewer.

 2-11-2010
Rick Norberg Date
Source Control Rep



City of Tacoma

Science & Engineering Division
Environmental Compliance

April 5, 2010

Brian Jefferson
Good Deed Developments LLC.
P.O. Box 901
Gig Harbor, WA 98335

Hand Delivered
[Signature]
Received by _____ Date 4/5/10

Subject: Onsite Surface Water Management at South 43rd Street and South 45th Street,
Tacoma, WA 98418

Dear Mr. Jefferson:

City of Tacoma Environmental Services/Compliance Support is concerned that adequate measures have not been taken to address issues documented in the **Warning Letter** that was hand-delivered to you on February 26, 2010.

Specifically, the onsite stormwater management facility has not been repaired in accordance with the conditions of the revised plan that was agreed upon by Good Deed Developments and Environmental Services. The following actions must be taken in accordance with the City of Tacoma's Surface Water Management Manual, and the necessary onsite stormwater management requirements in order to obtain Final Occupancy for the project:

- Soils in all disturbed areas must be re-amended to achieve a depth of no less than 8 inches, with an additional 4 inches of native soils scarified below the amended soils.
- Confirm gravel is level on dispersion system.
- Splash blocks must be installed correctly.
- Vegetation must be adequately established.
- Perform a dispersion system test, with Environmental Services staff in attendance.

Failure to adequately address the concerns of the February 26, 2010 **Warning Letter** with City of Tacoma Environmental Services may result in escalating enforcement actions, including but not limited to, Notices of Violation with Civil Penalties of up to \$5,000 per day for each violation of TMC 12.08.

Please contact Mike Rose of Environmental Services at (253) 502-2264 for information regarding the implementation of these required actions. If you have any questions about this letter or need more information please contact Kurt Fremont of Compliance Support at (253) 502-2238.

Sincerely,

Michael L. Kennedy
Assistant Division Manager
Environmental Compliance Support

mlk:kf:cfp

Enclosure: Warning Letter

cc:	Kurt Fremont	City of Tacoma
	Pete Rambow	City of Tacoma
	Susan Coffman	City of Tacoma
	Mike Rose	City of Tacoma

G:\EnviroCompliance\Fremont\Outgoing Correspondence\Good Deed Warning\2ndLetter Good Deeds Developments.docx



February 26, 2010

Brian Jefferson
Good Deed Developments LLC
P.O. Box 901
Gig Harbor, WA 98335

Hand-Delivered

Received by _____ Date _____

Subject: **Warning Letter – Polluted Stormwater Discharge and Improper Onsite BMP Surface Water Management at South 43rd Street and South 45th Street, Tacoma, WA 98418**

Dear Mr. Jefferson,

City of Tacoma Environmental Services responded to a complaint filed on January 14, 2010, regarding a turbid discharge from the Good Deed Developments construction project to the City of Tacoma's stormwater system located at:

216 South 43rd Street Parcel #7470024460 Permit #40000137273
222 South 43rd Street Parcel #7470024590 Permit #40000137274
217 South 43rd Street Parcel #7470024540 Permit #40000138795

Tacoma Municipal Code (TMC) 12.08 prohibits the discharge of pollutants, including sediments, into the City system. TMC 12.08 also requires that construction projects implement Best Management Practices (BMPs) in accordance with the requirements of the City of Tacoma's 2008 Surface Water Management Manual (SWMM).

City of Tacoma Environmental Services/Compliance Support and Building and Land Use representatives have, on multiple documented occasions, requested that Good Deed Developments implement appropriate BMPs to prevent the polluted discharge associated with construction activity from impacting the City's stormwater system.

At this time, City of Tacoma Environmental Services/Compliance Support has documented six (6) individual violations of TMC 12.08 as a result of the construction activities at the Good Deed Developments project, including but not limited to the polluted discharges to the City storm system, and the failure to appropriately implement and maintain BMPs. Good Deed Developments, as the primary operator for the project, must make appropriate and timely corrections to the onsite BMPs to prevent the continuation of these TMC 12.08 violations.

Good Deed Developments LLC

Warning Letter
Page 2
February 26, 2010

City of Tacoma Environmental Services has also noted that construction activities have exceeded the scope of the approved permits and potentially affected the viability of the proposed on-site stormwater management facilities. Areas of the site that were indicated on the plan set to be left in their vegetated state were disturbed, disrupting the downstream flowpath of the proposed dispersion trenches. The currently approved dispersion trenches will no longer function as intended due to the disruption in the downstream flow path.

The applicant shall submit a revised site plan and stormwater site plan for review and approval by Environmental Services. The revised plan shall show all areas disturbed and outline a proposal to provide on-site management of stormwater. It may still be possible to implement the proposed dispersion trenches if additional measures are taken to create a downstream flowpath. Re-establishment of the flow path utilizing replaced vegetation and restoration of the underlying soil may be allowed with the use of BMP L613 Post-Construction Soil Quality and Depth to restore the underlying soils.

Please refer to The Surface Water Management Manual on-site management sections in Volume 3 Section 2.1 and Volume 1 Section 3.4.5 for guidance on requirements and possible on-site management techniques. Information on BMP L613 is available in the SWMM Volume 6 Section 2.2.1.4.


The revised site plan and revised stormwater site plan shall be submitted to the Building and Land Use Services Department with the associated building permit referenced within fourteen (14) calendar days of receipt of this letter, or prior to the installation of permanent stormwater facilities. Please contact Mike Rose of Environmental Services at (253) 502-2264 to discuss requirements for the site.

Failure to adequately implement appropriate stormwater Best Management Practices in accordance with the City of Tacoma Surface Water Management Manual and Conditions of Approval for building permits is a violation of TMC 12.08.

Failure to adequately address the concerns of this **Warning Letter** with City of Tacoma Environmental Services may result in escalating enforcement actions, including but not limited to, Notices of Violation with Civil Penalties of up to \$5,000 per day for each violation of TMC 12.08.

If you have any questions about this **Warning Letter**, or need more information please contact Environmental Services/Compliance Support Senior Environmental Specialist, Kurt Fremont at: kfremont@cityoftacoma.org or (253) 502-2238.

Sincerely,



FOR M. KENNEDY

Michael L. Kennedy
Assistant Division Manager
Environmental Compliance Support

mlk:kf:cfp

cc: Kurt Fremont City of Tacoma
Pete Rambow City of Tacoma
Susan Coffman City of Tacoma
Vincent McGowan Washington State Department of Ecology

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OF237B

A.4 OUTFALL 237B

A.4.1 Outfall 237B Drainage Basin

Basin 237B encompasses 1,821 acres of south and east Tacoma. This area drains to Thea Foss Waterway through a 96-inch outfall pipe located in the block of E. Dock Street at the head of the waterway. The general basin boundaries are East 23rd Street and East Dock Street to the north, East 84th Street to the south, South Fawcett Avenue to the west, and McKinley Avenue to the east. Most of the storm drainage is channeled to the main trunk line, which flows south to north along East "D" Street.

Over 78 percent of the land use in Basin 237B is residential and five percent is multi-family (see **Figure 1-3**). Commercial land use accounts for less than 10 percent in this basin. Commercial areas are mostly linear and spread out in strips along Pacific Avenue and McKinley Avenue with some areas around I-5 to the Thea Foss Waterway. The commercial area also includes 67 percent of the Tacoma Dome drainage. Industrial land use accounts for only one percent in this basin. Freeway right-of-way makes up a small percent of this basin, which includes a portion of the I-5: I-705: Highway 7 interchange and Highway 7. Once as-builts are available, this may increase slightly with the 2005 to 2011 expansions and HOV lanes on I-5. Streets, parks, and open or undeveloped property account for the remaining land uses.

Baseflow from OF237B is continuous from former creeks that were piped. The flows originate in two major areas: seeps from the blueberry fields on 72nd and along the railroad tracks by Highway 7, and from an artesian well on South Tacoma Way in Gallagher's Gulch that discharges into the old 237A pipe which is 30 feet deep and connects to 237B at Tacoma's Dock Street yard (see Appendix B, **Figure B-2**). The baseflow for OF237B is approximately 4.3 cubic feet per second (Tacoma 2008a). In 2011, the artesian well baseflow in the old 237A pipe will be rerouted from 237B to 237A during construction of the Sounder corridor. The baseflow rate in OF237B should decrease after construction of the new pipe is complete.

As part of the BNSF railroad realignment project, OF237B was reconstructed in July-September 2005 including a new manhole structure downstream of the stormwater and FD1 sampling location and 60 feet of new concrete pipe to a new extended outfall pipe. FD1 and the whole-water monitoring station remained at the same location since that location captures contributions from the entire basin.

A.4.2 2002-2010 Source Control Activities

Since 2002, significant work has been accomplished in Basin 237B including intense business inspections, targeted line cleaning, and identification and removal of a point source (see **Table 2-1**). A discussion of specific activities and any supporting chemistry data are provided in the following paragraphs.

Summary of Actions. Source control activities completed through 2010 are listed in **Table 2-1**. From August 2001 through 2010, approximately 31 actions have occurred within Basin 237B. The types of actions taken in Basin 237B are as follows:

Action	Thea Foss	230	235	237A	237B	243	245	254
Construction	60	23	14	13	3	2	--	5
Inspection ¹	76	12	12	21	7	5	5	14
Facilities	43	6	7	12	7	3	3	5
Maintenance	37	10	7	3	1	4	6	6
Point sources	39	4	3	14	10	--	2	6
UST	19	7	2	3	2	2	3	--
Cleanup actions	17	2	2	4	--	5	2	2
Spill ¹	17	1	--	5	1	3	5	2
Fines ¹	4	--	--	1	--	--	2	1
Education	5	4	1	--	--	--	--	--
Total	355	69	48	76	31	24	28	41

¹ The number reported includes notable actions only. Number of all inspections and spills are provided in Section 2.2.2.

By the end of 2010, 100 percent of businesses and multi-family were inspected in this drainage basin. As part of the 2010 City-wide business inspections program, an additional 45 business inspections were conducted in Basin 237B. These business inspections, through education and implementation of nonstructural BMPs, help prevent materials from coming into contact with stormwater and to promote activities that reduce pollutants in stormwater.

Stormwater treatment devices currently in place also remove solids and the associated particulate-bound chemicals from stormwater. The locations of private onsite stormwater treatment devices in Basin 237B are shown on **Figure A-1**. In 2010, media filter and detention BMPs were installed on five sites in this drainage basin (see **Table A-1**). Tacoma is currently updating the list of private onsite stormwater treatment devices and our BMP inspection program (which includes new BMP inspection signoffs and periodic maintenance inspections). This program will improve the effectiveness of these devices through initial inspections, training on operation and maintenance, and periodic follow-up inspections. With future redevelopment in Basin 237B, more of these onsite treatment systems will be installed and over time decrease the solids load and the associated particulate-bound chemical load to the waterway.

FD31 PAH Investigation. HPAHs were found in baseflow in Water Year 2004 (see **Figure G-39A**). As shown in **Figure 2-1b**, FD31 PAH concentrations in 2003 were yellow (medium in comparison with all sites). In 2004-2005, source control inspectors located two sources for PAHs in the FD31 branch of the 237B drainage: an existing 1950s underground storage tank (UST) for heating fuels at Tacoma Public Schools Willard Staff School; and closure of a neighborhood fueling station. The City cleaned and TVed the FD31 branch as part of the PAH source tracing investigation. Source control inspectors worked with the school district's maintenance staff on proper BMPs for the site.

Because of these efforts, PAH concentrations decreased in FD31 and FD1 which is downstream of FD31 (see **Figure 2-1b**). Sediment trap chemistry in **Figure 5-1d** also shows a decrease in TPH and PAHs during this period. However, PAH concentrations at FD31 have increased starting in 2007 to 2010 to concentrations of concern [see **Figure 2-1b**, FD31 2008 and 2009 yellow (medium in comparison with all sites) and FD31 2010 red (high in comparison with all sites) and see **Figure A-5b**]. It is recommended that FD31 branch, the school and the site of the neighborhood fueling station be revisited as possible sources of PAHs and TPHs.

PCB Source Tracing in FD34 and FD35. In 2010, PCBs were once again detected at FD35 (850 ug/kg) and FD34 (490 ug/kg). PCBs were also found in 2005 at FD35 (5,200 ug/kg) and

FD34 (2,600 ug/kg) and in 2007 at FD35 (210 ug/kg) (see **Figure A-5a**). The SSPM concentrations indicate that there may be a source(s) of PCBs in the 237B Basin above and beyond those found throughout the Thea Foss Watershed as shown as red and yellow in **Figure 2-1d**. Investigations to date have not located a possible source of PCBs. It is recommended to review activities in FD34 and FD35 branches for possible sources of PCBs. This may include other source tracing techniques. Source control in the areas draining to FD35 and FD34 should be of a higher priority for PCBs.

Water Quality Improvements. TSS, metals (lead and zinc), PAHs and DEHP concentrations in stormwater have shown a statistically significant improvement from Water Year 2002 through 2010 (see **Figures 3-6a to 3-6c, 3-6e and 3-6h**). There is an estimated 40-57 percent reduction for TSS, metals and DEHP in 10 years (see **Table 3-8**). PAHs showed an 81 and 92 percent reduction in 10 years for phenanthrene and pyrene, respectively. This improvement is believed to result from the culmination of all source control activities within the basin, business and multifamily inspections, public education, stormwater treatment devices, etc.

A.4.3 Outfall 237B Water and SSPM Quality

The following paragraphs summarize 2001-2010 monitoring results for Basin 237B. Annual and seasonal data for baseflow, stormwater and SSPM for some of the COCs and other parameters is used to identify ongoing COCs and their pathway (water, SSPM, seasonality, etc.) and to narrow where to look for sources. The following paragraphs discuss how and where COCs in Basin 237B are different than other Thea Foss drainage basins, and where subsequent source control activities may be focused.

TSS and Metals. Storm drains 237A and 237B, by far the largest of the base flow discharges, exhibit the lowest concentrations of TSS and metals, compared to the smaller drains 230, 235, 243, 245, and 254 (see **Figures F-1 to F-3, F-11 to F-13, F-21 to F-23, and F-31 to F-33**). This may be caused by significant contributions from inflowing surface water (creeks) and groundwater (springs) to the base flow in these two drainages. As shown in **Table 3-4A**, OF237B (-5) exhibited consistently lower TSS, total lead, and total zinc concentrations in baseflow compared to the other outfalls. The number of statistically significant differences is considerably lower when only the last two years of monitoring data are evaluated (see **Table 3-4B**). Using this more limited data set, OF237B still exhibit lower than average concentrations of TSS, lead and zinc (-2, -3, and -3, respectively) in baseflow.

As shown in **Figures 3-6a and 3-6b**, TSS, lead and zinc concentrations show a statistically significant improvement in stormwater quality from 2001 to present. The best-fit regression equations result in an estimated 40 to 44 percent reductions, in TSS, lead and zinc in OF237B in a 10 year period (see **Table 3-8**). Zinc concentrations in OF237B (-6) are lower than all other outfalls and lead concentrations (-4) were depleted in OF237B in stormwater (see **Table 3-5A**). When only the last year of monitoring data is evaluated, OF237B is slightly depleted in metals (-2 to -3) (see **Table 3-5B**).

As shown in **Table 3-6**, SSPM in OF237B are relatively depleted (-2) in metals (see **Figures F-41 to F-43 and F-53 to F-55**). Within Basin 237B, mercury was detected at higher concentrations at FD33, FD34, and FD38 (0.2-0.7 mg/kg) prior to 2007 (see **Figure A-5a**). Since 2007, mercury was detected at lower concentrations at FD34, FD31, and FD35 (0.1-0.2 mg/kg). As shown in **Figure 2-1a**, these mercury concentrations are similar to mercury concentrations throughout the Thea Foss watershed except for FD34 which is yellow. This indicates additional source control in this area is a lower priority for mercury.

PAHs. The mean concentrations and interquartile ranges of PAHs in OF237B are lower than all other drains, and base flow quality in this drain is generally characterized by fewer extreme values (see **Figures F-24A to F-29A and F-34A to F-39A**). Base flow in OF237B exhibited consistently lower concentrations of phenanthrene (-3) and pyrene (-5) compared to the other outfalls (see **Table 3-4A**). As shown in **Table 3-5A**, stormwater in OF237B is somewhat depleted in phenanthrene (-2) and pyrene (-2). The number of statistically significant differences is considerably lower when only the last two years of monitoring data are evaluated (see **Table 3-5B**). Using this more limited data set, OF237B still exhibits lower than average concentrations of phenanthrene (-1) and pyrene (-2).

HPAHs were found in baseflow in Water Year 2004 (see **Figures G-25A to G-27, G-29A, G-35A to G-37A and G-39A**). HPAHs concentrations in baseflow for the remaining years were largely undetected. This indicates that a source of HPAHs in Water Year 2004 has since been controlled.

As shown in **Figure 2-1b**, PAHs in SSPM at OF237B exhibit some of the lowest concentrations when compared to the other outfalls, except at FD31. The 2003 PAH concentrations in Basin 237B were greater than 250,000 ug/kg at FD31 and greater than 100,000 ug/kg at FD36 which are also greater than any of the other locations in 237B (see **Figure A-5b**). In 2005-2006, the PAHs concentrations showed a significant decrease of 15,000 and 20,000 ug/kg in response to control of several sources (see Section A.4.2). However, in 2008-2010, the PAHs concentration at FD31 increased to 460,000 ug/kg. As shown in **Figure 2-1b**, the total PAHs concentrations at this location are some of the highest concentrations found in Thea Foss Watershed. This indicates there may be a new source(s) of PAHs in this subdrainage or the source(s) were only temporarily reduced at FD31.

DEHP. The mean concentrations and interquartile ranges of DEHP in OF 237B are lower than all other drains, and base flow quality in this drain is generally characterized by fewer extreme values (see **Figures F-30A and F-40A**). DEHP (-2 for OF237B) and total phthalate (-3 for OF237B) concentrations in SSPM are fairly ubiquitous and consistent throughout the various drainages; few or no statistically significant differences were identified (see **Table 3-6 and Figures F-35, F-37, F-47, and F-49**). As shown in **Figure 3-6h**, DEHP concentrations show a statistically significant improvement in stormwater quality from 2001 to present. The best-fit regression equations result in an estimated 57 percent reduction in a 10 year period (see **Table 3-8**).

In 2003 and 2005, the total phthalate concentrations at upline sediment trap locations FD38 and FD36 were greater than 50,000 ug/kg for those years (see **Figures 2-1c and A-5b**). In 2007-2008, the highest phthalate concentrations are measured at FD31 with DEHP concentrations of 65,000 and 33,000 ug/kg, respectively. Since 2009, phthalate concentrations appear to be fairly ubiquitous and additional source control for phthalates in Basin 237B would be a lower priority.

PCBs. When compared to the other outfalls, the highest PCB concentrations detected to date, 5,200 and 2,600 ug/kg, were found at FD35 and FD34, respectively (see **Figures 2-1d and A-5a**). The FD35 concentration was reduced to 210 ug/kg in 2007 (medium level in comparison the Thea Foss Basin). In 2010, PCBs were once again detected at at FD35 (850 ug/kg) and FD34 (490 ug/kg). The SSPM concentrations indicate that there may be a source(s) of PCBs in the 237B Basin above and beyond those found throughout the Thea Foss Watershed as shown as red and yellow in **Figure 2-1d**. Source control in the areas draining to FD35 and FD34 should be of a higher priority for PCBs.

A.4.4 Basin 237B Conclusions and Recommendations

OF237B exhibits the best overall baseflow and stormwater quality with some of the lowest median concentrations for the COCs in baseflow, stormwater and SSPM. TSS, metals and DEHP concentrations in stormwater have shown a statistically significant improvement from Water Year 2002 through 2010. This improvement is believed to result from the culmination of all source control activities within the basin, business and multi-family inspections, public education, stormwater treatment devices, etc.

Three COC do remain of concern in the basin. TPH and PAH concentrations decreased at FD31 and FD1 resulting from the removal two sources in the area. However, PAH concentrations in 2007 to 2010 at FD31 are once again at concentrations of concern. PCBs concentrations at FD35 and FD34 are once again at concentrations of concern. Mercury concentrations in SSPM indicate that there may be a source(s) in the 237B Basin, however, these are similar to those found throughout the Thea Foss Watershed.

In 2011, it is recommended to:

- Reinspect the FD31 branch, the Willard Staff School and the site of the neighborhood fueling station as possible sources of PAHs and TPHs.
- Reinspect the FD35 and FD34 branches, review activities in these areas of concern including the use of other source tracing techniques.
- Review 2011 SPMM Mercury data and if needed review activities in these areas of concern including the use of other source tracing techniques.

If needed, the City will use the screening methods for source tracing of PCBs. The screening method will provide data of gross magnitude only. This will be solely used for source tracing and, if necessary, standard EPA analytical laboratory methods will be used for follow-up quantification.

Figure A-5a
 Analysis of Monitoring Trends in Storm Sediment
 OF-237B

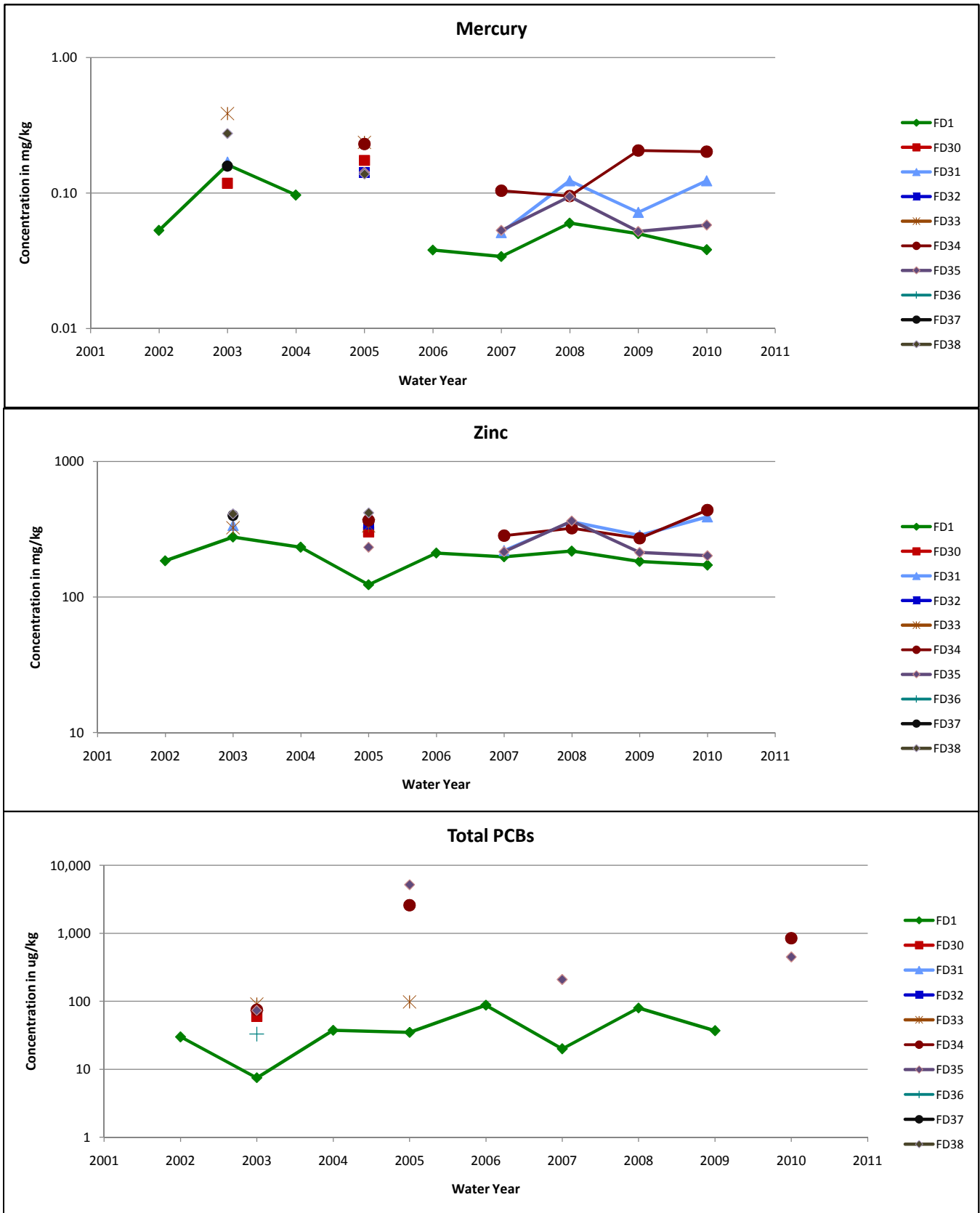
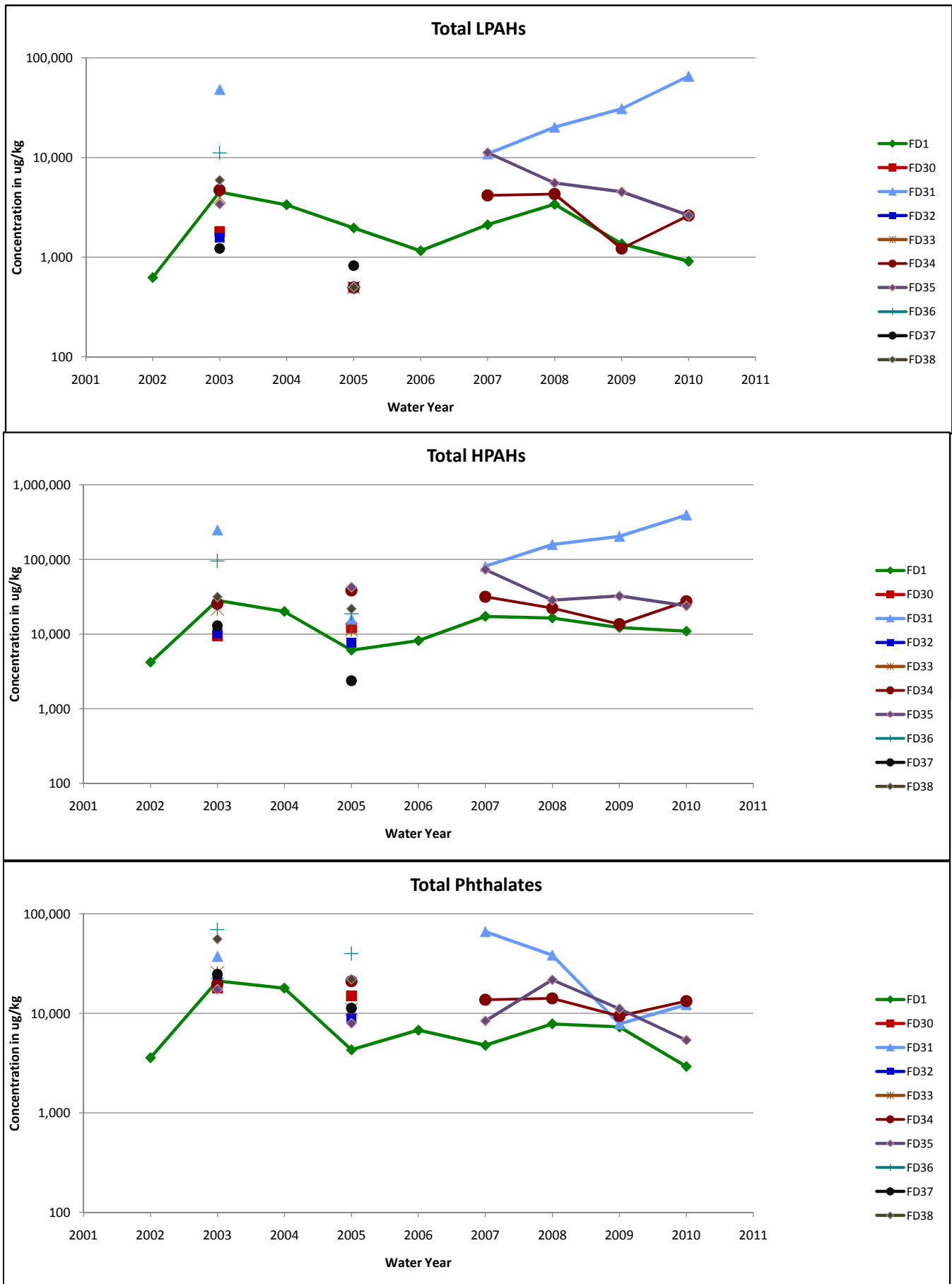


Figure A-5b
 Analysis of Monitoring Trends in Storm Sediment
 OF-237B



Foundation laid for Tacoma's LeMay car museum

Dome: Giant dirt pile from LeMay construction should be gone by winter

DANNY SERNA AND MIKE ARCHBOLD; STAFF WRITERS

Last updated: July 31st, 2010 06:26 AM (PDT)

When Lady Gaga comes to the Tacoma Dome next month, she'll be met by adoring fans, glitter and a heaping mound of dirt.

Construction on the LeMay car museum adjacent to the Dome began last month, and excavation work on the 6.5-acre site has created a 27,000-cubic-yard pile of silty glacial till in the parking lot across the street.

The deal struck between LeMay leaders and the city means the Dome will lose just over one-third of its parking, even after the pile of dirt is gone.

For such a large urban venue, losing that much parking requires significant planning, said Mike Combs, the director of the Dome and other public facilities for the city.

And given the diversity of events held there, it's tough to develop a universal parking plan. After all, night events, such as the Aug. 21 Lady Gaga concert, will pose different problems than all-day events, such as high school sports championships, during which traffic will come and go over a period of time.

This week, however, was mostly about celebration as the first 2.5 million pounds of cement were poured for the four-story car museum. It came 14 years after the idea was born to build a grand showplace for the car collection of businessman Harold E. LeMay.

Museum director David Madeira and museum board member Paul Miller smoked a cigar Thursday in honor of the construction milestone.

In their mind's eye, they could see beyond the dirt piles and the dust. They could see the \$32 million museum with its curved wood roof and walls of glass on each end. They could see the 3.5 acres of grassy parkland that will be the outdoor show field for car shows and other events.

In a couple of weeks, people can see for themselves how the museum comes together via a 24-hour webcam that will be available at the museum's website, lemaymuseum.org.

"I don't think people really understand this is the world's largest noncorporate museum," Madeira said. "Right there."

Right there is a large rectangular hole dug north of the Dome. The museum will occupy 165,000 square feet of space in what were once the B and C parking lots. It will have parking for 150 cars.

As construction continues through the summer and fall, the dirt will be used onsite and the mountain will gradually shrink, said project superintendent Jeff Gordner of JTM Construction.

He said building the museum will employ 150 to 160 union workers. "We will hire from the local union halls."

The dirt should all be gone before winter, he added. But even then, parking problems will remain.

In all, the Tacoma Dome has lost 1,000 parking stalls to the LeMay Museum, dropping its total parking capacity to 1,800.

Dome officials had their first taste of the museum's impact during its series of school graduations in June. Typically, events like these with attendance under 5,000 would not require police to direct traffic. But this time, cars backed up onto I-5 quickly, Combs said, and he had to call in police.

Dome officials realized they had to think up a new plan. Combs, along with his staff, the Dome parking staff, Tacoma police and Parametrics, a private consulting firm, have found two keys to regulating parking: signage and queuing.

It will help to add signs or alter existing ones to direct traffic to alternate parking downtown, Combs said.

"We need to take a long, hard look at all of our signage," he said. "Not just for the Dome, but for our entire downtown area."

Combs said he hopes to see new signs up within three or four months. It will take longer to change signs on Interstates 5 and 705 as well as the state routes, he added.

Changing the way traffic lines up through the area can make for major improvements as well. Shortly after police redirected traffic down D Street and Wiley Avenue on those busy graduation days, the backup on I-5 all but disappeared, Combs said.

Dome officials will examine the demographics and location of each event's ticketholders to determine which traffic revisions will be most effective, Combs said.

Things will only get messier in months to come. Though construction on the LeMay museum is slated to wrap up early next year, with doors opening in August or September 2011, construction on a new segment of the Sounder commuter rail will close Pacific Avenue from 25th to 26th streets for 10 months.

Danny Serna: 253-274-7341 danny.serna@thenewstribune.com

Mike Archbold: 253-597-8692 mike.archbold@thenewstribune.com

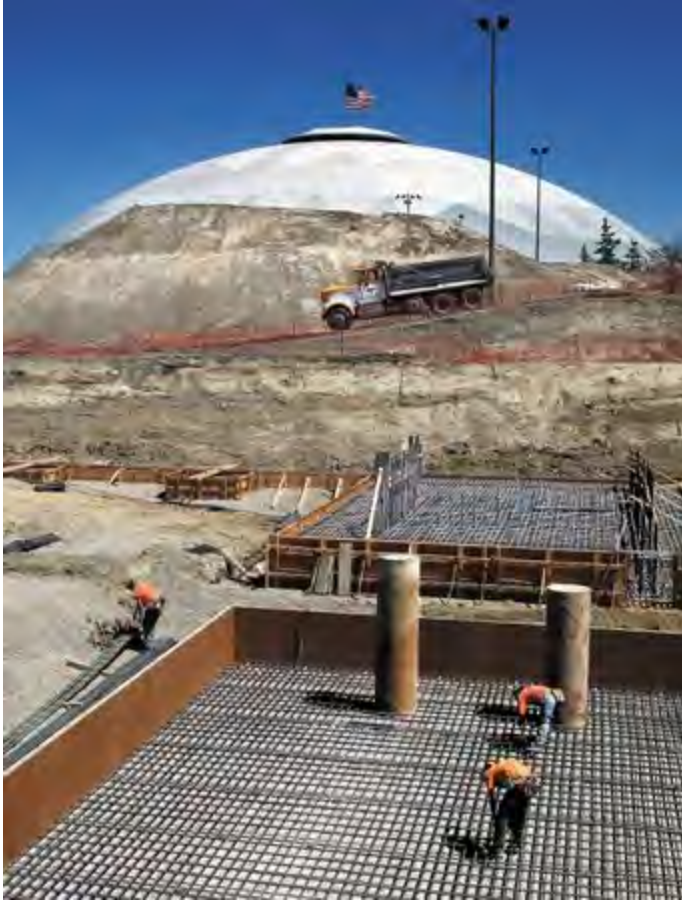
Read more: <http://www.thenewtribune.com/2010/07/31/v-printerfriendly/1284151/turning-a-mountain-into-a-molehill.html#ixzz0vURnXsL6>

Read more: <http://www.thenewtribune.com/2010/07/31/1284151/turning-a-mountain-into-a-molehill.html#ixzz0vURc1fhv>



TNT - Iron workers for JTM Construction of Seattle install rebar in one of two mat footings, which measure 33 feet long by 49 feet wide and 4 feet high, during work on the foundation of the LeMay car museum being built adjacent to the Tacoma Dome. Excavation work at the site created a 27,000-cubic-yard pile of silty glacial till, background. (Dean J. Koepfler/Staff photographer)

Read more: <http://www.thenewtribune.com/2010/07/31/1284151/turning-a-mountain-into-a-molehill.html#ixzz0vURVsNIG>



DEAN J. KOEPFLER/STAFF PHOTOGRAPHER - Iron workers for JTM Construction of Seattle install rebar in one of two mat footings, which measure 33 feet long by 49 feet wide and 4 feet high, during work on the foundation of the LeMay car museum being built adjacent to the Tacoma Dome. Excavation work at the site created a 27,000-cubic-yard pile of silty glacial till, background.



DEAN J. KOEPLER/STAFF PHOTOGRAPHER - JTM Construction workers pour part of the foundation of the LeMay museum Thursday. Sixty-five Cal Portland Concrete truckloads were used that day to pour the two mat footings and two-thirds of the building's foundation. The car museum will occupy 165,000 square feet of space in what once was the Dome's B and C parking lots.



October 26, 2010

Michael Kennedy
Environmental Services
City of Tacoma Public Works
326 East D Street
Tacoma WA 98421

RE: Warning Letter – Prohibited Discharge of Track-out Material to City of Tacoma Stormwater System.

Dear Mr. Kennedy,

Our project office received your warning letter regarding track of material from the LeMay jobsite the morning of October 25th, 2010. We are aware of two visits from your department last week and while we are not happy about receiving the letter, we appreciate both the quick follow up and the City of Tacoma's commitment to the environment; a value shared by JTM Construction.

In response to your letter we would like you be aware of the actions JTM Construction is taking to eliminate track off onto the City of Tacoma's storm system. In addition, we would like to a few of the items identified in your letter as identified below.

On the LeMay jobsite we have implemented a Stabilized Construction Entrance (BMP C105) and a Wheel Wash (BMP C106) in order to prevent any track off of material from the jobsite. In addition, we periodically have a street sweeper come to the jobsite to clean the asphalt paving adjacent to our construction entrance and wheel wash. We recognize that there was some minimal track off on October 20th as shown on the attached photographs and we subsequently made arrangements for a street sweeper to clean on Thursday afternoon on our jobsite and on D Street.

I would like to clarify the date of observation for this event. Your letter indicates the COT field staff observation and communication with JTM on October 21st. JTM's project engineer was contacted at approximately 4:15 on October 20th and discussed this item with a City of Tacoma employee who identified himself as Mark Schuler. Mr. Schuler indicated he would return the following day. JTM was not contacted again until Friday October 22nd at approximately 4PM. Your letter also indicates there have been a total of six observations related to track off from our jobsite. We request that in the future, if there are specific observations made by your field staff related to track off or other environmental concerns that JTM Construction is contacted immediately.

We do not take these matters lightly and are a company committed to building responsibly. Our project team has made a concerted effort to eliminate environmental impacts in coordination with the City of



Tacoma's Stormwater Construction Management requirements. If you have any other questions or concerns please do not hesitate to contact me.

Sincerely,

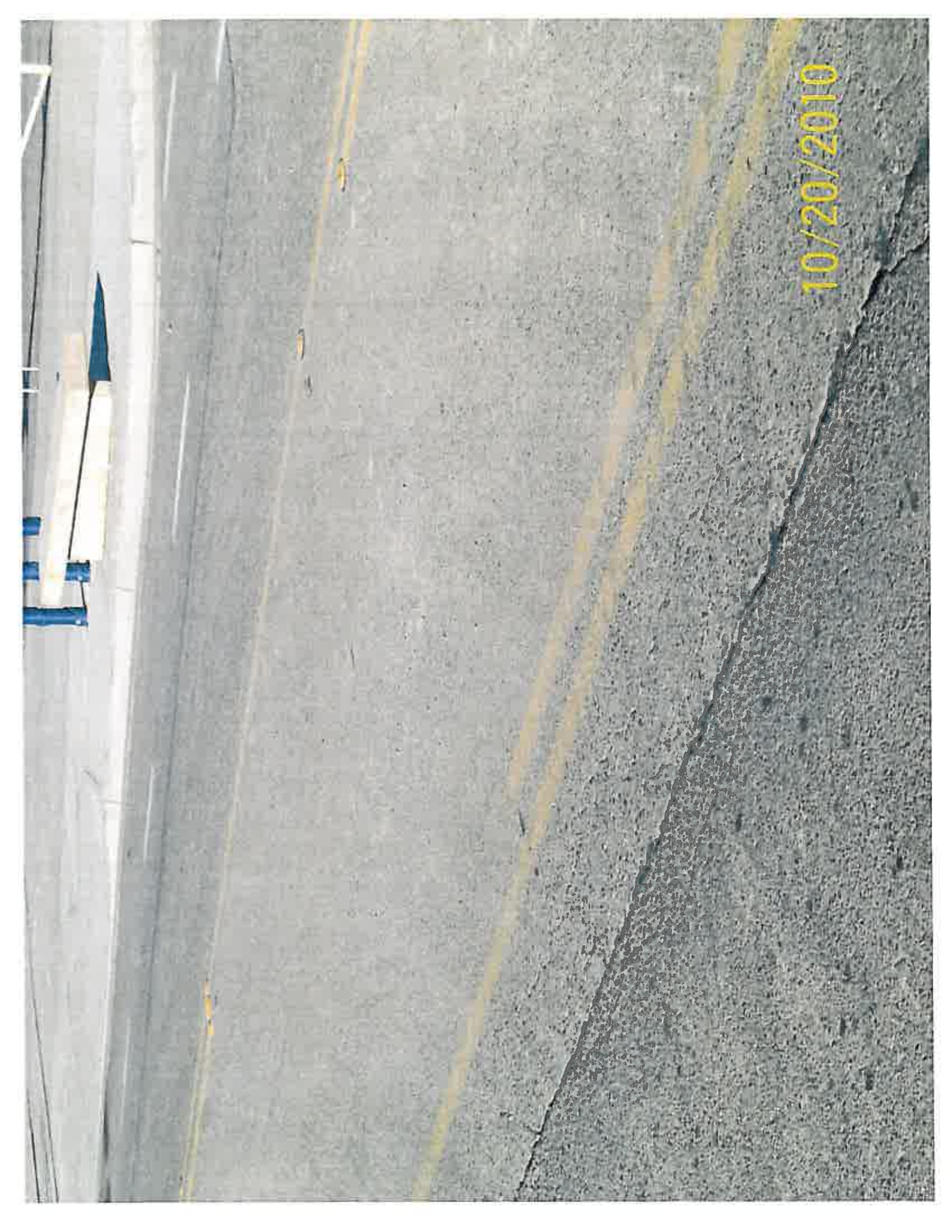
A handwritten signature in blue ink, appearing to read "Ian Klein", with a stylized flourish at the end.

Ian Klein
Project Manager
JTM Construction

cc: Paul Miller, The Harold E. LeMay Museum

City of Tacoma PW-SE
FR OCT 29 '10

10/20/2010



10/20/2010

10/20/2010

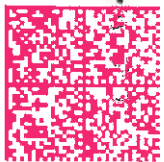




JTM CONSTRUCTION
METROPOLITAN PARK EAST
1730 MINOR AVENUE, SUITE 1120
SEATTLE, WASHINGTON 98101

28 OCT 2010 P

SEATTLE WA 981



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City of Tacoma Public Works
Attn: Michael Kennedy
Environmental Services
326 East D. Street
Tacoma, WA 98421

98421 98101



OF243

A.5 OUTFALL 243

A.5.1 Outfall 243 Drainage Basin

Basin 243 is 45 acres and discharges to the east side of the waterway at East 21st Street through a 42-inch outfall (see **Figure 1-3**). The storm drainage is carried in two main laterals, one south to north on East “D” Street from East 26th Street to East 21st Street and second east to west on East 21st Street. The majority of runoff in this basin is from Burlington Northern-Santa Fe Railway property and the portion of SR-509 between Portland Avenue and Thea Foss Waterway. Land uses in the basin are 79 percent industrial, 21 percent commercial and some highway with SR-509.

The outfall has a tide valve which was originally installed in 1999 then reinstalled in 2001 when the outfall pipe was extended. In 2008, “D” Street was raised over the BNSF main line increasing the drainage area by ½ acre. The stormwater runoff from the new ½ acre is treated through a VortFilter unit and then discharges to OF243 lateral through a new 15 inch pipe.

A.5.2 2002-2010 Source Control Activities

Since 2002, significant work has been accomplished in Basin 243 including removal of significant sources (see **Table 2-1**). A discussion of specific activities and any supporting chemistry data are provided in the following paragraphs.

Summary of Actions. Source control activities completed through 2010 are listed in **Table 2-1**. From August 2001 through 2010, approximately 24 actions have occurred within Basin 243. The types of actions taken in Basin 243 are as follows:

Action	Thea Foss	230	235	237A	237B	243	245	254
Construction	60	23	14	13	3	2	--	5
Inspection ¹	76	12	12	21	7	5	5	14
Facilities	43	6	7	12	7	3	3	5
Maintenance	37	10	7	3	1	4	6	6
Point sources	39	4	3	14	10	--	2	6
UST	19	7	2	3	2	2	3	--
Cleanup actions	17	2	2	4	--	5	2	2
Spill ¹	17	1	--	5	1	3	5	2
Fines ¹	4	--	--	1	--	--	2	1
Education	5	4	1	--	--	--	--	--
Total	355	69	48	76	31	24	28	41

¹The number reported includes notable actions only. Number of all inspections and spills are provided in Section 2.2.2.

As part of the City-wide business inspections program, two additional business inspections were conducted in Basin 243 in 2009. All of the businesses in Basin 243 have been inspected at least three times if not more since 2001, except the BNSF yard. These business inspections through education and implementation of nonstructural BMPs help prevent materials from coming into contact with stormwater and to promote activities that reduce pollutants in stormwater.

Stormwater treatment devices currently in place also remove solids and the associated particulate-bound chemicals from stormwater. Since 1995, there are two private onsite stormwater treatment devices that have been permitted for installation in Basin 243 including one VortFilter (basic treatment) and a bioswale (basic treatment) (see **Appendix A-Misc.**). With future redevelopment in Basin 243, more of these onsite treatment systems will be installed and over time decrease the solids load and the associated particulate chemical load to the waterway.

Redevelopment of the Area. In 2002 and 2003, Pick's Cove (now Foss Landing Marina) and American Plating were remediated. These sites were sources of mercury and DEHP (Pick's Cove) and metals (American Plating) (Tacoma 2005b). In addition, the D Street Grade separation/bridge was completed and stormwater from the new surfaces (0.49 acres) are routed through a treatment system.

As shown in **Figure 3-6h**, DEHP concentrations show a statistically significant improvement in storm water quality with an 81 percent reduction since 2001. Total phthalate concentrations also show an improvement in SSPM data since 2003 (see **Figure 5-1e**). **Figure 2-1c** also show the phthalate concentrations levels at FD23 were yellow (medium in comparison with all sites) in 2002 and 2003 and since 2004 are green (low in comparison with all sites). It is believed that these improvements reflect the redevelopment of the Pick Cove site and better BMPs at Foss Landing Marina.

SR509 WSDOT Pond Black Oil/Tar Releases. Historically black oil/tar emanating from the old Northern Pacific Rail yard oil pipeline was found in the SR-509 WSDOT stormwater treatment pond. In 2002, the pond was rebuilt to remediate the black oil/tar. In 2009, the pond was again remediated as directed by Ecology with the Northern Pacific Rail yard oil pipeline cleanup along D Street and E 19th Street (see **Table 2-1**).

As shown in **Figure 5-1e**, PAH concentrations in stormwater are fairly consistent from Water Year 2002 to 2007. These average PAHs concentrations begin to decrease in 2007. As shown in **Figures 3-6d** and **3-6f**, phenanthrene and pyrene are showing a statistically significant improvement in stormwater quality from 2001 to present. The best-fit regression equations result in an estimated 92 and 81 percent reductions, respectively, in OF243 in a 10-year period (see **Table 3-8**). This decrease coincides with the intensive source control activities along D Street and E 19th Street and the connection of the stormwater treatment system for the "D" Street overpass. PAH concentrations in baseflow are fairly consistent suggesting that PAHs were mainly carried in stormwater and not within the baseflow.

Outfall 243 Source Tracing 2009 Monitoring. In 2008, stormwater sediment samples were collected at several locations in the basin and analyzed for Foss parameters. On May 28, 2009, four sediment samples were collected from portions of the system that represent independent and comingled braches of the storm water system. Mercury (0.129-0.54 mg/kg) concentrations are comparatively similar to the mid-range of concentrations as represented in **Figure 2-1a** with no likely point-source of mercury for any one of the branches. In 2009 and 2010, City of Tacoma Environmental Compliance staff and our Legal Department continued to work towards gaining access to the BNSF yard to continue focused business inspections of the yard and its leases in Basin 243. City staff also obtained contractor safety certification. Focused business inspections began in 2011. It is recommended to continue to evaluate this area for mercury and PCBs.

A.5.3 Outfall 243 Water and SSPM Quality

The following paragraphs summarize 2001-2010 monitoring results for OF243. Annual and seasonal data for baseflow and stormwater for some of the COCs and other parameters is used to identify ongoing COCs and their pathway (stormwater, baseflow, seasonality, etc.) and to narrow where to look for sources. The following paragraphs discuss how and where COCs in Basin 243 are different than other Thea Foss drainage basins, and where subsequent source control activities may be focused.

TSS and Metals. Major land disturbance activities occurred in 2002 and 2003 including (see Table 2-1):

- Bank construction disturbances at the beginning of the Thea Foss Waterway remediation project
- Pick's Cove Redevelopment; and
- American Plating Remediation.

These activities are reflected in the Water Year 2003 (Year 2) TSS and total metals (lead and zinc) data in OF243 baseflow which exhibit higher than average variability (i.e. >80 percent) (see **Figures G-21B to G-23B and G-31B to G-33B**). Land disturbance during construction of the D Street Overpass is also reflected in the baseflow data. In Water Year 2007 (Year 6), TSS and total lead data in OF243 baseflow exhibit slightly higher means (see **Figures G-21B, G-22B, G-31B and G-32B**). These baseflow concentrations appear to be relatively consistent among outfalls (-2), although mean values are somewhat elevated in OF243 due to these land disturbance activities (see **Table 3-4A and Figures F-21 to F-23 and F-31 to F-33**).

In stormwater, OF243 showed evidence of elevated lead concentrations, including the highest overall lead concentration (379 µg/L) in September 2009. The highest maximum (1,170 µg/L) zinc concentrations were observed in OF243 (see **Table 3-3 and Figures F-2, F-3, F-12, F-13, G-2B, G-3B, G-12B and G-13B**). These outliers appear to be relatively isolated occurrences, and may be attributed in large part to random variability of the data. Total lead in OF243 stormwater (+3) is moderately elevated compared to all other outfalls (see **Table 3-5 and Figures F-2, F-3, F-12, F-13**). Zinc appears to be relatively consistent among outfalls, although mean values are somewhat elevated in OF243 which is attributed to the outliers. If anomalously high concentrations continue to recur in certain drainages, as Tacoma continues to compile and evaluate its stormwater monitoring data, source control investigations will be initiated.

For inorganic constituent, total lead, zinc baseflow and stormwater concentrations during dry season conditions appear to be higher than concentrations during wet season conditions (see **Figures H-2B, H-3B, H-12B, H-13B, H-22B H-23B, H-32B and H-33B**). This may be caused by more isolated storms and longer antecedent dry periods between storms. If metals continue to be of concern and prioritized high, increasing source control activities, such as sweeping, in the dry season would be warranted.

Storm sediment in OF243 is generally elevated in lead, mercury and zinc (+5 to +4) (see **Table 3-6**). Some of the highest SSPM concentrations of lead, mercury, and zinc were detected consistently at FD23 (**Figures 2-1a, F-29 to F-31 and F-41 to F-43**). Lead and zinc concentrations at these outfalls were four to five times higher than the other SSPM samples (see **Tables D-15 and D-16**). Lead and zinc are not a COCs in Thea Foss Waterway and source control will not be a high priority.

As shown in **Figure 3-3**, the highest concentrations of total mercury are at FD23 sediment trap in Basin 243 (2002, 2004, 2006-2008 and 2010). Insufficient sample was available in 2003, 2005 and 2009 for total mercury analysis. The mercury concentrations at OF243 were 1.1 to 25 times higher than the other SSPM samples. In Water Years 2007 and 2008, mercury was detected at the lowest concentrations to date at FD23 (see **Figure A-6a**). The mercury concentrations at FD23 were still 2 to 18 times higher than the other outfalls (see **Table D-15** and **Figure 2-1a**). This indicates that there may be a source(s) of mercury within the Basin 243. Additional source tracing for mercury will be completed in 2011 (see Section A.5.2).

PAHs. OF243 had similar levels of phenanthrene and pyrene concentrations in baseflow as compared to all the smaller drainages (see **Table 3-4A**). The average concentrations of acenaphthene were elevated by unusually high base flow concentrations in OF243, baseflow at 0.031 ug/L and stormwater at 0.018 ug/L. Acenaphthene was detected in 99 percent of the baseflow samples. The median concentration for the baseflow samples was higher than the median concentration for the outfalls' stormwater samples (0.031 and 0.018 ug/L, respectively). These results indicate that there may be a source(s) of acenaphthene which is diluted by stormwater. The source of these acenaphthene during baseflow conditions is unknown in this basin. When only the last two years of baseflow monitoring data are evaluated, the higher concentrations of pyrene in OF243 are somewhat elevated (+2) (see **Table 3-4B**) indicating there is a possible ongoing source.

In stormwater, OF243 is somewhat depleted in pyrene (-2) (see **Table 3-5A** and **Figures F-6** and **F-16**). As shown in **Figures 3-6d** and **3-6f**, phenanthrene and pyrene are showing a statistically significant improvement in stormwater quality from 2001 to present. The best-fit regression equations result in an estimated 92 and 81 percent reductions, respectively, in OF243 in a 10-year period (see **Table 3-8**). In SSPM, LPAHs and HPAHs concentrations at OF243 were not unusually elevated relative to other outfalls (see **Table 3-6**).

DEHP. The highest baseflow DEHP concentration (16 ug/L) on the eastside of the waterway was measured in OF243 during WY2010. However, OF243 had similar levels (-1) of DEHP concentrations in base flow as compared to all the smaller drainages (see **Table 3-4A**). As shown in **Figure 3-6h**, DEHP is showing a statistically significant improvement in stormwater quality from 2001 to present. The best-fit regression equations result in an estimated 81 percent reductions, in DEHP, in OF243 in a 10 year period (see **Table 3-8**). One unusually high peak concentration of DEHP (41 µg/L) was observed in 2007 stormwater in OF243, but this appears to be isolated occurrences. The cause of the outlier is unknown. DEHP appears to be relatively consistent among outfalls, although mean values are somewhat depleted in OF243 stormwater and baseflow (see **Tables 3-4** and **3-5**). When only the last year of monitoring data is evaluated, DEHP is somewhat depleted in OF243 (-2) (see **Table 3-5B**).

OF243 SSPM shows a slight enrichment in DEHP (+2) (see **Table 3-6a**). OF243 also exhibits notably different phthalate compositions that are dominated by butylbenzylphthalate. ANOVA results showed that OF243 is moderately elevated in butylbenzylphthalate (+4) (see **Table 3-6a**). **Figures F-48** and **F-60** show OF243 butylbenzylphthalate average, median and maximum concentrations in SSPM well above all outfalls but OF245. In **Figure 2-1c**, the phthalate concentrations levels at FD23 were yellow (medium in comparison with all sites) in 2002 and 2003. Since 2004, the phthalate concentrations levels at FD23 were green (low in comparison with all sites). Total phthalate concentrations show an improvement in SSPM data since 2003 (see **Figure 5-1e**). The improvements in stormwater and SSPM quality indicate that a source(s) of phthalates within the Basin 243 may have been controlled (see Section A.5.2).

Total PCBs. Storm sediment in OF243 is neutral (0) in PCBs relative to other outfalls (see **Table 3-6**). Earlier concentrations were medium to those found throughout the Thea Foss Watershed (see **Figure 2-1d**). Insufficient sample was available in 2002, 2005, 2006 and 2008 for PCB analysis. As shown in **Figure 5-1e**, the 2009 and 2010 concentrations were the lowest concentration measured to date. The priority for additional source control is lower relative to other outfalls.

A.5.4 Basin 243 Conclusions and Recommendations

Many activities occurred in Basin 243 some of which have shown improvements in stormwater and SSPM quality and others have source(s) linked to water quality concentrations. Redevelopment in Basin 243 is reflected in improving stormwater and SSPM quality. With the redevelopment of Pick's Cove (now Foss Landing Marina) and American Plating, total phthalate concentrations show an improvement in SSPM data and PAHs and DEHP concentrations show a statistically significant improvement in stormwater quality.

In 2002 and again in 2009, the SR-509 WSDOT stormwater treatment pond was rebuilt to remove black oil/tar emanating from the old Northern Pacific Rail yard oil pipeline along D Street and E 19th Street. It appears that PAH concentrations in stormwater decreased since 2007 as a result of the Ecology-lead old Northern Pacific Rail yard oil pipeline cleanup along D Street. However, acenaphthene continues to be present in OF243 baseflow. The City will evaluate possible source(s) of acenaphthene in baseflow.

In 2008 and 2009, source tracing investigation confirmed that redevelopment of Pick Cove has controlled a source of phthalate. However, mercury concentrations indicate that there is an ongoing source. To continue focused business inspections of the railroad yards in Basin 243, the City of Tacoma Environmental Compliance staff had to obtain a contractor certification. This is required to gain access to any railroad yard and port facility under Homeland Security regulations. The certifications were completed in late 2010 and focused business inspections began in 2011. It is recommended to continue to evaluate this area for mercury and PCBs. Possible sources of mercury are the rail road yard, the East D Street Branch, the WSDOT Pond drainage area and/or LRI boxes (garbage transfer boxes in the rail yard).

In 2011, it is recommended to

- Review the Water Year 2011 SSPM data to confirm the control of PAHs in Basin 243
- Evaluate the source(s) of acenaphthene in baseflow in Basin 243.
- Continue OF243 mercury source tracing investigations.
- Review of the 2010-2011 SSPM data to confirm existing conditions in the basin.

If needed, the City will use the screening methods for source tracing of mercury and PCBs. The screening method will provide data of gross magnitude only. This will be solely used for source tracing and, if necessary, standard EPA analytical laboratory methods will be used for follow-up quantification.

Figure A-6a
Analysis of Monitoring Trends in Storm Sediment
OF-243

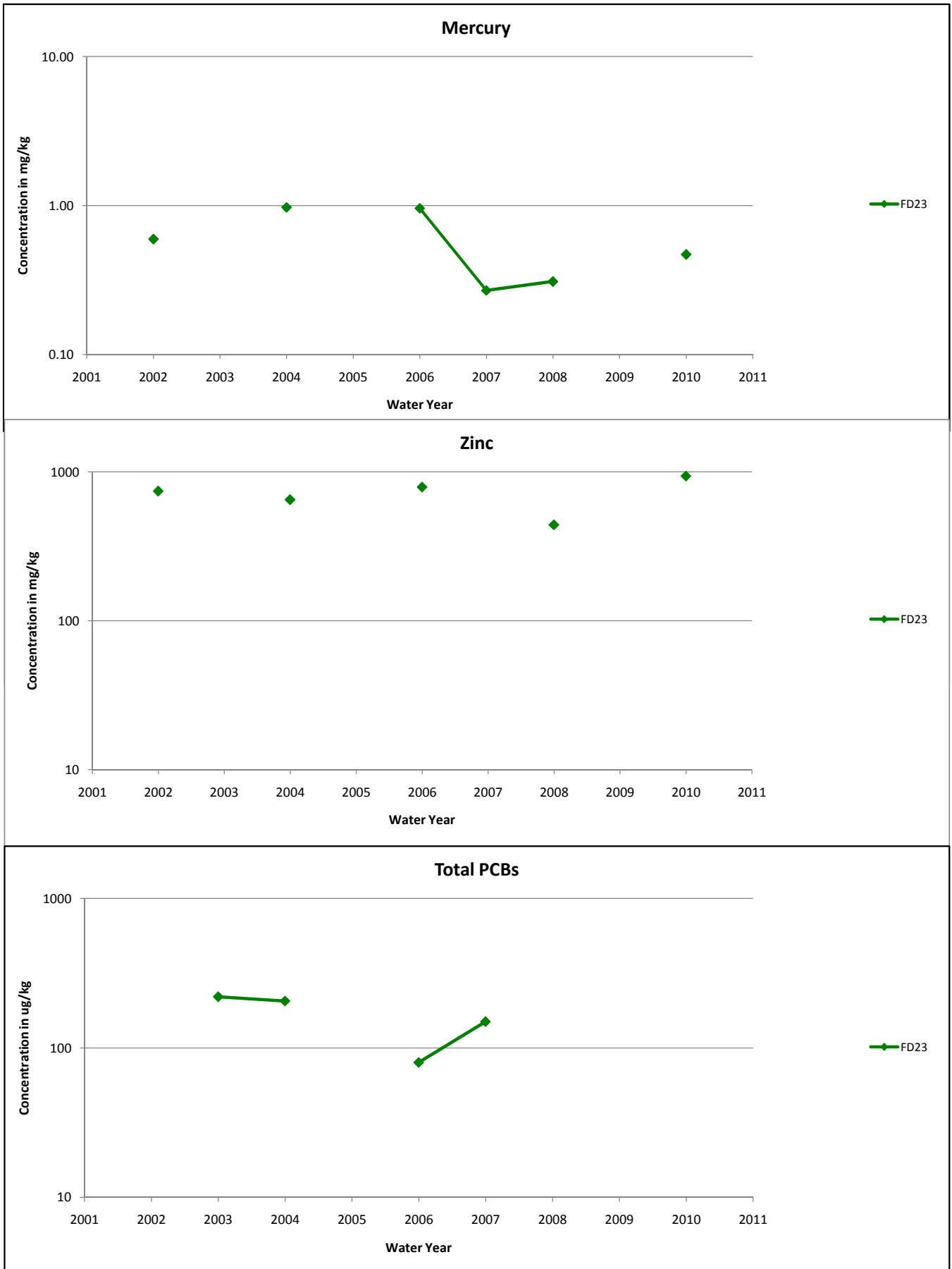
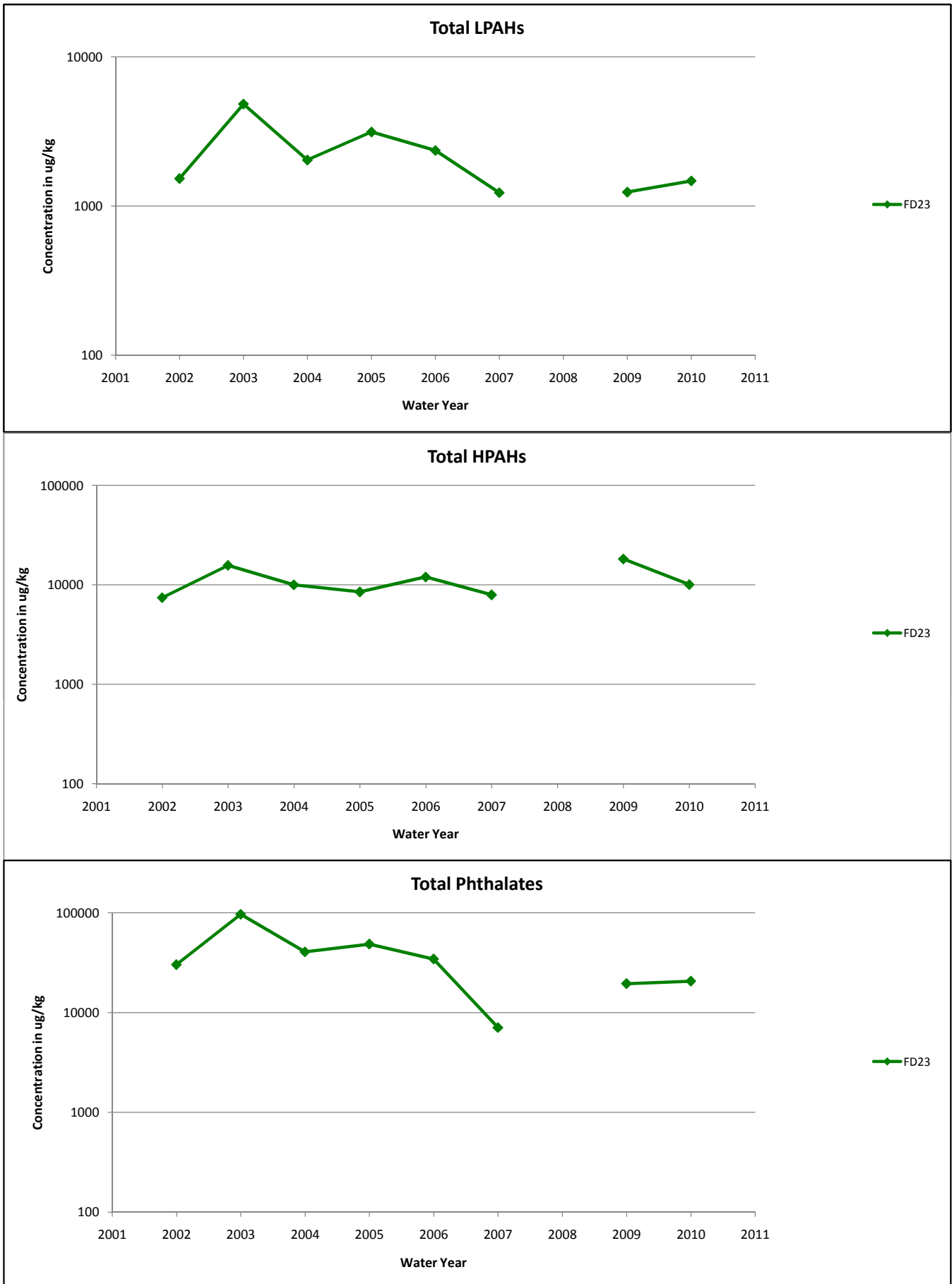


Figure A-6b
Analysis of Monitoring Trends in Storm Sediment
OF-243





BUSINESS

[< Back to Regular Story Page](#)

Report out on Foss boathouse

Commercial real estate: Conversion of shed might be cheap, but cleanup would be expensive

JOHN GILLIE; STAFF WRITER

Last updated: February 4th, 2010 07:38 AM (PST)

A former boat building shed at the Thea Foss Waterway's southern end could be converted to a dry storage facility for human-powered boats at a relatively modest cost, a new study says.

The long, narrow shed is on land the Foss Waterway Development Authority owns on the east side of the near-downtown waterway close to the intersection of East D and Dock streets.

The study, presented to the Foss Waterway Development Authority last week, pegs the rehabilitation cost of the 6,400-square-foot building at about \$42 a square foot – a little less than \$269,000.

Building a new building, closer to an existing float, would cost an estimated \$65 to \$70 a square foot.

Tacoma rowing enthusiast and boating entrepreneur Steve Wells said Wednesday he is sure that such a boathouse would find instant business.

"Tacoma is the only major city on the West Coast without a boathouse. All of the others' boathouses have waiting lists," Wells said.

Wells said his initial reaction to the relatively low cost of the conversion was positive. "When I heard the price, I said 'Wow.'"

Without a boathouse, he said, it's hard for rowing enthusiasts to enjoy their sports.

"I sell rowing shells. The shortest of those is 21 feet. The longest is 32 feet. That's too big for the average garage," he said.

The boathouse could be the home for the rowing teams from both PLU and UPS as well as for recreational programs run by such organizations as the YMCA, Metro Parks or the Boys & Girls Club.

The authority bought the site south of the South 19th Street bridge over the waterway in 2004 with the idea of turning the site into a park. The plating business on the north side of the property has left, and that site has been cleaned up.

A float for users of human-powered watercraft such as rowing shells, kayaks, canoes and dragon boats has been built on the site's north side.

Meanwhile, Berg Scaffolding remains a tenant on the site's southern half. The study, paid for by Pierce County, was commissioned to assess the condition of the building, years ago used for boat construction.

That study found the building's heavy timber structural members were in relatively good shape, though the building's plywood sheathing and roof need replacement.

The study recommends replacing the siding with metal panels and removing asbestos and lead paint.

While the study found that the rehabilitation cost to remake the building is relatively modest, it isn't the only impediment to moving forward. Environmental cleanup on site would require another \$300,000, said the authority's acting director, Su Dowie.

The authority plans to investigate potential grant funding to complete the project.

The authority itself, squeezed by slow land sales along the Foss on which it normally depends for funding, is seeking a loan from the City of Tacoma just to keep itself operating through the end of the year.


John Gillie: 253-597-8663

john.gillie@thenewstribune.com



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LUI KIT WONG/STAFF PHOTOGRAPHER - The Foss Waterway Development Authority says converting a former boat shed, center, on the east side of the Thea Foss Waterway could be an inexpensive alternative to building a new storage facility for human powered watercraft. However, environmental cleanup would cost \$300,000.

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Manager Environmental Operations

BNSF Railway

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E-mail: Jennifer.Wiener@bnsf.com

July 30, 2010

Michael P. Slevin III, P.E.
Asst. P.W. Director/Environmental Services
747 Market Street, Room 408
Tacoma, WA 98402-3769

CITY OF TACOMA
ENVIRONMENTAL COMPLIANCE
2010 AUG -3 PM 3:45

RE: June 30, 2010 Surface Water Inspection Request for BNSF Tacoma Yard

Mr. Slevin:

We are in receipt of your June 30, 2010 letter requesting a stormwater source control inspection of the Tacoma Yard. BNSF respectfully declines your request to meet to discuss site inspections pending review by BNSF's Law Department.

Regards,

Marsi Beeson / GeoEngineers, Inc.

for Jennifer L. Wiener, Manager Environmental Operations
BNSF Railway

Cc: Pamela Nehring, Senior General Attorney
BNSF Railway Company
P.O. Box 961039
Fort Worth, TX 76161-0039

Paul Tollefson, Tacoma Public Works
Environmental Services Compliance Support
2201 Portland Avenue
Tacoma, WA 98421

Doug Mosich, Deputy City Attorney
Tacoma City Legal Department
747 Market Street, Room 1120
Tacoma, WA 98402-3769

Geoff Smyth/Mike Kennedy, Tacoma Public Works
Environmental Services/Science and Engineering Division
2201 Portland Avenue
Tacoma, WA 98421



JENNIFER L. WIENER
Manager Environmental Operations

BNSF Railway

2454 Occidental Avenue South,
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Phone: (206) 625-6034
Fax: (206) 625-6007
E-mail: Jennifer.Wiener@bnsf.com

March 31, 2010

APR 7'10 12:15

Paul Tollefson, City of Tacoma Source Control Representative
Environmental Services Compliance Support
2201 Portland Avenue
Tacoma, WA 98421

RE: Inspection Request for BNSF Tacoma Yard

Dear Mr. Tollefson:

This letter is in regard to your December 18, 2009 e-mail to request an inspection of the BNSF Tacoma Yard for the purpose of looking at chemical storage, chemical usage and activities that would have impacts on the City's municipal storm and/or sanitary sewer systems. BNSF, as an Interstate Railroad Common Carrier, is subject solely to Federal Regulations. Since there is no violation of federal or state water quality standards, nor documentation or allegation that BNSF is out of compliance with the Industrial Storm Water General Permit regulations, there appears to be no need for an inspection of this facility.

The Washington Department of Ecology inspected the Tacoma Yard on January 15, 2008. The inspection produced no findings. Additionally, BNSF performed stormwater conveyance line, catch basin and manhole cleaning of the system that discharges to the east of the Yard in October 2009 as requested by the City of Tacoma. This activity was performed concurrently with the City's storm system cleaning project in the Lower Puyallup Drainage Basin. Additional stormwater conveyance line cleaning was performed in November 2009 of BNSF storm system lines discharging west of the site to the City's storm system

The following summarizes BNSF's environmental standards:

1. BNSF maintains full conformance with federal environmental regulations and laws.
2. BNSF conducts regular Spill Prevention Control and Countermeasure (SPCC) inspections and Stormwater Pollution Prevention inspections.
3. BNSF performs regular environmental awareness training for crews, supervisors, and staff system-wide, regionally, and within localized high environmental risk areas divisions.

4. BNSF has a national Memorandum of Understanding (MOU) with the Department of Army Corps of Engineers that applies system wide and in all Corp districts. This defines the Corps as the BNSF primary point of notification for all jurisdictional discharges as well as fills for emergency actions. BNSF also has direct liaison with both the Corps and applicable State Department's of Ecology or Environmental Quality or Natural Resources, etc. regarding activities that may affect water quality standards as defined under provisions of the U.S. Clean Water Act.

As mentioned previously, BNSF is subject solely to Federal Regulations. If you have concerns regarding defined water quality issues that you wish to bring to our attention so they can be expeditiously resolved, please feel free to contact me.

Regards,



 Jennifer L. Wiener, Manager Environmental Operations
BNSF Railway

Cc: Tony Miller, Environmental Specialist, City of Tacoma Public Works Department
Marsi M. Beeson, GeoEngineers, Inc.



City of Tacoma
Public Works Department

June 30, 2010

SENT VIA CERTIFIED MAIL

Jennifer L. Wiener, Manager
Environmental Operations
BNSF Railway
2454 Occidental Avenue South, Suite 1-A
Seattle, WA 98134-1451

Subject: Surface Water Inspection Request for BNSF Tacoma Yard

Dear Ms. Wiener:

This letter responds to your March 31, 2010 letter to City of Tacoma Source Control Inspector Paul Tollefson, in which you deny the City's request to conduct a stormwater source control inspection of BNSF's Tacoma yard. You mention federal preemption as the reason for the denial, stating that BNSF is "subject solely to Federal Regulations."

While the City acknowledges that local governments are preempted under federal law from regulating railroad operations in a variety of circumstances—environmental permitting is one example—we respectfully disagree that the City is categorically preempted from inspecting BNSF's Tacoma yard for compliance with the City's surface water management requirements.

The Surface Transportation Board ("STB") has recognized that not all state and local regulations that affect railroads are preempted.¹ The STB has stated that nothing in 49 U.S.C. § 10501(b),² "is intended to interfere with the role of state and local agencies in implementing Federal environmental statutes such as the...[clean water act]."³ As far as environmental regulation⁴ is concerned, the rule is not that local governments are preempted in every instance by federal law from regulating railroads, rather the test is whether local government regulation "unduly restrict[s] the railroad from conducting its operations, or unreasonably burden[s] interstate commerce."⁵

¹ *Joint Petition for Declaratory Order – Boston and Main Corporation and Town of Ayer, Ma.*, S.T.B. Finance Docket No. 33971, at 507 (STB served May 2, 2001.)

² 49 U.S.C. § 10501(b) is the federal law that preempts state and local regulation over railroad operations, by granting the STB exclusive jurisdiction over "transportation by rail carriers", as well as "construction, acquisition, operation, abandonment..." of railroad tracks and facilities."

³ *Id.* at 508. See also, *Friends of the Aquifer, City of Hauser, ID, Hauser Lake Water District, et al*, S.T.B. Finance Docket No. 33966, at page 885, (Decided August 10, 2001), where the S.T.B. makes the same statement but adds "...unless the regulation is being applied in such a manner as to unduly restrict the railroad from conducting its operations or unreasonably burdens interstate commerce."

⁴ The City's use of the term "environmental regulation" does not include local "environmental permitting", which the 9th Circuit found to be impermissible economic regulation subject to federal preemption under 49 U.S.C. § 10501(b), because it could prevent the railroad from "constructing, acquiring, operating, abandoning, or discontinuing a line." See, *City of Auburn v. United States Government*, 154 F.3d 1025, 1031 (9th Cir. 1998)

⁵ *Joint Petition for Declaratory Order – Boston and Main Corporation and Town of Ayer, Ma.*, S.T.B. Finance Docket No. 33971, at 508. See also, *Emerson v. Kansas City Southern Revocable Co.*, 503 F.3d 1126, 1133, (10th Cir. 2007), which states that "the STB has recognized that federal preemption under...[49 U.S.C. § 10501(b)]... 'does not completely remove any ability of state or local authorities to take action that affects railroad property. To the contrary, state and local regulation is permissible where it does not interfere with interstate rail operations, and localities retain certain police powers to protect public health and safety.'"

Jennifer L. Wiener
Surface Water Inspection Request for
BNSF Tacoma Yard
June 30, 2010
Page Two

As you may know, the City's obligation to inspect BNSF's Tacoma yard is based on a requirement of a federal and state National Pollutant Discharge Elimination System ("NPDES") municipal stormwater permit issued by the Department of Ecology⁶ which requires the City to establish a Stormwater Management Program to, among other things, "reduce the discharge of pollutants from MS4s to the maximum extent practicable, meet state All Known and Reasonable Technology (AKART) requirements, and protect water quality."⁷

A key element of the City's Stormwater Management Program is to inspect "pollution generating sources at industrial properties to enforce implementation of required BMPs to control pollution discharging into municipal separate storm sewers owned or operated by the Permittee."⁸ Conducting source control inspections to make sure commercial and industrial facilities are employing proper BMPs to prevent pollutants from being introduced into, and discharged from, the City's MS4 system is one of the cornerstones of the City's Stormwater Management Program under its NPDES MS4 permit.

Source control inspections are critically important within the Thea Foss drainage basin, where BNSF's facility is located, to prevent recontamination of sediments by stormwater in the Thea Foss and Wheeler-Osgood Waterways. As you know, these waterways were the site of a Superfund cleanup costing \$100,000,000; a portion of which was funded by BNSF, participating as a "cash-out" party under a comprehensive federal consent decree settlement with the City and close to seventy-five other parties. Stormwater discharges were identified as a significant source of sediment contamination during the cleanup project, and for this reason are being comprehensively monitored by EPA, the Department of Ecology, and the City, and will continue to be well into the future.

For the aforementioned reasons, the City is renewing its request for access to BNSF's Tacoma yard to conduct a stormwater source control inspection. In recognition of BNSF's status under federal law, the City will agree to inspect BNSF's facility at a mutually agreeable time, and, with BNSF's cooperation, in a manner that will not unduly restrict or interfere with BNSF's railroad operations. To this end, the City further requests that the parties meet within the next thirty (30) days to discuss the time and scope of this and future source control inspections, as well as sanitary sewer inspections at BNSF's Tacoma yard.

Please contact Mike Kennedy at (253) 502-2162 or via e-mail at mkennedy@cityoftacoma.org should you have questions and to schedule a time and place to meet. We look forward to your reply.

Sincerely,



Michael P. Slevin III, P.E.
Asst. P.W. Director/Environmental Services

cc: Doug Mosich, Deputy City Attorney
Science & Engineering Division, Geoff Smyth/Mike Kennedy

⁶ The Department of Ecology has been delegated authority by the Environmental Protection Agency to administer the federal clean water act NPDES program in Washington State.

⁷ June 17, 2009, Phase I Municipal Stormwater Permit, Section S5.B.

⁸ Id. at S.5.C.7.a.ii.

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 BNSF Railway
 2454 Occidental Avenue South, Suite 1-A
 Seattle WA 98134-1451

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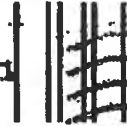
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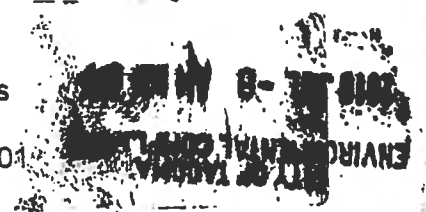


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 Environmental Services
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 Attn: Tollefson



12/17/10

Last known

BNSF

Inspector

City of Tacoma Oil/Water Separators

Type: CPS = Coalescing plate oil/water separator.

API = API-type gravity oil/water separator

Sump = Simple separation sump or tank, usually with a downturned elbow.

A = Inspect every five years (+ random)

B = Inspect every two years (+ random)

C = Annual inspection (+ random)

D = Semi-annual inspections. (+ random)

E = Quarterly inspections.

F = Operating under warning or NOV

House	Dir	Street	Type	Name	ZIP	Type	Where	Inspect Month	Last Inspect	Freq	Comments
1525	E	D	St.	Supervalu (Wcoast Groc.)	98421	API/API	san/stor		2/22/07	C	Fuel Island and parking lot (site API @ guards shack). Maint. Shop also. 3 total fuel island
802	E	E	St	US Redaway	98421	API	sanitary		9/22/06	C	Equip washing
2216	E	E	St.	Puglia Engineering Inc.	98421	API	sanitary		9/22/06	C	Truck wash (Hub closed OWS clean) Inspected 01/05/2006 told new business owner to fill with water. Whsl lumber product storage.
2434	E	E	St.	Hub Equipment/Vanport Tacoma	98421	API	sanitary		9/25/06	C	forklift/equipment washing
3302	E	E	St.	Vance Lift Truck	98421	API	sanitary		3/8/07	C	
635	E	E	St	Premear Plastics	98421	CPS	sanitary		12/6/06	A	Compressor blowdown (5 yr inspect)
509	E	E	St	Burlington Northern RR	98421	API	sanitary		3/22/05	C	Fuel depot
802	E	E	St	Tacoma Link Light Rail	98421	CPS	sanitary		5/6/05	C	Shop drains
1453	E	E	St.	Phil's Auto Care	98421	API	sanitary		3/15/07	D	Wash pd ad work bays.
320	E	E	St	Hawthorne Hill Condos	98404	API/CPS	sanitary		4/7/06	C	API in parking garage, CPS is for upper parking lot
805	E	E	St	Marco's Chevron	98404	API	sanitary		9/6/06	C	Fuel island/Simple sump for surface - discharges to storm
817	E	E	St.	Sears Maintenance	98404	API	sanitary		9/6/06	C	Wash pad (invert elbow in c/b & API outside rear shop dppr
1430	E	E	St	Texaco (Shell)	98404	API	sanitary		9/6/06	C	OWS located inside car wash.
500	E	E	Ave	TOTE	98421	CPS	sanitary		12/6/06	C	2 @ Maint Shop, 1 @ Rollock Box Area. Rand Lymabgrover @238-8487 to schedule appt.
605	E	E	Ave	Pioneer	98421	CPI	sanitary			C	Inspected by Alan
2340	E	E	Ave	Weyerhaeuser Wood Chip	98421	API	sanitary		5/13/05	C	Fuel storage area
1601	E	E	St.	Courtwright Diesel	98421	API	sanitary		1/19/07	C	effluent sampled and reported monthly
2727	E	E	St	Tacoma Dome	98406	API	sanitary		12/18/06	C	Wash pad. (Dan Culp @ 593-7609) - inspection log submitted 01/11/06
1705	E	E	St	Thea's Landing	98402	CPS	sanitary		2/7/07	A	2 in parking garage(s)

Oberlander, Jim

From: Oberlander, Jim
Sent: Thursday, December 30, 2010 12:26 PM
To: 'Jennifer.Wiener@BNSF.com'
Cc: Fremont, Kurt
Subject: Tacoma Yard, uncovered stored transformers, near East D St. Bridge

Jennifer,

Kurt briefed regarding me your recent conversation and I wished to alert you to a situation I noted, while walking to work. Several transformer on spill pallets, south end of BNSF Tacoma rail yard, drainage to the Thea Foss Waterway, where the tarp has blown off. Could you please assign someone to check out and manage as appropriate.

Thanks.

JIM O

Jim Oberlander
Stormwater, Source Control Supervisor
City of Tacoma Public Works
Environmental Services
326 East "D" Street
Tacoma, WA 98421-1801
(253) 502-2131 (w)



IMG_3714.JPG



IMG_3715.JPG

OF245

A.6 OUTFALL 245

A.6.1 Outfall 245 Drainage Basin

Basin 245 is located in the tideflats of Tacoma on the southern portion of the east side of the waterway. Basin boundaries are shown on **Figure 1-3**. The outfall is located at E. 19th Street, just south of Johnny's Restaurant. The drainage area is approximately 36 acres. The main trunkline of the storm drainage system extends east from Foss Waterway, down E.19th Street to E. "I" Street. Because of the low basin elevation, the entire storm system is influenced by saltwater at high tide. Land use in this basin is entirely industrial. Most facilities are engaged in storage, transloading and warehousing of materials and products, and manufacturing.

Directly upstream of the outfall is a deep bottom sump manhole known as MH390 (see Appendix B, **Figure B-3**). MH390 is 60 inches (I.D.) approximately 18 feet in depth with the inlet pipe and outlet pipe at 55.5 inches above the bottom. A plastic tide gate (swing valve) is located on the inlet pipe. The tide gate does not securely seal and some tidal water does get into the upper reaches of the system. In the fall 2004, the last 24 feet of pipe from MH390 to the waterway was replaced with HPDE. Drainage from MH390 was improved with the new slope of the outfall pipe, which replaced the old line that had a sag in it.

In August 2004, Tacoma replaced a 300 feet segment of the stormwater line and associated laterals in East 19th Street. This action sealed this segment from groundwater, sediment and product migration from the surrounding contaminated soil that remained in-place after an interim action remediation project was completed in this area.

A.6.2 2002-2010 Source Control Activities

Since 2001, three major areas have remained of concern in Basin 245, tar releases into the storm sewer system and a phthalate point source. A discussion of activities associated with these areas and any supporting chemistry data are provided in the following paragraphs.

Summary of Actions. Source control activities completed through 2010 are listed in **Table 2-1**. From August 2001 through 2010, approximately 28 actions have occurred within Basin 245. The types of actions taken in Basin 245 are as follows:

Action	Thea Foss	230	235	237A	237B	243	245	254
Construction	60	23	14	13	3	2	--	5
Inspection ¹	76	12	12	21	7	5	5	14
Facilities	43	6	7	12	7	3	3	5
Maintenance	37	10	7	3	1	4	6	6
Point sources	39	4	3	14	10	--	2	6
UST	19	7	2	3	2	2	3	--
Cleanup actions	17	2	2	4	--	5	2	2
Spill ¹	17	1	--	5	1	3	5	2
Fines ¹	4	--	--	1	--	--	2	1
Education	5	4	1	--	--	--	--	--
Total	355	69	48	76	31	24	28	41

¹The number reported includes notable actions only. Number of all inspections and spills are provided in Section 2.2.2.

As part of the City-wide business inspections program, seven additional business inspections were conducted in Basin 245 in 2010. All of the businesses in Basin 245 have been inspected at least three times if not more since 2001. These business inspections, through education and implementation of nonstructural BMPs, help prevent materials from coming into contact with stormwater and to promote activities that reduce pollutants in stormwater.

Stormwater treatment devices currently in place also remove solids and the associated particulate-bound chemicals from stormwater. The locations of private onsite stormwater treatment devices in Basins 245/248 are shown on **Figure A-1**. In 2010, oil/water separators were installed at SuperValu (see **Table A-1**). Tacoma is currently updating the list of private onsite stormwater treatment devices and our BMP inspection program (which includes new BMP inspection signoffs and periodic maintenance inspections). This program will improve the effectiveness of these devices through initial inspections, training on operation and maintenance, and periodic follow-up inspections. With future redevelopment in Basin 245, more of these onsite treatment systems will be installed and over time decrease the solids load and the associated particulate-bound chemical load to the waterway.

MH390/Outfall 245 Black Oil/Tar Releases. Black oil and tar-blobs emanating from the old Northern Pacific Rail yard oil pipeline and several LUSTs were seeping into the storm drains' joints and cracks. Before the extent of the contamination was understood, Tacoma completed three maintenance projects (two line replacements and one relining) to alleviate this issue. After these projects were complete, seeps continued to leak into the storm drain system. Further investigations found contamination along the entire Northern Pacific Rail yard oil pipeline area along D Street and E 19th Street. Ecology ordered remediation of the pipeline in 2008 and 2009. During this period, five UST/LUSTs were also removed or filled.

With completion of all these activities, the oil absorbent snares placed in the storm lines have remained clean. As shown in **Figure 5-1f**, PAH concentrations in stormwater are fairly consistent from Water Year 2002 to 2007. These average concentrations begin to decrease in Water Year 2008 through Water Year 2010. In the stormwater, phenanthrene (a LPAH) exhibited higher than average variability (i.e. >100 percent), traceable to Water Years 2004-2008 outliers, including the highest measured phenanthrene concentration (2004) in any of the drains (see **Table 3-3** and **Figures G-4B, G-8B, G-14B** and **G-18B**). Water Year 2010 did not repeat the pattern of extreme phenanthrene concentrations outliers. As shown in **Figure 3-6g**, indeno[cd-123]pyrene is showing a statistically significant improvement in stormwater quality from 2001 to present with an estimated 81 percent reduction in OF245 in a 10 year period (see **Table 3-8**).

It is believed that the storm drains are no longer an oil contaminant pathway with the removal of these probable sources and rebuilding of the drainage lines since this decrease corresponds with the intensive source control activities along D Street and E 19th Street.

Former MPS Site Investigation. OF245 exhibits notably different phthalate compositions that are dominated by butylbenzylphthalate. Butylbenzylphthalate concentrations in OF245 were among the highest of any reported phthalates in the monitoring program (see **Tables 3-2, 3-3** and **3-6** and **Figures F-48** and **F-60**). DEHP and total phthalates (butylbenzylphthalate included) concentrations in SSPM indicate an ongoing significant source of phthalates from a former bulk liquid phthalate transloading facility, MPS site (see **Figure 2-1c**). The sediment traps were located around the suspected source of phthalates within Basin 248 labeled as FD22.

The site is now operated by Quality Transport, Inc. Quality Transport, Inc. cleaned a majority of their system in 1997 and in 2000 with no effect on the sediment trap phthalate concentrations downstream of their facility (Tacoma 2009b). Average total phthalate concentrations show a peak in Water Year 2003 with a steady decline in stormwater and baseflow chemistry in 2004 and 2005. As shown in **Figure 3-6h**, DEHP has shown a statistically significant improvement (81 percent reduction) in water quality. The specific source(s) of the unusually elevated DEHP concentrations found in OF245 stormwater (five events in Oct 2002 through Apr 2003) was unknown. It was believed that one source of the high stormwater concentrations was the in-place lining of the storm line. However, it has been found that three of the high DEHP occurred prior to the March 5-15, 2003 relining project and thus the relining project isn't the source of phthalates for the five events (see **Table 2-1**).

As shown in **Figure A-7b**, SSPM total phthalates data also peaked in Water Year 2003 followed with a steady decrease from 900,000, 300,000 to 130,000 ug/kg. **Figure 2-1c** indicates that the MH390 and FD22 total phthalates concentrations were higher than all other sites from Water Year 2002-2005. In September 2007, the City cleaned two pipe segments above FD21 and FD22, which had significant amounts of sediment in the pipes and were never cleaned during the previous cleaning efforts. The cleaning did not result in an improvement of sediment quality indicating that the historical sediments were not a significant source. Since 2006, total phthalate concentrations have stabilized around 100,000 ug/kg (see **Figure A-7b**). This appears to be a direct result of the intense City inspections and BMPs implemented by Quality Transport, Inc. However, total phthalates concentrations at FD22 are still higher than most sites from Water Year 2006-2010 (see **Figure 2-1c**). Thus, source control in Basin 248 is high priority for phthalates. Possible sources of phthalates to FD22 include residues from the former bulk liquid phthalate transloading facility.

Truck Traffic Affects on Water and SSPM Quality. In 2005, a major warehouse trucking facility on E 19th Street and "D" Street closed. Other truck traffic was also detoured during that same period when "D" Street was temporarily closed due to construction of the "D" Street Overpass. In 2006, the warehouse once again opened for business and truck traffic resumed in the basin. In **Figure 5-1f**, sediment trap chemistry, average COC concentrations decreased in Water Year 2005 and increased in Water Year 2006 following the same pattern as the truck traffic. In particular, average TPH and zinc concentrations were lowest in 2005 then increasing and stabilizing in Water Years 2006-2009.

Baseflow and stormwater quality in OF245 (+4 and +3, respectively) is most elevated in zinc (see **Tables 3-4** and **3-5**). These concentrations indicate that there may be a source(s) of zinc in water in the 245 Basin. The Water Year 2005 changes in zinc and TPH concentrations in SSPM data indicate that truck traffic is a major contributor of zinc and TPH in Basin 245. In fact, Ecology (2008) reported that the major sources of zinc contributing to stormwater runoff on industrial sites are:

- Galvanized metals,
- Motor oils/hydraulic fluids exposed on the ground, or absorbed by solid particles such as dust and dirt roads, parking lots, and loading docks, and other surfaces; and
- Tire dust from forklifts, trucks, and other vehicles especially where trucks and truck trailers make tight turns, a considerable amount of zinc is released.

Ecology recommends two methods that can be used to reduce zinc contributions; one by replacing or coat galvanized metals and two by sweeping with industrial vacuum sweepers to clean paved areas.

However, these chemicals are not COCs in Thea Foss Waterway and source control will not be a high priority for these chemicals. It is anticipated that under Ecology's Industrial Stormwater General Permit (ISWGP), zinc concentrations and other chemicals in stormwater will be reduced over time at industrial facilities. As new information is available on sources and control of such pollutants, Tacoma will update our Surface Water Management Manual as necessary.

Petroleum Spills in Basins 245, 248 and 249. One of the trucking warehouses in the basin, SuperValu, was also fined and under order from Ecology for repeated petroleum spills to the waterway through Outfalls 245, 248 and 249. In 2010, Supervalu installed three oil/water separators and have implemented spill response BMPs as required by Ecology. These actions should also reduced contributions of TPH and other petroleum related chemicals from this facility.

A.6.3 Outfall 245 Water and SSPM Quality

The following paragraphs summarize 2001-2010 monitoring results for OF245. Annual and seasonal data for baseflow and stormwater for some of the COCs and other parameters is used to identify ongoing COCs and their pathway (stormwater, baseflow, seasonality, etc.) and to narrow where to look for sources. The following paragraphs discuss how and where COCs in Basin 245 are different than other Thea Foss drainage basins, and where subsequent source control activities may be focused.

TSS and Metals. For inorganic constituents (TSS, total lead, and total zinc), baseflow concentrations during dry season conditions appear to be higher than baseflow concentrations during wet season conditions (see boxplots **Figures H-21B to H-23B** and **H-31B to H-33B**). In stormwater, zinc boxplots showed occasional evidence of seasonality, (i.e., higher median, mean, and/or peak concentrations) during dry season months (see **Figures H-3B** and **H-13B**). This may be caused by more isolated storms and longer antecedent dry periods between storms. Increasing source control activities, such as sweeping, in the dry season would be warranted.

In baseflow, TSS is relatively consistent year-to-year, although summer concentrations are somewhat elevated in Water Year 2004 (Year 3) (see **Figures 5-1f, G-21B, and G-31B**). In July and August 2004, the stormwater line and laterals were replaced during this same period. These elevated concentrations appear to be associated with the storm pipe construction project.

In stormwater, lead appears to be relatively consistent among outfalls, although mean values are somewhat depleted in OF245 (see **Figures F-2** and **F-12**). As shown in **Table 3-5A**, OF245 (-4) stormwater contain lead concentrations that are well below average. Storm sediment in OF245 are also relatively depleted in lead (-4) and mercury (-2) (see **Table 3-6** and **Figures F-41, F-42, F-53** and **F-54**).

Conversely, zinc appears to be relatively consistent among outfalls, although mean values are somewhat elevated in OF245 in both baseflow and stormwater, (see **Figures F-3, F-13, F-23** and **F-33**). The highest zinc concentrations are found in OF245 baseflow and stormwater including:

- Baseflow maximum, mean and median concentrations at 1,950, 180 and 24 ug/L, respectively (see **Table 3-2**).
- Stormwater mean and median concentrations at 181 and 154 ug/L, respectively (see **Table 3-3**).

OF245 stormwater (+3) and baseflow (+4) is significantly elevated in zinc (see **Tables 3-4** and **3-5**). When only the last year of monitoring data is evaluated, zinc is slightly elevated in OF245 (+2) in baseflow and neutral in stormwater. As shown in **Figure 5-1f**, the zinc concentrations, Water Years 2007 and 2008 (in particular Aug 2007 to Sep 2008), were the highest zinc concentrations found in baseflow in OF245 (see **Figures G-23B**, and **G-33B**). None of the actions listed in **Table 2-1** occurred during this period, thus, the source for the zinc concentrations is unknown.

Even though zinc is significantly elevated in stormwater (+4), in storm sediment, average concentration is relatively depleted (-2) compared to the other outfalls (0) (see **Table 3-6** and **Figures F-43** and **F-55**). Discrepancies between these two data sets may be caused by differential transport of pollutants in dissolved and particulate phases. Source control investigations will look at sources that lend themselves transport in dissolved phases.

SSPM in OF245 are also relatively depleted in lead and mercury (-4 and -2) (see **Table 3-6**, SSPM and **Figures F-42** and **F-54**). Within Basins 245/248, mercury was detected at higher concentrations at FD22 (see **Figure A-7a**). As shown in **Figure 2-1a**, the 2010 mercury concentration is slightly elevated (yellow) in comparison to mercury concentrations throughout the Thea Foss watershed. This indicates additional source control in this area is a higher priority for mercury.

PAHs. OF245 had similar levels of phenanthrene and pyrene concentrations in base flow as compared to all the smaller drainages (see **Table 3-4A**). Average concentrations of acenaphthene were elevated by unusually high base flow concentrations in OF 245. Acenaphthene average baseflow concentrations were marginally (one to two percent) higher than stormwater concentrations in OF245. Acenaphthene was detected in 34 out of 39 of the baseflow samples. The median concentration for the baseflow samples was twice the median concentration for the outfalls' stormwater samples (0.026 and 0.010 ug/L, respectively). It appears that the source is ongoing since acenaphthene was detected at the same levels in the 2004-2010 baseflow events. The source of acenaphthene during baseflow conditions is unknown in this basin.

In the stormwater, comparatively higher concentrations of LPAHs were observed in OF245. Phenanthrene in OF245 exhibits higher than average variability (i.e. >100 percent), traceable to Year 3, Year 4, Year 5, and Year 7 outliers, including the highest measured concentration (1.65 ug/L in Year 3) in any of the drains (see **Table 3-3** and **Figures G-4B**, **G-8B**, **G-14B** and **G-18B**). These peak concentrations occurred infrequently, because the mean and median phenanthrene concentrations are about average in this drain (see **Table 3-5A** and **Figures F-4** and **F-14**). It is believed that the source of these outliers was the Northern Pacific Rail yard oil pipeline area. Since this area has been remediated, the anomalously high concentrations have not been observed (see Section A.6.2). As shown in **Figure 3-6g**, indeno[cd-123]pyrene is showing a statistically significant improvement in stormwater quality from 2001 to present. The best-fit regression equations result in an estimated 81 percent reduction in OF245 in a 10 year period (see **Table 3-8**).

In contrast, OF245 stormwater is significantly depleted in HPAHs, pyrene (-4) and indeno[123-cd]pyrene (-5) (see **Table 3-5A** and **Figures F-5**, **F-6**, **F-12**, and **F-13**) and SSPM is significantly depleted in PAHs (-5) relative to all other outfalls (see **Table 3-6** and **Figures F-32** to **F-34** and **F-44** to **F-46**).

DEHP. DEHP is fairly ubiquitous and consistent in baseflow, stormwater and SSPM throughout the various drainages; few statistically significant differences were identified. However, unusually elevated DEHP concentrations were found in OF245 stormwater in Water Year 2003 (Year 2: Oct 2002 through Apr 2003) (see total phthalates in **Figures 5-1f, G-10B** and **G-20B**). Possible sources of phthalates in this drain is believed to be the former bulk liquid phthalate transloading facility and not residues from the in-place lining of the storm line completed in March 2003 as previously thought (see Section A.6.2). These sources are believed to be historic since the water quality is improving. Most of the peak phthalate concentrations occurred earlier in the monitoring program (2002 through 2005) (see **Figures 5-1f, G-30B** and **G-40B**). As shown in **Figure 3-6h**, DEHP is showing a statistically significant improvement in stormwater quality from 2001 to present. The best-fit regression equations result in an estimated 81 percent reduction in DEHP in OF245 in a 10 year period (see **Table 3-8**).

OF245 exhibits notably different phthalate compositions that is dominated by butylbenzylphthalate in stormwater and SSPM. Butylbenzylphthalate concentrations in OF245 were among the highest of any reported phthalates in the monitoring program (see **Tables 3-2, 3-3** and **D-15**). In stormwater, OF245 butylbenzylphthalate average concentration is 20 ug/L as compared to 0.5-1.5 ug/L in the other drains and in baseflow, 1.6 ug/L as compared to 0.4-0.5 ug/L. **Figures F-48** and **F-60** show OF245 butylbenzylphthalate average, median and maximum concentrations in SSPM well above all other outfalls with four of the five highest concentrations. ANOVA results showed that OF245 is moderately elevated in butylbenzylphthalate (+4) (see **Table 3-6**). Elevated peak concentrations of diethylphthalate were also detected in OF245 at 430 ug/L in stormwater.

Within Basin 245 and the adjacent Basin 248, additional sediment traps were located around a suspected source of phthalates, the former MPS site (see Section A.6.2). As shown in **Figures 2-1c** and **A-7b**, DEHP and total phthalates concentrations indicate an ongoing source of phthalates from the Former MPS site. FD21 (245) and FD22 (248) phthalate concentrations are high in Water Years 2003 and 2004 at 900,000 and 300,000 ug/kg. Since Water Year 2006, phthalates at FD22 stabilized at or slightly below 100,000 ug/kg, which is still greater than other monitoring sites (see **Figures 2-1c** and **A-7b**). This indicates that there may be an ongoing source(s) of phthalates.

A.6.4 Basin 245 Conclusions and Recommendations

In 2009-2010, many activities occurred in Basin 245 some of which have shown improvements in water quality and others have source(s) linked to water quality concentrations. BMPs were put in place to eliminate petroleum spills from SuperValu. PAH concentrations in stormwater have decreased in the last three years in response to the soil remediation around the oil pipeline, removal of many LUSTs and completion of Tacoma's storm line maintenance projects. One HPAH showed a statistically significant improvement in stormwater quality from 2001 to present in response to these efforts. However, baseflow concentrations indicate that there is a source of acenaphthene in the baseflow. The source of acenaphthene is unknown.

DEHP is also showing a statistically significant improvement in stormwater quality from 2001 to present in response to intense City inspections and BMPs implemented by Quality Transport, Inc. However, OF245 still exhibits a notably different phthalate compositions that is dominated by butylbenzylphthalate in stormwater and SSPM and is higher than most sites from Water Year 2006-2010. One of the possible sources of phthalates to FD22 is residues from the former bulk liquid phthalate transloading facility.

Truck traffic is believed to be one of the major sources of zinc and TPH in Basin 245. Sediment trap chemistry, average COC (in particular TPH and zinc) concentrations decreased when truck traffic halted and increased when truck traffic resumed. In fact, Ecology (2008) reported that the major sources of zinc contributing to stormwater runoff on industrial sites is motor oils/hydraulic fluids and tire dust especially where trucks and truck trailers make tight turns. Baseflow and stormwater quality in OF245, industrial area, is most elevated in zinc in comparison with other drainages. It is anticipated that under Ecology's Industrial Stormwater General Permit (ISWGP), zinc concentrations and other chemicals in stormwater will be reduced over time at industrial facilities.

In 2011, it is recommended to

- Review the Water Year 2011 SSPM data to confirm the control of PAHs in Basins 245 and 248
- Mercury in the area draining to FD22. Review the Water Year 2011 SSPM data to confirm existing conditions
- Investigate Quality Transport, Inc. with TPCHD to locate possible source of phthalates. Review the Water Year 2011 SSPM data to confirm existing conditions
- Monitor the SuperValu site and its compliance with the Ecology lead order
- Evaluate the source(s) of acenaphthene in baseflow in Basin 245.

Figure A-7a
 Analysis of Monitoring Trends in Storm Sediment
 OF-245

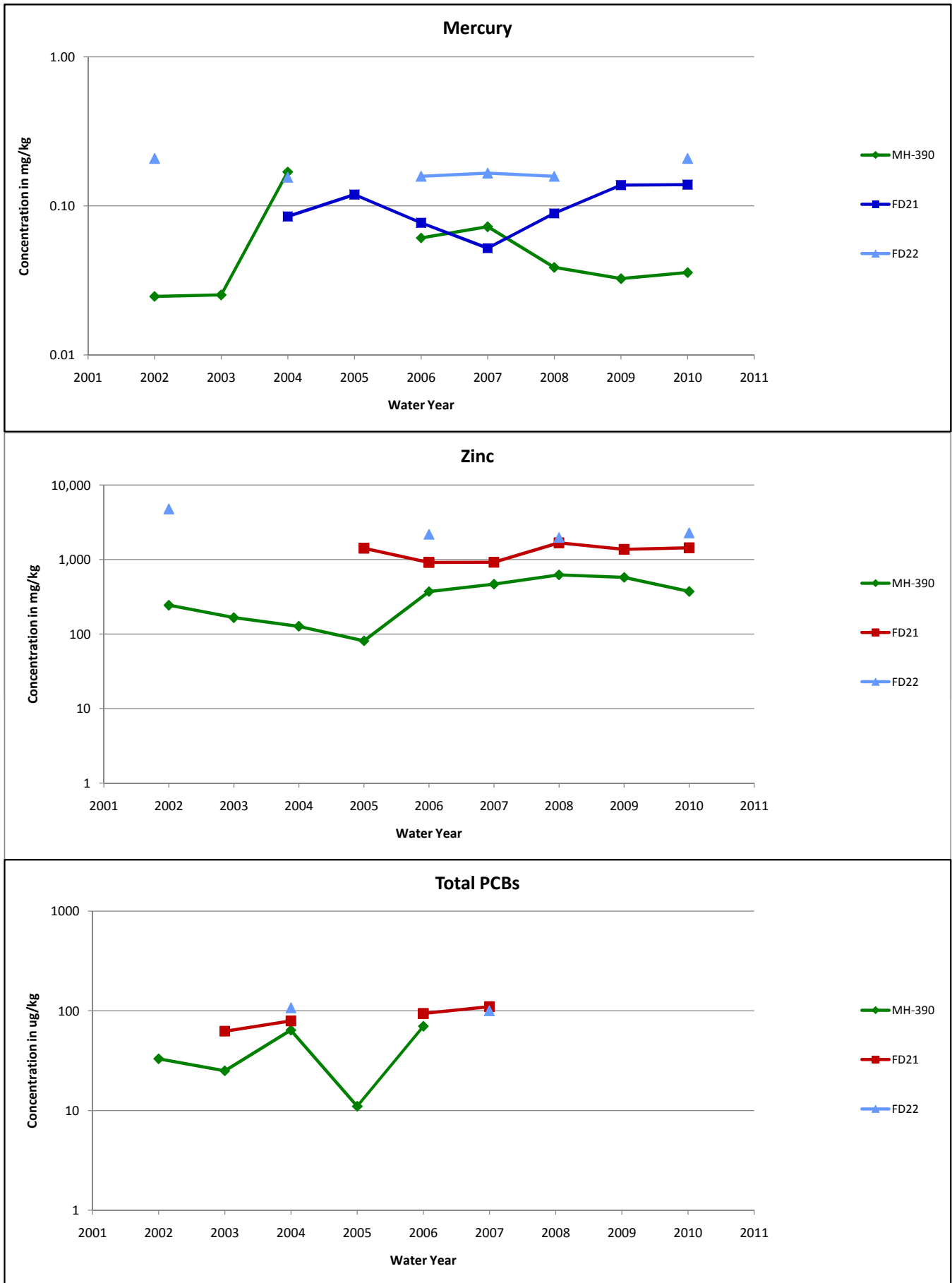
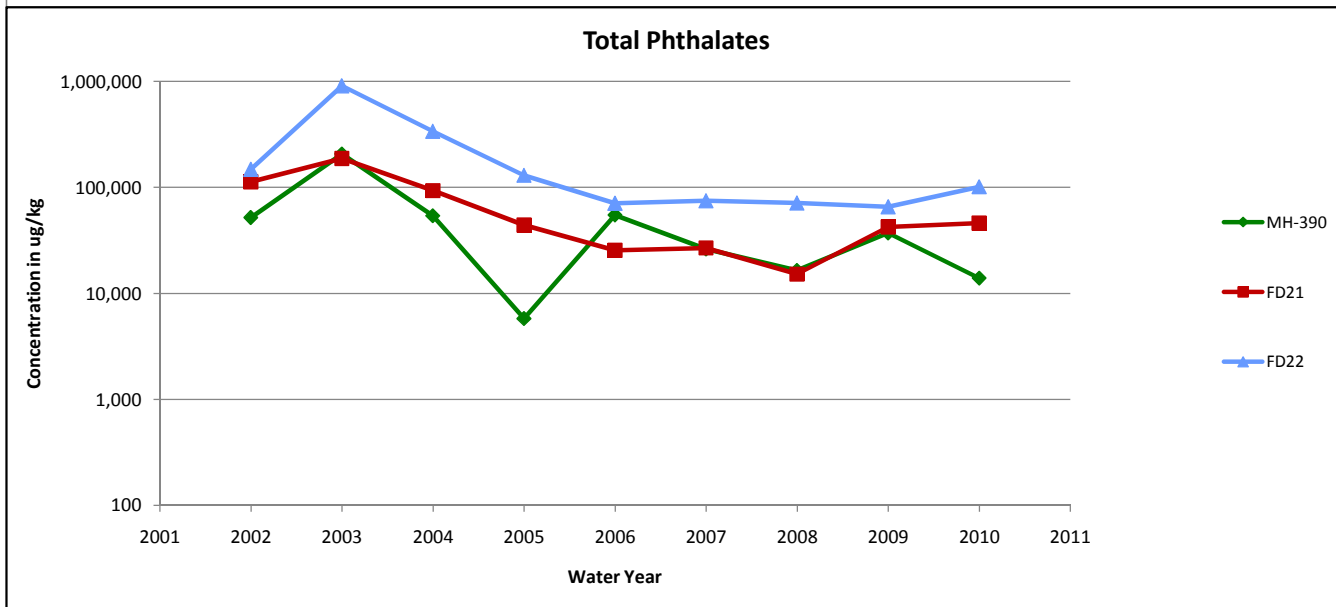
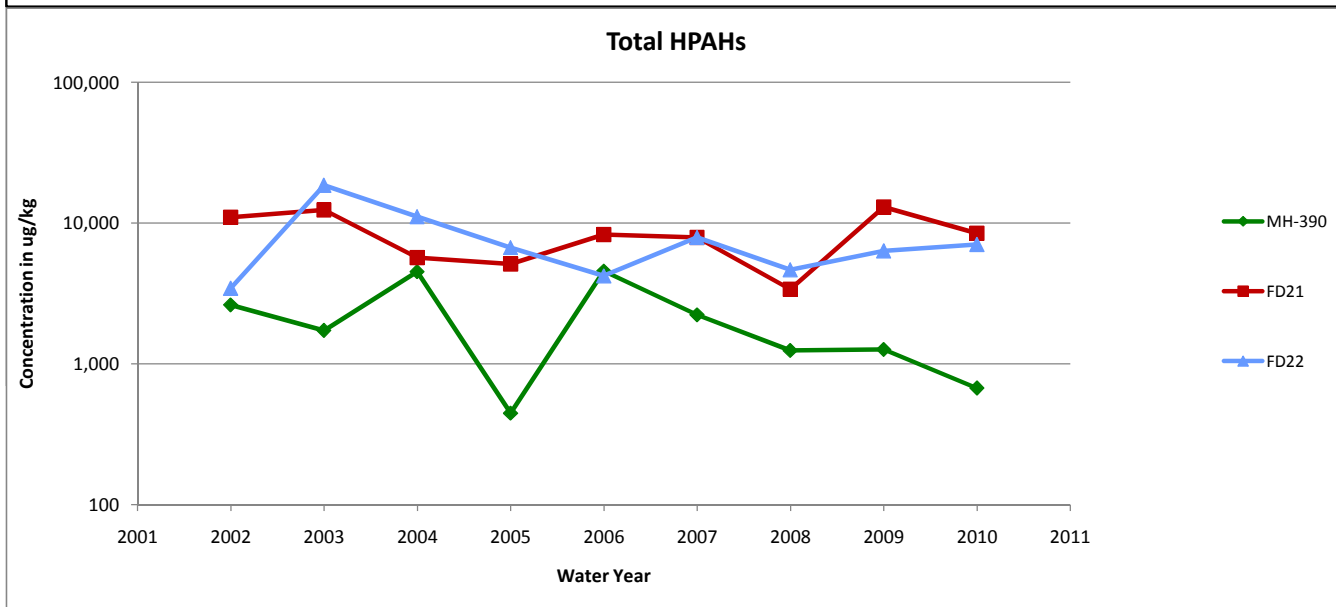
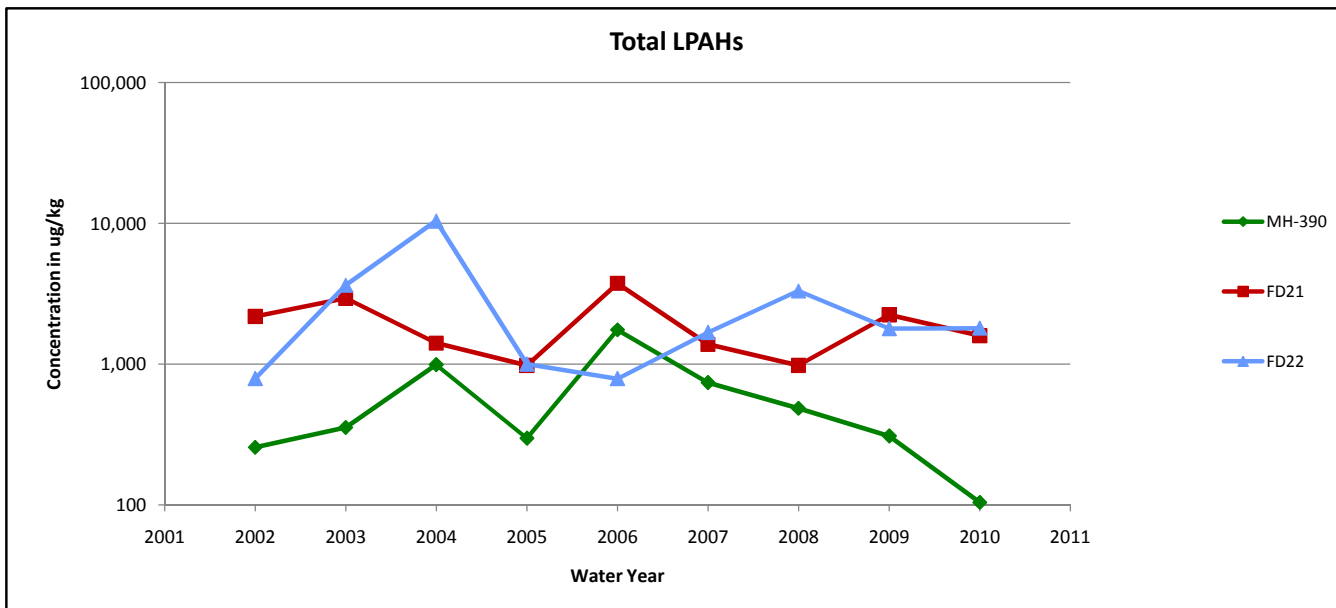


Figure A-7b
 Analysis of Monitoring Trends in Storm Sediment
 OF-245



10-0798 Environmental Services Spill Response / Complaint Form

Recorder: LDUNN
 Date: 12/2/2010
 Anonymous:
 Reported by: Larry Dunn
 Address:

Home Phone: Larry Dunn
 Work Phone: 253.502.2277
 Best Call Time:

COMPLAINT

Material: Petroleum Product
 Source: Vehicle
 Receiving Waters: Thea Foss Waterway
 Drainage Basin:

Incident Date: 12/2/2010
 Activity: Unknown / Other
 Quantity: 5-500 Gallon

ALLEGED VIOLATOR / BUSINESS

Complaint Title: Truck Fire-424 East 19th Street (ERTS 623776)

Business: NICHOLS TRUCKING CO INC
 Address: 424 E 19TH ST

Contact: Doug Nichols
 Phone: 253.272.8495

Parcel No.:

Comments: 12/2/2010-0715 Id: Observed fire and police units at Nichols Trucking. Fire fighting foam was on the ground. Reported information to Jim Oberlander and was directed to check storm water system in the accident area.

NOTIFICATIONS / ACTIONS

Investigator: Larry Dunn

Site Visit &
 Date: 12/2/2010

ACTION(S) TAKEN:

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Enforcement | <input checked="" type="checkbox"/> Voluntary Compliance | <input checked="" type="checkbox"/> Technical Assistance | <input type="checkbox"/> Hazard Material |
| <input checked="" type="checkbox"/> Investigate | <input type="checkbox"/> In Compliance | <input type="checkbox"/> Refer to WDOE | <input checked="" type="checkbox"/> Photos Taken |
| <input type="checkbox"/> No Action | <input type="checkbox"/> Written Response | <input type="checkbox"/> Refer to TPCHD | <input type="checkbox"/> Samples Taken |

Narrative

Comments:

ERTS Number 623776 Jason Brooks, Detective TPD: W-591.5909 Doug Nichols, Nichols Trucking: 253.272.8495 Mark Bridges, Phoenix Environmental: 779.8474 Elizabeth Bowers (Insurance Adjuster), Partners Claim Services: 253.851.1504 Eric Weisen, N W Shippers Inc (truck and trailer owners), 360.815.2901 3314 Douglas Road, Ferndale WA 98248 -12/2/2010-Id 0800: Mark Schuler and I entered the accident area and introduced ourselves to TPD detective Jason Brooks. After explaining the purpose of our visit, we inspected the area and catch basins, looking for petroleum product and fire fighting foam. Two COT catch basins and one private batch basin were affected by the accident, along with 150 feet of gutter line. Foam was also dispersed across a large part of the paved accident area. I coordinated time lines with Detective Brooks for clean-up. A conference with Nichols Trucking personnel coordinated clean-up standards. Doug Nichols has coordinated with Phoenix Environmental for the clean-up. -12/2/2010-Id 1600: Schuler and I returned to the accident site to meet with the insurance adjuster and check on the clean-up work. We pulled MH covers to check the storm main and found heavy petroleum product. Phoenix had vac(ed) the MHs earlier and did so again. With the negative tide, Phoenix will be able to jet the lines. Phoenix also boomed the outfall to contain any product reaching Thea Foss. The accident site will be tarped according Phoenix rep for the evening after Gene's Towing removes the burned tractor rig. Final clean-up will be during daylight hours 12/3/2010. -12/3/10-JO- 10 am, e-mail to JS WDOE. Photo #'s 25-33, Friday's follow up (that we discussed) to Thursday semi truck fire/fatality, and cargo release (Starbuck Coffee drinks) in the yard at Nichols Trucking. The tractor and cargo had been removed by time of my inspection and the majority of cleanup efforts completed as well a jet cleaning of COT 15 inch storm water main. I found a sheen in each of the CB's and MH's to our outfall/Thea Foss. Outfall 245 area has boom and sweeps containing the sheen. Difficult spot to boom with docks and vessel movement. ----Action items reviewed/ agreed w both contractor and Bob Stack, Nichols Trucking manager. • Complete sweeping and flush of area where tractor burnt. • Final flush of lines in the Nichols yard and replace the sorbents • Leave the fresh boom coils currently in street CB's and MH's, as passive sorbent. • Retain the triple boom/sweeps efforts at the OF and daily check at both high and low tides. • Review again next Friday (12/10/10), please call if situation changes. The glass containers have been taken to Full Container Recovery, 3408 Lincoln Ave. for crushing/waste fluids to sewer. Plant contact, Steve Berthellson, 272-7726. I understand from Al Aplin this is a permitted industry and OK. JO photos 24-29, photos 28/29 OF 245 area. -12/6/2010-Id: Inspected outfall 245 area. Boom is containing small amount of sheen. -12/7/2010-Id: Recommended to Ms. Bowers (Insurance) that 6 hour spot checks of site no longer required by COT ES. Message also passed to Corky (Phoenix Environmental). -12/30/2010-Id: Final check of Outfall #245 and upstream MH. No remaining problems relating to the accident noted.

FOLLOW UP ACTION(S):

- Owner Notified Cleanup Required Transmission Notified

Caller Notified 12/2/2010

Cost Recovery

Streets & Grounds Notified

BMPs

Inspection Required

Others City Dept Notified

OTHER:

SSO

Approved By:

Date:

Completed





9



10

Nichols Trucking 11



11



12



13



14



15



16







33

34



City of Tacoma
Public Works Department
February 1, 2011

Elizabeth Bowers
Partners Claim Services
2061 N. Pearl Street, Suite 214
Tacoma, WA 98407

Subject: NW Shippers, Inc. Truck Fire Accident 12-2-2010
424 E 19th Street, Tacoma WA (Claim: WA10-0467, Nichols Trucking)

Dear Ms. Bowers:

All waters entering Tacoma's storm drainage system in the accident area where the December 2nd 2010 fire occurred enter the Thea Foss Waterway via outfall #245. The City is under permit from the Washington State Department of Ecology for stormwater discharges throughout the City. This permit requires that the City of Tacoma maintain water quality by preventing pollutants from entering the stormwater system and waters of the state.

City of Tacoma Environmental Services required that Nichols Trucking and Phoenix Environmental Services perform spill response corrective actions to prevent and/or minimize the surface water impacts from the accident. In part, Environmental Services required that:

- Accident area be swept and cleaned.
- Waste and debris be disposed of.
- Affected public and private storm system be cleaned.
- Adsorbents and booms be installed and monitored.
- Periodic spotchecks of accident area and discharge point be performed.

As of December 30, 2010, the requested corrective actions had been appropriately implemented. At this time, City of Tacoma Environmental Services is not requesting any additional corrective actions be implemented as a result of the December 2nd accident. As always, standard operational Best Management Practices that address surface water pollution prevention must be continually administered.

Your prompt response and environmental stewardship is appreciated. Please contact Larry Dunn at (253) 862-2277, or ldunn@cityoftacoma.org, Monday through Friday, 8:00 am to 4:30 pm, if you have any questions.

Respectfully,

Michael L. Kennedy
Assistant Director Manager
Environmental Compliance Support

MKL:dp

cc: Ron Holcomb, WDOE Spill Response

© EnviroComplianceDunn14 Letters Nichols Trucking Fire 12-2-2010.doc

Environmental Services ■ Science and Engineering ■ 124 East D Street ■ Tacoma, Washington 98421-1801 ■ (253) 591-0588
www.cityoftacoma.org

OF254

A.7 OUTFALL 254

A.7.1 Outfall 254 Drainage Basin

Basin 254 is located on the tideflats and is the fifth largest basin in the Thea Foss Watershed (see **Figure 1-3**). It is approximately 51.3 acres and drains through a 42-inch outfall pipe located at the head of Wheeler-Osgood Waterway on “F” Street just north of East 15th Street. The drainage area includes East 15th Street from “D” Street to St. Paul Avenue, East “J” Street from 15th Street to the 1600 block, and St. Paul Avenue from East 11th Street to Portland Avenue. The entire basin is zoned for industrial use.

Prior to 2004, Basin 254 remained unchanged for years with many undeveloped properties. Since then, several facilities have been constructed including:

- First Student Transportation Facility
- INS Detention Facility now the Northwest Detention Center
- Portside Warehouse Facility (2007).

A.7.2 2002-2010 Source Control Activities

Since 2003, significant work has been accomplished in Basin 254 including intense business inspections, complete line cleaning, identification and removal of point sources. A discussion of specific activities and any supporting chemistry data are provided in the following paragraphs.

Summary of Actions. Source control activities completed through 2010 are listed in **Table 2-1**. From August 2001 through 2010, approximately 41 actions have occurred within Basin 254. The types of actions taken in Basin 254 are as follows:

Action	Thea Foss	230	235	237A	237B	243	245	254
Construction	60	23	14	13	3	2	--	5
Inspection ¹	76	12	12	21	7	5	5	14
Facilities	43	6	7	12	7	3	3	5
Maintenance	37	10	7	3	1	4	6	6
Point sources	39	4	3	14	10	--	2	6
UST	19	7	2	3	2	2	3	--
Cleanup actions	17	2	2	4	--	5	2	2
Spill ¹	17	1	--	5	1	3	5	2
Fines ¹	4	--	--	1	--	--	2	1
Education	5	4	1	--	--	--	--	--
Total	355	69	48	76	31	24	28	41

¹The number reported includes notable actions only. Number of all inspections and spills are provided in Section 2.2.2.

As part of the City-wide business inspections program, 20 additional business inspections were conducted in Basin 254 in 2010. All of the businesses in Basin 254 have been inspected at least three times if not more since 2001. These business inspections through education and implementation of nonstructural BMPs help prevent materials from coming into contact with stormwater and to promote activities that reduce pollutants in stormwater.

Stormwater treatment devices currently in place also remove solids and the associated particulate-bound chemical from stormwater. The locations of private onsite stormwater treatment devices in Basin 230 are shown on **Figure A-1**. In 2010, there were no new BMPs in Basin 254 (see **Table A-1**). Tacoma is currently updating the list of private onsite stormwater treatment

devices and our BMP inspection program (which includes new BMP inspection signoffs and periodic maintenance inspections). This program will improve the effectiveness of these devices through initial inspections, training on operation and maintenance, and periodic follow-up inspections. With future redevelopment in Basin 254, more of these onsite treatment systems will be installed and over time decrease the solids load and the associated particulate chemical load to the waterway.

Storm System Cleaning. After cleaning the storm lines, regular street vacuum sweeping throughout the basin was started in 2007 in an attempt to reduce sediment buildup in the storm sewer system. In February 2008, the frequency of street vacuum sweeping was increased. Sweeping and installation of onsite treatment systems are expected to reduce the solids load and associated PAHs load to the waterway.

With four full years of post-cleaning data in Basin 254, statistical analysis was conducted on the pre-cleaning versus post-cleaning data sets to assess the effectiveness of basin-wide sewer line cleaning. Statistically significant reductions were evident for zinc and PAHs (phenanthrene, pyrene, and indeno[1,2,3-cd]pyrene) in Basin 254 (see in **Table 2-3** and **Figure 2-2d**). Sewer line cleaning resulted in 18, 52, 71 and 63 percent reductions, respectively, in zinc and the three PAH concentrations in Basin 254. However, no significant reductions in TSS, lead, or DEHP can be discerned from these data.

The improvements in water quality, both baseflow and stormwater, appear to be a direct result of the intense inspections, installation of stormwater treatment systems, the system cleaning and increased street sweeping in Basin 254. Differences in PAH composition are remarkable, and provide the best evidence for the effectiveness of storm line cleaning.

PAHs in Basin 254. Intense inspections of all businesses in the basin were conducted in 2003-2004, June 2006 and again in 2008 (see **Table 2-1**). In January – June 2006, the entire storm sewer system including laterals and CBs were cleaned (see **Table 2-1**). As shown in **Figure G-39B** boxplot included below, the highest concentrations of PAHs in baseflow were reported mainly in Year 4 (Oct 04-Sep 05) (also see **Table 3-2** and boxplots **Figures G- 25B** through **G-29B** and **G- 35B** through **G-39B**). After the storm system cleaning, the baseflow concentrations were less than those detected in the previous four years and continued to decrease each year.

Not only has average concentrations of LPAHs and HPAHs in baseflow decreased, **Figure 5-1g** also shows average concentrations of LPAHs and HPAHs in decreasing from Water Year 2005 to Water Year 2010 (Oct 04-Sep 10) which is after the cleaning. PAHs (phenanthrene, pyrene, and indeno(1,2,3-cd)pyrene show a statistically significant improvement in stormwater quality from 2001 to present (see **Figures 3-6d, 3-6f** and **3-6g**) (81, 97 and 97 percent reduction, respectively).

Northern Pacific Rail Yard Oil Pipeline and Standard Oil Site Cleanup. Another source of PAHs in the basin may be associated with the Northern Pacific Rail yard oil pipeline area along D Street to the old Standard Oil site. In 2009, the Northern Pacific Rail yard oil pipeline area along D Street and E 19th Street was remediated as directed by Ecology. In 2010, the final phase of this cleanup within Basin 254 was completed. Ecology has oversight of the remediation project. Tacoma will continue to monitor activities in 2011 and their affect on stormwater and baseflow quality.

Northwest Detention Center DEHP Investigation. The Northwest Detention Center (NWDC, formerly known as INS), a private immigration-related prison, was constructed at the former Hygrade Meat site. Previous sediment results collected from the City's storm system showed that NWDC was a point source of DEHP (Tacoma 2009b). In 2006 through 2008, DEHP was found in the inlet pipe to the stormwater pond at concentrations up to 790,000 ug/kg. After intense business inspections the source of DEHP remained unknown. NWDC remodeled and installed media filtration stormwater treatment devices.

In December 2009 and 2010, Tacoma reinspected NWDC several times in order to identify the source of DEHP and to confirm that the DEHP-laden sediments were retained in the stormwater treatment devices. These inspection reports are provided in this appendix. DEHP-laden sediment was found in one part of the private drainage at levels up to 2.7M ug/kg. The DEHP-laden sediment was contained within the private system by the media filter treatment devices, DEHP was less than 1,500 ug/kg immediately downstream in the City system.

Further sampling and source tracing was conducted to identify the source of DEHP (see March 9, 2011 Field Report). The source of the DEHP is believed to be laundry lint that has accumulated on the open ground and eventually washes into the private storm drain system. Environmental Compliance recommended that maintenance to the lint collection system be completed.

Baseflow Quality in 2007 and 2008. In two different years for two different chemicals, baseflow quality was above average for those two years. In Water Year 2008 (Year 7), TSS and DEHP were detected at higher concentrations in the dry weather events well above all the other years (see **Figures G-21B, G-30B, G-31B** and **G-40B**). In Water Year 2007 (Year 6), lead was also detected at higher concentrations in the dry weather events well above all the other years (see **Figures G-22B, and G-32B**). The dry weather DEHP and lead concentrations for those years were at the same levels as the average stormwater concentrations for Basin 254. In contrast, these TSS baseflow concentrations were well below TSS stormwater concentrations. The source of the dry weather concentrations is unknown. These concentrations were not repeated in the following years, Water Year 2009 and 2010.

A.7.3 Outfall 254 Water Quality

The following paragraphs summarize 2001-2010 water quality monitoring results for Basin 254. Annual and seasonal data for baseflow and stormwater for some of the COCs and other parameters is used to identify ongoing COCs and their pathway (stormwater, baseflow, seasonality, etc.) and to narrow where to look for sources. OF254 does not have a sediment trap because of the tidal inundation within the entire system, thus, no SSPM data is available.

The following paragraphs discuss how and where COCs in Basin 254 are different than other Thea Foss drainage basins, and where subsequent source control activities may be focused.

TSS and Metals. For inorganic constituents (TSS, total lead, and total zinc), baseflow concentrations during dry season conditions appear to be higher than baseflow concentrations during wet season conditions (see **Figures H-21B-23B** and **H-31B-33B**). In Water Year 2008 (Year 7), TSS was detected at higher concentrations well above all the other years (see **Figures G-21B** and **G-31B**). In Water Year 2007 (Year 6), lead was detected at higher concentrations well above all the other years (see **Figures G-22B, and G-32B**). These concentrations were not repeated in the following years. TSS and lead concentrations in OF254 baseflow are similar to the other smaller drainages (see **Table 3-4A and 3-4B**).

Comparatively higher TSS concentrations were observed in OF254 which had elevated maximum (354 mg/L), mean (108 mg/L), and median (89 mg/L) TSS concentrations (see **Figures F-1 and F-11**). In fact, TSS concentrations in OF254 stormwater (+4) are above average (see **Table 3-5A**). In eight years of monitoring, TSS concentrations appear to be highest in the Years 6, 7 and 8 (Oct 06-Sep 09) (see **Figures G-1B and G-11B**). As show in **Figures G-1B and G-11B**, the mean TSS concentrations decrease from Year 7 through Year 9 where the concentrations return to levels as seen in Years 1 through 5.

In addition, highest average concentrations of mercury were observed in OF254 stormwater (0.043 ug/L) but was not significantly higher than most of the other outfalls (see **Table 3-3**). The source(s) of TSS and mercury are unknown.

Zinc appears to be relatively consistent among outfalls, although mean values are somewhat elevated in OF254 (see **Figures F-3 and F-10**). The two highest zinc median concentrations was found in OFs 245 and 254 stormwater (154 and 149 ug/L, respectively) (see **Table 3-3**). In fact, OFs 245 and 254 (both +3) stormwater are significantly elevated in zinc (see **Table 3-5A**). The stormwater concentrations indicate that there may be a source(s) of zinc in these industrialized basins. As discussed in Section A.6.2, truck traffic is a source of zinc but may not be the only source. When only the last year of monitoring data is evaluated, zinc is neutral in OF254 (see **Table 3-5B**) indicating that Tacoma's source control efforts have helped to reduce zinc in OF254

PAHs. OF254 has some of the highest concentrations of PAHs in water quality in the Thea Foss Basin but these concentrations are improving. The highest mean and/or maximum concentrations of several LPAHs and HPAHs have been reported in OF254 baseflow including acenaphthylene, anthracene, phenanthrene, benzo(a)anthracene, benzofluoranthenes, chrysene, fluoranthene, pyrene and HPAHs, mainly in Water Year 2005 (Year 4, Feb and Jul 2005) (see **Table 3-2**). There is a suggestion that PAH concentrations may be decreasing in OF254 (see **Figures G- 25B through G-29B, G- 35B through G-39B**). ANOVA results suggest that OF254 PAH baseflow quality is similar to the other small drainages (see **Table 3-4A**).

In the stormwater, comparatively higher concentrations of LPAHs and HPAHs were observed in OF254 (see **Table 3-3**). The highest mean or maximum concentrations of several LPAHs and HPAHs in stormwater have been reported in OF254 including acenaphthene, acenaphthylene, anthracene, fluorene, total LPAHs, chrysene, fluoranthene, and pyrene (see **Table 3-3**). OF254 stormwater is enriched in pyrene (+3) (see **Table 3-5A**).

PAHs concentrations have decreased in OF254 stormwater from 2001 to present (see **Figures G- 4B through G-9B and G- 14B through G-19B**). As shown in **Figures 3-6d, 3-6f and 3-6g**, PAHs (phenanthrene, pyrene and indeno[123-cd]pyrene) show a statistically significant improvement in stormwater quality from 2001 to present. The best-fit regression equations result in an estimated 81, 97 and 97 percent reduction, respectively, in PAHs in OF254 in a 10 year period (see **Table 3-8**). In particular is the consistent decrease from 2007 to 2010 (see **Figures 5-1g**) that occurred following cleaning of the storm lines. This reduction of PAHs and related source control activities is discussed in Section A.7.2.

DEHP. In contrast to PAHs, the lowest average concentration of DEHP was in OF254 stormwater (3.26 ug/L, see **Table 3-3 and Figures F-7 and F-14**). ANOVA results suggest that OF254 DEHP baseflow and stormwater quality is slightly depleted compared to the drainages (see **Tables 3-4A and 3-5A**). However, in Water Year 2008 (Year 7), DEHP was detected at higher concentrations in the baseflow dry weather events well above all the other years (see **Figures G-30B and G-40B**). Those dry weather baseflow DEHP concentrations were at the same levels as the average

stormwater concentrations for Basin 254. These concentrations were not repeated in the following years, Water Year 2009 and 2010. A possible source may have been remodeling at the NWDC site and with installation of the stormwater treatment system in 2009 the DEHP concentrations were not repeated.

A.7.4 Basin 254 Conclusions and Recommendations

In 2010, source control activities were continued to focus on this drainage including intense inspections, the system cleaning project and increased street sweeping. The major point source of DEHP to Wheeler-Osgood Waterway, the NWDC, was confirmed as controlled and the onsite source of the DEHP was located.

PAHs (phenanthrene, pyrene, and indeno[1,2,3-cd]pyrene) show a statistically significant improvement in stormwater quality with an estimated 81, 97 and 97 percent reductions, respectively, in OF254 in a 10 year period. When comparing pre- and post-cleaning stormwater quality data, statistically significant reductions were evident for zinc and PAHs (phenanthrene, pyrene, and indeno[1,2,3-cd]pyrene) with 18, 52, 71 and 63 percent reductions, respectively.

These long term and short term improvements in water quality, both baseflow and stormwater, appear to be a direct result of all source control efforts. In fact, differences in PAH composition are remarkable, and provide the best evidence for the effectiveness of storm line cleaning.

In 2011, it is recommended to

- Re-evaluate the post cleaning stormwater and baseflow data to determine the ongoing effectiveness of storm line cleaning
- Monitor and conduct inspections at new developments as completed to review appropriate BMPs for each site.
- Monitor the final remediation phase of Northern Pacific Rail yard oil pipeline area along D Street to the old Standard Oil site
- Conduct follow-up inspections at the NWDC, if needed



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Pressure on state's gas pipes

24,000 miles: To avoid explosions, officials say they're 'proactive'

MIKE ARCHBOLD; STAFF WRITER

Last updated: September 19th, 2010 10:20 AM (PDT)

Pierce County residents must depend on Joe Subsits and his seven inspectors to help protect them from the threat posed by miles of underground pipelines carrying natural gas and hazardous liquids such as gasoline.

The inspecting team is the core of the state's pipeline safety program, run by the Utilities and Transportation Commission. It oversees more than 24,000 miles of pipeline operated in the state by 28 pipeline companies. Most carry flammable natural gas, some under high pressure.

Subsits, the commission's chief engineer for pipeline safety, acknowledged the danger the pipelines pose to people living next to or over them.

"If you put a flammable product in the ground, you can't deny the risk is there," he said. "However, we have good people here. We have an aggressive program. We are proactive in many ways."

The underground pipelines in Pierce County range from labyrinths of small lines carrying natural gas to homes to high-pressure, 30-inch lines carrying either natural gas or petroleum products.

A pipeline that brings natural gas through East Pierce County is similar to the one that ruptured Sept. 9 in a San Bruno, Calif., neighborhood near San Francisco. The blast killed at least four people and injured scores more in a firestorm that destroyed 37 homes.

No one has died in a pipeline accident in Pierce County in at least the past 20 years, according to the commission. In the state, four people have died in pipeline accidents since 1999.

The deaths of three youths in Bellingham in June 1999 helped expand and strengthen the state's pipeline safety program, Subsits said. In that accident, a leaking gasoline transmission line operated by Olympic Pipe Line turned a quiet creek where the three were into an inferno.

In the past 10 years, 19 "significant" gas or liquid pipeline incidents have occurred in the state, according to the federal Department of Transportation's Pipeline and Hazardous Materials Safety Administration.

Those incidents are defined as accidents that:

- Caused a death or injury requiring hospitalization.
- Did at least \$50,000 in damage.
- Released at least five barrels of volatile liquid.
- Resulted in fire or explosion.

Significant incidents averaged 279 a year nationwide between 2000 and 2009.

One of those incidents occurred in Pierce County in 2003 when a 26-inch Williams Pipelines gas line ruptured in a cleared right of way in the Lakeland Hills area near Sumner. There was an explosion, but no one was hurt and no fire broke out.

NEW REGULATIONS

After the Bellingham accident, federal and state legislation tightened pipeline regulations, increased the number of inspections and raised penalties for violations.

Standards the Utilities and Transportation Commission established for companies were above the minimum

federal criteria, Subsits said. For example, the state requires that operators report on all kinds of pipeline incidents, even those that don't meet the federal threshold of \$50,000-plus in damage.

The idea is to prevent accidents, Subsits said.

The more the state knows about pipeline problems, including incidents that caused little or no damage but were classified as near misses, the better it can spot possible problems or bothersome trends. Spotting complacency or overconfidence is as important as detecting a weakened pipeline or a missed inspection, Subsits said.

Since 2000, state inspectors have reviewed the findings of hundreds of construction crew inspections and more than 400 standard pipeline inspections.

Much of an inspection is a review of the company's own reports. Inspectors also can physically make inspections and verify information with their own testing. Each inspection can take longer than three weeks.

"We are relying on the integrity of (their) records and hopefully verifying that record when we are out there," Subsits said.

Under the state's requirements, each pipeline operator must have a program to identify and analyze threats, do risk assessments and come up with ways to head off future problems.

The state also has taken over from the federal agency inspections of large interstate pipelines that come into the state. Few states are allowed to do that, Subsits said.

Over the years, improvements have been made in inspection tools. Companies can use so-called "smart pigs" that travel inside pipelines to detect weak spots, such as dents and thinning in steel pipes.

Still difficult to spot, Subsits said, are stress corrosion cracks such as those that led to the failures in the Williams pipeline. The cracks are very fine and no tool has been designed yet to find them, he said. Operators are required to evaluate their pipelines for the corrosion threat.

They also must apply an electric current to pipes to further resist corrosion. With a proper coating and electricity protection, Subsits said, a pipe can stay in the ground almost indefinitely.

The systems of the five pipeline operators in Pierce County – BP Olympic, Williams Pipelines, McChord Pipeline, Puget Sound Energy and the City of Buckley – have been inspected since 2008, Subsits said.

Violations were found only with Puget Sound Energy, which distributes natural gas to homes and businesses. The 11 violations primarily involved missing inspection deadlines, not updating maps and not having required inspections, according to the commission.

HOLES IN THE SYSTEM

Washington state has a 13-member Citizens Committee on Pipeline Safety, established in 2000 in the wake of the Bellingham disaster. Whatcom County Councilman Carl Weimer is one of the committee's longtime members.

"We certainly don't think everything is fine and dandy," he said. "There are still some significant holes in regulations."

One hole, he said, is the lack of a state-coordinated "call before you dig" program to help stop third parties from damaging underground pipelines. "We will try to introduce a bill to do that in the next Legislature," he said.

With 2.5 million miles of pipeline in the country, major damage to a pipeline occurs every other day, said Weimer, who works for the nonprofit Pipeline Safety Trust.

"The chance of a pipeline failing in any one spot is almost negligible," he said. "But as we saw in San Bruno, when they do, what the consequences can be."

Mike Archbold: 253-597-8692

mike.archbold@thenewstribune.com

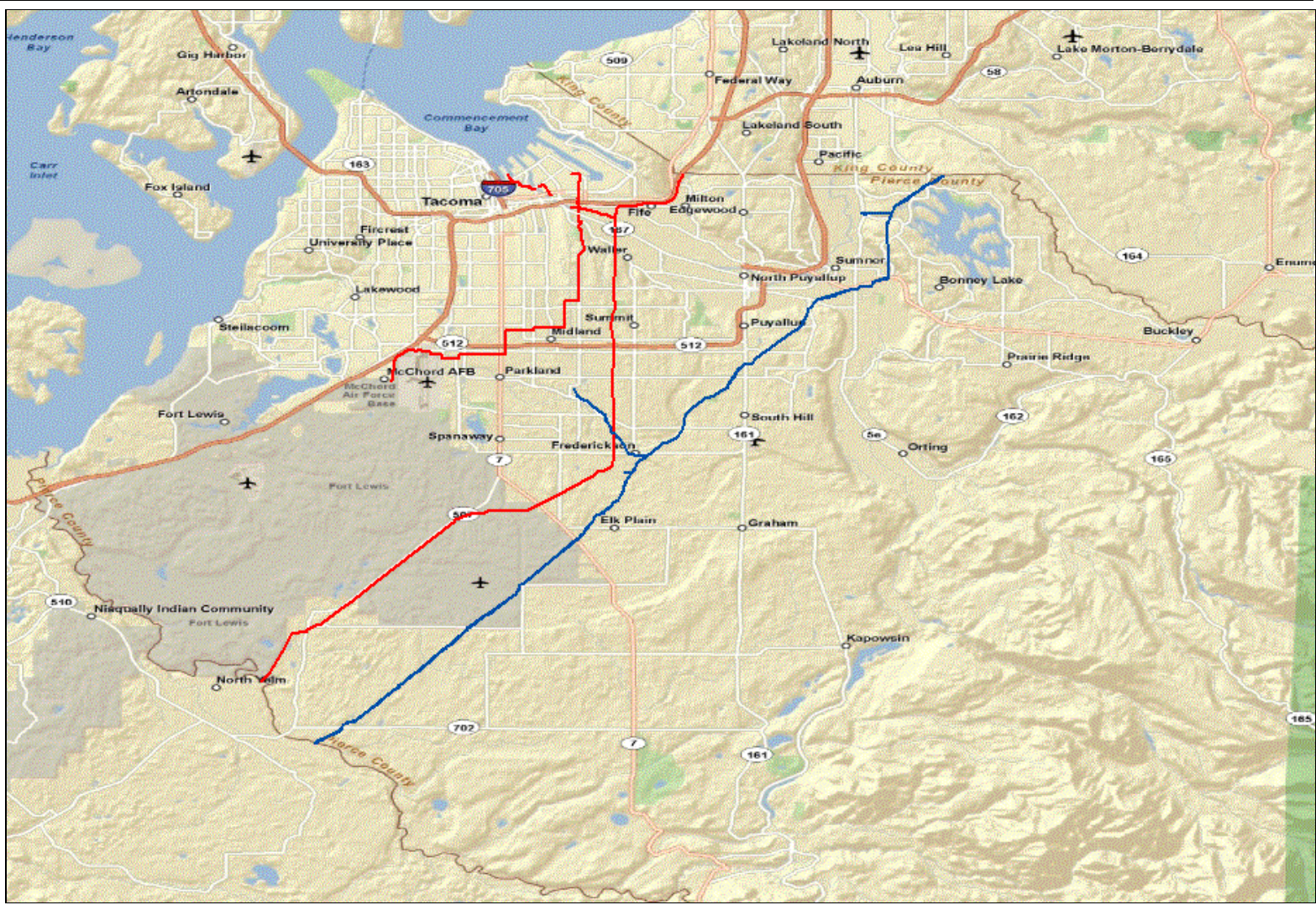


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Field Report

To: Rick Fuller
CC: Kurt Fremont, John Sunich
From: Tony Miller
Date: March 9, 2011
Re: Northwest Detention Center Phthalate Sampling January 2011

Background:

On January 13, 2011 Environmental Services (ES) performed a follow-up phthalate compound, PAH, and Foss Metals of Concern investigation at the Northwest Detention Center (NWDC), located at 1623 East J Street. The purpose of the investigation was to determine the route of entry of contaminants of concern into the NWDC's private storm system which has the potential to impact the sediment and water quality in the City of Tacoma's stormwater system and the Wheeler Osgood Waterway. The investigation is part of the City of Tacoma's (COT) ongoing commitment to address any potential sediment re-contamination in the Thea Foss and Wheeler Osgood Waterways. The NWDC site has been identified as a potential point source of bis(2-ethylhexyl) phthalate (DEHP) based on earlier investigations conducted by ES in 2006, 2008, 2009, and 2010.

In 2009 the private stormwater conveyance system was updated. This included the removal of holding ponds and the installation of Contech Filter Devices. The pond sediments were found to contain high levels of DEHP in the 2006 and 2008 investigations. The December 2009, June 2010, and November 2010 investigations showed that the installation of the Contech media filtration devices did retain sediment particles from the stormwater that was leaving the NWDC facility. The investigations showed elevated levels of DEHP in sediments within the Contech devices, however, the sediments in the structures after (downstream) the devices had DEHP concentrations at levels below background levels found in Thea Foss Basin sediment trap data. In July 2010 the NWDC had their entire storm system cleaned of sediment and performed annual maintenance (i.e., removed sediment buildup and replaced filters with new media) in the Contech devices. The November 2010 investigation showed that the high DEHP concentrations in the storm system were coming from 4 pipes of an unknown origin within the NWDC.

The sediment coming from these connections was heavily contaminated with DEHP.

The goals of the January investigation were to:

- Identify the origin of the 4 unknown connections to the NWDC storm system,
- Identify potential sources of “ongoing” contaminants of concern impacting the connections,
- Collect samples as necessary within specific areas of the NWDC to confirm the sources of DEHP.

Field Actions:

January 13, 2011:

John Sunich, Kurt Fremont, and Tony Miller arrived at the NWDC at 08:30 hrs to meet with NWDC staff and to investigate the drainage areas contributing to the connections to catch basins NWDC1, NWDC3, NWDC4, and NWDC9 for phthalates, metals and PAHs. After security check in procedures we met with Tony Asis and Bruce Scott of GeoGroup to discuss our findings to this point and to address the unknown connections to their storm system. We informed them that these connections were the source of their DEHP contamination. They informed us that these connections were from floor drains located within recreation areas associated with the various holding units. These recreation areas were small basketball courts consisting of concrete floors and walls with an open-air ceiling exposed to outside weather elements. We investigated these rec. areas along with Tony Asis and Bruce Scott, and found that that the floors in these areas were impacted with dryer lint. The exhaust venting for the facility’s laundry system was located on the roof and apparently lint that escaped the filters could drift into the rec. areas because of the open ceiling. The lint was in various stages of decomposition, from being light and fluffy to being pulverized from playing basketball. The lint migrated to the floor drain during rain events and there were remnants of “lint mud” in the floor drain grate. The lint and lint mud were the same grey color as the sediment we had sampled in previous investigations which contained very high levels of DEHP. We sampled the pulverized lint and lint mud in 3 different rec. areas, each connecting to a different catch basin within the NWDC private storm system. In addition we were able to obtain a sample of soiled mop water, lint from the laundry facility near the exhaust system, a laundry soap sample, and a sample of the blankets issued at the facility. The blankets used are made of a fleece material which is commonly made from recycled plastics and they are the same color of the lint sampled. The majority of the laundered material at the facility is comprised of these blankets.

- NWDC100. 09:00 hrs. Alpha 1 Recreation Area. The floor drain in this area connected to CB NWDC1. The sample consisted of pulverized lint located throughout the rec. area.
- NWDC99. 09:05 hrs. Alpha 1 Recreation Area. The floor drain in this area connected to CB NWDC1. The sample consisted of pulverized lint mud located within the floor drain grate.

- NWDC98. 09:20 hrs. Bravo 3 Recreation Area. The floor drain in this area connected to CB NWDC4. The sample consisted of pulverized lint located throughout the rec. area.
- NWDC97. 09:25 hrs. Bravo 3 Recreation Area. The floor drain in this area connected to CB NWDC4. The sample consisted of pulverized lint mud located within the floor drain grate.
- NWDC96. 09:35 hrs. Located within the lint collection area of the laundry room. The sample consisted of fluffy lint.
- NWDC95. 09:40 hrs. Taken within the Alpha 1 holding facility. The sample consisted of soiled mop water.
- NWDC 94. 0950 hrs. Delta 1 Recreation Area. The floor drain in this area connected to CB NWDC9. The sample consisted of pulverized lint mud located within the floor drain grate.
- NWDC 93. 10:00 hrs. Blanket sample.
- NWDC92. 1/18/2011. 15:40 hrs. Laundry detergent sample provided by GeoGroup.

Analytical Results/General Summary:

All samples were taken using appropriate sampling practices. The samples were immediately placed in a cooler and transported to COT laboratory under Chain of Custody. The samples were analyzed for phthalate compounds, PAHs, lead, copper, and zinc. Analytical results are attached.

These sample results were compared to previous sampling events at the NWDC to determine whether they are the sources of contamination of the private stormwater system. Generally, the analytical results and visual observations direct us to three conclusions:

1. **The laundry lint collection system is not functioning properly.** Throughout the NWDC we found evidence that the laundry lint collection system is not functioning properly. Lint is escaping through the vents on the roof of the facility and ending up in recreation areas where is it being pulverized by foot traffic and washing down the floor drain during rain events. Additionally the room containing the lint collection system had lint accumulated all over the floor further showing the system is not functioning properly.
2. **The laundry lint is a source of DEHP and zinc contamination within the private storm sewer.** Phthalate concentrations in the laundry lint are in much higher concentrations than that of Thea Foss sediment trap background concentrations. DEHP concentrations in the lint ranged from 270,000 ppb to 720,000 ppb. Zinc concentrations ranged from 1,220 ppb to 4,670 ppb.

Sample ID #	DEHP Concentration (ug/Kg)	Zinc Concentration (mg/Kg)
NWDC100	430,000	3300
NWDC99	330,000	2440
NWDC98	460,000	1220

NWDC97	590,000	2730
NWDC96	270,000	166
NWDC95	930	1520
NWDC94	720,000	4670
NWDC93	30,000	7.10
NWDC92	ND	ND
Thea Foss Basin Sediment Trap Concentration Ranges		
Foss - Low	<50,000	<700
Foss - Med	50,000-100,000	700-1300
Foss - High	>100,000	>1300

Foss-High: area requires further investigation.

- DEHP and zinc contaminants appear to concentrate within the lint collection system.** Since DEHP is an oil, it volatilizes at high temperatures. Our analysis shows that the blankets used at the NWDC contain 30,000 ppb DEHP. Theoretically, when the blankets are heated in the dryer the DEHP could volatilize and pass through the collection system. As the gaseous DEHP cools it could bond with the lint or sediments? trapped inside of the collection system thus making the lint concentrated with DEHP. The blankets have a very low zinc concentration; however the entire collection system is made with galvanized materials. It is probable that the zinc is being transferred to the lint as it passes through the system.

Executive Summary and Conclusion:

Recent investigations in the OF254 drainage basin identified phthalates and PAHs as primary contaminants of concern in stormwater and in the Thea Foss and Wheeler Osgood Waterway sediments. Because of high DEHP concentrations in waterway sediments found in 2008, and subsequent source investigations in the OF 254 drainage basin, the NWDC was identified as a potential significant contributor of phthalates. These investigations showed that DEHP laden sediments were retained in the Contech media filtration devices and not found downstream in the City's storm system.

The January 2011 investigation of the NWDC was intended to locate the points of origin for the pipes connecting to catchbasins NWDC1, NWDC3, NWDC4, and NWDC9 which were shown to contain concentrated levels of DEHP and zinc. Additionally, the investigation intended to sample any materials located or used within these drainage areas which could be contributors to the DEHP and zinc contamination located within the NWDC private stormwater system.

We discovered that floor drains located within small, open-air recreation yards were the point of origin for the pipes connecting to catch basins NWDC1, NWDC3, NWDC4, and NWDC9. Within these open-air rec. yards we discovered large

March 9, 2011

amounts of laundry lint which had accumulated as the lint passed through the lint collection system and exited through vents on the roof. Samples of the lint showed high levels of DEHP and zinc.

It appears that the lint collection system is not functioning properly thus allowing lint to escape the system via roof vents and eventually end up in the NWDC private stormwater system. Maintenance, repairs, or redesign may be needed to return the lint collection system to its correct operational effectiveness. The issue of contaminated sediments caused by the laundry lint entering the private stormwater system would be alleviated if the lint was being contained within the laundry's collection system.

If you have any questions, or need more information, please feel free to contact me. Thank you.



Tony Miller
Environmental Specialist
Environmental Services/Science & Engineering
(253) 502-2195 wk
(253) 253-377-5138 cell

Attachments:

- Site map with sampling locations.
- Lab Results.
- Photos from sampling event.

NOTES

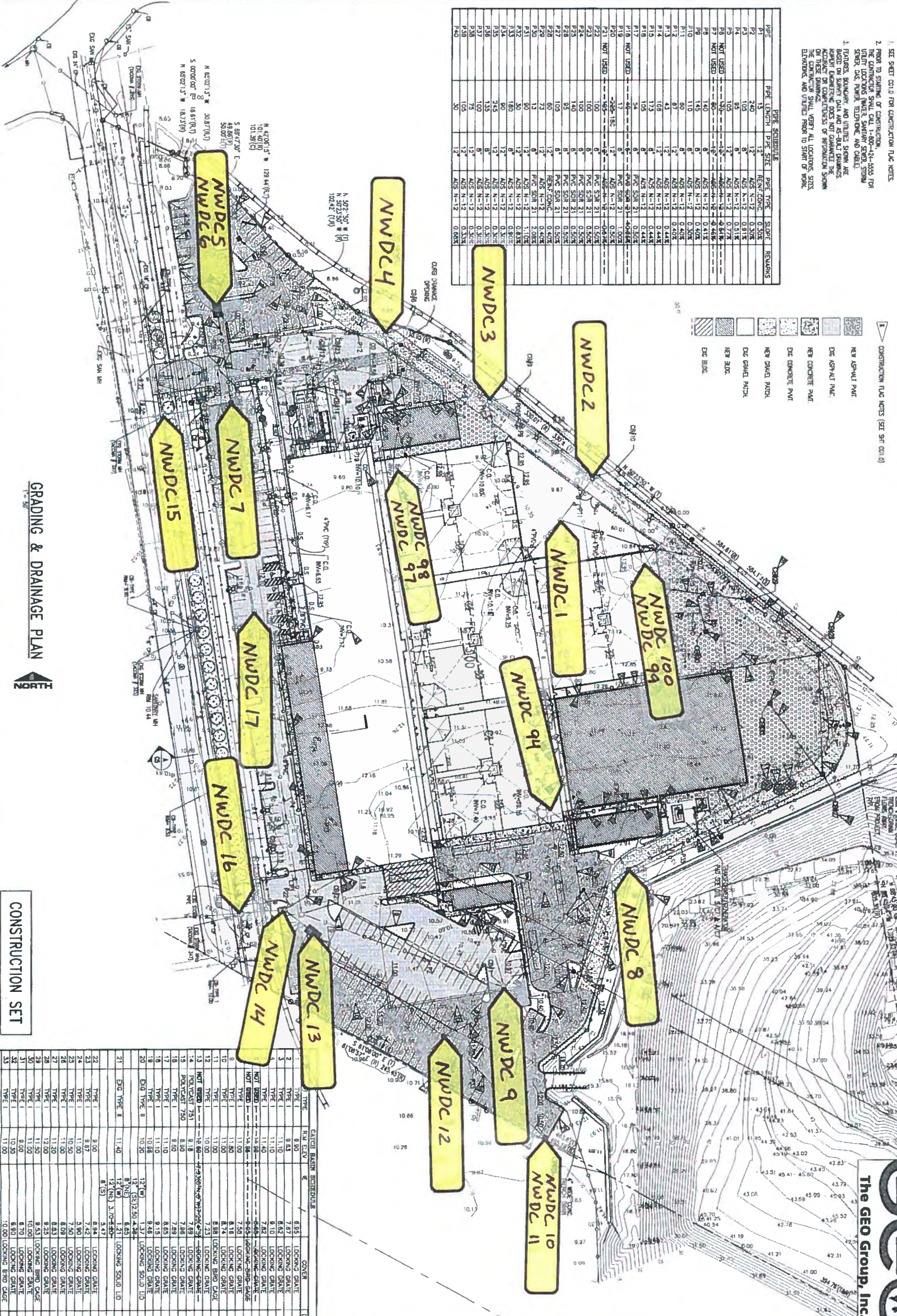
- SEE SHEET C01.0 FOR CONSTRUCTION FLAG NOTES.
- FOR TO EXISTING OF CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION, SIZE, AND DEPTH OF ALL UTILITIES (ELECTRIC, WATER, GAS, FIBER, TELEPHONE, AND CABLE).
- FEATURES, BOUNDARY AND UTILITIES SHOWN ARE BASED ON SURVEY DATA AND AS-BUILT DRAWINGS. RUPERT ENGINEERING DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF INFORMATION SHOWN. THE CONTRACTOR SHALL VERIFY ALL LOCATIONS, SIZES, DEPTHS, AND UTILITIES PRIOR TO START OF WORK.

LEGEND

- CONSTRUCTION FLAG NOTES (SEE SHEET C01.0)
- NEW ASPHALT PAVT
- EXIST ASPHALT PAVT
- NEW CONCRETE PAVT
- EXIST CONCRETE PAVT
- NEW GRAVEL PADCH
- EXIST GRAVEL PADCH
- NEW SAND
- EXIST SAND
- EXIST BLDG

PIPE	PIPE LENGTH	PIPE SIZE	PIPE TYPE	SLOPE	REMARKS
P1	13	12"	REIN. CONC.	0.50%	
P2	240	12"	AOS N-12	0.50%	
P3	103	8"	AOS N-12	0.81%	
P4	15	12"	AOS N-12	0.51%	
P5	15	12"	AOS N-12	0.71%	
P6	140	8"	AOS N-12	0.44%	
P7	140	8"	AOS N-12	0.44%	
P8	145	8"	AOS N-12	0.40%	
P9	110	8"	AOS N-12	0.50%	
P10	80	8"	AOS N-12	0.40%	
P11	87	12"	AOS N-12	0.40%	
P12	169	12"	AOS N-12	0.44%	
P13	173	8"	AOS N-12	0.44%	
P14	109	8"	AOS N-12	0.44%	
P15	54	8"	PVC SDR 21	0.50%	
P16	54	8"	PVC SDR 21	0.50%	
P17	54	8"	PVC SDR 21	0.50%	
P18	NOT USED				
P19	NOT USED				
P20	NOT USED				
P21	NOT USED				
P22	100	8"	PVC SDR 21	0.50%	
P23	100	8"	PVC SDR 21	0.50%	
P24	100	8"	PVC SDR 21	0.50%	
P25	140	8"	PVC SDR 21	0.50%	
P26	95	8"	PVC SDR 21	0.50%	
P27	109	8"	PVC SDR 21	0.50%	
P28	80	12"	REIN. CONC.	0.40%	
P29	73	12"	AOS N-12	0.40%	
P30	50	12"	AOS N-12	1.10%	
P31	50	12"	AOS N-12	0.83%	
P32	50	12"	AOS N-12	0.83%	
P33	180	8"	AOS N-12	0.80%	
P34	243	12"	AOS N-12	0.30%	
P35	80	12"	AOS N-12	0.30%	
P36	135	8"	AOS N-12	0.30%	
P37	109	12"	AOS N-12	0.33%	
P38	110	12"	AOS N-12	0.33%	
P39	50	12"	AOS N-12	0.66%	
P40	50	12"	AOS N-12	0.66%	

SEC 3 & 4, TWP. 20 N, RGE. 3 E, W.M.



GRADING & DRAINAGE PLAN

CONSTRUCTION SET



Rupert Engineering, Inc.
CONSULTING ENGINEERS/CIVIL AND STRUCTURAL
1519 West Valley Highway North, Suite 101
Auburn, WA 98001
TEL (253) 833-7776 FAX (253) 839-2168

GRADING & DRAINAGE NORTHWEST DETENTION CENTER PLAN
553 BED FACILITY EXPANSION
1623 EAST J STREET TACOMA, WA

REVISIONS

NO.	DESCRIPTION	DATE
1	PLAN REVISION	10/27/08
2	CONSTRUCTION SET	2/16/09

NO.	DATE	BY	CHECKED	APP. NO.	SHEET NO.
1	2/16/09	MC	DEB	08063	C3



STATE OF WASHINGTON
RUPERT ENGINEERING, INC.
REGISTERED PROFESSIONAL ENGINEER
NO. 12345
EXPIRES 12/31/2010



City of Tacoma
Environmental Services

Memorandum

TO: Chris Burke, Sr. Environmental Specialist

FROM: Christopher L. Getchell, Asst. Division Manager, Env. Services Laboratory

SUBJECT: Miscellaneous WBS Element ENV-03003-04-01:

DATE: February 8, 2011

Attached are the analytical results for the samples collected from the NWDC Source Tracing on January 13 and 18, 2011. The samples were analyzed for Semi-Volatile Organics (PAH and Phthalate Compounds) and Total Metals.

Due to the small quantity of sample available the Total Solids were not performed on the samples. Results are reported on a wet weight basis.

The Copper values for these samples have been qualified as estimated based on the Duplicate Sample Analysis.

The Copper and Lead results were qualified as estimated for these samples based on spike recoveries outside of limits.

The Environmental Services Laboratory analyzed the samples. A detailed Data Quality Review report was prepared and is attached for your review.

If you have any questions concerning this data, call me at (253) 502-2130. Please note that the sample associated with this report will be discarded six months from the date of this report, unless notified otherwise.

A handwritten signature in black ink, appearing to read "Christopher L. Getchell", written over a horizontal line.


Christopher L. Getchell
Assistant Division Manager
Environmental Services Laboratory

CLG:GP

L:\LABGROUP\QCGROUP\Shared\2011\2011-00406.doc

Fs005\lab_reports\SurfaceWater\Miscellaneous\2011\NWDetCenter_2011_02.pdf

Data Quality Review Report

TO: Christopher L. Getchell, Asst. Division Manager
FROM: Gregory Perez, Senior Environmental Laboratory Analyst 
DATE: February 8, 2011

SAMPLES

This report concerns the following samples associated with **Miscellaneous WBS Element ENV-03003-04-01**:

<u>Sample Description</u>	<u>Lab#</u>	<u>Date Sampled</u>
NWDC 92	2011-00595	1/18/2011
NWDC 93	2011-00406	1/13/2011
NWDC 94	2011-00407	1/13/2011
NWDC 96	2011-00408	1/13/2011
NWDC 97	2011-00409	1/13/2011
NWDC 98	2011-00410	1/13/2011
NWDC 99	2011-00411	1/13/2011
NWDC 100	2011-00412	1/13/2011
NWDC 95	2011-00413	1/13/2011

HOLDING TIMES

The samples were extracted within the 14-day sample collection-to-extraction holding time and analyzed within 7 days for Total Solids, 40 days for Semi-Volatile Organics, and 180 days for Total Metals.

METHODS

The samples were analyzed according to Method 8270D for Semi-Volatile Organics and 6020A for Total Metals.

METHOD DETECTION LIMITS

All analytes are reported to the Method Detection Limit (MDL). Values greater than the MDL and less than the Practical Quantitation Limit (reporting limit or PQL) are reported for your information. The value is qualified as estimated (J) because it is not as precise at this concentration as values reported greater than the PQL.

METHOD BLANKS

Method Preparation blanks were analyzed at the required frequency. The concentrations of these blanks were less than 1/10th the amount found in the samples or less than the detection limits.

SURROGATES

Two surrogates were added to the samples prior to extraction for Semi-Volatile Organics. The recoveries for the Semi-Volatile Organics were within the laboratory's control limits for all compounds, except for the following:

<u>Lab#</u>	<u>Analyte</u>	<u>Result</u>	<u>Limits</u>
NWDC 93	Terphenyl-d14	129.2 *	49-128

No data is qualified on just one surrogate recovery outside limits.

LABORATORY CONTROL SAMPLES

Laboratory Control Samples (LCS) monitor the performance of each step of the analysis, including sample preparation. The LCS recoveries were within the laboratory established control limits.

DUPLICATE SAMPLE ANALYSIS

Duplicate samples were analyzed for Total Solids and Total Metals. All duplicate results had relative percent differences (RPD) within laboratory-established limits of less than 35%, **except for the following:**

<u>Lab#</u>	<u>Analyte</u>	<u>Result</u>	<u>Limits</u>
NWDC 93	Copper	76.7 *	0-35

The Copper result for these samples have been qualified as estimated.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SAMPLE ANALYSIS

Matrix Spike analysis was performed for Total Metals. The recoveries ranged from 96 – 108% and were within the laboratory's limits of 70 -130% **except for the following:**

<u>Lab#</u>	<u>Analyte</u>	<u>Result</u>	<u>Limits</u>
2011-00409	Copper	36.4 *	75-125
	Lead	68.5 *	75-125
	Zinc	-126.8 *	75-125

The Copper and Lead results were qualified as estimated for these samples. Zinc was not qualified based on interference from high levels of the analyte in the sample.

Matrix Spike and Matrix Spike Duplicates were analyzed for Semi-Volatile Organics. The recoveries were within the Laboratory Control Limits except for the following:

<u>Lab#</u>	<u>Analyte</u>	<u>MS</u>	<u>MSD</u>	<u>Limits</u>
2011-00412	bis(2-Ethylhexyl)phthalate	-171.1 *	87.7	49-137
	Di-n-butylphthalate	-351.1 *	-151.7 *	62-122
	Diethylphthalate	37.5 *	-227.9 *	51-124

High Levels of the target analytes interfered with matrix spike recoveries. No data was qualified based on these QC failures.

INTERNAL STANDARDS

Performance of the Internal Standards (IS) monitors GC/MS sensitivity and stability during each analysis. Internal Standard areas in the samples must meet 50% to 200% when compared to the Continuing Calibration response and be within +/- 30 seconds from the Continuing Calibration retention time. The Internal Standards added to these samples met the method requirements for all samples.



City of Tacoma

Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421
Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2011-00412

Sample ID: NW DC 100

Sample Type: Sediment

Sample Collect Date: 1/13/2011

9:00

Sample Receipt Date: 1/13/2011

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>		<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
Metals								
Copper	1/24/2011	6010B	10.5	J	mg/Kg	8.5	1.6	7440-50-8
Lead	1/24/2011	6010B	32.0	J	mg/Kg	8.5	4.1	7439-92-1
Zinc	1/24/2011	6010B	3300		mg/Kg	42.4	3.3	7440-66-6
Semi-VOA								
2-Methylnaphthalene	2/3/2011	8270D	670	U	ug/Kg	960	670	91-57-6
Acenaphthene	2/3/2011	8270D	480	U	ug/Kg	960	480	83-32-9
Acenaphthylene	2/3/2011	8270D	380	U	ug/Kg	960	380	208-96-8
Anthracene	2/3/2011	8270D	290	U	ug/Kg	960	290	120-12-7
Benzo(a)anthracene	2/3/2011	8270D	480	U	ug/Kg	960	480	56-55-3
Benzo(a)pyrene	2/3/2011	8270D	870	U	ug/Kg	960	870	50-32-8
Benzo(b,k)fluoranthenes	2/3/2011	8270D	870	U	ug/Kg	1900	870	56832-73-6
Benzo(g,h,i)perylene	2/3/2011	8270D	870	U	ug/Kg	960	870	191-24-2
bis(2-Ethylhexyl)phthalate	2/4/2011	8270D	430000		ug/Kg	12000	6900	117-81-7
Butyl benzyl phthalate	2/3/2011	8270D	9300		ug/Kg	1200	690	85-68-7
Chrysene	2/3/2011	8270D	380	U	ug/Kg	960	380	218-01-9
Dibenz(a,h)anthracene	2/3/2011	8270D	1200	U	ug/Kg	1200	1200	53-70-3
Diethylphthalate	2/3/2011	8270D	20000		ug/Kg	960	480	84-66-2
Dimethyl phthalate	2/3/2011	8270D	380	U	ug/Kg	960	380	131-11-3
Di-n-butylphthalate	2/4/2011	8270D	360000		ug/Kg	12000	8100	84-74-2
Di-n-octyl phthalate	2/3/2011	8270D	1100	U	ug/Kg	1100	1100	117-84-0
Fluoranthene	2/3/2011	8270D	380	U	ug/Kg	960	380	206-44-0
Fluorene	2/3/2011	8270D	290	U	ug/Kg	960	290	86-73-7
Indeno(1,2,3-c,d)pyrene	2/3/2011	8270D	960	U	ug/Kg	960	960	193-39-5
Naphthalene	2/3/2011	8270D	770	U	ug/Kg	960	770	91-20-3
Phenanthrene	2/3/2011	8270D	190	U	ug/Kg	960	190	85-01-8
Pyrene	2/3/2011	8270D	2900		ug/Kg	960	480	129-00-0



City of Tacoma

Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421
Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2011-00412

Sample ID: NW DC 100

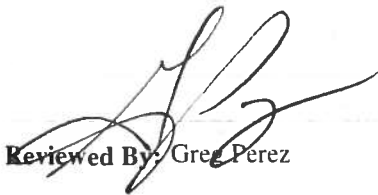
Sample Type: Sediment

Sample Collect Date: 1/13/2011

9:00

Sample Receipt Date: 1/13/2011

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
Flags: U:	The analyte was not detected at or above the reported value.						
UJ:	The analyte was not detected at or above the reported estimated result. See QC Report.						
NJ:	TIC There is evidence the analyte is present. The associated value is an estimate.						
J:	The analyte was positively identified. The associated value is an estimate. See QC Report.						
B:	The analyte was detected but is less than the Project Reporting Limit Goal.						
R:	The value is unusable.						



Reviewed By: Greg Perez

Thursday, February 10, 2011

Date



City of Tacoma

Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421
Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2011-00411

Sample ID: NW DC 99

Sample Type: Sediment

Sample Collect Date: 1/13/2011

9:05

Sample Receipt Date: 1/13/2011

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>		<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
Metals								
Copper	1/24/2011	6010B	93.0	J	mg/Kg	9.1	1.7	7440-50-8
Lead	1/24/2011	6010B	38.5	J	mg/Kg	9.1	4.4	7439-92-1
Zinc	1/24/2011	6010B	2440		mg/Kg	9.09	0.70	7440-66-6
Semi-VOA								
2-Methylnaphthalene	2/3/2011	8270D	670	U	ug/Kg	960	670	91-57-6
Acenaphthene	2/3/2011	8270D	480	U	ug/Kg	960	480	83-32-9
Acenaphthylene	2/3/2011	8270D	380	U	ug/Kg	960	380	208-96-8
Anthracene	2/3/2011	8270D	290	U	ug/Kg	960	290	120-12-7
Benzo(a)anthracene	2/3/2011	8270D	480	U	ug/Kg	960	480	56-55-3
Benzo(a)pyrene	2/3/2011	8270D	870	U	ug/Kg	960	870	50-32-8
Benzo(b,k)fluoranthenes	2/3/2011	8270D	870	U	ug/Kg	1900	870	56832-73-6
Benzo(g,h,i)perylene	2/3/2011	8270D	870	U	ug/Kg	960	870	191-24-2
bis(2-Ethylhexyl)phthalate	2/4/2011	8270D	330000		ug/Kg	23000	14000	117-81-7
Butyl benzyl phthalate	2/3/2011	8270D	580	U	ug/Kg	960	580	85-68-7
Chrysene	2/3/2011	8270D	380	U	ug/Kg	960	380	218-01-9
Dibenz(a,h)anthracene	2/3/2011	8270D	1200	U	ug/Kg	1200	1200	53-70-3
Diethylphthalate	2/3/2011	8270D	480	U	ug/Kg	960	480	84-66-2
Dimethyl phthalate	2/3/2011	8270D	380	U	ug/Kg	960	380	131-11-3
Di-n-butylphthalate	2/3/2011	8270D	26000		ug/Kg	960	670	84-74-2
Di-n-octyl phthalate	2/3/2011	8270D	1100	U	ug/Kg	1100	1100	117-84-0
Fluoranthene	2/3/2011	8270D	380	U	ug/Kg	960	380	206-44-0
Fluorene	2/3/2011	8270D	290	U	ug/Kg	960	290	86-73-7
Indeno(1,2,3-c,d)pyrene	2/3/2011	8270D	960	U	ug/Kg	960	960	193-39-5
Naphthalene	2/3/2011	8270D	770	U	ug/Kg	960	770	91-20-3
Phenanthrene	2/3/2011	8270D	190	U	ug/Kg	960	190	85-01-8
Pyrene	2/3/2011	8270D	2200		ug/Kg	960	480	129-00-0



City of Tacoma

Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421
Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2011-00411

Sample ID: NW DC 99

Sample Type: Sediment

Sample Collect Date: 1/13/2011

9:05

Sample Receipt Date: 1/13/2011

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
Flags: U:			The analyte was not detected at or above the reported value.				
UJ:			The analyte was not detected at or above the reported estimated result. See QC Report.				
NJ:			TIC There is evidence the analyte is present. The associated value is an estimate.				
J:			The analyte was positively identified. The associated value is an estimate. See QC Report.				
B:			The analyte was detected but is less than the Project Reporting Limit Goal.				
R:			The value is unusable.				

Reviewed By: Greg Perez

Thursday, February 10, 2011

Date



City of Tacoma

Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421
Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2011-00410

Sample ID: NW DC 98

Sample Type: Sediment

Sample Collect Date: 1/13/2011

9:20

Sample Receipt Date: 1/13/2011

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>		<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
Metals								
Copper	1/24/2011	6010B	11.3	J	mg/Kg	4.03	0.77	7440-50-8
Lead	1/24/2011	6010B	13.6	J	mg/Kg	4.0	1.9	7439-92-1
Zinc	1/24/2011	6010B	1220		mg/Kg	4.03	0.31	7440-66-6
Semi-VOA								
2-Methylnaphthalene	2/3/2011	8270D	690	U	ug/Kg	980	690	91-57-6
Acenaphthene	2/3/2011	8270D	490	U	ug/Kg	980	490	83-32-9
Acenaphthylene	2/3/2011	8270D	390	U	ug/Kg	980	390	208-96-8
Anthracene	2/3/2011	8270D	290	U	ug/Kg	980	290	120-12-7
Benzo(a)anthracene	2/3/2011	8270D	490	U	ug/Kg	980	490	56-55-3
Benzo(a)pyrene	2/3/2011	8270D	880	U	ug/Kg	980	880	50-32-8
Benzo(b,k)fluoranthenes	2/3/2011	8270D	880	U	ug/Kg	2000	880	56832-73-6
Benzo(g,h,i)perylene	2/3/2011	8270D	880	U	ug/Kg	980	880	191-24-2
bis(2-Ethylhexyl)phthalate	2/4/2011	8270D	460000		ug/Kg	24000	14000	117-81-7
Butyl benzyl phthalate	2/3/2011	8270D	1300		ug/Kg	980	590	85-68-7
Chrysene	2/3/2011	8270D	390	U	ug/Kg	980	390	218-01-9
Dibenz(a,h)anthracene	2/3/2011	8270D	1200	U	ug/Kg	1200	1200	53-70-3
Diethylphthalate	2/3/2011	8270D	490	U	ug/Kg	980	490	84-66-2
Dimethyl phthalate	2/3/2011	8270D	390	U	ug/Kg	980	390	131-11-3
Di-n-butylphthalate	2/4/2011	8270D	74000		ug/Kg	24000	16000	84-74-2
Di-n-octyl phthalate	2/3/2011	8270D	1100	U	ug/Kg	1100	1100	117-84-0
Fluoranthene	2/3/2011	8270D	390	U	ug/Kg	980	390	206-44-0
Fluorene	2/3/2011	8270D	290	U	ug/Kg	980	290	86-73-7
Indeno(1,2,3-c,d)pyrene	2/3/2011	8270D	980	U	ug/Kg	980	980	193-39-5
Naphthalene	2/3/2011	8270D	780	U	ug/Kg	980	780	91-20-3
Phenanthrene	2/3/2011	8270D	200	U	ug/Kg	980	200	85-01-8
Pyrene	2/3/2011	8270D	490	U	ug/Kg	980	490	129-00-0



City of Tacoma

Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421
Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2011-00410

Sample ID: NW DC 98


Sample Type: Sediment

Sample Collect Date: 1/13/2011

9:20

Sample Receipt Date: 1/13/2011

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
Flags: U:			The analyte was not detected at or above the reported value.				
UJ:			The analyte was not detected at or above the reported estimated result. See QC Report.				
NJ:			TIC There is evidence the analyte is present. The associated value is an estimate.				
J:			The analyte was positively identified. The associated value is an estimate. See QC Report.				
B:			The analyte was detected but is less than the Project Reporting Limit Goal.				
R:			The value is unusable.				



Reviewed By: Greg Perez

Thursday, February 10, 2011

Date



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Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421
Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2011-00409

Sample ID: NW DC 97

Sample Type: Sediment

Sample Collect Date: 1/13/2011

9:25

Sample Receipt Date: 1/13/2011

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>		<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
Metals								
Copper	1/24/2011	6010B	87.7	J	mg/Kg	9.8	1.9	7440-50-8
Lead	1/24/2011	6010B	75.6	J	mg/Kg	9.8	4.7	7439-92-1
Zinc	1/24/2011	6010B	2730		mg/Kg	9.80	0.75	7440-66-6
Semi-VOA								
2-Methylnaphthalene	2/3/2011	8270D	690	U	ug/Kg	990	690	91-57-6
Acenaphthene	2/3/2011	8270D	500	U	ug/Kg	990	500	83-32-9
Acenaphthylene	2/3/2011	8270D	400	U	ug/Kg	990	400	208-96-8
Anthracene	2/3/2011	8270D	300	U	ug/Kg	990	300	120-12-7
Benzo(a)anthracene	2/3/2011	8270D	500	U	ug/Kg	990	500	56-55-3
Benzo(a)pyrene	2/3/2011	8270D	890	U	ug/Kg	990	890	50-32-8
Benzo(b,k)fluoranthenes	2/3/2011	8270D	890	U	ug/Kg	2000	890	56832-73-6
Benzo(g,h,i)perylene	2/3/2011	8270D	890	U	ug/Kg	990	890	191-24-2
bis(2-Ethylhexyl)phthalate	2/4/2011	8270D	590000		ug/Kg	24000	14000	117-81-7
Butyl benzyl phthalate	2/3/2011	8270D	590	U	ug/Kg	990	590	85-68-7
Chrysene	2/3/2011	8270D	400	U	ug/Kg	990	400	218-01-9
Dibenz(a,h)anthracene	2/3/2011	8270D	1200	U	ug/Kg	1200	1200	53-70-3
Diethylphthalate	2/3/2011	8270D	500	U	ug/Kg	990	500	84-66-2
Dimethyl phthalate	2/3/2011	8270D	400	U	ug/Kg	990	400	131-11-3
Di-n-butylphthalate	2/3/2011	8270D	38000		ug/Kg	990	690	84-74-2
Di-n-octyl phthalate	2/3/2011	8270D	1100	U	ug/Kg	1100	1100	117-84-0
Fluoranthene	2/3/2011	8270D	400	U	ug/Kg	990	400	206-44-0
Fluorene	2/3/2011	8270D	300	U	ug/Kg	990	300	86-73-7
Indeno(1,2,3-c,d)pyrene	2/3/2011	8270D	990	U	ug/Kg	990	990	193-39-5
Naphthalene	2/3/2011	8270D	790	U	ug/Kg	990	790	91-20-3
Phenanthrene	2/3/2011	8270D	200	U	ug/Kg	990	200	85-01-8
Pyrene	2/3/2011	8270D	1200		ug/Kg	990	500	129-00-0



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Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2011-00409

Sample ID: NW DC 97

Sample Type: Sediment

Sample Collect Date: 1/13/2011

9:25

Sample Receipt Date: 1/13/2011

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
Flags: U:			The analyte was not detected at or above the reported value.				
UJ:			The analyte was not detected at or above the reported estimated result. See QC Report.				
NJ:			TIC There is evidence the analyte is present. The associated value is an estimate.				
J:			The analyte was positively identified. The associated value is an estimate. See QC Report.				
B:			The analyte was detected but is less than the Project Reporting Limit Goal.				
R:			The value is unusable.				



Reviewed By: Greg Pérez

Thursday, February 10, 2011

Date.



City of Tacoma

Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421
Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2011-00408

Sample ID: NW DC 96

Sample Type: Sediment

Sample Collect Date: 1/13/2011

9:35

Sample Receipt Date: 1/13/2011

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>		<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
Metals								
Copper	1/24/2011	6010B	15.5	J	mg/Kg	4.90	0.93	7440-50-8
Lead	1/24/2011	6010B	6.6	J	mg/Kg	4.9	2.4	7439-92-1
Zinc	1/24/2011	6010B	166		mg/Kg	4.90	0.38	7440-66-6
Semi-VOA								
2-Methylnaphthalene	2/3/2011	8270D	690	U	ug/Kg	990	690	91-57-6
Acenaphthene	2/3/2011	8270D	500	U	ug/Kg	990	500	83-32-9
Acenaphthylene	2/3/2011	8270D	400	U	ug/Kg	990	400	208-96-8
Anthracene	2/3/2011	8270D	300	U	ug/Kg	990	300	120-12-7
Benzo(a)anthracene	2/3/2011	8270D	500	U	ug/Kg	990	500	56-55-3
Benzo(a)pyrene	2/3/2011	8270D	890	U	ug/Kg	990	890	50-32-8
Benzo(b,k)fluoranthenes	2/3/2011	8270D	890	U	ug/Kg	2000	890	56832-73-6
Benzo(g,h,i)perylene	2/3/2011	8270D	890	U	ug/Kg	990	890	191-24-2
bis(2-Ethylhexyl)phthalate	2/4/2011	8270D	270000		ug/Kg	12000	7100	117-81-7
Butyl benzyl phthalate	2/3/2011	8270D	3300		ug/Kg	990	590	85-68-7
Chrysene	2/3/2011	8270D	400	U	ug/Kg	990	400	218-01-9
Dibenz(a,h)anthracene	2/3/2011	8270D	1200	U	ug/Kg	1200	1200	53-70-3
Diethylphthalate	2/3/2011	8270D	500	U	ug/Kg	990	500	84-66-2
Dimethyl phthalate	2/3/2011	8270D	11000		ug/Kg	990	400	131-11-3
Di-n-butylphthalate	2/3/2011	8270D	16000		ug/Kg	990	690	84-74-2
Di-n-octyl phthalate	2/3/2011	8270D	1100	U	ug/Kg	1100	1100	117-84-0
Fluoranthene	2/3/2011	8270D	400	U	ug/Kg	990	400	206-44-0
Fluorene	2/3/2011	8270D	300	U	ug/Kg	990	300	86-73-7
Indeno(1,2,3-c,d)pyrene	2/3/2011	8270D	990	U	ug/Kg	990	990	193-39-5
Naphthalene	2/3/2011	8270D	790	U	ug/Kg	990	790	91-20-3
Phenanthrene	2/3/2011	8270D	200	U	ug/Kg	990	200	85-01-8
Pyrene	2/3/2011	8270D	500	U	ug/Kg	990	500	129-00-0



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Lab#: 2011-00408

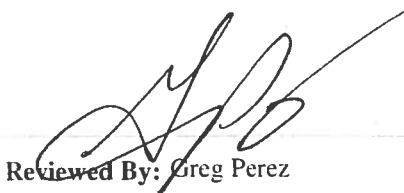
Sample ID: NW DC 96

Sample Type: Sediment

Sample Collect Date: 1/13/2011 9:35

Sample Receipt Date: 1/13/2011

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
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	R:	The value is unusable.					



Reviewed By: Greg Perez

Thursday, February 10, 2011

Date



City of Tacoma

Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421
Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2011-00413

Sample ID: NW DC 95

Sample Type: Surface Water

Sample Collect Date: 1/13/2011

9:40

Sample Receipt Date: 1/13/2011

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
ICP-MS							
Copper	1/25/2011	6020A	191	ug/L	2.50	0.36	7440-50-8
Lead	1/25/2011	6020A	17.1	ug/L	2.50	0.12	7439-92-1
Zinc	1/25/2011	6020A	1520	ug/L	5.00	0.95	7440-66-6
Semi-VOA							
2-Methylnaphthalene	2/3/2011	8270D	14 U	ug/L	100	14	91-57-6
Acenaphthene	2/3/2011	8270D	12 U	ug/L	100	12	83-32-9
Acenaphthylene	2/3/2011	8270D	14 U	ug/L	100	14	208-96-8
Anthracene	2/3/2011	8270D	8.0 U	ug/L	100	8.0	120-12-7
Benzo(a)anthracene	2/3/2011	8270D	10 U	ug/L	100	10	56-55-3
Benzo(a)pyrene	2/3/2011	8270D	8.0 U	ug/L	100	8.0	50-32-8
Benzo(b,k)fluoranthenes	2/3/2011	8270D	20 U	ug/L	100	20	56832-73-6
Benzo(g,h,i)perylene	2/3/2011	8270D	10 U	ug/L	100	10	191-24-2
bis(2-Ethylhexyl)phthalate	2/3/2011	8270D	930	ug/L	400	36	117-81-7
Butyl benzyl phthalate	2/3/2011	8270D	33 J	ug/L	100	14	85-68-7
Chrysene	2/3/2011	8270D	10 U	ug/L	100	10	218-01-9
Dibenz(a,h)anthracene	2/3/2011	8270D	12 U	ug/L	100	12	53-70-3
Diethylphthalate	2/3/2011	8270D	12 U	ug/L	100	12	84-66-2
Dimethyl phthalate	2/3/2011	8270D	6.0 U	ug/L	100	6.0	131-11-3
Di-n-butylphthalate	2/3/2011	8270D	570	ug/L	100	6.0	84-74-2
Di-n-Octyl phthalate	2/3/2011	8270D	22 U	ug/L	100	22	117-84-0
Fluoranthene	2/3/2011	8270D	10 U	ug/L	100	10	206-44-0
Fluorene	2/3/2011	8270D	10 U	ug/L	100	10	86-73-7
Indeno(1,2,3-c,d)pyrene	2/3/2011	8270D	12 U	ug/L	100	12	193-39-5
Naphthalene	2/3/2011	8270D	16 U	ug/L	100	16	91-20-3
Phenanthrene	2/3/2011	8270D	10 U	ug/L	100	10	85-01-8
Pyrene	2/3/2011	8270D	16 U	ug/L	100	16	129-00-0



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Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421
Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2011-00413

Sample ID: NW DC 95


Sample Type: Surface Water

Sample Collect Date: 1/13/2011

9:40

Sample Receipt Date: 1/13/2011

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
Flags: U:	The analyte was not detected at or above the reported value.						
UJ:	The analyte was not detected at or above the reported estimated result. See QC Report.						
NJ:	TIC There is evidence the analyte is present. The associated value is an estimate.						
J:	The analyte was positively identified. The associated value is an estimate. See QC Report.						
B:	The analyte was detected but is less than the Project Reporting Limit Goal.						
R:	The value is unusable.						



Reviewed By: Greg Perez

Thursday, February 10, 2011

Date



City of Tacoma

Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421
Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2011-00407

Sample ID: NW DC 94

Sample Type: Sediment

Sample Collect Date: 1/13/2011

9:50

Sample Receipt Date: 1/13/2011

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>		<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
Metals								
Copper	1/24/2011	6010B	165	J	mg/Kg	8.8	1.7	7440-50-8
Lead	1/24/2011	6010B	70.4	J	mg/Kg	8.8	4.2	7439-92-1
Zinc	1/24/2011	6010B	4670		mg/Kg	43.9	3.4	7440-66-6
Semi-VOA								
2-Methylnaphthalene	2/3/2011	8270D	650	U	ug/Kg	930	650	91-57-6
Acenaphthene	2/3/2011	8270D	460	U	ug/Kg	930	460	83-32-9
Acenaphthylene	2/3/2011	8270D	370	U	ug/Kg	930	370	208-96-8
Anthracene	2/3/2011	8270D	280	U	ug/Kg	930	280	120-12-7
Benzo(a)anthracene	2/3/2011	8270D	460	U	ug/Kg	930	460	56-55-3
Benzo(a)pyrene	2/3/2011	8270D	830	U	ug/Kg	930	830	50-32-8
Benzo(b,k)fluoranthenes	2/3/2011	8270D	830	U	ug/Kg	1900	830	56832-73-6
Benzo(g,h,i)perylene	2/3/2011	8270D	830	U	ug/Kg	930	830	191-24-2
bis(2-Ethylhexyl)phthalate	2/4/2011	8270D	720000		ug/Kg	22000	13000	117-81-7
Butyl benzyl phthalate	2/3/2011	8270D	560	U	ug/Kg	930	560	85-68-7
Chrysene	2/3/2011	8270D	370	U	ug/Kg	930	370	218-01-9
Dibenz(a,h)anthracene	2/3/2011	8270D	1100	U	ug/Kg	1100	1100	53-70-3
Diethylphthalate	2/3/2011	8270D	460	U	ug/Kg	930	460	84-66-2
Dimethyl phthalate	2/3/2011	8270D	370	U	ug/Kg	930	370	131-11-3
Di-n-butylphthalate	2/4/2011	8270D	65000		ug/Kg	22000	16000	84-74-2
Di-n-octyl phthalate	2/3/2011	8270D	1000	U	ug/Kg	1000	1000	117-84-0
Fluoranthene	2/3/2011	8270D	370	U	ug/Kg	930	370	206-44-0
Fluorene	2/3/2011	8270D	280	U	ug/Kg	930	280	86-73-7
Indeno(1,2,3-c,d)pyrene	2/3/2011	8270D	930	U	ug/Kg	930	930	193-39-5
Naphthalene	2/3/2011	8270D	740	U	ug/Kg	930	740	91-20-3
Phenanthrene	2/3/2011	8270D	190	U	ug/Kg	930	190	85-01-8
Pyrene	2/3/2011	8270D	460	U	ug/Kg	930	460	129-00-0



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Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421
Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2011-00407

Sample ID: NW DC 94

Sample Type: Sediment

Sample Collect Date: 1/13/2011

9:50

Sample Receipt Date: 1/13/2011

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
Flags:	U:	The analyte was not detected at or above the reported value.					
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	J:	The analyte was positively identified. The associated value is an estimate. See QC Report.					
	B:	The analyte was detected but is less than the Project Reporting Limit Goal.					
	R:	The value is unusable.					

Reviewed By: Greg Perez

Thursday, February 10, 2011

Date



City of Tacoma

Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421
Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2011-00406

Sample ID: NW DC 93

Sample Type: Sediment

Sample Collect Date: 1/13/2011

10:00

Sample Receipt Date: 1/13/2011

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>		<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
Metals								
Copper	1/24/2011	6010B	6.31	J	mg/Kg	4.90	0.93	7440-50-8
Lead	1/24/2011	6010B	2.6	J	mg/Kg	4.9	2.4	7439-92-1
Zinc	1/24/2011	6010B	7.10		mg/Kg	4.90	0.38	7440-66-6
Semi-VOA								
2-Methylnaphthalene	2/3/2011	8270D	690	U	ug/Kg	980	690	91-57-6
Acenaphthene	2/3/2011	8270D	490	U	ug/Kg	980	490	83-32-9
Acenaphthylene	2/3/2011	8270D	390	U	ug/Kg	980	390	208-96-8
Anthracene	2/3/2011	8270D	290	U	ug/Kg	980	290	120-12-7
Benzo(a)anthracene	2/3/2011	8270D	490	U	ug/Kg	980	490	56-55-3
Benzo(a)pyrene	2/3/2011	8270D	880	U	ug/Kg	980	880	50-32-8
Benzo(b,k)fluoranthenes	2/3/2011	8270D	880	U	ug/Kg	2000	880	56832-73-6
Benzo(g,h,i)perylene	2/3/2011	8270D	880	U	ug/Kg	980	880	191-24-2
bis(2-Ethylhexyl)phthalate	2/4/2011	8270D	30000		ug/Kg	980	590	117-81-7
Butyl benzyl phthalate	2/3/2011	8270D	590	U	ug/Kg	980	590	85-68-7
Chrysene	2/3/2011	8270D	390	U	ug/Kg	980	390	218-01-9
Dibenz(a,h)anthracene	2/3/2011	8270D	1200	U	ug/Kg	1200	1200	53-70-3
Diethylphthalate	2/3/2011	8270D	490	U	ug/Kg	980	490	84-66-2
Dimethyl phthalate	2/3/2011	8270D	390	U	ug/Kg	980	390	131-11-3
Di-n-butylphthalate	2/3/2011	8270D	5900		ug/Kg	980	690	84-74-2
Di-n-octyl phthalate	2/3/2011	8270D	1100	U	ug/Kg	1100	1100	117-84-0
Fluoranthene	2/3/2011	8270D	390	U	ug/Kg	980	390	206-44-0
Fluorene	2/3/2011	8270D	290	U	ug/Kg	980	290	86-73-7
Indeno(1,2,3-c,d)pyrene	2/3/2011	8270D	980	U	ug/Kg	980	980	193-39-5
Naphthalene	2/3/2011	8270D	780	U	ug/Kg	980	780	91-20-3
Phenanthrene	2/3/2011	8270D	200	U	ug/Kg	980	200	85-01-8
Pyrene	2/3/2011	8270D	490	U	ug/Kg	980	490	129-00-0



City of Tacoma

Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421
Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2011-00406


Sample ID: NW DC 93

Sample Type: Sediment

Sample Collect Date: 1/13/2011 10:00

Sample Receipt Date: 1/13/2011

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
Flags:	U:	The analyte was not detected at or above the reported value.					
	UJ:	The analyte was not detected at or above the reported estimated result. See QC Report.					
	NJ:	TIC There is evidence the analyte is present. The associated value is an estimate.					
	J:	The analyte was positively identified. The associated value is an estimate. See QC Report.					
	B:	The analyte was detected but is less than the Project Reporting Limit Goal.					
	R:	The value is unusable.					


Reviewed By: Greg Perez

Thursday, February 10, 2011

Date



City of Tacoma

Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421
Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2011-00595

Sample ID: NW DC 92

Sample Type: Sediment

Sample Collect Date: 1/18/2011

15:40

Sample Receipt Date: 1/18/2011

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>		<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
Metals								
Copper	1/25/2011	6010B	0.99	J	mg/Kg	4.72	0.90	7440-50-8
Lead	1/25/2011	6010B	3.0	J	mg/Kg	4.7	2.3	7439-92-1
Zinc	1/25/2011	6010B	2.19	J	mg/Kg	4.72	0.36	7440-66-6
Semi-VOA								
2-Methylnaphthalene	2/3/2011	8270D	640	U	ug/Kg	910	640	91-57-6
Acenaphthene	2/3/2011	8270D	450	U	ug/Kg	910	450	83-32-9
Acenaphthylene	2/3/2011	8270D	360	U	ug/Kg	910	360	208-96-8
Anthracene	2/3/2011	8270D	270	U	ug/Kg	910	270	120-12-7
Benzo(a)anthracene	2/3/2011	8270D	450	U	ug/Kg	910	450	56-55-3
Benzo(a)pyrene	2/3/2011	8270D	820	U	ug/Kg	910	820	50-32-8
Benzo(b,k)fluoranthenes	2/3/2011	8270D	820	U	ug/Kg	1800	820	56832-73-6
Benzo(g,h,i)perylene	2/3/2011	8270D	820	U	ug/Kg	910	820	191-24-2
bis(2-Ethylhexyl)phthalate	2/4/2011	8270D	550	U	ug/Kg	910	550	117-81-7
Butyl benzyl phthalate	2/3/2011	8270D	550	U	ug/Kg	910	550	85-68-7
Chrysene	2/3/2011	8270D	360	U	ug/Kg	910	360	218-01-9
Dibenz(a,h)anthracene	2/3/2011	8270D	1100	U	ug/Kg	1100	1100	53-70-3
Diethylphthalate	2/3/2011	8270D	450	U	ug/Kg	910	450	84-66-2
Dimethyl phthalate	2/3/2011	8270D	360	U	ug/Kg	910	360	131-11-3
Di-n-butylphthalate	2/3/2011	8270D	640	U	ug/Kg	910	640	84-74-2
Di-n-octyl phthalate	2/3/2011	8270D	1000	U	ug/Kg	1000	1000	117-84-0
Fluoranthene	2/3/2011	8270D	360	U	ug/Kg	910	360	206-44-0
Fluorene	2/3/2011	8270D	270	U	ug/Kg	910	270	86-73-7
Indeno(1,2,3-c,d)pyrene	2/3/2011	8270D	910	U	ug/Kg	910	910	193-39-5
Naphthalene	2/3/2011	8270D	730	U	ug/Kg	910	730	91-20-3
Phenanthrene	2/3/2011	8270D	180	U	ug/Kg	910	180	85-01-8
Pyrene	2/3/2011	8270D	450	U	ug/Kg	910	450	129-00-0



City of Tacoma

Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421
Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2011-00595

Sample ID: NW DC 92


Sample Type: Sediment

Sample Collect Date: 1/18/2011

15:40

Sample Receipt Date: 1/18/2011

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
Flags: U:	The analyte was not detected at or above the reported value.						
UJ:	The analyte was not detected at or above the reported estimated result. See QC Report.						
NJ:	TIC There is evidence the analyte is present. The associated value is an estimate.						
J:	The analyte was positively identified. The associated value is an estimate. See QC Report.						
B:	The analyte was detected but is less than the Project Reporting Limit Goal.						
R:	The value is unusable.						



Reviewed By: Greg Perez

Thursday, February 10, 2011

Date

City of Tacoma

Environmental Services Laboratory
2201 Portland Ave
Tacoma, WA 98421
Phone: (253)502-2130 Fax: (253)502-2170

INVOICE

Date: 10-Feb-11

Ship To: Stormwater Investigation
Science and Engineering Division
326 East D Street.

Tacoma, WA 98421

Bill To:

Project:
SAP#: 521400

Lab#	Sample ID
2011-00407	NW DC 94

Test Group Name	Test Group Fee	PrepFee	Unit Price
ICP metals in soil	\$66.00	\$15.00	\$81.00
BNA	\$250.00	\$0.00	\$250.00

SubTotal Test Group Fees: \$331.00
Sample Collection Fee: \$0.00
QC Review Fee: \$10.00
Rush Surcharge Percent: 0
Discount Percent: 0

Sample Total: \$341.00

Total For All Samples:

~~\$341.00~~

\$238.7



Chain of Custody Record

Page 1 of 1

SAP Accounting		Project Name				Analysis / # of Containers			Samples Sent to:		
Lab #	Date	Time	Matrix	Grab	Composite	Sample ID	Total Containers	Analysis	Containers	Remarks	
Samplers (Print) T. MILLER, J. SUNICH, K. FREMONT NWDC SOURCE TRACING											
1	0412	1/13/11	0900	SOLID	X	NWDC100	1	TOTAL PHTHALATES TOTAL PHTHALATES Zn, Pb, Cu	X	PRIORITIES: PHTHALATES Zn Pb Cu PAH'S	
2	0411	1	0905			NWDC99					
3	0410	1	0920			NWDC98					
4	0409	1	0925			NWDC97					
5	0408	1	0935			NWDC96					
6	0413	1	0940	WATER		NWDC95					
7	0407	1	0950	SOLID		NWDC94					
8	0406	1	1000	SOLID		NWDC93					
9											
10											
11										* SOME MATERIAL MAY BE EXTREMELY DEHP CONTAMINATED	
12											
13										SAMPLES IN COOLER	
14											
15											
16											
Relinquished By (Signature):		Date/Time		Received By (Signature):		Date/Time		Relinquished By (Signature):		Date/Time	
<i>T. Miller</i>		1/13/11		<i>ANA 1/13/11</i>		1050		<i>ANA 1/13/11</i>		1200	
Relinquished By (Signature):		Date/Time		Received for Analysis By (Signature):		Date/Time		Received for Laboratory By (Signature):		Date/Time	
<i>T. Miller</i>		1050		<i>ANA 1/13/11</i>		1050		<i>ANA 1/13/11</i>		1200	
								<i>Bill Esmeier</i>			

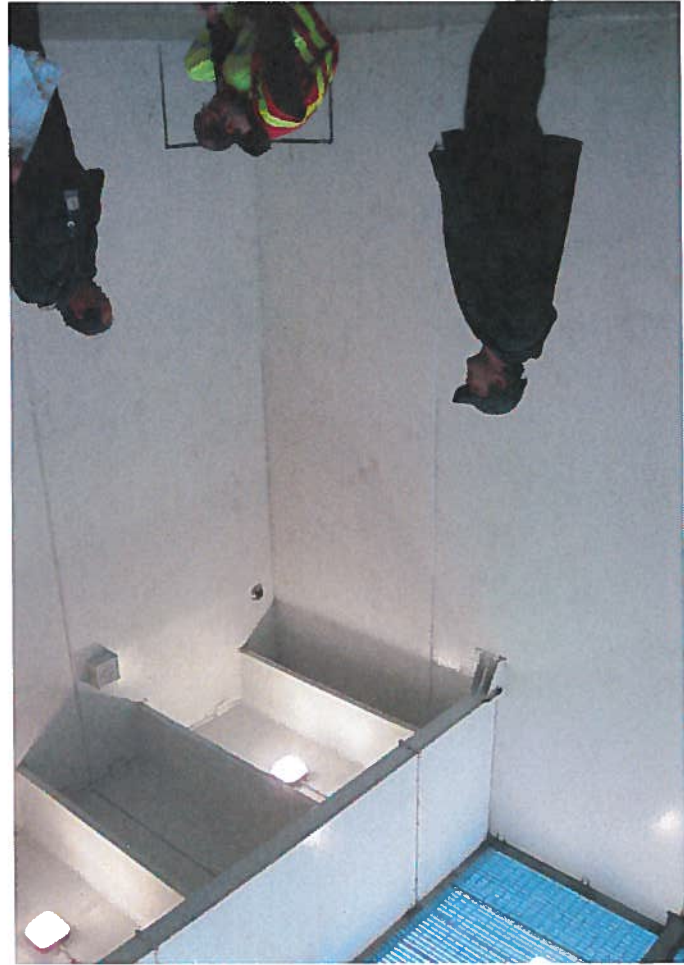


Chain of Custody Record

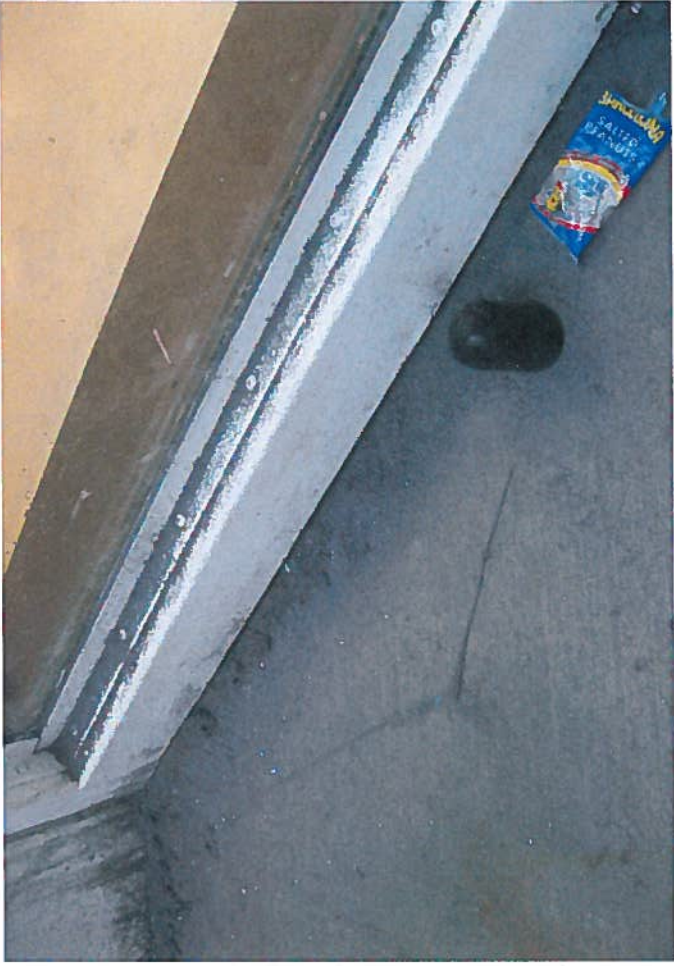
Send Results & Invoice to:
Environmental Services Laboratory
326 East D Street
Tacoma, WA 98421
(253) 502-2130
PO#:

Page of

SAP Accounting		Project Name			Analysis/# of Containers					Samples Sent to:		
Lab #	Date	Time	Matrix	Grab	Composite	Sample ID	Total Containers	TOTAL PHTHALATES	TOTAL ZN, Pb, Cu	PARTS	PO#	Remarks
100595	1/18/11	1540	SOLID	X		NWDC9Z	1	X	X	X		
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
Relinquished By (Signature):		Date/Time		Received By (Signature):		Date/Time		Received for Laboratory By (Signature):		Date/Time		
<i>[Signature]</i>		1540		<i>[Signature]</i>		1/18/11		<i>[Signature]</i>		1-18-2011		
Relinquished By (Signature):		Date/Time		Received for Analysis By (Signature):		Date/Time		Remarks		Date/Time		
<i>[Signature]</i>		1/18/11		<i>[Signature]</i>		1540		* CAUTION CAUSTIC		<i>[Signature]</i>		





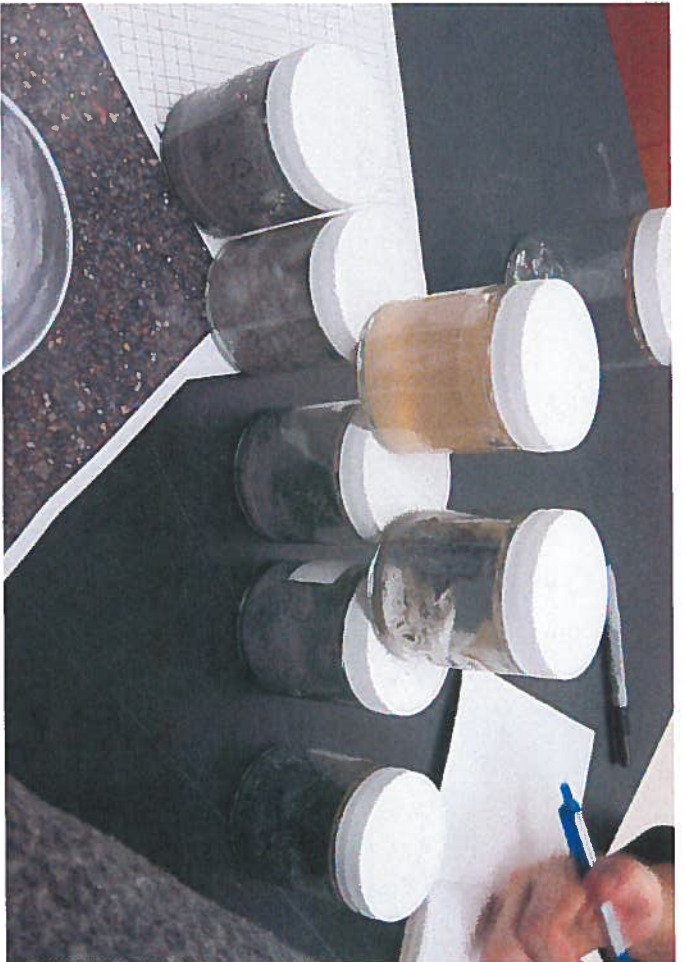
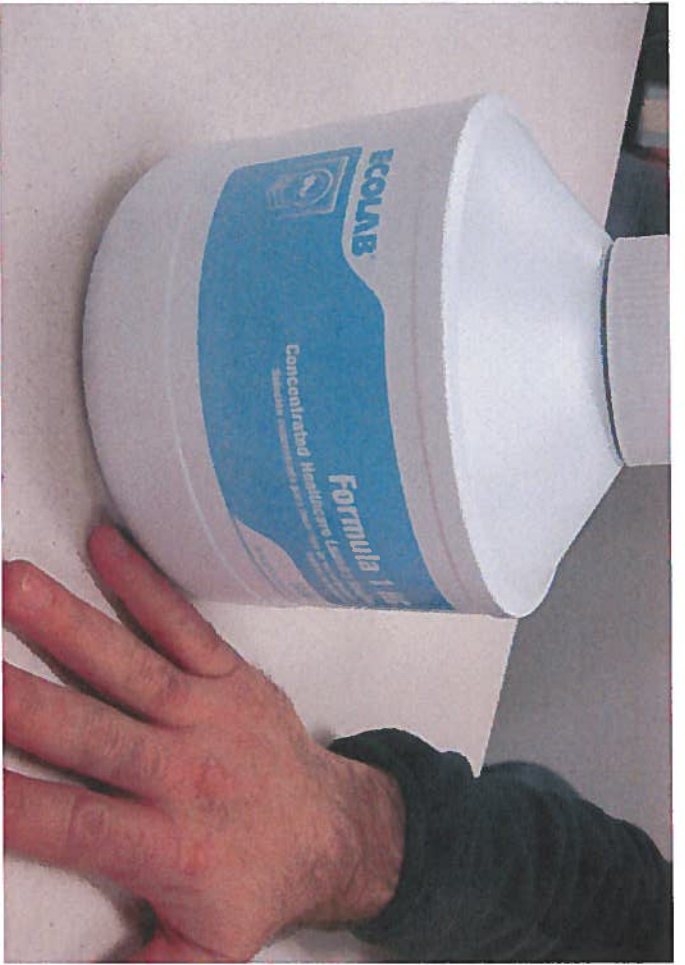


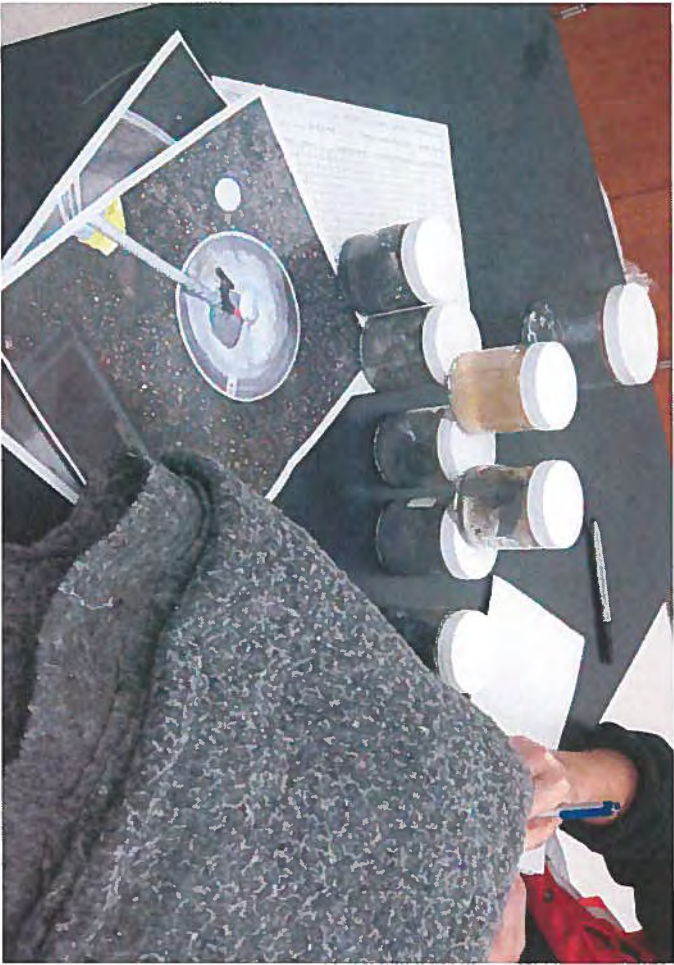














Field Report

To: Rick Fuller
CC:
From: Tony Miller
Date: December 21, 2010
Re: NWDC Phthalate Sampling June 2010

Background:

On June 24, 2010 Environmental Services (ES) performed a follow-up phthalate compound and PAH investigation at the Northwest Detention Center (NWDC), 1623 East J Street. The purpose of the investigation was to source-trace contaminants of concern that may impact the sediment and water quality in the Wheeler Osgood Waterway as part of the City of Tacoma's (COT) ongoing commitments to address any potential sediment re-contamination in the Thea Foss and Wheeler Osgood Waterways. The NWDC site has been identified as a potential point source of bis(2-ethylhexyl) phthalate (DEHP), as a result of earlier investigations conducted by ES in 2006, 2008, and December 2009.

In 2009 the private stormwater conveyance system was updated. This included the removal of holding ponds and the installation of Contech Filter Devices. The pond sediments contained high levels of DEHP in the 2006 and 2008 investigations. The December 2009 investigation showed that the installation of the Contech devices was helping to improve the water quality leaving the NWDC. The investigation showed elevated levels of DEHP in the Contech devices, however, the structures after the device had levels below background levels established by sediment trap data and sediment sampling within the Wheeler Osgood Waterway.

The goals of the June 2010 investigation were to:

- Identify the presence of "ongoing" contaminants of concern.
- Locate which parts of the private stormwater system were being impacted and where these contaminants are coming from. Determine if contaminants of concern were entering the City's storm system from the private system.

The City of Tacoma required the NWDC to clean their entire private stormwater system to remove any residual historic or construction generated contaminated sediments after the June 24th sampling investigation. Another sampling event was

scheduled for November 2010 to determine the post-cleaning impacts of sediment into the system and to potentially source-trace the origin of the DEHP in the stormwater sediments.

Field Actions:

June 24, 2010:

Tony Miller and John Sunich arrived at the NWDC at 14:00 to perform field sampling of the private stormwater system's sediments to further characterize the site for phthalates, metals and PAHs. After security check in procedures, various legs of the private stormwater system that had shown previous phthalate contamination were again sampled to better categorizing where the gross contamination is located and possible routes of entry into the private stormwater system. 14 samples were collected (see Site Map) and the following observations were noted:

- NWDC1C. (Formerly NWDC2) This catchbasin collects roof drains and represents the top of the north half of the storm system. It is located in the Gate 8 secured area. The sediment sample was collected at 14:40. The sample consisted of mostly grey mud, with some gravel.
- NWDC2C. Located to the North of NWDC1C outside of the gated area along the service road. The sediment sample was collected at 14:20. The sample consisted of grey mud with some gravel.
- NWDC3C. Located northwest of NWDC2C along the service road. The sediment sample was collected at 14:30. The sediment sample consisted of gray mud and clay with some gravel.
- NWDC4C. Located northwest of NWDC3C along the service road. The sediment sample was collected at 14:52. The sample consisted of gray mud and gravel, and large amounts of what appeared to be hair.
- NWDC5C. (Formerly NWDC12) Northern Contech Device. The sediment sample was collected at 15:02. The sample consisted of thick black mud.
- NWDC6C. Duplicate of NWDC5C.
- NWDC7C. (Formerly NWDC14) The first catchbasin after the Northern Contech Device. The sediment sample was collected at 15:22. The sample consisted of stratified mud, the surface layer was brown with black mud beneath. The sample also contained what appeared to be hair.
- NWDC8C. Northeastern most CB on southern leg along service road. The sediment sample was collected at 15:43. The sediment sample consisted of black mud, gray aggregate roofing material, wire sheathing, electrical tape, and had an organic smell.
- NWDC9C. (Formerly NWDC17) The sediment sample was collected at 15:50. The sample consisted of sand and gravel with a small amount of mud.
- NWDC10C. CB located at the start of the southernmost leg. The sediment sample was collected at 16:02. The sample consisted mainly of rock and gravel, very little mud.
- NWDC11C. Duplicate of NWDC10C.

- NWDC12C. CB located to the northwest of NWDC10C. The sediment sample was collected at 16:15. The sediment sample consisted of coarse sand.
- NWDC13C. (Formerly NWDC18) Southern Contech Device. The sediment sample was collected at 16:24. The sediment sample consisted of black mud, and had an anaerobic decomposition smell.
- NWDC14C. (Formerly NWDC20) First catchbasin located downstream of southern Contech Device. Inaccessible due to guard shack.
- NWDC15C. Point of compliance for northern system. Storm MH # 6775105. No sample taken, high tide and no sediment present in the City system.
- NWDC16C. Point of compliance for southern system. Storm MH # 6761714. No sample taken, high tide and no sediment present in the City system.
- NWDC17C. Southern most CB in northern system. The sediment sample was collected at 15:30. The sediment sample consisted of brown stratified mud.

June 25, 2010:

On June 25, 2010 the entire private stormwater system at the NWDC was cleaned by ProVac, this included vacuuming sediment from catchbasins, jet rodding storm laterals, and replacement of the filter cartridges in both Contech devices. John Sunich and Kurt Fremont were onsite to witness the work. John completed a Business Inspection while they were onsite. That report is attached.

Analytical Results/General Summary:

All samples were taken using the industry standard sampling practices and properly stored and transported to COT laboratory under Chain of Custody. The samples were analyzed for phthalate compounds, PAHs, lead, copper, and zinc. Sampling results from the July 2010 sediment sampling event in the Wheeler Osgood waterway are being used as a comparison to substantiate the results. Sample results ranged from 410 ug/Kg to 2200 ug/Kg in the Wheeler Osgood. The highest result was sample number NR-20-Y4, this was the closest sample to the 254 drainage basin outfall pipe. Analytical results are attached separately.

Generally, the analytical results direct us to three conclusions:

1. **DEHP concentrations are highest in the northern leg of the storm system as compared to the southern leg.** We found that all but one of the highest levels of DEHP concentrations exists in the northern leg of the system. There are two catchbasins with concentrations (ppb) 2 million ug/kg and greater whereas the others (including in the Contech device) were less than 410,000 ug/kg. The only sample taken in the southern leg that had a concentration greater than a 100,000 ug/kg was in the southern Contech device. The highest concentrations are as follows:

Sample ID #	DEHP Concentration (ug/Kg)	Zinc Concentration (mg/Kg)
NWDC1C	2.7 million	4740
NWDC4C	2.0 million	7610
NWDC13C	480,000	254
NWDC2C	410,000	3080
NWDC3C	300,000	3320
NWDC5C	290,000	1820
NWDC6C	230,000	1940

- Higher zinc concentrations appear to correlate with higher DEHP concentrations in the northern conveyance system.** In addition to the higher phthalate concentrations in the northern system we found high concentrations of zinc. The zinc concentrations in the northern system ranged from 7,610 mg/kg to 1,940 mg/kg pre-filter and were measured at 196 mg/kg post filter. The southern system's zinc concentrations ranged from 1,410 mg/kg to 114 mg/kg pre-filter. There is no post filter data for the southern system because the guard shack is sitting on the manhole, preventing access.
- DEHP and zinc laden sediments appear to be contained onsite by the media filter treatment devices and not transported offsite into the City storm system.** The stormwater structures immediately downstream of the northern media filter system did not contain excessive levels of phthalates or metals. NWDC7C contained only 1,400 ug/Kg of DEHP, which is well within the expected range. Access to the outlet of the southern filter system was not available during this investigation, but the earlier sampling event in December 2009 showed the outlet from the southern Contech device to be mostly clear of DEHP, and showing that the contamination is being contained by the Contech Device. Thus, it appears that the phthalate and zinc laden sediments have been contained within the private system by the media filter treatment devices.

Executive Summary and Conclusion:

Recent investigations in the OF254 drainage basin identified phthalates and PAHs as primary contaminants of concern in stormwater and in the Wheeler Osgood Waterway sediments. The NWDC was subsequently identified as a potential significant contributor of these contaminants. The June 2010 investigation of the NWDC was intended to further characterize the site for phthalates and PAHs and to determine the potential sources of these contaminants.

After the December 2009 sampling event showed no significant correlation between phthalate and PAH contamination it was decided to add certain metals of concern (Copper, Lead, and Zinc) to the sampling scheme. Results showed an apparent

December 21, 2010

correlation between phthalate and zinc contamination in the sediments . Further investigations and research must be done to define this correlation.

The timing of the July 2010 investigation of the NWDC's stormwater system was intended to identify the presence of any "on-going" source of contaminants of concern after the completion of the system's remodeling. The investigation was also planned to be performed right before the cleaning of their private storm water conveyance system.

As a follow up to the June 2010 investigation, it was determined that a modified sampling event must be completed during the next rain season to determine whether phthalates are present in the newly cleaned system. If phthalates are present at concentrations of concern, additional investigations may be warranted. The modified sampling event is scheduled for the month of November to determine if the source(s) are ongoing and to trace the location of any such ongoing sources.

If you have any questions, or need more information, please feel free to contact me. Thank you.

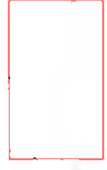


Tony Miller
Environmental Specialist
Environmental Services/Science & Engineering
(253) 502-2195 wk
(253) 253-377-5138 cell

Attachments:

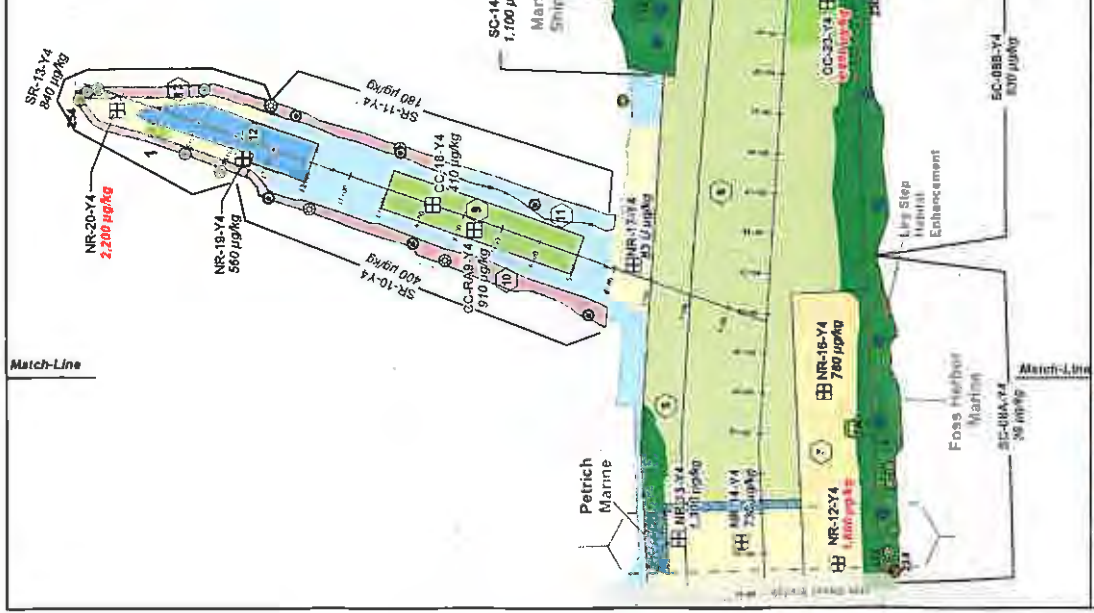
- Site map with sampling locations and phthalate and zinc concentrations.
- Thea Foss map and results from June 2010 sediment sampling event.
- Business Inspection # 10-BI-0989
- Lab Results

Notes: This map generated from CAD drawings supplied by Weller and Associates, based on a March 2008 aerial survey. Details located provided by City of Tacoma. Outfall locations are shown on the map. See the City of Tacoma Department of Public Works (DPW) website for more information. See the City of Tacoma Department of Public Works (DPW) website for more information. See the City of Tacoma Department of Public Works (DPW) website for more information.



Site Overview

Legend	
	Remedial Areas
	Completed Remedial Actions:
	No Action
	Slope Rehabilitation
	Natural Recovery
	Enhanced Natural Recovery
	Habitat Enhancement
	Backfill
	Channel Sand Cap
	Slope Cap
	Dredge to Clean
	Grout Mat Cap
	Additional Cap Material Placement in Utilities Area
	Transition Slope
	Quarry Spalls
	Cap Placed by the Utilities
	Channel Sand Cap Performance Sample Location and Designation
	Natural Recovery Performance Sample Location and Designation
	Slope Cap Sample Locations and Designation
	Slope Rehabilitation Sample Locations and Designation
	Sample Designation and DEHP Concentration (Color Concentrations in Red Exceed the BOD of 1,300 µg/kg)
	City of Tacoma Outfall and Designation
	Private (No Designation Provided)

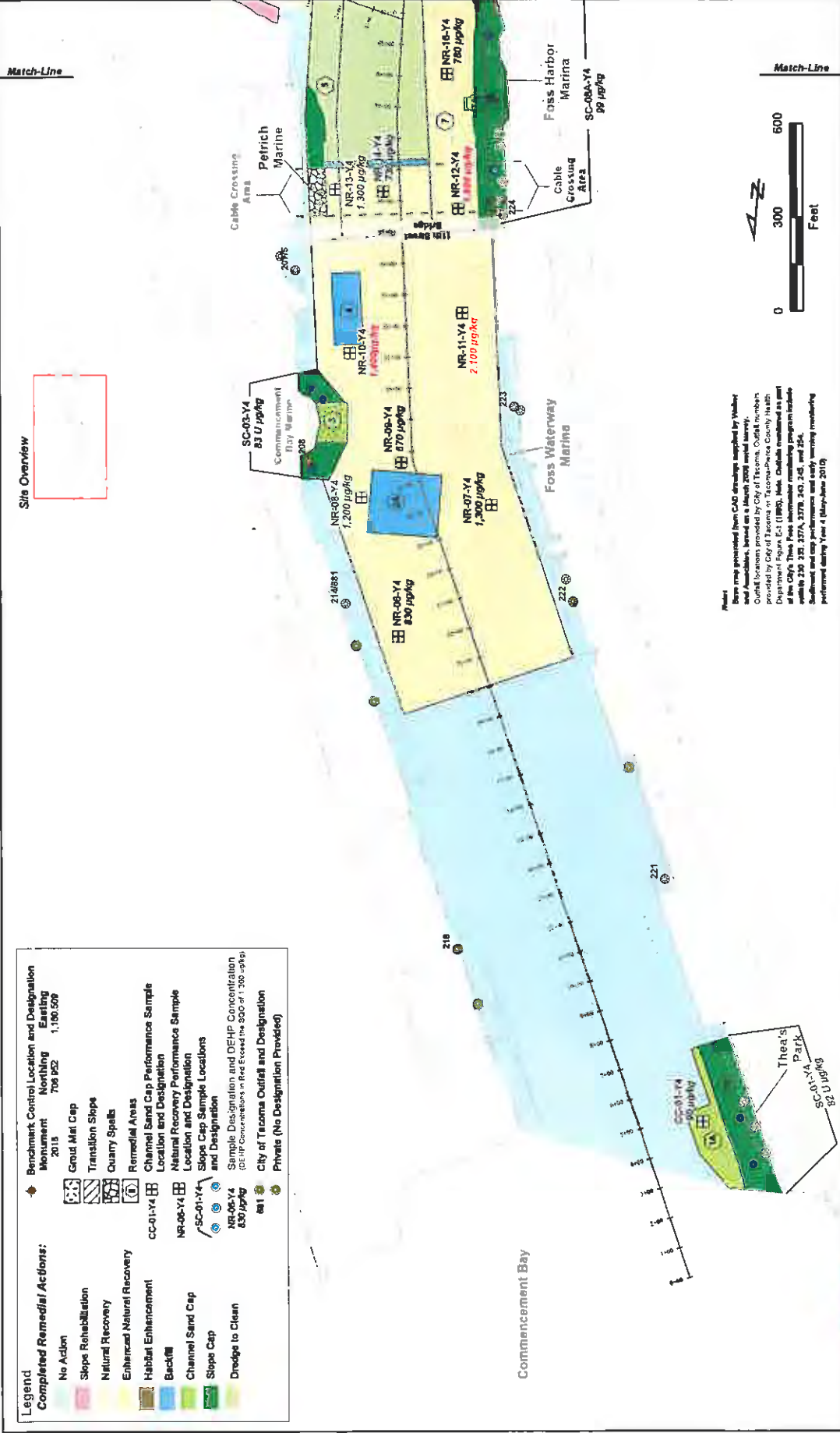


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Thea Foss and Wheeler-Osgood Waterways
OMMP

Figure 3 (Page 2 of 2)
Year 4 Bis (2-Ethylhexyl) Phthalate (DEHP)
Concentrations in Surface Samples (0-10 cm)

Fig. 3 - Year 4 Bis (2-Ethylhexyl) Phthalate (DEHP) Concentrations in Surface Samples (0-10 cm) - Page 2 of 2
Date: 8/25/2010



Match-Line

Match-Line



Sits Overview

Legend	
	Completed Remedial Actions:
	No Action
	Slope Rehabilitation
	Natural Recovery
	Enhanced Natural Recovery
	Habitat Enhancement
	Backfill
	Channel Sand Cap
	Slope Cap
	Dredge to Clean
	Benchmark Control Monument
	Grout Mat Cap
	Transition Slope
	Quarry Spalls
	Remedial Areas
	Channel Sand Cap Performance Sample Location and Designation
	Natural Recovery Performance Sample Location and Designation
	Slope Cap Sample Locations and Designation
	Sample Designation and DEHP Concentration (DEHP Concentrations in Red Exceed the 300 or 1,300 µg/kg)
	City of Tacoma Outfall and Designation
	Private (No Designation Provided)

Notes:
 Data was provided from CAO drawings supplied by Wheeler and Associates, based on a March 2009 aerial survey.
 Outfall locations provided by City of Tacoma. Outfall Number provided by City of Tacoma or Tacoma County Health Department Figure E-1 (1995). Note: Data included as part of the City of Tacoma Free Remediation program include only the 1995-2000, 2000-2005, and 2005-2010 data. Subsequent data was not early meeting monitoring performed during Year 4 (May/June 2019).

Figure 3 (Page 1 of 2)
 Year 4 Bis (2-Ethylhexyl) Phthalate (DEHP)
 Concentrations in Surface Samples (0-10 cm)

Thea Foss and Wheeler-Osgood Waterways
 OMMP

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File: F:\projects\2017\Council\2017\Y4\Engineering\Monitoring\Inspection\and_Reporting\Year 3\DEHP_Como_04\Bis_Foss_1_0.dwg
 Date: 03/25/2019

Business Inspection ID: 10-BI-0989
Business Partner/SapID: 29629
Business Inspection: INS DETENTION FACILITY
Business Site Address: 1623 E. J STREET Suite: NA
Business Mail Address: TACOMA, WA 98421

Inspection Information

Activity Type	Site Visit	Activity Date	6/25/2010
Inspector	John Sunich	Sample No.	
2nd Inspector	Kurt Fremont	Contact	Tony Asis
		Owner	

Collection System Information

Catch Basin	4 checked/Impacted with sediment	Oil/Water Separator	0
Grass Swales	0	SW Management	0
Retention Pond	0	Stormcepter	0
Drywell	0	UG Vault	0
Filter	2 CDS stormfilter vaults impacted	Infiltration	0
Other	0	Shared System	0
<input type="checkbox"/> No Further Action Required		No Treatment	0
<input type="checkbox"/> Non-Domestic Discharge			

Notifications / Actions

<input type="checkbox"/> Notify EPA DOE	<input type="checkbox"/> Enforcement Authority	<input checked="" type="checkbox"/> Photos Taken 9
<input type="checkbox"/> Notify Fire	<input type="checkbox"/> Haz Mat Storage	<input type="checkbox"/> Records Inspection
<input type="checkbox"/> Notify Owner	<input type="checkbox"/> Maintenance Contract	<input type="checkbox"/> Sample Collected
<input type="checkbox"/> Notify Tax & License	<input type="checkbox"/> PreTreatment BMP	<input type="checkbox"/> Sample Split
<input type="checkbox"/> Notify TPCHD	<input type="checkbox"/> Storm BMPs	

Detailed Concerns and Other Information

History Site located within the Wheeler Osgood Drainage Basin via OF254. See database for history of site. Maintenance Supervisor: Tony Asis.

Opening Conference Met with supervisor and discussed nature of visit. Also met with Pro-Vac contact about cleaning being done at site.

Compliance Concern or Nature of Problem Follow up visit to observe what work is done by contractor to clean out catch basins, conveyance lines, and treatment devices.

Action Required -Must clean out all basins, vaults, replace CDS filters, and jet lines per requirements on Letter dated March 9, 2010.

Hazardous Materials N/A

Comments -Pro-Vac onsite had vactored both treatment devices dry and that had filled up holding tanks. Truck was headed to dump at PRS. -Staff were in the process of removing the dirty CDS cartridges and preparing the media to be vacted out. -Re-emphasized that all the devices, lines, and cb's needed to be cleaned out after hearing the pro-vac only intended to clean 10 cb's and did not intend to jet lines. 06-29-10 KF. Tony Asis called to inform me that the entire system had been cleaned, including lines and basins. Tony will be scheduling the full maintenance on an annual basis.

Closing Conference

Follow Up / Re-Inspection Needed?

Completion Date: 7/13/2010





City of Tacoma
Environmental Services

Memorandum

TO: Chris Burke, Sr. Environmental Specialist

FROM: Christopher L. Getchell, Asst. Division Manager, Env. Services Laboratory

SUBJECT: Miscellaneous Cost Center 521400

DATE: September 2, 2010

Attached are the analytical results for the sediment samples collected from the Northwest Detention Center on June 24, 2010. The samples were analyzed for Semi-Volatile Organics (PAH and Phthalate Compound) and Total Metals.

The samples were frozen upon sample receipt because the Laboratory was in the middle of processing Thea Foss Waterway Year 4 OMMP sediments. The samples were thawed for analysis on July 28, 2010 for analysis. The Environmental Services Laboratory analyzed the samples. A detailed Data Quality Review report was prepared and is attached for your review.

If you have any questions concerning this data, call me at (253) 502-2130. Please note that the sample associated with this report will be discarded six months from the date of this report, unless notified otherwise.

A handwritten signature in black ink that reads "Christopher L. Getchell".

Christopher L. Getchell
Assistant Division Manager
Environmental Services Laboratory

CLG:LAZ

L:\LABGROUP\QCGROUP\Shared\2010\2010-07839.doc

Fs005\lab_reports\SurfaceWater\Miscellaneous\2010\NWDetCenter_201006.pdf

Data Quality Review Report

TO: Christopher L. Getchell, Asst. Division Manager
FROM: Lori A. Zboralski, Senior Laboratory Analyst *LZ*
DATE: September 2, 2010

SAMPLES

This report concerns the following samples associated with WBS Element ENV-03003-04-01:

<u>Sample Description</u>	<u>Lab#</u>	<u>Date Sampled</u>
NW DC 1C	2010-07839	6/24/2010
NW DC 2C	2010-07840	6/24/2010
NW DC 3C	2010-07841	6/24/2010
NW DC 4C	2010-07842	6/24/2010
NW DC 5C	2010-07843	6/24/2010
NW DC 6C	2010-07844	6/24/2010
NW DC 7C	2010-07845	6/24/2010
NW DC 8C	2010-07846	6/24/2010
NW DC 9C	2010-07847	6/24/2010
NW DC 10C	2010-07848	6/24/2010
NW DC 11C	2010-07849	6/24/2010
NW DC 12C	2010-07850	6/24/2010
NW DC 13C	2010-07851	6/24/2010
NW DC 17C	2010-07853	6/24/2010

HOLDING TIMES

The samples were extracted within the 14-day sample collection-to-extraction holding time and analyzed within 7 days for Total Solids, 40 days for Semi-Volatile Organics, and 180 days for Total Metals.

METHODS

The samples were analyzed according to Method 8270D for Semi-Volatile Organics and 6020A for Total Metals.

METHOD DETECTION LIMITS

All analytes are reported to the Method Detection Limit (MDL). Values greater than the MDL and less than the Practical Quantitation Limit (reporting limit or PQL) are reported for your information. The value is qualified as estimated (J) because it is not as precise at this concentration as values reported greater than the PQL.

METHOD BLANKS

Method Preparation blanks were analyzed at the required frequency. The concentrations of these blanks were less than 1/10th the amount found in the samples or less than the detection limits.

SURROGATES

Two surrogates were added to the samples prior to extraction for Semi-Volatile Organics. The recoveries for the Semi-Volatile Organics were within the laboratory's control limits for all compounds, except for the following:

<u>Lab#</u>	<u>Analyte</u>	<u>Result</u>	<u>Limits</u>
NW DC 6C	2-Fluorobiphenyl	32 *	39-92

No data is qualified on just one surrogate recovery outside limits.

LABORATORY CONTROL SAMPLES

Laboratory Control Samples (LCS) monitor the performance of each step of the analysis, including sample preparation. The LCS recoveries were within the laboratory established control limits, except for the following:

<u>Lab#</u>	<u>Analyte</u>	<u>Result</u>	<u>Limits</u>
Control17242	Benzo(g,h,i)perylene	26.6 *	51-133
Control17242	Di-n-butylphthalate	60.5 *	62-122

The compounds listed above are qualified as estimated (J) for all of the samples.

DUPLICATE SAMPLE ANALYSIS

Duplicate samples were analyzed for Total Solids and Total Metals. All duplicate results had relative percent differences (RPD) within laboratory-established limits of less than 35%.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SAMPLE ANALYSIS

Matrix Spike analysis was performed for Total Metals. The recoveries ranged from 96 – 108% and were within the laboratory's limits of 70 -130%.

Matrix Spike and Matrix Spike Duplicates were analyzed for Semi-Volatile Organics. The recoveries for Benzo(g,h,i)perylene were outside of the laboratory's control limits at 35% and 26%. The Benzo(g,h,i)perylene value for NW DC 2C is qualified as estimated (J).

INTERNAL STANDARDS

Performance of the Internal Standards (IS) monitors GC/MS sensitivity and stability during each analysis. Internal Standard areas in the samples must meet 50% to 200% when compared to the Continuing Calibration response and be within +/- 30 seconds from the Continuing Calibration retention time. The Internal Standards added to these samples met the method requirements for all samples.



City of Tacoma

Environmental Services Laboratory

Center for Urban Waters

326 East D Street Tacoma WA 98421

Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-07839

Sample ID: NWDC 1C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

14:10

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>CAS#</u>
CONVENTIONAL							
Total Solids	8/4/2010	SM2540 G	45.4	percent	5.0	1.0	
ICP-MS							
Copper	8/16/2010	6020A	187	mg/Kg	0.484	0.092	7440-50-8
Lead	8/16/2010	6020A	311	mg/Kg	0.484	0.018	7439-92-1
Zinc	8/16/2010	6020A	4740	mg/Kg	24	10	7440-66-6
Semi-VOA							
2-Methylnaphthalene	8/24/2010	8270D	700 U	ug/Kg	1000	700	91-57-6
Acenaphthene	8/24/2010	8270D	500 U	ug/Kg	1000	500	83-32-9
Acenaphthylene	8/24/2010	8270D	400 U	ug/Kg	1000	400	208-96-8
Anthracene	8/24/2010	8270D	300 U	ug/Kg	1000	300	120-12-7
Benzo(a)anthracene	8/24/2010	8270D	500 U	ug/Kg	1000	500	56-55-3
Benzo(a)pyrene	8/24/2010	8270D	900 U	ug/Kg	1000	900	50-32-8
Benzo(b,k)fluoranthenes	8/24/2010	8270D	900 U	ug/Kg	2000	900	56832-73-6
Benzo(g,h,i)perylene	8/24/2010	8270D	900 U J	ug/Kg	1000	900	191-24-2
bis(2-Ethylhexyl)phthalate	8/25/2010	8270D	2700000	ug/Kg	50000	30000	117-81-7
Butyl benzyl phthalate	8/24/2010	8270D	2100	ug/Kg	1000	600	85-68-7
Chrysene	8/24/2010	8270D	1200	ug/Kg	1000	400	218-01-9
Dibenz(a,h)anthracene	8/24/2010	8270D	1200 U	ug/Kg	1200	1200	53-70-3
Diethylphthalate	8/24/2010	8270D	500 U	ug/Kg	1000	500	84-66-2
Dimethyl phthalate	8/24/2010	8270D	400 U	ug/Kg	1000	400	131-11-3
Di-n-butylphthalate	8/24/2010	8270D	3900	ug/Kg	1000	700	84-74-2
Di-n-octyl phthalate	8/24/2010	8270D	1100 U	ug/Kg	1100	1100	117-84-0
Fluoranthene	8/24/2010	8270D	2000	ug/Kg	1000	400	206-44-0
Fluorene	8/24/2010	8270D	300 U	ug/Kg	1000	300	86-73-7
Indeno(1,2,3-c,d)pyrene	8/24/2010	8270D	1000 U	ug/Kg	1000	1000	193-39-5
Naphthalene	8/24/2010	8270D	800 U	ug/Kg	1000	800	91-20-3
Phenanthrene	8/24/2010	8270D	2200	ug/Kg	1000	200	85-01-8
Pyrene	8/24/2010	8270D	2100	ug/Kg	1000	500	129-00-0



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Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-07839

Sample ID: NW DC 1C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

14:10

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
Flags:	U:	The analyte was not detected at or above the reported value.					
	UJ:	The analyte was not detected at or above the reported estimated result. See QC Report.					
	NJ:	TIC There is evidence the analyte is present. The associated value is an estimate.					
	J:	The analyte was positively identified. The associated value is an estimate. See QC Report.					
	B:	The analyte was detected but is less than the Project Reporting Limit Goal.					
	R:	The value is unusable.					

Lori Zboralski

Thursday, September 02, 2010

Reviewed By: Lori Zboralski

Date



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Environmental Services Laboratory

Center for Urban Waters

326 East D Street Tacoma WA 98421

Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-07840

Sample ID: NWDC 2C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

14:20

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>CAS#</u>
CONVENTIONAL							
Total Solids	8/4/2010	SM2540 G	76.0	percent	5.0	1.0	
ICP-MS							
Copper	8/16/2010	6020A	99.6	mg/Kg	0.52	0.10	7440-50-8
Lead	8/16/2010	6020A	227	mg/Kg	0.524	0.019	7439-92-1
Zinc	8/16/2010	6020A	3080	mg/Kg	26	11	7440-66-6
Semi-VOA							
2-Methylnaphthalene	8/24/2010	8270D	690 U	ug/Kg	990	690	91-57-6
Acenaphthene	8/24/2010	8270D	490 U	ug/Kg	990	490	83-32-9
Acenaphthylene	8/24/2010	8270D	390 U	ug/Kg	990	390	208-96-8
Anthracene	8/24/2010	8270D	300 U	ug/Kg	990	300	120-12-7
Benzo(a)anthracene	8/24/2010	8270D	490 U	ug/Kg	990	490	56-55-3
Benzo(a)pyrene	8/24/2010	8270D	890 U	ug/Kg	990	890	50-32-8
Benzo(b,k)fluoranthenes	8/24/2010	8270D	890 U	ug/Kg	2000	890	56832-73-6
Benzo(g,h,i)perylene	8/24/2010	8270D	890 U J	ug/Kg	990	890	191-24-2
bis(2-Ethylhexyl)phthalate	8/25/2010	8270D	410000	ug/Kg	9900	5900	117-81-7
Butyl benzyl phthalate	8/24/2010	8270D	1100	ug/Kg	990	590	85-68-7
Chrysene	8/24/2010	8270D	390 U	ug/Kg	990	390	218-01-9
Dibenz(a,h)anthracene	8/24/2010	8270D	1200 U	ug/Kg	1200	1200	53-70-3
Diethylphthalate	8/24/2010	8270D	490 U	ug/Kg	990	490	84-66-2
Dimethyl phthalate	8/24/2010	8270D	390 U	ug/Kg	990	390	131-11-3
Di-n-butylphthalate	8/24/2010	8270D	5500	ug/Kg	990	690	84-74-2
Di-n-octyl phthalate	8/24/2010	8270D	1100 U	ug/Kg	1100	1100	117-84-0
Fluoranthene	8/24/2010	8270D	390 U	ug/Kg	990	390	206-44-0
Fluorene	8/24/2010	8270D	300 U	ug/Kg	990	300	86-73-7
Indeno(1,2,3-c,d)pyrene	8/24/2010	8270D	990 U	ug/Kg	990	990	193-39-5
Naphthalene	8/24/2010	8270D	790 U	ug/Kg	990	790	91-20-3
Phenanthrene	8/24/2010	8270D	200 U	ug/Kg	990	200	85-01-8
Pyrene	8/24/2010	8270D	490 U	ug/Kg	990	490	129-00-0



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Environmental Services Laboratory

Center for Urban Waters

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Lab#: 2010-07840

Sample ID: NW DC 2C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

14:20

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
Flags: U: The analyte was not detected at or above the reported value. UJ: The analyte was not detected at or above the reported estimated result. See QC Report. NJ: TIC There is evidence the analyte is present. The associated value is an estimate. J: The analyte was positively identified. The associated value is an estimate. See QC Report. B: The analyte was detected but is less than the Project Reporting Limit Goal. R: The value is unusable.							

Lori A. Zboralski

Thursday, September 02, 2010

Reviewed By: Lori Zboralski

Date



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Lab#: 2010-07841

Sample ID: NW DC 3C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

14:30

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
CONVENTIONAL							
Total Solids	8/4/2010	SM2540 G	77.2	percent	5.0	1.0	
ICP-MS							
Copper	8/16/2010	6020A	76.8	mg/Kg	0.487	0.093	7440-50-8
Lead	8/16/2010	6020A	84.3	mg/Kg	0.487	0.018	7439-92-1
Zinc	8/16/2010	6020A	3320	mg/Kg	24	10	7440-66-6
Semi-VOA							
2-Methylnaphthalene	8/24/2010	8270D	700 U	ug/Kg	990	700	91-57-6
Acenaphthene	8/24/2010	8270D	500 U	ug/Kg	990	500	83-32-9
Acenaphthylene	8/24/2010	8270D	400 U	ug/Kg	990	400	208-96-8
Anthracene	8/24/2010	8270D	300 U	ug/Kg	990	300	120-12-7
Benzo(a)anthracene	8/24/2010	8270D	500 U	ug/Kg	990	500	56-55-3
Benzo(a)pyrene	8/24/2010	8270D	890 U	ug/Kg	990	890	50-32-8
Benzo(b,k)fluoranthenes	8/24/2010	8270D	890 U	ug/Kg	2000	890	56832-73-6
Benzo(g,h,i)perylene	8/24/2010	8270D	890 U J	ug/Kg	990	890	191-24-2
bis(2-Ethylhexyl)phthalate	8/26/2010	8270D	300000	ug/Kg	9900	6000	117-81-7
Butyl benzyl phthalate	8/24/2010	8270D	1100	ug/Kg	990	600	85-68-7
Chrysene	8/24/2010	8270D	400 U	ug/Kg	990	400	218-01-9
Dibenz(a,h)anthracene	8/24/2010	8270D	1200 U	ug/Kg	1200	1200	53-70-3
Diethylphthalate	8/24/2010	8270D	500 U	ug/Kg	990	500	84-66-2
Dimethyl phthalate	8/24/2010	8270D	400 U	ug/Kg	990	400	131-11-3
Di-n-butylphthalate	8/24/2010	8270D	4300	ug/Kg	990	700	84-74-2
Di-n-octyl phthalate	8/24/2010	8270D	1100 U	ug/Kg	1100	1100	117-84-0
Fluoranthene	8/24/2010	8270D	400 U	ug/Kg	990	400	206-44-0
Fluorene	8/24/2010	8270D	300 U	ug/Kg	990	300	86-73-7
Indeno(1,2,3-c,d)pyrene	8/24/2010	8270D	990 U	ug/Kg	990	990	193-39-5
Naphthalene	8/24/2010	8270D	790 U	ug/Kg	990	790	91-20-3
Phenanthrene	8/24/2010	8270D	1200	ug/Kg	990	200	85-01-8
Pyrene	8/24/2010	8270D	1200	ug/Kg	990	500	129-00-0



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Lab#: 2010-07841

Sample ID: NW DC 3C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

14:30

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>CAS#</u>
Flags:	U:	The analyte was not detected at or above the reported value.					
	UJ:	The analyte was not detected at or above the reported estimated result. See QC Report.					
	NJ:	TIC There is evidence the analyte is present. The associated value is an estimate.					
	J:	The analyte was positively identified. The associated value is an estimate. See QC Report.					
	B:	The analyte was detected but is less than the Project Reporting Limit Goal.					
	R:	The value is unusable.					

Lori Zboralski

Thursday, September 02, 2010

Reviewed By: Lori Zboralski

Date



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Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-07842

Sample ID: NW DC 4C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

14:52

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
CONVENTIONAL							
Total Solids	8/4/2010	SM2540 G	31.2	percent	5.0	1.0	
ICP-MS							
Copper	8/16/2010	6020A	141	mg/Kg	0.485	0.092	7440-50-8
Lead	8/16/2010	6020A	188	mg/Kg	0.485	0.018	7439-92-1
Zinc	8/16/2010	6020A	7610	mg/Kg	24	10	7440-66-6
Semi-VOA							
2-Methylnaphthalene	8/24/2010	8270D	700 U	ug/Kg	1000	700	91-57-6
Acenaphthene	8/24/2010	8270D	500 U	ug/Kg	1000	500	83-32-9
Acenaphthylene	8/24/2010	8270D	400 U	ug/Kg	1000	400	208-96-8
Anthracene	8/24/2010	8270D	300 U	ug/Kg	1000	300	120-12-7
Benzo(a)anthracene	8/24/2010	8270D	1100	ug/Kg	1000	500	56-55-3
Benzo(a)pyrene	8/24/2010	8270D	1100	ug/Kg	1000	900	50-32-8
Benzo(b,k)fluoranthenes	8/24/2010	8270D	2400	ug/Kg	2000	900	56832-73-6
Benzo(g,h,i)perylene	8/24/2010	8270D	900 U J	ug/Kg	1000	900	191-24-2
bis(2-Ethylhexyl)phthalate	8/25/2010	8270D	2000000	ug/Kg	50000	30000	117-81-7
Butyl benzyl phthalate	8/24/2010	8270D	2000	ug/Kg	1000	600	85-68-7
Chrysene	8/24/2010	8270D	2400	ug/Kg	1000	400	218-01-9
Dibenz(a,h)anthracene	8/24/2010	8270D	1200 U	ug/Kg	1200	1200	53-70-3
Diethylphthalate	8/24/2010	8270D	500 U	ug/Kg	1000	500	84-66-2
Dimethyl phthalate	8/24/2010	8270D	400 U	ug/Kg	1000	400	131-11-3
Di-n-butylphthalate	8/24/2010	8270D	27000	ug/Kg	1000	700	84-74-2
Di-n-octyl phthalate	8/24/2010	8270D	1100 U	ug/Kg	1100	1100	117-84-0
Fluoranthene	8/24/2010	8270D	400 U	ug/Kg	1000	400	206-44-0
Fluorene	8/24/2010	8270D	300 U	ug/Kg	1000	300	86-73-7
Indeno(1,2,3-c,d)pyrene	8/24/2010	8270D	1000 U	ug/Kg	1000	1000	193-39-5
Naphthalene	8/24/2010	8270D	800 U	ug/Kg	1000	800	91-20-3
Phenanthrene	8/24/2010	8270D	3500	ug/Kg	1000	200	85-01-8
Pyrene	8/24/2010	8270D	4400	ug/Kg	1000	500	129-00-0



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Phone: 253.391.5588 Fax: 253.502.2170

Lab#: 2010-07842

Sample ID: NW DC 4C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

14:52

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis</u> <u>Date</u>	<u>Analytical</u> <u>Method:</u>	<u>Result</u>	<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>CAS#</u>
Flags:	U:	The analyte was not detected at or above the reported value.					
	UJ:	The analyte was not detected at or above the reported estimated result. See QC Report.					
	NJ:	TIC There is evidence the analyte is present. The associated value is an estimate.					
	J:	The analyte was positively identified. The associated value is an estimate. See QC Report.					
	B:	The analyte was detected but is less than the Project Reporting Limit Goal.					
	R:	The value is unusable.					

Lori B. Zboralski

Thursday, September 02, 2010

Reviewed By: Lori Zboralski

Date



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Environmental Services Laboratory

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Phone: 253.391.3588 Fax: 253.502.2170

Lab#: 2010-07843

Sample ID: NW DC 5C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

15:02

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
CONVENTIONAL							
Total Solids	8/4/2010	SM2540 G	38.0	percent	5.0	1.0	
ICP-MS							
Copper	8/16/2010	6020A	167	mg/Kg	0.498	0.095	7440-50-8
Lead	8/16/2010	6020A	94.9	mg/Kg	0.498	0.018	7439-92-1
Zinc	8/16/2010	6020A	1820	mg/Kg	25	10	7440-66-6
Semi-VOA							
2-Methylnaphthalene	8/24/2010	8270D	700 U	ug/Kg	1000	700	91-57-6
Acenaphthene	8/24/2010	8270D	500 U	ug/Kg	1000	500	83-32-9
Acenaphthylene	8/24/2010	8270D	400 U	ug/Kg	1000	400	208-96-8
Anthracene	8/24/2010	8270D	300 U	ug/Kg	1000	300	120-12-7
Benzo(a)anthracene	8/24/2010	8270D	500 U	ug/Kg	1000	500	56-55-3
Benzo(a)pyrene	8/24/2010	8270D	900 U	ug/Kg	1000	900	50-32-8
Benzo(b,k)fluoranthenes	8/24/2010	8270D	900 U	ug/Kg	2000	900	56832-73-6
Benzo(g,h,i)perylene	8/24/2010	8270D	900 U J	ug/Kg	1000	900	191-24-2
bis(2-Ethylhexyl)phthalate	8/25/2010	8270D	290000	ug/Kg	10000	6000	117-81-7
Butyl benzyl phthalate	8/24/2010	8270D	1900	ug/Kg	1000	600	85-68-7
Chrysene	8/24/2010	8270D	1300	ug/Kg	1000	400	218-01-9
Dibenz(a,h)anthracene	8/24/2010	8270D	1200 U	ug/Kg	1200	1200	53-70-3
Diethylphthalate	8/24/2010	8270D	500 U	ug/Kg	1000	500	84-66-2
Dimethyl phthalate	8/24/2010	8270D	400 U	ug/Kg	1000	400	131-11-3
Di-n-butylphthalate	8/24/2010	8270D	2000	ug/Kg	1000	700	84-74-2
Di-n-octyl phthalate	8/24/2010	8270D	1100 U	ug/Kg	1100	1100	117-84-0
Fluoranthene	8/24/2010	8270D	1900	ug/Kg	1000	400	206-44-0
Fluorene	8/24/2010	8270D	300 U	ug/Kg	1000	300	86-73-7
Indeno(1,2,3-c,d)pyrene	8/24/2010	8270D	1000 U	ug/Kg	1000	1000	193-39-5
Naphthalene	8/24/2010	8270D	800 U	ug/Kg	1000	800	91-20-3
Phenanthrene	8/24/2010	8270D	1300	ug/Kg	1000	200	85-01-8
Pyrene	8/24/2010	8270D	1600	ug/Kg	1000	500	129-00-0



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Lab#: 2010-07843

Sample ID: NW DC 5C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

15:02

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis</u> <u>Date</u>	<u>Analytical</u> <u>Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
Flags:	U:	The analyte was not detected at or above the reported value.					
	UJ:	The analyte was not detected at or above the reported estimated result. See QC Report.					
	NJ:	TIC There is evidence the analyte is present. The associated value is an estimate.					
	J:	The analyte was positively identified. The associated value is an estimate. See QC Report.					
	B:	The analyte was detected but is less than the Project Reporting Limit Goal.					
	R:	The value is unusable.					

Lori Zboralski

Thursday, September 02, 2010

Reviewed By: Lori Zboralski

Date



City of Tacoma

Environmental Services Laboratory

Center for Urban Waters

326 East D Street Tacoma WA 98421

Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-07844

Sample ID: NW DC 6C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

15:22

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
CONVENTIONAL							
Total Solids	8/4/2010	SM2540 G	37.8	percent	5.0	1.0	
ICP-MS							
Copper	8/16/2010	6020A	160	mg/Kg	0.511	0.097	7440-50-8
Lead	8/16/2010	6020A	92.5	mg/Kg	0.511	0.019	7439-92-1
Zinc	8/16/2010	6020A	1940	mg/Kg	26	11	7440-66-6
Semi-VOA							
2-Methylnaphthalene	8/24/2010	8270D	700 U	ug/Kg	990	700	91-57-6
Acenaphthene	8/24/2010	8270D	500 U	ug/Kg	990	500	83-32-9
Acenaphthylene	8/24/2010	8270D	400 U	ug/Kg	990	400	208-96-8
Anthracene	8/24/2010	8270D	300 U	ug/Kg	990	300	120-12-7
Benzo(a)anthracene	8/24/2010	8270D	500 U	ug/Kg	990	500	56-55-3
Benzo(a)pyrene	8/24/2010	8270D	890 U	ug/Kg	990	890	50-32-8
Benzo(b,k)fluoranthenes	8/24/2010	8270D	890 U	ug/Kg	2000	890	56832-73-6
Benzo(g,h,i)perylene	8/24/2010	8270D	890 U J	ug/Kg	990	890	191-24-2
bis(2-Ethylhexyl)phthalate	8/25/2010	8270D	230000	ug/Kg	9900	6000	117-81-7
Butyl benzyl phthalate	8/24/2010	8270D	2800	ug/Kg	990	600	85-68-7
Chrysene	8/24/2010	8270D	1100	ug/Kg	990	400	218-01-9
Dibenz(a,h)anthracene	8/24/2010	8270D	1200 U	ug/Kg	1200	1200	53-70-3
Diethylphthalate	8/24/2010	8270D	500 U	ug/Kg	990	500	84-66-2
Dimethyl phthalate	8/24/2010	8270D	400 U	ug/Kg	990	400	131-11-3
Di-n-butylphthalate	8/24/2010	8270D	2100	ug/Kg	990	700	84-74-2
Di-n-octyl phthalate	8/24/2010	8270D	1100 U	ug/Kg	1100	1100	117-84-0
Fluoranthene	8/24/2010	8270D	2100	ug/Kg	990	400	206-44-0
Fluorene	8/24/2010	8270D	300 U	ug/Kg	990	300	86-73-7
Indeno(1,2,3-c,d)pyrene	8/24/2010	8270D	990 U	ug/Kg	990	990	193-39-5
Naphthalene	8/24/2010	8270D	790 U	ug/Kg	990	790	91-20-3
Phenanthrene	8/24/2010	8270D	1100	ug/Kg	990	200	85-01-8
Pyrene	8/24/2010	8270D	3600	ug/Kg	990	500	129-00-0



City of Tacoma

Environmental Services Laboratory

Center for Urban Waters

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Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-07844

Sample ID: NW DC 6C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

15:22

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>CAS#</u>
Flags:	U:	The analyte was not detected at or above the reported value.					
	UJ:	The analyte was not detected at or above the reported estimated result. See QC Report.					
	NJ:	TIC There is evidence the analyte is present. The associated value is an estimate.					
	J:	The analyte was positively identified. The associated value is an estimate. See QC Report.					
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Lori Zboralski

Thursday, September 02, 2010

Reviewed By: Lori Zboralski

Date



City of Tacoma

Environmental Services Laboratory

Center for Urban Waters

326 East D Street Tacoma WA 98421

Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-07845

Sample ID: NW DC 7C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

15:20

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>CAS#</u>
CONVENTIONAL							
Total Solids	8/4/2010	SM2540 G	70.3	percent	5.0	1.0	
ICP-MS							
Copper	8/16/2010	6020A	71.7	mg/Kg	0.482	0.092	7440-50-8
Lead	8/16/2010	6020A	15.9	mg/Kg	0.482	0.018	7439-92-1
Zinc	8/16/2010	6020A	196	mg/Kg	2.4	1.0	7440-66-6
Semi-VOA							
2-Methylnaphthalene	8/25/2010	8270D	700 U	ug/Kg	1000	700	91-57-6
Acenaphthene	8/25/2010	8270D	500 U	ug/Kg	1000	500	83-32-9
Acenaphthylene	8/25/2010	8270D	400 U	ug/Kg	1000	400	208-96-8
Anthracene	8/25/2010	8270D	300 U	ug/Kg	1000	300	120-12-7
Benzo(a)anthracene	8/25/2010	8270D	500 U	ug/Kg	1000	500	56-55-3
Benzo(a)pyrene	8/25/2010	8270D	900 U	ug/Kg	1000	900	50-32-8
Benzo(b,k)fluoranthene	8/25/2010	8270D	900 U	ug/Kg	2000	900	56832-73-6
Benzo(g,h,i)perylene	8/25/2010	8270D	900 U	ug/Kg	1000	900	191-24-2
bis(2-Ethylhexyl)phthalate	8/24/2010	8270D	7600	ug/Kg	1000	600	117-81-7
Butyl benzyl phthalate	8/25/2010	8270D	1400	ug/Kg	1000	600	85-68-7
Chrysene	8/25/2010	8270D	400 U	ug/Kg	1000	400	218-01-9
Dibenz(a,h)anthracene	8/25/2010	8270D	1200 U	ug/Kg	1200	1200	53-70-3
Diethylphthalate	8/25/2010	8270D	500 U	ug/Kg	1000	500	84-66-2
Dimethyl phthalate	8/25/2010	8270D	400 U	ug/Kg	1000	400	131-11-3
Di-n-butylphthalate	8/25/2010	8270D	700 U	ug/Kg	1000	700	84-74-2
Di-n-octyl phthalate	8/25/2010	8270D	1100 U	ug/Kg	1100	1100	117-84-0
Fluoranthene	8/25/2010	8270D	400 U	ug/Kg	1000	400	206-44-0
Fluorene	8/25/2010	8270D	300 U	ug/Kg	1000	300	86-73-7
Indeno(1,2,3-c,d)pyrene	8/25/2010	8270D	1000 U	ug/Kg	1000	1000	193-39-5
Naphthalene	8/25/2010	8270D	800 U	ug/Kg	1000	800	91-20-3
Phenanthrene	8/25/2010	8270D	200 U	ug/Kg	1000	200	85-01-8
Pyrene	8/25/2010	8270D	500 U	ug/Kg	1000	500	129-00-0



City of Tacoma

Environmental Services Laboratory

Center for Urban Waters

326 East D Street Tacoma WA 98421

Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-07845

Sample ID: NWDC 7C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

15:20

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
Flags:	U:	The analyte was not detected at or above the reported value.					
	UJ:	The analyte was not detected at or above the reported estimated result. See QC Report.					
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Lon Zboralski

Thursday, September 02, 2010

Reviewed By: Lon Zboralski

Date



City of Tacoma

Environmental Services Laboratory

Center for Urban Waters

326 East D Street Tacoma WA 98421

Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-07846

Sample ID: NW DC 8C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

15:43

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>CAS#</u>
CONVENTIONAL							
Total Solids	8/4/2010	SM2540 G	59.1	percent	5.0	1.0	
ICP-MS							
Copper	8/16/2010	6020A	142	mg/Kg	0.494	0.094	7440-50-8
Lead	8/16/2010	6020A	103	mg/Kg	0.494	0.018	7439-92-1
Zinc	8/16/2010	6020A	1410	mg/Kg	4.9	2.1	7440-66-6
Semi-VOA							
2-Methylnaphthalene	8/24/2010	8270D	700 U	ug/Kg	990	700	91-57-6
Acenaphthene	8/24/2010	8270D	500 U	ug/Kg	990	500	83-32-9
Acenaphthylene	8/24/2010	8270D	400 U	ug/Kg	990	400	208-96-8
Anthracene	8/24/2010	8270D	300 U	ug/Kg	990	300	120-12-7
Benzo(a)anthracene	8/24/2010	8270D	500 U	ug/Kg	990	500	56-55-3
Benzo(a)pyrene	8/24/2010	8270D	890 U	ug/Kg	990	890	50-32-8
Benzo(b,k)fluoranthene	8/24/2010	8270D	890 U	ug/Kg	2000	890	56832-73-6
Benzo(g,h,i)perylene	8/24/2010	8270D	890 U J	ug/Kg	990	890	191-24-2
bis(2-Ethylhexyl)phthalate	8/24/2010	8270D	43000	ug/Kg	990	600	117-81-7
Butyl benzyl phthalate	8/24/2010	8270D	1100	ug/Kg	990	600	85-68-7
Chrysene	8/24/2010	8270D	400 U	ug/Kg	990	400	218-01-9
Dibenz(a,h)anthracene	8/24/2010	8270D	1200 U	ug/Kg	1200	1200	53-70-3
Diethylphthalate	8/24/2010	8270D	500 U	ug/Kg	990	500	84-66-2
Dimethyl phthalate	8/24/2010	8270D	400 U	ug/Kg	990	400	131-11-3
Di-n-butylphthalate	8/24/2010	8270D	1000	ug/Kg	990	700	84-74-2
Di-n-octyl phthalate	8/24/2010	8270D	1100 U	ug/Kg	1100	1100	117-84-0
Fluoranthene	8/24/2010	8270D	400 U	ug/Kg	990	400	206-44-0
Fluorene	8/24/2010	8270D	300 U	ug/Kg	990	300	86-73-7
Indeno(1,2,3-c,d)pyrene	8/24/2010	8270D	990 U	ug/Kg	990	990	193-39-5
Naphthalene	8/24/2010	8270D	800 U	ug/Kg	990	800	91-20-3
Phenanthrene	8/24/2010	8270D	200 U	ug/Kg	990	200	85-01-8
Pyrene	8/24/2010	8270D	500 U	ug/Kg	990	500	129-00-0



City of Tacoma

Environmental Services Laboratory

Center for Urban Waters

326 East D Street Tacoma WA 98421

Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-07846

Sample ID: NWDC 8C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

15:43

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>CAS#</u>
Flags:	U:	The analyte was not detected at or above the reported value.					
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Lori Zboralski

Thursday, September 02, 2010

Reviewed By: Lori Zboralski

Date



City of Tacoma

Environmental Services Laboratory

Center for Urban Waters

326 East D Street Tacoma WA 98421

Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-07847

Sample ID: NW DC 9C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

15:50

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
CONVENTIONAL							
Total Solids	8/4/2010	SM2540 G	85.0	percent	5.0	1.0	
ICP-MS							
Copper	8/16/2010	6020A	85.6	mg/Kg	0.481	0.091	7440-50-8
Lead	8/16/2010	6020A	6.47	mg/Kg	0.481	0.018	7439-92-1
Zinc	8/16/2010	6020A	140	mg/Kg	2.4	1.0	7440-66-6
Semi-VOA							
2-Methylnaphthalene	8/24/2010	8270D	670 U	ug/Kg	960	670	91-57-6
Acenaphthene	8/24/2010	8270D	480 U	ug/Kg	960	480	83-32-9
Acenaphthylene	8/24/2010	8270D	380 U	ug/Kg	960	380	208-96-8
Anthracene	8/24/2010	8270D	290 U	ug/Kg	960	290	120-12-7
Benzo(a)anthracene	8/24/2010	8270D	480 U	ug/Kg	960	480	56-55-3
Benzo(a)pyrene	8/24/2010	8270D	860 U	ug/Kg	960	860	50-32-8
Benzo(b,k)fluoranthenes	8/24/2010	8270D	860 U	ug/Kg	1900	860	56832-73-6
Benzo(g,h,i)perylene	8/24/2010	8270D	860 U J	ug/Kg	960	860	191-24-2
bis(2-Ethylhexyl)phthalate	8/24/2010	8270D	1800	ug/Kg	960	580	117-81-7
Butyl benzyl phthalate	8/24/2010	8270D	580 U	ug/Kg	960	580	85-68-7
Chrysene	8/24/2010	8270D	380 U	ug/Kg	960	380	218-01-9
Dibenz(a,h)anthracene	8/24/2010	8270D	1200 U	ug/Kg	1200	1200	53-70-3
Diethylphthalate	8/24/2010	8270D	480 U	ug/Kg	960	480	84-66-2
Dimethyl phthalate	8/24/2010	8270D	380 U	ug/Kg	960	380	131-11-3
Di-n-butylphthalate	8/24/2010	8270D	670 U	ug/Kg	960	670	84-74-2
Di-n-octyl phthalate	8/24/2010	8270D	1100 U	ug/Kg	1100	1100	117-84-0
Fluoranthene	8/24/2010	8270D	380 U	ug/Kg	960	380	206-44-0
Fluorene	8/24/2010	8270D	290 U	ug/Kg	960	290	86-73-7
Indeno(1,2,3-c,d)pyrene	8/24/2010	8270D	960 U	ug/Kg	960	960	193-39-5
Naphthalene	8/24/2010	8270D	770 U	ug/Kg	960	770	91-20-3
Phenanthrene	8/24/2010	8270D	190 U	ug/Kg	960	190	85-01-8
Pyrene	8/24/2010	8270D	480 U	ug/Kg	960	480	129-00-0



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Lab#: 2010-07847

Sample ID: NWDC 9C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

15:50

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
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Lori Zboralski

Thursday, September 02, 2010

Reviewed By: Lori Zboralski

Date



City of Tacoma

Environmental Services Laboratory

Center for Urban Waters

326 East D Street Tacoma WA 98421

Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-07848

Sample ID: NW DC 10C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

16:02

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
CONVENTIONAL							
Total Solids	8/4/2010	SM2540 G	81.6	percent	5.0	1.0	
ICP-MS							
Copper	8/16/2010	6020A	56.0	mg/Kg	0.512	0.097	7440-50-8
Lead	8/16/2010	6020A	40.2	mg/Kg	0.512	0.019	7439-92-1
Zinc	8/16/2010	6020A	216	mg/Kg	2.6	1.1	7440-66-6
Semi-VOA							
2-Methylnaphthalene	8/24/2010	8270D	700 U	ug/Kg	1000	700	91-57-6
Acenaphthene	8/24/2010	8270D	500 U	ug/Kg	1000	500	83-32-9
Acenaphthylene	8/24/2010	8270D	400 U	ug/Kg	1000	400	208-96-8
Anthracene	8/24/2010	8270D	300 U	ug/Kg	1000	300	120-12-7
Benzo(a)anthracene	8/24/2010	8270D	500 U	ug/Kg	1000	500	56-55-3
Benzo(a)pyrene	8/24/2010	8270D	900 U	ug/Kg	1000	900	50-32-8
Benzo(b,k)fluoranthenes	8/24/2010	8270D	900 U	ug/Kg	2000	900	56832-73-6
Benzo(g,h,i)perylene	8/24/2010	8270D	900 U,I	ug/Kg	1000	900	191-24-2
bis(2-Ethylhexyl)phthalate	8/24/2010	8270D	3000	ug/Kg	1000	600	117-81-7
Butyl benzyl phthalate	8/24/2010	8270D	600 U	ug/Kg	1000	600	85-68-7
Chrysene	8/24/2010	8270D	400 U	ug/Kg	1000	400	218-01-9
Dibenz(a,h)anthracene	8/24/2010	8270D	1200 U	ug/Kg	1200	1200	53-70-3
Diethylphthalate	8/24/2010	8270D	500 U	ug/Kg	1000	500	84-66-2
Dimethyl phthalate	8/24/2010	8270D	400 U	ug/Kg	1000	400	131-11-3
Di-n-butylphthalate	8/24/2010	8270D	700 U	ug/Kg	1000	700	84-74-2
Di-n-octyl phthalate	8/24/2010	8270D	1100 U	ug/Kg	1100	1100	117-84-0
Fluoranthene	8/24/2010	8270D	400 U	ug/Kg	1000	400	206-44-0
Fluorene	8/24/2010	8270D	300 U	ug/Kg	1000	300	86-73-7
Indeno(1,2,3-c,d)pyrene	8/24/2010	8270D	1000 U	ug/Kg	1000	1000	193-39-5
Naphthalene	8/24/2010	8270D	800 U	ug/Kg	1000	800	91-20-3
Phenanthrene	8/24/2010	8270D	200 U	ug/Kg	1000	200	85-01-8
Pyrene	8/24/2010	8270D	500 U	ug/Kg	1000	500	129-00-0



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Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-07848

Sample ID: NW DC 10C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

16:02

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>CAS#</u>
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	J:	The analyte was positively identified. The associated value is an estimate. See QC Report.					
	B:	The analyte was detected but is less than the Project Reporting Limit Goal.					
	R:	The value is unusable.					

Lori A. Zboralski

Thursday, September 02, 2010

Reviewed By: Lori Zboralski

Date



City of Tacoma

Environmental Services Laboratory

Center for Urban Waters

326 East D Street Tacoma WA 98421

Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-07849

Sample ID: NW DC 11C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

16:20

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>CAS#</u>
CONVENTIONAL							
Total Solids	8/4/2010	SM2540 G	82.8	percent	5.0	1.0	
ICP-MS							
Copper	8/16/2010	6020A	44.2	mg/Kg	0.488	0.093	7440-50-8
Lead	8/16/2010	6020A	58.1	mg/Kg	0.488	0.018	7439-92-1
Zinc	8/16/2010	6020A	213	mg/Kg	2.4	1.0	7440-66-6
Semi-VOA							
2-Methylnaphthalene	8/25/2010	8270D	670 U	ug/Kg	960	670	91-57-6
Acenaphthene	8/25/2010	8270D	480 U	ug/Kg	960	480	83-32-9
Acenaphthylene	8/25/2010	8270D	380 U	ug/Kg	960	380	208-96-8
Anthracene	8/25/2010	8270D	290 U	ug/Kg	960	290	120-12-7
Benzo(a)anthracene	8/25/2010	8270D	480 U	ug/Kg	960	480	56-55-3
Benzo(a)pyrene	8/25/2010	8270D	860 U	ug/Kg	960	860	50-32-8
Benzo(b,k)fluoranthenes	8/25/2010	8270D	860 U	ug/Kg	1900	860	56832-73-6
Benzo(g,h,i)perylene	8/25/2010	8270D	860 U J	ug/Kg	960	860	191-24-2
bis(2-Ethylhexyl)phthalate	8/24/2010	8270D	3600	ug/Kg	960	580	117-81-7
Butyl benzyl phthalate	8/25/2010	8270D	1100	ug/Kg	960	580	85-68-7
Chrysene	8/25/2010	8270D	380 U	ug/Kg	960	380	218-01-9
Dibenz(a,h)anthracene	8/25/2010	8270D	1200 U	ug/Kg	1200	1200	53-70-3
Diethylphthalate	8/25/2010	8270D	480 U	ug/Kg	960	480	84-66-2
Dimethyl phthalate	8/25/2010	8270D	380 U	ug/Kg	960	380	131-11-3
Di-n-butylphthalate	8/25/2010	8270D	670 U	ug/Kg	960	670	84-74-2
Di-n-octyl phthalate	8/25/2010	8270D	1100 U	ug/Kg	1100	1100	117-84-0
Fluoranthene	8/25/2010	8270D	380 U	ug/Kg	960	380	206-44-0
Fluorene	8/25/2010	8270D	290 U	ug/Kg	960	290	86-73-7
Indeno(1,2,3-c,d)pyrene	8/25/2010	8270D	960 U	ug/Kg	960	960	193-39-5
Naphthalene	8/25/2010	8270D	770 U	ug/Kg	960	770	91-20-3
Phenanthrene	8/25/2010	8270D	190 U	ug/Kg	960	190	85-01-8
Pyrene	8/25/2010	8270D	480 U	ug/Kg	960	480	129-00-0



City of Tacoma

Environmental Services Laboratory

Center for Urban Waters

326 East D Street Tacoma WA 98421

Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-07849

Sample ID: NW DC 11C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

16:20

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>CAS#</u>
Flags:	U:	The analyte was not detected at or above the reported value.					
	UJ:	The analyte was not detected at or above the reported estimated result. See QC Report.					
	NJ:	TIC There is evidence the analyte is present. The associated value is an estimate.					
	J:	The analyte was positively identified. The associated value is an estimate. See QC Report.					
	B:	The analyte was detected but is less than the Project Reporting Limit Goal.					
	R:	The value is unusable.					

Lori A. Zboralski

Thursday, September 02, 2010

Reviewed By: Lori Zboralski

Date



City of Tacoma

Environmental Services Laboratory

Center for Urban Waters

326 East D Street Tacoma WA 98421

Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-07850

Sample ID: NW DC 12C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

16:15

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>CAS#</u>
CONVENTIONAL							
Total Solids	8/4/2010	SM2540 G	81.4	percent	5.0	1.0	
ICP-MS							
Copper	8/16/2010	6020A	47.1	mg/Kg	0.500	0.095	7440-50-8
Lead	8/16/2010	6020A	5.89	mg/Kg	0.500	0.018	7439-92-1
Zinc	8/16/2010	6020A	114	mg/Kg	2.5	1.0	7440-66-6
Semi-VOA							
2-Methylnaphthalene	8/24/2010	8270D	690 U	ug/Kg	990	690	91-57-6
Acenaphthene	8/24/2010	8270D	490 U	ug/Kg	990	490	83-32-9
Acenaphthylene	8/24/2010	8270D	400 U	ug/Kg	990	400	208-96-8
Anthracene	8/24/2010	8270D	300 U	ug/Kg	990	300	120-12-7
Benzo(a)anthracene	8/24/2010	8270D	490 U	ug/Kg	990	490	56-55-3
Benzo(a)pyrene	8/24/2010	8270D	890 U	ug/Kg	990	890	50-32-8
Benzo(b,k)fluoranthenes	8/24/2010	8270D	890 U	ug/Kg	2000	890	56832-73-6
Benzo(g,h,i)perylene	8/24/2010	8270D	890 U	ug/Kg	990	890	191-24-2
bis(2-Ethylhexyl)phthalate	8/24/2010	8270D	11000	ug/Kg	990	590	117-81-7
Butyl benzyl phthalate	8/24/2010	8270D	1000	ug/Kg	990	590	85-68-7
Chrysene	8/24/2010	8270D	400 U	ug/Kg	990	400	218-01-9
Dibenz(a,h)anthracene	8/24/2010	8270D	1200 U	ug/Kg	1200	1200	53-70-3
Diethylphthalate	8/24/2010	8270D	490 U	ug/Kg	990	490	84-66-2
Dimethyl phthalate	8/24/2010	8270D	400 U	ug/Kg	990	400	131-11-3
Di-n-butylphthalate	8/24/2010	8270D	690 U	ug/Kg	990	690	84-74-2
Di-n-octyl phthalate	8/24/2010	8270D	1100 U	ug/Kg	1100	1100	117-84-0
Fluoranthene	8/24/2010	8270D	400 U	ug/Kg	990	400	206-44-0
Fluorene	8/24/2010	8270D	300 U	ug/Kg	990	300	86-73-7
Indeno(1,2,3-c,d)pyrene	8/24/2010	8270D	990 U	ug/Kg	990	990	193-39-5
Naphthalene	8/24/2010	8270D	790 U	ug/Kg	990	790	91-20-3
Phenanthrene	8/24/2010	8270D	200 U	ug/Kg	990	200	85-01-8
Pyrene	8/24/2010	8270D	490 U	ug/Kg	990	490	129-00-0



City of Tacoma

Environmental Services Laboratory

Center for Urban Waters

326 East D Street Tacoma WA 98421

Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-07850

Sample ID: NWDC 12C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

16:15

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method;</u>	<u>Result</u>	<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>CAS#</u>
Flags:	U:	The analyte was not detected at or above the reported value.					
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	B:	The analyte was detected but is less than the Project Reporting Limit Goal.					
	R:	The value is unusable.					

Lori Zboralski

Thursday, September 02, 2010

Reviewed By: Lori Zboralski

Date



City of Tacoma

Environmental Services Laboratory

Center for Urban Waters

326 East D Street Tacoma WA 98421

Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-07851

Sample ID: NWDC 13C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

16:24

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>CAS#</u>
CONVENTIONAL							
Total Solids	8/4/2010	SM2540 G	40.6	percent	5.0	1.0	
ICP-MS							
Copper	8/16/2010	6020A	197	mg/Kg	0.478	0.091	7440-50-8
Lead	8/16/2010	6020A	141	mg/Kg	0.478	0.018	7439-92-1
Zinc	8/16/2010	6020A	254	mg/Kg	2.4	1.0	7440-66-6
Semi-VOA							
2-Methylnaphthalene	8/24/2010	8270D	700 U	ug/Kg	1000	700	91-57-6
Acenaphthene	8/24/2010	8270D	500 U	ug/Kg	1000	500	83-32-9
Acenaphthylene	8/24/2010	8270D	400 U	ug/Kg	1000	400	208-96-8
Anthracene	8/24/2010	8270D	300 U	ug/Kg	1000	300	120-12-7
Benzo(a)anthracene	8/24/2010	8270D	500 U	ug/Kg	1000	500	56-55-3
Benzo(a)pyrene	8/24/2010	8270D	900 U	ug/Kg	1000	900	50-32-8
Benzo(b,k)fluoranthenes	8/24/2010	8270D	1200 J	ug/Kg	2000	900	56832-73-6
Benzo(g,h,i)perylene	8/24/2010	8270D	900 UJ	ug/Kg	1000	900	191-24-2
bis(2-Ethylhexyl)phthalate	8/25/2010	8270D	480000	ug/Kg	10000	6000	117-81-7
Butyl benzyl phthalate	8/24/2010	8270D	5500	ug/Kg	1000	600	85-68-7
Chrysene	8/24/2010	8270D	1600	ug/Kg	1000	400	218-01-9
Dibenz(a,h)anthracene	8/24/2010	8270D	1200 U	ug/Kg	1200	1200	53-70-3
Diethylphthalate	8/24/2010	8270D	500 U	ug/Kg	1000	500	84-66-2
Dimethyl phthalate	8/24/2010	8270D	400 U	ug/Kg	1000	400	131-11-3
Di-n-butylphthalate	8/24/2010	8270D	9300	ug/Kg	1000	700	84-74-2
Di-n-octyl phthalate	8/24/2010	8270D	1100 U	ug/Kg	1100	1100	117-84-0
Fluoranthene	8/24/2010	8270D	2400	ug/Kg	1000	400	206-44-0
Fluorene	8/24/2010	8270D	300 U	ug/Kg	1000	300	86-73-7
Indeno(1,2,3-c,d)pyrene	8/24/2010	8270D	1000 U	ug/Kg	1000	1000	193-39-5
Naphthalene	8/24/2010	8270D	800 U	ug/Kg	1000	800	91-20-3
Phenanthrene	8/24/2010	8270D	1700	ug/Kg	1000	200	85-01-8
Pyrene	8/24/2010	8270D	2000	ug/Kg	1000	500	129-00-0



City of Tacoma

Environmental Services Laboratory

Center for Urban Waters

316 East D Street Tacoma WA 98421

Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-07851

Sample ID: NWDC 13C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

16:24

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis</u> <u>Date</u>	<u>Analytical</u> <u>Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
Flags:	U:	The analyte was not detected at or above the reported value.					
	UJ:	The analyte was not detected at or above the reported estimated result. See QC Report.					
	NJ:	TIC There is evidence the analyte is present. The associated value is an estimate.					
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Lori Zboralski

Thursday, September 02, 2010

Reviewed By: Lori Zboralski

Date



City of Tacoma

Environmental Services Laboratory

Center for Urban Waters
 326 East D Street Tacoma WA 98421
 Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-07853

Sample ID: NW DC 17C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

15:30

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>CAS#</u>
CONVENTIONAL							
Total Solids	8/4/2010	SM2540 G	53.3	percent	5.0	1.0	
ICP-MS							
Copper	8/16/2010	6020A	202	mg/Kg	0.493	0.094	7440-50-8
Lead	8/19/2010	6020A	17.2	mg/Kg	0.197	0.0073	7439-92-1
Zinc	8/16/2010	6020A	272	mg/Kg	2.5	1.0	7440-66-6
Semi-VOA							
2-Methylnaphthalene	8/24/2010	8270D	700 U	ug/Kg	1000	700	91-57-6
Acenaphthene	8/24/2010	8270D	500 U	ug/Kg	1000	500	83-32-9
Acenaphthylene	8/24/2010	8270D	400 U	ug/Kg	1000	400	208-96-8
Anthracene	8/24/2010	8270D	300 U	ug/Kg	1000	300	120-12-7
Benzo(a)anthracene	8/24/2010	8270D	500 U	ug/Kg	1000	500	56-55-3
Benzo(a)pyrene	8/24/2010	8270D	900 U	ug/Kg	1000	900	50-32-8
Benzo(b,k)fluoranthenes	8/24/2010	8270D	900 U	ug/Kg	2000	900	56832-73-6
Benzo(g,h,i)perylene	8/24/2010	8270D	900 U J	ug/Kg	1000	900	191-24-2
bis(2-Ethylhexyl)phthalate	8/24/2010	8270D	13000	ug/Kg	1000	600	117-81-7
Butyl benzyl phthalate	8/24/2010	8270D	2200	ug/Kg	1000	600	85-68-7
Chrysene	8/24/2010	8270D	400 U	ug/Kg	1000	400	218-01-9
Dibenz(a,h)anthracene	8/24/2010	8270D	1200 U	ug/Kg	1200	1200	53-70-3
Dietylphthalate	8/24/2010	8270D	500 U	ug/Kg	1000	500	84-66-2
Dimethyl phthalate	8/24/2010	8270D	400 U	ug/Kg	1000	400	131-11-3
Di-n-butylphthalate	8/24/2010	8270D	700 U	ug/Kg	1000	700	84-74-2
Di-n-octyl phthalate	8/24/2010	8270D	1100 U	ug/Kg	1100	1100	117-84-0
Fluoranthene	8/24/2010	8270D	400 U	ug/Kg	1000	400	206-44-0
Fluorene	8/24/2010	8270D	300 U	ug/Kg	1000	300	86-73-7
Indeno(1,2,3-c,d)pyrene	8/24/2010	8270D	1000 U	ug/Kg	1000	1000	193-39-5
Naphthalene	8/24/2010	8270D	800 U	ug/Kg	1000	800	91-20-3
Phenanthrene	8/24/2010	8270D	200 U	ug/Kg	1000	200	85-01-8
Pyrene	8/24/2010	8270D	500 U	ug/Kg	1000	500	129-00-0



City of Tacoma

Environmental Services Laboratory

Center for Urban Waters

326 East D Street Tacoma WA 98421

Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-07853

Sample ID: NWDC 17C

Sample Type: Sediment

Sample Collect Date: 6/24/2010

15:30

Sample Receipt Date: 6/25/2010

<u>Test</u>	<u>Analysis</u> <u>Date</u>	<u>Analytical</u> <u>Method:</u>	<u>Result</u>	<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>CAS#</u>
Flags:	U:	The analyte was not detected at or above the reported value.					
	UJ:	The analyte was not detected at or above the reported estimated result. See QC Report.					
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	R:	The value is unusable.					

Lori A. Zboralski

Reviewed By: Lori Zboralski

Thursday, September 02, 2010

Date



Chain of Custody Record

Page 1 of 1

SAP Accounting		Project Name		Samples Sent for							
531400		NW DETENTION CENTER PULVERIZER IMP.		MO#							
Samples (Filter)		Samples (Filter)		Remarks							
T. MILLER		J. SWINCH		SAMPLES TO BE FROZEN UNTIL LAB IS ABLE TO ANALYZE							
Lab #	Date	Time	Matrix	Composite	Sample ID	Total Containers	ANALYTES (LOSS)	H PAH (LOSS)	H PAH (LOSS)	DATE/TIME	Received for Laboratory By (Signature):
1	6/24/10	1440	SOIL	X	NWDC1C	1	X	X	X	6/24/10	Received for Laboratory By (Signature):
2	6/24/10	1450			NWDC2C						
3	6/24/10	1452			NWDC3C						
4	6/24/10	1502			NWDC4C						
5	6/24/10	1512			NWDC5C						
6	6/24/10	1522			NWDC6C						
7	6/24/10	1532			NWDC7C						
8	6/24/10	1542			NWDC8C						
9	6/24/10	1550			NWDC9C						
10	6/24/10	1602			NWDC10C						
11	6/24/10	1620			NWDC11C						
12	6/24/10	1645			NWDC12C						
13	6/24/10	1654			NWDC13C						
14	6/24/10	1658			NWDC14C						
15	6/24/10	1707			NWDC17C						
Received by (Signature):		Date/Time		Received By (Signature):		Date/Time		Date/Time		Received for Laboratory By (Signature):	
		6/24/10				6/24/10		6/24/10		Received for Laboratory By (Signature):	
Received by (Signature):		Date/Time		Received for Analysis By (Signature):		Date/Time		Date/Time		Received for Laboratory By (Signature):	
		1707				1707		1707		Received for Laboratory By (Signature):	

Field Report



To: Rick Fuller

CC:

From: Tony Miller

Date: January 26, 2010

Re: NWDC Phthalate Sampling November 2010

Background:

On November 17, 2010 Environmental Services (ES) performed a follow-up phthalate compound, PAH, and Foss Metals of Concern investigation at the Northwest Detention Center (NWDC), located at 1623 East J Street. The purpose of the investigation was to determine the route of entry of contaminants of concern into the NWDC's private storm system which have the potential to impact the sediment and water quality in the Wheeler Osgood Waterway. The investigation is part of the City of Tacoma's (COT) ongoing commitment to address any potential sediment re-contamination in the Thea Foss and Wheeler Osgood Waterways. The NWDC site has been identified as a potential point source of bis(2-ethylhexyl) phthalate (DEHP), as a result of earlier investigations conducted by ES in 2006, 2008, 2009, and June 2010.

In 2009 the private stormwater conveyance system was updated. This included the removal of holding ponds and the installation of Contech Filter Devices. The pond sediments were found to contain high levels of DEHP in the 2006 and 2008 investigations. The December 2009 and June 2010 investigations showed that the installation of the Contech devices likely filtered and retained sediment particles from the stormwater that was leaving the NWDC site. The investigations showed elevated levels of DEHP in sediments within the Contech devices, however, the sediments in the structures after (downstream) the devices had DEHP concentrations at levels below background levels found in Thea Foss Basin sediment trap data and sediment sampling within the within the Wheeler Osgood Waterway. In July 2010 the NWDC had their entire storm system cleaned of sediment and performed annual maintenance (i.e., removed sediment buildup and replaced filters with new media) in the Contech devices.

The goals of the November 2010 investigation were to:

- Identify the presence of “ongoing” contaminants of concern.
- Attempt to trace the origin of the DEHP in the onsite stormwater sediments.

Field Actions:

November 17, 2010:

Tony Miller and John Sunich arrived at the NWDC at 13:30 hrs to perform field sampling of the private stormwater system’s sediments to further characterize the site for phthalates, metals and PAHs. After security check in procedures, various legs of the private stormwater system that had shown previous phthalate contamination were again sampled to determine the contaminant levels, to identify where the gross contamination is located, and to evaluate possible routes of entry into the private stormwater system. 5 samples were collected (see Site Map) and the following observations were noted:

- NWDC1D. This catchbasin (CB) collects roof drain runoff and represents the top of the north half of the storm system. Additionally it has two 2” pipe connections whose origins are unknown. According to security staff they are from floor drains located within the building. The CB is located in the Gate 8 secured area. The sediment sample was collected at 13:53. The sample consisted of mostly grey mud, which was less than ½” deep in the basin. The grey material appeared to be coming from the two unknown connections, since there was some in the bottom of the pipes.
- NWDC2D. CB. Located to the North of NWDC1D outside of the gated area along the service road. The sediment sample was collected at 14:05. The sample consisted of brown/grey mud, which was less than ¼” deep in the basin. A catchbasin sock was removed prior to the sample being taken from the sump, the sock was approximately ¾ full of material. The sediments were dumped out adjacent to the road and the sock was replaced.
- NWDC3D. CB. Located northwest of NWDC2D along the service road. This CB also has an unknown 2” pipe connection. The sediment sample was collected at 14:20. The sediment sample consisted of gray mud, this mud appears to be coming from the unknown 2” connection, since there was some in the bottom of the pipe.
- NWDC4D. CB. Located northwest of NWDC3D along the service road. There is an 8” connection coming from the loading dock area, but we were not able to identify the exact connection point. The sediment sample was collected at 14:34. The sample consisted of gray mud and was approximately 3” deep in the basin. The gray mud appears to be coming from the unknown 8” pipe connection.
- NWDC5D. Northern Contech Device. There was not enough sediment to obtain a sample.
- NWDC7D. The first CB after the Northern Contech Device. There was not sufficient sediment to obtain a sample.
- NWDC8D. Northeastern most CB on southern leg along service road. The sediment sample was collected at 15:03. The sediment sample consisted of black/white aggregate roofing material, and the material was less than ¼” deep. There was a slight sheen on the water, and the water was clear.

- NWDC9D. CB. There is an unknown 4" pipe connection to the catch basin. There was not sufficient sediment to obtain a sample.
- NWDC10D. CB located at the start of the southernmost leg. There was not enough sediment for a sample. There was only gravel present which can't be analyzed for the analytes of concern.
- NWDC12D. CB located to the northwest of NWDC10C. There was not enough sediment to obtain a sample.
- NWD13D. Southern Contech Device. There was not enough sediment for a sample.
- NWDC14D. First CB located downstream of southern Contech Device. Inaccessible because guard shack was sitting on top of CB.
- NWDC15D. Point of compliance for northern system. Storm MH # 6775105. No sample taken, high tide and no sediment present in the City system.
- NWDC16D. Point of compliance for southern system. Storm MH # 6761714. No sample taken, high tide and no sediment was present in the City system.
- NWDC17D. Southern most CB in northern system. There was enough sediment to obtain a sample.

Analytical Results/General Summary:

All samples were taken using pre-cleaned stainless steel spoons and bowls, using good sampling practices. The samples were immediately placed in a cooler and transported to COT laboratory under Chain of Custody. The samples were analyzed for phthalate compounds, PAHs, lead, copper, and zinc. Analytical results are attached.

These sample results were compared to the Thea Foss sediment sampling results. This comparison provides a basis to determine whether concentrations present in the samples are similar to background concentrations or whether they are greater, indicating a possible point source of chemicals.

Generally, the analytical results direct us to three conclusions:

1. **DEHP contamination appears to be coming from the unknown pipe connections (suspected floor drains) to the catchbasins.** We found that the one to three orders of magnitude higher concentrations of DEHP and Zinc are coming from the grey muddy sediments that were collected from various catchbasins. These catchbasin also have connections with unknown origins, and it appears that the grey sediment is coming from these unknown pipes as you can see residual grey mud sitting in the bottom of them.
2. **Higher zinc concentrations appear to correlate with higher DEHP concentrations.** Similar to the sampling event in June 2010 we found that the zinc levels increased along with the DEHP levels, suggesting that they have a common origin at this site. These results are shown below.

Sample ID #	DEHP Concentration (ug/Kg)	Zinc Concentration (mg/Kg)
NWDC1D	2.6 million	9950
NWDC4D	3.0 million	9810
NWDC3D	290,000	2980
NWDC2D	30,000	324
NWDC8D	1,400	167
Thea Foss Basin Concentration Ranges		
Foss - Low	<50,000	<700
Foss - Med	50,000-100,000	700-1300
Foss - High	>100,000	>1300

Foss-High: area requires further investigation.

3. **Except for unknown connections the storm system appears to have little accumulated sediment.** The lack of sediment that we found in the catchbasins throughout the storm system suggests that the site's BMPs are either being implemented correctly (nonstructural BMPs such as house cleaning) or are working correctly (structural BMPs). Except for NWDC2D and NWDC8D the only catchbasins found to contain enough volume of sediment for analyses are those with the pipe connections of unknown origins. Visual observations indicate that the sediment is entering the system through these pipes of unknown origin, and these sediments appear to contain relatively high concentrations of DEHP and Zinc.

Executive Summary and Conclusion:

Recent investigations in the OF254 drainage basin identified phthalates and PAHs as primary contaminants of concern in stormwater and in the Wheeler Osgood Waterway sediments. Because of high DEHP concentrations in waterway sediments found in 2008, and subsequent source investigations in the OF 254 drainage basin, the NWDC was identified as a potential significant contributor of phthalates. The November 2010 investigation of the NWDC was intended to further characterize the site for phthalates and to determine the potential sources of these contaminants. An ongoing source of DEHP into the stormwater system should be more easily determined since the system was cleaned in July 2010.

Similar to the June 2010 investigation, a correlation between the presence of DEHP and zinc has been identified. It is suspected that these compounds have a common origin within the NWDC facility.

The timing of the November 2010 investigation of the NWDC's stormwater system was intended to identify the presence and source of any "on-going" source of contaminants of concern after the completion of the cleaning of the storm system.

This sampling event appears to have shown the route for the DEHP contamination entering the system. The pipe connections of unknown origin within NWDC1, NWDC3, and NWDC4 appear to be the source of this site's contaminated

January 26, 2011

sediments. A meeting has been scheduled for 1/13/11 with the Geo Group to determine the origin of these connections as well as the source of contamination. The purpose of that meeting will be to verify the origins of the suspect pipes that contained contaminated sediment. Also, additional sampling may be performed to identify the source of contaminants entering the pipes to confirm the activity or source that is causing the contaminated discharge. Future recommendations may be based on those results.

If you have any questions, or need more information, please feel free to contact me. Thank you.



Tony Miller
Environmental Specialist
Environmental Services/Science & Engineering
(253) 502-2195 wk
(253) 253-377-5138 cell

Attachments:

- Site map with sampling locations.
- Thea Foss map and results from June 2010 sediment sampling event.
- Lab Results.
- Photos from sampling event.



NOTES

1. SEE SHEET C31A FOR CONSTRUCTION AND NOTES
2. WEST B. SOUTHWEST CORNER OF CONSTRUCTION
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LEGEND

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SEC 3 & 4, TWP. 20 N, RGE. 3 E, WM.

GRADING & DRAINAGE PLAN

CONSTRUCTION SET

DATE: 2/16/09

DRAWN: LC

CHECKED: JDO

APP. NO.: 00063

SHEET NO.: C3

REVISIONS

NO.	DATE	BY	REVISION
1	10/22/08		GRADING & DRAINAGE CONSTRUCTION SET
2	2/16/09	LC	

THE GEO GROUP, INC.

Rupert Engineering, Inc.
 CONSULTING ENGINEERS/CIVIL AND STRUCTURAL

1570 West Valley Highway North, Suite 101
 Aurora, WI 53001
 Tel: (262) 833-7774 Fax: (262) 838-2188

GRADING & DRAINAGE NORTHWEST DETENTION CENTER
 553 BED FACILITY EXPANSION
 1623 EAST J STREET TACOMA, WA

WESTERN ENGINEERING & SURVEYING

PROPERTY OWNER: NWDC 10C, NWDC 11C

LINE NO.	DESCRIPTION	AREA (SQ. FT.)	PERCENT
1	EXIST. ASPHALT	100.00	100.00%
2	EXIST. CONCRETE	100.00	100.00%
3	EXIST. GRAVEL	100.00	100.00%
4	EXIST. CONC.	100.00	100.00%
5	NEW ASPHALT	100.00	100.00%
6	NEW CONCRETE	100.00	100.00%
7	NEW GRAVEL	100.00	100.00%
8	NEW CONC.	100.00	100.00%
9	TOTAL	100.00	100.00%

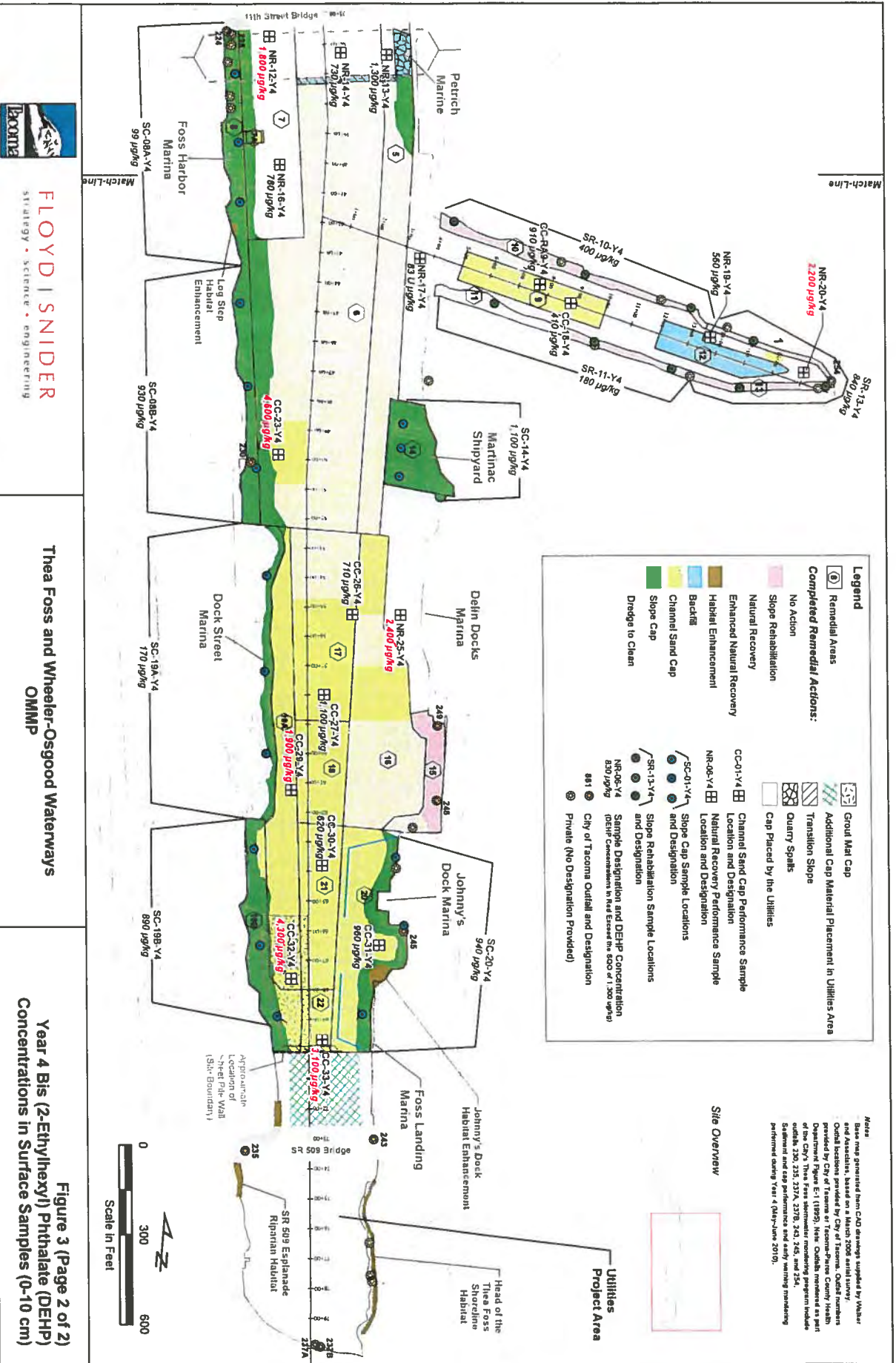
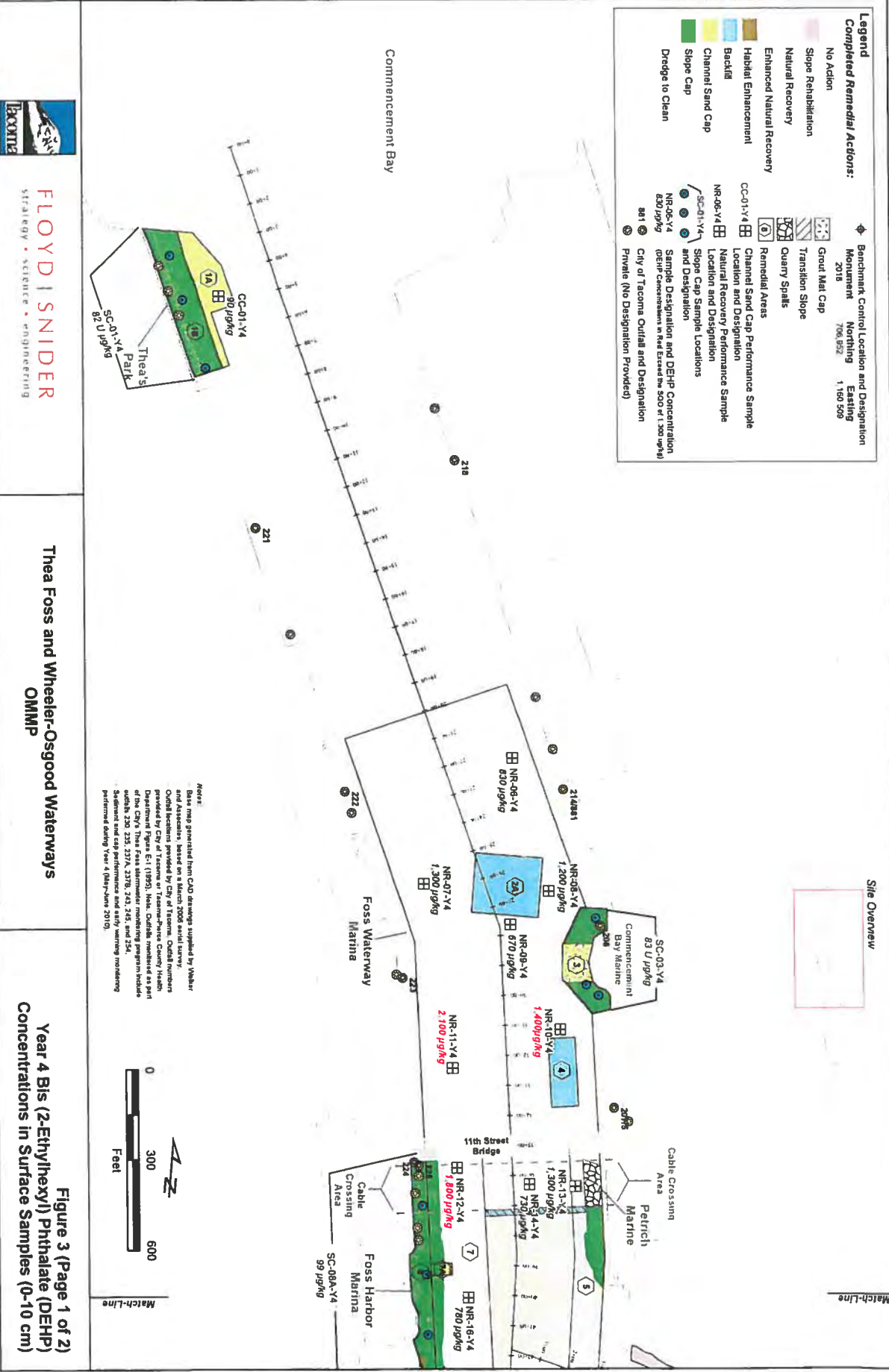


Figure 3 (Page 2 of 2)
Year 4 Bis (2-Ethylhexyl) Phthalate (DEHP)
Concentrations in Surface Samples (0-10 cm)





City of Tacoma
Environmental Services

Memorandum

TO: Chris Burke, Sr. Environmental Specialist

FROM: Christopher L. Getchell, Asst. Division Manager, Env. Services Laboratory

SUBJECT: Miscellaneous Cost Center 521400

DATE: December 30, 2010

Attached are the analytical results for the sediment samples collected from the NWDC Phthalate Investigation on November 17, 2010. The samples were analyzed for Semi-Volatile Organics (PAH and Phthalate Compounds) and Total Metals.

Non-target phthalate esters were detected at high concentrations in two of the samples. They have been reported as tentatively identified compounds (TIC) with estimated values.

The Environmental Services Laboratory analyzed the samples. A detailed Data Quality Review report was prepared and is attached for your review.

If you have any questions concerning this data, call me at (253) 502-2130. Please note that the sample associated with this report will be discarded six months from the date of this report, unless notified otherwise.


Christopher L. Getchell
Assistant Division Manager
Environmental Services Laboratory

CLG:GP

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Fs005\lab_reports\SurfaceWater\Miscellaneous\2010\NWDetCenter_201011.pdf

Data Quality Review Report

TO: Christopher L. Getchell, Asst. Division Manager
FROM: Gregory Perez, Senior Laboratory Analyst 
DATE: December 30, 2010

SAMPLES

This report concerns the following samples associated with **WBS Element ENV-03003-04-01**:

<u>Sample Description</u>	<u>Lab#</u>	<u>Date Sampled</u>
NW DC 1D	2010-13865	11/17/2010
NW DC C2D	2010-13866	11/17/2010
NW DC 3D	2010-13867	11/17/2010
NW DC 4D	2010-13868	11/17/2010
NW DC 8D	2010-13869	11/17/2010

HOLDING TIMES

The samples were extracted within the 14-day sample collection-to-extraction holding time and analyzed within 7 days for Total Solids, 40 days for Semi-Volatile Organics, and 180 days for Total Metals.

METHODS

The samples were analyzed according to Method 8270D for Semi-Volatile Organics and 6020A for Total Metals.

METHOD DETECTION LIMITS

All analytes are reported to the Method Detection Limit (MDL). Values greater than the MDL and less than the Practical Quantitation Limit (reporting limit or PQL) are reported for your information. The value is qualified as estimated (J) because it is not as precise at this concentration as values reported greater than the PQL.

METHOD BLANKS

Method Preparation blanks were analyzed at the required frequency. The concentrations of these blanks were less than 1/15th the amount found in the samples or less than the detection limits.

ICP SERIAL DILUTIONS

Serial dilution of samples analyzed by ICP provides information about physical or chemical interferences that may exist due to sample matrix.

The NW DC 2D sample was analyzed at a five-fold dilution. All analytes had percent difference of the diluted sample compared to the undiluted sample of less than 10% for analytes greater than 50 times the IDL.

SURROGATES

Two surrogates were added to the samples prior to extraction for Semi-Volatile Organics. The recoveries for the Semi-Volatile Organics were within the laboratory's control limits for all compounds, **except for the following:**

<u>Lab#</u>	<u>Analyte</u>	<u>Result</u>	<u>Limits</u>
2010-13865R	2-Fluorobiphenyl	25 *	39-92
2010-13865R	Terphenyl-d14	138.2 *	49-128

Data for this sample will be qualified as estimated(J).

LABORATORY CONTROL SAMPLES

Laboratory Control Samples (LCS) monitor the performance of each step of the analysis, including sample preparation. The LCS recoveries were within the laboratory established control limits.

DUPLICATE SAMPLE ANALYSIS

Duplicate samples were analyzed for Total Solids and Total Metals. All duplicate results had relative percent differences (RPD) within laboratory-established limits of less than 35%.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SAMPLE ANALYSIS

Matrix Spike analysis was performed for Total Metals. The recoveries ranged from 96 – 108% and were within the laboratory's limits of 70 -130%, except for Zinc, where the native amount in the sample was over 4 times the spike level.

Matrix Spike and Matrix Spike Duplicates were analyzed for Semi-Volatile Organics. Recoveries were within the laboratory established control limits, except for the following:

<u>Lab#</u>	<u>Analyte</u>	<u>Result</u>	<u>Limits</u>
2010-13869M	2-Methylnaphthalene	107.1	35-105
2010-13869M	Benzo(g,h,i)perylene	47	51-133
2010-13869M	Di-n-Octyl phthalate	149.4	43-147

Data is not qualified based on one matrix spike failure.

INTERNAL STANDARDS

Performance of the Internal Standards (IS) monitors GC/MS sensitivity and stability during each analysis. Internal Standard areas in the samples must meet 50% to 200% when compared to the Continuing Calibration response and be within +/- 30 seconds from the Continuing Calibration retention time. The Internal Standards added to these samples met the method requirements for all samples.



City of Tacoma

Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421

Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-13865

Sample ID: NW DC 1D

Sample Type: Sediment

Sample Collect Date: 11/17/2010

Sample Receipt Date: 11/17/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>		<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>CAS#</u>
CONVENTIONAL								
Total Solids	11/19/2010	SM2540B/G	18.6		percent	5.0	1.0	
Metals								
Copper	12/8/2010	6010B	91.0		mg/Kg	20.7	6.6	7440-50-8
Lead	12/8/2010	6010B	150		mg/Kg	20.7	3.7	7439-92-1
Zinc	12/8/2010	6010B	9950		mg/Kg	20.7	4.5	7440-66-6
Semi-VOA								
1,2-Benzenedicarboxylic acid, mono	12/23/2010	8270D	19000	NJ	ug/Kg	960	960	
1,3-Benzenedicarboxylic acid, bis(2-	12/23/2010	8270D	940000	NJ	ug/Kg	960	960	
2-Methylnaphthalene	12/23/2010	8270D	380	U J	ug/Kg	960	380	91-57-6
Acenaphthene	12/23/2010	8270D	380	U J	ug/Kg	960	380	83-32-9
Acenaphthylene	12/23/2010	8270D	1200	U J	ug/Kg	1200	1200	208-96-8
Anthracene	12/23/2010	8270D	580	U J	ug/Kg	960	580	120-12-7
Benzo(a)anthracene	12/23/2010	8270D	770	U J	ug/Kg	960	770	56-55-3
Benzo(a)pyrene	12/23/2010	8270D	670	U J	ug/Kg	960	670	50-32-8
Benzo(b,k)fluoranthenes	12/23/2010	8270D	380	U J	ug/Kg	1900	380	56832-73-6
Benzo(g,h,i)perylene	12/23/2010	8270D	380	U J	ug/Kg	960	380	191-24-2
bis(2-Ethylhexyl)phthalate	12/23/2010	8270D	2600000	J	ug/Kg	48000	29000	117-81-7
Butyl benzyl phthalate	12/23/2010	8270D	670	U J	ug/Kg	960	670	85-68-7
Chrysene	12/23/2010	8270D	1800	J	ug/Kg	960	670	218-01-9
Dibenz(a,h)anthracene	12/23/2010	8270D	1400	J	ug/Kg	960	380	53-70-3
Diethylphthalate	12/23/2010	8270D	670	U J	ug/Kg	960	670	84-66-2
Dimethyl phthalate	12/23/2010	8270D	480	U J	ug/Kg	960	480	131-11-3
Di-n-butylphthalate	12/23/2010	8270D	48000	J	ug/Kg	960	670	84-74-2
Di-n-Octyl phthalate	12/23/2010	8270D	770	U J	ug/Kg	960	770	117-84-0
Fluoranthene	12/23/2010	8270D	3000	J	ug/Kg	960	670	206-44-0
Fluorene	12/23/2010	8270D	380	U J	ug/Kg	960	380	86-73-7
Indeno(1,2,3-c,d)pyrene	12/23/2010	8270D	480	U J	ug/Kg	960	480	193-39-5
Naphthalene	12/23/2010	8270D	380	U J	ug/Kg	960	380	91-20-3
Phenanthrene	12/23/2010	8270D	2800	J	ug/Kg	960	580	85-01-8
Pyrene	12/23/2010	8270D	13000	J	ug/Kg	960	670	129-00-0



City of Tacoma

Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421
Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-13865

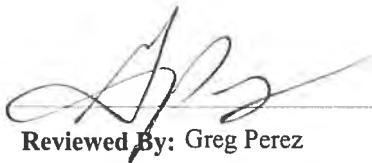
Sample ID: NW DC 1D

Sample Type: Sediment

Sample Collect Date: 11/17/2010

Sample Receipt Date: 11/17/2010

<u>Test</u>	<u>Analysis</u> <u>Date</u>	<u>Analytical</u> <u>Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
Flags:	U:	The analyte was not detected at or above the reported value.					
	UJ:	The analyte was not detected at or above the reported estimated result. See QC Report.					
	NJ:	TIC There is evidence the analyte is present. The associated value is an estimate.					
	J:	The analyte was positively identified. The associated value is an estimate. See QC Report.					
	B:	The analyte was detected but is less than the Project Reporting Limit Goal.					
	R:	The value is unusable.					



Reviewed By: Greg Perez

Monday, January 03, 2011

Date



City of Tacoma

Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421
Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-13866

Sample ID: NW DC 2D

Sample Type: Sediment

Sample Collect Date: 11/17/2010

Sample Receipt Date: 11/17/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>CAS#</u>
CONVENTIONAL							
Total Solids	11/19/2010	SM2540B/G	76.0	percent	5.0	1.0	
Metals							
Copper	12/8/2010	6010B	37.3	mg/Kg	6.6	2.1	7440-50-8
Lead	12/8/2010	6010B	20.6	mg/Kg	6.6	1.2	7439-92-1
Zinc	12/8/2010	6010B	324	mg/Kg	6.6	1.4	7440-66-6
Semi-VOA							
2-Methylnaphthalene	12/23/2010	8270D	40	U ug/Kg	100	40	91-57-6
Acenaphthene	12/23/2010	8270D	40	U ug/Kg	100	40	83-32-9
Acenaphthylene	12/23/2010	8270D	120	U ug/Kg	120	120	208-96-8
Anthracene	12/23/2010	8270D	60	U ug/Kg	100	60	120-12-7
Benzo(a)anthracene	12/23/2010	8270D	180	ug/Kg	100	80	56-55-3
Benzo(a)pyrene	12/23/2010	8270D	230	ug/Kg	100	70	50-32-8
Benzo(b,k)fluoranthenes	12/23/2010	8270D	490	ug/Kg	200	40	56832-73-6
Benzo(g,h,i)perylene	12/23/2010	8270D	40	U ug/Kg	100	40	191-24-2
bis(2-Ethylhexyl)phthalate	12/23/2010	8270D	30000	ug/Kg	1000	600	117-81-7
Butyl benzyl phthalate	12/23/2010	8270D	70	U ug/Kg	100	70	85-68-7
Chrysene	12/23/2010	8270D	290	ug/Kg	100	70	218-01-9
Dibenz(a,h)anthracene	12/23/2010	8270D	40	U ug/Kg	100	40	53-70-3
Diethylphthalate	12/23/2010	8270D	70	U ug/Kg	100	70	84-66-2
Dimethyl phthalate	12/23/2010	8270D	100	ug/Kg	100	50	131-11-3
Di-n-butylphthalate	12/23/2010	8270D	3700	ug/Kg	100	70	84-74-2
Di-n-Octyl phthalate	12/23/2010	8270D	80	U ug/Kg	100	80	117-84-0
Fluoranthene	12/23/2010	8270D	400	ug/Kg	100	70	206-44-0
Fluorene	12/23/2010	8270D	140	ug/Kg	100	40	86-73-7
Indeno(1,2,3-c,d)pyrene	12/23/2010	8270D	50	U ug/Kg	100	50	193-39-5
Naphthalene	12/23/2010	8270D	260	ug/Kg	100	40	91-20-3
Phenanthrene	12/23/2010	8270D	520	ug/Kg	100	60	85-01-8
Pyrene	12/23/2010	8270D	460	ug/Kg	100	70	129-00-0



City of Tacoma

Environmental Services Laboratory

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Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-13866

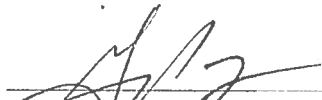
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Sample Type: Sediment

Sample Collect Date: 11/17/2010

Sample Receipt Date: 11/17/2010

<u>Test</u>	<u>Analysis</u> <u>Date</u>	<u>Analytical</u> <u>Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
Flags:	U:	The analyte was not detected at or above the reported value.					
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	NJ:	TIC There is evidence the analyte is present. The associated value is an estimate.					
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	B:	The analyte was detected but is less than the Project Reporting Limit Goal.					
	R:	The value is unusable.					


Reviewed By: Greg Perez

Monday, January 03, 2011

Date



City of Tacoma

Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421
Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-13867

Sample ID: NW DC 3D

Sample Type: Sediment

Sample Collect Date: 11/17/2010

Sample Receipt Date: 11/17/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
CONVENTIONAL							
Total Solids	11/19/2010	SM2540B/G	44.8	percent	5.0	1.0	
Metals							
Copper	12/8/2010	6010B	60.7	mg/Kg	4.9	1.6	7440-50-8
Lead	12/8/2010	6010B	48.4	mg/Kg	4.85	0.87	7439-92-1
Zinc	12/8/2010	6010B	2980	mg/Kg	4.9	1.1	7440-66-6
Semi-VOA							
2-Methylnaphthalene	12/23/2010	8270D	39	U ug/Kg	99	39	91-57-6
Acenaphthene	12/23/2010	8270D	39	U ug/Kg	99	39	83-32-9
Acenaphthylene	12/23/2010	8270D	120	U ug/Kg	120	120	208-96-8
Anthracene	12/23/2010	8270D	59	U ug/Kg	99	59	120-12-7
Benzo(a)anthracene	12/23/2010	8270D	230	ug/Kg	99	79	56-55-3
Benzo(a)pyrene	12/23/2010	8270D	340	ug/Kg	99	69	50-32-8
Benzo(b,k)fluoranthenes	12/23/2010	8270D	460	ug/Kg	200	39	56832-73-6
Benzo(g,h,i)perylene	12/23/2010	8270D	39	U ug/Kg	99	39	191-24-2
bis(2-Ethylhexyl)phthalate	12/28/2010	8270D	290000	ug/Kg	9900	5900	117-81-7
Butyl benzyl phthalate	12/23/2010	8270D	69	U ug/Kg	99	69	85-68-7
Chrysene	12/23/2010	8270D	410	ug/Kg	99	69	218-01-9
Dibenz(a,h)anthracene	12/23/2010	8270D	39	U ug/Kg	99	39	53-70-3
Diethylphthalate	12/23/2010	8270D	250	ug/Kg	99	69	84-66-2
Dimethyl phthalate	12/23/2010	8270D	49	U ug/Kg	99	49	131-11-3
Di-n-butylphthalate	12/23/2010	8270D	22000	ug/Kg	9900	6900	84-74-2
Di-n-Octyl phthalate	12/23/2010	8270D	79	U ug/Kg	99	79	117-84-0
Fluoranthene	12/23/2010	8270D	640	ug/Kg	99	69	206-44-0
Fluorene	12/23/2010	8270D	160	ug/Kg	99	39	86-73-7
Indeno(1,2,3-c,d)pyrene	12/23/2010	8270D	49	U ug/Kg	99	49	193-39-5
Naphthalene	12/23/2010	8270D	140	ug/Kg	99	39	91-20-3
Phenanthrene	12/23/2010	8270D	830	ug/Kg	99	59	85-01-8
Pyrene	12/23/2010	8270D	1500	ug/Kg	99	69	129-00-0



City of Tacoma

Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421
Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-13867

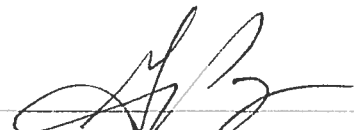
Sample ID: NW DC 3D

Sample Type: Sediment

Sample Collect Date: 11/17/2010

Sample Receipt Date: 11/17/2010

<u>Test</u>	<u>Analysis</u> <u>Date</u>	<u>Analytical</u> <u>Method:</u>	<u>Result</u>	<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>CAS#</u>
Flags:	U:	The analyte was not detected at or above the reported value.					
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Reviewed By: Greg Perez

Monday, January 03, 2011

Date



City of Tacoma

Environmental Services Laboratory

2201 Portland Avenue Tacoma WA 98421
Phone: 253.591.5588 Fax: 253.502.2170

Lab#: 2010-13868

Sample ID: NW DC 4D

Sample Type: Sediment

Sample Collect Date: 11/17/2010

Sample Receipt Date: 11/17/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
CONVENTIONAL							
Total Solids	11/19/2010	SM2540B/G	28.0	percent	5.0	1.0	
Metals							
Copper	12/8/2010	6010B	195	mg/Kg	28.8	9.2	7440-50-8
Lead	12/8/2010	6010B	289	mg/Kg	28.8	5.2	7439-92-1
Zinc	12/8/2010	6010B	9810	mg/Kg	28.8	6.3	7440-66-6
Semi-VOA							
1,2-Benzenedicarboxylic acid, mono	12/23/2010	8270D	19500	NJ ug/Kg	974	974	
1,3-Benzenedicarboxylic acid, bis(2-	12/23/2010	8270D	759000	NJ ug/Kg	974	974	
2-Methylnaphthalene	12/23/2010	8270D	390	U ug/Kg	970	390	91-57-6
Acenaphthene	12/23/2010	8270D	390	U ug/Kg	970	390	83-32-9
Acenaphthylene	12/23/2010	8270D	1200	U ug/Kg	1200	1200	208-96-8
Anthracene	12/23/2010	8270D	580	U ug/Kg	970	580	120-12-7
Benzo(a)anthracene	12/23/2010	8270D	1200	ug/Kg	970	780	56-55-3
Benzo(a)pyrene	12/23/2010	8270D	680	U ug/Kg	970	680	50-32-8
Benzo(b,k)fluoranthenes	12/23/2010	8270D	390	U ug/Kg	1900	390	56832-73-6
Benzo(g,h,i)perylene	12/23/2010	8270D	390	U ug/Kg	970	390	191-24-2
bis(2-Ethylhexyl)phthalate	12/28/2010	8270D	3000000	ug/Kg	97000	58000	117-81-7
Butyl benzyl phthalate	12/23/2010	8270D	680	U ug/Kg	970	680	85-68-7
Chrysene	12/23/2010	8270D	2300	ug/Kg	970	680	218-01-9
Dibenz(a,h)anthracene	12/23/2010	8270D	390	U ug/Kg	970	390	53-70-3
Diethylphthalate	12/23/2010	8270D	680	U ug/Kg	970	680	84-66-2
Dimethyl phthalate	12/23/2010	8270D	490	U ug/Kg	970	490	131-11-3
Di-n-butylphthalate	12/23/2010	8270D	14000	ug/Kg	970	680	84-74-2
Di-n-Octyl phthalate	12/23/2010	8270D	780	U ug/Kg	970	780	117-84-0
Fluoranthene	12/23/2010	8270D	4700	ug/Kg	970	680	206-44-0
Fluorene	12/23/2010	8270D	390	U ug/Kg	970	390	86-73-7
Indeno(1,2,3-c,d)pyrene	12/23/2010	8270D	490	U ug/Kg	970	490	193-39-5
Naphthalene	12/23/2010	8270D	390	U ug/Kg	970	390	91-20-3
Phenanthrene	12/23/2010	8270D	3400	ug/Kg	970	580	85-01-8
Pyrene	12/23/2010	8270D	8700	ug/Kg	970	680	129-00-0



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Lab#: 2010-13868

Sample ID: NW DC 4D

Sample Type: Sediment

Sample Collect Date: 11/17/2010

Sample Receipt Date: 11/17/2010

<u>Test</u>	<u>Analysis</u> <u>Date</u>	<u>Analytical</u> <u>Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
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Reviewed By: Greg Perez

Monday, January 03, 2011

Date



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Environmental Services Laboratory

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Lab#: 2010-13869

Sample ID: NW DC 8D

Sample Type: Sediment

Sample Collect Date: 11/17/2010

Sample Receipt Date: 11/17/2010

<u>Test</u>	<u>Analysis Date</u>	<u>Analytical Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
CONVENTIONAL							
Total Solids	11/19/2010	SM2540B/G	81.7	percent	5.0	1.0	
Metals							
Copper	12/8/2010	6010B	14.4	mg/Kg	3.9	1.3	7440-50-8
Lead	12/8/2010	6010B	49.3	mg/Kg	3.92	0.71	7439-92-1
Zinc	12/8/2010	6010B	167	mg/Kg	3.92	0.86	7440-66-6
Semi-VOA							
2-Methylnaphthalene	12/23/2010	8270D	40 U	ug/Kg	100	40	91-57-6
Acenaphthene	12/23/2010	8270D	40 U	ug/Kg	100	40	83-32-9
Acenaphthylene	12/23/2010	8270D	120 U	ug/Kg	120	120	208-96-8
Anthracene	12/23/2010	8270D	60 U	ug/Kg	100	60	120-12-7
Benzo(a)anthracene	12/23/2010	8270D	80 U	ug/Kg	100	80	56-55-3
Benzo(a)pyrene	12/23/2010	8270D	70 U	ug/Kg	100	70	50-32-8
Benzo(b,k)fluoranthenes	12/23/2010	8270D	40 U	ug/Kg	200	40	56832-73-6
Benzo(g,h,i)perylene	12/23/2010	8270D	40 U	ug/Kg	100	40	191-24-2
bis(2-Ethylhexyl)phthalate	12/23/2010	8270D	1400	ug/Kg	100	60	117-81-7
Butyl benzyl phthalate	12/23/2010	8270D	70 U	ug/Kg	100	70	85-68-7
Chrysene	12/23/2010	8270D	70 U	ug/Kg	100	70	218-01-9
Dibenz(a,h)anthracene	12/23/2010	8270D	40 U	ug/Kg	100	40	53-70-3
Diethylphthalate	12/23/2010	8270D	70 U	ug/Kg	100	70	84-66-2
Dimethyl phthalate	12/23/2010	8270D	50 U	ug/Kg	100	50	131-11-3
Di-n-butylphthalate	12/23/2010	8270D	270	ug/Kg	100	70	84-74-2
Di-n-Octyl phthalate	12/23/2010	8270D	80 U	ug/Kg	100	80	117-84-0
Fluoranthene	12/23/2010	8270D	70 U	ug/Kg	100	70	206-44-0
Fluorene	12/23/2010	8270D	40 U	ug/Kg	100	40	86-73-7
Indeno(1,2,3-c,d)pyrene	12/23/2010	8270D	50 U	ug/Kg	100	50	193-39-5
Naphthalene	12/23/2010	8270D	40 U	ug/Kg	100	40	91-20-3
Phenanthrene	12/23/2010	8270D	60 U	ug/Kg	100	60	85-01-8
Pyrene	12/23/2010	8270D	70 U	ug/Kg	100	70	129-00-0



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Lab#: 2010-13869

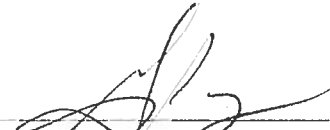
Sample ID: NW DC 8D

Sample Type: Sediment

Sample Collect Date: 11/17/2010

Sample Receipt Date: 11/17/2010

<u>Test</u>	<u>Analysis</u> <u>Date</u>	<u>Analytical</u> <u>Method:</u>	<u>Result</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>CAS#</u>
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Reviewed/By: Greg Perez

Monday, January 03, 2011

Date



Chain of Custody Record

Page 1 of 1

SAP Accounting		Project Name		Analysis/# of Containers		Samples Sent to:	
Samplers (Print)		NWDC PATHALATE INVESTIGATION		Total Containers		PO#	
Lab #	Date	Time	Matrix	Grab	Composite	Sample ID	Remarks
1	13865	11/17/10	1355	SOIL	X	NWDC 1D	PRIORITIES: 1. PATHALATES 2. ZINC 3. LEAD 4. COPPER 5. PAHS
2	66	1405	SOIL			NWDC 1M NWDC 2D	
3	67	1420				NWDC 3D	
4	68	1434				NWDC 4D	
5	13869	1505				NWDC 8D	
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
Relinquished By (Signature):		Date/Time		Received By (Signature):		Date/Time	
<i>Anthony Miller</i>		11/17/10		[Signature]		11-17-10	
Relinquished By (Signature):		Date/Time		Received for Analysis By (Signature):		Date/Time	
<i>Anthony Miller</i>		1556		[Signature]		1600	
Received for Laboratory By (Signature):		Date/Time		Received for Laboratory By (Signature):		Date/Time	
[Signature]		[Signature]		[Signature]		[Signature]	







CITYWIDE



Memorandum

To: Dana de Leon, P.E.
CC: Mike Kennedy, Lorna Mauren, Shauna Hansen
From: John Sunich
Date: 3/11/2011
Re: 2010 Year end Complaints/Spills and Inspections data for Thea Foss Watershed

I have gathered the following information detailing the amount of work performed by the Source Control Representatives for the Surface Water and Wastewater Source Control units. Please keep in mind that these numbers only reflect a portion of our overall program. Citizens for a Healthy Bay called in 21 spills/complaints within the Foss Drainage during 2010. City of Tacoma Employees called in 79 spills/complaints within the Foss Drainage.

Complaints and Spills – 9 years of database records (2002-2010)**

Thea Foss Spills and Complaints

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Water	11	25	13	21	29	15	19	13	22	168
Sewage	9	25	31	23	34	16	20	23	34	215
Petroleum	47	55	70	53	42	57	35	33	81	473
Mud	23	22	18	21	13	17	21	17	13	165
Paint	9	12	9	9	3	7	4	3	4	60
Soap	18	22	9	4	11	1	4	16	9	94
Chemical	17	13	20	11	6	3	13	6	8	97
Concrete	3	6	6	6	4	9	9	3	3	49
Garbage						12	0	14	25	51
FOG						9	4	5	2	20
Unknown	15	17	6	28	77	12	15	14	11	195
Total	152	197	182	176	219	158	144	147	212	1587

**Numbers are based on sorting of database and may not include items entered incorrectly.

Top 4 complaints for nine years are (corresponding number of received calls):

- Petroleum products (473)
- Sewage (215)
- Mud/Silt/Muddy water (165)
- Water (Flooding/Standing/Drainage) (168)

Business Inspections

- For 2010 we had 1523 business inspections or follow ups for all of the City of Tacoma, with 784 inspections or follow ups in the Thea Foss watershed. Additionally we completed 436 treatment device permit signoff inspections.

March 31, 2011



Memorandum

To: Jim Oberlander
From: John Sunich
Date: January 14, 2011
Re: Foss Business Inspections and Spills/Complaints from 2010

Jim,

Here are some tables of the 2010 Business Inspections and Spills/Complaints that took place in the Thea Foss drainage basin. Please let me know what other information specific to the Thea Foss basin you or Dana/Shauga would like me to generate from the database

Total Business Inspections Completed in the Foss Drainage Basin	784
Total Complaints In the Foss Drainage Basin	212

2010 Foss Spills/Complaint Break Down	
Surface Water	22
Waste Water	34
Garbage/Debris	25
Unknown/Other	10
Soaps/Washing Activities	9
Petroleum/Sheens	81
Muddy Runoff	13
Concrete	3
Chemical	8
Animal Waste	1
Paints	4
Fats/Oils/Grease	2
Total:	212

March 31, 2011

2010 Citywide Business Inspections and Spills/Complaints

Total Inspections:	1960
Total Spills/Complaints:	867

Thea Foss Watershed 2010 Inspections

ActivityID	ActivityDate	BusinessName	Address
10-BI-0008	30-Dec-09	TACOMA GENERAL STORM FILTERS	315 MARTIN LUTHER KING JR WAY
10-BI-0009	05-Jan-10	TACOMA GENERAL STORM FILTERS	315 MARTIN LUTHER KING JR WAY
10-BI-0010	06-Jan-10	FOREST BEACH FILMS	45 ST. HELENS
10-BI-0011	06-Jan-10	CELEBRITY CAKE STUDIO ON ST HELENS	41 ST. HELENS
10-BI-0012	06-Jan-10	STYRONS PHOTOGRAPHY	43 ST. HELENS AVE
10-BI-0013	06-Jan-10	DAVID THORSON PHOTOGRAPHY	45 ST. HELENS
10-BI-0014	06-Jan-10	KIRISHIAN CO ORIENTAL RUG	49 ST HELENS AVE
10-BI-0015	06-Jan-10	CLASSIC CUTS ON ST HELENS	29 ST HELENS AVE
10-BI-0016	06-Jan-10	A GRAND AFFAIR CATERING	29 ST HELENS AVE
10-BI-0021	07-Jan-10	THE GALLERIA CONDOMINIUMS	JEFFERSON & FAWCETT
10-BI-0023	07-Jan-10	CONOCO PHILLIPS COMPANY	520 E D ST
10-BI-0024	08-Jan-10	WARFAIR MASONARY	35 BROADWAY
10-BI-0025	08-Jan-10	35 BROADWAY CONDOS - 8 UNITS	35 BROADWAY
10-BI-0026	08-Jan-10	CELEBRATIONS	45 BROADWAY S
10-BI-0027	08-Jan-10	GRULICH ARCHITECTURE & PLANNING	49 BROADWAY
10-BI-0028	07-Jan-10	CHRISTINE APARTMENTS	2503 SOUTH I
10-BI-0029	08-Jan-10	ENGINUITY SYSTEMS	59 BROADWAY #100
10-BI-0030	07-Jan-10	HILLSIDE TERRACE-THA	2520 SOUTH G STREET
10-BI-0031	08-Jan-10	BROADWAY APARTMENTS	31 BROADWAY
10-BI-0032	08-Jan-10	LUNA CONDOMINIUMS	210 BROADWAY
10-BI-0033	07-Jan-10	FAWCETT BERKSHIRE LLC	2510 FAWCETT AVENUE
10-BI-0035	08-Jan-10	216-226 BROADWAY CONDOS	216-226 BROADWAY
10-BI-0036	08-Jan-10	230 BROADWAY 4-PLEX	230 BROADWAY
10-BI-0037	08-Jan-10	PINE TREE HARBOR TACOMA APARTMENTS	2501 SOUTH G STREET
10-BI-0038	08-Jan-10	THE HARDER FOUNDATION	401 BROADWAY
10-BI-0039	08-Jan-10	ARROW WORLDWIDE	401 BROADWAY
10-BI-0040	11-Jan-10	TRUE BUILT HOMES	401 BROADWAY
10-BI-0044	11-Jan-10	HITECH DRY CLEANERS	1415 EAST 72ND STREET #D
10-BI-0045	11-Jan-10	HOT TERRIYAKI	1407 EAST 72ND STREET
10-BI-0046	11-Jan-10	TACOMA SENIOR HOUSING	1709 S G ST
10-BI-0047	12-Jan-10	COMMUNITY PUB & EATERY	1305 SOUTH 56TH STREET
10-BI-0048	12-Jan-10	FAMILY REAL ESTATE	3808 SOUTH YAKIMA AVENUE
10-BI-0049	12-Jan-10	VIEN DONG RESTAURANT	3801 SOUTH YAKIMA AVENUE
10-BI-0050	12-Jan-10	TACOMA SENIOR HOUSING	1709 S G ST
10-BI-0055	12-Jan-10	COMMENCEMENT TERRACE APARTMENTS	29 ST HELENS AVE
10-BI-0056	12-Jan-10	CARPE DIEM MASSAGE	9 ST HELENS
10-BI-0057	12-Jan-10	DR. KENDRA C. ROBERTSON LICSW	9 ST HELENS
10-BI-0058	12-Jan-10	RASMUSSEN TRIELHORN ARCHITECT AIA / PS	9 ST HELENS
10-BI-0059	11-Jan-10	TACOMA GENERAL STORM FILTERS	315 MARTIN LUTHER KING JR WAY
10-BI-0060	13-Jan-10	TACOMA GENERAL STORM FILTERS	315 MARTIN LUTHER KING JR WAY
10-BI-0061	14-Jan-10	JUSTIN PAE	3011 S. FIFE STR.
10-BI-0062	14-Jan-10	OASIS APARTMENTS	2825 S. DELIN
10-BI-0063	14-Jan-10	HOLY ROSARY CONVENT & OFFICE	424 S. 30TH
10-BI-0064	14-Jan-10	HOLY ROSARY CHURCH & SCHOOL	504 S. 30TH STR
10-BI-0065	14-Jan-10	LOOMIS ARMORED CAR	3716 SOUTH G STREET
10-BI-0067	14-Jan-10	HOME	222 S 43RD ST
10-BI-0068	15-Jan-10	CANTRELL BODY & FENDER WRKS	3416 SOUTH TACOMA WAY
10-BI-0069	15-Jan-10	PLANET FUTON	4020 S. STEELE STR #107

Thea Foss Watershed 2010 Inspections

10-BI-0070	15-Jan-10	CONCEPT NAILS	4020 S. STEELE STR #105
10-BI-0071	15-Jan-10	PROCTOR SPORTS & GAMES	4020 S. STEELE STR #104
10-BI-0072	15-Jan-10	ATOMIC COMICS	4020 S. STEELE STR #102
10-BI-0078	19-Jan-10	A AUTO RENTAL AND SALES	3412 SOUTH TACOMA WAY
10-BI-0080	20-Jan-10	LAWSON APARTMENTS	3415 S 45TH ST
10-BI-0081	20-Jan-10	OMAR INDUSTRIES-APARTMENTS	4317 S PUGET SOUND AV
10-BI-0082	20-Jan-10	GOOD DEED DEVELOPMENTS LLC-DUPLEX	4311-4315 S. PUGET SOUND
10-BI-0088	21-Jan-10	TOWN SQUARE APARTMENTS	4523 S PUGET SOUND AV
10-BI-0089	21-Jan-10	SAND POINT TOWNHOUSES	4537 S PUGET SOUND
10-BI-0095	22-Jan-10	WOODY'S ON THE WATER	1715 DOCK ST
10-BI-0096	25-Jan-10	GUILDFORD PROPERTY	4044 S PUGET SOUND AVE
10-BI-0097	25-Jan-10	NGUYEN PROPERTY	4046 S PUGET SOUND AV
10-BI-0098	25-Jan-10	NGUYEN PROPERTY	4046 S PUGET SOUND AV
10-BI-0099	25-Jan-10	ALMOND AND ASSOCIATES	207 BROADWAY SUITE 300
10-BI-0104	25-Jan-10	LI & CHEN PROPERTY	4050 S. PUGET SOUND AVE
10-BI-0105	25-Jan-10	UNION 43 APARTMENTS	4317 S. UNION AVENUE
10-BI-0106	25-Jan-10	BOZE ELEMENTARY SCHOOL	1140 EAST 65TH STREET
10-BI-0107	25-Jan-10	FAWCETT ELEMENTARY SCHOOL	126 EAST 60TH STREET
10-BI-0108	25-Jan-10	DEVEY APARTMENTS	4309 S. UNION AVENUE
10-BI-0109	26-Jan-10	DEES PROPERTY-0780	4335 S. UNION
10-BI-0110	25-Jan-10	CASCADE PARK GARDENS	4347 S UNION AVE
10-BI-0111	26-Jan-10	WINDSOR APARTMENTS	17 ST HELENS AVE
10-BI-0112	26-Jan-10	ONE ST HELENS APARTMENTS	1 ST HELENS
10-BI-0113	26-Jan-10	THE CLASS ACT CONSIGNMENT BOUTIQUE	7 ST HELENS AVE
10-BI-0115	26-Jan-10	METRO COFFEE	1901 S JEFFERSON AVE, SUITE B
10-BI-0122	26-Jan-10	BETA MANSIONS	1903 S JEFFERSON AVE
10-BI-0125	26-Jan-10	VACANT BUILDING	722 SOUTH 38TH STREET
10-BI-0126	26-Jan-10	TIOGA BUILDING	1901 JEFFERSON AVE, SUITES 100 - 300
10-BI-0130	27-Jan-10	YWCA	405 BROADWAY
10-BI-0131	27-Jan-10	ELATE ENTERPRISES	431 BROADWAY
10-BI-0132	27-Jan-10	C M CANVAS	431 BROADWAY
10-BI-0133	27-Jan-10	THE BROADMOOR	431 BROADWAY
10-BI-0134	27-Jan-10	CHOICES MONEY MANAGEMENT SRVCS PLUS	436 BROADWAY
10-BI-0136	27-Jan-10	RICHARDSON ENTERPRISE	436 BROADWAY
10-BI-0137	27-Jan-10	BELLA ON BROADWAY	436 BROADWAY
10-BI-0143	28-Jan-10	R A S GRANITE & MARBLE	1931 S FAWCETT AVE
10-BI-0144	28-Jan-10	CALEDONIA BAY BUILDERS	1931-1935 S FAWCETT AVE
10-BI-0145	28-Jan-10	ABBEY BALLROOM	1901 S FAWCETT AVE
10-BI-0146	28-Jan-10	LAZER TRENDS LLC	1938 MARKET STREET
10-BI-0148	28-Jan-10	T TOWN APPAREL	1934 MARKET STREET
10-BI-0149	28-Jan-10	PIONEER COFFEE ROASTING COMPANY	1929 TACOMA AVE S
10-BI-0156	28-Jan-10	JOHNNY'S DOCK	1900 E D ST
10-BI-0159	28-Jan-10	MCKINLEY ELEMENTARY SCHOOL	3702 MCKINLEY AVENUE
10-BI-0160	28-Jan-10	MULTIFAMILY	1954 TACOMA AVE S
10-BI-0161	29-Jan-10	STEWART MIDDLE SCHOOL	5010 PACIFIC AVENUE
10-BI-0162	29-Jan-10	ROOSEVELT ELEMENTARY SCHOOL	3550 EAST ROOSEVELT AVENUE
10-BI-0165	29-Jan-10	GREATER CHRIST TEMPLE CHURCH	1926 SOUTH G STREET
10-BI-0166	29-Jan-10	GREATER CHRIST TEMPLE CHURCH SCHOOL	1937 SOUTH G STREET

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10-BI-0168	29-Jan-10	MULTIFAMILY	1954 TACOMA AVE S
10-BI-0172	01-Feb-10	MARY LYON ELEMENTARY SCHOOL	101 EAST 46TH STREET
10-BI-0175	02-Feb-10	TACOMA SENIOR HOUSING	1709 S G ST
10-BI-0180	03-Feb-10	A-MAIN FABRICATORS	455 ST HELENS AVE
10-BI-0181	03-Feb-10	NOSTALGIC EVENTS INC	455 ST HELENS AVE
10-BI-0182	03-Feb-10	SHARP & SON'S USA/YSTRDY	455 ST HELENS AVE
10-BI-0183	03-Feb-10	ENTERPRISE RENT A CAR	4840 S WASHINGTON ST
10-BI-0184	03-Feb-10	TASTE OF THE TOWN	455 ST HELENS
10-BI-0185	03-Feb-10	BRADLEY DESIGN GROUP	455 ST HELENS
10-BI-0186	03-Feb-10	HORIZON PACIFIC CENTER	2106 PACIFIC AVE
10-BI-0187	02-Feb-10	EVEREST COLLEGE	2108 PACIFIC AVE
10-BI-0188	02-Feb-10	EVEREST COLLEGE	2156 PACIFIC AVE
10-BI-0189	02-Feb-10	DALE CHIHULY LIVING TRUST	2128 PACIFIC AVE
10-BI-0190	02-Feb-10	HUNT-MOTTET LOFT APARTMENTS	2125 S. COMMERCE ST
10-BI-0191	02-Feb-10	EVEREST COLLEGE	2108 PACIFIC AVE
10-BI-0195	03-Feb-10	RAINIER WOODWORKING	455 B ST HELENS
10-BI-0196	03-Feb-10	MEEDER PROPERTIES LLC	221 SOUTH 28TH STREET
10-BI-0200	03-Feb-10	COT, SINGLE FAMILY HOME	420 65TH STREET
10-BI-0204	04-Feb-10	BROWER APARTMENTS-0503	3419 S. 43RD ST
10-BI-0206	04-Feb-10	THE NEWS TRIBUNE	1950 S STATE ST
10-BI-0208	05-Feb-10	TACOMA RESCUE MISSION	702 PACIFIC AVE
10-BI-0223	08-Feb-10	WILLARD SCHOOL BUILDING	3201 SOUTH D STREET
10-BI-0227	08-Feb-10	COT, DRAINAGE REPORT RESEARCH, INFILTRATION (2)	7636 'A' STREET
10-BI-0237	10-Feb-10	OLD TACOMA STEEL SUPPLY CO	2134 COMMERCE ST
10-BI-0238	10-Feb-10	OLD TACOMA STEEL SUPPLY CO	2134 COMMERCE ST
10-BI-0239	10-Feb-10	MCCARVER PRIMARY & ELEMENTARY SCHOOL	2111 S J ST
10-BI-0240	10-Feb-10	PUGET SOUND BEVERAGE	2136 PACIFIC AVE
10-BI-0242	10-Feb-10	OLD TIME WOODWORK, INC	2101 S C ST
10-BI-0244	09-Feb-10	CONSTRUCT TWO STORY SINGLE FAMILY HOME	222 S 43RD ST
10-BI-0245	10-Feb-10	CONSTRUCT TWO STORY SINGLE FAMILY HOME	222 S 43RD ST
10-BI-0254	11-Feb-10	OLD COLUMBIA BREWERY OFFICE	2108 S C ST
10-BI-0255	11-Feb-10	OLD COLUMBIA BREWERY WAREHOUSE	2120 S C ST
10-BI-0256	11-Feb-10	HEIDELBERG TACOMA PARTNERS LLC	2210 S C ST
10-BI-0257	11-Feb-10	TACOMA JET (JEFFERSON AVENUE LLC)	2101 JEFFERSON AVE
10-BI-0258	11-Feb-10	CONSTRUCT TWO STORY SINGLE FAMILY HOME	222 S 43RD ST
10-BI-0261	12-Feb-10	GAS LAMP TERRACES HOA	2101-2121 S. G ST & 2101-2119 TACOMA CT
10-BI-0264	12-Feb-10	JOHNSTONE SUPPLY	2134 S TACOMA AVE
10-BI-0265	12-Feb-10	WSDOT SR-16/UNION PONDS	SR-16 & UNION
10-BI-0268	12-Feb-10	23RD ST TOWNHOMES	2128-2140 G STREET
10-BI-0270	12-Feb-10	701-709 S 23RD MULTIFAM	701-709 S 23RD ST.
10-BI-0272	12-Feb-10	4-137274 -TESC VERIFICATION	222 SOUTH 43RD
10-BI-0273	16-Feb-10	4-137274 -TESC VERIFICATION	222 SOUTH 43RD
10-BI-0274	16-Feb-10	MULTIFAMILY	1954 TACOMA AVE S
10-BI-0280	18-Feb-10	JACKS CUSTOM MACHINE SHOP	2114 S TACOMA AVE
10-BI-0281	18-Feb-10	AT&T COMMUNICATIONS HUB	2324 PACIFIC AVE

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10-BI-0282	18-Feb-10	MCKINSTRY	2306 PACIFIC AVE
10-BI-0283	18-Feb-10	BANDSTAND MUSIC INC	2302 PACIFIC AVE
10-BI-0284	18-Feb-10	J MARCEL ENTERPRISES	2320 PACIFIC AVE
10-BI-0285	18-Feb-10	PACIFIC STUDIOS	2328 PACIFIC AVE
10-BI-0286	18-Feb-10	WORTHINGTON MID-RISE CONSTRUCTION INC	2310 - 2314 COMMERCE ST
10-BI-0288	19-Feb-10	CHIHULY POWER STATION WAREHOUSE	2412 S. C ST
10-BI-0289	19-Feb-10	JACK IN THE BOX	5207 TACOMA MALL BLVD
10-BI-0290	19-Feb-10	PIERCE COUNTY FLEET SERVICES	2406 PACIFIC S.
10-BI-0291	22-Feb-10	AMERICAN KITCHEN SERVICE	518 S 7TH ST
10-BI-0292	22-Feb-10	JANUARIUS BRADLEY JR	518 S 7TH ST
10-BI-0293	22-Feb-10	LISA KINOSHITA WORDS & DESIGN	518 S 7TH ST
10-BI-0294	22-Feb-10	THE VINTAGE APPTS.	518 S 7TH ST
10-BI-0298	22-Feb-10	NORTHWEST LEADERSHIP FOUNDATION	419 MARTIN LUTHER KING JR WAY
10-BI-0300	22-Feb-10	NORTHWEST JUSTICE PROJECT	715 TACOMA AVE S
10-BI-0301	22-Feb-10	TEAM CHILD	715 TACOMA AVE S
10-BI-0302	22-Feb-10	VOLUNTEER LEGAL SERVICES	715 TACOMA AVE S
10-BI-0308	22-Feb-10	4-136490 STORMFILTER VAULT	3333 S 38TH STREET
10-BI-0315	23-Feb-10	4-137274 -TESC VERIFICATION	222 SOUTH 43RD
10-BI-0325	25-Feb-10	4-137274 -TESC VERIFICATION	222 SOUTH 43RD
10-BI-0330	01-Mar-10	TACOMA SCHOOL OF THE ARTS - ADMIN	1818 TACOMA AVE
10-BI-0331	01-Mar-10	SHAUB-ELLISON CO. INC.	1117 BROADWAY PLAZA SUITE 500
10-BI-0332	01-Mar-10	AVAUNT TECHNOLOGIES INC	1117 BROADWAY PLAZA SUITE 501
10-BI-0333	01-Mar-10	TACOMA SCHOOL OF THE ARTS - PERFORMING ARTS	117 BROADWAY
10-BI-0335	01-Mar-10	VINA MUSIC & GIFTS	754 SOUTH 38TH STREET
10-BI-0336	01-Mar-10	SKYWAY DESIGN	801 SOUTH 38TH STREET
10-BI-0338	01-Mar-10	SKYWAY NAIL & BEAUTY SUPPLY	801 SOUTH 38TH STREET
10-BI-0339	01-Mar-10	ASIA GIFT & AQUARIUM	763 SOUTH 38TH STREET
10-BI-0340	01-Mar-10	AN HING CO.	767 SOUTH 38TH STREET
10-BI-0341	02-Mar-10	4-137274 -TESC VERIFICATION	222 SOUTH 43RD
10-BI-0342	26-Feb-10	4-137274 -TESC VERIFICATION	222 SOUTH 43RD
10-BI-0370	04-Mar-10	TACOMA SKATE-0580	1912 CENTER STREET
10-BI-0373	05-Mar-10	TACOMA MARINE REPAIR	1106 ST PAUL AVE
10-BI-0381	08-Mar-10	4-137274 TEMP. CO	222 SOUTH 43RD
10-BI-0385	10-Mar-10	CORINA BAKERY	510 6TH AVE
10-BI-0386	10-Mar-10	TACOMA CITY BALLET INC	508 6TH AVE
10-BI-0387	10-Mar-10	LEE'S BARBER SHOP	901 MARTIN LUTHER KING JUNIOR WAY
10-BI-0391	10-Mar-10	FAMILY CLEANERS	815 S J ST
10-BI-0392	10-Mar-10	SHIRAZ	1006 SOUTH 9TH ST
10-BI-0393	10-Mar-10	POCAAN	919 S 9TH ST
10-BI-0405	12-Mar-10	DALORES SARANDOS ATTN AT LAW	911 SOUTH I ST
10-BI-0406	12-Mar-10	SCHULL LAW FIRM	911 SOUTH I ST
10-BI-0407	12-Mar-10	JAMES J HELBLING ATTORNEY AT LAW	818 SOUTH YAKIMA
10-BI-0408	12-Mar-10	C BAYLY MILLER ATTORNEY AT LAW	818 S YAKIMA AVE
10-BI-0409	12-Mar-10	DONALD N POWELL PLLC	818 S YAKIMA AVE
10-BI-0410	12-Mar-10	BON LAW FIRM PLLC	818 S YAKIMA AVE
10-BI-0411	12-Mar-10	GARY GROTZ LAW FIRM	818 S YAKIMA
10-BI-0412	12-Mar-10	DANNY D KIM	818 S YAKIMA
10-BI-0413	12-Mar-10	BELLEVUE HEALTH CARE	1007 S J ST

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10-BI-0414	12-Mar-10	GOODFELLAS BARBER SHOP	1001 S 11TH ST
10-BI-0415	12-Mar-10	9TH STREET FLATS	815 9TH ST
10-BI-0416	12-Mar-10	CONSTRUCT TWO STORY SINGLE FAMILY HOME	222 S 43RD ST
10-BI-0419	12-Mar-10	AIR FX	702 E. D STREET
10-BI-0420	12-Mar-10	MULTI-UNIT COMMERCIAL 1200-1204 E. D STREET	1200-1204 E. D STREET
10-BI-0424	15-Mar-10	PURVIS CONSTRUCTION-0090	3847 S. PUGET SOUND
10-BI-0426	15-Mar-10	NS COMMUNICATION (BOOST MOBILE)	708 SOUTH 38TH STREET
10-BI-0427	15-Mar-10	38TH STREET DELI	750 SOUTH 38TH STREET
10-BI-0428	15-Mar-10	AMVIET CONSULTING GROUP WA, INC.	750 #C SOUTH 38TH STREET
10-BI-0429	15-Mar-10	NHU THUY RESTAURANT	758 SOUTH 38TH STREET
10-BI-0430	15-Mar-10	SAGO CENTER	764 SOUTH 38TH STREET
10-BI-0432	15-Mar-10	SAM TAX SERVICE	750 #C SOUTH 38TH STREET
10-BI-0434	15-Mar-10	SIGNS BY TOMORROW	3838 S. WARNER STREET
10-BI-0436	15-Mar-10	PRESSED FOR SUCCESS	3802 S WARNER ST #C
10-BI-0437	15-Mar-10	MILLER PAINT COMPANY	3802 S. WARNER STREET, SUITE #A
10-BI-0439	16-Mar-10	ANTHONYO BEAUTY SCHOOL	769 SOUTH 38TH STREET #A
10-BI-0440	16-Mar-10	LORINDA'S HAIR CARE	769 SOUTH 38TH STREET
10-BI-0441	17-Mar-10	PHUONG BEAUTY SALON	717 SOUTH 38TH STREET
10-BI-0442	17-Mar-10	SAIGON VIETNAMESE RESTAURANT	757 SOUTH 38TH STREET
10-BI-0443	17-Mar-10	LAVIE SERVICES	773 SOUTH 38TH STREET
10-BI-0445	17-Mar-10	METRO AUTO REBUILD SOUTH	3845 S. WARNER STREET
10-BI-0451	18-Mar-10	4-137274 TEMP. CO	222 SOUTH 43RD
10-BI-0462	22-Mar-10	LUCKY SUPERMARKET	3820 SOUTH YAKIMA AVENUE
10-BI-0463	22-Mar-10	HONG KONG SUPERMARKET	3616 SOUTH YAKIMA AVENUE
10-BI-0464	22-Mar-10	TAM ANH TRAVEL	3810 SOUTH YAKIMA AVENUE
10-BI-0467	23-Mar-10	EAST ASIA SUPERMARKET	602 SOUTH 38TH STREET
10-BI-0468	23-Mar-10	CONSTRUCT TWO STORY SINGLE FAMILY HOME	222 S 43RD ST
10-BI-0469	23-Mar-10	PIERCE COUNTY JAIL	910 TACOMA AVE
10-BI-0472	23-Mar-10	4-137274 -TESC VERIFICATION	222 SOUTH 43RD
10-BI-0474	23-Mar-10	TACOMA URBAN LEAGUE INC	2550 S YAKIMA AVE
10-BI-0475	23-Mar-10	TACOMA-PIERCE CTY ASSOCIATION OF REALTORS	2550 S. YAKIMA, SUITE C
10-BI-0476	23-Mar-10	TOWNVIEW APARTMENTS-0010	2901 S. C STREET
10-BI-0477	23-Mar-10	PETRICH MARINE DOCK	1118 EAST D STREET SUITE 1
10-BI-0478	23-Mar-10	WOODWORTH & COMPANY	1200 E D ST
10-BI-0479	23-Mar-10	CONSTRUCTION TESTING LBRTRS INC	1201 E D ST
10-BI-0480	23-Mar-10	MARINE FLOATS FABRICATION FACILITY	1204 ST. PAUL
10-BI-0481	23-Mar-10	THE NEWS TRIBUNE	1950 S STATE ST
10-BI-0482	23-Mar-10	TACOMA POWER NISQUALLY SUBSTATION	2401 S. C ST
10-BI-0483	24-Mar-10	CLEARWIRE CORPORATION	2601 S. 35TH STREET
10-BI-0484	24-Mar-10	APEX ENGINEERING PLLC	2601 S 35TH ST
10-BI-0485	24-Mar-10	WASHINGTON FLORAL SERVICE	2701 S 35TH ST
10-BI-0486	24-Mar-10	CLOVER CREEK ELECTRIC INC	1413 CENTER ST
10-BI-0487	25-Mar-10	4-137273 AMENDED SOILS VERIFICATION	217 45TH STREET
10-BI-0491	26-Mar-10	MOTION INDUSTRIES	1011 E. E STREET
10-BI-0493	26-Mar-10	POTS AND MORE	301 E. 11TH STREET
10-BI-0494	26-Mar-10	PUGET SOUND INLINE INC	2322 S HOLGATE ST
10-BI-0495	26-Mar-10	AEROPRECISION	2338 S HOLGATE ST

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10-BI-0497	29-Mar-10	6-14552 YAKIMA VILLAS	2300 YAKIMA AVE.
10-BI-0498	30-Mar-10	4-108474 STORM CO	1625 S. TACOMA WAY
10-BI-0500	30-Mar-10	WSDOT, 'M' STREET STORMWATER PONDS	TACOMA WAY
10-BI-0501	30-Mar-10	WSDOT I-5, YAKIMA-DELIN STORMWATER PONDS	DELIN-YAKIMA AVE. & I-5
10-BI-0502	30-Mar-10	ACE VAN & STORAGE CO INC	2402 S WRIGHT AVE
10-BI-0503	30-Mar-10	SEA MAR CMMNTY HLTH CNTR	1415 CENTER ST
10-BI-0504	30-Mar-10	NATIVITY HOUSE INC	2304 JEFFERSON AVE
10-BI-0505	31-Mar-10	HOWE INVESTMENT PARTNERSHIP-0089	2402 S. WRIGHT AVENUE
10-BI-0507	31-Mar-10	AULT ELECTRIC COMPANY INC	2348 HOLGATE ST
10-BI-0508	31-Mar-10	AULT ELECTRIC COMPANY PARKING LOT	351 S 25TH ST
10-BI-0509	31-Mar-10	BITE ME/FRIDAY'S COOKIES	2302 S FAWCETT AVE
10-BI-0510	31-Mar-10	NATIVITY HOUSE STORMFILTER	2304 JEFFERSON AVE.
10-BI-0511	20-Apr-10	JOHNNY'S DOCK	1900 E D ST
10-BI-0514	31-Mar-10	COT POND EAST 57TH & MCKINLEY POND	600 BLOCK OF EAST 57TH
10-BI-0522	01-Apr-10	COT POND EAST 57TH & MCKINLEY POND	600 BLOCK OF EAST 57TH
10-BI-0525	02-Apr-10	DEAN ALLEN'S CATERING	2365 TACOMA AVE S
10-BI-0526	01-Apr-10	SWEET FOUNTAINS	2336 S FAWCETT AVE
10-BI-0527	01-Apr-10	EWCO	2328 S FAWCETT AVE
10-BI-0528	01-Apr-10	VANGARD INC.	2339 S FAWCETT AVE
10-BI-0530	02-Apr-10	PARKING LOT	2344 S JEFFERSON AVE
10-BI-0532	05-Apr-10	COMMENCEMENT BAY CUNSLTING	3043 CENTER STREET
10-BI-0535	05-Apr-10	WHITE CAP CONSTRUCTION SUPPLY	3037 CENTER STREET
10-BI-0537	05-Apr-10	CONSTRUCT TWO STORY SINGLE FAMILY HOME	222 S 43RD ST
10-BI-0538	06-Apr-10	LAWSON APARTMENTS	3415 S 45TH ST
10-BI-0541	07-Apr-10	MEEDER PROPERTIES LLC	221 SOUTH 28TH STREET
10-BI-0545	07-Apr-10	ABC MONEY TRANSFER	766 SOUTH 38TH STREET
10-BI-0546	07-Apr-10	LINH LAM FARMERS INSURANCE	766 SOUTH 38TH STREET
10-BI-0547	07-Apr-10	PICH KIRI JEWELRY	772 SOUTH 38TH STREET
10-BI-0548	07-Apr-10	KIM DUNG SALON & BARBER	770 SOUTH 38TH STREET
10-BI-0549	07-Apr-10	KIM VIET JEWELRY	756 SOUTH 38TH STREET
10-BI-0552	07-Apr-10	THE FISH HOUSE CAFE	1814 MARTIN LUTHER KING JR WAY
10-BI-0555	08-Apr-10	CONOCO PHILLIPS	7051 PACIFIC AVENUE
10-BI-0556	08-Apr-10	4-137274 TEMP. CO	222 SOUTH 43RD
10-BI-0557	08-Apr-10	NORTHWEST STAGING AND SOUND	2367 TACOMA AVE S
10-BI-0558	08-Apr-10	METROPOLITAN DEVELOPMENT COUNCIL	721 S FAWCETT AVE
10-BI-0559	08-Apr-10	CLINTONS MUSIC HOUSE INC	2301 TACOMA AVE S
10-BI-0560	08-Apr-10	NATIONAL FOSTER PARENT ASSOCIATION	2307 TACOMA AVE S
10-BI-0561	08-Apr-10	B-NYCE URBAN APPAREL	2309 TACOMA AVE S
10-BI-0562	08-Apr-10	VACANT STOREFRONT	2313 TACOMA AVE S
10-BI-0563	08-Apr-10	THE DOOR STORE INC	2366 TACOMA AVE S
10-BI-0564	08-Apr-10	JACK IN THE BOX #8469	2420 PACIFIC AVE
10-BI-0579	09-Apr-10	6-14552 FINAL CO YAKIMA VILLAS	
10-BI-0580	12-Apr-10	THE JACKSON BUILDING	2358 -2372 S. YAKIMA AVE
10-BI-0582	12-Apr-10	BACK ALLEY STUDIOS	2310 COURT E
10-BI-0583	12-Apr-10	RECALL	2365 SOUTH G ST
10-BI-0586	12-Apr-10	23RD STREET TOWNHOMES	601 -621 S 23RD ST, 2131 - 2145 S G ST
10-BI-0587	12-Apr-10	LEXINGTON SQUARE	602 SOUTH 23RD STREET

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10-BI-0589	12-Apr-10	HILLSIDE TERRACE - TACOMA HOUSING AUTHORITY	2330 S G ST
10-BI-0590	13-Apr-10	WALSH TRUCKING CO LTD	2916 SOUTH TACOMA WAY
10-BI-0592	13-Apr-10	ELIZA MCCABE TOWNHOUSES	2301/2323 YAKIMA AVE
10-BI-0594	14-Apr-10	MULTIFAMILY - 0051	YAKIMA
10-BI-0603	15-Apr-10	CITY STEPS CONDOMINIUMS	YAKIMA CT
10-BI-0613	16-Apr-10	SIGNS BY TOMORROW	3838 S. WARNER STREET
10-BI-0614	15-Apr-10	GREATER CHRIST CHURCH	1937 'G' STREET
10-BI-0615	16-Apr-10	RAINER VISTA CONDOS	1919 S I ST
10-BI-0616	16-Apr-10	MULTIFAMILY - 0131	1931 S I ST
10-BI-0617	16-Apr-10	MULTIFAMILY - 0141	1935 S I ST
10-BI-0618	16-Apr-10	MULTIFAMILY - 0163	1939 S I ST
10-BI-0619	16-Apr-10	MULTIFAMILY - 0180	1949 S I ST
10-BI-0620	19-Apr-10	ONE GRANDVIEW CONDOS	1953 S I ST
10-BI-0621	16-Apr-10	ST JOHN CHURCH	2001 S J ST
10-BI-0622	16-Apr-10	NINETEEN 02 CONDOMINIUMS	1902 S YAKIMA AV
10-BI-0625	15-Apr-10	ELIZA MCCABE	2315 S. YAKIMA AVENUE
10-BI-0626	15-Apr-10	RECALL STORAGE FACILITY	2365 S. G STREET
10-BI-0627	15-Apr-10	23RD STREET TOWNHOMES	601 -621 S 23RD ST, 2131 - 2145 S G ST
10-BI-0637	16-Apr-10	AMB TOOLS & EQUIPMENT	1215 CENTER STREET
10-BI-0638	20-Apr-10	COMMUNITY ALLIANCE SERVICES	217 EAST 25TH STREET EAST
10-BI-0643	16-Apr-10	KRAM, JOHNSON, WOOSTER, & MCLAUGHLIN	1901 S I ST
10-BI-0645	16-Apr-10	ST JOHN CHURCH - PARKING LOT	1920 S I ST
10-BI-0646	19-Apr-10	ST. JOSEPH PHYSICIAN MEDICAL & OUTPATIENT CENTERS	1624 S I ST
10-BI-0647	21-Apr-10	COT POND EAST 57TH & MCKINLEY POND	600 BLOCK OF EAST 57TH
10-BI-0648	19-Apr-10	ST. JOSEPH STAFF PARKING LOT 2	1524 S I ST
10-BI-0650	20-Apr-10	4-136490 TOC STORMFILTER VAULT	3333 S 38TH STREET
10-BI-0651	19-Apr-10	ST. JOSEPH STAFF PARKING LOT 1	1525 S J ST
10-BI-0652	19-Apr-10	ST. JOSEPH PATIENT/VISTOR PARKING LOT 1	1620 S J ST
10-BI-0653	19-Apr-10	ST. JOSEPH STAFF PARKING CARPOOL LOT	1020 S 17TH ST
10-BI-0655	19-Apr-10	ST. JOSEPH MEDICAL STAFF PARKING LOT 2	1722 S J ST
10-BI-0656	19-Apr-10	NW MEDICAL PLAZA PARKING LOT	1812 S J ST
10-BI-0657	19-Apr-10	4-137274 TEMP. CO	222 SOUTH 43RD
10-BI-0658	19-Apr-10	ST. JOSEPH PHYSICIAN MEDICAL CENTER STAFF PARKING LOT	822 S 16TH ST
10-BI-0659	19-Apr-10	ST. JOSEPH STAFF PARKING LOTS 3 & 3A	1602 S YAKIMA AV
10-BI-0660	19-Apr-10	ST JOSEPH MEDICAL PAVILION	1802 S YAKIMA AVE
10-BI-0661	20-Apr-10	ST. JOSEPH MEDICAL CLINIC	1708 S YAKIMA AVE
10-BI-0662	19-Apr-10	ST. JOSEPH STAFF PARKING LOT 4	1908 S I ST
10-BI-0663	19-Apr-10	ST. JOSEPH STAFF PARKING LOT 5	1911 S J ST
10-BI-0665	19-Apr-10	ST. JOSEPH STAFF PARKING LOTS 6 & 7	1912 S J ST
10-BI-0668	20-Apr-10	ST. JOSEPH UTILITY PLANT	1702 S J ST
10-BI-0669	20-Apr-10	VACANT BUILDING - 0020	1701 S I ST
10-BI-0681	26-Apr-10	SPEAKEASY ARTS CO-OP	748 BROADWAY
10-BI-0686	27-Apr-10	ACTION BUSINESS FURNITURE, INC.	3802 S. CEDAR SR.
10-BI-0687	27-Apr-10	CATALINA APARTMENTS	1616 S YAKIMA AV
10-BI-0693	30-Apr-10	HOWE INVESTMENT PARTNERSHIP-0089	2402 S. WRIGHT AVENUE
10-BI-0695	03-May-10	TOC 4-118946 DAFFODIL STORAGE	3501 S. 38TH
10-BI-0697	04-May-10	MCD TECHNOLOGIES INC	2515 SOUTH TACOMA WAY

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10-BI-0699	04-May-10	FINAL CO 4-118946 DAFFODIL STORAGE	3501 S. 38TH
10-BI-0704	05-May-10	HELLS KITCHEN - PACIFIC AVE	928 PACIFIC AVE
10-BI-0705	05-May-10	COT WATER DEPT HOOD STREET RESERVOIR-4114	1050 SOUTH TACOMA WAY
10-BI-0706	05-May-10	4-136495 SINGLE FAMILY DEVELOPMENT	2323 S STATE ST
10-BI-0709	29-Apr-10	BILL'S TOWING, INC.	1651 CENTER STR.
10-BI-0710	30-Apr-10	BILL'S TOWING, INC.	1651 CENTER STR.
10-BI-0721	10-May-10	ATT TACOMA 2	757 S FAWCETT
10-BI-0723	10-May-10	THE BROADMOOR	431 BROADWAY
10-BI-0724	10-May-10	TASTE OF THE TOWN	455 ST HELENS
10-BI-0726	10-May-10	STAR RENTALS	2302 SOUTH TACOMA WAY
10-BI-0729	11-May-10	AUTO OUTLET OF TACOMA	3430 SOUTH TACOMA WAY
10-BI-0730	11-May-10	EVERGREEN TIRE & WHL INC	3740 SOUTH TACOMA WAY
10-BI-0731	11-May-10	MICKY LLC-1004	3812 SOUTH TACOMA WAY
10-BI-0732	11-May-10	38TH ST AUTO OUTLET INC	3820 SOUTH TACOMA WAY
10-BI-0733	11-May-10	BRUCE TITUS SUBARU-1049	3820 SOUTH TACOMA WAY
10-BI-0736	12-May-10	BATES TECHNICAL COLLEGE - FOOD SERVICES	1101 S YAKIMA AVE
10-BI-0737	12-May-10	BATES TECHNICAL COLLEGE - MACHINE SHOP	1101 S YAKIMA AVE
10-BI-0738	12-May-10	BATES TECHNICAL COLLEGE - CABNET SHOP	1101 S YAKIMA AVE
10-BI-0739	12-May-10	BATES TECHNICAL COLLEGE - DENTAL CLINIC	1101 S YAKIMA AVE
10-BI-0740	12-May-10	BATES TECHNICAL COLLEGE - SHEET METAL SHOP	1101 S YAKIMA AVE
10-BI-0741	12-May-10	BATES TECHNICAL COLLEGE - HVAC SHOP	1101 S YAKIMA AVE
10-BI-0742	12-May-10	BATES TECHNICAL COLLEGE - COSMOLOGY SCHOOL	1101 S YAKIMA AVE
10-BI-0743	12-May-10	BATES TECHNICAL COLLEGE - PARKING FACILITY 1	1101 S YAKIMA AVE
10-BI-0744	12-May-10	BATES TECHNICAL COLLEGE - PARKING FACILITY 2	1101 S YAKIMA AVE
10-BI-0747	13-May-10	4-136490 FINAL CO STORMFILTER VAULT	3333 38TH STREET
10-BI-0749	12-May-10	ALLENMORE EAST CONDOMINIUMS	2440 S. STEELE STREET
10-BI-0750	11-May-10	BRUCE TITUS SUBARU-10007	3838 SOUTH TACOMA WAY
10-BI-0751	12-May-10	UNITY CHURCH OF TCMA BKST	2102 S 23RD ST
10-BI-0753	13-May-10	4-136490 CO GRIOT'S STORMFILTER VAULT	3333 S 38TH ST
10-BI-0754	13-May-10	URBAN WATERS -ART CONSTRUCTION	326 EAST 'D' STREET
10-BI-0760	12-May-10	4-137274 FINAL CO	222 SOUTH 43RD
10-BI-0761	13-May-10	FINAL CO 4-118946 DAFFODIL STORAGE	3501 S. 38TH
10-BI-0764	14-May-10	BATES TECHNICAL COLLEGE - DENTAL LAB	1101 S YAKIMA AVE
10-BI-0765	14-May-10	BATES TECHNICAL COLLEGE - DENTURIST LAB	1101 S YAKIMA AVE
10-BI-0766	14-May-10	BATES TECHNICAL COLLEGE - CHILDCARE SERVICES	1101 S YAKIMA AVE
10-BI-0767	14-May-10	BATES TECHNICAL COLLEGE - OUTDOOR FACILITIES	1101 S YAKIMA AVE
10-BI-0768	14-May-10	DEPARTMENT OF SOCIAL AND HEALTH SERVICES	1949 SOUTH STATE ST.
10-BI-0769	14-May-10	DEPARTMENT OF SOCIAL & HEALTH SERVICES	2121 S STATE ST
10-BI-0770	14-May-10	BATES TECHNICAL COLLEGE - BARBER SHOP	1101 S YAKIMA AVE
10-BI-0775	17-May-10	4114	1050 SOUTH TACOMA WAY
10-BI-0783	17-May-10	SERVICES	1101 S YAKIMA AVE
10-BI-0784	17-May-10	BATES TECHNICAL COLLEGE - ELECTRONICS	1101 S YAKIMA AVE
10-BI-0785	17-May-10	BATES TECHNICAL COLLEGE - FIRE SUPPRESSION	1101 S YAKIMA AVE

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10-BI-0790	18-May-10	BATES TECHNICAL COLLEGE - KBTC CAMPUS	2321 S 19TH ST
10-BI-0792	18-May-10	OFFICEMAX #209	4044 TACOMA MALL BLVD
10-BI-0793	18-May-10	PETCO #1245-0042	4028 TACOMA MALL BOULEVARD
10-BI-0794	18-May-10	COST PLUS WORLD MARKET	4036 TACOMA MALL BLVD
10-BI-0799	07-May-10	COT, SWTD, S 23RD & FERRY ST	
10-BI-0800	20-May-10	KEY CORP OPERATIONS FACILITY	2420 S STATE ST
10-BI-0806	21-May-10	JUSTIN PAE	3011 S. FIFE STR.
10-BI-0815	27-May-10	FERNEDING PROPERTY-0380	5231 S. BIRMINGHAM
10-BI-0831	01-Jun-10	WESTERN BEAUTY SUPPLY	1902 MARTIN LUTHER KING BLVD
10-BI-0832	01-Jun-10	SUPER NOVA	817 DIVISION
10-BI-0834	01-Jun-10	7-ELEVEN 2303-32308B	1901 S TRAFTON ST
10-BI-0835	01-Jun-10	BATES TECHNICAL COLLEGE - MACHINE SHOP	1101 S YAKIMA AVE
10-BI-0836	01-Jun-10	SERVICES	1101 S YAKIMA AVE
10-BI-0841	02-Jun-10	CHRISTIAN BROTHERHOOD ACADEMY	2136 MARTIN LUTHER KING JR WAY
10-BI-0847	03-Jun-10	TACOMA FIXTURE CO INC	1815 E D ST
10-BI-0848	03-Jun-10	UNIVERSAL STEEL FABRICATORS	525 EAST 15TH STREET
10-BI-0849	02-Jun-10	MULTIFAMILY - 0130	2402 S I ST
10-BI-0850	02-Jun-10	MULTIFAMILY - 0013	2406 S I ST
10-BI-0851	02-Jun-10	MULTIFAMILY - 0031 & 0041	2410 & 2412 S I ST
10-BI-0852	02-Jun-10	MULTIFAMILY - 0070	2422 S I ST
10-BI-0853	03-Jun-10	WSDOT SR509/ E. D ST POND	EAST 'D' STREET
10-BI-0854	03-Jun-10	23RD STREET HOA	1116 - 1126 S 23RD ST
10-BI-0859	02-Jun-10	VACANT BUILDING	722 SOUTH 38TH STREET
10-BI-0861	02-Jun-10	23RD ST COURT YARD EAST HOA	2301 MARTIN LUTHER KING JR WAY
10-BI-0862	02-Jun-10	23RD ST COURTYARD WEST HOA	2302 MARTIN LUTHER KING JR WAY
10-BI-0865	04-Jun-10	NORTHWEST PHYSCNS NTRWK OF WA LLC	708 BROADWAY
10-BI-0866	04-Jun-10	MENIFIT MD	708 BROADWAY #310
10-BI-0867	04-Jun-10	TACOMA EVENTS COMMISSION	708 BROADWAY #106
10-BI-0869	04-Jun-10	KENNEDY AND BRASWELL PLLC	708 BROADWAY #102
10-BI-0870	04-Jun-10	SKILLED HANZ MASSAGE	708 BROADWAY
10-BI-0871	04-Jun-10	O'BRIAN COMMUNICATIONS	708 BROADWAY #105
10-BI-0872	04-Jun-10	MORTENSON CONSTRUCTION	708 BROADWAY #100
10-BI-0873	04-Jun-10	THE SEWING ROOM	708 BROADWAY #107
10-BI-0874	04-Jun-10	HUDSON ASSET MANAGEMENT	708 BROADWAY #110
10-BI-0875	04-Jun-10	JASON AND JASON INC	708 BROADWAY #110
10-BI-0876	04-Jun-10	NEW COVANENT PENTACOSTAL TABERNACLE	2156 MARTIN LUTHER KING JR WY
10-BI-0884	07-Jun-10	ST. JOHN BAPTIST CHURCH #2	2155 S L ST
10-BI-0885	07-Jun-10	CHURCH OF THE LIVING GOD	1954 S M ST
10-BI-0886	07-Jun-10	CHURCH OF THE LIVING GOD VISION CENTER	2102 S M ST
10-BI-0887	07-Jun-10	CHRIST	1107 S 21ST ST
10-BI-0888	07-Jun-10	HILLTOP MARKET	1304 S 23RD ST
10-BI-0889	07-Jun-10	WILLIE BROWN APARTMENTS	1220 S 23RD ST
10-BI-0892	07-Jun-10	THE NOBLE HOUSE II	1410 S 23RD ST
10-BI-0893	09-Jun-10	TRAINS FABRICS ETC	1315 S 23RD ST
10-BI-0902	07-Jun-10	SHERIDAN STREET COUMMUNITY CHURCH OF GOD	2303 S SHERIDAN AVE
10-BI-0905	09-Jun-10	KINGDOM HALL OF JEHOVAH'S WITHNESSES	2308 S CUSHMAN AVE
10-BI-0906	10-Jun-10	ALL TRANSMISSSIONS & AUTOMOTIVE	3113 S PINE ST
10-BI-0912	10-Jun-10	WSDOT HWY 16 NALLEY VALLEY PROJECT	1900 SOUTH TACOMA WAY

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10-BI-0914	10-Jun-10	MH 390, OF 245, THEA FOSS, SEDIMENTS MONITORING	1902 EAST D ST.
10-BI-0917	11-Jun-10	HENDERSON'S BARBER SHOP	1421 S 23RD ST
10-BI-0918	09-Jun-10	VICTORY OUTREACH	2150 S CUSHMAN AVE
10-BI-0919	09-Jun-10	PEACE LUTHERN CHURCH	2106 S CUSHMAN AVE
10-BI-0920	09-Jun-10	TACOMA WATER J STREET STAND PIPE	1917 S J ST
10-BI-0922	14-Jun-10	BROOK'S DENTAL STUDIO	732 BROADWAY
10-BI-0923	14-Jun-10	AL'TA	702 BROADWAY NO. 102
10-BI-0924	14-Jun-10	AMERICAN HEART ASSOCIATION	708 BROADWAY NO. 330
10-BI-0925	14-Jun-10	LINEBERRY KENNEY	932 BROADWAY # 301
10-BI-0926	14-Jun-10	RUSTY GEORGE DESIGN	917 PACIFIC AVE
10-BI-0927	14-Jun-10	ANDERSON BUISNESS ADVISORS	732 BROADWAY #201
10-BI-0936	15-Jun-10	GLOBE MACHINE MFG CO	701 E D ST
10-BI-0943	15-Jun-10	BNSF RR CROSSING-EAST 11TH STREET 400 BLOCK	EAST 11TH STREET & EAST D STREET
10-BI-0944	10-Jun-10	COT -TACOMA WATER ALASKA RESERVOIR	1620 S 19TH ST
10-BI-0954	17-Jun-10	JONES BUILDING SUPPLIES	1912 S WILKESON ST
10-BI-0955	17-Jun-10	JONES GLASS / BUFFALO MILITARY MUSEUM	1940 S WILKESON ST
10-BI-0957	17-Jun-10	EDWARDS KARATE	2302 S WILKESON ST
10-BI-0958	01-Jul-10	FIRE WORKS FORGE, LLC	1720 S 23RD ST
10-BI-0959	17-Jun-10	MULTIFAMILY - 2021	1719 S 23RD ST
10-BI-0960	17-Jun-10	MOUNT TABOR BAPTIST CHURCH	1710 S 23RD ST
10-BI-0963	16-Jun-10	COT LEMAY PROJECT	TACOMA DOME WEST PARKING LOT
10-BI-0964	18-Jun-10	FOSS LANDING MARINA & BOAT STORAGE	1940 E D ST
10-BI-0978	22-Jun-10	TRUCK RAIL HANDLING, INC.	457 E. 18TH ST.
10-BI-0985	23-Jun-10	COT LEMAY PROJECT	TACOMA DOME WEST PARKING LOT
10-BI-1009	29-Jun-10	COT LEMAY PROJECT	TACOMA DOME WEST PARKING LOT
10-BI-1013	01-Jul-10	JOHNNY'S DOCK	1900 E D ST
10-BI-1019	01-Jul-10	WRAPJAX	2305 S WILKESON ST
10-BI-1022	07-Jul-10	FINAL CO-4-139885	420 E 65TH STREET
10-BI-1025	08-Jul-10	OF 235, WING WALLS, MONITORING	SOUTH 21ST AND DOCK ST.
10-BI-1032	09-Jul-10	HILLSIDE TERRACE - TACOMA HOUSING AUTHORITY	2330 S G ST
10-BI-1044	12-Jul-10	COT LEMAY PROJECT	TACOMA DOME WEST PARKING LOT
10-BI-1047	13-Jul-10	COT LEMAY PROJECT	TACOMA DOME WEST PARKING LOT
10-BI-1048	13-Jul-10	FINAL CO-4-139885	420 E 65TH STREET
10-BI-1056	14-Jul-10	COT LEMAY PROJECT	TACOMA DOME WEST PARKING LOT
10-BI-1059	15-Jul-10	LIFE FORCE	1206 SOUTH 11TH ST # 7
10-BI-1060	16-Jul-10	4-147948 TEMP CO	4810 'E' STREET E.
10-BI-1061	16-Jul-10	4-147946 TEMP CO	4816 'E' STREET E.
10-BI-1063	16-Jul-10	4-147945 TEMP CO	4814 'E' STREET E.
10-BI-1064	20-Jul-10	FINAL CO 4-137820	8413 'A' STREET
10-BI-1069	16-Jul-10	4-147947 TEMP CO	4826 'E' STREET E.
10-BI-1088	21-Jul-10	THE BRONZE WORKS LLC	2506 S FAWCETT AVE
10-BI-1104	22-Jul-10	ALLENMORE GOLF COURSE	2125 S CEDAR ST
10-BI-1116	26-Jul-10	4-142175 TEMP CO	4802 'E' STREET E.
10-BI-1117	26-Jul-10	HARBOR VIEW MANOR	919 S. FAWCETT AVE.
10-BI-1118	26-Jul-10	DAVIES PEARSON PC	920 FAWCETT AVE
10-BI-1119	26-Jul-10	TACOMA RADIOLOGY	1304 FAWCETT AVE
10-BI-1120	26-Jul-10	MOSS ADAMS LLP	1301 A ST

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10-BI-1121	26-Jul-10	SMITH CARR & MC LANE	1517 S FAWCETT AVE # 300,
10-BI-1122	26-Jul-10	4-142176 TEMP CO	4808 'E' STREET E.
10-BI-1129	22-Jul-10	FINAL CO 4-137820	8413 'A' STREET
10-BI-1133	27-Jul-10	TAHOMA ASSOCIATES	1545 TACOMA AVE S
10-BI-1142	28-Jul-10	MONTE E HESTER INC PS	1008 S YAKIMA AVE
10-BI-1143	28-Jul-10	ZENON P OLBERTZ/ATTORNEY	1008 S YAKIMA AVE
10-BI-1144	28-Jul-10	GREGORY L EKLUND ATTN AT LAW	1008 YAKIMA AVE SUITE 202
10-BI-1145	28-Jul-10	LAW OFFICE OF SCOTT W JABLON	1008 SOUTH YAKIMA, SUITE 100
10-BI-1146	28-Jul-10	AXIA FINANCIAL	1008 SOUTH YAKIMA
10-BI-1147	28-Jul-10	A COLBY PARKS ATTN AT LAW	1008 YAKIMA AVE SUITE 100
10-BI-1148	28-Jul-10	LAW OFFICES OF JASON S NEWCOMBE	1008 YAKIMA AVE
10-BI-1149	28-Jul-10	LAW OFFCS OF KRUPA & CLRK	1008 S YAKIMA AVE
10-BI-1151	28-Jul-10	ALLEN TRAYWICK PH.D.	1008 YAKIMA AVE #202
10-BI-1154	21-May-10	THE BRONZE WORKS LLC	2506 S FAWCETT AVE
10-BI-1156	10-Mar-10	THE BRONZE WORKS LLC	2506 S FAWCETT AVE
10-BI-1159	04-Feb-10	PHOENIX ENVIRONMENTAL SERVICES	1901 E D ST
10-BI-1161	29-Jul-10	GOODWILL WAREHOUSE GRADING	3102 S. PINE STREET
10-BI-1162	29-Jul-10	HOTEL MURANO	1320 BROADWAY PLAZA
10-BI-1163	29-Jul-10	FINAL CO/ 4-142176	4808 'E' STREET E.
10-BI-1164	30-Jul-10	ALLENMORE RIDGE CONDOMINIUMS	2301 S CEDAR ST
10-BI-1165	29-Jul-10	FINAL CO/ 4-142175	4802 'E' STREET E.
10-BI-1166	30-Jul-10	CEDAR MEDICAL CENTER	1901 S CEDAR ST
10-BI-1167	30-Jul-10	CARDIAC STUDY CTR INC PS	1901 S CEDAR ST
10-BI-1168	30-Jul-10	GOODWILL WAREHOUSE GRADING	3102 S. PINE STREET
10-BI-1170	30-Jul-10	CEDAR MEDICAL CENTER - INDIVIDUAL SUITES	1901 S CEDAR ST
10-BI-1171	02-Aug-10	TACOMA RESCUE MISSION	702 PACIFIC AVE
10-BI-1172	30-Jul-10	SOUND TRANSIT, SOUTH J ST. & SOUTH TACOMA WAY, SPRING	
10-BI-1177	04-Aug-10	ALLENMORE CHILDREN/YOUNG ADULT	1924 S CEDAR ST
10-BI-1180	04-Aug-10	6TH AVE DENTURES	1217 6TH AVE
10-BI-1181	04-Aug-10	U BUILD IT	1215 6TH AVE
10-BI-1182	04-Aug-10	LE CHAT NOIR SALON	1211 6TH AVE
10-BI-1183	04-Aug-10	CARE NET OF PIERCE COUNTY-FAMILY SERVICES	1205 6TH
10-BI-1187	04-Aug-10	GOODWILL WAREHOUSE GRADING	3102 S. PINE STREET
10-BI-1188	04-Aug-10	WHITENER RAINEY LAW OFFICES	820 6TH AVE SUITE A
10-BI-1189	04-Aug-10	MY HOUSE TO YOURS	820 6TH AVE #B
10-BI-1190	04-Aug-10	PREFERRED ORTHOTIC AND PROSTHETIC S	1901 S CEDAR ST
10-BI-1191	05-Aug-10	NORTHWEST RADIOGRAPHY PS	1950 S CEDAR ST
10-BI-1192	05-Aug-10	ORAL SURGICAL ASSOCIATES	1950 S CEDAR ST
10-BI-1193	05-Aug-10	DOUGLAS J KNIGHT DDS MSD	1950 S CEDAR ST
10-BI-1198	06-Aug-10	STEELER INC	540 E 15TH ST
10-BI-1200	06-Aug-10	HOME STREET BANK	3315 S 23RD ST
10-BI-1201	06-Aug-10	AMEN CLINIC	3315 S 23RD ST, SUITE 102
10-BI-1202	06-Aug-10	HOUSEHOLDER GROUP	3315 S 23RD ST, SUITE 108
10-BI-1203	06-Aug-10	MEDICAL CONSULTANTS NETWORK	3315 S 23RD ST, SUITE 110
10-BI-1212	10-Aug-10	BATES TECHNICAL COLLEGE - DENTAL CLINIC	1101 S YAKIMA AVE
10-BI-1213	10-Aug-10	BATES TECHNICAL COLLEGE - MACHINE SHOP	1101 S YAKIMA AVE
10-BI-1214	10-Aug-10	BATES TECHNICAL COLLEGE - HVAC SHOP	1101 S YAKIMA AVE
10-BI-1215	10-Aug-10	TRA MEDICAL IMAGING	2202 S CEDAR ST, SUITE 200

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10-BI-1216	10-Aug-10	ASSOCIATES	2202 S CEDAR ST, SUITE 100
10-BI-1218	10-Aug-10	INFINITE SOUPS	445 TACOMA AVE S #B
10-BI-1219	10-Aug-10	MALARKEYS	445 TACOMA AVE S #A
10-BI-1220	10-Aug-10	THE VINTAGE APPTS	518 S 7TH ST
10-BI-1221	10-Aug-10	APPARTMENTS AT 802-804 S G ST	802-804 S G ST
10-BI-1222	10-Aug-10	APPARTMENTS AT 708-710 S 8TH ST	708-710 S 8TH ST
10-BI-1223	10-Aug-10	CEDAR LASER & SURGICAL CENTER	2202 S CEDAR ST, SUITE 150
10-BI-1224	10-Aug-10	AESTHETIC SURGERY CENTER	2202 S CEDAR ST, SUITE 300
10-BI-1225	10-Aug-10	DIGESTIVE HEALTH SPCLSTS	2202 S CEDAR
10-BI-1227	11-Aug-10	COT PUBLIC WORKS - MATERIALS LAB	2301 HOLGATE STREET
10-BI-1228	11-Aug-10	COT PUBLIC WORKS - STREETS AND GROUNDS - UPPER YARD STORAGE GARAGE	2301 SOUTH JEFFERSON AVENUE
10-BI-1229	11-Aug-10	COT PUBLIC WORKS - STREETS AND GROUNDS	2324 SOUTH C STREET
10-BI-1230	11-Aug-10	COT PUBLIC WORKS - CENTRAL STORES	2311 SOUTH HOLGATE STREET
10-BI-1231	11-Aug-10	COT PUBLIC WORKS - EQUIPMENT SHOP	2310 SOUTH HOLGATE
10-BI-1232	11-Aug-10	COT PUBLIC WORKS - CONCRETE SHOP	2308 SOUTH HOLGATE STREET
10-BI-1233	11-Aug-10	COT PUBLIC WORKS - CARPENTER PAINT SHOP	2313 SOUTH HOLGATE STREET
10-BI-1235	20-Aug-10	ALLENMORE MEDICAL PLAZA	2202 CEDAR ST
10-BI-1243	12-Aug-10	ALLENMORE HOSPITAL (MULTICARE HEALTH SYSTEM)	1901 S UNION AV
10-BI-1245	12-Aug-10	BOB'S BAR-B-Q INC	911 S 11TH ST
10-BI-1246	12-Aug-10	CLARK COMMUNICATIONS	913 S 11TH ST
10-BI-1247	12-Aug-10	TACOMA RESCUE MISSION	702 PACIFIC AVE
10-BI-1267	16-Aug-10	AL'S USED CARS, INC.-0760	3010 SOUTH TACOMA WAY
10-BI-1269	16-Aug-10	6-24484 TITUS-WILL	3606 S. SPRAGUE AVE.
10-BI-1272	13-Aug-10	SEA MAR COMMUNITY HEALTH CENTER	1516 S 11TH ST
10-BI-1273	17-Aug-10	JAMES M. CARAHAR ATTORNEY AT LAW	902 S 10TH ST
10-BI-1274	17-Aug-10	RICHARD J WILLIAMS ATTORNEY AT LAW	902 SOUTH 10TH STREET
10-BI-1275	17-Aug-10	RONALD L HENDRY/ATTORNEY	902 S 10TH ST
10-BI-1276	17-Aug-10	DENNIS BURNS ATTORNEY AT LAW	902 S 10TH ST
10-BI-1277	17-Aug-10	PAUL J LANDRY ATTORNEY AT LAW	902 S 10TH ST
10-BI-1278	17-Aug-10	LAW OFFICES OF H ALIPURIA	902 S 10TH ST
10-BI-1279	17-Aug-10	HOWARD COMFORT III ATTORNEY AT LAW	902 SOUTH 10TH STREET
10-BI-1280	17-Aug-10	FRESH START 811 HOUSE	817 SOUTH 11TH ST
10-BI-1281	17-Aug-10	MCCARTHY ETAL INC PS	902 S 10TH ST
10-BI-1282	17-Aug-10	MCCARTHY CAUSSEAU AND HURDELBRINK INC	902 S 10TH ST
10-BI-1283	17-Aug-10	6-24484 & 4-137596 TITUS-WILL	3606 S. SPRAGUE AVE.
10-BI-1288	18-Aug-10	BARBARA COREY ATTORNEY AT LAW PLLC	902 S 10TH ST
10-BI-1289	18-Aug-10	LAW OFFICES OF FREDERICK P.S. WHANG	902 SOUTH 10TH ST
10-BI-1290	18-Aug-10	PIERCE COUNTY LAW GROUP	902 SOUTH 10TH ST
10-BI-1291	18-Aug-10	MICHAEL P SHEEHY ATTORNEY AT LAW	902 SOUTH 10TH ST
10-BI-1297	19-Aug-10	FINAL CO 4-147945	4814 E ST E
10-BI-1298	19-Aug-10	FINAL CO 4-147947	4826 E ST E
10-BI-1299	19-Aug-10	FINAL CO 4-147946	4818 E ST E
10-BI-1300	19-Aug-10	FINAL CO 4-147948	4810 E ST E
10-BI-1301	11-Aug-10	COT PUBLIC WORKS - GARDEN SHOP	2308 SOUTH HOLGATE STREET
10-BI-1302	20-Aug-10	ALLENMORE MEDICAL PLAZA PHASE 2	3209 S 23RD ST

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10-BI-1303	20-Aug-10	MCCARVER PRIMARY & ELEMENTARY SCHOOL	2111 S J ST
10-BI-1305	19-Aug-10	COT MH 390, OF 245, THEA FOSS, SEDIMENTS MONITORING	1902 EAST D ST.
10-BI-1307	23-Aug-10	SUPERVALUE PERMIT 4-133161	1801 D ST E
10-BI-1311	25-Aug-10	SUPERVALUE PERMIT 4-133161	1801 D ST E
10-BI-1313	25-Aug-10	RH2 ENGINEERING	621 TACOMA AVE S #104
10-BI-1314	25-Aug-10	TARABOCHIA AND ASSOCIATES	621 PACIFIC AVE #300
10-BI-1315	25-Aug-10	LPL FINANCIAL - THE SETTLE GROUP	621 PACIFIC AVE #216
10-BI-1318	25-Aug-10	COLUMBIA NW MORTGAGE INC.	621 PACIFIC AVE #215
10-BI-1319	25-Aug-10	CENTER FOR HAELING & RECOVERY	621 PACIFIC AVE #309
10-BI-1320	25-Aug-10	RICHARD B LEVENSON ATTY	621 PACIFIC AVE
10-BI-1321	25-Aug-10	CENTRIA	621 PACIFIC AVE #201
10-BI-1322	25-Aug-10	LAW OFFICES OF GREGORY J MURPHY	621 PACIFIC AVE #15
10-BI-1323	25-Aug-10	ASSOCIATED INSURANCE BROKERS, INC	621 PACIFIC AVE
10-BI-1324	25-Aug-10	DAPHNE MICHAELS VIBRATIONAL HEALTH	621 PACIFIC AVE
10-BI-1325	25-Aug-10	SOUNDVIEW HEALTH ASSOCIATES	621 PACIFIC AVE #310
10-BI-1326	26-Aug-10	RETROFIT	3010 CENTER ST
10-BI-1327	26-Aug-10	FINAL CO 4-134925	8432 D ST E
10-BI-1330	27-Aug-10	COT PARKING - MUSEUM OF GLASS GARAGE	1801 EAST DOCK STREET
10-BI-1331	27-Aug-10	GOODWILL WAREHOUSE GRADING	3102 S. PINE STREET
10-BI-1332	27-Aug-10	ASPHALT PLANT STORMWATER TREATMENT RETROFIT	3010 CENTER ST
10-BI-1336	27-Aug-10	ALLENMORE MEDICAL CENTER LLC	1901 S UNION AVE
10-BI-1337	27-Aug-10	ALLENMORE MEDICAL CENTER, BUILDING C	3124 S 19TH ST
10-BI-1339	30-Aug-10	ASPHALT PLANT STORMWATER TREATMENT RETROFIT	3010 CENTER ST
10-BI-1341	30-Aug-10	WM DICKSON CO	3315 S PINE ST
10-BI-1345	30-Aug-10	SUPERVALU PERMIT 4-133161	1801 D ST E
10-BI-1346	31-Aug-10	SUPERVALU PERMIT 4-133161	1801 D ST E
10-BI-1347	31-Aug-10	COT LEMAY PROJECT	TACOMA DOME WEST PARKING LOT
10-BI-1348	01-Sep-10	SUPERVALU PERMIT 4-133161	1801 D ST E
10-BI-1350	01-Sep-10	STW GAS LINE-PILCHUCK	WAY
10-BI-1351	02-Sep-10	SUPERVALU PERMIT 4-133161	1801 D ST E
10-BI-1353	02-Sep-10	COT PUBLIC WORKS - STREETS AND GROUNDS	2324 SOUTH C STREET
10-BI-1354	02-Sep-10	COT LEMAY PROJECT	TACOMA DOME WEST PARKING LOT
10-BI-1356	03-Sep-10	SPORTS AUTHORITY	1905 SUITE B SOUTH 72ND STREET
10-BI-1357	01-Sep-10	MULTICARE MEDICAL IMAGING	3124 S 19TH ST, SUITE 100
10-BI-1359	01-Sep-10	MULTICARE HEALTHWORKS ALLENMORE	3124 S 19TH ST, SUITE 110
10-BI-1360	01-Sep-10	LABORATORIES NORTHWEST	3124 S 19TH ST, SUITE 120
10-BI-1361	01-Sep-10	MULTICARE INTERNAL MEDICINE	3124 S 19TH ST, SUITE 140
10-BI-1363	01-Sep-10	MULTICARE TACOMA CENTRAL FAMILY MEDICINE	3124 S 19TH ST, SUITE 200
10-BI-1364	01-Sep-10	TACOMA CENTRAL INTERNAL MEDICINE	3124 S 19TH ST, SUITE 240
10-BI-1365	07-Sep-10	MULTICARE UROLOGY CLINIC	3124 S 19TH ST, SUITE 320
10-BI-1367	01-Sep-10	MEDICINE	3124 S 19TH ST, SUITE 340
10-BI-1369	03-Sep-10	COT FIRE STATION #18	302 EAST 11TH STREET
10-BI-1372	01-Sep-10	MULTICARE WOMENS PELVIC MEDICINE & RECONSTRUCTIVE SURGERY	1901 S UNION AV, SUITE B2006
10-BI-1373	01-Sep-10	LABORATORIES NORTHWEST	1901 S. Union Ave Suite B-3009

Thea Foss Watershed 2010 Inspections

10-BI-1374	01-Sep-10	MULTICARE MEDICAL GROUP - FAMILY PRACTICE	1901 S UNION AV, SUITE B-7005
10-BI-1376	07-Sep-10	ASPHALT PLANT STORMWATER TREATMENT RETROFIT	3010 CENTER ST
10-BI-1386	08-Sep-10	6-24484 & 4-137596 TITUS-WILL	3606 S. SPRAGUE AVE.
10-BI-1387	08-Sep-10	ASPHALT PLANT STORMWATER TREATMENT RETROFIT	3010 CENTER ST
10-BI-1392	09-Sep-10	COT LEMAY PROJECT	TACOMA DOME WEST PARKING LOT
10-BI-1393	02-Sep-10	COT LEMAY PROJECT	TACOMA DOME WEST PARKING LOT
10-BI-1395	09-Sep-10	ASPHALT PLANT STORMWATER TREATMENT RETROFIT	3010 CENTER ST
10-BI-1396	10-Sep-10	THE BRONZE WORKS LLC	2506 S FAWCETT AVE
10-BI-1406	15-Sep-10	MCKINLEY ELEMENTARY SCHOOL	3702 MCKINLEY AVENUE
10-BI-1411	14-Sep-10	ASPHALT PLANT STORMWATER TREATMENT RETROFIT	3010 CENTER ST
10-BI-1421	16-Sep-10	SUPERVALUE PERMIT 4-133161	1801 D ST E
10-BI-1423	20-Sep-10	ROOSEVELT ELEMENTARY SCHOOL	3550 EAST ROOSEVELT AVENUE
10-BI-1432	22-Sep-10	THE SOVEREIGN APPARTMENTS - 14 UNITS	816 S 8TH ST
10-BI-1433	22-Sep-10	APPTS AT 710 S I ST - 8 PLEX	710 S I ST -
10-BI-1434	22-Sep-10	WRIGHT PARK APPARTMENTS - 13 UNITS	902 S I ST
10-BI-1435	22-Sep-10	APPTS AT 817 S 7TH ST - 7 PLEX	817 S 7TH ST
10-BI-1436	22-Sep-10	APPTS AT 707 S I ST - 12 UNIT	707 S I ST
10-BI-1437	22-Sep-10	I STREET MARKET	721 S I ST
10-BI-1438	22-Sep-10	APPTS AT 612 S I ST - 5 PLEX	612 S I ST
10-BI-1439	22-Sep-10	WRIGHT PLACE APPARTMENTS - 4 PLEX	606 - 608 1/2 S I ST
10-BI-1440	22-Sep-10	APPTS AT 906 6TH AVE S	906 6TH AVE S
10-BI-1441	22-Sep-10	MULTICARE AT CHELSEA HEIGHTS	603 S J ST
10-BI-1442	22-Sep-10	CAR WASH ENTERPRISES, INC.-1661	3002 S. 38TH STREET
10-BI-1444	21-Sep-10	TEMP CO 4-133161 SUPERVALU	1801 D ST E
10-BI-1449	23-Sep-10	ASPHALT PLANT STORMWATER TREATMENT RETROFIT	3010 CENTER ST
10-BI-1452	24-Sep-10	POPEYES	1917 S 72ND ST
10-BI-1454	24-Sep-10	AMERICA'S CREDIT UNION	1917 SUITE 25 SOUTH 72ND STREET
10-BI-1455	24-Sep-10	HOUSE OF SAS	1917 S 72ND ST
10-BI-1463	24-Sep-10	REDWING SHOES	1917 S 72ND
10-BI-1464	28-Sep-10	PAIPAE CAFE HUT	3801 S. UNION AVE.
10-BI-1465	28-Sep-10	EXPORT AUTO INC.-0760	3010 SOUTH TACOMA WAY
10-BI-1466	29-Sep-10	ADVANCED AUTO WORKS	4033 S. UNION
10-BI-1470	30-Sep-10	LESLIE TOLZIN ATTN AT LAW	901 SOUTH I ST
10-BI-1471	30-Sep-10	FRED THORNE ATTN AT LAW	901 SOUTH I ST
10-BI-1472	30-Sep-10	GREG MAGEE ATTN AT LAY	901 SOUTH I ST
10-BI-1473	30-Sep-10	ALLAN OVERLAND ATTN AT LAW	901 S I ST
10-BI-1474	30-Sep-10	KIRK	901 S I ST
10-BI-1475	30-Sep-10	PHILIP THORTON ATTN AT LAW	901 S I ST
10-BI-1476	30-Sep-10	MARK TREYZ ATTN AT LAW	901 S I ST
10-BI-1477	30-Sep-10	DOUGLAS CLOUD ATTN AT LAW	901 S I ST
10-BI-1478	30-Sep-10	CYNTHIA MCDONALD ATTN AT LAW	901 S I ST
10-BI-1479	30-Sep-10	JOE QUAINANCE ATTN AT LAW	901 S I ST
10-BI-1480	30-Sep-10	MATT RENDA ATTN AT LAW	901 S I ST
10-BI-1481	30-Sep-10	CAPITAL PACIFIC REPORTING	901 S I ST
10-BI-1482	30-Sep-10	8-PLEX AT 806 S YAKIMA	806 S YAKIMA
10-BI-1483	30-Sep-10	900 LLC - HALFWAY HOUSE AT 919 S 10TH	919 - 917 S 10TH ST

Thea Foss Watershed 2010 Inspections

10-BI-1484	30-Sep-10	SURE HOUSE	901 S 10TH ST
10-BI-1485	30-Sep-10	COMMERCIAL CREDITORS - PHYSICIAN AND DENTIST COLECTION BUREAU	915 I ST
10-BI-1487	30-Sep-10	802 YAKIMA AVE 8-PLEX	802-804 SOUTH YAKIMA
10-BI-1488	30-Sep-10	900 LLC 4-PLEX AT 913 S 10TH	913 S 10TH
10-BI-1499	23-Sep-10	FOREMOST BUILDING - SODO CONSTRUCTION	2415 PACIFIC AVENUE
10-BI-1507	05-Oct-10	FRANCISICAN HEALTH SYSTEMS	1149 MARKET ST
10-BI-1508	05-Oct-10	REPUBLIC PARKING - PARK PLAZA NORH	923 COMMERCE ST
10-BI-1509	05-Oct-10	REPUBLIC PARKING CITY BUILDING #094	930 ALTHEIMER ST
10-BI-1515	05-Oct-10	REPUBLIC PARKING NO. 003	1102 CT C
10-BI-1518	06-Oct-10	COT PARKING - CARLTON LOT & GARAGE	1551 BROADWAY PLAZA
10-BI-1519	06-Oct-10	REPUBLIC PARKING - VISION DEUCE NO 066	1517 FAWCETT ST
10-BI-1521	06-Oct-10	COT PARKING - CONVENTION CENTER	1500 BROADWAY PLAZA
10-BI-1523	07-Oct-10	REPUBLIC PARKING FOSS WATERWAY MARINA	1103 DOCK ST
10-BI-1526	06-Oct-10	THE BRONZE WORKS LLC	2506 S FAWCETT AVE
10-BI-1527	06-Oct-10	PAIPAE CAFE HUT	3801 S. UNION AVE.
10-BI-1528	06-Oct-10	ADVANCED AUTO WORKS	4033 S. UNION
10-BI-1529	06-Oct-10	REPUBLIC PARKING CONVENTION CENTER LOT B	1500 BROADWAY
10-BI-1530	06-Oct-10	REPUBLIC PARKING CONVENTION CENTER LOT C	1500 BROADWAY
10-BI-1531	06-Oct-10	ROMA TILE & STONE, INC-1501	3808 SOUTH TACOMA WAY
10-BI-1532	06-Oct-10	WASHINGTON ENERGY SERVICES-1390	3801 S. UNION
10-BI-1533	06-Oct-10	GRACE PLACE CHURCH-1390	3801 S. UNION
10-BI-1534	06-Oct-10	EXIGERE	1901 S UNION AVE, SUITE 1012
10-BI-1535	06-Oct-10	COMMENCEMENT BAY PEDIATRICS	1901 S UNION AVE, SUITE B-1010
10-BI-1536	06-Oct-10	CEDAR SURGICAL	3124 S 19TH ST, SUITE 220
10-BI-1537	23-Sep-10	EAGLE TIRE & AUTOMOTIVE	102 PUYALLUP AVENUE
10-BI-1538	06-Oct-10	JORGENSON OPTICAL SUPPLY	1901 S UNION AVE
10-BI-1540	07-Oct-10	AF INVESTMENTS LLC-1160	3213 S.38TH STREET
10-BI-1542	07-Oct-10	REPUBLIC PARKING SITE 8	1300 DOCK ST
10-BI-1543	07-Oct-10	SUPER VALUE CASH & CARRY	3729 S. LAWRENCE
10-BI-1545	07-Oct-10	THEA'S LANDING	1705 DOCK ST
10-BI-1546	07-Oct-10	REPUBLIC PARKING THEA'S LANDING	1705 DOCK ST
10-BI-1551	08-Oct-10	REPUBLIC PARKING NW/1305 PACIFIC	1305 PACIFIC AVE
10-BI-1552	08-Oct-10	BUDGET CAR & TRUCK RENTAL OF TACOMA	1305 PACIFIC AVE
10-BI-1559	11-Oct-10	COT PUBLIC WORKS - STREETS AND GROUNDS	2324 SOUTH C STREET
10-BI-1561	12-Oct-10	REPUBLIC PARKING 15TH AND MARKET	1308 MARKET ST
10-BI-1562	12-Oct-10	REPUBLIC PARKING QUAD ASSOCIATES	904 - 944 PACIFIC AVE
10-BI-1565	12-Oct-10	REPUBLIC PARKING 911 BUILDING LOT	925 TACOMA AVE S
10-BI-1566	12-Oct-10	REPUBLIC PARKING RIALTO GARAGE	909 MARKET ST
10-BI-1567	12-Oct-10	REPUBLIC PARKING SUBWAY LOT	916 BROADWAY
10-BI-1576	13-Oct-10	REPUBLIC PARKING MUSIUM OF GLASS PARKING	1801 DOCK ST
10-BI-1577	13-Oct-10	6-25267 ZUNIGA SHORT PLAT	6814 E. 'I' STREET
10-BI-1578	07-Sep-10	6-25267 ZUNIGA SHORT PLAT	6814 E. 'I' STREET
10-BI-1580	14-Oct-10	PETROCARD-3003	3059 SOUTH LAWRENCE STREET
10-BI-1581	14-Oct-10	SFR - 4-152471	416 E 65TH ST
10-BI-1582	14-Oct-10	GOODWILL WAREHOUSE-3068	3102 S. PINE STREET

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10-BI-1583	14-Oct-10	NEW JERUSELUM CHURCH OF GOD IN CHRIST	1623 S. 11TH ST
10-BI-1584	20-Oct-10	FINAL CO - SFR 4-152471	416 E 65TH ST
10-BI-1586	18-Oct-10	TESC FAILURE SFR	2106 S. AINSWORTH
10-BI-1590	19-Oct-10	CITY OF TACOMA ASPHALT PLANT	3210 CENTER STREET
10-BI-1591	19-Oct-10	TACOMA METAL ART SCHOOL	711 ST HELENS #102
10-BI-1592	19-Oct-10	SWISH	712 OPRA ALLEY
10-BI-1593	19-Oct-10	OVER THE MOON CAFE AND CATERING INC	709 COURT C
10-BI-1594	19-Oct-10	B SQUARED FINE ART GALLERY	711 ST HELENS #100
10-BI-1595	19-Oct-10	STEFANIE BROOKS	711 ST HELENS NO. 101A
10-BI-1596	19-Oct-10	COT PUBLIC WORKS - STREETS AND GROUNDS - UPPER YARD STORAGE GARAGE	2301 SOUTH JEFFERSON AVENUE
10-BI-1598	20-Oct-10	WANAKA AND SONS INC	711 ST HELENS NO. 101A
10-BI-1599	20-Oct-10	ANGELIQ DESIGNS	711 ST HELENS # 101A
10-BI-1600	19-Oct-10	HIGHLAND GOLF & RCQT CLB	1400 N HIGHLANDS PKWY
10-BI-1601	07-Oct-10	TACOMA RESCUE MISSION	702 PACIFIC AVE
10-BI-1602	19-Oct-10	TEMP CO 6-24484 & 4-137596 TITUS-WILL	3606 S. SPRAGUE AVE.
10-BI-1603	20-Oct-10	DIAMOND PARKING #431	1911 JEFFERSON AVE
10-BI-1604	20-Oct-10	D STREET PETROLEUM - GROUNDWATER REMEDIATION	520 EAST D STREET
10-BI-1605	20-Oct-10	FINAL CO 4-143869	416TH E. 65TH
10-BI-1608	20-Oct-10	COT LEMAY PROJECT	TACOMA DOME WEST PARKING LOT
10-BI-1618	22-Oct-10	COT LEMAY PROJECT	TACOMA DOME WEST PARKING LOT
10-BI-1620	22-Oct-10	FINAL CO ASPHALT PLANT 4-149972	3010 CENTER ST
10-BI-1635	29-Oct-10	BIG M STAINED GLASS CORP	711 S 25TH ST
10-BI-1637	01-Nov-10	WSDOT HWY 16 NALLEY VALLEY PROJECT	HWY 16, CENTER & STW
10-BI-1638	01-Nov-10	BROADWAY LID	415 SAINT HELENS AVENUE
10-BI-1641	02-Nov-10	COT FIRE STATION #18	302 EAST 11TH STREET
10-BI-1645	03-Nov-10	MASON COATINGS-0340	5002 S. WASHINGTON
10-BI-1653	08-Nov-10	COT FIRE STATION #18	302 EAST 11TH STREET
10-BI-1654	06-Nov-10	WALSH TRUCKING CO LTD	2916 SOUTH TACOMA WAY
10-BI-1659	08-Nov-10	6-25267 ZUNIGA SHORT PLAT	6814 E. 'I' STREET
10-BI-1660	28-Sep-10	FINAL CO 4-133161	1801 D ST E
10-BI-1661	09-Nov-10	LINCOLN PLAZA-0592	3702 S. FIFE STREET
10-BI-1662	06-Nov-10	MICHAEL'S PLAZA-0781	2921 S. 38TH STREET
10-BI-1669	16-Nov-10	SFR FINAL CO 4-148074	4320 'G' STREET
10-BI-1677	17-Nov-10	BROADWAY LID	415 SAINT HELENS AVENUE
10-BI-1678	02-Nov-10	BROADWAY LID	415 SAINT HELENS AVENUE
10-BI-1680	18-Nov-10	THRILL OF THE GRILL	1402 TACOMA AVE S
10-BI-1681	18-Nov-10	GRANADA APPARTMENTS	1224 S YAKIMA
10-BI-1682	18-Nov-10	BROADWAY LID	415 SAINT HELENS AVENUE
10-BI-1689	29-Nov-10	O'REILLY AUTO PARTS-1710	3026 S. 38TH STREET
10-BI-1690	29-Nov-10	ESPLANADE PARKING	2101 DOCK STREET
10-BI-1691	29-Nov-10	CITY OF TACOMA/THE ESPLANADE PARK@ALBERS MILL	1833 DOCK STREET
10-BI-1692	29-Nov-10	ALBERS'S MILLS	1821 DOCK ST
10-BI-1693	29-Nov-10	CITY OF TACOMA FOSS WATERWAY ESPLANADE	1543 DOCK ST
10-BI-1694	30-Nov-10	JORGENSON OPTICAL SUPPLY	1901 S UNION AVE
10-BI-1696	30-Nov-10	PACIFIC OTOLARNYGOLOGY	1901 S UNION AVE
10-BI-1697	30-Nov-10	SONUS	1901 S UNION AVE
10-BI-1698	30-Nov-10	DELI 322	1901 S UNION AVE

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10-BI-1699	30-Nov-10	JAMES M KOMOROUS MD PS	1901 S UNION AVE
10-BI-1700	30-Nov-10	ADVANCED ANKLE AND FOOT CLINICS	1901 S UNION AVE, SUITE B-3010
10-BI-1701	30-Nov-10	QUEST DIAGNOSTICS LABORATORY	1901 S UNION, SUITE B-3005
10-BI-1702	30-Nov-10	CHARLES D PREWITT MD PS	1901 S UNION AVE
10-BI-1710	02-Dec-10	GEORGE C BRAIN DDS PC	1901 S UNION AVE
10-BI-1712	02-Dec-10	IMPLANT AND PERIODONTAL ASSOCIATES	1901 S UNION, SUITE B-4010
10-BI-1713	02-Dec-10	MILAN & TENNISON GENERAL DENTISTRY	1901 S UNION AVE, SUITE B-4008
10-BI-1715	02-Dec-10	BRIAN SIMPSON DDS	1901 S UNION AVE
10-BI-1716	02-Dec-10	BRIAN M BERG DDS PS	1901 S UNION AVE
10-BI-1717	02-Dec-10	JURGEN H HUCK DDS PS	1901 S UNION AVE
10-BI-1718	02-Dec-10	PACIFIC CARDIOVASCULAR, PS	1901 S UNION AVE, SUITE B-5003
10-BI-1719	07-Dec-10	TMJ ASSOCIATES	1901 S UNION AVE
10-BI-1723	08-Dec-10	PUGET SOUND ALLRGY ASTHMA	1901 S UNION AVE
10-BI-1724	08-Dec-10	MARK D LAVIOLA DDS	1901 S UNION AVE
10-BI-1725	08-Dec-10	MARRIAGE AND FAMILY ASSOCIATES	1901 S UNION AVE, SUITE B7006
10-BI-1726	08-Dec-10	UNITED STATES POSTAL SERVICE EMPLOYEE ASSISTANCE PROGRAM	1901 S UNION AVE, SUITE B-7009
10-BI-1727	08-Dec-10	PACIFIC NEPHROLOGY	1901 S UNION AVE, SUITE B-7011
10-BI-1729	09-Dec-10	BROADWAY LID	415 SAINT HELENS AVENUE
10-BI-1742	02-Dec-10	ALLENMORE FOOT CARE CENTER	1901 S UNION, SUITE B-4010
10-BI-1743	01-Dec-10	ARS SHELL #405-0011	2631 S. 38TH STREET
10-BI-1744	15-Dec-10	CARLSON FORMETEC, INC.	2202 A STREET
10-BI-1757	16-Dec-10	FOREMOST BLDG 4-117030	2415 PACIFIC
10-BI-1758	16-Dec-10	6-25267 ZUNIGA SHORT PLAT	6814 E. 'I' STREET
10-BI-1787	30-Dec-10	4-138795 FLOODING COMPLIANT	216 S. 43RD

February 25, 2011



Memorandum

To: John Sunich
From: Kurt Fremont
Date: January 28, 2011
Re: Stormwater Letters 2010, Warning or NOV.

Formal/Informal Enforcement Actions, Stormwater 2010

Warning Letters

- August 2, 2010 H&K Underground, Inc.
- November 22, 2010 RL Alia Company, Inc.
- August 26, 2010 City of Tacoma Sewer-Plant Maintenance
- February 25, 2010 Good Deed Developments LLC
- June 29, 2010 H&B Topsoil, Inc.
- August 2, 2010 H&B Topsoil, Inc. (Second Warning)
- October 22, 2010 JTM Construction (LeMay Museum)
- August 10, 2010 Tri Pak, Inc. (Yard #3, discharging wastewater)
- August 11, 2010 WM Dickson Co. (Asphalt cooling water)
- May 25, 2010 John Gibson Construction Company

Notices of Violation

- June 17, 2010 Bill's Towing
- August 12, 2010 Bronze Works
- March 30, 2010 Tri Pak #3



PETER CALLAGHAN

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Tacoma City Council faces widespread yet irrational opposition to new shoreline rules

PETER CALLAGHAN; STAFF WRITER

Last updated: April 20th, 2010 06:23 AM (PDT)

Two hundred feet.

Two-thirds of a football field.

Sixty-five paces.

That is the strip of waterfront protected by the state Shoreline Management Act.

Not much, really. But in Tacoma it's plenty to trigger another civil war over how best to use that rare commodity known as waterfront. The tension is between protectors of the industries that historically located on the water – whether they needed to be there or not – and the folks who want to claim that land for nonindustrial uses once industry doesn't need it anymore.

The Foss Waterway is where this tension plays out most clearly. When it was called City Waterway it was lined with smokestacks and factories. Most are gone now, not because they were chased out but because it no longer made economic sense to remain there.

The city purchased the land on the west shoreline, managed the environmental cleanup and guided a redevelopment. While the Great Recession has stopped most projects, the land isn't going to return to industrial uses.

Now comes the east shore. According to the great compromise of 2005, mixed-use developments could be built there with housing allowed south of the Murray Morgan Bridge but not north of the bridge.

That fits in with Tacoma's economic development plan, preparing for a future without Russell Investments. The city and its business and educational leaders are hoping that a small rust-colored building on the east side of the Foss north of the bridge will spark the kind of economic growth the city has long lusted after but never quite achieved. It's the Center for Urban Waters. It soon will house city environmental labs as well as the University of Washington Tacoma's environmental studies people and the state's Puget Sound Partnership.

The hope is that similar laboratory and research companies and institutes would want to locate near Urban Waters, helping complete the Foss as an inner urban harbor. And a state-mandated update of the city's Shoreline Master Program would further that hope by both allowing and encouraging such developments.

But it also has rekindled fear among the Port of Tacoma, Tideflats industrial users and their unions that such redevelopment would cause problems. Having people nearby whose livelihoods are not tied to existing industry might lead to complaints about the noise, dust and lights from these 24-hour operations.

That fear drove the failed opposition to saving the Murray Morgan Bridge, and it now fuels a move to block proposed changes to the shoreline plan. A Tacoma City Council joint committee meeting on the issue set for April 28 at 4:30 p.m. has already been moved to the larger Room 16 at City Hall to accommodate a bigger audience.

The fears are understandable because other cities have faced similar tension. But they are irrational both because there are ways to balance both uses and because there are no proposed or even imagined industrial uses for the 200 feet of shoreline on the Foss. Nonhousing uses could be a good buffer between city and industry, but if opponents of the shoreline rewrite get their way, Urban Waters will be isolated.

Current uses – an oil tank farm, a boat services business, a nonprofit boating center – are grandfathered. None of the proposed regulations such as public access would be triggered unless those uses undergo major remodeling or changes in use.

Again, 200 feet is all that is involved. Even the oil tank farms would not suffer under a 15-year-old prohibition against expanding in the shoreline as long as they did so on the other side of D Street.

The current owners would have the best of all worlds. They could stay as long as they wish. But if changing markets make redevelopment more profitable, the regulations would support that too. Only then would they need to provide public access to the shoreline.

Despite the facts, opposing the shoreline changes has become a litmus test that Tideflats businesses, the port and the waterfront unions want to impose on members of the City Council.

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BUSINESS

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Tacoma marinas make push to welcome boaters

Tourism: Tie up and stay awhile

C.R. ROBERTS; THE NEWS TRIBUNE

Last updated: January 12th, 2010 11:01 AM (PST)

When the Tacoma Regional Convention and Visitor Bureau honored Craig Perry as Tourism Professional of the Year in November, Perry was quick to give credit to his team at Tacoma's Dock Street and Delin Docks marinas.

Sitting in his office last week at Delin Docks, located on the eastern shore of the Thea Foss Waterway, Perry again gave full credit to his office staff and dock workers.

"We won the award – I didn't. It's not me – it's all of us," he said. "Just to sit there and listen to everybody else's bios, and their accomplishments – I leaned over to my wife and said, 'How cool is that?'"

Perry is general manager of facilities that include the 180-slip Delin Docks and the 80-slip Dock Street moorage. The first hosts a small fishing fleet plus facilities for regular moorage and some live-aboard guests. The second offers moorage plus 20 slips for visitors – and last year counted 2,167 guest nights spent afloat in Tacoma.

Perry also manages Foss Landing Marina and the 16th Street Pier, which provides a 320-foot excursion dock that might one day host regular tourist cruises.

You've had several jobs in various industries – marinas, media systems, wine distribution. How did you come back to marinas?

My wife said, "Your passion is on the water, and I want you to find something on the water." I started networking. I talked to Elliott Bay Marina (principals of which own Foss Waterway Management LLC, which manages the Tacoma facilities) – and I was going to be a delivery skipper for Sea Ray.

But you took the Tacoma job.

When I walked down here and saw the facility I thought, "Oh my gosh." I went home and told my wife, "This could be phenomenal." I told (the owners), "I'm your guy." I took the job on April 27, 2008. Later, one day, I walked across the Chihuly Bridge. It was eye-opening.

People said, "You're going to Tacoma?" To this day, people don't know how revitalized it is.

Part of the award was due to the way you welcome visiting boaters to Tacoma. What is it that makes your welcome special, and where did you get the idea?

I wanted to do something like Edmonds, which won National Marina of the Year. They give out a canvas bag with coupons and a flashlight. Edmonds has a waiting list for businesses that want to give discounts to boaters.

What's been the reaction when you go to merchants looking for additions to the Tacoma welcome bag?

It's been an ongoing process, trying to get them to offer discounts. It's really a good idea – the boats come in on Friday, and the people want to explore.

We've got some great museums and restaurants.

We give out mugs, tide books, key chains. Last year El Gaucho gave gift certificates. The Harmon; Lobster Shop; Woody's; Cutter's Point; Hello, Cupcake. The first few times I felt like a door-to-door salesman. The first year there was hardly anything. The tourism board works with us.

Now that we've had two successful years, I'm hoping people will get behind us.

Is there anything you'd like to say to merchants in Tacoma?

Edmonds has 76 merchants on the card and a waiting list. We have about two dozen.

We've had 2,100 nights of guest boaters. We don't have to play second fiddle to anybody. We're a year-round venue.

We're offering them customers they wouldn't otherwise have. I want the whole downtown core to say, "Let's embrace this."

I had one downtown merchant say, "We don't need the business." But I am not asking them to spend money.

People are finding a Tacoma they didn't know, and they're coming back.

Since you first came here, what changes have you noticed?

The difference in the sea life (in the waterway) is unbelievable. There are tons of crab, and there are the fish runs. People were fishing off the back of their boats. The starfish, the sea anemones, they are migrating back in. The mussels. To have been a Superfund site – it's gratifying. It's good to see.

The job the city did, putting the marinas together, is second to none.

What kinds of complaints do you get from customers?

I get two. One, the trains going by, but 80 percent of the people embrace it. Second, there's not a grocery store nearby.

What other initiatives are you working on?

Sixteen marinas are doing a "Passport to Puget Sound." We'll introduce it at the boat show on the 29th. It's to keep boaters in the Puget Sound, from Anacortes to Olympia.

C.R. Roberts: 253-597-8535

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Craig Perry

Title: General manager, Delin Docks and Dock Street Marina

Age: 54

Family: Wife of seven years, Kim Smith, teaches professional baking and pastry making at Renton Technical College; sons Max, 6, and Skyler, 4

Lives: Seattle

Background: Bellingham-born, raised in Anacortes, started boating at age 4. Participated in ocean racing for a dozen years, lived aboard his boat in Seattle for 10 years. Owns a 24-foot power boat. Previously worked doing home installations for Magnolia Hi-Fi and as a wine distributor.

Employees: Eight in summer, five in winter

Annual gross sales: Approximately \$1.2 million



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• SUNDAY • JANUARY 31, 2010

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TEMPERATURES

McCHORD AIR FORCE BASE

Yesterday to 5 p.m.	High	Low
Last year	46	47
Normal for day	45	37
Record (1997/2009)	46	33
Top wind speed	55	23
	9	

SEA-TAC AIRPORT

Yesterday to 5 p.m.	High	Low
Last year	49	41
Normal for day	49	31
Record (1992/1950)	47	36
Top wind speed	59	7
	12	

Freezing level 3,000 feet

PRECIPITATION

McCHORD			
This year to date	Day	Month	Year
Last year to date	0.20	6.62	6.62
Normal to date	0.00	6.40	6.4
Record high (2006/1996)	0.17	5.21	5.21
Record low (1985/1952)	11.93	60.77	
	0.55	16.96	

SEA-TAC

This year to date	Day	Month	Year
Last year to date	0.17	6.07	6.07
Normal to date	7	5.38	5.38
Record to date	0.16	4.97	4.97

TIDES TODAY

NARROWS

High/Tide	Low/Tide
6:30 a.m./14.7	12:10 p.m./5.0
5:33 p.m./12.4	

COMMENCEMENT BAY

5:12 a.m./11.0	11:55 a.m./4.9
5:12 p.m./11.6	11:51 p.m./5.1

WESTPORT

1:44 a.m./10.1	7:07 a.m./2.0
1:26 p.m./11.3	7:38 p.m./0.8

WIND AND SURF

Puget Sound	2-4 knots/SSW	< 4 feet
Hood Canal	2-4 knots/SSW	< 4 feet
Port Angeles	3-8 knots/SSW	< 4 feet
Near Bay	3-8 knots/SW	< 4 feet
La Push	3-7 knots/SSW	< 4 feet
Westport	5-10 knots/SE	< 4 feet



TODAY
Chance of light rain showers.
High: 50
Low: 40

MONDAY
Likely dry to start, then rain late.
High: 50
Low: 40

TUESDAY
Chance of rain and mostly cloudy.
High: 50
Low: 41

WEDNESDAY
Mostly cloudy with a chance of rain.
High: 51
Low: 40

THURSDAY
Generally cloudy with a chance of showers.
High: 51
Low: 40



STATE GOVERNMENT

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House unveils transportation plan

Olympia: Lawmakers say \$8.5 billion budget will create 3,000 jobs

BRIAN EVERSTINE; THE ASSOCIATED PRESS

Last updated: February 24th, 2010 12:27 AM (PST)

The Washington state House unveiled its transportation budget proposal Tuesday, calling for a \$1 billion jump from last year's budget thanks to an influx of federal stimulus money.

Lawmakers say the \$8.5 billion budget will create 3,000 jobs while focusing spending on existing projects throughout the state. The increase in federal money will go to projects such as a \$590 million high-speed rail corridor, increased funding for the North Spokane Corridor, and reconstruction work on Highway 410, which was damaged by a landslide.

"It's all about getting jobs on the ground," said House Transportation Committee Chairwoman Judy Clibborn, D-Mercer Island.

The state's transportation budget for the 2009-2011 biennium is already facing a \$121 million drop in revenue, and unlike the Senate's \$8.6 billion proposal released Monday, the House's version calls for no additional cuts. House leaders instead say the deficit will be covered by lower-than-expected construction bids. The slower economy is forcing contractors to make lower bids to get work, they said.

In addition to including federal stimulus money, the House's proposal calls for \$32 million more for fuel costs and \$3 million for stormwater treatment. The state will also spend \$2.2 million on staff costs associated with implementing the \$590 million in federal money for improvements to the rail corridor that runs from Oregon to British Columbia along Interstate 5.

This year's supplemental budget will expand on the \$7.5 billion transportation budget that legislators approved last year, already the largest in the state's history, lawmakers said. The proposal is scheduled to be voted out of committee today.

CONSTRUCTION BUDGET TRIMMED

Also Tuesday, the House introduced a trimmed-back state construction budget, with lawmakers saying the bond capacity available to pay for projects must be reduced this year because of declining state revenues.

More than \$168 million in cuts were proposed, including a nearly \$110 million reduction on a grant for K-12 public school construction through 2011. The House assumed another \$100 million in savings due to construction work bids coming in about 20 percent less than original project cost estimates, as well as projects that will not move forward.

The proposed construction budget also assumes a pollution-tax plan pushed by environmentalists that would nearly triple the state's existing hazardous substances tax, which was approved by voters in 1988.

The bill has passed out of the House Committee on Capital Budget and awaits a hearing before the House Finance Committee.

The tax is levied on oil products, pesticides and other chemicals and is earmarked for environmental cleanup projects.

About \$5 million of that tax would go to Puget Sound restoration, and \$49 million would go to storm water cleanup.

The construction budget also sets aside \$200 million for a plan that would launch a statewide package of energy-efficient school makeovers. The plan is aimed at spurring specialized construction jobs and capturing electricity savings at public buildings. Rep. Hans Dunshee says the energy projects – combined with \$100 million in housing seed money – would create an estimated 19,500 jobs.

"We want to put as much money to work as possible," he said.



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EDITORIALS

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Cleaner heat, free (or nearly free) for the asking

THE NEWS TRIBUNE

Last updated: February 25th, 2010 08:35 AM (PST)

To the wood-heat holdouts go the spoils.

Tacoma-area homeowners who haven't yet replaced their outdated wood stoves have the best opportunity yet to switch to a more efficient heating source. But time is running out.

As of Friday, the Puget Sound Clean Air Agency still had nearly two-thirds of the \$650,000 it received from the state last year to get rid of old wood stoves – and the agency has only days to spend it.

The current incentives are the most generous offered since state and federal agencies began making the push to clean up Tacoma's air a few years ago. Low-income households could get a new wood stove for little or nothing out of pocket.

Wood stoves are a big part of the reason why the Tacoma area has Washington's sootiest air and ranks among the 31 most polluted places in the country. About 63 percent of airborne particulates in this area come from fireplaces and wood stoves during the winter, when pollution levels are at their highest.

The soot, smoke, dust and dirt that pollute the air cause major health problems, especially for the very young, the very old and people with respiratory illnesses.

They also pose hazards to this region's economy. Emission restrictions on industry – or even the threat of them – could chill investment and job creation.

Pierce County officials tried to get key industrial districts such as the Tideflats, Frederickson and Nalley Valley excluded from the "non- attainment area" designated by the state and federal governments in 2008. The argument was that particulates in those areas were pushing the federal limits only because wood smoke from residential neighborhoods was drifting in. Pierce County lost the fight.

Local agencies have been working on measures to reduce vehicle exhaust, another big contributor to Tacoma's dirty air. But the region cannot make a significant improvement in air quality without a significant reduction in the wood smoke that comes from home heating.


Officials estimate that tens of thousands of Tacoma-area households still rely on wood stoves. Yet interest in the replacement program has declined even as financial incentives have grown.

The holdouts should reconsider – for themselves and for their community. Voluntary measures are preferable to forced compliance, but not at the cost of public health and economic vitality.



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EDITORIALS

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Seaport a bright spot in historic preservation

THE NEWS TRIBUNE

Last updated: January 4th, 2010 12:30 AM (PST)

The Luzon Building may no longer be standing, but preserving Tacoma's heritage wasn't a lost cause in 2009.

Down the hill from the post-Luzon scar at 13th and Pacific is the Balfour Dock Building, the last remnant of what once was a mile-long stretch of grain storage warehouses.

The Balfour has come far – from a decaying castoff that once stored impounded vehicles to a combination maritime museum, working boat shop and hands-on learning center.

A major \$7 million overhaul of the wharf in 2007 saved the Balfour from slipping into the Foss Waterway. The construction of the new concrete esplanade happened just in time to help host the Tall Ships Festival.

More work is on the way. The Foss Waterway Seaport, which is in charge of redeveloping the building, got a big boost last month. On the heels of the Tacoma City Council approving \$2 million for improvements to the Balfour, an unnamed donor gave the Seaport another \$2 million.

The private money – from a benefactor “with deep local roots in Tacoma who no longer lives here,” according to Seaport officials – will go toward creating a laboratory and classrooms. It also will endow marine and environmental education programs that aim to get students excited about science.

The city's contribution will buy seismic bracing and other public safety upgrades for the 109-year-old timbered warehouse. Together with an earlier \$750,000 state appropriation to help replace the roof, the money will bring the 45,000-square-foot structure into compliance with building codes.

The city's support has extra significance. Tacoma owns the building, but had contributed little to its overhaul. Public and private donors had begun to ask why they should give when the owner wasn't. Tacoma's participation will assist Seaport backers as they look to raise \$8 million more to fully renovate the building by 2012. The private donation is another vote of confidence that will help convince other potential donors to give.

It's been a long haul for Seaport officials already, and they're not done yet. But they no longer have to wonder if the building will be saved for future generations, only when their vision of creating a destination museum and education center will be realized.

There is a lesson in the Balfour's incremental rescue. Historic structures are often lost in one fell swoop, but rarely saved in the same manner. Preservation takes time and sustained effort. A plan that serves several interests also doesn't hurt.



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STATE GOVERNMENT

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Puget Sound Partnership plans light session

Legislation: Group backing only two bills covering environment

ROB CARSON; STAFF WRITER

Last updated: January 27th, 2010 12:26 AM (PST)

The state agency charged with restoring the health of Puget Sound by 2020 is keeping its head down this legislative session.

The Puget Sound Partnership is putting its political muscle behind just two bills, neither of which proposes strong proactive action on major problems facing the Sound.

David Dicks, the partnership's executive director, laid out the agency's strategy for the session to a board of the agency's top advisers last week in Olympia.

With legislators desperate to cut programs and raise revenue, Dicks said, major regulatory bills dealing with stormwater and protection of shoreline habitat are "not ready for prime time."

"I wish the world wasn't this way, but we are in a very tough time here," Dicks said.

Legislators are in no mood for new environmental legislation, Dicks said.

"Basically, we have like four or five people down here that care about this stuff," he said.

The two bills the partnership is vigorously backing, Dicks said, are to limit the use of copper in vehicle brake pads and to coordinate plans for the use of ocean waters.

A stormwater bill introduced last year – House Bill 1614, which would have put the burden of stormwater remediation with fees on businesses – has been jettisoned, Dicks said.

"It is not the preferred alternative at the moment," he said.

HB 1614 made it through the House last year but never made it to the Senate. Gov. Chris Gregoire did not support the approach.

Drafts of legislation to place a moratorium on new bulkheads and structures built over the water in certain sensitive shoreline habitat areas also will not be pursued this time around, Dicks said.

"We basically came to the conclusion that this is not doable in this session," he said.

News of the partnership's low-key approach angered some members of the partnership's Ecosystem Coordination Board.

The group is made up of about two dozen of the agency's advisers, representing state and federal agencies, business interests, tribes and environmental groups.

"It's always the same story: 'It's not the right time,'" said David Troutt, natural resources director for the Nisqually Indian tribe.

"We need to stop the bleeding now. There is absolutely no reason we should not be doing something right now."

Kathy Fletcher, executive director of the environmental group, People for Puget Sound, also expressed frustration.

"What's the partnership's proactive strategy?" she demanded.

Dicks asked for patience.

"If we put these things out there now, we'd risk getting killed and maybe hurting ourselves in the long haul," he said.

The legislation intended to limit the use of copper in vehicle brake pads – 6557 in the Senate and 3018 in the House – was requested jointly by the partnership and the state Department of Ecology.

Even if passed, the bill would not take effect until 2015 for used cars and 2020 for new cars.

The ocean-planning legislation – 6350 in the Senate and 3078 in the House – is intended to coordinate uses of Washington's marine waters, including the location of energy production facilities.


The partnership also will track three other bills this session, Dicks said.

One would sponsor studies into the effects of seawater desalinization. Another encourages high-density growth in cities. The third encourages safe collection and disposal of unwanted prescription medications.

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LOCAL NEWS

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State wins \$590 million for high-speed rail work

I-5: Federal funds will first work on slowdowns

LES BLUMENTHAL; STAFF WRITER

Last updated: January 28th, 2010 06:47 AM (PST)

WASHINGTON – Plans for a high-speed rail corridor between Portland and Seattle will receive a boost today when the Transportation Department announces \$590 million in funding for the project.

Both Washington and Oregon have bought trains capable of traveling at 125 mph. But because of safety and freight traffic concerns, the trains are limited to 79 mph maximum and are plagued by slowdowns and erratic schedules.

The higher speeds may still be years off, but the funding will be used to eliminate bottlenecks in the corridor and improve on-time arrivals.

"Anybody who travels the I-5 corridor in our state knows that we need to find new, efficient options to get commuters and commerce moving," said Sen. Patty Murray, D-Wash. "This funding is the opportunity we've been waiting for to help make these improvements a reality."

Murray, chairwoman of the Senate transportation appropriations subcommittee, learned of the funding in a phone call Wednesday from Transportation Secretary Ray LaHood.

Even though they had sought \$1.3 billion, state officials said they were more than pleased with the amount and are already working on an application for the next round of funding.

"If that's the number, that's a big chunk," said Scott Witt, director of the Washington Department of Transportation's rail and marine program.

Congress provided \$8 billion for high-speed rail corridors in the \$787 billion stimulus and economic recovery bill it approved almost a year ago. President Barack Obama will travel today to Florida, where he is expected to announce funding for 13 high-speed rail corridors in 31 states.

Since 1994, Washington and Oregon have invested nearly \$1.1 billion in the Cascades high-speed rail corridor. State officials said earlier that the federal funding would help pay for needed improvements in an effort to get train speeds to 110 mph.

But Witt said even with the federal funding the trains won't reach 110 mph. Instead, the money will help the trains better keep to their schedule. About 64 percent of trains on the Portland to Seattle route arrive on time. Witt said that will increase to about 90 percent.

"They will run on time," he said. "It's about consistency of service."

The \$590 million is a good start, Witt said. "This is a marathon, not a sprint," he said. "As the president said, this is a down payment."

Built in Spain, the Talgo trains are equipped with a suspension system that allows them to lean into curves.

The passenger trains currently share track with freight trains on the BNSF mainline and sometimes face backups. The Amtrak Cascades route between Eugene, Ore., and Seattle had a 64 percent average on-time performance in 2008. The Portland-Seattle line carried 750,000 passengers in 2008, an 82 percent increase over 10 years ago.

Corridor improvements could reduce travel time from Portland to Seattle by almost an hour, from three hours and 25 minutes to two hours and 30 minutes.

The state wants to alleviate the congestion with a 19.2-mile inland "bypass" that runs through South Tacoma, Lakewood, past Fort Lewis and DuPont before rejoining the tracks in the Nisqually area. It's expected to reduce the Seattle-Portland run by six minutes.

But Lakewood officials have voiced concern over the plan since it was unveiled in 2006. The route will run through neighborhoods and intersect streets where there's currently no train traffic, except slow-moving freight trains that use it a couple of times a week. Lakewood also won't get a stop on the Amtrak route.

On Jan. 19, the Lakewood City Council passed a resolution asking the state and federal governments to withhold funding until its concerns are addressed.

"Lakewood has taken issue with the state's decision to avoid an environmental review for this project in light of serious traffic

and safety concerns," according to the city's Web site. Lakewood officials say the local fire and school districts plan to issue similar resolutions.


Washington state and California officials have had preliminary discussions about a high-speed rail line between San Diego and Vancouver, B.C., using trains that could travel 200 mph. By some estimates, the corridor could cost between \$10 million and \$45 million per mile.

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Staff writer Brent Champaco contributed to this report.



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ON TRACK FOR THE FUTURE

The 466-mile Pacific Northwest Rail Corridor is one of a nationwide network of hubs identified for high speed rail development. Short-term plans call for more daily trains and track improvements. In the future, rail boosters envision super fast trains and a link between the California and Northwest corridors to create a 1,500-mile West Coast high-speed route.



CASCADES RIDERSHIP

Amtrak's Eugene-to-Seattle run saw a 31% increase in annual ridership between 2003 and 2008.



Sources: Wash. Department of Transportation, ESRI, TeleAtlas **FRED MATAMOROS**/The News Tribune



EDITORIALS

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Be reasonable about port fine, EPA

THE NEWS TRIBUNE

Last updated: February 26th, 2010 12:26 AM (PST)

File this under "No good deed goes unpunished."

In 2003, the Port of Tacoma bought a piece of property – the former Kaiser Aluminum & Chemical Corp. smelter site – that no one else wanted because it had hazardous waste issues. The port has spent more than \$5 million cleaning up the property and hauling out tons of waste, planning to put the site to work generating jobs as a shipping terminal. It plans to spend up to another \$5 million to complete the cleanup.

But because the port missed some paperwork deadlines involving a fraction of the property, it faces a hefty fine – it could be \$231,600 and possibly much more – from the U.S. Environmental Protection Agency.

The kicker here is that the fine involves only a half-acre of the 96-acre site – and that half-acre was cleaned up by Kaiser before the port even bought the property. The paperwork the port was late on involved its guarantee of being able to afford the cost of any future cleanup needs and monitoring of the half-acre – a cost the port estimates at about \$300,000 over the next 20 to 30 years.

Given the many sites in the region that await cleanup, it's outrageous that a fine would be assessed against an entity that has actually stepped up to the plate and invested millions of dollars doing just that. And it's not as if this is a fine against a private company that is dumping toxic waste or failing to clean it up. This would be one public agency taking taxpayer dollars from another public agency.

It's actually unclear whether the port did anything substantively wrong. The port claims the paperwork was late because it was tied to the port's annual financial audit and that an employee of the state Department of Ecology – which administers the Kaiser cleanup on behalf of the EPA – said it would be OK to turn it in after the audit. The port has no record of that advice, and the DOE employee is now retired.

Is the EPA really spending precious, limited public money pursuing such a minor issue? The agency surely has bigger fish to fry than a public agency that has shown a commitment to cleaning up the environment.

Yes, the port has a responsibility to have its paperwork in order. But this minor lapse warrants a slap on the wrist, not the federal sledgehammer.



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TACOMA

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Tacoma: Murray Morgan Bridge to close for work Monday

THE NEWS TRIBUNE

Last updated: January 30th, 2010 06:27 AM (PST)

Tacoma's Murray Morgan Bridge will close to pedestrian traffic Monday so crews can replace some of the span's cables, the city announced Friday.

The closure is expected to last until early April. The bridge was closed to vehicle traffic in October 2007 but has remained open to foot traffic. The stairs to Dock Street will remain open.

The nearly \$3 million cable replacement project is part of a city effort to slowly revitalize the bridge.

Staff report



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El Niño to top extreme tides

Weather: South Sound has seen high water already this winter and likely will again in the next few weeks

JOHN DODGE; STAFF WRITER

Last updated: January 27th, 2010 12:01 PM (PST)

OLYMPIA - South Sound faces some extreme high tides next week that could climb even higher than predicted because of this winter's El Niño-influenced weather.

Tides are predicted to hover near 17 feet in Budd Inlet the mornings of Feb. 1-3, a height they reach only a few times a year, according to the National Oceanic and Atmospheric Administration. University of Washington scientists say there's a chance tides will be even higher than predicted.

In typical El Niño winters, when the equatorial Pacific warms and the Northwest experiences warmer and drier weather than normal, high tides average about a foot above predicted levels for the entire winter, said Nate Mantua, co-director of the UW Climate Impacts Group.

The warmer ocean water expands, the southwest winds pile up the ocean water feeding into Puget Sound, and the northwest Pacific Ocean experiences persistent low-pressure systems that also allow the water to expand, Mantua said.

Just last week, record-low barometric pressure off the West Coast played a major role in Puget Sound tides rising as much as 2 feet higher than predicted, pushing the actual tides in Budd Inlet close to or above the 17-foot mark by midweek. "It's likely to happen again," Mantua said of the string of weather events that pushes high tides even higher.

Neil Falkenburg, owner of West Bay Marina in lower Budd Inlet, said the high water last week spilled into his parking lot and lapped at the corner of his building.

What made it even more bizarre was the lack of wind or rain, which often accompany South Sound flooding, Falkenburg said.

"I've been here 20 years, and never seen the water this high," he said. "If we have low barometric pressure next week, I'll be here with my waders on."

Across the inlet north of Priest Point Park, waterfront resident Rick Lawrence watched Wednesday morning with amazement as the high tide, which was supposed to be about 15.6 feet, topped his bulkhead and disabled his well's pump.

He, too, said it was the highest tide he's seen at his waterfront property in 20 years.

In early January, a 17-foot tide left about 2 feet of clearance between the water and the Percival Landing boardwalk in downtown Olympia.

Last week's tide was higher than the one in early January, said Andy Haub, a city of Olympia public works official.

Olympia's lack of an official tide gauge – the closest one is in Tacoma – makes it difficult to precisely compare one high tide with another, Haub said.

The city is working with the Port of Olympia to put a tide gauge in lower Budd Inlet.

High tides are expected to become a topic of increased importance in the decades ahead, because of sea-level rise attributed to climate change, Mantua and others have said.

Sea-level-rise models by the UW Climate Impacts Group show water levels in the Pacific Northwest increasing from 3 inches to 22 inches by 2050.

A sea-level increase of 13 inches could cause extensive flooding of downtown streets during extreme high tides because of marine water flowing up through storm drains, according to a city public works briefing paper presented to the City Council last year.

Olympia's biggest flooding threats occur when high tides coincide with storms and heavy volumes in the Deschutes River, which flows into Budd Inlet, said Olympia assistant fire chief Greg Wright.

The weather forecast for the next week does not include that scenario, said Larry Kessel, who manages the Capitol Lake Dam, where the river meets lower Budd Inlet.

El Niño gets some of the credit for that, as it tends to split the jet stream that feeds winter storms into the Northwest, sending

them instead to the north and south and leaving this region warmer and drier than normal.


Olympia is on pace to break the record for the warmest January on record. That record was set in 1953, when the daily average was 44 degrees, according to the National Weather Service.

The temperature in Olympia reached 61 degrees on Jan. 19, breaking the record of 59 degrees for that day set in 1995.

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The Olympian - Floating docks at Percival Landing almost were level because of unusually high South Sound tides on Jan. 5. The tides are expected to return soon.
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Read more: <http://www.thenewstribune.com/2010/01/27/1045365/el-nino-to-top-extreme-tides.html#ixzz0leePp6dN>



The Olympian - On a winter Tuesday that looks like spring, West Bay Marina owner Neil Falkenburg stands next to his sign warning of potential high water and flooding that are forecast for February.

Y • MARCH 28, 2010



Richards Studio Collection, Tacoma Public Library, 253-597-5622, search.tpl.lib.wa.us/images

This photograph of trains of logs on and along Northern Pacific Railway tracks with Northern Pacific boxcars nearby was taken in March 1929, then used in a News Tribune article Oct. 20, 1930, to help bolster Tacoma's claim to be "the lumber capital of the world." Great trains of logs like these were brought to Tacoma's mills for cutting into lumber before being sent out to the world. More than 80 Tacoma mills converted lumber into finished products. There were 21 local furniture-making factories that used Tacoma lumber.



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Holdouts resist Asarco cleanup efforts

Environment: EPA wants to remove contaminated soil

ROB CARSON; STAFF WRITER

Last updated: January 24th, 2010 07:35 AM (PST)

For most people, it sounded like the sensible thing to do.

Property owners whose yards were polluted by windblown fallout from the old Asarco smelter could get the top layer of their dirt scraped away and replaced for free, courtesy of Asarco.

All the landscaping would be replaced, right down to brick pathways, irrigation systems and bird baths – even the marigolds in flower beds.

Since the EPA initiated the Superfund yard cleanup program in 1993, anywhere from 1 inch to as much as 2 feet of soil has been lifted from 4,000 public and private properties in Ruston, north Tacoma and Point Defiance Park. In all, 250,000 cubic yards of arsenic- and lead-contaminated soil has been hauled off to toxic storage.

But, good as the program sounds, not everybody has been crazy about buying into it.

According to the EPA, about 100 private homeowners out of 1,500 in the Superfund cleanup area either have refused to let scientists test their property or – after contaminated dirt was discovered – refused to let cleanup crews onto their property.

Most of the holdouts live in the outer rings of the EPA's target-shaped cleanup zone, on parcels not as badly polluted as those closer to the old emissions stack near Point Defiance.

But a handful live in the EPA bull's-eye, within the area most contaminated with lead and arsenic. They've resisted certified letters, phone calls and personal visits from EPA employees.

The holdouts are not eager to advertise their presence, and the EPA refuses to identify them, either by name or by location of property, citing privacy concerns. The EPA denied a News Tribune Freedom of Information request for their addresses.

"Disclosure of the information would constitute a clearly unwarranted invasion of personal privacy," Lori Cohen, acting director of the EPA's office of environmental cleanup, said in a written response to the request.

Last fall, the EPA began ramping up its efforts to convince the holdouts, stirred by evidence that the remaining yards are more polluted than previously thought. The agency also was enriched with \$5 million in federal economic stimulus funds allocated specifically to wrap up the yard cleanup program.

The EPA's resolve to finish the job was strengthened further last month by an agreement in Asarco's bankruptcy proceedings. The judge in the case approved a deal in which Asarco, purchased by Grupo Mexico, will fully fund all of its environmental liabilities in the United States, including the Ruston site.

"I can't tell you at this point what enforcement action we'll take," said Kevin Rochlin, the EPA's manager of the Ruston yard cleanup project. "The job that I have been tasked with is to convince people to let us clean up their property. It's a good program. We have the money. It reduces risk, and we really want to encourage people to take advantage of it."

The standoff over the remaining yards is taking place at a tender confluence of law, environmental science and politics, and it raises difficult questions.

To what extent do the remaining properties genuinely constitute a public health risk? Under what circumstances should a government force private property owners to clean their property in the interest of the public good?

A SHRUNKEN ASARCO

While the EPA won't divulge the names and addresses of the holdouts, a huge map on the wall of the Asarco cleanup office in Ruston clearly tells the story.

Every property, right of way, planting strip and alley in the square mile designated for cleanup is color-coded to indicate its status. Holdouts are marked with bright red cross-hatching.

Asarco's presence in Ruston has shrunk from a massive industrial complex to a single document-strewn room in the basement of the old Ruston School building on Shirley Street.

The number of local Asarco employees has dropped from more than 1,300 in the smelter's heyday to just two: Karen Pickett

and Bob Miller.

Pickett, who seems glad to have company in the tomblike office, lays out the details of the yard cleanup program, using the map as a visual aid.

The yard rehab area is divided into four zones, roughly concentric circles radiating out from the old plant. The zones relate to concentrations of pollutants.

To determine extent of pollution, technicians tested for contamination by setting up grids and taking random samples down to a depth of 18 inches.

Samples containing more than 230 parts per million of arsenic or 500 ppm of lead indicated pollution sufficient to require cleanup. The remedy chosen by the EPA was to excavate the polluted soil and replace it with clean dirt.

Generally speaking, deposition of the fallout depended on the distance from the stack and prevailing winds.

Virtually all properties in Zone 1 exceeded the standards; 80 percent of them exceeded standards in Zone 2; 70 percent in Zone 3 and 50 percent in Zone 4.

REASONS FOR RESISTANCE

There's no single reason people refuse to have their yards cleaned up.

"I don't think we've got the same reason from anybody we've talked to," Rochlin said. "There is no single profile."

However, he said, those most inclined to resist are those who have lived in the area the longest. Many still tend to feel loyalty to Asarco, he said, even after all the reorganizations and bankruptcies and lawsuits.

Some, he said, recall the toxicity of the smelter with a strange kind of pride. They remain loyal despite air pollution so corrosive it peeled paint off cars parked in the employees' lot.

The most common argument is that the cleanup is unnecessary, Rochlin said. They doubt the fallout really poses any significant health risks.

"They say, 'I worked there 40 years and I feel fine,'" Rochlin said. "'What's the problem?'"

"Some of the arguments have been heartbreaking," Rochlin said. "One woman said her husband had done all the landscaping. He died, and she didn't want to risk changing it."

Others have pets buried in their yards and don't want the remains disturbed. Some don't like big government.

Still others worry about favorite bushes or trees. Cleanup crews go to great lengths to make sure plants survive, laboriously hand-digging around trees and packing clean soil around the roots. Even so, owners worry their trees will die.

Cheryl Perkins, who lives in the North End near Jane Clark Park, eventually agreed to have her property cleaned. But she was originally reluctant, she said.

"My grandkids were here for the summer and I didn't want to have it done while they were playing in the yard," she said.

Also, Perkins said, she didn't want to hurt Asarco – even though her brother-in-law, a longtime employee, died of lung problems.

"I didn't want to take advantage of them," Perkins said. "I didn't want to profit from Asarco going under. They employed a lot of people – some of them relatives."

NOT GOING TO 'ROLL OVER'

One of the last holdouts lives less than one-quarter of a mile from the spot where the old Asarco emissions stack was imploded Jan. 17, 1993.

The landowner doesn't want to be identified – not because she is ashamed of her stance but because she lives alone and worries about the attention publicity might bring.

She lives in a million-dollar house with a megamillion-dollar view, a vast panorama of Commencement Bay, Browns Point and Vashon Island.

Her reasons for not participating, she said, are basically two: She doesn't want her elaborate landscaping ruined, and she doesn't believe the contamination discovered on her property poses any real threat.

She said the EPA has lobbied her heavily to change her mind. She's had phone calls, certified letters, personal visits and

most recently, she says, what amounted to threats.

"They indicated they may sue me," she said. "If they do, I'm certainly not going to just lie down and roll over."

Mostly, she said, she just wants to be left alone.

"For me, this isn't just my house, it's my world," she said. "I don't want people coming in here ripping it up, and I don't think there's a rational reason to do that."

"I've spent the last 12 years of my life doing this garden," she said. "I don't want to start over. I'm too old to start over."

She doesn't believe the contamination, which technicians discovered 18 inches below the surface, is hazardous, as long as it's left where it is.

"I can't imagine it's really a problem," she said. "There's no way it's going to have any effect on me unless I dig 18 inches down and eat the dirt. ... There are a lot of dangers in the world, but this one doesn't scare me very much."

Rochlin says there definitely are risks – not only to the people who live on polluted properties, who might garden in the dirt, track it inside and whose children may play in it, but also a risk that blowing dirt will fall on neighboring yards.

But the property owners have a point: At levels measured in parts per million, it is difficult to establish health effects on individual levels. The threshold at which the EPA mandates cleanup is a level believed to cause one additional cancer case in 2,000 people.

The issue, Rochlin said, is not so much a question of harm caused by one property owner but the aggregate over the entire area.

Justifying tough enforcement in individual backyards easily can seem ridiculous. It is like insisting a single boat emptying its sewage will endanger Puget Sound or that a single uncertified wood stove in Spanaway will give somebody lung cancer.

The point, Rochlin says, is that the pollution is a health hazard on a broader scale.

"It's not, 'You will die tomorrow from working in your yard,'" he said. "The risk is at the public health level.

"That's why we have drinking-water laws. That's why we have air laws. It's not just the person who owns the property now but whoever lives there in the future. It remains a health risk until it's cleaned up."

Mark Gosnell had his Ruston yard cleaned up several years ago, back when the EPA did its first run-through. He thinks the holdouts probably should be required to have theirs cleaned too.

"You always have a few quirky people who have their own ideas," he said. "Sometimes, for the good of everybody, you have to do some things you might not want to. That's why they have building codes and stuff like that."

On a sunny morning last week, Gosnell was on his knees in his front yard, digging in his garden.

The irony of his own cleanup, he said, was that by the time the EPA tested his soil, he already had moved most of it, recontouring his yard to open up the lower story of his house.

"They only found two little problem spots," Gosnell said. "Everything else was buried."

While he thinks the EPA should make sure everybody complies, Gosnell said it's no big deal to him one way or another.



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CONVINCING THE HOLDOUTS

Contaminated soil on thousands of properties in the four pollution zones surrounding the old Asarco plant in Ruston has been replaced. Now, armed with \$5 million in economic stimulus funds, the EPA is doing its best to convince remaining property owners to get with the program.



Urban Waters spirit runs deep

On the Foss: Center hopes to be hub for environmental expertise, green technology

ROB CARSON; STAFF WRITER

Last updated: April 5th, 2010 10:48 PM (PDT)

Construction of Tacoma's new Center for Urban Waters is down to the final details.

Last week, window washers rappelled down the west face of the building, cleaning the last traces of construction dust from exterior glass. Inside, assembly crews set up desks and office partitions.

Ninety-seven City of Tacoma scientists, engineers and environmental inspectors will move into the building before this month is out. In July they'll be joined by nearly the full 36-person staff of the Puget Sound Partnership, the state agency formed to restore the health of Puget Sound.

A corner office awaits Joel Baker, the University of Washington Tacoma professor who will serve as science director at the center.

The \$38 million Urban Waters project, which skeptics criticized at every turn for high cost and misguided hopes, is riding a wave of enthusiasm in its inaugural days.

The Urban Waters concept – locating a nexus of environmental expertise on a former Superfund site, in a building that is itself a paragon of environmental virtue – now appears to have been prescient, given the priorities of the Obama administration.

The center's completion coincides with widespread acceptance of the notion that science and technology are the answer to the world's environmental problems. And, despite the recession, there is cash for environmental restoration and technology. While money for everything else is in short supply, federal funds for environmental cleanup and green jobs are at least temporarily plentiful.

Projects designed to restore the health of Puget Sound received \$70 million in federal stimulus funds last year. Congress appropriated \$50 million more for 2010.

While construction workers were still drilling holes for the center's foundation piers, the concept already had attracted two large grants: \$4 million from the Environmental Protection Agency for a "Puget Sound Institute," intended to gather top scientists for cleanup expertise, and \$1 million from the state Department of Ecology for stormwater research, in conjunction with the City of Puyallup, the University of Washington Tacoma and the Washington State University Puyallup Research and Extension Center.

Looking east across the Foss Waterway from downtown Tacoma, the 51,000-square-foot research facility is hard to miss, and that was the plan from the beginning.

Eager to humanize the east side of the Foss and attract eco-tech entrepreneurs, backers wanted the building to have a strong visual presence. The building's red-orange color – which architects say was inspired by rust on the oil storage tanks next door – makes it pop into view.

The prominent location is intended to establish Tacoma as a national hub for green technology and give the city a competitive edge over other cities trying to do the same thing.

“They wanted it to be like a big sign, saying, ‘Here is this building,’” said Devin Kleiner, the architect who led the Perkins+Will design team.

“The building itself is a billboard,” Kleiner said. “What it says, is ‘Sustainability.’”

That's what it says inside too.

It's a smart building, managed by a weather station “brain” on the roof.

Data on wind speed, temperature and cloud cover automatically adjust heating and cooling systems and tilt external window shades on the west side. Green and amber lights on inside walls let workers know when it's OK to open windows. (On the east side, where the labs are located, the windows are fixed to maintain consistent conditions.)

Overall, the new building will consume 36 percent less energy and 46 percent less water than if it had been built using standard techniques, according to Jim Goldman, who managed the building project for Turner Construction, the general contractor.

The building features a green roof, recycled water for toilets, a natural heating and cooling system, and natural light to reduce dependence on electricity. Goldman said he expects the Urban Waters building to win the highest rating (platinum) from the U.S. Green Building Council for Leadership in Energy and Environmental Design.

If he's right, it will be the second structure in Washington state to do so. The first was Perkins+Will's downtown Seattle office. Two big galvanized metal water tanks, 36,000 gallons each, stand next to the main entrance.

“We thought about putting the tanks underground,” Kleiner said, “but then we decided to put them out where everybody could see them. This building is all about water management. Why hide it?”

Rainwater that falls on the building percolates through 12,000 square feet of roof gardens, set in 4 inches of special lightweight soil mix. That reduces stormwater runoff and helps keep the roof cooler in summer.

The water tanks collect excess water from the roof and parcel it out for flushing toilets (low-flow, naturally) and irrigating the extensive landscaping on the site. The entire property was designed for maximum absorption of rainwater, in part by using permeable concrete paving blocks instead of solid pavement on the 35-space parking lot. Plantings cover every surface not used for parking or walkways.

A rain garden captures runoff and filters it naturally before it reaches the Foss Waterway.

The center is heated and cooled by a “geoexchange system” that circulates water through 84 wells drilled on the site, some as deep as 282 feet. Because water at that depth stays at a relatively constant temperature, heat pumps can concentrate thermal energy from the water and either use it to heat the building in winter or send it back underground for cooling in the summer.

By nearly every measure, the Center for Urban Waters is sustainable architecture. But will it generate the sustainable flow of eco-tech spinoffs its backers hope for?

That remains to be seen, said Jake Fey, Tacoma’s deputy mayor and an avid supporter of green jobs and environmental technology.

“Every county in the state has an interest in the green economy,” Fey said Friday night at a UWT-sponsored panel discussion called “Envisioning Tacoma as a Leader in the New Green Economy.”

“But even with all the players, there is a niche in Tacoma that every county doesn’t have,” Fey said. That niche, he said, was created by putting the collaborative energies of the University of Washington Tacoma and the Puget Sound Partnership together in the same building.

“That makes it one of the prime opportunity areas for the City of Tacoma,” he said.

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Read more: <http://www.thenewtribune.com/2010/04/05/v-printerfriendly/1135702/urban-waters-spirit-runs-deep.html#ixzz0vUZXqyU1>



Staff photographer - The Center for Urban Waters on Tacoma's Thea Foss Waterway is a model of green design and construction. Features shown here include fixed sun shades on the south side, right, and exterior venetian blinds on the west side.



PETER HALEY/STAFF PHOTOGRAPHER - Jim Goldman, left, project executive for Turner Construction, and Devin Kleiner, co-designer of the Center for Urban Waters, stroll past the center's rainwater cisterns. The center is a model of green design and construction. When finished it is expected to achieve LEED platinum certification.



Staff photographer - The west side of the Center for Urban Waters has exterior venetian blinds that automatically change angles.

Read more: <http://www.thenewstribune.com/2010/04/05/1135702/urban-waters-spirit-runs-deep.html#ixzz0vUZRHD00>



EDITORIALS

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Good news on health of bay, waterways

THE NEWS TRIBUNE

Last updated: April 27th, 2010 12:21 AM (PDT)

The latest reports on the health of Commencement Bay and Tacoma waterways offer at least two valuable lessons when it comes to the environment:

- It is possible to make significant progress even on sites so terribly polluted that they get on the federal Superfund list.
- And ongoing, aggressive prevention efforts are needed to keep a site from becoming polluted all over again.

The reports from the state Department of Ecology and the City of Tacoma are mostly positive, painting a picture of continuing improvements on most fronts while reminding us that turnaround efforts still have a long way to go.

In Commencement Bay, levels of some cancer-causing chemicals and such toxic metals as arsenic, lead, mercury and copper are lower. And researchers are finding healthier populations of the bay's version of the canary in the coal mine – the sediment-dwelling creatures that provide food for other marine life.

But the news isn't all good. Higher levels were found of phthalates, which are used in making plastics flexible and are all but ubiquitous in modern life, being found in everything from building materials and toys to detergents and pill coatings.

As for the city's Thea Foss and Wheeler-Osgood waterways, efforts to control stormwater runoff is having an "amazing" effect by reducing levels of contaminants, said Lorna Mauren, manager of the Public Works Department's surface water group, in an interview with The News Tribune's Mike Archbold. The city's had success tracing pollutants back to their source and preventing them from continuing to flow into the waterways.

Another tactic has paid off, too: The city cleaned out its stormwater drain system, removing sediment that can leach out when it rains. That's greatly reduced the levels of lead and other toxic chemicals that enter the waterways.

If the city weren't being aggressive with stormwater entering the Thea Foss Waterway, the state wouldn't be enjoying as much success with Commencement Bay. The health of the two are inextricably linked.

Doing a better job of controlling stormwater runoff throughout the region will be necessary if Puget Sound is to move from "recovering" to "healthy." It's the major challenge facing those charged with saving the Sound for future generations. It will require more emphasis on low-impact development, monitoring and runoff management at the state and local level.

Each of us can do our part, too, with simple things: like not dumping harmful liquids down storm drains and cutting down on the amount of fertilizer and pesticide we use in our yards (see box below). The challenge of cleaning up Puget Sound pollution is too big for anyone to sit on the sidelines.

[Learn more](#)

For more ideas on what individuals can do to decrease stormwater pollution, go to the Puget Sound Partnership's website at bit.ly/cLGtAU.



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TACOMA NORTH END/STADIUM

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Mystery debris falls on, flusters Tacoma's Stadium District

soot: Neighbors suspect vessels moored in bay

ADAM LYNN, STAFF WRITER

Last updated: September 18th, 2010 08:26 AM (PDT)

Residents of Tacoma's Stadium District awoke Friday to a reminder – some say a rude one – they live near a working waterfront.

A layer of oily soot coated their landscaping, decks and cars. It turned to a greasy smudge at the lightest touch.

Neighbors suspect the pollution spewed from the two 685-foot-long ships moored in Commencement Bay just downhill from their homes.

Crews have been working on the Cape Island and the Cape Intrepid – part of the U.S. Maritime Administration's Ready Reserve – for most of the week. The ships are moored along Ruston Way near Old Town.

Residents said the ships' huge engines began rumbling early in the week.

They emitted only noise until late Thursday or early Friday, said Carl Teitge, who lives in the 800 block of North Stadium Way. Some time overnight the soot fell, said Teitge, a former city planning commissioner.

"This stuff is nasty," he said as he pointed out the residue on his white sedan and red pickup. "I want these guys to explain to me how to clean this stuff up. I don't know what's in it."

Frank Linehan, a supervisor with the Maritime Administration, said his agency is investigating to see whether the soot came from one or both of the ships. If so, the Maritime Administration – a division of the U.S. Department of Transportation – will do what it can to make amends, Linehan said.

"We want to be good neighbors," he said.

Crews have been working on the ships' engines as part of a biannual maintenance and inspection program that ensures they are "mission ready," Linehan said.

The City of Tacoma dispatched two of its environmental experts to the area Friday to analyze the residue.

"We want to know what's going into our (sewer) system," said Shawn Madison of the city's Environmental Services office.

Linda Heaton, who lives in the 900 block of Stadium Way, said she called the mayor's office and state Department of Ecology officials, among others, to complain about the noise and soot.

"I get frustrated when there doesn't seem to be any oversight on these ships in my neighborhood," Heaton said. "I'm going to have to spend hours cleaning this stuff."

Stadium District residents have complained about the ships before and opposed plans to expand the number of ships moored near their homes. The Maritime Administration has kept ships moored in the same location for decades.

Heaton said she and her neighbors have worked with Maritime Administration officials in the past to address problems, including reducing the number of lights used to illuminate the ships at night.

Teitge said he is not against industrial uses but wonders whether the Ruston Way waterfront is the proper place for them as the city tries to beautify the area.

"Tacoma is changing," he said.

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THE NEWS TRIBUNE - Carl Teitge and wife Leanna Long awoke Friday to find their home and vehicles on Stadium Way coated with an oily soot that they suspect came from ships docked along Ruston Way. Teitge said crews had been working on the merchant vessels.

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DEAN J. KOEPFLER/STAFF PHOTOGRAPHER - A crew from the City of Tacoma Environmental Services department looks for samples Friday of an oily soot that coated homes, landscaping and vehicles in the Stadium Way neighborhood above Ruston Way. The Maritime Administration is investigating whether the substance came from ships moored in the bay.

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Richards Studio Collection, Tacoma Public Library, 253-591-5622, search.tacomapubliclibrary.org/images

This is an aerial southeastern view of the downtown Tacoma business district and portion of the industrial Tideflats that was taken in August of 1948. Two boats are approaching the 11th Street Bridge (now Murray Morgan Bridge), left center, as it extends over the City (now Thea Foss) Waterway. The two bridges pictured to the right of the Murray Morgan Bridge have since been removed. Prominent structures also include the 17-story, Art Deco-styled Medical Arts Building (now Tacoma Municipal Building) on Market St., the massive Washington Building and Puget Sound National Bank with its spire, both on Pacific Avenue.



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Mary Joyce Community Center gives Ruston a new outlook

DANNY SERNA; STAFF WRITER
Last updated: August 13th, 2010 12:24 PM (PDT)

Things are looking up for Ruston.

The town of roughly 765 residents, beset in recent years by political squabbles and financial struggles, has improved its outlook. And some residents point to this summer's opening of the Mary Joyce Community Center as a symbolic step.

The newly refurbished center was once the gymnasium for the Ruston School. The Tacoma School District shut down the school in the mid-1980s and turned it over to the town after serious campaigning by former Ruston Town Council member Mary Joyce.

The brick building at 5219 N. Shirley St., dwarfed by The Commencement condominium development next door, has started hosting Town Council meetings this summer.

Mayor Bruce Hopkins said he hopes Ruston residents will hold spaghetti feeds and other community gatherings there. It will host private events, as well; several weddings are already on track for August, he said.

Before the center opened June 5, Town Council meetings were held in a tiny room in Town Hall that "just wasn't conducive for anything," Hopkins said.

For Ruston residents, the act of creating this center strengthened the community. Work began a year ago, Hopkins said, and was driven by volunteer labor; the town spent \$10,000 on the project, Hopkins said.

Some work was already completed when Ruston took over last year. The gym had served as a sales gallery for The Commencement, a six-story condominium complex. The developers left behind the model apartment they had constructed inside the gym. The community center inherited the cabinetry and kitchen appliances.

Asarco, The Commencement and the Point Ruston development continue to occupy other rooms in the old schoolhouse.

The center's opening comes as the town on the doorstep of Point Defiance Park finds itself on an upswing, some residents say.

Karen Pickett, who runs the Ruston Home blog (rustonhome.blogspot.com), said that in the past six months the atmosphere in town has improved dramatically.

"We've grown past the petty fighting and the hatred of somebody who has a different opinion," she said. "We're able to talk more openly, even when we disagree. Now, it's a more civil atmosphere."

Pickett credits Hopkins for changing the mood. In the last year, though, he's had to boost more than just morale; last spring, the Town tapped nearly \$600,000 from its surplus property funds to bridge its budget deficit, and even placed a discussion of annexation on a Town Council agenda.

Since then, finances have improved. The town still has more than \$5 million in reserves, and Hopkins and the council have trimmed this year's deficit to \$139,000 in part by adding a utility tax and making town government more efficient.

A good deal of Ruston's financial future hinges on the success of a pair of large waterview projects, The Commencement and Point Ruston, but Hopkins said the town should be able to eliminate the deficit within the next three years even without the developments.

"The sentiment is and always has been that if we were able to be financially viable, there's no reason for

annexation," Hopkins said.



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PETER HALEY/STAFF PHOTOGRAPHER - The auditorium in the former Ruston School has become the Mary Joyce Community Center. It has an adjoining kitchen and Ruston City Council meetings are now held there.
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Tacoma Waterfront Association seeks Thea Foss Waterway home for seaplanes

A place to tie up: 'It will bring new life to our waterfront,' president says

JOHN GILLIE; STAFF WRITER
Last updated: August 27th, 2010 11:53 AM (PDT)

To Stan Selden, there's no doubt that a new seaplane float will attract operators who now lack any safe and easy place to tie up on the Tacoma waterfront.

Selden, a furniture store owner and president of the Tacoma Waterfront Association, says a first-class waterfront city needs a place where passengers can board seaplanes. He and the association have made it a crusade to get one built on Tacoma's waterfront.

A score of cities in Washington, including such smaller locales as Bellingham, Olympia and Renton – and a handful of island communities in the San Juans – have proper facilities for host seaplanes.

Tacoma does not.

The one designated seaplane base in Pierce County is on American Lake, south of Tacoma, but that base is far from business and population centers.

"We need a facility where seaplanes can tie up," Selden said Wednesday. "It will bring new life to our waterfront."

Tacoma once had a float that could be used for seaplane tie-ups on the Thea Foss Waterway near Johnny's Seafood, but that facility is no longer viable.

Selden said a Foss Waterway location makes sense both for tourists and for seaplane operators. A well-located dock, he said, would meet the technical requirements for seaplane use and would be within easy walking distance of such Tacoma attractions as the Museum of Glass, the Washington History Museum, Tacoma Art Museum, the Tacoma Dome and the upcoming Lemay Automobile Museum.

Building a seaplane facility isn't a huge project. Any bit of sheltered water can be the runway, but not just any boat dock can serve as seaplane tie-up.

Eric Johnson, construction project manager for the state Department of Transportation's aviation division, said seaplane floats have special requirements.

A seaplane's wings keep it from approaching docks tied to pilings that protrude from the water. And the dock's sides must be specially designed to keep them from damaging the planes' large floats.

Tim Brooks, vice president of operations for Kenmore Air, one of the country's largest commercial seaplane airlines, said he believes there is demand for Tacoma flights – not on a Seattle or Victoria scale, but a demand nonetheless.

The airline has operated some charter flights from Tacoma in the past, but the means of transferring passengers from land to the plane have been makeshift, he said. In many cases, the airline has used boats

to transfer passengers from land to plane and back.

"Those just aren't satisfactory," he said.

Brooks said he thinks a Foss Waterway location would fit seaplane needs both for commercial operators and for private seaplane pilots with their own aircraft.

A float site south of the Murray Morgan Bridge on the waterway would be closer to Tacoma attractions but would involve more taxiing for the seaplane pilots to a less-congested area to take off.

Selden has suggested a site nearer the mouth of the waterway, near the Dock Building.

The waterway association is working with the Thea Foss Waterway Development Authority to get the project moving.

Su Dowie, acting authority director, said she's researching the possibilities of winning grants to finance a seaplane float construction project. Some grants are potentially available through the state Department of Transportation.

"This project is definitely on our radar screen," she said.

Selden said he thinks a volunteer work crew could create a suitable facility in a few days at a low cost.

But Dowie said building any kind of new structure on the water can be complicated. The structure would need city shoreline permits and would have to pass muster with the Army Corps of Engineers and a handful of other agencies.

The mouth of the waterway can expose floating structures there to rough wave action, she said, so the structure would have to be properly engineered to withstand the pounding from wind-driven waves.

And siting and building any facility such as a seaplane float will necessarily involve public hearings to take residents' views about the idea.

Some residents along the Foss might find the noise objectionable.

Not developer Grace Pleasants, who rebuilt the old Albers Mill at the south end of the waterway for residential use.

Pleasants, who comes from Alaska, has her seaplane pilot's license.

"Noise? It will be nothing compared with the train tracks in our backyard," she said.

Selden said the association thinks the float should be installed as soon as possible.

"We'd like to see one on the Foss, at the Old Town Dock, in Gig Harbor and even at Chambers Bay before the U.S. Open," he said. "It's a necessity for a lively waterfront."

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DREW PERINE/STAFF PHOTOGRAPHER - Stan Selden, president of the Tacoma Waterfront Association, is promoting construction of a new floating dock extension to accommodate seaplanes on the north end of the Thea Foss Waterway.

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EDITORIALS

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Stadium Bowl – still breathtaking after 100 years

THE NEWS TRIBUNE

Last updated: September 17th, 2010 12:28 AM (PDT)

"I know of nothing like it, nothing on this side of the water, and nothing abroad. While I had heard of your Stadium, I had no idea of what an extraordinary feature of your municipal life it is."

– Teddy Roosevelt, 1911

Is there a more beautiful, more historic high school football field in the country than Stadium Bowl?

If there is, we haven't seen or heard of it.

Stadium Bowl, with its spectacular outlook over Commencement Bay and its view of the Stadium High School "castle," has hosted presidential visits, big sporting events and community celebrations. It was there that Babe Ruth put on a batting exhibition, John Philip Sousa and his band played to their largest seated audience ever, and a young Heath Ledger sang and danced while filming "10 Things I Hate About You."

The iconic Tacoma landmark is celebrating its centennial today and Saturday with events ranging from a food drive (organizers hope to set a Guinness World Record for most food collected in a 24-hour period) and football game to an old-fashioned All Community Program.

Getting in and out of the steep bowl can be a challenge, but it's worth it. After all, Stadium Bowl has been a challenge from the very beginning.

It came about because the Tacoma community decided it needed a stadium in the early years of the 20th century. Residents came up with \$50,000 through a variety of inventive fund-raising schemes, and the school district chipped in another \$100,000. In 1910, Tacoma Stadium opened, having been built for \$160,000 (the equivalent of \$3.6 million in inflation-adjusted dollars). It was the biggest such facility west of the Mississippi River.

Sure, Stadium Bowl has had its problems – generally ones in the "acts of God" category related to the hydrological fact that water inexorably flows downhill. It's spent nearly 20 years shut down for various repairs after damage by earthquakes (1949 and 1965), sewer line rupture (1932) and a stormwater line overwhelmed by heavy rain (1985).

But the bowl endures – and with a little luck will see another century of providing invigorating stair-climbing exercise and the most astonishingly scenic place to play high school sports.



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ENVIRONMENT NEWS

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projects ▶▶

Millions in grants go to Puget Sound science

ROB CARSON; STAFF WRITER

Last updated: September 4th, 2010 12:22 AM (PDT)

Efforts to restore the health of Puget Sound have gotten another big boost from the U.S. Environmental Protection Agency, with the announcement of nearly \$13 million in grants – specifically to bolster Puget Sound science.

Recipients of all the grants have not yet been made public. U.S. Rep. Norm Dicks, D-Belfair, will join EPA officials Wednesday in University Place for the formal announcement.

Insiders said about \$4 million of the money will go to the collaborative research institute formed by the University of Washington Tacoma and the Puget Sound Partnership, located at Tacoma's Center for Urban Waters.

The state Department of Health also is among the apparent winners, with a grant for studies in Cormorant Passage in South Puget Sound.

According to the EPA, the grant will pay for a shellfish survey and a pollution evaluation designed to identify beaches that potentially could be opened for shellfish harvest.


Cormorant Passage is between the mainland and Ketron Island, southwest of Steilacoom.

The latest round of federal grant awards follows the July 6 announcement of \$30 million in EPA grants for Puget Sound.

That grant money is helping to pay for 36 Puget Sound restoration and protection projects, from Bellingham to Olympia.



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LOCAL NEWS

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Summer washes away with rain-drenched end

Rainy, cool: 'The worst summer for 3 decades'

STACEY MULICK; STAFF WRITER

Last updated: September 21st, 2010 01:54 PM (PDT)

Summer fizzled a long time ago, and now it's coming to a rain-drenched end.

More rainfall has been recorded at Sea-Tac Airport over the past four days (3.23 inches Thursday through Sunday) than the normal monthly average of 1.63 inches for September, the National Weather Service said Monday.

Right now, this September is sitting at fourth among the all-time wettest Septembers recorded at Sea-Tac Airport and in Olympia.

Through Sunday, 4.10 inches of rain had fallen at Sea-Tac. The wettest September on record was in 1978 when 5.95 inches worth of rain drops fell. At the Olympia Airport, 4.95 inches of rain had been collected through Sunday. The record is 7.95 inches, also set in 1978.

And we still have 10 days to go.

"We've had an accelerated fall pattern," said Dennis D'Amico, a meteorologist in the Weather Service's Seattle office. "The storms have been stronger, wetter and coming in faster than usual."

The rain showers are expected to stop today and most of Wednesday. More rain is expected Wednesday night, however, to bring a drizzly end to summer.

Local weather guru Cliff Mass reported on his blog that so far in 2010 the Puget Sound region has recorded fewer 70-degree days (55) than normal, which is 72.

"Yes, the worst summer for three decades," Mass, a University of Washington professor of meteorology, wrote last week. "No one younger than 35 can remember anything worse!"

Still, September hasn't been chilly. Highs have been in the 60s, D'Amico said.

And for what it's worth, August was dry, D'Amico said. (It's normally the driest month of the year.) But the temperatures were off. Several days started off cloudy and, when the clouds disappeared, temperatures didn't soar.

As for summer itself, we had two heat waves – one in July and one in August.

"We had a short summer in some sense," D'Amico said.

And what about the first weekend of autumn?

The forecast has been fluctuating, D'Amico said. It will either be a nice Saturday or a downpour.

"Right now," he said, "it's a little bit of a guessing game."

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staff photographer - A trip to the store to purchase cheap rain gear proved wise for Katherine Siverts, right, of Aberdeen, who did the rainy Puyallup Fair with her son, Brand, 12, left, and her mom, Bonney Milan, of New York on Monday.

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RECORD RAINFALL

(For September)

1.49 inches of rain fell Friday, surpassing the previous record for Sept. 17 of 1.26 inches set in 1969.

0.94 inches of rain fell from 11 p.m. Friday to 1 a.m. Saturday, blowing past the previous two-hour record of 0.60 set Sept. 22, 1978.

0.78 inches of rain fell Saturday, surpassing the previous record for Sept. 18 of 0.57 inches set in 1987.

0.63 inches of rain fell from 11 p.m. to midnight Friday, surpassing the previous one-hour record of 0.54 set Sept. 8, 1979.

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Read more: <http://www.thenewstribune.com/2010/09/21/1349993/summer-washes-away.html#ixzz1A6aRvkpg>

17th ANNUAL Tacoma Maritime Fest

Thema Foss Park

Saturday, August 28

Sunday, August 29

10:00am - 6:00pm

All for
FREE!



Festival Highlights

- Hydro plan runs
- Ride an army landing craft
- Dragon boat races
- Cruise the Port
- Meet a pirate
- Kids boat building

FREE Parking / Shuttle via Light Link Rail

www.maritimefest.org



TACOMA: Where's protection for residents, environment?

R. A. Rose, Tacoma

Published September 21, 2010

The oily airborne events of this past Friday from the Maritime Administration ships isn't their first, nor will it be their last if left unchecked.

I have seen and smelled exhaust coming from their stacks into my windows and later have seen the same exhaust trapped in the Garfield Park, tennis club and Annie Wright School area. I have seen exhaust plumes wafting at tree level into Old Town and toward Stadium High School.

I have seen scraping and sand-blasting without tenting to prevent paint particles from entering the air or bay that a private boat owner couldn't dare get away with doing. I have seen a worker hose paint dust and chips overboard into Commencement Bay.

All these events were reported to local, state and federal agencies, but environmental atrocities continue.

Is there a "get-of-jail-free card" for the dock owner, maintenance contractor and MarAd because the ships fall into a military classification?

The question, as a few suggest, isn't whether the residents should have known these activities occurred prior to moving to the neighborhood, as though polluting were permissible. It is a question whether the City of Tacoma, the Department of Ecology, the Department of Natural Resources, the Puget Sound Clean Air Agency, the Environmental Protection Agency and the Tacoma-Pierce County Health Department actually protect Tacoma residents, park users, students and marine life?

When will someone stand up to the federal government and say "we are mad as hell and won't take your pollution anymore"?



TACOMA DOWNTOWN/FOSS

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What caused costly leak in Tacoma's Urban Waters building?

mystery: What broke has been determined; the question is why

ROB CARSON; STAFF WRITER
Last updated: December 9th, 2010 06:22 AM (PST)

Tacoma's new Center for Urban Waters cost \$38 million and won awards and high praise for design and engineering.

So why did it flood after the first winter storm?

Finding the answer has turned into a high stakes detective story.

Ever since the flooding early Thanksgiving morning, the building's architect, its prime contractor, subcontractors, equipment manufacturers and property manager, plus their various insurance companies, have been sorting through the evidence.

None wants to get stuck with the bill.

"We're not pointing fingers right now," said Dan Seng, an architect at the Perkins + Will firm and the Urban Waters project manager. "We're currently in the process of assessing the question, trying to figure out why it broke. We're all working together to find out what the problems are."

The total damage has not yet been tallied, but it will be several hundred thousand dollars at least, said Geoffrey Smyth, manager of the City of Tacoma's Environmental Services Division.

The city itself is not at risk, Smyth said, because it has insurance that covers its losses.

The morning of the flooding temperatures dropped into the low teens, by far the coldest it had been since the building at 326 E. D St., opened last summer.

Water flowed from the roof through all three floors of the building, soaking wallboard, ceiling tiles, insulation, carpeting and expensive laboratory equipment on its way down.

In the City of Tacoma's lab on the second floor, three gas chromatograph/mass spectrometers, which are used to identify chemicals and sell for about \$125,000 apiece, were soaked and ruined.

"It was like somebody was just standing there holding a hose over them," said Christopher Getchell, the city's laboratory manager.

Circuit boards inside the machines are covered in furry green corrosion. Black sooty splotches mark places where fires broke out inside the cases.

There's no disagreement about what broke on Thanksgiving morning: It was a bolted flange on a 2 1/2-inch cold water line beneath the rooftop air-handling unit, where air blows over heated or chilled coils to heat and cool the building.

Beyond that, things get murky.

While it make sense to think the flange broke because water inside the pipe froze, even that has not yet been definitely established, Seng said.

"We're all kind of guessing that's the case, because of the timing, but it's too early to know for sure," he said.

Critics who roll their eyes at the building's innovative – and expensive – heating and cooling system have been quick to blame it for the break. At this point, that doesn't appear to have been the case, Seng said.

"We're not jumping to any conclusions," he said. "We're gathering information right now, from the contractor

and subcontractors.”

The building is heated and cooled by a “geoexchange system” that circulates water through 84 wells drilled on the site, some as deep as 282 feet.

Because water at that depth stays at a relatively constant temperature, heat pumps can concentrate thermal energy from the water and use it either to heat the building in winter or cool it in the summer, saving money that would otherwise need to be used for a energy-sucking boiler and chiller.

The geoexchange system pipes aren't what broke, Seng said. The air-handler configuration where the break occurred is commonly used on large commercial buildings throughout the Northwest.

The company contracted by the city to manage the building – GVA Kidder Mathews – hired the Kent-based firm Washington Water Damage and Cleaning Services to do the mop up work.

Workers have been on the job since shortly after the damage was discovered, working mainly at night to minimize the impact on tenants, said Melinda Martinez, a senior property manager at GVA Kidder.




With regard to who might end up being on the hook for damages, Martinez declined comment.

“There are a lot of aspects to this,” she said. “We prefer not to discuss it at this point.”

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LOCAL NEWS

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Fall had it all, but winter offers rain, rain and rain

WEATHER: As a chaotic autumn ends, forecast looks to be wet for a while

KRIS SHERMAN

Last updated: December 21st, 2010 08:53 AM (PST)

Wind. Rain. Snow. Hail.

If that was just fall, what can South Sound expect from winter, which officially arrives today?

Well, for starters, don't be dreaming of a white Christmas.

Think wet Christmas instead.

And forget green and red. Think green and brown, National Weather Service meteorologist Johnny Burg said Monday.

Those would be the shades of conifers mixed with mud.

The weather phenomenon known as La Niña is expected to douse us with even more precipitation as we move into late December, January and February, Burg said.

Some memorable dates and statistics from fall:

RAIN

Pineapple juice: Warm, moist, tropical air drenched the South Sound with more than 3.5 inches of rain in some areas over Dec. 11-12. Rivers swelled, but the area dodged major flooding. Amtrak service was suspended between Seattle and Portland. Snow piled up in the mountains.

Wetter than normal? Absolutely. The Seattle-Tacoma-Olympia area is outpacing normal annual rainfall totals – and there are still 10 days to go in December. Sea-Tac Airport recorded about 10 inches over normal average annual rainfall; Olympia is just over 5.5 inches higher than normal.

WIND

A surprise lashing: Nobody saw it coming. But we saw what it did. A huge windstorm blew through Puget Sound overnight and into the morning Nov. 15-16. The fierceness surprised forecasters. Gusts of more than 50 mph were recorded in the South Sound, throwing trees into cars and onto houses, ripping down power lines and depriving thousands of homes and businesses of electricity. Power outages disrupted schedules or closed schools from Federal Way to Lacey.

Another blow: More winds whipped through the area last week, again knocking out power. In one case two classic cars – a 1968 Dodge Dart and a 1972 Dodge Challenger – were crushed by a falling 50-foot pine tree at the Parkland home of James Crabbe. "It was as bad as being in a hurricane," Crabbe said.

And another: Wind tore through the Enumclaw Plateau last weekend, leaving power poles lying in roadways like a crazy game of Pick Up Stix.

SNOW

A white Thanksgiving week: More wind blew through the South Sound Nov. 22, this time bringing snow that continued to fall through the day Nov. 23, slicking roads, closing schools and snarling traffic along Interstate 5. Up to 6 inches fell in some areas. Twelve people were injured when a Pierce Transit bus slid down a steep hill and overturned near the University of Washington Tacoma. Emergency cold shelters opened around the Sound in the following days as frigid temperatures hung on.

A record low: 14 degrees at Sea-Tac on Nov. 24.

WHAT'S NEXT

It's a La Niña winter, and that usually means below-normal temperatures and above-normal precipitation, Burg said. December so far has been a bit of an anomaly. That Pineapple Express actually brought in warm air that boosted the average temperature by about 3.3 degrees at Sea-Tac. But don't count on warm days. We're looking at highs in the 40s and lows in the 30s in the next week or so, the Weather Service said. And then we start getting into the heart of winter.

Keep your muck boots, snowshoes, flashlights and heavy coats handy.

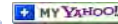
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DREW PERINE/STAFF PHOTOGRAPHER FILE - WATER WORLD: Cars spray water on South Mildred Street on Nov. 1. This year's rainfall totaled 45.21 inches through Sunday, 10 inches above normal.
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JOE BARRENTINE/STAFF PHOTOGRAPHER FILE - WINDY CITY: David Miller inspects a tree downed at Tacoma's Jefferson Park by a Nov. 15 storm that brought 50 mph wind gusts and knocked out power.
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JANET JENSEN/STAFF PHOTOGRAPHER FILE - THE SNOWS OF AUTUMN: A woman waits for a bus in downtown Tacoma during heavy snow Nov. 22. Two days later a record low temperature of 14 degrees was recorded at Sea-Tac Airport. Winter officially begins today.

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LOCAL NEWS

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Tacoma's Center for Urban Waters springs a leak

aftermath: Urban Waters building one of many to suffer with the thaw

KRIS SHERMAN; STAFF WRITER

Last updated: November 26th, 2010 11:54 AM (PST)

Tacoma's newest showcase building – the Center for Urban Waters – sprang a leak Thursday.

And it was far from the only one.

Tacoma fire officials didn't have figures, but Battalion 2 Chief Ben Flesher said anecdotally he knew department crews were busy Thursday responding around the city to calls of broken pipes.

Tacoma area emergency dispatchers were heard on radio scanners sending crews out to reports of leaks at homes, businesses and churches throughout the day.

This week's frigid weather across Puget Sound caused water to freeze in some pipes. That can bring about cracks or breaks that won't be known until temperatures climb and the water inside thaws.

At the Center for Urban Waters, water flowed through the ceiling from a broken pipe near the roof, flooding portions of laboratory spaces Thursday.

Long into Thanksgiving afternoon, crews assessed damage and mopped up in laboratories and other spaces on three floors of the building on the east side of the Thea Foss Waterway.

Across the channel at 1515 Dock St., there were leaky pipe problems at Esplanade Tacoma, a new nine-story condominium building. Water seeped from the seventh floor all the way to the first, according to tenants and cleanup crews, though few details were available.

Workers pulled up carpet and padding and carried it out of the building.

Crews from Superior Cleaning & Restoration packed up their tools about 4 p.m.

No information was available Thursday evening on what caused the leaks at either building and whether they were related to this week's snowstorm and subsequent deep freeze.

Crews were assessing the situation at the Center for Urban Waters, a representative of property management company GVA Kidder Mathews said. A call from The News Tribune to a management number for the Esplanade was not returned.

The 51,000-square-foot Urban Waters structure opened last spring. Its construction and financing cost totaled \$38 million and it was built to exacting environmental standards set by the U.S. Green Building Council for Leadership in Energy and Environmental Design.

It's home to the science and engineering laboratories of the City of Tacoma's Public Works Department, which assesses the health of the waterway and works on cleanup.

The Puget Sound Partnership, a state agency also focused on the health of Puget Sound; and University of Washington Tacoma marine research center also lease space from building owner Lorig Associates of Seattle.

There was no estimate of damages to the building or its contents Thursday, but some of the labs contain pieces of scientific equipment that can individually run into six figures.

As soon as fire crews arrived, they began "moving high-value equipment" away from dripping areas, Flesher said. About 13 firefighters on three ladder trucks and an engine company responded to the call for help, he added.

The leak might not have been detected as soon as it was if not for an employee who entered the building on

Thanksgiving Day to pick up a personal item, said Geoffrey Smyth, the city's division manager for Environmental Services.

The employee "noticed a massive leak" and called it in, Smyth said.

Water apparently began flowing from a pipe between the third floor and the roof, cascading into the city's Metals Prep/Analysis lab in Room 327.

It also made its way into the city's Organics Prep/Extraction lab in Room 230 and Semi-Volatiles Analysis space in Room 231 on the second floor and below that into locker and storage spaces on the first floor.

Even after the water was shut off, there was a steady drip-drip-drip through holes in the ceiling into carefully positioned trash and garbage cans to catch it. In one lab, crumbling ceiling tiles lay on a work space. In another, the ceiling tiles were so bowed with water it appeared they would break through at any moment.

Desks and work tables, computers and lab equipment was pushed against a window in the Semi-Volatiles Analysis lab. There were similar scenes in other spaces.

Water was 1 to 1 1/2 inches deep in some areas when Smyth arrived, he said.

The flow appeared to go straight down through the floors, and though it seeped out of labs and onto some carpeted office space, the damage appeared limited to one swath through the building.

The building's electrical systems, computer servers and phone systems all appeared to be OK, Smyth said.

Though today was to be a day off for city staff members, many workers will be in the building to assess and catalog damage to equipment and begin their part of the cleanup process, he added.

Thursday afternoon, custodians from ServiceMaster and crews from a water damage restoration contractor were trading turkey for tools and settling into work.

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PHOTOS BY DEAN J. KOEPFLER/STAFF PHOTOGRAPHER - Lt. Pete Mathews, right, holds the door for Tacoma firefighter Wayne Williamson on Thursday as he empties a backpack vacuum used to remove water from the new Center for Urban Waters building at 326 E. D St. in Tacoma. Water caused damage to labs and equipment in the building.

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DEAN J. KOEPFLER/STAFF PHOTOGRAPHER - Robert Escamilla of Superior Cleaning & Restoration releases water from a garbage bag carrying wet carpet padding stripped from the Esplanade Luxury Condominiums on Tacoma's Foss Waterway. Leaking water caused damage to a undetermined number of units from the seventh floor to the parking garage. A thaw following the recent frigid weather caused many water-related calls to the Tacoma Fire Department on Thursday.

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DEAN J. KOEPFLER/STAFF PHOTOGRAPHER - Geoffrey Smyth, manager of environmental services for the City of Tacoma, looks up into water leaking from the ceiling of a thirdfloor lab at the Center for Urban Waters building.

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OUTDOORS

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Beaches get good grades for water quality

report card: Group finds problems at 10 locations

STAFF REPORT

Last updated: October 17th, 2010 12:34 AM (PDT)

Beaches in Washington earned a grade of A or B in 93 percent of locations, according to the End of Summer Beach Report Card released by Heal the Bay, a California coastal environmental group.

Only 10 of the 141 monitoring locations in Washington received fair to poor water quality grades with only three locations receiving F grades: Oak Harbor City Beach Park (west), Freeland County Park Holmes Harbor (east) and Pomeroy Park's Manchester Beach (north).

The report card is based on the monitoring conducted by local health agencies and dischargers. Water samples are analyzed for bacteria that indicate pollution from numerous sources, including fecal waste, according to a news release. The better the grade a beach receives, the lower the risk of illness to beach users.

Heal the Bay officials said the report is not designed to measure the amount of trash or toxins found at beaches.

This was the fourth summer California beaches were graded, with 92 percent of the nearly 500 sites receiving A or B grades.

In Oregon, only 13 beaches were monitored frequently enough (at least weekly) to be considered for this report.

All of Oregon's 13 regularly monitored beaches received A grades.

Heal the Bay's Beach report card website – beachreportcard.org – is updated every Friday with weekly grades for all sampled locations. You can read more about the beach report card at www.healththebay.org.

The accompanying box contains a look at the most recent grades for beaches in Pierce and Thurston counties. (NS indicates no samples were taken at that location)

Beach report card

PIERCE COUNTY BEACHES

Dash Point County Park-east: No Samples

Dash Point County Park-east of pier: NS

Dash Point County Park-west of pier: NS

Owens Beach-Point Defiance Park-mid: A+

Owens Beach-Point Defiance Park-north: A+

Owens Beach-Point Defiance Park-south: A+

Penrose Point State Park-mid: NS

Penrose Point State Park-east: NS

Penrose Point State Park-west: NS

Purdy Sandspit County Park-mid: A

Purdy Sandspit County Park-east: C

Purdy Sandspit County Park-west: A+

Ruston Way-mid: A+

Ruston Way-north: A+

Ruston Way-south: A+

Solo Point boat launch-mid: A+

Solo Point boat launch-north: A+

Solo Point boat launch-south: A+

Sunnyside Beach Park-mid: NS

Sunnyside Beach Park-north: NS

Sunnyside Beach Park-south: NS

Titlow Park-mid: A

Titlow Park-north: A

Titlow Park-south: A+

THURSTON COUNTY BEACHES

Burfoot County Park-mid: A

Burfoot County Park-north: A+

Burfoot County Park-south: A+



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Elected officials take cleaner-water tour

15,000 Jobs, \$480 million: Governor, others visit several Puget Sound sites

JOHN DODGE; STAFF WRITER

Last updated: October 16th, 2010 01:20 PM (PDT)

Gov. Chris Gregoire renewed her pledge to work for a clean, healthy Puget Sound by 2020 during a five-stop, three-county tour of South Sound on Friday.

Joined by U.S. Congressman Norm Dicks, D-Belfair; his son, Puget Sound Partnership Director David Dicks; state Department of Ecology Director Ted Sturdevant and others, the governor visited a wastewater-treatment plant under construction in Belfair, shellfish-growing and habitat-protection projects in Oakland Bay near Shelton, the Nisqually Delta estuary-restoration project and projects to clean up Commencement Bay in Tacoma.

Sounding a mixed message of jobs creation and environmental protection, the governor said cleanup and restoration work in Puget Sound has included 600 projects, 15,000 jobs and \$480 million in federal, state and local funding since 2008.

"We are in the midst of the greatest recession since the Great Depression," she said. "But we are not going to take a timeout in our efforts to recover Puget Sound and Hood Canal."

The tour kicked off in Belfair, where an advanced wastewater-treatment plant is under construction to initially replace some 200 on-site septic systems in Mason County's largest unincorporated community.

The \$44 million project scheduled for completion next year is designed in part to reduce nutrient-loading at the southern end of Hood Canal.

"Getting the nitrogen out of the water is key at this end of the canal," David Dicks said. "It's a very sensitive place."

The next stop on the tour was Twin Rivers Ranch at the northern tip of Oakland Bay. It's the most productive Manila clam-growing bay in the nation, according to commercial shellfish growers.

Driving southeast toward Shelton, the contingent stopped at an oyster and clam nursery owned by Taylor Shellfish Farms.

The nursery served as a backdrop as Shelton city officials talked about nearly \$75 million in water and sewer projects designed partly to improve and protect water quality in the bay.

Many of the projects were made possible by federal stimulus money, Shelton Commissioner of Public Works Dawn Pannell said.

"When I hear people say the federal stimulus spending isn't helping the economy, I get a little mad," she said. "It's made a huge difference here in Shelton."


At the same time, Mason County officials, the Squaxin Island tribe, shellfish companies, and state and federal agencies have put a big dent in an explosion of bacterial contamination that in 2006 threatened to shut down shellfish harvesting in the bay, said John Konovsky, environmental program manager for the tribe.

Actions to fence livestock out of streams and repair and replace failing on-site septic systems in the watershed have made a big difference, he said.

"We have, at least for the moment, tamed the bacteria in Oakland Bay," Konovsky said.



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PETER HALEY/STAFF PHOTOGRAPHER - Rep. Norm Dicks and Gov. Chris Gregoire, from left, listen to Eric Erler, Capitol Land Trust director, talk Friday about acquisitions of land for preservation around Oakland Bay. The officials were part of a tour of Puget Sound projects to improve water quality and the environment using state, local and federal funds.

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BUSINESS

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Tacoma condominiums selling, sales manager says

THE NEWS TRIBUNE

Last updated: October 13th, 2010 08:49 AM (PDT)

A nine-story waterfront condominium purchased in a foreclosure sale a year ago on the Pierce County Courthouse plaza is seeing revived interest from buyers, the building's sales manager says.

Daniel Poach, community sales manager for Windermere Solution Partners Northwest, said 70-some units in the 162-unit building on the west side of downtown Tacoma's Thea Foss Waterway have been sold or are in the closing process.

When the \$80 million, nine-story building was sold in a foreclosure auction last year, just 11 of the units had been sold.

"We're making about 10 to 13 sales a month in the last three months," Poach said Tuesday.

IStar Financial, principal lender on the project, bought the building for \$7 million in that auction to protect its \$48-million loan investment.

Poach said some 250 potential buyers showed up last weekend for an open house. They were lured in part by new financing deals as low as 2.6 percent for qualified buyers on a five-year, adjustable rate note.

Thirty-year fixed rate mortgages were available as low as 3.7 percent, he said.

The bank that owns much of the building at 1515 Dock St. has reduced some unit prices by as much as 35 percent.

Prices in the building range from \$199,000 for a 725-square-foot unit to a \$600,000 for 2,000-square-foot units as large as a stand-alone home.

When the building initially opened months before the foreclosure, prices ranged from \$278,000 to \$989,000.

John Gillie, staff writer



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Molten liquid is being poured into molds at Fick Foundry, 1005 East D Street, in October of 1969. In business since 1924, Fick Foundry were producers of "quality static and centrifugal castings in most ferrous metals, and close tolerance aluminum centrifugal castings." The company had suffered through three major fires and was rebuilt each time. It would finally close in the late 1980's.

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 Regional stewardship
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Proposed new federal pollution rules might force more dioxin cleanups

EPA: Sites could be affected that were deemed safe long ago

JOHN FLESHER; THE ASSOCIATED PRESS

Last updated: November 1st, 2010 12:22 AM (PDT)

MIDLAND, Mich. – The government has spent many millions of dollars in recent decades cleaning up sites contaminated with dioxin and, in extreme cases, relocating residents of entire neighborhoods tainted by the toxin.

But tough new pollution standards proposed by the Obama administration could require additional dioxin cleanups at scores of abandoned factories, military bases, landfills and other locations declared safe years ago, officials say.

If the guidelines receive final approval, federal and state officials will examine sites with known dioxin contamination to identify those needing work and what the work will cost. Among those expected to be reviewed are notorious places such as the former village of Times Beach, Mo., where about 2,000 people were relocated in the 1980s after dioxin-laced waste oil was sprayed on roads to control dust.

The Environmental Protection Agency plan has escalated a decades-long debate over the danger of dioxin, a family of chemical byproducts from industries such as pesticide and herbicide production, waste incineration and smelting. One form of dioxin was in Agent Orange, the defoliant used by the U.S. during the Vietnam War.

The EPA is expected to make a final decision this fall on the new standards. But congressional critics and chemical companies say the agency is acting hastily and should wait until it completes a reassessment of dioxin's health effects in the coming months.

"They're proposing these sweeping changes to regulations without giving us an idea of how many sites will be affected, how many homes will be affected, what the economic impact would be," said Rep. Dave Camp, a Republican whose Michigan district includes a 50-mile-long watershed polluted with dioxin from a Dow Chemical Co. plant.

EPA officials say they want to move ahead because they are convinced dioxin is hazardous at lower concentrations than previously thought. If necessary, they say, the standards can be adjusted later.

"We're driven by the need to protect against excessive risk of both cancer and non-cancer health concerns," said Mathy Stanislaus, EPA assistant administrator for solid waste and emergency response. "We believe (the current standards) are not sufficiently protective and more stringent numbers are needed."

The Associated Press obtained an EPA list of 92 current and former Superfund locations where records show that dioxin is among the soil contaminants, making them candidates for a review under the new standards.

The sites include Cherry Point Marine Air Station in North Carolina, Camp Pendleton Marine Base in California and the former Rocky Flats nuclear weapons plant in Colorado.

Also listed is an abandoned wood treatment plant in Pensacola, Fla., where more than 350 households had to be relocated in the 1990s.

The notorious Love Canal neighborhood of Niagara Falls, N.Y., where hundreds of families were uprooted, also may rate another look although it was declared clean in 2004 after dioxin and other chemicals were removed or covered, the EPA says.

The EPA also estimates that up to 150 hazardous waste sites not on the Superfund list may have dioxin contamination and will need reviewing.

Since 1998, the agency has regarded dioxin soil concentrations of less than 1,000 parts per trillion (ppt) as safe for residential areas. For commercial and industrial zones, 5,000 ppt to 20,000 ppt has been considered safe.

The proposed revisions would drop the safe levels to a fraction as much – 72 ppt for residential areas and 950 ppt for commercial and industrial sites.



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BUSINESS

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Tacoma might check your sewer line

Tacoma: Council considers inspection program as part of effort to protect bay

KATHLEEN COOPER, STAFF WRITER

Last updated: October 12th, 2010 06:32 AM (PDT)

Tacoma homeowners might not be able to ignore their aging private sewer lines much longer.

The city is considering a home-by-home inspection program as part of a larger effort to stop extra water from getting into the public sewer, which sometimes overwhelms the treatment system and results in sewage flowing into Commencement Bay.

The idea is the latest from a three-year process that resulted in a new city ordinance requiring inspections of private sewer connections to the public main when a home is sold or remodeled. That law was to have gone into effect in July. The City Council has twice postponed it, most recently until Dec. 1, first over concerns that the requirement unnecessarily burdens home sales and also as a new council came aboard.

"This whole ordinance was crafted before this council started," Councilman David Boe said last week. He and Ryan Mello, who were appointed in January, both said the water quality issue can't be solved by inspections alone.

Mello said he is working on an alternative to a point-of-sale inspection, which he says was unclear and didn't solve the underlying pollution problem.

"I just didn't understand how we were going to say, 'Every single house had to be inspected.' And (inspectors) say, 'Hey, there's a problem. You don't have to fix it but there's a problem,'" Mello said last week. "If you were a lender, would you lend in that situation? And, it doesn't fix the problem."

Mello's approach is three-pronged. Instead of requiring inspection at the time of sale or remodel, require a notice-to-buyer provision that the home has old infrastructure and that side sewers have been known to fail. Second, the city could start a revolving low-interest loan fund as part of the wastewater utility so that homeowners can finance repairs by paying a rate surcharge.

"If your sidewalk will trip people, we have a program where you can apply for a low-interest loan to fix your sidewalk when we tell you to," Mello said. Finding a way to pay for repairs is "going to be the key to making this bearable and cost-effective to ratepayers."

Finally, the city would start a 10- to 20-year inspection program of every side sewer in Tacoma – affecting about 50,000 homeowners – starting in the neighborhoods where the problem is the worst. While the city is making repairs on the public sewer in those areas, homeowners could hire the contractors at a reduced rate and pay it off over time, through the utility bill.

What would such an approach cost? City staff is researching that now, said Mike Slevin, an assistant director for public works.

"We won't know what the costs are until we start implementing. We have put in this year's rate cycle, should it be approved, generally about \$1 million a year over the next five years to implement revolving fund and inspections" starting in 2011, he said.

"Nothing is off the table at this time in regards to how we would accomplish this," Slevin said. "The viewpoint from staff is that this is a serious issue."

Excess water comes into the sewer two ways: inflow, which is an improper direct connection like a basement sump pump; or infiltration, when groundwater leaks through broken pipes.

During a dry winter, the city may have no sewage overflows. During a wet one, overflows can happen two or three times. Less severe storms can cause basement backups, but the heavier ones overwhelm the city's pump stations, pipes and treatment plants.

The city spent \$95 million to upgrade the main treatment plant in 2005, mostly to be able to treat more water. That bought time, engineers said, to fix the larger problem. Tacoma has spent about \$366,000 on studies during the past 10 years to confirm that aging or improperly connected side sewers let rainwater into the city's closed system.

If inflow and infiltration keeps forcing sewage into the bay, federal regulators could order the city to make expensive improvements quickly. Many side sewer inspection programs in the U.S. are a result of such an order. City engineers say that over time, costs would go down because the city won't be building more equipment and treating water that shouldn't be in the sewer anyway.

The delays in starting inspections have left some area businesses in the lurch. They hired staff and bought equipment to meet the new law's requirements. Inspections generally would cost \$300 to \$400, but repairs run into the thousands.

"It's obviously hurt us in a financial way," said Terry Reynolds of SewerCam, a two-person operation formed in reaction to the city's initial inspection law. Reynolds said the business has spent \$30,000-\$40,000 so far on equipment, and he is frustrated that the city went through a long public process and keeps putting it off. "Whether they do it or not, I just wish they'd make a decision one way or the other."

The council also is working through major budget issues, though both Boe and Mello said this issue will be addressed before the Dec. 1 date. Mello hopes to phase in whatever process the council agrees on.

"There's a point where you can't stop the train just because you know you have budget issues," Boe said. The cost is significant, he said, but the city will have to be creative.

Kathleen Cooper: 597-8546 kathleen.cooper@thenewstribune.com



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City of Tacoma
Public Works

November 22, 2010

SENT VIA CERTIFIED MAIL

Rick Alia
R L Alia Company, Inc.
107 Williams Avenue
Renton, WA 98057

Subject: Warning Letter – Prohibited Discharge of polluted material to City of Tacoma stormwater system

Dear Mr. Alia:

On November 1, 2010, City of Tacoma Environmental Service's field staff observed debris from the operations at 415 St. Helens Avenue discharging into the City right-of-way and the stormwater drainage system. The project manager onsite, Gary Pankowitz, was contacted and informed that the discharge of sediments to the City streets impacts the stormwater system and is a prohibited discharge. Mr. Pankowitz was also informed that measures must be taken immediately to prevent the discharge of pollutants to the City system.

On November 17th 2010, Environmental Services again observed polluted material discharging from the staging lot at 415 St. Helens. The discharge was polluted with sediments and heavy oils. Field samples were collected for turbidity and diesel range oils;

- Turbidity results were 6,200 NTUs .
- NWTPH-Dx results pending, heavy visual sheen and odor present in discharge.

Mr. Pankowitz was again contacted and informed that preventative actions must be taken to prevent the discharge of pollutants, including sediments, from entering the City stormwater system.

Tacoma Municipal Code (TMC) 12.08 prohibits the discharge of pollutants, including sediments, into the City system. TMC 12.08 also requires facilities to implement and maintain Best Management Practices in accordance with Volume II and Volume IV of the City of Tacoma Surface Water Management Manual to cease causing or contributing to a prohibited discharge. Volume II and Volume IV Source Control Best Management Practices can be found at: <http://www.cityoftacoma.org/Page.aspx?hid=951>

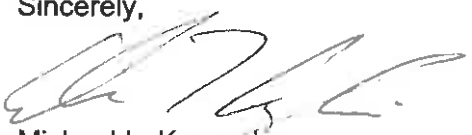
R L Alia Company, Inc. must immediately implement and maintain Best Management Practices, in accordance with the City of Tacoma Surface Water Management Manual (2008) to prevent the discharge of pollutants to the City storm system.

R L Alia Company, Inc.
Warning Letter
November 22, 2010
Page 2

Failure to adequately address the concerns of this **Warning Letter** with City of Tacoma Environmental Services may result in escalating enforcement actions, including but not limited to Notices of Violation with Civil Penalties of up to \$5,000 per day for each violation of TMC 12.08.

If you have any questions or need more information, please contact Environmental Services/Compliance Support Senior Environmental Specialist, Kurt Fremont at: kfremont@cityoftacoma.org, or (253) 502-2238.

Sincerely,


For Michael L. Kennedy
Assistant Division Manager
Environmental Compliance Support

MLK:KF:cfp

cc: Mark Henry, City of Tacoma
Vincent McGowan, Washington State Department of Ecology

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Rick Alia
R L Alia Company, Inc.
107 Williams Avenue
Renton, WA 98057

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- Attach this card to the back of the mailpiece, or on the front if space permits.

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Rick Alia
 R L Alia Company, Inc.
 107 Williams Avenue
 Renton, WA 98057

2. Article Number
(Transfer from service label)

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X *[Signature]* Agent Addressee

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C. Date of Delivery

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 If YES, enter delivery address below: No

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 Environmental Services
 326 East D Street
 Tacoma WA 98421-1801
 Attn: Fremont



R. L. Alia Company

GENERAL CONTRACTORS
107 WILLIAMS AVENUE SOUTH
RENTON, WA 98055
(425) 226-8100 OFFICE
(425) 226-8649 FAX

E-MAIL ADDRESS: GJPANK@RLALIA.COM

PUMPING STATIONS
ROAD CONSTRUCTION
CONCRETE STRUCTURES
UNDERGROUND UTILITIES
LARGE DEWATERING EQUIPMENT

November 29, 2010

City of Tacoma
Environmental Services
326 East D Street
Tacoma, WA 98421

DEC 2'10 11:14

Re: Warning Letter Dated November 22, 2010

Dear Mr. Kennedy,

I have read your letter and find it lacks the accounting of your acknowledgement of Alia's immediate response to all of your requested actions when the runoff was reported to Alia.

Alia:

- 1) removed stockpiled soils
- 2) placed straw bales
- 3) placed wattles (two separate occasions)
- 4) removed fuel truck from the site
- 5) constructed berms within the yard

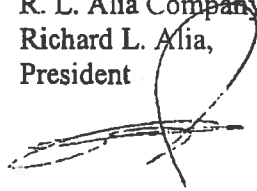
Alia will secure this site further to prevent any runoff that you find unacceptable but it should also be noted that this area is undeveloped and the source of the turbid runoff is compounded by other properties in the area.

Alia will comply immediately with your demand to augment BMPs at the site.

I also wanted to express my disappointment in the contents and tone of your letter which presented an unfair representation of the facts as they occurred regarding the site and Alia's commitment to our common concern.

Thank you,

R. L. Alia Company
Richard L. Alia,
President





City of Tacoma
Public Works

NOV 24 2010

November 22, 2010

SENT VIA CERTIFIED MAIL

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R L Alia Company, Inc.
107 Williams Avenue
Renton, WA 98057

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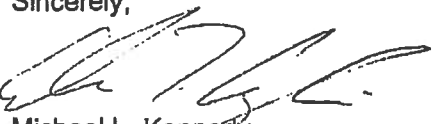
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R L Alia Company, Inc.
Warning Letter
November 22, 2010
Page 2

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Sincerely,


For Michael L. Kennedy
Assistant Division Manager
Environmental Compliance Support

MLK:KF:cfp

cc: Mark Henry, City of Tacoma
Vincent McGowan, Washington State Department of Ecology

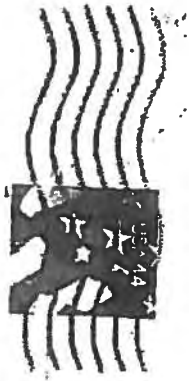
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R. L. Alia Company

107 Williams Ave. S.
Renton, WA 98057

SEATTLE WA 981

29 NOV 2010 PM 6 T



City of Tacoma
ENVIRONMENTAL SERVICES
ATTN: MICHAEL KENNEDY
326 EAST D STREET
TACOMA, WA 98421

9842181801

