



**PERIODIC REVIEW REPORT
FINAL**

**Dickman Mill
Facility Site ID#: 74734464
Cleanup Site ID# 3112**

**2423 Ruston Way
Tacoma, Washington 98421**

Southwest Regional Office

TOXICS CLEANUP PROGRAM

December 2017

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1.0 INTRODUCTION

This document is a review by the Washington State Department of Ecology (Ecology) of post-cleanup Site conditions and monitoring data to ensure that human health and the environment are being protected at the Former Dickman Mill site (Site). Cleanup at this Site was implemented under the Model Toxics Control Act (MTCA) regulations, Chapter 173-340 Washington Administrative Code (WAC).

Cleanup activities at this Site were conducted under an Agreed Order No. DE99TC-S138 dated April 12, 1999. The cleanup actions resulted in concentrations of total petroleum hydrocarbons and/or metals exceeding MTCA Method A cleanup levels and/or Sediment Quality Standards remaining under the cap in the tidal channel and/or wetland at the Site. The MTCA Method A cleanup levels for soil were established under WAC 173-340-740(2) and cleanup levels for intertidal sediments were established under the Washington State Sediment Quality Standards; Chapter 173-204 WAC. WAC 173-340-420 (2) requires that Ecology conduct a periodic review of a site every five years under the following conditions:

- Whenever the department conducts a cleanup action.
- Whenever the department approves a cleanup action under an order, agreed order or consent decree.
- Or, as resources permit, whenever the department issues a No Further Action (NFA) opinion.
- And one of the following conditions exists:
 - (a) Institutional controls or financial assurance are required as part of the cleanup.
 - (b) Where the cleanup level is based on a practical quantitation limit.
 - (c) Where, in the department's judgment, modifications to the default equations or assumptions using Site-specific information would significantly increase the concentration of hazardous substances remaining at the Site after cleanup or the uncertainty in the ecological evaluation or the reliability of the cleanup action is such that additional review is necessary to assure long-term protection of human health and the environment.

When evaluating whether human health and the environment are being protected, the factors the department shall consider include [WAC 173-340-420(4)]:

- (a) The effectiveness of ongoing or completed cleanup actions, including the effectiveness of engineered controls and institutional controls in limiting exposure to hazardous substances remaining at the Site.
- (b) New scientific information for individual hazardous substances or mixtures present at the Site.
- (c) New applicable state and federal laws for hazardous substances present at the Site.
- (d) Current and projected Site use.
- (e) Availability and practicability of higher preference technologies.
- (f) The availability of improved analytical techniques to evaluate compliance with cleanup levels.

The department shall publish a notice of all periodic reviews in the Site Register and provide an opportunity for public comment.

2.0 SUMMARY OF SITE CONDITIONS

2.1 Site History

The former Dickman Mill Site is located at 2423 Ruston Way in the City of Tacoma in Pierce County, Washington. The Dickman Mill property include 8.8-acre parcel consisted of uplands and tidelands is bordered to the east by Hamilton Park, to the west by a series of restaurants, to the north by Commencement Bay, and to the south by Ruston Way. The mill facility was built upon land created by filling out into the tideflat of Commencement Bay, created a variable sequence of fill materials on the property. Following remedial activities, a Restrictive Covenant was recorded for the Site on February 1, 2007. A Satisfaction of Agreed Order DE99TC-S138 (remedial activities completion letter) was issued by Ecology on February 21, 2007. A vicinity map and Site plans are available as Appendix 6.1 and Appendix 2, respectively.

The facility was a lumber mill, which operated between 1899 and 1977, when the mill was partially destroyed by fire. Prior to the occupancy of the Dickman Lumber Company, the Site operated as a shingle mill in 1889 and as a saw mill from 1890 to 1992. The Dickman Lumber Company purchased the property in 1922 and remodeled the mill extensively in 1926. The mill structures included a large overwater decked area at the west end of the Site, a boiler house, a sawmill building, office building, a machine shop, an auto shed, concrete water tank, decked area above tidelands at the east end of the Site, sawdust burner, and pier. The mill was initially powered by steam, but was mostly converted to electric power in 1926-1927. The electric power was generated by burning hog fuel in the sawdust burner. The mill buildings were partially destroyed by fire in 1978. The Metropolitan Park District purchased the eastern portion of the property in 1991, and the western portion in 1993. The remains of the mill buildings remained on the Site until 1998, when they were demolished and removed by the Metropolitan Park District of Tacoma in preparation for developing the Site into a public park.

2.2 Cleanup Standards

The sediment quality data were compared against the most stringent screening levels of Ecology's Marine Sediment Quality Standards (SQS) and Commencement Bay Sediment Objectives (SQO). In addition, Ecology's Minimum Cleanup Levels (MCUL) were also used in evaluation of sediment cleanup alternatives, and are thus also included as the higher-bound sediment screening levels. For polycyclic aromatic hydrocarbons (PAHs), second lowest apparent effects thresholds (2LAETs) were used as the higher-bound screening levels. For upland soils, MTCA Method A cleanup levels were used. The Table 1 below presents the Site Cleanup Standards for the contaminant of concerns at this Site.

Table 1: Site Cleanup Standards

Chemical	Intertidal Sediments		Upland Soils*		Groundwater		
	mg/kg	Notes	mg/kg	Notes	ug/L-TOI	ug/L-DIS	Notes
Total Petroleum Hydrocarbons (TPH)							
Diesel-Range			2,000	(a)			
Heavy Oil			2,000	(a)			
Metals							
Arsenic	57	(c)	20	(a)		36	(e)
Cadmium	5.1	(c)	1	(a)		9.3	(e)
Chromium	260	(c)	2,000	(a)		50	(e)
Copper	390	(c)	2,960	(b)		5	(g)
Lead	450	(c)	250	(a)		8.1	(e)
Mercury	0.41	(c)	2	(a)	0.1		(g)
Nickel	---		1,600	(b)		8.2	(e)
Silver	6.1	(c)	400	(a)		1.9	(f)
Zinc	410	(c)	24,000	(b)		81	(e)
Polynuclear Aromatic Hydrocarbons (PAHs)							
Naphthalene	2.10	(d)	3,200	(b)	2,350		(h)
Acenaphthylene	1.30	(d)					
Acenaphthene	0.50	(d)	4,800	(b)	710		(h)
Fluorene	0.54	(d)	3,200	(b)			
Phenanthrene	1.50	(d)			4.6		(h)
Anthracene	0.96	(d)	2,400	(b)			
2-Methylnaphthalene	0.67	(d)					
Total LPAH	5.20	(d)					
Fluoranthene	2.90	(d)	3,200	(b)	16		(h)
Pyrene	3.30	(d)	2,400	(b)			
Benzo(a)anthracene	1.60	(d)	0.137	(b)			
Chrysene	2.80	(d)	0.137	(b)			
Benzo(b)fluoranthene	3.60	(d)	0.137	(b)			
Benzo(a)pyrene	1.60	(d)	0.137	(b)			
Indeno(1,2,3-cd)pyrene	0.69	(d)	0.137	(b)			
Dibenzo(a,h)anthracene	0.23	(d)	0.137	(b)			
Benzo(g,h,i)perylene	0.72	(d)					
Total HPAH	17	(d)					
Total cPAH			1	(a)			
Polychlorinated Biphenyls (PCBs)							
Total PCBs	0.3	(d)	1	(a)	0.05		(g)

Notes:

* Upland soils defined as soils above +14 feet MLLW.

(a) MTCA Method A soil cleanup standards for unrestricted land use

(b) MTCA Method B soil cleanup standards for unrestricted land use

(c) Washington State Sediment Quality Standards (SQS), per 173-204 WAC

(d) Commencement Bay Sediment Quality Objectives (SQO, dry weight basis), per EPA Record of Decision (1989)

(e) Washington State surface water quality standard, marine chronic criterion, per 173-201A

(f) Washington State surface water quality standard, marine acute criterion (no chronic criterion available), per 173-201A

(g) Cleanup standard set by practical quantitation limit (PQL), per Ecology, 1993

(h) Draft Water Quality Criteria or Lowest Observable Effects Level, per EPA, 1991

2.3 Site Investigations

2.3.1 Hart Crowser 1985 Investigation

In October 1885, eight intertidal sediment samples were collected from eight test pits (TP-1 through TP-8) locations in support of a proposed Ruston Way Marina. These sediment samples were collected at different depths representing upper zone of sand and gravel (approximately 0- to 3-foot), middle zone of wood waste and mixed with silty sand (approximately 3-to-5-foot), and lower zone of silty sand below wood waste (approximately 5-to-8-foot). The upper zone sample was a discrete (TP-1, S-1), and the middle zone [TP-3 S-2, TP-6 S-1, and TP-8 S-1 (Comp A)] and lower zone [TP-1 S-3, TP-3 S-3, and TP-5 S-1 (Comp B)] were composite samples.

All the sediment samples were analyzed for total metals (arsenic, cadmium, copper, lead, mercury and zinc), polychlorinated biphenyls (PCBs), organochlorine pesticides, conventional parameters [total organic carbon (TOC), and sulfides] and semivolatile organic compounds (SVOCs). Pesticides and PCBs were not detected in any of the sediment samples and the concentrations of detected metals were all below the sediment quality screening levels. Locations of test pits are shown on Figure 2 in Appendix 6.3.

2.3.2 Harr Crowser 1988 Preliminary Environmental Site Assessment

In November 1988, a Preliminary Environmental Site Assessment (PESA) was conducted by Hart Crowser to evaluate whether or not Site activities have adversely affected soil or groundwater quality at the Site. As a part of this PESA, the remaining ruins of an old saw mill, brick power house, and an abandoned office building were investigated. This PESA discovered potential asbestos-containing material (ACM) in the sawmill, office building, Boiler House, and the insulation on pipe lines running from the Boiler House and the office building. The results of the analysis indicated ACM was present in the Boiler House (insulation material around the boiler tank and associated pipes), and on the insulation of pipelines running from the Boiler House to the office building. The ACM materials were removed and disposed of off-site by a licensed asbestos removal contractor.

In addition, the PESA also discovered a limited oil stains on the concrete floor where possibly electrical transformers were stored. However, historical background search did not indicate any evidence of PCB oil-containing electrical transformers on the Property. Nonetheless, representative samples of oily soil on the concrete floor were collected for PCB screening analysis. The results indicated no PCB concentrations above 2.0 mg/kg indicated for the area.

2.3.3 Hart Crowser 1993 Investigations

In 1993, a limited intertidal sediment investigation was conducted at the western and eastern portions of the property, in two separate phases.

Western Portion of the Property

A total of four intertidal beach sediment samples were collected in the western portion of the property. These samples included, two samples on the beach at 0 to 6 inches (S-1 and S-2) and two samples within the proposed intertidal wetland at 0 to 2 feet (S-3 and S-4). Sediment samples were analyzed for total petroleum hydrocarbons [(TPH) identification (TPH-HCID), 18 metals by X-ray fluorescence], and/or for volatile organic compounds (VOCs).

None of the detected metal and VOCs concentrations exceeded the Sediment Quality Standards (SQS) or unrestricted land use criteria for soils. The TPH-Oil was detected at 35 milligrams per kilogram (mg/kg) to 1,300 mg/kg in sediment samples was well below the unrestricted land use cleanup level of 2,000 mg/kg for soils.

Eastern Portion of the Property

Two composite intertidal sediment samples (S-1 and S-2) were collected at upper 4 inches (0 to 10 cm) representing a 5-to-7-diameter areas. Both samples consisted of wood waste and silty sand with broken shells and pebbles, except the sample S-2 consisted of less wood waste and more shell fragments. The two sediment samples were analyzed for total metals, PAHs, and total organic carbon (TOC).

Copper (774 mg/kg) and lead (582 mg/kg) were detected in sample S-2 exceeding SQS screening levels of 390 mg/kg and 450 mg/kg, respectively. Concentrations of PAHs, phenanthrene (1.7 mg/kg) and pyrene (4.4 mg/kg) were exceeded the respective SQS standards. The sediment sampling locations are included as Appendix 6.4.

2.3.4 Hart Crowser 1998 Investigation

In June 1998, Hart Crowser collected two intertidal sediment samples (S-3 and S-4) at the east end of the Site as a part of an investigation of odor and a gray/white material observed at the Site. These samples were analyzed for total metals (arsenic, cadmium, chromium, copper, iron, lead, manganese, mercury, silver and zinc), major ions, TOC, and total volatile solids. Copper was detected in both samples (S-3 and S-4) at 2,430 mg/kg and 1,080 mg/kg, respectively exceeding SQS of 390 mg/kg. Lead (3,490 mg/kg) was also detected at S-4 above SQS of 450 mg/kg. The white film was identified as naturally occurring sulfur-oxidizing bacteria. The sampling locations and results are available as Appendix 6.4.

2.3.5 GeoEngineers 1998 Investigation

In August 1998, GeoEngineers excavated nine test pits (TP-1 through TP-9), and drilled three 50-foot borings and collected a total of selected six sediment samples at varying depths to gather the information in support of the park development. The sediment samples were analyzed for TPH identification (WTPH-HCID), SVOCs, and/or total metals (arsenic, cadmium, chromium, copper, iron, lead, silver, mercury and zinc). Several PAHs concentrations were detected above

the SQOs and these total PAH concentrations ranged from 6.1 mg/kg to 16.9 mg/kg. Lead was also detected in one of the samples (TP-1-S2-5) at 499 mg/kg, which was above the 450 mg/kg SQS. The sampling locations are available as Appendix 6.5.

2.3.6 GeoEngineers 1999 Investigation

In March 1999, GeoEngineers completed ten test pits (TP-10 through TP-19) within the proposed tidal channel to evaluate disposal options for materials to be excavated. One discrete and six composite samples were collected at varying depths, representing material planned for the excavation. All the samples were analyzed for diesel and oil (TPH-D and TPH-O), metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) and PAHs. In addition, some of the samples were analyzed for PCBs.

Select individual PAH concentrations in several samples and total light polycyclic aromatic hydrocarbons (LPAHs, 6.1 mg/kg to 41 mg/kg) and total heavy polycyclic aromatic hydrocarbons (HPAHs, 18.4 mg/kg) exceeded EPA's SQO values for the Commencement Bay. However, when the PAH concentrations normalized for total organic carbon (TOC) content, concentrations were below SQS. Lead (550 mg/kg to 1,300 mg/kg), copper (450 mg/kg to 4,000 mg/kg) and mercury (0.44 mg/kg to 1.1 mg/kg) concentrations detected in some of the samples were above SQS. The total PCBs (0.6 mg/kg to 1.1 mg/kg) detected concentrations exceeded EPA's 0.3 mg/kg SQO; however, when the data was normalized for TOC, the concentrations (6.4 mg/kg and 9.2 mg/kg) were below the SQS of 12 mg/kg. Sampling locations are included as Appendix 6.6.

2.3.7 Hart Crowser 1999 and 2000 Investigations

During November 1999 and January 2000, additional investigations were conducted to gather information to support the evaluation of Site development cleanup needs including the risk issues associated with the future park development. This investigation included the collection of five 3-point composite intertidal sediment samples (Sed-1 through Sed-5) from depths 1 to 1.33 foot, three surface soil samples (from 0 to 0.5 foot depths, SS-1 through SS-3) from the proposed park lawn area, two debris materials samples (D-1 and D-2), two groundwater samples from monitoring well MW-1, and five wellpoints (Seep-1 through Seep-5) intertidal seep samples (to evaluate the quality of Site groundwater discharging to Commencement Bay). The sediment samples were analyzed for metals (arsenic, copper, lead, mercury, PAHs and total organic carbon (TOC)); Surface samples were analyzed for TPH-D, TPH-O, PAHs, and metals (arsenic, copper, lead, and mercury); the debris samples were analyzed for TPH-D, TPH-O and total and leachable (SPLC) metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, and silver).

Arsenic (160 mg/kg) and copper (471 mg/kg) concentrations detected in sediment samples Sed-3 and Sed-4 exceeded their SQS of 57 mg/kg and 390 mg/kg, respectively. Also some of the individual PAHs and HPAHs (20.6 mg/kg) detected in Sed-4 sample exceeded their respective SQS.

Total petroleum hydrocarbons (170 mg/450 mg/kg), total cPAHs (4.9 mg/kg to 9.9 mg/kg), arsenic (25.3 mg/kg), and mercury (5.5 mg/kg) were detected in the surface soil samples. cPAHs, arsenic and mercury exceeded their respective soil screening levels of 1 mg/kg, 20 mg/kg and 2 mg/kg, respectively. However, none of these contaminants were detected in the groundwater.

Results of the debris samples indicated that silver (8.1 mg/kg to 11.7 mg/kg), cadmium (3.5 mg/kg to 6.6 mg/kg), chromium (535 mg/kg), and copper (936 mg/kg) exceeded their respective SQS. In addition, leachable copper (3.1 µg/l to 49 µg/l) was also above the marine water quality criterion. Arsenic concentration of 37.7 mg/kg was also exceeded its screening level for unrestricted/industrial land uses. All the sampling locations are available as Appendix 6.7.

2.3.8 Feasibility Study and Cleanup Action Plan

Following completion of the Remedial Investigation, a Cleanup Action Plan (CAP) was developed in March 2000 and an Addendum to the CAP in July 2000 to finalize the CAP. The CAP Addendum included the establishment of remediation levels for arsenic and copper consistent with the Sediment Quality Standards (SQS) for the protection of marine environment. The following three remedial alternatives were presented in the CAP:

- Alternative 1 – No Action
- Alternative 2 – Isolation by Cap or Cover
- Alternative 3 – Excavation and Treatment

After a detailed evaluation of above alternatives as per the requirements of the Model Toxics Control Act (MTCA) remedy selection process; WAC 173-340-360, the selected remedial alternative included a combination of Alternative 2, Isolation by Cap or Cover and Alternative 3, Excavation and Treatment. The combination remedial alternative included capping of soil and sediments within the proposed park development with 1 foot of clean soil or capped with a pavement; a minimum of 2 feet of soil cover in upland areas (lawn and berm), and 1 to 3 feet of cover in intertidal areas; excavation and treatment or disposal of contaminated soils/sediments in several areas of the Site where the contaminant concentrations were above applicable cleanup levels. In addition, over excavation of debris within the sawdust burner and adjacent the burner in Wetland F to a depth of 3 feet and capping the excavation with a 3 feet of clean cover material. Figure 5 in Appendix 6.8 shows the selected cleanup action for the Site with proposed capping areas with different cap thicknesses.

2.4 Remedial Activities

The remedial actions were implemented under an Agreed Order Number DE 99TC-S138 dated April 12, 1999. The Park Construction was started in late July 2000 and the Site remedial activities were conducted between August 2000 and January 2001. The excavation of Site preparation included the removal of asphalt and concrete rubble, metal debris, structures such as pilings and some of the concrete foundations, fencing off the wetland areas and placement of a silt curtain log boom in the Commencement Bay and around the Site perimeter. In addition, the

upper 1 foot of sediment with abundant concrete rubble and wood was excavated from the northwest Beach prior to placing it with 1 foot of imported pea gravel to improve the habitat quality of the substrate.

Soil/sediment and debris were excavated during the Phase I Park construction and transported off-Site to TPS Technologies for treatment. During the Site cleanup, approximately 2,562 tons of contaminated wood waste fill materials were excavated and transported to TPS for treatment and disposal. In addition, 256 tons of wood/metal debris and 790 tons of concrete were excavated and disposed of off-Site. The concrete was recycled by the Contractor. A minimum of 2-foot of soil cover was placed in Upland Areas consisting of 1-foot of top soil over 1-foot of structural fill.

In addition, an estimated 1,675 cubic yards of contaminated materials were over excavated from below the design subgrade from grids 2 through 13 within the tidal channel as part of the cleanup action. Areas of proposed for over excavation with contaminant concentrations exceeding screening levels, a cross-section of over excavation areas, and proposed areas where the contaminant concentrations will remain in-place exceeding screening levels are shown in Appendix 6.9.

The over excavation was conducted to remove the buried shredded creosote timber, lead (1,680 mg/kg) and petroleum (oily wood waste and saw dust) contaminated sediments within the tidal channel at least 2 feet below the design elevation to cap the remaining contaminated material with 2 feet of clean cap material to the designed elevation. Performance and conformational sediment samples were collected to determine the final contaminant concentrations remaining in the tidal channel and wet land areas 2 feet below the design grade/elevation. The performance and conformational sampling locations and results in the tidal channel and wet land areas are included as Appendix 6.9.

2.5 Conformational Groundwater Monitoring

The conformational groundwater monitoring consisted of one groundwater monitoring well (MW-1) located on the upland lawn and four steel wellpoints (Seep-3, Seep-4, Seep-5 and Seep-6) located on the beach along the Site perimeter. The purpose of the monitoring network was to confirm that the disturbance of soil and the placement of fill soils during the construction did not caused leaching of contaminants to groundwater.

An initial round of groundwater monitoring was performed in December 2000 during Phase I construction. Subsequent groundwater monitoring was performed twice a year for two years (April 2002 through August 2003) in accordance with the Monitoring Plan. The groundwater samples were analyzed for TPH-D, TPH-O, semivolatile organic compounds (SVOCs), dissolved metals (arsenic, copper, and lead), and total mercury.

Results of groundwater monitoring revealed that few SVOCs, TPH-O, arsenic, copper, lead, and mercury were detected. However, phenanthrene (11 µg/l), TPH-D (1.3 mg/l), copper (6.87 µg/l to 41.2 µg/l), and mercury (0.52 µg/l to 0.78 µg/l) were exceeded their respective cleanup levels

of 4.6 µg/l, 1 mg/l, 5 µg/l (arsenic and copper), and 0.1 µg/l, respectively. The arsenic was detected during one or more occasions. Detected groundwater concentrations (3.19 µg/l to 54.8 µg/l) exceeded its cleanup level of 36 µg/l. However, the detected arsenic concentrations were similar to the concentrations detected in the seawater reference sample collected from Owens Beach. Based on the results of two years of post-construction conformational groundwater monitoring, it was concluded that the construction activities did not appear to have significantly impacted the groundwater quality at the Site. The groundwater monitoring was discontinued, the steel well points were removed and the groundwater monitoring well (MW-1) was abandoned consistent with the requirements of WAC 173-160 in early 2006. Groundwater monitoring sampling locations are included as Appendix 6.10.

The post-construction topographic (sediment cap) monitoring was conducted as per the Final Mitigation Monitoring Plan dated February 2003 for three years from 2003 through 2005 to determine the cap erosion and the stability of the sediment cap. Ecology reviewed three years of topographic monitoring reports and concluded that there was no evidence of significant cap erosion and the sediment capped areas are appears to be stable. As a result, Ecology approved the discontinuation of post-construction topographic/cap monitoring. The post-construction topographic monitoring areas are shown on Figure 2 in Appendix 6.11.

2.6 Restrictive Covenant

A Restrictive Covenant on the Property was required because the Remedial Action resulted in residual concentrations of petroleum hydrocarbons left in place under the sediment cap in the tidal channel. The Restrictive Covenant is a document that shows the type and location of contamination and limits activities such as digging, drilling or other actions that could create exposure pathways to the remaining contaminants. The restriction provides long-term protection for the cleanup that was completed at the Site. A Restrictive Covenant was recorded for the Site on February 1, 2007 and Agreed Order Number DE99TC-S138 (completion of remedial actions) Satisfaction letter was issued by Ecology on February 21, 2007. The Restrictive Covenant imposes the following limitations:

1. The Property shall only be used for the purpose of a park and related recreational activities.
2. Any activity on the Property that may result in the release or exposure to the environment of the contaminated soil that was contained as part of the Remedial Action, or create a new exposure pathway, is prohibited. Some examples of activities that are prohibited in the capped areas include: “drilling, digging, placement of any objects or use of any equipment which deforms or stresses the surface beyond its load bearing capability, piercing the surface with a rod, spike or similar item, bulldozing or earthwork.”
3. Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.

4. Any activity on the Property that may result in the release or exposure to the environment of a hazardous substance that remains on the Property as part of the Remedial Action, or create a new exposure pathway, is prohibited without prior written approval from Ecology.
5. The Metro Parks reserves the right under WAC 173-340-440 to record an instrument that provides that this RC shall no longer limit use of the Property or be of any further force or effect, following public notice, comment and concurrence with applicable law.

The Restrictive Covenant is available as Appendix 6.12.

3.0 PERIODIC REVIEW

3.1 Effectiveness of completed cleanup actions

Based upon the Site visit conducted on May 16, 2017, the clean cap cover and the Park grass at the Site continue to provide an adequate barrier to direct exposure pathways (ingestion, contact) to contaminated soils. The sediment cap in the tidal channel appears to be in satisfactory condition. The Site is being used as a public park. A photo log is available as Appendix 6.13.

The RC for the Site was recorded and is in place. This RC prohibits activities that will result in the release of contaminants contained as part of the cleanup without Ecology's approval, and prohibits any use of the property that is inconsistent with the Covenant. This RC serves to assure the long term property use and integrity of the property surface.

3.2 New scientific information for individual hazardous substances for mixtures present at the Site

There is no new relevant scientific information for the petroleum contaminants related to the Site since the remedial actions were implemented.

3.3 New applicable state and federal laws for hazardous substances present at the Site

The cleanup at the Site was governed by Chapter 173-340 WAC (2001 ed.) and Chapter 173-204 WAC. Cleanup levels have not changed since the remedial actions were implemented at the Site in 2004. Contamination remains at the Site above MTCA Method A cleanup levels and/or SQS.

3.4 Current and projected Site use

The Site is currently used as a public park for recreational purposes. There have been no changes in current or projected future Site or resource uses.

3.5 Availability and practicability of higher preference technologies

The remedy implemented included containment of hazardous substances. While higher preference cleanup technologies may be available, they are not likely practicable at this Site.

3.6 Availability of improved analytical techniques to evaluate compliance with cleanup levels

The analytical methods used at the time of the remedial action were capable of detection below MTCA Method A and Method B cleanup levels. The presence of improved analytical techniques would not affect decisions or recommendations made for the Site.

4.0 CONCLUSIONS

- The cleanup actions completed at the Site appear to be protective of human health and the environment.
- Soils and sediment cleanup levels have not been met at the Site; however, under WAC 173-340-740(6) (d), the cleanup action is determined to comply with cleanup standards, since the long-term integrity of the containment system is ensured and the requirements for containment technologies have been met.
- The RC for the property is in place and will be effective in protecting public health from exposure to hazardous substances and protecting the integrity of the cleanup action.

Based on this periodic review, Ecology has determined that remedial actions conducted at the Site continue to be protective of human health or the environment. The requirements of the RC are being satisfactorily met and no additional actions are needed at this time. It is the property owner's responsibility to continue to inspect the Site to assure that the integrity of the cap is maintained.

Next Review

The next review for the Site will be scheduled five years from the date of this periodic review. In the event that additional cleanup actions or institutional controls are required, the next periodic review will be scheduled five years from the completion of those activities.

5.0 REFERENCES

Department of Ecology. Completion of remedial activities under Agreed Order DE99TC-S138-Dickman Mill Park, 2423 Ruston Way, Tacoma. February 21, 2007.

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Hart Crowser. Final Cleanup Completion Report, Dickman Mill Park, Tacoma, Washington. December 21, 2001.

Hart Crowser. Final Cleanup Action Plan Addendum Proposed for Dickman Mill Park, Tacoma, Washington. July 18, 2000.

Hart Crowser. Draft Final Cleanup Action Plan Proposed for Dickman Mill Park, Tacoma, Washington. March 24, 2000.

Hart Crowser. Draft Addendum to Sampling and Analysis Plan, Proposed Dickman Mill Park, Tacoma, Washington. November 15, 1999.

GeoEngineers. Sampling and Analysis Plan, Dickman Mill Park, Site Characterization and Remedial Investigation. June 23, 1999.

Department of Ecology. Agreed Order No. DE 99TC-S138. April 12, 1999.

Hart Crowser. Preliminary Environmental Assessment Update and Limited Sediment Sampling And Analysis, Former Dickman Lumber Company Property (Eastern Portion) 2423 Ruston Way, Tacoma, Washington. April 30, 1993.

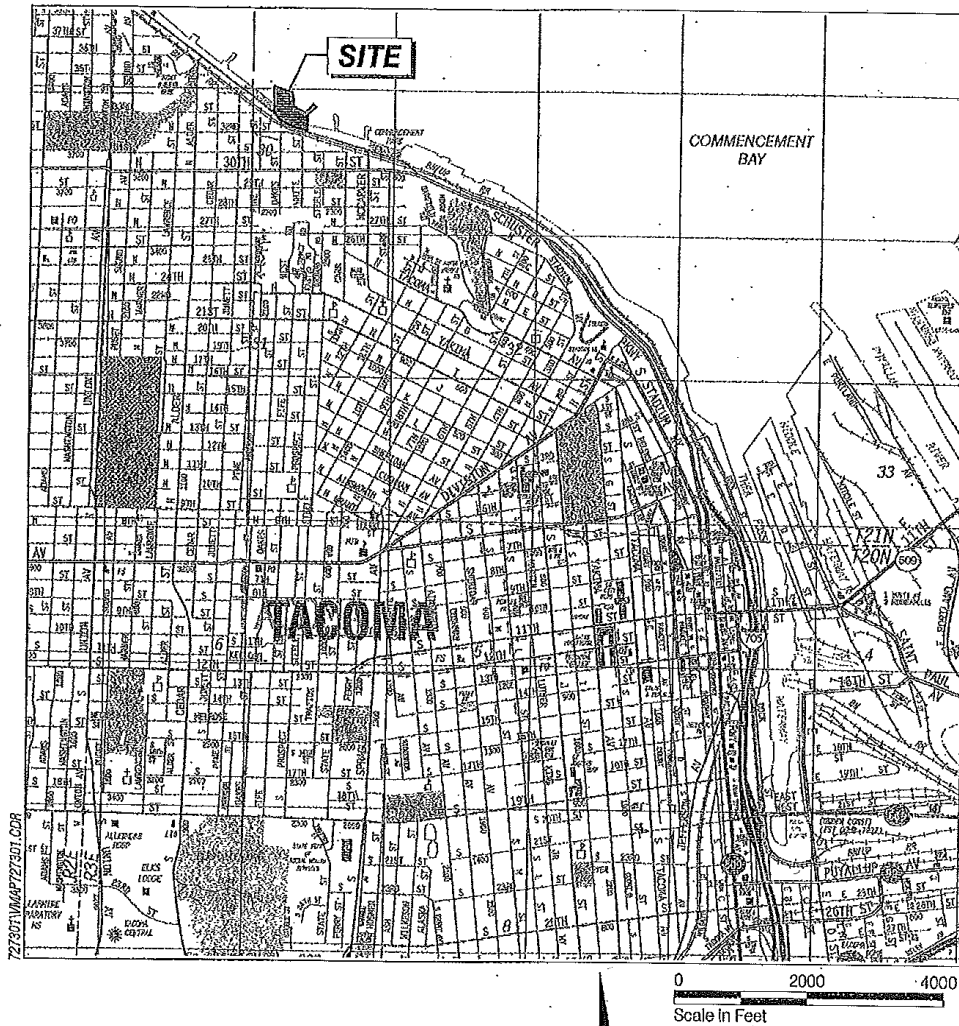
Hart Crowser. Preliminary Environmental Risk Assessment, Dickman Lumber Company, Tacoma, Washington. December 9, 1988.

Ecology. *Site Visit*. May 16, 2017.

6.0 APPENDICES

6.1 Vicinity Map

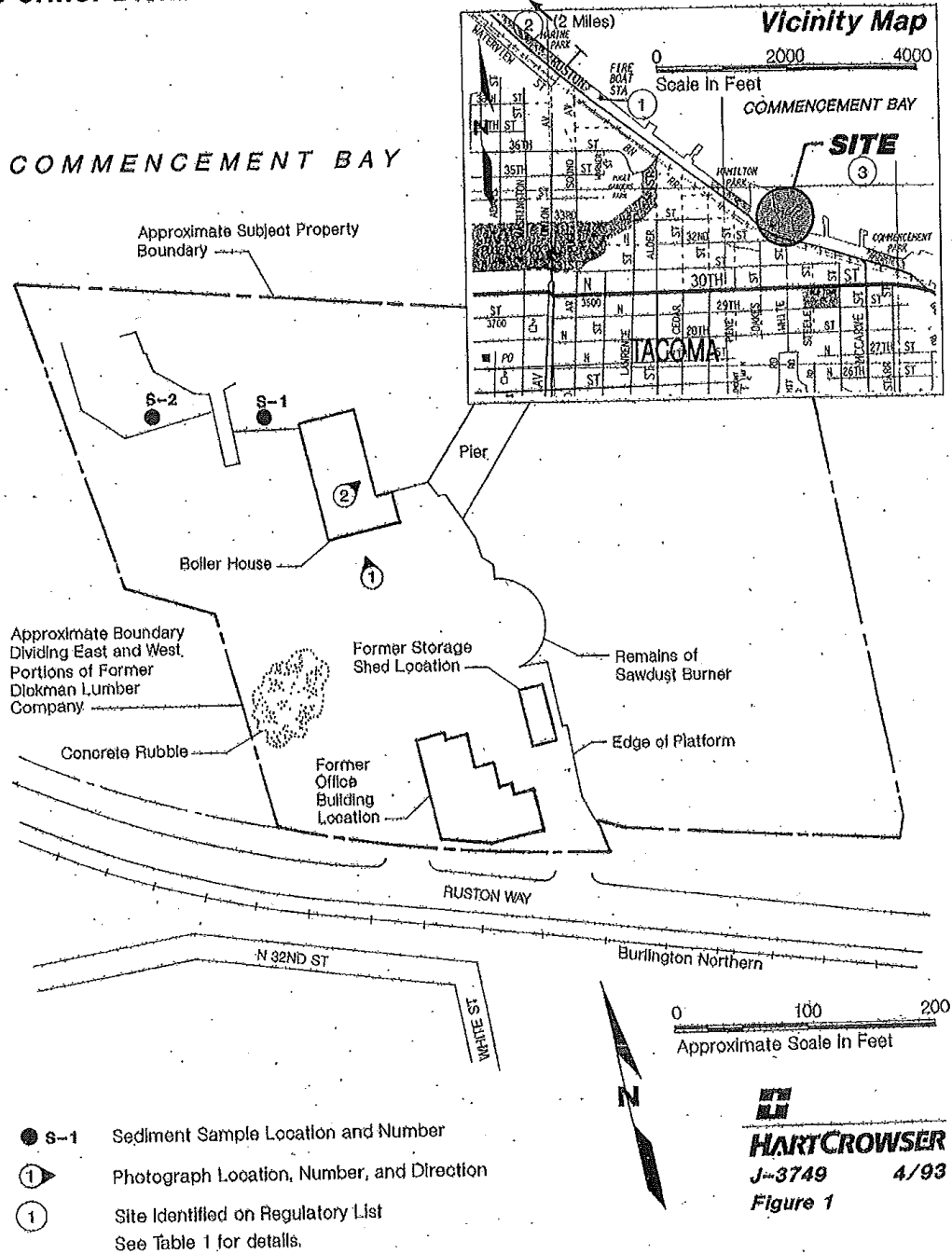
Vicinity Map



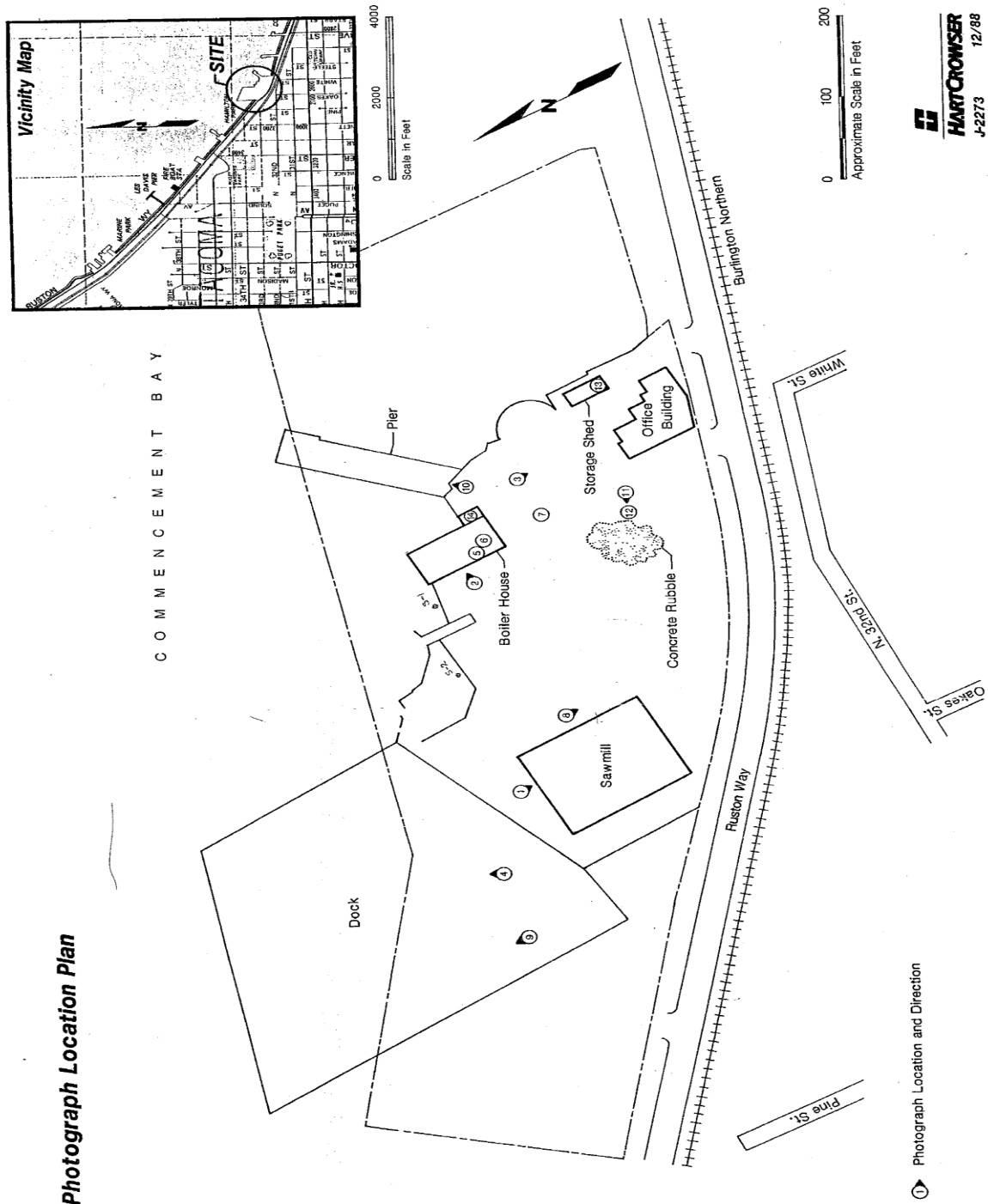

HARTCROWSER
J-7273-01 11/01
Figure 1

6.2 Site Plan (Eastern Portion)

Site Plan Former Dickman Lumber Company (Eastern Portion)

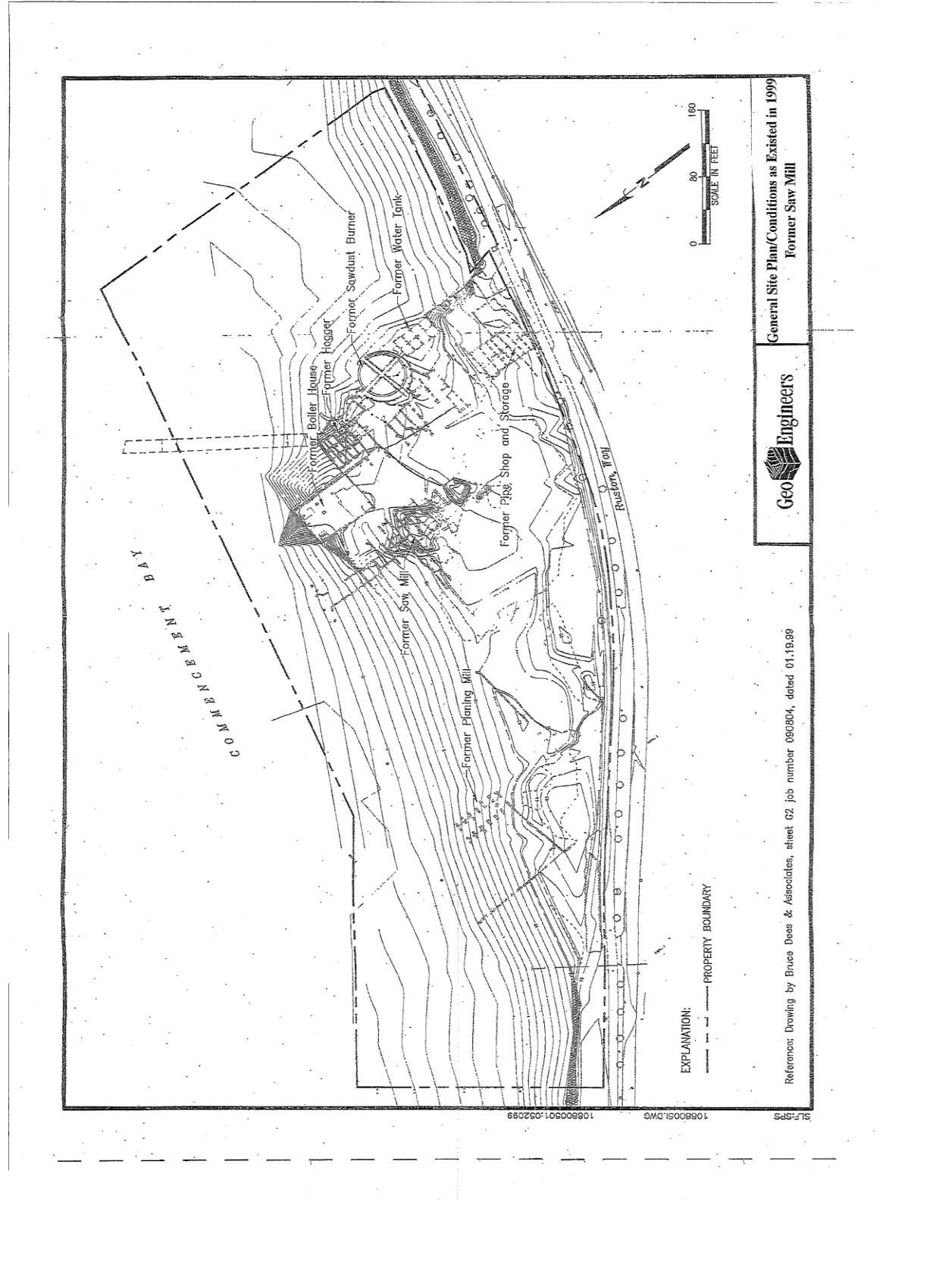


Site Plan: Eastern and Western Portion

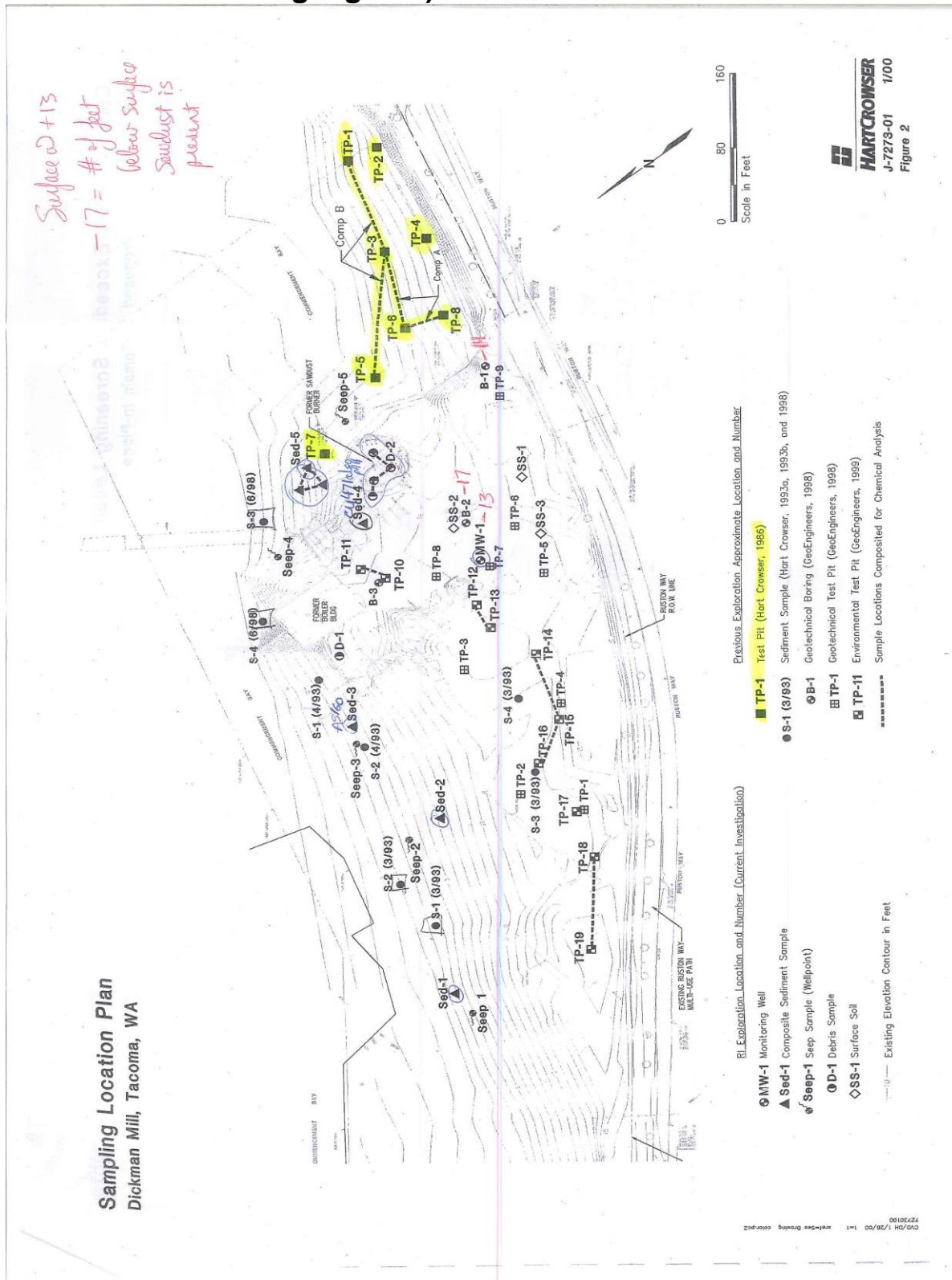


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J-2273 12/88
Figure 1

Site Plan as Existed in 1999



6.3 Hart Crowser: 1985 Test Pits Sampling Locations (yellow highlighted) and Results



J-2273

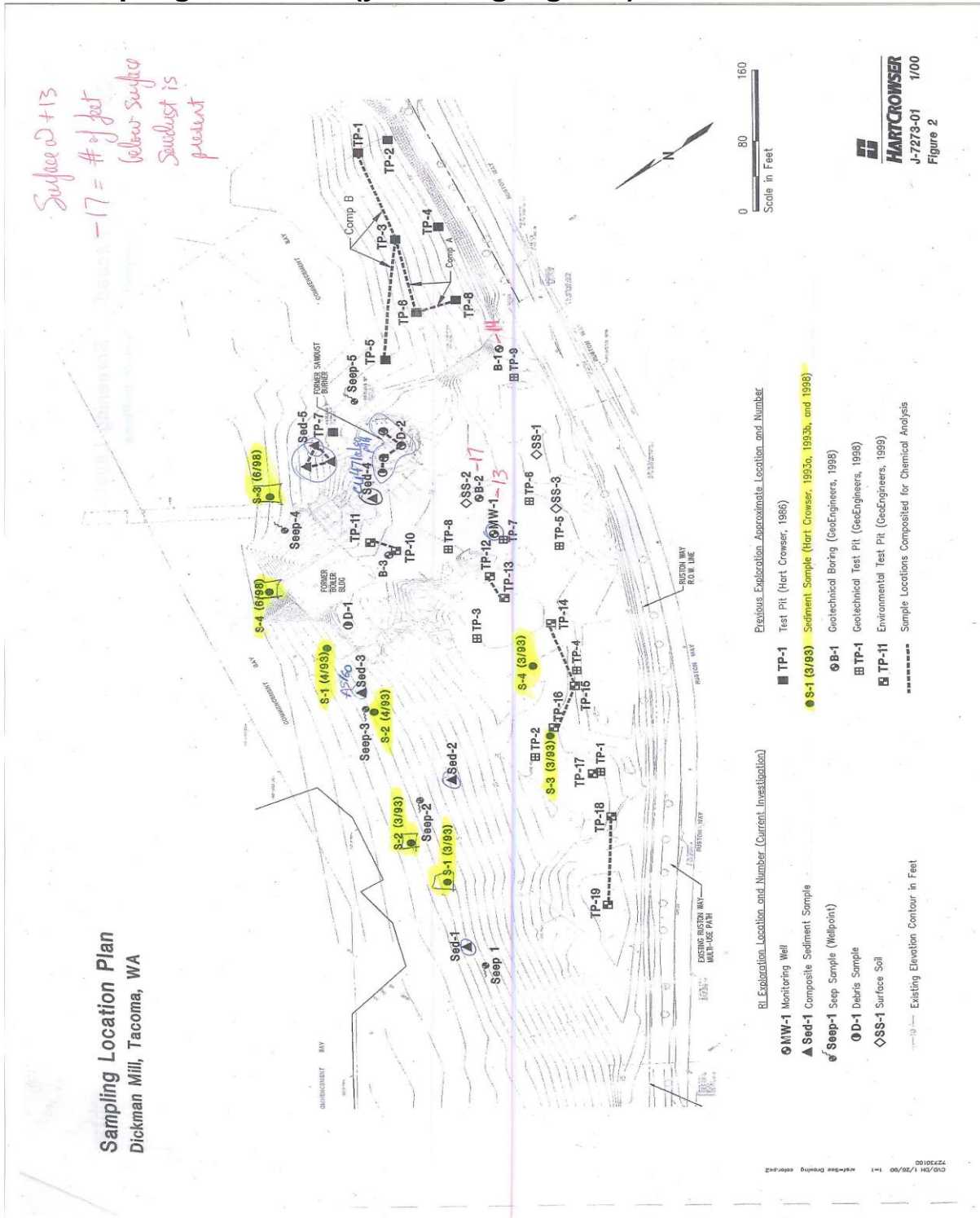
**Table D-1 - Results of Previous Chemical Testing (1985) of Dickman
 Lumber Company Property Sediments**

	Upper Zone <u>0-3 FT</u>	Middle Zone <u>3-5 FT</u>	Lower Zone <u>5-8 FT</u>	ISCDM ¹
Total Solids (%)	71.5	66.7	81.1	--
Total Organic Carbon (% dry)	2.4	3.3	1.3	--
Total Volatile Solids (% dry)	5.9	6.2	1.4	--
Arsenic (ppm)	2.4 ²	2.6	2.3	13
Cadmium (ppm)	<0.5 ²	0.6	<0.5	0.28
Copper (ppm)	29	19	9	53
Lead (ppm)	23	16	<7	27
Mercury (ppm)	0.2	<0.1	<0.1	0.11
Zinc (ppm)	54	38	27	74

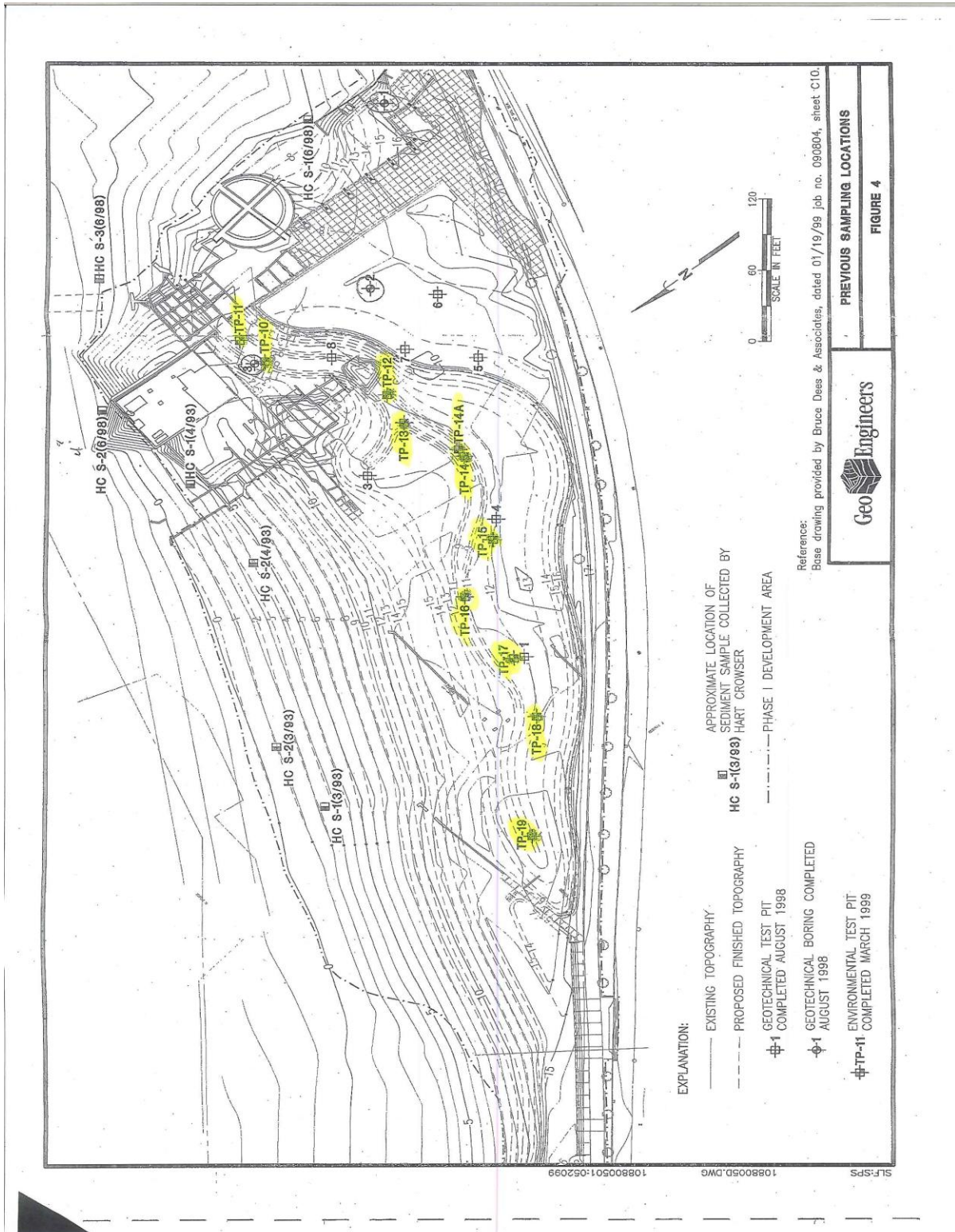
¹ Interim Sediment Criteria for Dredge Material, Commencement Bay Standards

² "<" Indicates less than limit of detection.

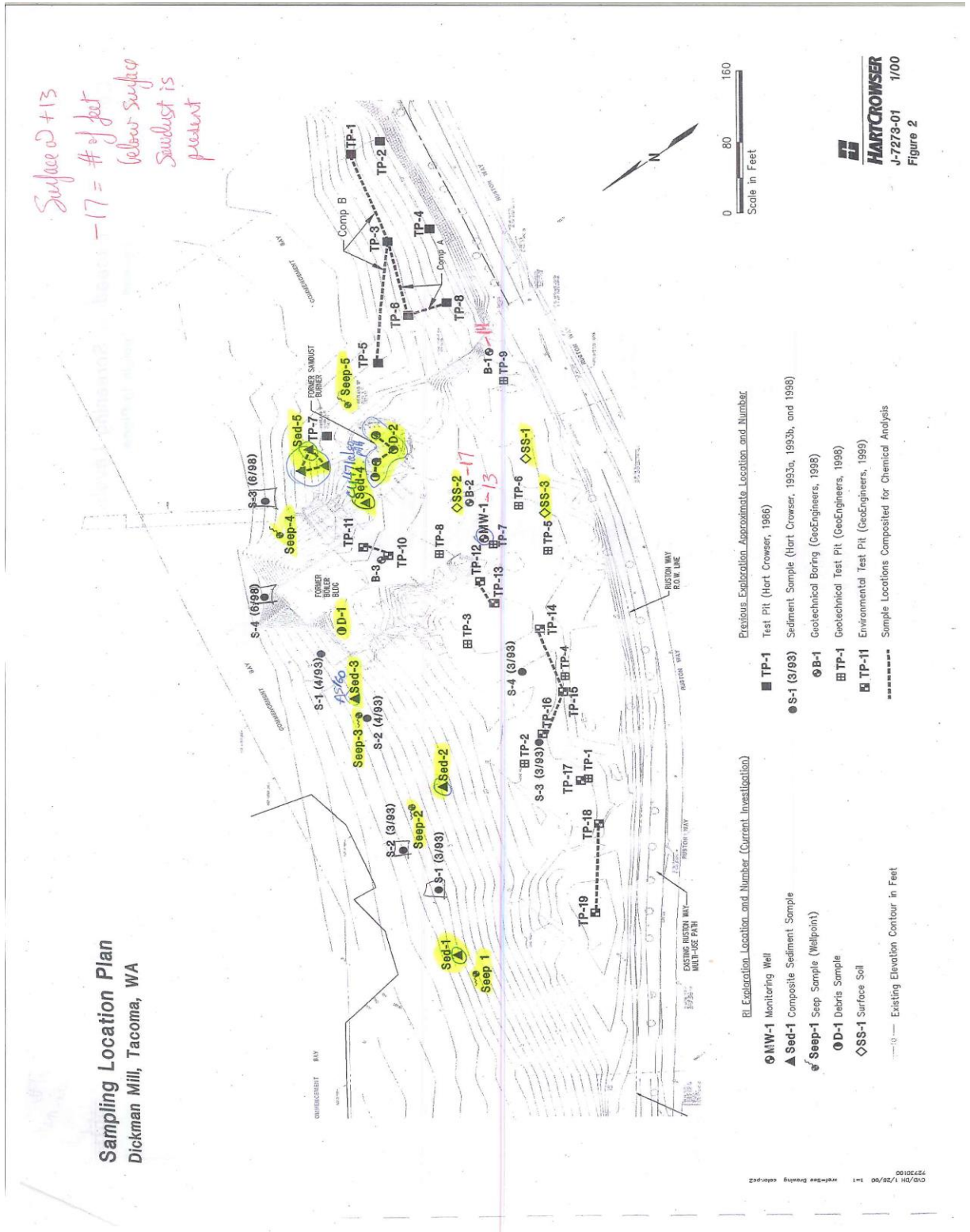
6.4 Hart Crowser: 1993 and June 1998 Sediment Investigation Sampling Locations (yellow highlighted) and Results



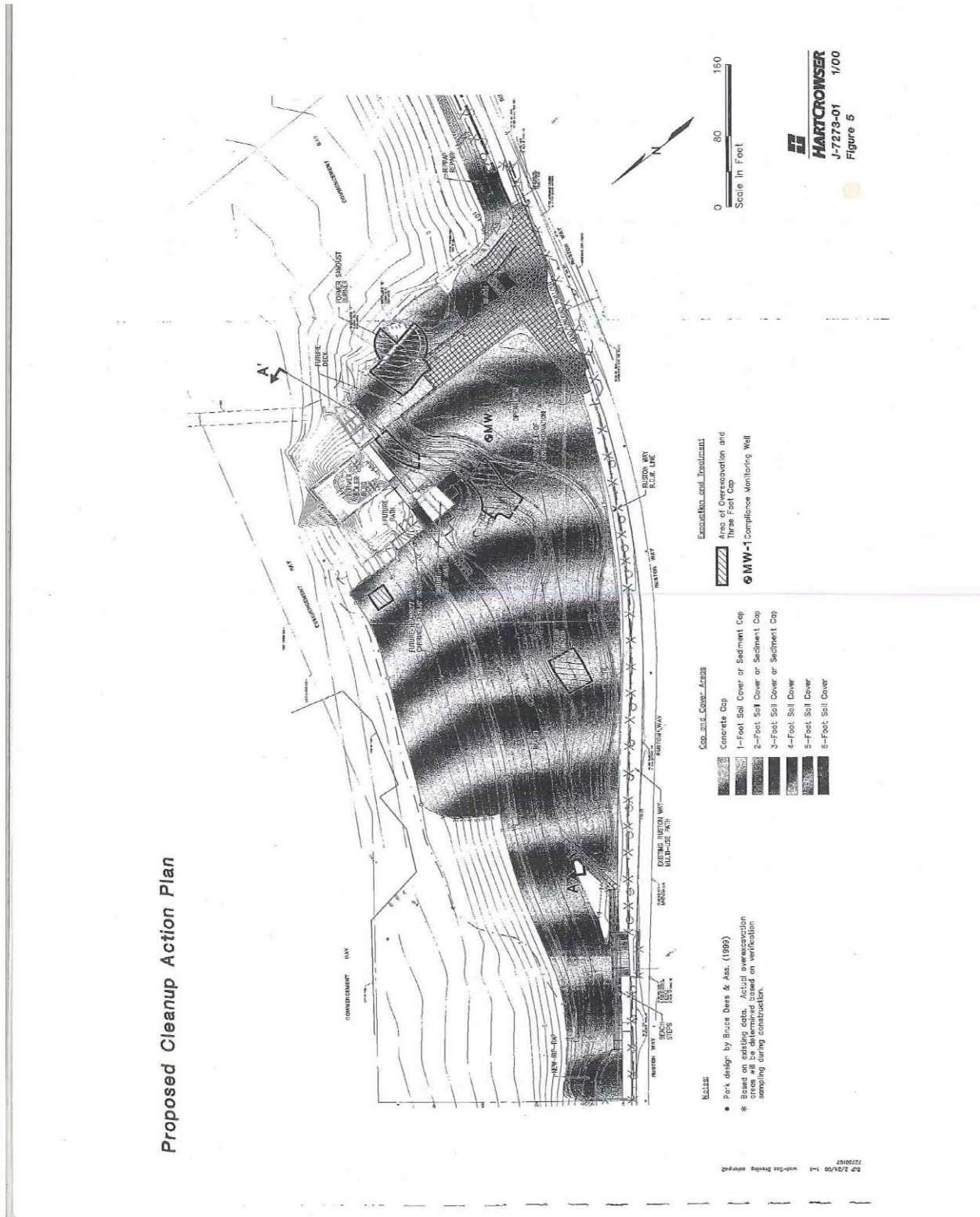
6.6 GeoEngineers: March 1999 Sediment Test Pits Sampling Locations (yellow highlighted)



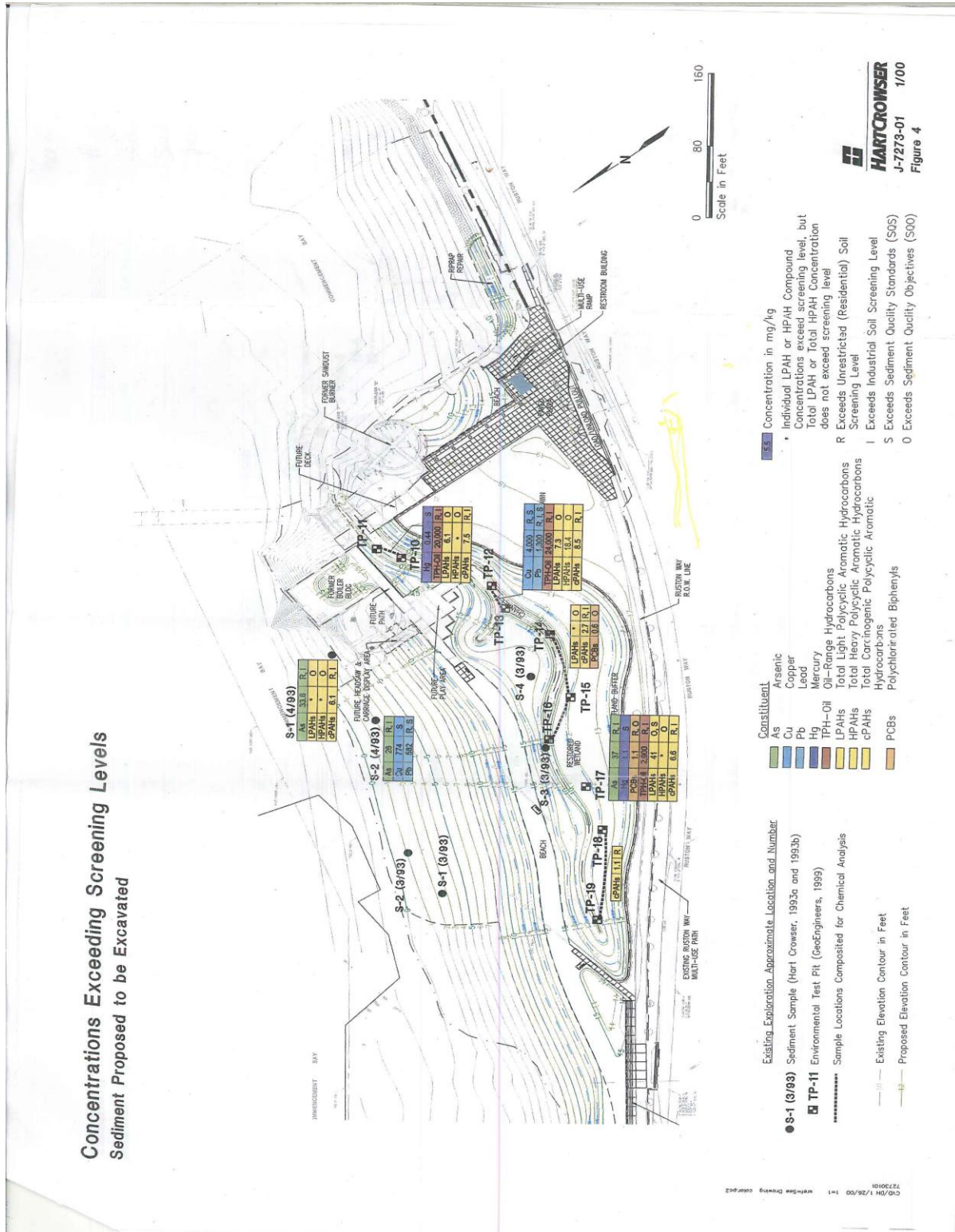
6.7 Hart Crowser: November 1999 and January 2000 Investigation Sampling Locations (yellow highlighted)



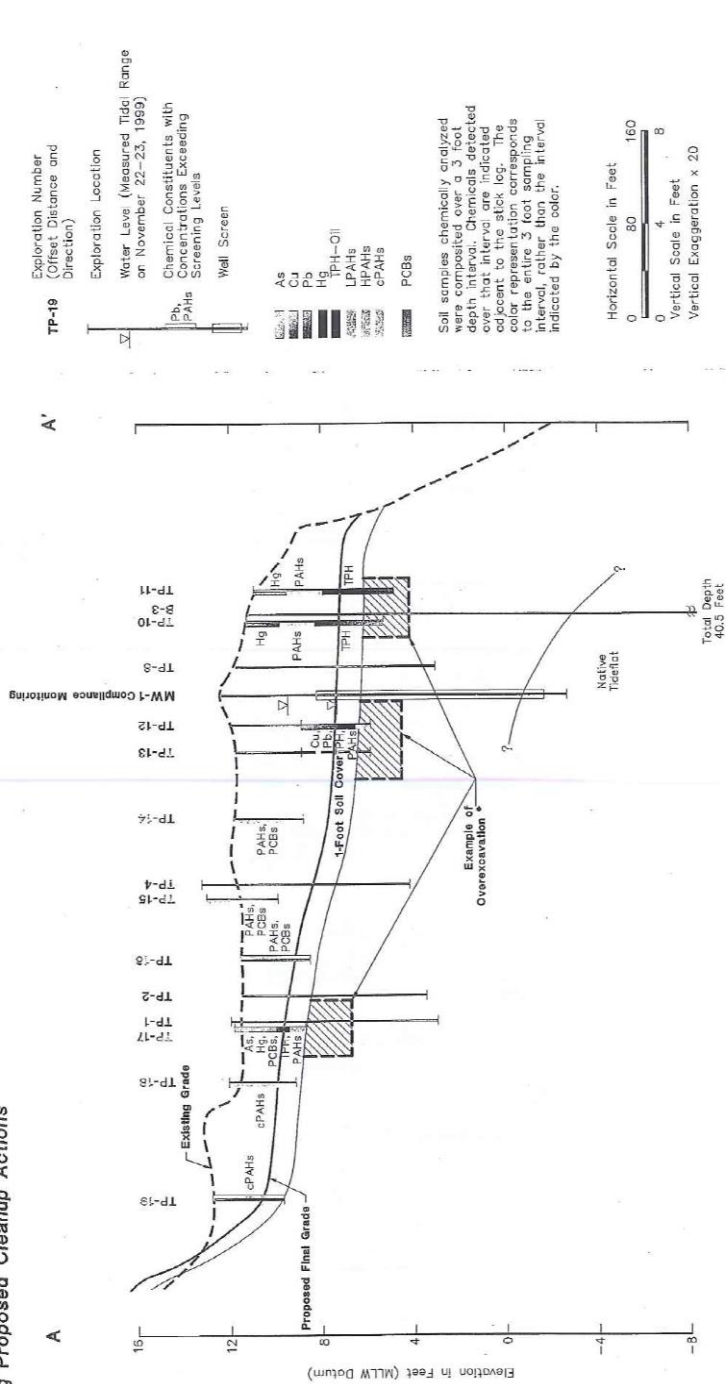
6.8 Selected Remedial Action



6.9 Proposed Sediment Excavation Areas and Contaminant Concentration Exceedances and Contaminants Left-in-Place



Wetland and Tide Channel Section A-A'
 Showing Proposed Cleanup Actions



Exploration Number (Offset Distance and Direction)
TP-19

Exploration Location
 Water Lane (Measured Tidal Range on November 22-23, 1999)

Chemical Constituents with Concentrations Exceeding Screening Levels

Well Screen

As
 Cu
 Pb
 Hg
 PAHs
 LPAHs
 HPAHs
 CPAHs
 PCBs

Soil samples chemically analyzed were composited over a 3 foot depth interval. Chemicals detected over that interval are indicated adjacent to the stick log. The color represents a worst case scenario. The color corresponds to the interval, rather than the interval indicated by the color.

Horizontal Scale in Feet
 0 80 160

Vertical Scale in Feet
 0 4 8
 Vertical Exaggeration x 20

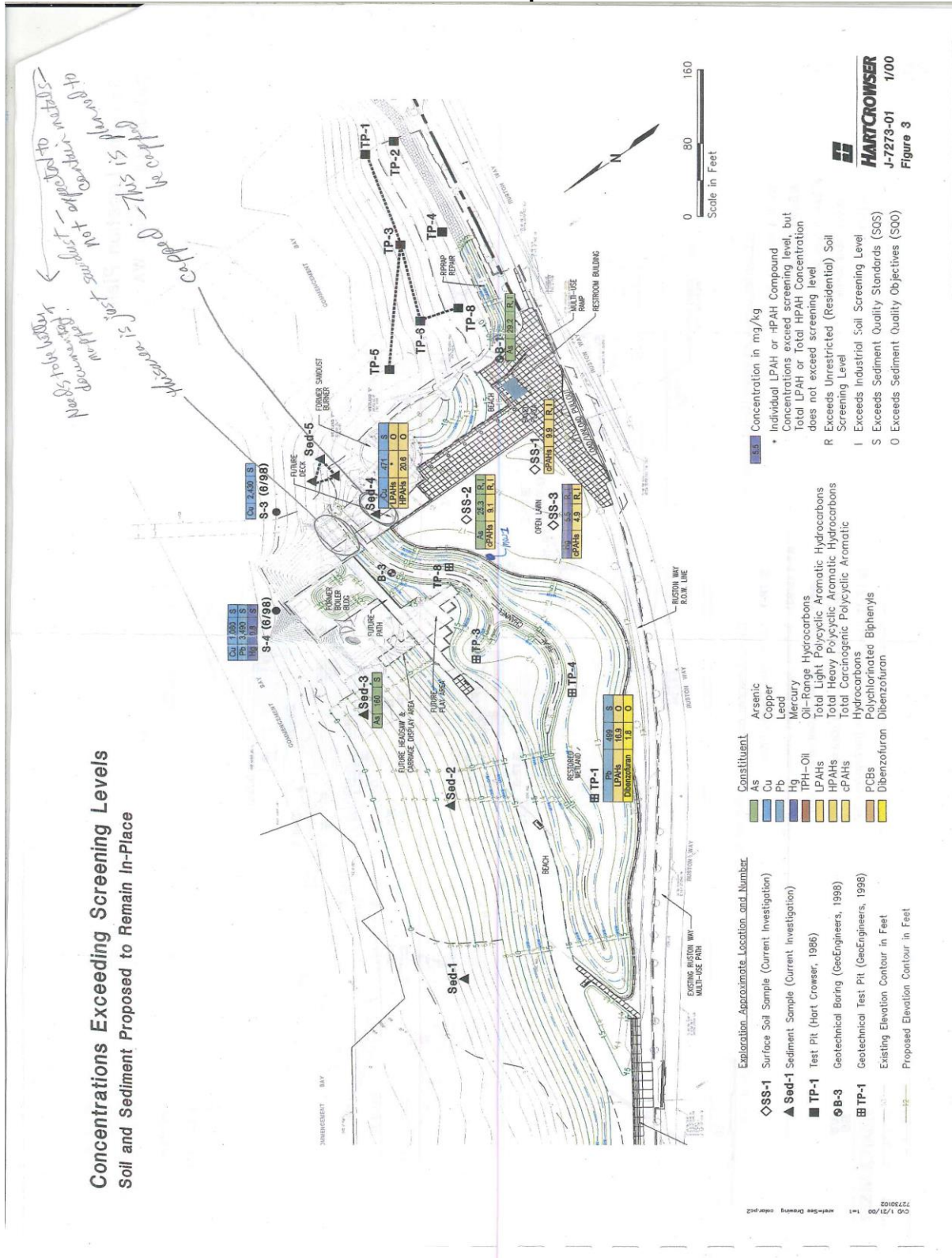
HARTCROWSER
 J-7273-01 3/00
 Figure 6

* Based on existing data. Actual overexcavation areas will be determined based on verification sampling during construction.

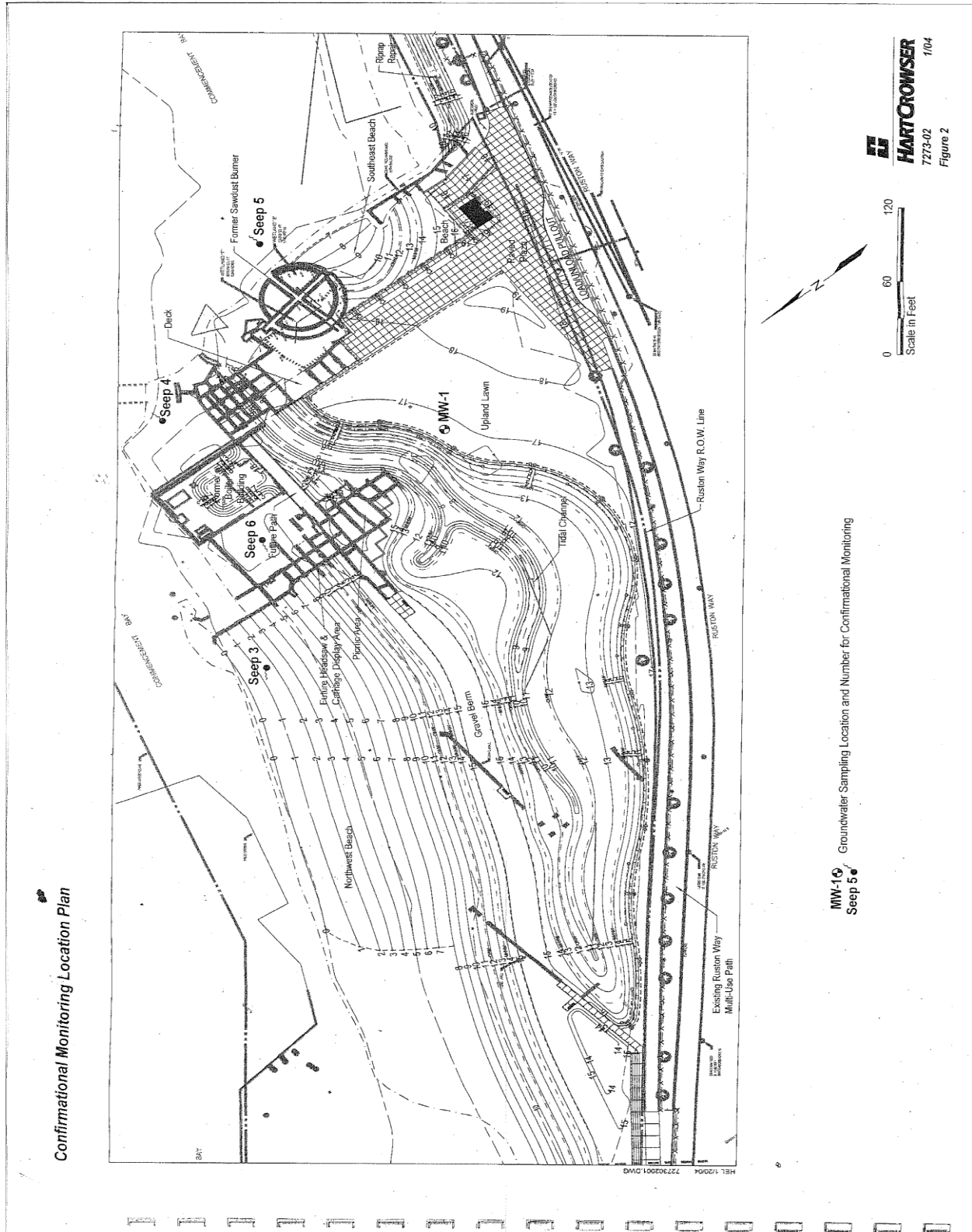
Note: Contacts between soil units are based upon interpolation between borings and represent our interpretation of subsurface conditions based on currently available data.

DP 3/22/00 1-00 hwd/ksk/pdf
 2/27/01/00

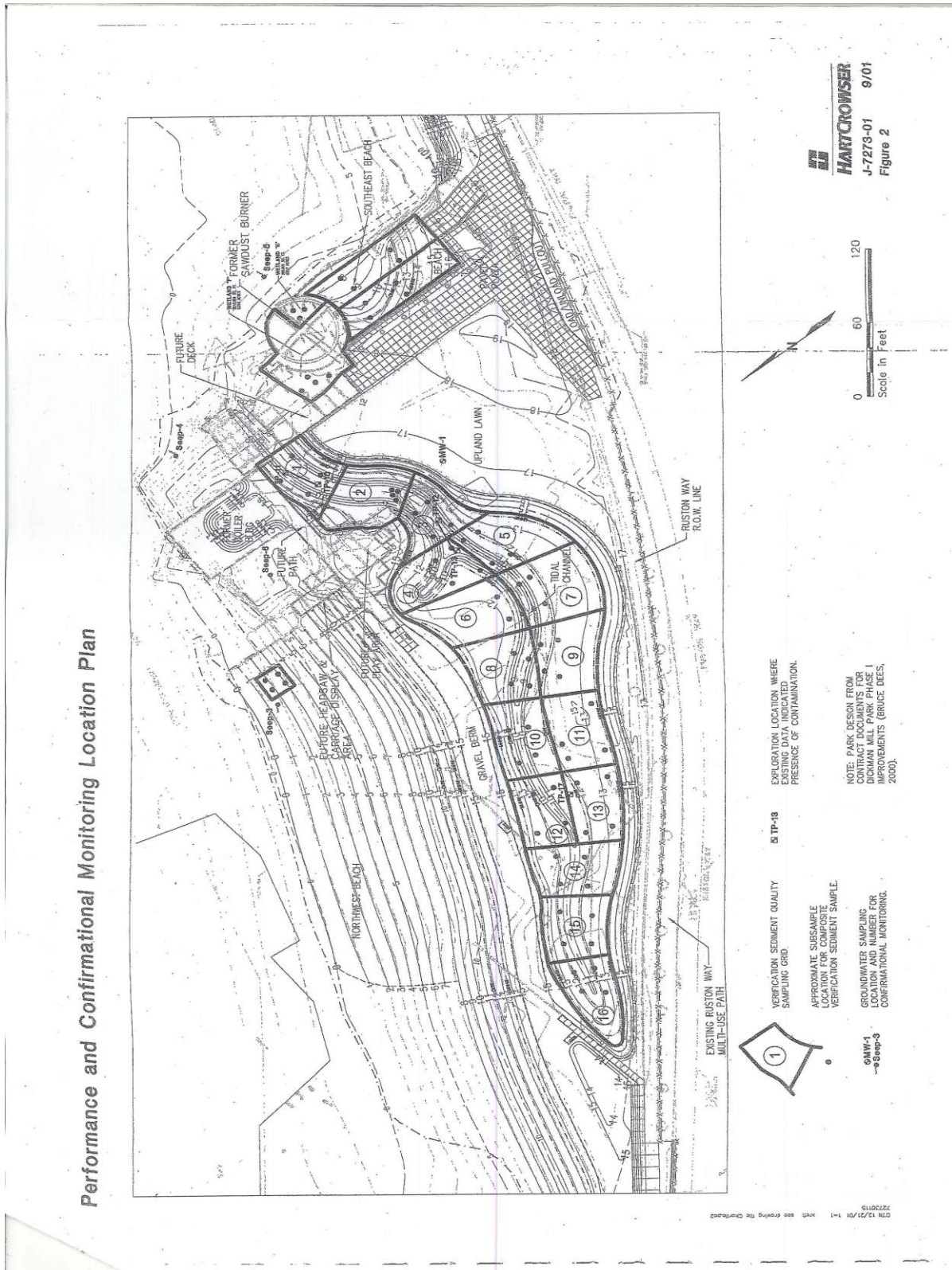
Locations of Contaminant Concentrations left-in-place



6.10 Conformational Groundwater Monitoring Locations

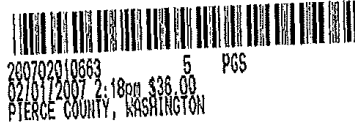


6.11 Post Construction Topographic Monitoring Area



6.12 Restrictive Covenant

Project # 8577
SIC 51009



AFTER RECORDING RETURN TO:

Mark R. Roberts
Davis Roberts & Johns, PLLC
7525 Pioneer Way, Suite 202
Gig Harbor, WA 98335

Document Title: Restrictive Covenant Regarding Dickman Mill Property
Grantor: METROPOLITAN PARK DISTRICT OF TACOMA
Grantee: State of Washington Department of Ecology
Legal Description: Section 30 Township 21 Range 03 Quarter 42

Legal Description is on Page 4 of this Document.

Reference Number: None

Assessor's Property Tax Parcel: 8950002534

RESTRICTIVE COVENANT REGARDING DICKMAN MILL PROPERTY

This Declaration of Restrictive Covenant is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 by the Metropolitan Park District of Tacoma, a Washington municipal corporation, its successors and assigns (hereafter "Metro Parks"), and the State of Washington Department of Ecology, its successors and assigns (hereafter "Ecology").

Metro Parks is the owner of certain real property located at 2423 Ruston Way, Tacoma, Washington, commonly known as Dickman Mill Park and legally described on the attached Exhibit A and depicted on the attached Exhibit B (hereafter the "Property").

An independent remedial action (hereafter "Remedial Action") occurred at the Property that is the subject of this Restrictive Covenant. The Remedial Action work is depicted on the attached Exhibit B. This Restrictive Covenant is required because

RESTRICTIVE COVENANT - Page 1 of 4

COPY


the Remedial Action resulted in residual concentrations of petroleum hydrocarbons left in place under the cap in the tidal channel.

Metro Parks makes the following declaration as to limitations, restrictions, and uses to which the Property may be put and specifies that such declarations shall constitute covenants to run with the land, as provided by law and shall be binding on all parties and all persons claiming under them, including all current and future owners of any portion of or interest in the Property.

1. The Property shall only be used for the purposes of a park and related recreational activities.
2. Any activity on the Property that may result in the release or exposure to the environment of the contaminated soil that was contained as part of the Remedial Action, or create a new exposure pathway, is prohibited. Some examples of activities that are prohibited in the capped areas include: drilling, digging, placement of any objects or use of any equipment which deforms or stresses the surface beyond its load bearing capability, piercing the surface with a rod, spike or similar item, bulldozing or earthwork."
3. Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.
4. Any activity on the Property that may result in the release or exposure to the environment of a hazardous substance that remains on the Property as part of the Remedial Action, or create a new exposure pathway, is prohibited without prior written approval from Ecology.
5. Metro Parks reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect, following public notice, comment and concurrence by Ecology in accordance with applicable law.

EXECUTED this 22nd day of January 2007.

GRANTOR:
METROPOLITAN PARK DISTRICT OF TACOMA

By: 
JACK C. WILSON
Its Executive Director

RESTRICTIVE COVENANT - Page 2 of 4

6.13 Photo log

Photo 1: Dickman Mill Park – from the Southeast



Photo 2: Dickman Mill Park Entrance from Ruston Way – from the South



Photo 3: Dickman Mill Park and the Ruston Way to the Right – from the West



Photo 4: Remaining Sawdust and Wood Burner Foundation, Restored Beach and the Commencement Bay – from the South



Photo 5: Former Sawdust and Wood Burner

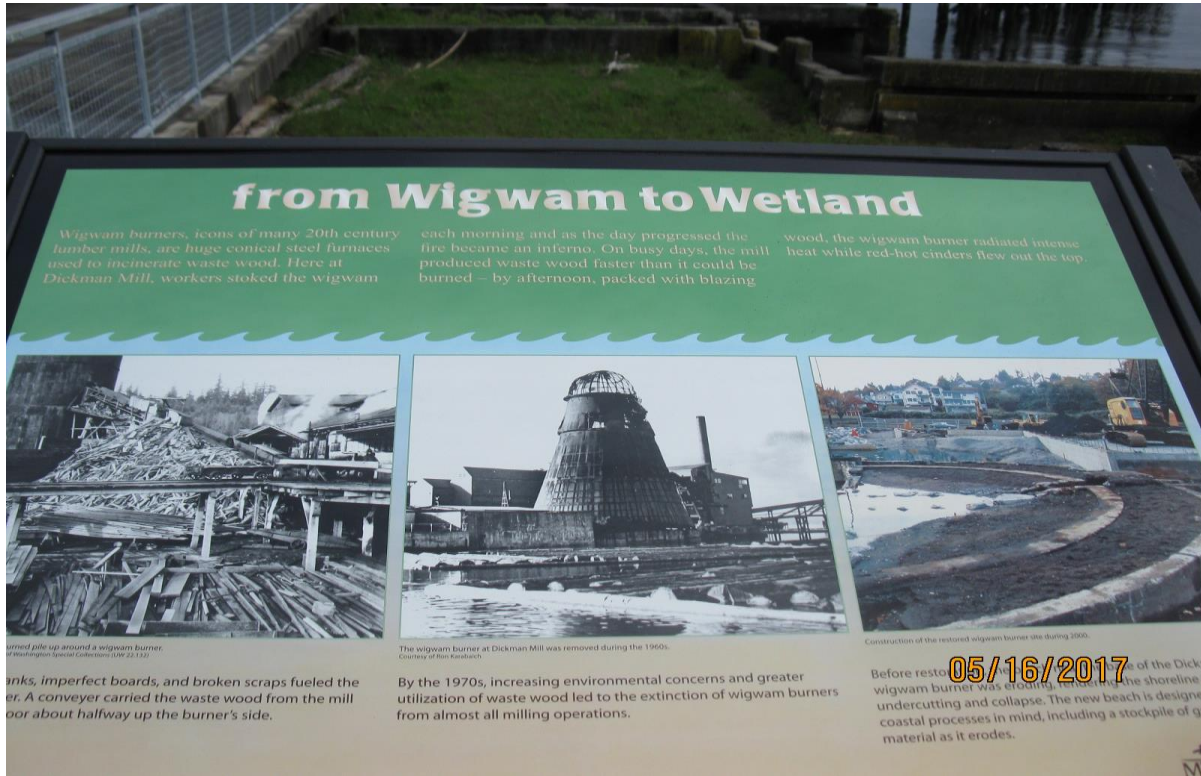


Photo 6: Remaining Mill Building/Foundation and Intertidal Area – from the West



Photo 7: Remaining Mill Building/Foundation and Pilings in the Commencement Bay – from the Southeast



Photo 8: Tidal Channel between the Park and Intertidal Area – from the East



Photo 9: Remaining Former Mill Building after 1979 Fire, Site Restoration and Remaining Mill Foundation



Photo 10: Remains of the Mill Foundation and the Commencement Bay – from the Southwest

