APPENDIX A

Upland Structural Inspection Report

Harris Avenue Shipyard - Upland Area Condition Assessment Report

Port of Bellingham
Harris Avenue Shipyard

Submitted to

Port of Bellingham
Bellingham, Washington

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Submitted by

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PORT OF BELLINGHAM
HARIS AVENUE SHIPYARD - UPLAND AREA CONDITION ASSESSMENT REPORT
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1.0 INTRODUCTION

In support of the Port of Bellingham and Washington State Department of Ecology's Agreed Order No DE 19450, Anchor QEA retained WSP USA (WSP) to perform a facility condition assessment (FCA) of the Harris Avenue Shipyard upland structures/foundations associated with a proposed environmental cleanup. The purpose of this facility condition assessment report (FCAR) is to identify the overall condition of the upland structures located within the Cleanup Action Plan (CAP) and determine any potential conflicts with upland cleanup needs by documenting structure types and associated foundations.

2.0 GENERAL SITE DESCRIPTION

The Harris Avenue Shipyard is located near the northwest end of the Fairhaven neighborhood at 201 Harris Ave, Bellingham Washington. The upland area reviewed during this assessment included the Paint Building, Stormwater Tanks 1 through 8 and their associated foundations, the Water Treatment Building, the Paint Shop, the Sandblast Shed, and the Conex Building. Stormwater Tank 6 is not labeled on Figure 1 as it is located inside the Water Treatment Building. See Figure 1 for a plan area of the shipyard's upland structures. The existing eco block bulkhead delineates upland area from in water structures and was not included within this scope.

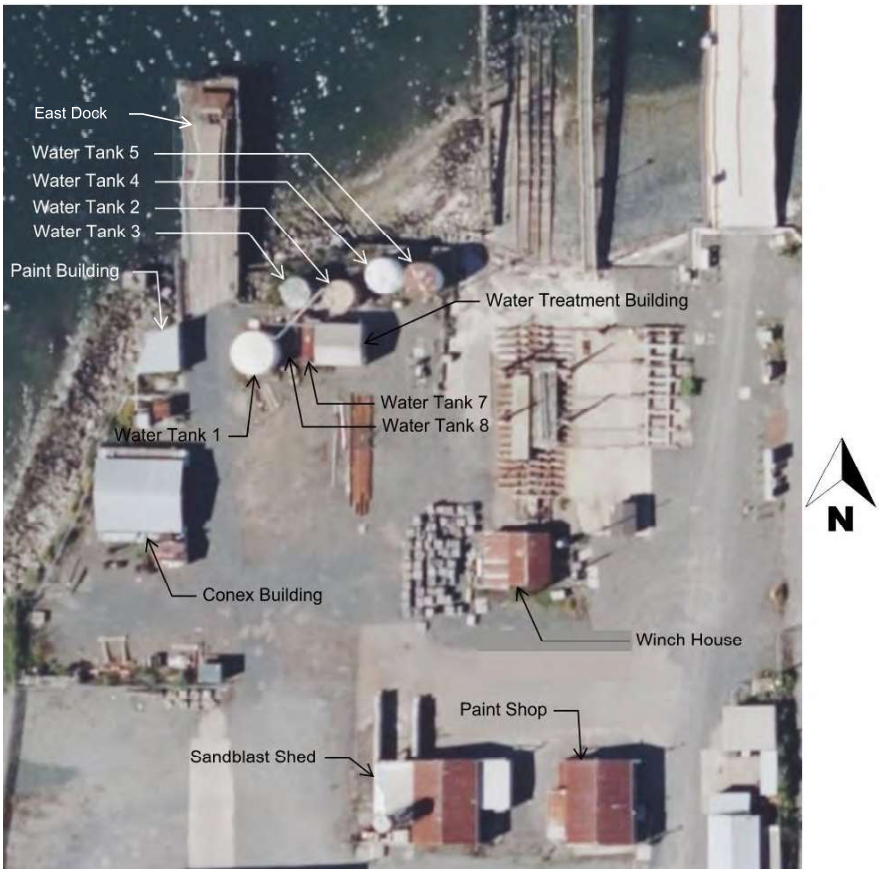

Figure 1. Harris Ave Shipyard Upland Plan

3.0 FACILITY CONDITION ASSESSMENT APPROACH

WSP performed a visual condition assessment of select upland structures at the Harris Avenue Shipyard within the general area of potential cleanup. The interior of tanks was not inspected as part of this assessment. Likewise, the interior of the paint shop and sand blasting shed building were not included within this scope.

4.0 FACILITY CONDITION ASSESSMENT METHODOLOGY

Condition assessment of elements included visual observation. Following the completion of the field work, visual observations were used to assign an overall facility condition assessment rating. The following facility condition assessment ratings was utilized during the assessment.

Good	No visible damage or only minor damage noted.
Satisfactory	Limited minor to moderate defects or deterioration observed.
Fair	All primary structural elements are sound but minor to moderate defects or deterioration observed.
Poor	Advanced deterioration or overstressing observed on widespread portions of the structure.
Serious	Advanced deterioration, overstressing, or breakage may have significantly affected the load-bearing capacity of primary structural components.
Critical	Very advanced deterioration, overstressing, or breakage has resulted in localized failure(s) of primary structural components.

5.0 STRUCTURE DESCRIPTION AND ASSESSMENT FINDINGS

A brief description of structures reviewed, and their associated condition assessment ratings are described in the following sections. Ratings have been assigned based on visual field observations.

5.1 STORMWATER TANK 1

Tank 1 is a steel tank, approximately 20 feet diameter, located in the northwest portion of the shipyard, east of the West Dock approach. See Figure 1 indicating the location in plan. The tank was not supported by or fastened to a concrete foundation.

Tank 1 is in **fair** condition. Paint has worn in locations and minor corrosion stains were observed throughout the outer surface of the tank. See photo 1 in appendix A.

5.2 STORMWATER TANKS 2 AND 3

Tank 2 is a fiberglass coated tank approximately 14 feet diameter situated on a 700 square foot concrete slab. The tank did not appear to be anchored to the concrete slab foundation and the slabs thickness is estimated to be approximately 5 inches. This same slab also supports adjacent tank 3 located west of tank 2. Tank 3 is approximately 14 feet diameter fiberglass coated tank. Steel angles are located towards the base of the tank, around the tank's perimeter, and anchored to the concrete slab. See Figure 1 indicating the location in plan.

Tank 2 and 3 are in **fair** condition. Minor corrosion was observed bleeding through exterior fiberglass coating on the exterior of the tank. Minor cracks were observed throughout the concrete foundation slab around the tank. See photos 2 and 3 in appendix A

5.3 STORMWATER TANK 4

Tank 4 is a fiberglass coated tank approximately 16 feet diameter situated on gravel directly to the northeast of Tank 2 and to the west of Tank 5. See Figure 1 indicating the location in plan.

Tank 4 is in **fair** condition. A tear in the fiberglass protective layer was noted on the exterior of the tank. The tank was not supported by or fastened to a concrete foundation. See photo 4 in appendix A

5.4 WATER TANK 5

Tank 5 is a steel tank approximately 16 feet in diameter situated on steel beam framing bearing directly on gravel. The tank is located directly to the east of Tank 4. See Figure 1 indicating the location in plan.

Tank 5 is in **fair** condition. A significant amount of corrosion stains was observed on the tank's outer surface but no substantial pitting on section loss was observed. The tank is supported by steel beams elevating the tank 6-inches above ground level. See photo 5 in Appendix A

5.5 STORMWATER TANK 6 AND WATER TREATMENT BUILDING

Tank 6 is a plastic tank situated within the northeast corner of the 420 square foot Water Treatment Building. The floor of the building consists of a concrete foundation

slab and is depressed approximately 6 inches below the exterior ground level. This building is constructed of timber framing with sheet metal walls and roofing. The building is located south of Tank 2 and east of Tank 7. See Figure 1 indicating the location in plan.

Tank 6 is in **fair** condition. No defects were noted on the plastic tank. See photo 6 in Appendix A.

The Water Treatment Building is in fair condition. Some corrosion stains were observed on the building's exterior walls as well as mechanical damage such as dents scuffs and dings to siding. Some water had collected on the floor, inside the building. Minor tears to the plastic sheathing on the interior side of walls and roof exposed insulation in few locations. No visual defects in the of the building's interior framing were observed. See photos 7 and 8 in Appendix A

5.6 STORMWATER TANK 7 AND 8

Water Tank 7 is a 22 ft long, 8 ft diameter steel tank, situated on gravel directly adjacent to Water Tank 8. Tank 8 is a 17 ft long, 8 ft diameter steel tank, situated on gravel. Both Tanks 7 and 8 are located between Tank 1 and the Water Treatment Building. See Figure 1 indicating the location in plan.

Tank 7 and 8 is in **fair** condition. Minor corrosion stains were observed on the tank. See photo 9 in Appendix A

5.7 PAINT BUILDING

The 310 ft^2 Paint Building is a timber framed structure with sheet metal walls and roofing. The structure is supported by a 5-inch-thick concrete slab. The building is in the northwest corner of the shipyard just to the southwest of the West Dock and north of the Conex Building. See Figure 1 indicating the location in plan.

The Paint Building is in **fair** condition. The steel roofing siding and timber walls are in good condition except for the southeast corner of the structure where damage was observed to the siding and column adjacent to the doorway/entrance. Hardware above the doorway entrance suggests a sliding door, similar to the Water treatment building, was once present. Tears in the plastic sheathing on the interior side of walls and roof exposed insulation in multiple locations. Minor cracking was present in the concrete slab foundation. See photo 10 in Appendix A

5.8 CONEX SHED

The 1400 square foot Conex Shed is a timber truss system supported by shipping containers acting as the structure's walls. The roof material is metal and the wall extending above the Conex box is timber framed construction with plywood sheathing. It is located south of the Paint Building. See Figure 1 indicating the location in plan.

The Conex Shed structure is in **fair** condition. Only minor defects were noted on timber truss framing elements. See photo 11 in Appendix A

5.9 PAINT SHOP

The 1,500 square-foot Paint Shop is constructed of steel siding and roofing with two large sliding bay doors located at each end of structure. The structure is located in the central portion of the shipyard. See Figure 1 indicating the location in plan.

From the exterior, the Paint Shop is in **fair** condition. The steel walls have minor/moderate corrosion and minor dents. Minor defects were observed in the concrete slab adjacent to the building. The interior of this building was inspected as part of this scope. See photo 12 in Appendix A

5.10 SANDBLAST SHED

The 2,200 square-foot Sandblast Shed has steel walls and roofing. The structure located is in the central portion of the shipyard adjacent to the Paint Shop. See Figure 1 indicating the location in plan.

From the exterior, the Sandblast Shed is in **fair** condition. The steel walls have minor/moderate corrosion and minor dents. Minor defects were observed in the concrete slabs adjacent to the building. The door to the structure on the south side had a large dent. The interior of this building was inspected as part of this scope. See photo 13 in Appendix A

6.0 RECOMMONDATIONS

In general, the upland foundations and structures are in **fair** condition. If structures or foundations located adjacent to open excavations during cleanup are to remain, shoring will need to be considered to prevent damage to said foundations. It appears that many stormwater tanks and or structures are no longer used. Therefore, it is recommended that any structures deemed obsolete by the tenant and obstruct or impact cleanup actives during construction, are demolished.

APPENDIX A

PHOTOGRAPHS

Photo 1 – Stormwater Tank 1

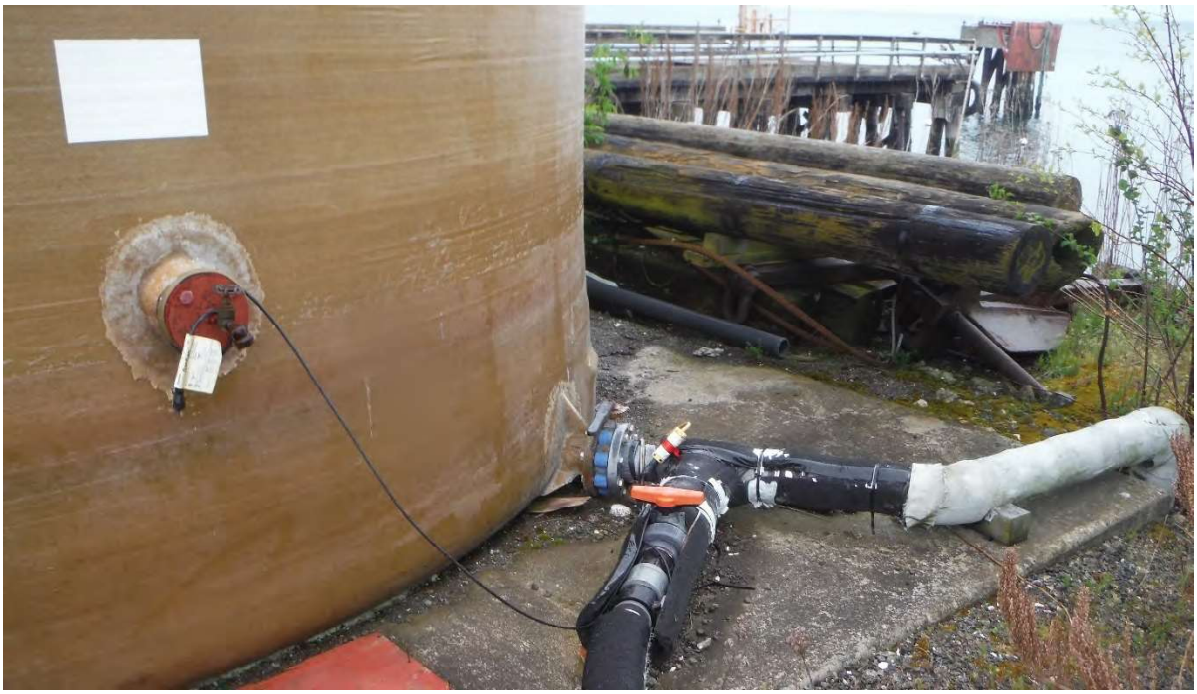

Photo 2 – Stormwater Tank 2 and Foundation

Photo 3 – Stormwater Tank 3

Photo 4 – Stormwater Tank 4

Photo 5 – Stormwater Tank 5

Photo 6 – Sormwater Tank 6

Photo 7 – Water Treatment Building Exterior

Photo 8 – Stormwater Treatment Building Interior

Photo 9 – Stormwater Tanks 7 and 8

Photo 10 – Paint Building

Photo 11 – Conex Building

Photo 12 – Paint Shop

Photo 13 – Sandblast Shed