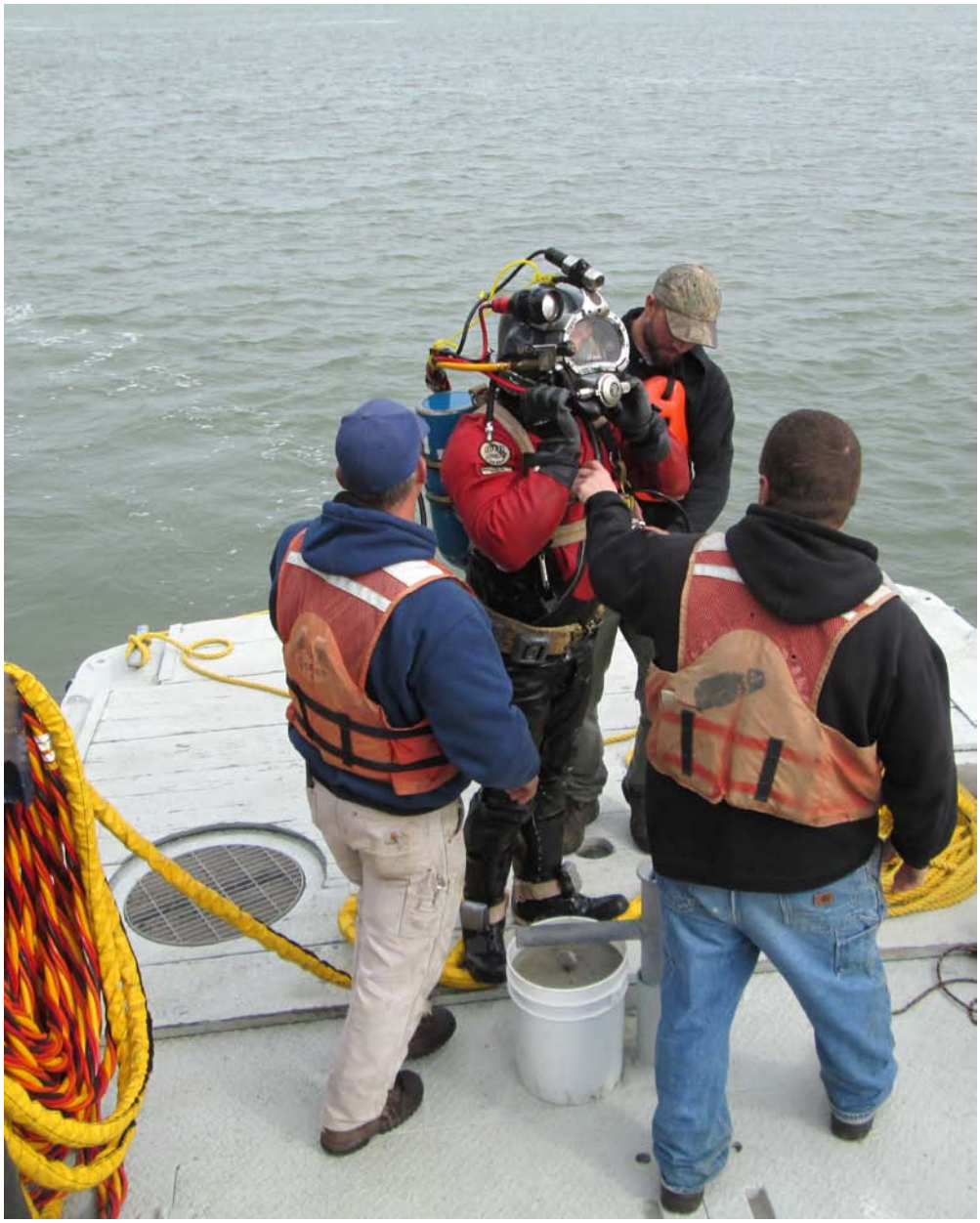
Appendix B

Underwater Inspection Report

NORTH COAST DIVERS INCORPORATED

Port Costa Underwater Inspection

March 19-21, 2013



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1.0 INTRODUCTION

As part of an AECOM environmental study within an area incorporating the old Port Costa Oil marine terminal, a bathymetric survey was conducted of underwater topography adjacent to the abandoned, deteriorated wharf structures. This survey area is bounded by an existing State Lands Commission lease. The bathymetry results revealed submerged objects within the lease boundaries with features similar to pipes and/or pilings.

North Coast Divers was contracted to provide a support vessel and dive crew to determine the exact nature of four sonar contacts, and obtain information that would be useful for future removal of the objects. The objects were designated SC-1, SC-2, SC-3 and SC-4, with locations that ranged from near the face of the main wharf, to about 175 feet offshore. Water depth at the offshore contact was approximately 95 feet. The image below shows the submerged object locations per the 2012 sonar survey.

In addition to investigating the four sonar contacts, NCD was directed to inspect the perimeter pilings around the various wharf structures, document bottom substrate conditions, pile condition, and existing scour.

The Port Costa survey area is located in the Mare Island Straight, and it was anticipated that near-zero visibility on bottom combined with high current velocities would be encountered during the dive inspection. Extensive pre-dive operational and safety planning was completed prior to mobilization to address the challenges and hazards specific to the work site.

AECOM provided GPS coordinates and sonar images obtained from the earlier bathymetric study to assist in object location, and provided an onshore field representative who remained in contact with the dive supervisor during the three day inspection.

Due to the probability of poor/absent bottom visibility, NCD also mobilized a surface deployed scanning sonar head that could be suspended from the dive vessel to an elevation just above mudline. This would allow the diving supervisor the ability to direct the diver to areas of interest, and graphically illustrate the bottom topography.

The inspection priority was investigation of the four cylindrical or pipe-like objects, followed by the piling inspection at the various wharf structures, walkways, and mooring dolphins.

2.0 SONAR CONTACTS INSPECTION RESULTS

As expected, the visibility on bottom was non-existent, and the NCD deployed sonar turned out to be an indispensable tool in guiding the diver to the various contacts. The sonar software was also very useful in providing accurate measurements and distances to other contacts. The sonar was most effective in polar scans not exceeding a distance about 50-70 feet. This was likely due to the steep slope dropping rapidly down from the shoreline, as best results are typically obtained from more level topography. The images recorded by the dive crew, however, do present an excellent picture of the object's layout and their relationship to each other.

SC-4

The target designated SC-4 is located approximately 170 feet offshore of the largest wharf section in approximately 95 feet of water. The image provided from the earlier bathometric study appeared to show two long objects about 50 in length, and were designated SC-4 and SC-5. In a pre-mobilization conference call with *eTrack Engineering*, another feature was seen on their imagery of a large round offshore of SC-4. This feature was added to the dive scope inspection.

The sonar displayed a very good image of what turned out to be a large truck tire, 7 feet in diameter. About 10 feet inshore of the tire, the diver reported two timber pilings lying next to each other. A short, 10 foot section of pile is laying at a perpendicular angle to the tire and two adjacent pilings. The piling diameters are about 13 inches, which matches the wharf timber support pilings. The two longer pilings are about 40-45 feet in length,

but due to their staggered position the overall object length is about 65 feet. The pilings appear to be in generally good condition, based on the diver's touch. The bottom consists of a soft layer of mud or silt over a firmer substrate. There would be no difficulty attaching slings or other rigging to recover the pilings or tire.

SC-5

The object designated SC-5 lies approximately 50 inshore (towards the wharf) from the SC-4 location, and is a timber piling of the same description of those documented at SC-4. This piling is also about 45 feet in length, appears in good enough condition to allow intact recovery to the surface, and can be easily rigged for retrieval.

There is an additional timber piling matching the characteristics reported above about 50 feet south and inshore of SC-5 that the dive crew also investigated. This target was not included in the inspection scope, but is likely the item designated SS-6 on the earlier bathometric images.

SS-1 and SS-2

These objects are long pipe sections lying on bottom, and parallel the face of the wharf structures. Object SS-1 is 8 inch diameter steel piping approximately 228 feet in length. Object SS-2 is 12 inch diameter steel piping, and is about 275 feet long. These pipes lay within a few feet of each other at the south end, in front of the large dock. The outboard, or offshore pipe (SS-2) trails down-slope at its northern extremity to a depth of approximately 66 feet of water.

The 8 inch piping has two timber piles lying across the top if the pipe that can be easily recovered, and are associated with the deteriorated dock structure. The south end of SS-1 extends past the 12" offshore pipe (SS-2) and terminates in a "tee" fitting. One side of the tee is open, with the opposite side blind flanged. The northern end of the pipe is flanged and blanked. The diver reported that there may be some support members attached at a few points along the 8" piping that are presently buried. Excavation would be required to determine if this is the case, however these miscellaneous supports, if they exist, will not likely present a significant impediment to removal of the piping.

The 12 inch diameter piping (SS-2) has a flanged valve in place on the south end of the pipe, and northern end of the pipe is blind flanged. Three flanged couplings were reported along the length of pipe, and appeared to be secure and tight.

Due to the extreme currents experienced in the area, there is some scour occurring on the offshore sides of SS-1 and SS-2, with mud cover accumulated on the inshore, or up slope sides of the piping. This scour is relatively minor, and lessens the difficulty of establishing recovery rigging. The two NCD sonar images on the following page (figures 1, 2 and 3) illustrate the layout and object locations, and are an excellent enhancement to the eTrack scans. The scan compass rose directions are not accurate, and should be ignored.

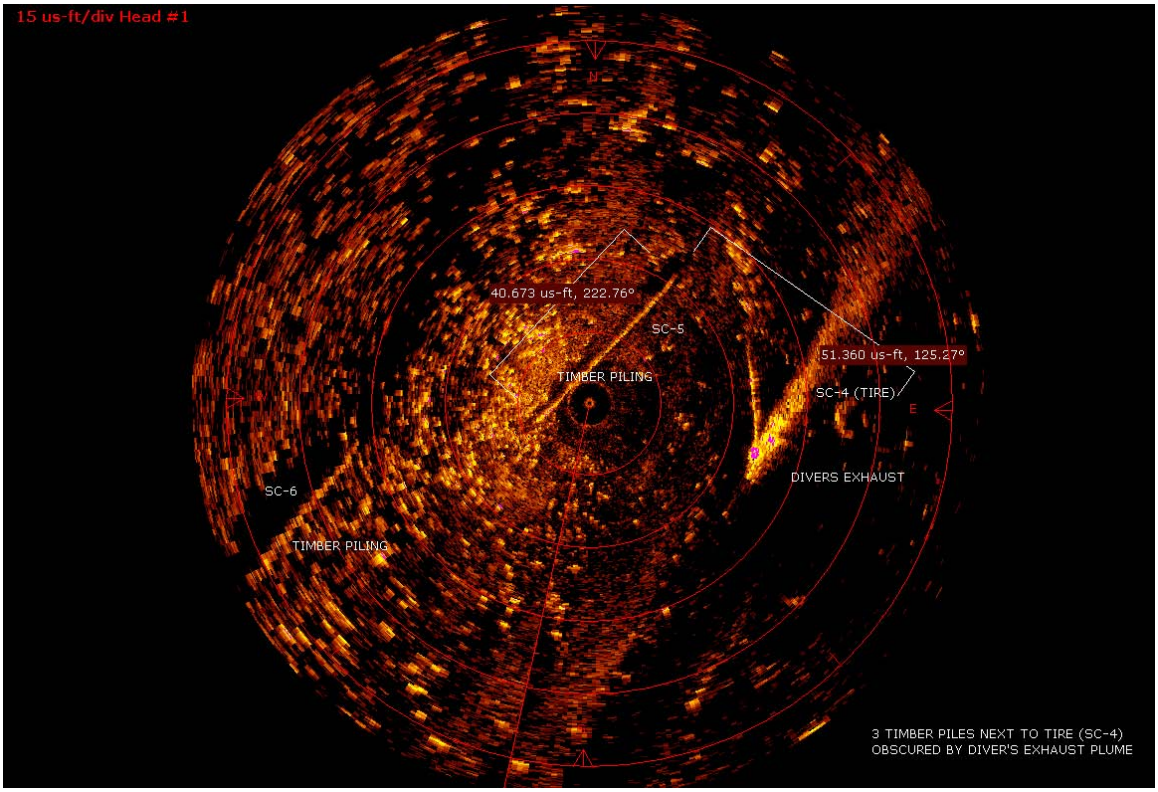


Figure 1: *Sonar scan showing diver inspection 3 pilings adjacent to truck tire. Divers exhaust plume temporarily obscures pilings at SC-4.*

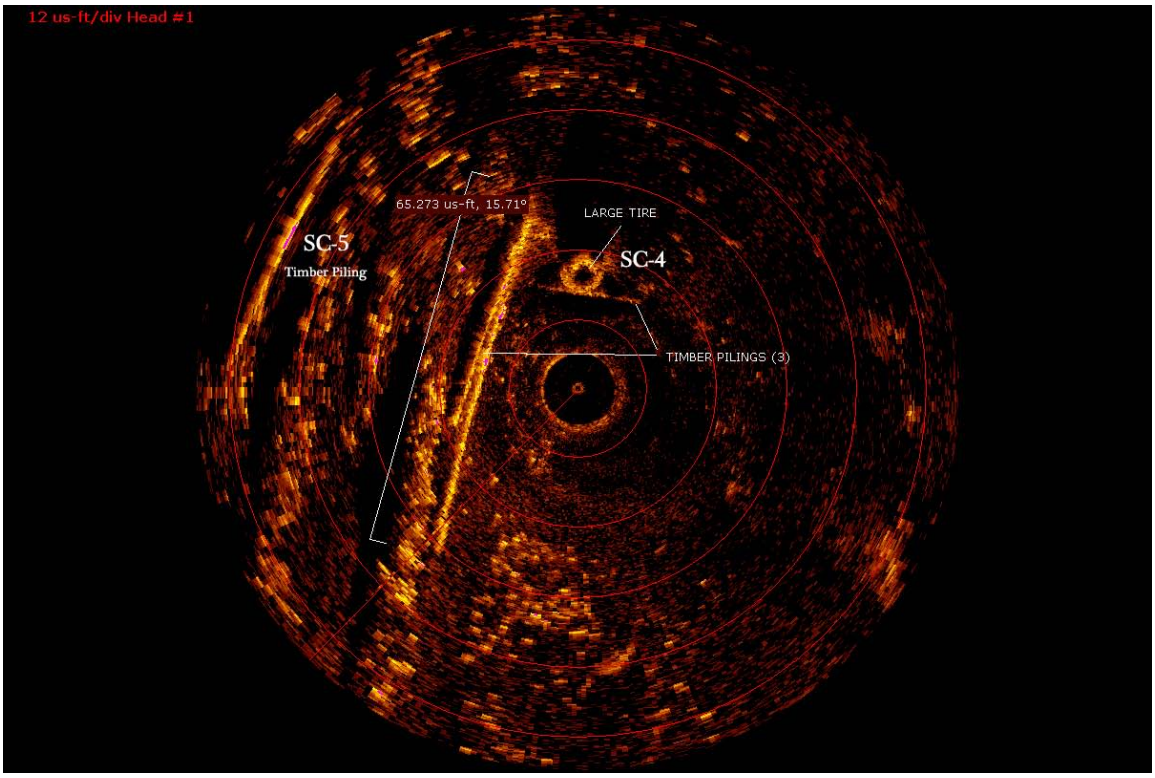


Figure 2: *This scan clearly shows the three timber pilings adjacent to the tire. The two long pilings are about 40 feet long, but in a staggered position, increasing overall object length to about 65 feet.*

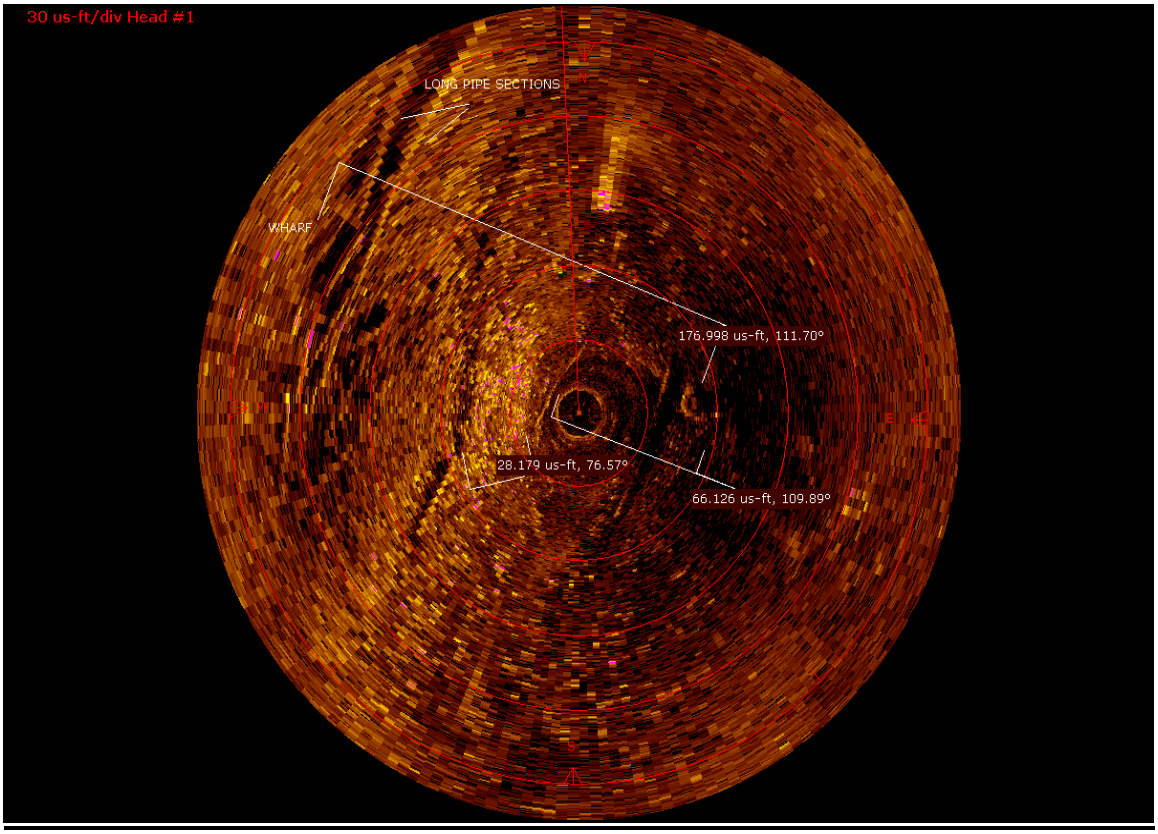


Figure 3: *The scan above shows all the submerged objects in the survey area, and confirm the 175 distance from the wharf to the SC-4 targets.*

Recovery of Submerged Objects

As described above, the objects located by the dive team consist of piping timber pilings, and a large tire. These objects, as far as could be determined by touch, are in generally good condition, although encrusted with marine growth, and should hold together during recovery to the surface.

It is assumed a derrick barge, and perhaps a materials barge or two, would be utilized during demolition and site cleanup. The timber pilings and truck tire can be easily rigged and recovered to the surface in single crane picks. The long pipe section recovery will likely require lifting one end up to the barge deck, and cutting the piping into lengths required for handling, transport.

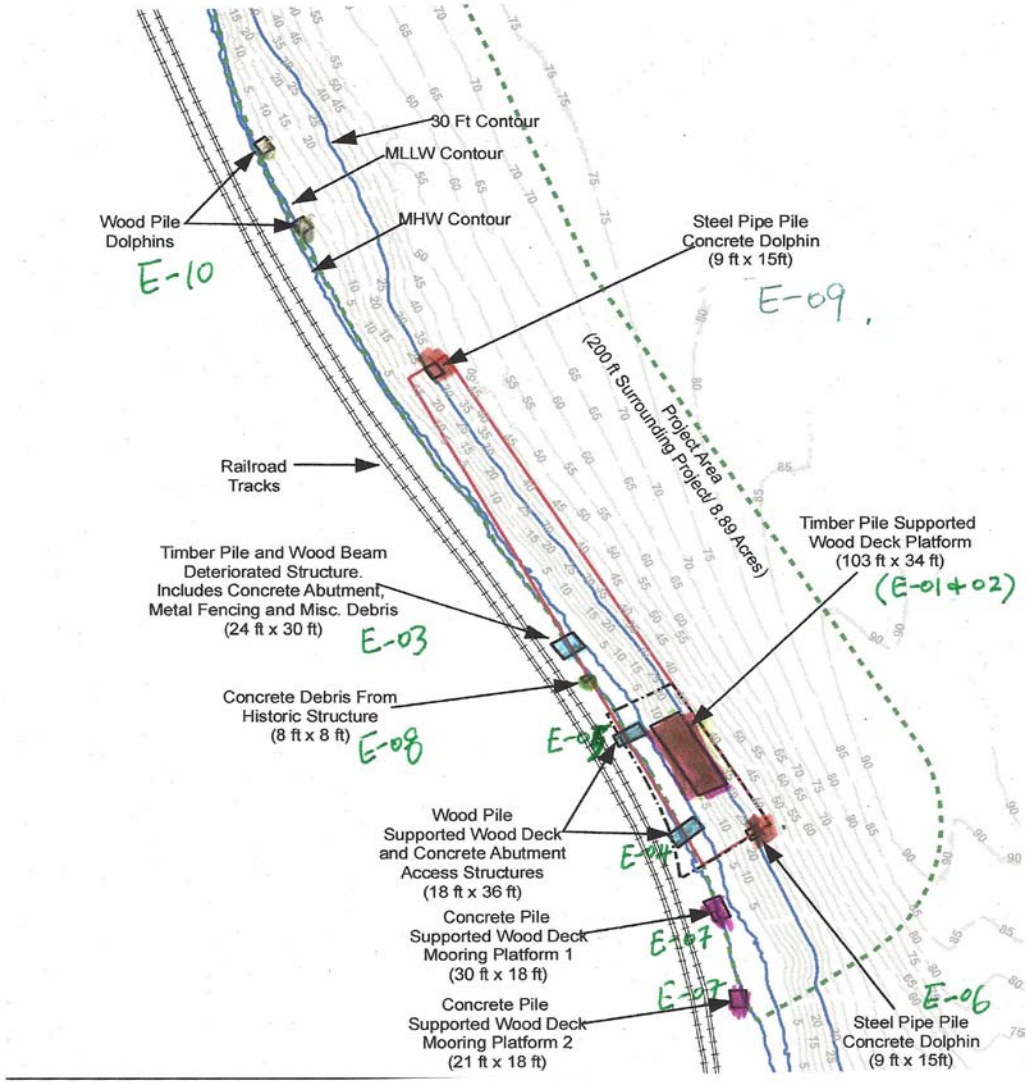
3.0 PILE INSPECTION OF WHARF STRUCTURES

In addition to the offshore object investigation, NCD was directed to carry out an inspection of pilings associated with the terminal wharf structures, mooring dolphins, walkways, and pile supported decks. When the marine terminal was in use, the walkways, main dock, and approaches were connected. In the intervening years, a fire combined with other deterioration has reduced many of these elements into disconnected, individual features. These features have well documented in previous studies.

Because of the extent of the damage, the dive crew was to investigate the submerged portion of the perimeter pilings only, and not walk on or penetrate to the interior of the damaged structures. The directed work scope was as follows:

- Inspect the underwater pile structure by gentle touching or similar means.
- Inspect the signs of local scouring around the piles.
- Inspect the substrate condition that could affect recovery.

The annotated drawing below (provided by AECOM) shows the structure designations for each location. The intent of the inspection was not a detailed report of each piling, for which access was not permitted in any case, but focused instead on information that may be useful when planning future demolition and disposal. The findings are in general conformity throughout the survey area in terms of typical pile and bottom conditions. These are described below for each location, beginning at the northern end of the project area.



E-10 – Wood Pile Dolphins

Location E-10 features two timber pile dolphins in an advanced state of deterioration. Some piles are broken at the splash zone; several are shelled out from marine borers. The wire rope binding the batter and plumb piles is largely absent, with some remnants reported on bottom by the diver.

E-10 North has five remaining piles, of which two are shelled out at mudline or through the splash zone. Medium sized rip rap is present on bottom at the base of the pilings, primarily on the inshore side.

E-10 South has eight remaining pilings, including one broken off in the splash zone. Rip rap is present on the inshore side of the dolphin. These pilings are in generally better condition than E-10 North, although there is extensive checking and splitting reported throughout the pile lengths.

E-09 – Steel Pile Dolphin with Concrete Cap (9 ft x 15 ft)

The steel pilings show advanced corrosion and surface scale, however no holes are similar damage was reported to the perimeter pilings. There are two timber piles on the south side extending above the splash zone next to the dolphin. These piles are shelled out and splintered, with bottom sections wedged into the battered steel pilings at the base of the dolphin. The bottom is very firm, with rocks and rip rap present.

The concrete cap and mid water concrete deck appear generally intact, with no separation occurring from the steel pilings they encase.

E-03 – Timber Pile and Wood Beam Structure (24 ft x 30 ft)

This area was above the waterline, and outside the dive scope. The AECOM field representative obtained photo documentation of this area, and will provide details regarding this location.

E-5 – Timber Pile Supported Wood Deck (18 ft x 36 feet)

There are six Timber piles arranged in three rows of two, most shelled by borer attack. The furthest offshore two pilings are below the water surface extending about 4 feet above mudline. The bottom conditions are firm and compacted, with no scouring evident at the base of the pilings. Rip rap and smaller rock is present around the base of the inshore row of pilings.

E-01/02 – Timber Pile Supported Wood Deck Platform (103 ft x 34 ft)

Less than half the timber pilings around the perimeter of the main dock appear to be in moderately good condition below the splash zone, although splits and checks are felt

along the pile lengths. The rest of the inspected perimeter pilings exhibit sectional borer damage and shelling between mudline and the splash zone. There is horizontal and diagonal timber bracing attached to several pilings, but not attached to the adjacent piling in many cases. The pile tops are charred from the fire that damaged much of the dock area. The bottom is firm and rocky, with rip rap collecting around the piles at the inshore portion of the dock.

E-04 – Timber Pile Supported Wood Deck

There are six Timber piles arranged in three rows of two, most shelled by borer attack. The furthest offshore two pilings are below the water surface extending about 4 feet above mudline. The bottom conditions are firm and compacted, with no scouring evident around the base of the pilings. Rip rap and smaller rock is present around the bottom of the inshore row of pilings. At this location, the decking extends to a point above the inshore pilings; however these pilings are heavily shelled out at mudline, and offer no structural support to the deck above.

E-06 – Steel Pile Dolphin with Concrete Cap

The steel pilings show corrosion and scaling on the exterior surface area, but the diver did not report feeling holes or other major damage. In addition to the concrete cap at the top of the mooring dolphin, there is a second concrete brace cast around the pilings in the splash zone, to which remnants of timber fendering is still attached. The concrete cap and lower elevation concrete deck appears generally intact, with no separation occurring from the steel pilings they encase.

The bottom is firm and compacted with rip rap present, particularly on the inshore side. There are pieces of what appears to be concrete debris mixed in with the rip rap.

E-07 North – Concrete Pile Supported Wood Deck Mooring Platform (30 ft x 18 ft)

The three concrete pilings were in less than three feet of water at the time of inspection. The southern pile was in good condition. The middle and northern piles were spalled and cracked. The bottom is hard, rocky, and has small rip rap present. There are pieces of concrete also present on bottom.

E-07 South – Concrete Pile Supported Wood Deck Mooring Platform (21 ft x 18 ft)

This location was located on dry land, and outside the dive inspection scope. The AECOM field representative obtained photo documentation of this area, and will provide details regarding this location.

PILE INSPECTION SUMMARY

The condition of many of the timber support pilings are deteriorated to the point that attempts at conventional extraction would probably result in the piling breaking apart above mudline. If the demolition requires removal of the piles below mudline, this will require excavation and rip rap removal in the cases of the most damaged pilings.

Typically, divers will use an educator-style suction dredge to "side cast" enough material to expose the pile at the cutoff elevation, where it is cut with an underwater chain saw. This type of minimal bottom disturbance does not normally require regulatory permitting beyond that necessary for the major demolition that will occur during the project site cleanup effort.

The jetting and/or dredging will be slowed by the firm, compacted condition of the substrate, but is can be accomplished by the method described above. The rip rap and rock that will be encountered in most cases can be moved by hand away from the piling, although this also will be time consuming and labor intensive.

Sincerely,

NORTH COAST DIVERS, INC.

Rick Heaslet
President