



January 20, 2005

Mr. David Mik
Power Engineering
1501 Viking Street, Suite 200
Alameda, CA

Subject: Work Plan for Removal of Contaminated Soil, Stone Boatyard, 2517 Blanding Avenue, Alameda, California

Dear Mr. Mik:

This letter presents the Work Plan for removal of contaminated soils at the Stone Boatyard, 2517 Blanding Avenue, Alameda, California. Questa previously prepared a Phase 2 Environmental Site Assessment that outlined the results of a subsurface investigation and analytical testing of soil and groundwater. During that investigation, two areas of the site were identified as having subsurface contamination exceeding the California Hazardous Waste levels (CCR Title 22) or the Regional Water Quality Control Board Environmental Screening Levels (ESLs) guidelines. Results were presented in the report dated November 18, 2004 and titled *Results of Phase 2 Environmental Site Assessment, Stone Boatyard, 2517 Blanding Avenue, Alameda, California*.

CLEANUP GOALS FOR SOIL

The proposed cleanup goals for soil at the site will meet or exceed the Environmental Screening Levels (ESLs) established by the RWQCB for Commercial/Industrial Sites where groundwater is less than 3 meters (approximately 10 feet) deep and is not a current or potential drinking water source (Table B, Volume 1 ESL levels, RWQCB, July 2003, updated February 2004). The contamination at the site was evaluated in our Phase 2 Environmental Site Assessment report dated November 18, 2004. A copy of this report is enclosed with this work plan. The following **Table 1** lists the relevant soil contaminants, the ESLs, and the proposed cleanup goals.

Table 1. Proposed Cleanup Goals for Soil

Contaminant	Table A Soil ESL Commercial Site Potential Drinking Water Aquifer (mg/kg)	Table B Soil ESL Commercial Site Not A Drinking Water Aquifer (mg/kg)	Proposed Cleanup Goal (mg/kg)
Chromium (total)	58	58	58
Copper	230	230	230
Lead	750	750	750
Zinc	600	600	600
TPH as Gasoline	100	400	100
TPH as Diesel	100	500	250
TPH as Motor Oil	1,000	1,000	1,000

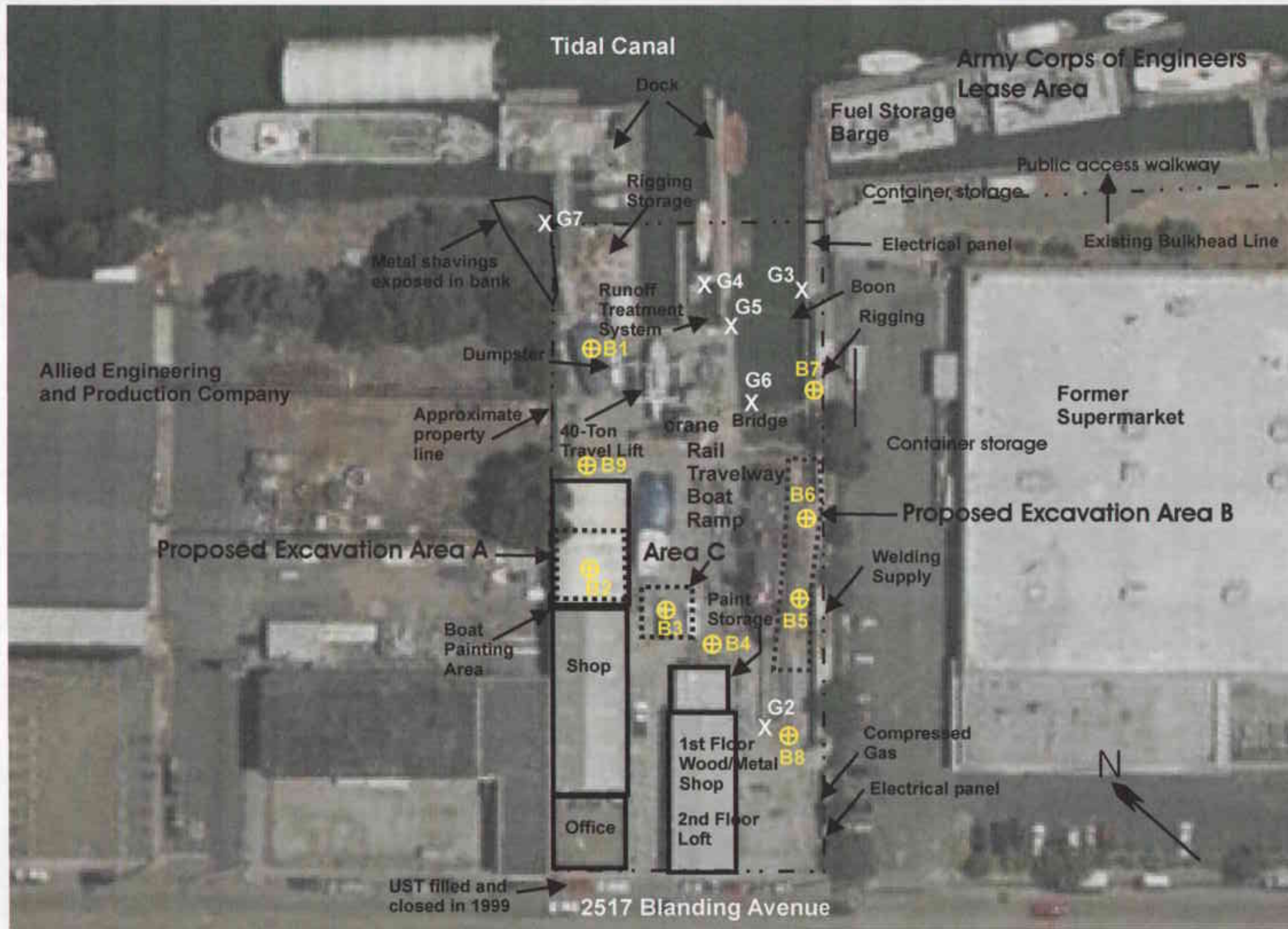
The proposed cleanup goals for the site will meet the Table A guidelines for Commercial-Industrial sites where groundwater is a potential drinking water source for all chemicals of concern with the exception of TPH as diesel.


SOIL EXCAVATION AREAS

Three areas of the subject property require contaminated soil removal as shown on **Figure 1**. The Boat Paint area in the vicinity of Borehole 2, shown as area A on the plan, contains hazardous waste level concentrations of Copper in the concrete trap backfill material and Lead in the three feet below ground surface. Elevated concentrations of total petroleum hydrocarbons (TPH) as diesel and motor oil were also found in this area. An area of approximately 2,500 square feet of concrete will require removal and soil will be excavated to depths of approximately eight feet below ground surface. The upper three feet of this soil will likely be contaminated at hazardous waste levels (Class I) with the lower five feet contaminated at special waste levels (Class 2). Total excavation depth is anticipated to be approximately eight to nine feet at the deepest point.

The second area, Area B, requiring excavation is located to the south of the Boat Travelway in the vicinity of Boreholes 5 and 6. This area will require removal of approximately 15,000 square feet of concrete. The excavation area is approximately 12 feet wide by 120 feet long and will require excavation to a depth of approximately nine feet below ground surface to remove contamination to levels below the ESLs. Contamination in Area B consists of a combination of the metals copper and lead in the shallow subsurface samples collected at one foot below ground surface, and TPH as diesel and gasoline in the samples collected at five to eight feet below ground surface.

The third area, Area C, requires excavation due to the presence of lead at the hazardous waste level of 1,000 mg/kg at a depth of one foot below ground surface. This sub-site



-  Proposed excavation area
- G2 X** Location of Grab Sample (9/28/04)
- B1 ⊕** Borehole Location (11/2/04)

0 40 80 feet
scale is approximate only

Date: 01/18/05
 Drawn: JF
 Apprd: WH
 Dwg. No: 240155_excavation



Stone Boat Yard
 Excavation Plan
 Alameda, California

FIGURE
1

will require concrete removal of an area of approximately 400 square feet, 20 feet by 20 feet, with excavation of soil to depths of approximately three feet below ground surface.

The cleanup goal for TPH as diesel at 250 mg/kg will allow soil to remain in two locations where TPH as diesel are at or exceed 100 mg/kg (the Table A Commercial-Industrial ESL). In the vicinity of boreholes B7 (B7@1.0', TPH as diesel- 150 mg/kg) and B9 (B9@6', TPH as diesel- 100 mg/kg) no soil excavation is planned. These areas both had no detectable TPH as gasoline and the levels of TPH as motor oil present were low, less than 100 mg/kg at B7 and less than 200 mg/kg at B9. The concentrations of metals were also low in the soil samples from B7. No metals were analyzed in B9, but no detectable volatile organic compounds (VOCs) were detected.

METHODS OF EXCAVATION AND STOCKPILING

Excavation will be performed using conventional excavation equipment such as a track-mounted excavator capable of reaching the depths required for soil removal. Work will be performed by 40-hour Hazardous Waste Operations trained personnel in accordance with federal and state regulation. Excavated soils will be placed on pre-prepared concrete slab-on-grade areas covered in 10-mil plastic sheeting and bermed around the sides to prevent any contamination of adjacent areas. Stockpile sampling will be performed to obtain landfill acceptance. The frequency of sampling and the analytical testing required will be determined in consultation and agreement with the landfill(s) representative. Typically, one four-point composite sample will be collected from each stockpile. Excavating and stockpiling will be performed under the observation and testing of an independent state-licensed Civil Engineer/Engineering Geologist or his representative.

EXCAVATION SPOILS VOLUME

The volume of soil to be excavated is estimated to total approximately 700 cubic yards. This will include three classes of waste. Class I RCRA material will require disposal to a Class I landfill within California or a RCRA landfill outside of California. Approximately 50 cubic yards of soil will require this type of disposal. Class I non-RCRA material will require disposal to a Class I landfill within California or a non-RCRA landfill outside of California. Approximately 150 cubic yards of soil is estimated to require this type of disposal. Class 2 special waste will require disposal to a California Class 2 landfill. Approximately 500 cubic yards is estimated to require this type of disposal.

CONTAMINATED SOIL HAULING

A certified hazardous waste hauler and 40-hour trained personnel will haul all soils removed from the site. A transportation safety plan will accompany the hauler in case of accident or emergency. Hazardous Waste Manifests will accompany all hazardous waste removed from the site and will be signed off by the landfill upon waste receipt. Waste Manifests will also be provided by the Class 2 Special Waste landfills.

CONFIRMATORY SAMPLING

Following the completion of soil excavation, confirmatory soils samples will be collected from the sidewalls and bottom of the excavation area. Typically, samples will be collected from each sidewall near the mid-point, or in areas of suspected contamination. A minimum of two bottom samples will be collected from each excavation area. These may be sampled by collecting samples from the excavated material within the excavator bucket. Samples will be analyzed for the contaminants of concern as listed in **Table 1** above. Should the results indicate that additional excavation is required, re-testing will be performed after additional soil has been removed.

Samples will be collected using decontaminated soil sampling equipment including stainless steel and plastic trowels. Soil will be immediately transferred into pre-cleaned glass jars and will be sealed with lined plastic screw caps. Samples will be labeled and placed in a cooler on ice. Chain of custody documentation will be maintained from the time of sampling until samples are delivered to the analytical testing laboratory in accordance with EPA protocol.

Decontamination of sampling equipment will utilize a series of three buckets. The first will contain a solution of tap water and non-phosphate detergent and a scrub brush. The second will contain tap water and brush and the third will be a tap water rinse. The sampler will then have a final rinse with commercial distilled water.

LABORATORY TESTING

All laboratory testing will be performed in accordance with EPA test methods at a state-certified analytical testing laboratory. TPH as gasoline, TPH as diesel and TPH as gasoline will be tested in accordance with EPA test method 8015B. The metals Chromium, Copper, Lead, and Zinc will be tested in accordance with EPA test method 6010B.

Page 5
Mr. Mik
January 20, 2005

EXCAVATION BACKFILLING

Following contaminated soil removal and completion of confirmatory soil sampling the site should be restored by backfilling with clean import fill compacted to a minimum of 90 percent relative compaction. The upper twelve inches below concrete should consist of Class 2 aggregate base compacted to a minimum of 95 percent of the maximum dry density. The restored soil should then be covered by 3,500 psi concrete a minimum of four to six inches in thickness.

FINAL REPORT

A final report will be prepared documenting the results of the excavation including results of confirmatory sampling, areas of soil removal, results of stockpile sampling, analytical test reports, and copies of hazardous waste manifests.

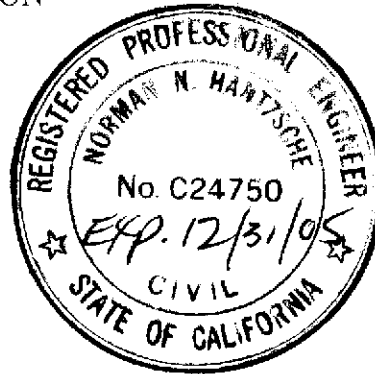
We trust this is the information you require at this time. Should you have any questions, please contact the undersigned at (510) 236-6114, extension 222.

Sincerely,

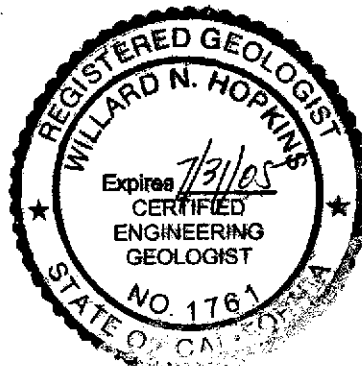
QUESTA ENGINEERING CORPORATION



Norman N. Hantzsche, P.E.
Principal/Managing Engineer



Willard N. Hopkins, C.E.G.
Senior Engineering Geologist



Ref: 240165 RemovalAction_workplan