SENT 11-30-99

Washington State Department of Transportation
Sid Morrison
Secretary of Transportation

Northwest Region
6431 Corson Avenue South
Seattle, WA 98108

(206) 768-5700

November 29, 1999

Port of Seattle
Beth Clarke, POS environmental Section
17900 International Blvd., Suite 402
Seattle, WA 98188

RE: First Avenue South Bridge Vicinity
Available Fill Material

Dear Beth:

This letter is written to fulfill the Port of Seattle's requirements to accept the fill material from the First Avenue Bridge construction site. As you are aware, there are approximately 120,000 cubic yards of excess material available southwest of the First Avenue Bridge. A copy of a memorandum from Mike Stephens of WSDOT Environmental Affairs Office, summary and sampling results from the stockpile by Health Risk Associates, Inc. and a site map showing where samples were taken are attached to this letter.

According to Health Risk Associates, Inc., the top few feet of soil on the original ramp embankments contain slightly elevated levels of Petroleum Hydrocarbons. The levels of contamination may have come from several sources, including the past practice of oiling the city streets by the City of Seattle in this area. Please refer to the attached report for more details.

WSDOT is willing to set aside the top few feet of the contaminated material and analyze it again using a different procedure. If further analysis indicates the material is contaminated above the levels acceptable to the Port, the WSDOT will not propose transporting the material to your site. The remaining majority of material on the site doesn't appear to be environmentally impaired based on the analytical testing.

If the Port of Seattle decides to accept the fill material, it is available for use immediately. The existing fill material could be used for embankment construction during dry weather, but may not be suitable for use during wet weather. The Port will need to notify the State where the fill material will go including a haul route and any restrictions to the route if an agreement is reached.

We are also aware that the Port has geotechnical concerns over the material. Please advise us as to the acceptability of the material environmentally so we can begin the engineering required to assure the fill will be placed in a manner that will provide the stable base required to meet your project needs.

We are looking forward to working with the Port of Seattle in wrapping up this matter. If you require additional information or have questions, please feel free to contact me at (206) 768-5861.

Sincerely,

Thomas R. Madden, P.E.
Project Engineer

File: C4962 project file
cc: C. Arnold NB82 - 230

TRM:ms
MS

Copy: T. MIKE STEPHENS 47331
HQ ENVIR.

Tom copy

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TOM MADDEN'S OFFICE

Washington State Department of Transportation

Memorandum

November 1, 1999

TO: Tom Madden
MS: NB82-60

FROM: Mike Stephens
360-570-7256

SUBJECT: Fill Material Certification for the Port of Seattle

This memorandum report is prepared to fulfill a fill material certification requirement for the Port of Seattle so the Washington State Department of Transportation (WSDOT) may provide material from the First Avenue Bridge construction site to the SEATAC third runway construction project. A geo-technical assessment is not included in this memorandum. It could be attached as a separate report if required by the Port of Seattle.

Fill Site Description

Site Location: The site, jointly owned by the City of Seattle and WSDOT, is located southwest of the recently constructed First Avenue South Bridges between Marginal Way Southwest and Southwest Michigan Street, Seattle, Washington. It is further described as a portion of Government Lot 2 and a portion of the NE1/4, SE1/4, Section 30, Township 24N, Range 4E, Willamette Meridian.

Site Description: The site was the location of former on and off-ramps to the original First Avenue South bridge. The site is currently an open field with limited access. The trace of the removed roadway is apparent both in aerial photographs and in site reconnaissance. There are three distinct materials available for removal from the site, described as follows:

1. Very dense, highly compacted light brown, poorly graded, gravelly, sand. This material formed the top surface of the ramps and is approximately 2-4 feet deep over the entire ramp surface. The asphalt road cap has been removed. There is an estimated 5,000 cubic yards of this material.

2. Very dense, light gray, silty to sandy silt, and fine to coarse gravelly, clay. This material formed the foundation of the ramp embankments. The depth ranges from 2 feet at the west end of the site to 20 feet on the east end of the site. There are approximately 75,000 cubic yards available for removal.

3. Loose, dark gray to black, silty sands. This material is Duwamish Alluvium excavated from the new bridge piers. There is approximately 40,000 cubic yards of this material available for removal. None of this material includes any river sediments. This material was moved from under the new bridge after it was determined there was no further use for it on the bridge project. The material is currently piled along the edges of the ramp embankments.

Site Reconnaissance

The site was visually inspected by staff from the WSDOT Environmental Affairs Office (EAO) in October 1999. The site consists of an open lot with built up surface embankments for highway ramps. There are numerous pieces of concrete in various sizes that came from the old demolished First Avenue Bridge. Some limited solid waste dumping is evident. None of this solid waste appears hazardous. There was no evidence of other hazardous material disposal on the site.

Review of Existing Environmental Information

Literature: A review of a June 1991 Shannon and Wilson, *First Avenue South Bridge Hazardous Waste and Waste Discipline Report*, also confirms that this site has remained essentially undeveloped land from prior to 1920 to the present. There were a number of adjacent industries which often are associated with generation or use of hazardous materials, but none were directly on the site. No soil sampling was conducted for this report. Duwamish Waterway Sediments were analyzed and found to exceed in-water disposal criteria for several compounds. None of these sediments are included in the site materials.

In 1994 Shannon and Wilson evaluated the suitability of the embankment materials for reuse elsewhere on the bridge project. Their findings are in the report, *Geotechnical Report Parallel Structure to the First Avenue South Bridge Over Duwamish Seattle, Washington Volumes I and II, August 1994*. It is accepted practice for geo-technical reports to note the possible existence of contamination. A review of the test pit logs revealed no indications of contamination or suspect materials. There were no odors noted in the field logs. The material description in the Shannon and Wilson report logs is consistent with the material presently on site.

Dames and Moore conducted an extensive Hazardous Waste Assessment for the First Avenue Bridge Project in 1992 and 1993. The report is titled *Hazardous Waste Assessment Site Investigation, Route 99- First Avenue South Bridge Project Seattle, Washington, March 10, 1994*. This assessment included sampling of soil and groundwater in numerous locations throughout the project corridor. Dames and Moore concluded that none of the deeper soils were likely contaminated. The report did identify several isolated pockets of petroleum contaminated soil, including some areas south of the river. These

soils were identified as shallow and likely less than 5 feet deep. Although some sampling was conducted to define extent and identify a source in two locations, no conclusions were reached. None of the boring or test pit logs of deeper material in the vicinity of the site identified any potential contamination, based on accepted field screening techniques or laboratory analysis.

During construction of the bridge numerous deep shafts were excavated for bridge piers. Some of that material was moved to the site in 1999. WSDOT's construction practices require excavation to cease if suspected contamination is apparent. These construction guidelines were followed on this project. It is reasonable to assume none of the material appeared to be contaminated during excavation.

Summary of Testing

In October 1999, five samples of the available materials were analyzed for petroleum contamination and toxic RCRA metals by Health Risk Associates, Inc. The samples were analyzed by On Site Environmental of Redmond, Washington. These samples were taken from a depth of less than 2 ½ feet and contained some vegetation residue. All the samples were below MTCA Method A standards for all items tested except for a sample taken on the east face of the embankment. That sample contained Total Petroleum Hydrocarbons (TPH) contamination in the diesel range at 870 PPM. The MTCA Method A cleanup standard for TPH is 200 PPM. Three additional samples within a radius of 10 feet were analyzed on 25 October 1999. These soils contained TPH as diesel between 200-310 PPM. 19

Interview Summary: EAO interviewed Mr. Tom Madden, Project Engineer for the First Avenue South Bridge Project. Mr. Madden provided historical information about handling and source of materials during construction. He also provided information about the ramp removal activities. According to him Seattle had oiled the local streets for dust control for a time in the 1950's and 1960's. Mr. Madden affirmed that WSDOT conducted no activities on the site which would have contributed extensive contamination and did not move any known contaminated soil to the site during construction.

Review of Historic Operations

Prior to the construction of the First Avenue South bridge in the mid 1950's the site was situated in a tidally influenced alluvial plain. The surrounding areas were in the process of being filled in for creation of industrial property. During the construction of the original bridge an on-ramp was constructed at this location. The source of the material for the ramp embankment is unknown, but based on the lithology it most likely came from the immediate area impacted by construction. Such use of material was consistent with highway construction practices. The top layer of compacted soil is dissimilar to the

alluvial material native to the site. It appears to be glacial till probably obtained from a local pit site. The material has remained undisturbed for more than 40 years.

Summary/Conclusions

Based on an analysis of the history and the reported information the WSDOT Environmental Affairs Office concludes the following:

It is our professional opinion that the potentials for significant environmental contamination to exist in the proposed fill materials is low. The level of investigation performed for the construction project was sufficient to provide an accurate representation of the materials under consideration.

The top several feet of highly compacted soil on the ramp embankments contain slightly elevated levels of TPH contamination. The levels of contamination reported may come from several sources or analytical errors. Since Seattle oiled streets in this area for a period of time, these ramp materials may have also been oiled in similar fashion. Another potential source is the asphalt and oil base pavement cap since removed. Because the soil had been seeded and the samples contained possible organic materials, the analysis may be in error due to organic interference. Because the material is easily identified we recommend it be set aside and analyzed again using a silica gel procedure. However, should the analysis again exceed the MTCA Method A cleanup standards, the material can be used elsewhere in a variety of applications approved by the Department of Ecology.

The remaining, majority of the material on the site does not appear to be environmentally impaired, based on a review of environmental documentation and available analytical testing, in our opinion. We conclude that it may be used for the purpose intended.

Please call me if you have any questions or concerns.

Addendum

On May 17 2000, Jim Kelly of Health Risks Associates [redacted] These tests were conducted at my direction to confirm that the higher levels of heavy oils, encountered on previous test in this vicinity, were confined to the surface top soil. Tests were taken after the top soil was removed and stockpiled. Tests results for both heavy oils and lead were below clean-up levels.

On May 25, 2000 Jim Kelly, of Health Risks Associates, took six additional soil samples at random locations to verify soil quality. These samples gave a representative cross-section of the material hauled. The material was checked for heavy Metals and Petroleum Hydrocarbons. Results were O.K.