EARTHWORKS
Earthworks Consulting Engineers, Inc.

March 30, 2004

Mr. Doug Beisch, P.E.
Williamsburg Environmental Group, Inc.
3000 Easter Circle
Williamsburg, Virginia 23188

Reference: Report of Subsurface Exploration
Tabb Lakes Dredging Investigation
York County, Virginia

Earthworks Project No. 1303

Dear Mr. Beisch:

Earthworks Consulting Engineers, Inc. (Earthworks) is pleased to provide you with this report of subsurface exploration in support of the proposed Tabb Lakes dredging project. The purpose of this investigation was to generally ascertain the engineering properties of the materials above the proposed bottom elevation of the lake relative to excavation, dredging, and material handling. Submitted herein are the results of our field sampling, laboratory analysis, and a discussion of our findings. This work was conducted in general accordance with our proposal No. 1144-P-R1, dated February 6, 2004.

The proposed project will consist of dredging of Lake 2 of the Tabb Lakes subdivision in York County. Lake 2 is located on the north side of the causeway which separates Lake 2 from Lake 1 and which supports Bridge Wood Drive. The normal pool of the lake is about elevation 27 ft. The elevation of the bottom of the lake generally ranges between elevations 24 and 20 ft. The proposed dredge depth is elevation 21 ft. In this regard, excavation in the Lake would range between 0 to 4 feet below the existing Lake bottom.

To accomplish this investigation, a representative of Earthworks accompanied WEG personnel in a boat and sampled the lake bottom materials at 9 locations. Sampling occurred on March 9, 2004. Sampling was accomplished by driving a 2-inch diameter PVC pipe 1 to 1.5 feet into the lake bottom, capping the top of the pipe, then withdrawing the pipe using suction to retain the sample. Samples recovered from this operation were returned to our laboratory and subjected to moisture content and gradation analysis. Field sampling locations are indicated on Enclosure I. Sampling locations were recorded based on the project drawings prepared by WEG and dated December 11, 2000. A summary of the field sampling and laboratory test results is included as Enclosure II.

Based on the results of our field sampling, it appears that lake depths observed by Earthworks are generally consistent with those shown on the project drawings, except that we encountered somewhat deeper water at the south end of the lake (see Enclosure II, B-5).

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The bottom of the lake was covered with sediments consisting of black, organic, Sandy Silt (Sludge). This layer appeared to be about 12 inches thick in the shallower areas of the lake and 1.5 to 2 feet thick in deeper areas. The results of moisture content tests in this sediment ranged from about 50% to 260%. Sand content in the Sludge samples was observed to be less than about 25%.

Soils underlying the sediment layer consisted primarily of gray, fine to medium SAND (SP and SM). Some of these Sands contained marine shell fragments, indicating they are probably from the original lake bottom and not accumulated sediment. While most soils encountered below the sediment were Sandy in nature, Clayey soils were encountered below a thin layer of sediment in the vicinity of B-3 and B-7. These were relatively shallow areas in the vicinity of what may have been a road crossing, now submerged, of the original Sand pit from which the lake was created. This area is midway between cross-sections K and J on the project drawings.

Based on our probes of the lake bottom, it appears that perhaps one third or more (by saturated volume) of the materials excavated during a dredging operation would consist of sludge. During hydraulic dredging, the Sand and Sludge would become intermixed. Therefore, we do not expect the excavated material would be of any productive use other than landscaping fill. It would also be necessary to drain these excavated materials in a manner which considers that the sludge will remain in suspension for hours before it settles in the containment area and water can be drained off.

Furthermore, it appears that Clay soils which were encountered in the shallower waters in the vicinity of B-3 and B-7 would be resistant to hydraulic dredging, as they appear to consist of relatively stiff Clayey SAND (SC) and Sandy CLAY (CL). A dredging contractor may determine that this area requires mechanical excavation.

We trust this information will assist in the planning and cost estimating of dredging operations. If you should have any questions regarding the information contained in this report, or if we can be of further assistance, please do not hesitate to contact us.

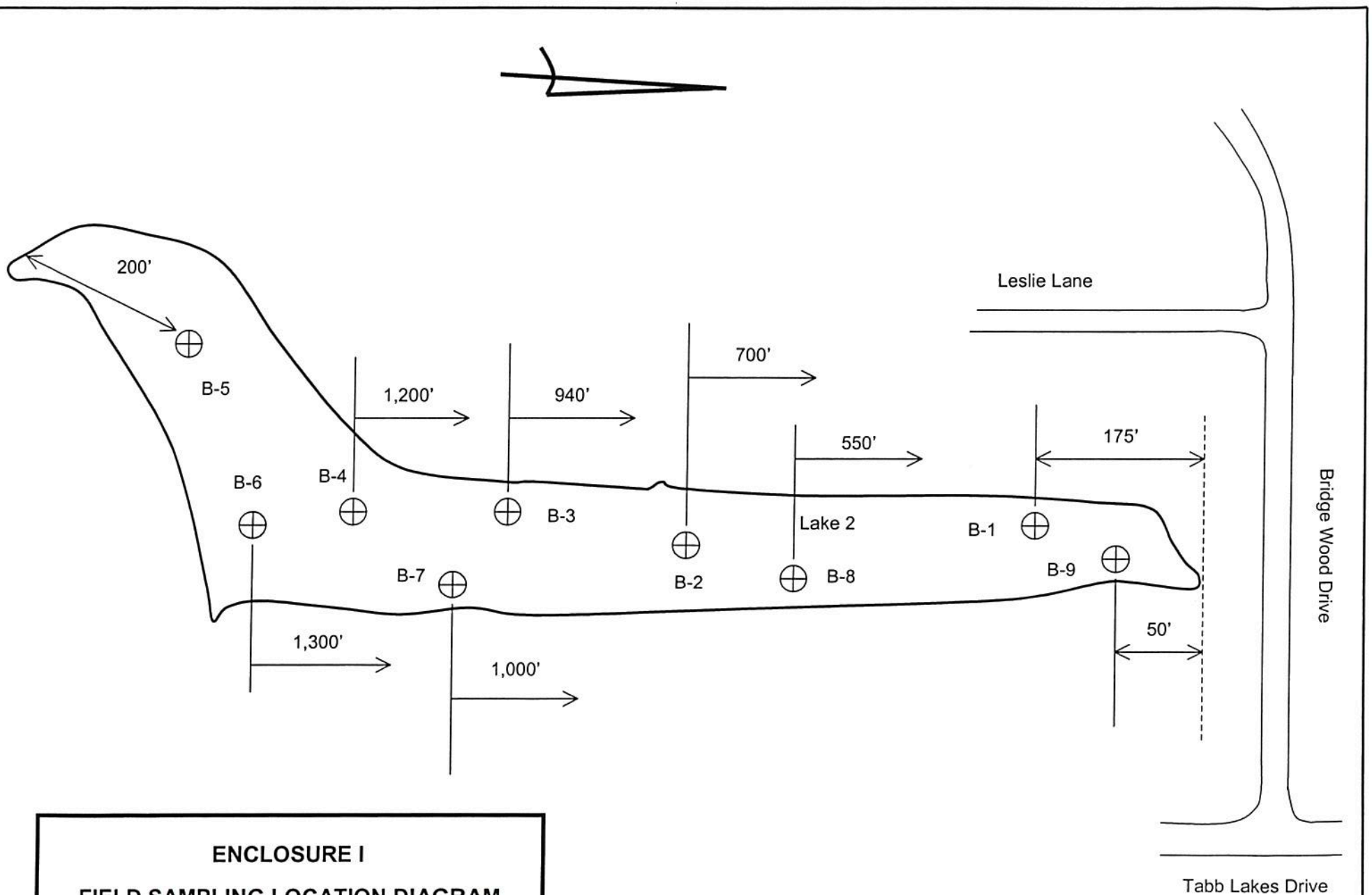
Respectfully,

EARTHWORKS CONSULTING ENGINEERS, INC.

Robert C. Moss, III, P.E.
Principal Engineer

Enclosures: I. Field Sampling Location Diagram
II. Summary of Laboratory Test Data

Copies: (2) Client



ENCLOSURE I

FIELD SAMPLING LOCATION DIAGRAM

TABB LAKES DREDGING INVESTIGATION

Earthworks Project No. 1303

No Scale – Drawing is Schematic

ENCLOSURE II

LABB LAKES DREDGING INVESTIGATION
SUMMARY OF LABORATORY TEST DATA

Boring No.	Water Depth (ft)	Sample Depth (ft)	Natural Moisture Content (%)	Silt or Clay Fraction (%)	Material Description
B-1	6.5	7-7.5	26.6	8.7	Gray **Sand**
B-2	8	8-8.5	63.5	51.2	Gray and black **Sand/Sludge/Clay** mix
B-3	3.5	4-4.5	35.4	61.3	Gray Silty **Clay**
B-4	3.5	3.5-4	29.9	14.8	Gray Silty **Sand** with organics
B-5	5.5	5.5-6	262.3	76.7	Black **Sludge** with Sand
B-6	4	4-5	55.6	35.1	Gray **Sand** with shell frag's and Sludge
B-7	3.5	3.5-4.5	27.8	23.3	Light gray Clayey **Sand**
B-8	7	7-7.5	169.0	92.6	Black **Sludge**
B-9	6	6-7	47.3	23.0	Gray **Sand** with Sludge