



EA Engineering, Science,
and Technology, Inc.

3 August, 2000

TO: Charles Basham, USACE-Baltimore District (4 copies)
Ray Pilon, USACE-Buffalo District (13 copies)
Gordy Porter, EA Engineering Project Manager
Jeff Smith, EA Engineering, Site Manager

FROM: Sandra Staigerwald, EA Engineering, Task Manager

RE: Expansion of LOOW Phase II RI (2)

Preliminary results from the field screening analysis program described in Final Addendum to the Work Plan for Phase I RI for the LOOW, Niagara County, New York, for Phase II Remedial Investigation (dated June 2000) indicate the presence of chemical constituents at concentrations exceeding the NYSDEC TAGM values, or exhibiting an increasing trend in concentration at the following areas of investigation:

Area 218 Grid D200
Area 218120 Grid D300
Area 20 Grid C500
Vicinity Shops Grid MO
Area 7111 Grid H100

Due to the reported constituents, it was recommended that the sampling at these grids be expanded. As per the letter dated 20 July 2000 ("Phase II RI Letter 02"), approval was issued by Mr. Charles Basham, Design Team Leader, USACE-Baltimore, to add additional points to the referenced grids.

Attached is the approval letter from the USACE dated 20 July 2000 (see Attachment 1), as well as inserts for each section of the Final Addendum to the Site Specific Sampling and Analysis Plan for the Phase I RI at the Former LOOW Niagara County, New York for Phase II Remedial Investigation. Each of the inserts describe the approved additions to the sampling and analysis plan for each area, and should be inserted into the readers copy of the Final Plan.

Attachments:

- Attachment 1-Approval letter dated 20 July, 2000 from USACE
- Attachment 2-Additions to the Sampling B-4, Areas 2 and 20
- Attachment 3-Additions to the SAP B-12, Vicinity Shops
- Attachment 4- Additions to the SAP B-5, Areas 4, 7, 8, 11

ATTACHMENT 1



DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS
P.O. Box 1715
Baltimore, MD 21203-1715

20 July 2000

Civil HTRW Section
Engineering Division

Mr. H. Gordon Porter
EA Engineering, Science, and Technology, Inc.
15 Loveton Circle
Sparks, Maryland 211.52

SUBJECT: Phase II RI Letter 02

Dear Mr. Porter:

Reference is made to Delivery Order 0115, Lake Ontario Ordnance Works (LOOW) Site Wide Remedial Investigation Phase 2 under your contract DACA31-94-D-0015.

Based on results of preliminary field investigations, the Government has identified the need for additional soil borings at LOOW. Specifically, the following amendments to the final work plans are approved:

- a) Three additional boring at the South-East corner of Grid 0200, Area 2/20.
- b) Four additional borings on the South-East corner of Grid D300, Area 2/20.
- c) Three additional borings on the South-East corner of Grid MO, Shops Area West of the Waste Water Treatment Plant.
- d) Six additional borings on the North-West side of Grid C500, Area 2.
- ef) Four additional borings on the South-East corner of Grid H100, Area 11.

You are requested to amend the final work plans to reflect these adjustments. The costs associated for this work shall be accounted for in accordance with the Scope of Work, paragraph 5.d. "Variations in Estimated Quantities (Field Days, Monitoring Wells, and Transportation)" and paragraph 5.e. "Variations in Estimated Quantities (Analytical)".

I consider that all of the above work is in accordance with the Scope of Work. Please contact me immediately should clarification on the above is required.

Sincerely,

Charles E. Basham, P.E.
Design Team Leader

Copy Furnished:
US Army Corps of Engineers- Buffalo District
ATTN: CELRB-PM (Mr. Ray Pilon)
1776 Niagara Street
Buffalo, NY 14203

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Attachment 2 (reference EA letter dated 3 Aug 2000 and USACE letter dated 20 July 2000)

20 JULY 2000 ADDITIONS TO THE SAMPLING AND ANALYSIS PLAN (SAP) FOR AREAS 2 AND 20

INSERTION LOCATION: Insert page between Table B-4- 1 and B-4-2

CHANGES TO ORIGINAL SAP:

Phase II Investigation at Area 2/8 Grid D200

Due to elevated PAH concentrations reported in samples collected from B2 to A3, three additional locations will be added to assess the horizontal extent of the reported constituents. The locations will be designated and placed as follows (see figure B-4-1 for location of D200 grid within Area 2/8):

New location A4 shall be placed 25 ft east of D200A3
New location Z3 shall be placed 25 ft south of D200A3
New location Z4 shall be placed 35 ft southeast of D200A3

In accordance with the original sampling strategy for the D200 grid (see Table B-4-2), one surface soil sample and one subsurface soil sample will be collected from each of the new locations and will be screened for PAHs, PCBs, and VOCs. The subsurface sample interval shall be 2.5 to 3.0 ft bgs, or at the discretion of the field geologist based on possible observations of elevated organic vapor concentrations or soil staining.

Phase II Investigation at Area 218120 Grid D300

Due to elevated PAH concentrations reported in the soil samples collected from locations A2, A3, and B3, four additional locations will be added to assess the horizontal extent of PAHs. The locations will be designated and placed as follows (see Figure B-4- 1 for location of D300 grid within Area 2/8/20):

New location B4 shall be placed 25 ft east of D300B3
New location A4 shall be placed 25 ft east of D300A3
New location Z3 shall be placed 25 ft south/southeast of D300A3
New location Z4 shall be placed 25 ft south of D300A2

In accordance with the original sampling strategy for the D300 grid (see Table B-4-2), one surface and one subsurface soil sample will be collected from each of the new locations and will be screened for PAHs and TNT. The subsurface sample interval shall be 2.5 to 3.0 ft bgs, or at the discretion of the field geologist based on possible observations of elevated organic vapor concentrations or soil staining.

Phase II Investigation of Area 20 Grid C500

Due to elevated concentrations of chlorinated solvents reported in the soil samples collected from locations D99, C99, and B99, and the presence of 1,1-DCE exceeding TAGM at D 1, six additional locations will be added to assess the horizontal extent of VOCs. The locations will be designated and placed as follows (see Figure B-4- 1 for the location of the C500 grid in Area 20):

New location E 1 shall be placed 35 ft north of C500D1
New location E99 shall be placed 25 ft north of C500D99
New location E98 shall be placed 35 feet northwest of C500D99
New location D98 shall be placed 25 feet west of C500D99
New location C98 shall be placed 25 feet west of C500C99
New location B98 shall be placed 25 feet west of C500B99

In accordance with the original sampling strategy for the C500 grid (see Table B-4-2), one surface and two subsurface soil samples will be collected from each of the new locations to assess the horizontal extent of VOCs. The subsurface soil sample intervals shall be 3.5 to 4 ft bgs and 12 to 14 ft bgs, or at the discretion of the field geologist based on possible observations of elevated organic vapor concentrations or soil staining. Samples will be field screened for VOCs, PAHs, PCBs, and TNT.

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Attachment 3 (reference letter dated 3 Aug 2000 and USACE letter dated 20 July 2000)

20 JULY 2000 ADDITIONS TO THE SAP AT THE WWTP VICINITY SHOPS

INSERTION LOCATION: Insert page between Table B- 12-2 and B- 12-2 contd.

CHANGES TO ORIGINAL SAP:

Phase II Investigation at Vicinity Shops Grid MO

Due elevated PAH concentrations reported in samples collected from location A3, three additional locations will be added to assess the horizontal extent of the reported constituents. The locations will be designated and placed as follows (see figure B-12-1 for location of MO grid within Vicinity Shops):

New location A4 shall be placed 25 ft east of MOA3

New location Z4 shall be placed 35 ft southeast of M0A3

New location Z3 shall be placed 25 ft south of MOA3

In accordance with the original sampling strategy for the MO grid (see Table B-12-2) two subsurface soil samples will be collected from each of the new locations to assess the horizontal extent of PAHs. The subsurface soil sample intervals shall be 1.5 to 1.9 ft bgs and 4 ft bgs, or at the discretion of the field geologist based on possible observations of elevated organic vapor concentrations or soil staining.

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Attachment 4 (reference letter dated 3 Aug 2000 and USACE letter dated 20 July 2000)

20 JULY 2000 ADDITIONS TO THE SAP FOR AREAS 4, 7, 8 AND 11

INSERTION LOCATION: Insert page between Table B-5-1 and B-5-2.

CHANGES TO ORIGINAL SAP:

Phase II Investigation at Area 7/11 Grid H100

Due to elevated concentrations of PAHs and VOCs in samples collected from locations A3 and Z3, four additional locations will be added to assess the horizontal extent of the reported constituents. The locations will be designated and placed as follows (see figure B-5 1 for location of H 100 grid within Area 7/1 1):

New location A4 shall be placed 25 ft east of H100A3

New location Z4 shall be placed 25 ft east of H100Z3

New location Y4 shall be placed 35 ft southeast of H100Z3

New location Y3 shall be placed 25 ft south of H100Z3

In accordance with the original sampling strategy for the H100 grid (see Table B-5-2), one surface and one subsurface soil sample will be collected from each of the new locations to assess the horizontal extent of VOCs and PAHs. The subsurface soil sample interval shall be 8 to 14 ft bgs, or at the discretion of the field geologist based on possible observations of elevated organic vapor concentrations or soil staining.

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