Lockheed Martin
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LOCKHEED MARTIN

**HAND DELIVERY**

April 16, 2004

File: LMC BD
File Code: 9D

Mr. David Smith
Bureau Chief
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233-7010

Re: Phase IV-A Side Bank Soil Investigation – Proposed Sampling Locations
Bloody Brook, Onondaga County, New York
Voluntary Cleanup Agreement Index #D7-0001-01-09 (VCP Site No. V00501-7)

Dear Mr. Smith:

In accordance with Section II, Paragraph B of the Voluntary Cleanup Agreement for Remedial Investigation/Remedial Action (Index #D7-0001-01-09) for the above referenced site, please find enclosed four copies of drawings illustrating the proposed sampling locations for the Phase IV-A Side Bank Soil Investigation (April 2004) for New York State Department of Environmental Conservation (NYSDEC) review and approval.

The field sampling activities are scheduled to begin on Wednesday, April 28, 2004 and should be complete in 2-3 days. Soil samples will be analyzed with an expedited turn around time and laboratory reports will be submitted to the NYSDEC the week of May 10, 2004. The Phase IV-A soil sampling and analysis program will be conducted in accordance with the provisions established in the Phase IV Side Bank Soil investigation Work Plan (Revised July 2003).

Please contact me at (315) 456-3199 if you have any questions.

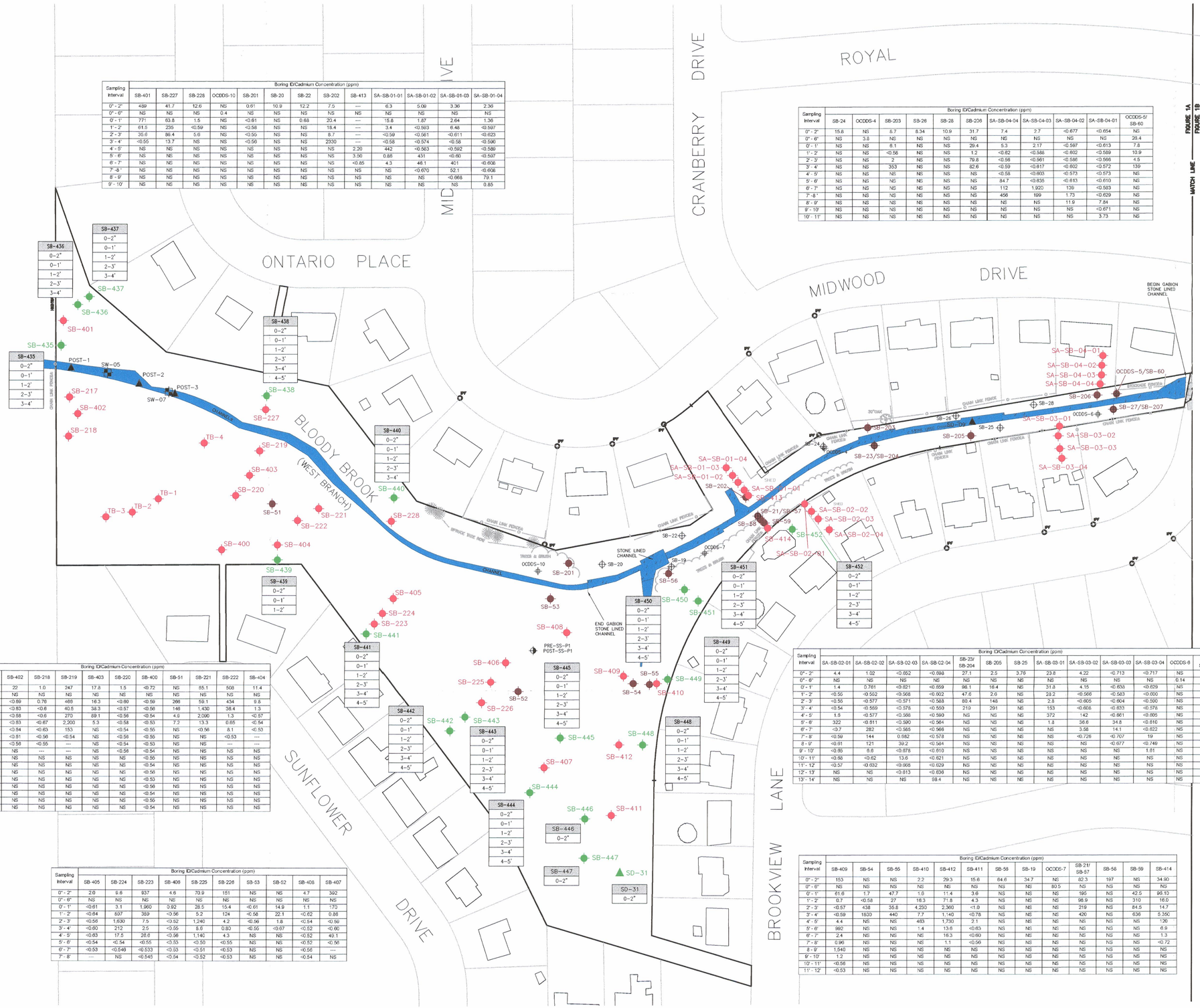
Sincerely,

Patrick Salvador

Patrick D. Salvador, P.E.
Principal Engineer

Enclosure

cc (with enclosure): Carol Conyers, Esq. - NYSDEC, Albany
Heather Daniels - Lockheed Martin Corporation, Syracuse
Sandra Lee Fenske, Esq. - Lockheed Martin Corporation, Syracuse
Drew Graham - Shaw Environmental, Albany
Henriette Hamel - NYSDOH, Syracuse
Michael Komoroske - NYSDEC, Central Office VCP Coordinator
Gary Litwin - NYSDOH, Troy (2 copies)
Richard Mustico, P.E. - NYSDEC, Albany
Robert Nunes - USEPA, Region II, New York
Mary Jane Peachey, P.E. - NYSDEC, Region 7, Syracuse
Virginia C. Robbins, Esq. - Bond, Schoeneck & King, LLP




| Sampling Interval | Boring ID/Cadmium Concentration (ppm) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SB-401 | SB-227 | SB-228 | OCDDS-10 | SB-201 | SB-20 | SB-22 | SB-202 | SB-413 | SA-SB-01-01 | SA-SB-01-02 | SA-SB-01-03 | SA-SB-01-04 |
| 0" - 2" | 489 | 41.7 | 12.6 | NS | 0.61 | 10.9 | 12.2 | 7.5 | --- | 6.3 | 5.09 | 3.36 | 2.36 |
| 0" - 6" | NS | NS | NS | 0.4 | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 0' - 1' | 771 | 63.8 | 1.5 | NS | <0.61 | NS | 0.68 | 20.4 | --- | 15.8 | 1.87 | 2.64 | 1.36 |
| 1' - 2' | 61.5 | 235 | <0.59 | NS | <0.58 | NS | NS | 18.4 | --- | 3.4 | <0.593 | 6.48 | <0.597 |
| 2' - 3' | 35.6 | 86.4 | 5.6 | NS | <0.55 | NS | NS | 8.7 | --- | <0.59 | <0.581 | <0.611 | <0.623 |
| 3' - 4' | <0.55 | 13.7 | NS | NS | <0.56 | NS | NS | 2330 | --- | <0.58 | <0.574 | <0.58 | <0.590 |
| 4' - 5' | NS | NS | NS | NS | NS | NS | NS | NS | 2.20 | 442 | <0.583 | <0.592 | <0.589 |
| 5' - 6' | NS | NS | NS | NS | NS | NS | NS | NS | 3.50 | 0.88 | 431 | <0.60 | <0.597 |
| 6' - 7' | NS | NS | NS | NS | NS | NS | NS | NS | <0.85 | 4.3 | 46.1 | 401 | <0.608 |
| 7' -8' | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | <0.670 | 52.1 | <0.668 |
| 8' - 9' | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | <0.668 | 79.1 |
| 9' - 10' | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | 0.85 |

| Sampling Interval | Boring ID/Cadmium Concentration (ppm) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SB-24 | OCDDS-4 | SB-203 | SB-26 | SB-28 | SB-206 | SA-SB-04-04 | SA-SB-04-03 | SA-SB-04-02 | SA-SB-04-01 | OCDDS-5/ SB-60 |
| 0" - 2" | 15.8 | NS | 6.7 | 8.34 | 10.9 | 31.7 | 7.4 | 2.7 | <0.677 | <0.654 | NS |
| 0" - 6" | NS | 3.8 | NS | NS | NS | NS | NS | NS | NS | NS | 28.4 |
| 0' - 1' | NS | NS | 8.1 | NS | NS | 29.4 | 5.3 | 2.17 | <0.597 | <0.613 | 7.8 |
| 1' - 2' | NS | NS | <0.58 | NS | NS | 1.2 | <0.62 | <0.586 | <0.602 | <0.589 | 10.9 |
| 2' - 3' | NS | NS | 2 | NS | NS | 76.8 | <0.56 | <0.561 | <0.586 | <0.566 | 4.5 |
| 3' - 4' | NS | NS | 353 | NS | NS | 82.6 | <0.59 | <0.617 | <0.602 | <0.572 | 139 |
| 4' - 5' | NS | NS | NS | NS | NS | NS | <0.58 | <0.603 | <0.573 | <0.573 | NS |
| 5' - 6' | NS | NS | NS | NS | NS | NS | 84.7 | <0.635 | <0.613 | <0.610 | NS |
| 6' - 7' | NS | NS | NS | NS | NS | NS | 112 | 1.920 | 139 | <0.583 | NS |
| 7' -8' | NS | NS | NS | NS | NS | NS | 456 | 199 | 1.73 | <0.629 | NS |
| 8' - 9' | NS | NS | NS | NS | NS | NS | NS | NS | 11.9 | 7.84 | NS |
| 9' - 10' | NS | NS | NS | NS | NS | NS | NS | NS | NS | <0.671 | NS |
| 10' - 11' | NS | NS | NS | NS | NS | NS | NS | NS | NS | 3.73 | NS |

| Sampling Interval | Boring ID/Cadmium Concentration (ppm) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SB-217 | SB-402 | SB-218 | SB-219 | SB-403 | SB-220 | SB-400 | SB-51 | SB-221 | SB-222 | SB-404 | | | | |
| 0" - 2" | 1.5 | 22 | 1.0 | 247 | 17.8 | 1.5 | <0.72 | NS | 85.1 | 508 | 11.4 | | | | |
| 0" - 6" | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | | | | |
| 0' - 1' | 6.0 | <0.69 | 0.76 | 465 | 16.3 | <0.60 | <0.59 | 266 | 59.1 | 434 | 9.8 | | | | |
| 1' - 2' | 2.1 | <0.83 | <0.6 | 40.5 | 38.3 | <0.57 | <0.58 | 146 | 1,430 | 36.4 | 1.3 | | | | |
| 2' - 3' | 0.68 | <0.58 | <0.6 | 270 | 89.1 | <0.56 | <0.54 | 4.6 | 2,090 | 1.3 | <0.57 | | | | |
| 3' - 4' | <0.65 | <0.63 | <0.67 | 2,200 | 5.3 | <0.58 | <0.53 | 7.2 | 13.3 | 0.65 | <0.54 | | | | |
| 4' - 5' | <0.53 | <3.84 | <0.63 | 153 | NS | <0.54 | <0.55 | NS | <0.56 | 8.1 | <0.53 | | | | |
| 5' - 6' | NS | <0.61 | <0.56 | <0.54 | NS | <0.56 | <0.55 | NS | NS | <0.53 | --- | | | | |
| 6' - 7' | NS | <0.56 | <0.55 | --- | NS | <0.54 | <0.53 | NS | NS | --- | --- | | | | |
| 7' - 8' | NS | NS | --- | --- | NS | <0.58 | <0.54 | NS | NS | NS | NS | | | | |
| 8 - 9' | NS | NS | NS | NS | NS | NS | <0.55 | NS | NS | NS | NS | | | | |
| 9' - 10' | NS | NS | NS | NS | NS | NS | <0.54 | NS | NS | NS | NS | | | | |
| 10' - 11' | NS | NS | NS | NS | NS | NS | <0.56 | NS | NS | NS | NS | | | | |
| 11' - 12' | NS | NS | NS | NS | NS | NS | <0.53 | NS | NS | NS | NS | | | | |
| 12' - 13' | NS | NS | NS | NS | NS | NS | <0.56 | NS | NS | NS | NS | | | | |
| 13' - 14' | NS | NS | NS | NS | NS | NS | <0.54 | NS | NS | NS | NS | | | | |
| 14' - 15' | NS | NS | NS | NS | NS | NS | <0.55 | NS | NS | NS | NS | | | | |
| 15' - 16' | NS | NS | NS | NS | NS | NS | <0.54 | NS | NS | NS | NS | | | | |

| Sampling Interval | Boring ID/Cadmium Concentration (ppm) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | SB-405 | SB-224 | SB-223 | SB-406 | SB-225 | SB-226 | SB-53 | SB-52 | SB-408 | SB-407 | |
| 0" - 2" | 2.0 | 9.6 | 937 | 4.6 | 70.9 | 151 | NS | NS | 4.7 | 392 | |
| 0" - 6" | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| 0' - 1' | <0.61 | 3.1 | 1,960 | 0.92 | 28.5 | 15.4 | <0.61 | 14.9 | 1.1 | 170 | |
| 1' - 2' | <0.64 | 897 | 389 | <0.56 | 5.2 | 124 | <0.58 | 22.1 | <0.62 | 0.86 | |
| 2' - 3' | <0.56 | 1,630 | 7.5 | <0.52 | 1,240 | 4.2 | <0.56 | 1.8 | <0.54 | <0.50 | |
| 3' - 4' | <0.60 | 212 | 2.5 | <0.55 | 8.8 | 0.80 | <0.59 | <0.67 | <0.52 | <0.60 | |
| 4' - 5' | <0.63 | 17.5 | 28.6 | <0.56 | 1,140 | 4.3 | NS | NS | <0.52 | 49.1 | |
| 5' - 6' | <0.54 | <0.54 | <0.55 | <0.53 | <0.50 | <0.55 | NS | NS | <0.52 | <0.56 | |
| 6' - 7' | <0.53 | <0.546 | <0.533 | <0.53 | <0.51 | <0.53 | NS | NS | <0.56 | --- | |
| 7' - 8' | --- | NS | <0.545 | <0.54 | <0.52 | <0.53 | NS | NS | <0.54 | NS | |

| Sampling Interval | Boring ID/Cadmium Concentration (ppm) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SA-SB-02-01 | SA-SB-02-02 | SA-SB-02-03 | SA-SB-02-04 | SB-23/ SB-204 | SB-205 | SB-25 | SA-SB-03-01 | SA-SB-03-02 | SA-SB-03-03 | SA-SB-03-04 | OCDDS-6 | SB-27/ SB-207 | |
| 0" - 2" | 4.4 | 1.02 | <0.652 | <0.698 | 27.1 | 2.5 | 3.78 | 23.8 | 4.22 | <0.713 | <0.717 | NS | 11.9 | |
| 0" - 6" | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | 0.14 | NS | |
| 0' - 1' | 1.4 | 0.761 | <0.621 | <0.659 | 98.1 | 16.4 | NS | 31.8 | 4.15 | <0.638 | <0.629 | NS | 45.8 | |
| 1' - 2' | <0.50 | <0.562 | <0.568 | <0.602 | 47.6 | 2.6 | NS | 28.2 | <0.565 | <0.543 | <0.600 | NS | 233 | |
| 2' - 3' | <0.55 | <0.577 | <0.571 | <0.588 | 80.4 | 148 | NS | 2.8 | <0.605 | <0.604 | <0.590 | NS | 71.4 | |
| 3' - 4' | <0.54 | <0.569 | <0.578 | <0.550 | 219 | 291 | NS | 153 | <0.608 | <0.633 | <0.578 | NS | 125 | |
| 4' - 5' | 1.5 | <0.577 | <0.588 | <0.590 | NS | NS | NS | 572 | 142 | <0.661 | <0.605 | NS | NS | |
| 5' - 6' | 322 | <0.611 | <0.590 | <0.564 | NS | NS | NS | 1.8 | 36.6 | 34.8 | <0.616 | NS | NS | |
| 6' - 7' | <3.7 | 282 | <0.565 | <0.566 | NS | NS | NS | NS | 3.58 | 14.1 | <0.622 | NS | NS | |
| 7' - 8' | <0.59 | 144 | 0.682 | <0.578 | NS | NS | NS | NS | <0.726 | <0.707 | 19 | NS | NS | |
| 8 - 9' | <0.61 | 121 | 39.2 | <0.584 | NS | NS | NS | NS | NS | <0.677 | <0.749 | NS | NS | |
| 9' - 10' | <0.55 | 5.8 | <0.578 | <0.610 | NS | NS | NS | NS | NS | NS | 1.61 | NS | NS | |
| 10' - 11' | <0.68 | <0.62 | 13.6 | <0.621 | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| 11' - 12' | <0.57 | <0.632 | <0.668 | <0.629 | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| 12' - 13' | NS | NS | <0.613 | <0.636 | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| 13' - 14' | NS | NS | NS | 98.4 | NS | NS | NS | NS | NS | NS | NS | NS | NS | |

| Sampling Interval | Boring ID/Cadmium Concentration (ppm) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SB-409 | SB-54 | SB-55 | SB-410 | SB-412 | SB-411 | SB-59 | SB-19 | OCDDS-7 | SB-21/ SB-57 | SB-56 | SB-59 | SB-414 | |
| 0" - 2" | 153 | NS | NS | 2.2 | 29.3 | 15.6 | 64.6 | 34.7 | NS | 82.3 | 197 | NS | 34.90 | |
| 0" - 6" | NS | NS | NS | NS | NS | NS | NS | NS | 80.5 | NS | NS | NS | NS | |
| 0' - 1' | 61.6 | 1.7 | 47.7 | 1.6 | 11.4 | 3.6 | NS | NS | NS | 195 | NS | 42.5 | 96.10 | |
| 1' - 2' | 0.7 | <0.58 | 27 | 16.3 | 71.8 | 4.3 | NS | NS | NS | 98.9 | NS | 310 | 16.0 | |
| 2' - 3' | <0.57 | 438 | 35.8 | 4,230 | 2,360 | <1.0 | NS | NS | NS | 219 | NS | 84.5 | 14.7 | |
| 3' - 4' | <0.59 | 1820 | 440 | 7.7 | 1,140 | <0.78 | NS | NS | NS | 420 | NS | 636 | 5,350 | |
| 4' - 5' | 4.4 | NS | NS | 483 | 1,730 | 2.1 | NS | NS | NS | NS | NS | NS | 120 | |
| 5' - 6' | 992 | NS | NS | 1.4 | 13.6 | <0.63 | NS | NS | NS | NS | NS | NS | 6.9 | |
| 6' - 7' | 2.4 | NS | NS | NS | 16.3 | <0.60 | NS | NS | NS | NS | NS | NS | 1.3 | |
| 7' - 8' | 0.96 | NS | NS | NS | 1.1 | <0.56 | NS | NS | NS | NS | NS | NS | <0.72 | |
| 8 - 9' | 1,540 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| 9' - 10' | 1.2 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| 10' - 11' | <0.56 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| 11' - 12' | <0.53 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |

## LEGEND:

- INDICATES LIGHT STAND
- INDICATES UTILITY POLE, ANCHOR & OVERHEAD LINES
- INDICATES IRON PIPE AND/OR MONUMENT FOUND
- INDICATES STORM CULVERT
- INDICATES GAS MAIN, GAS VALVE & GAS LINE MARKER
- INDICATES WATER MAIN, WATER VALVE & HYDRANT
- INDICATES STORM SEWER, CATCH BASIN & MANHOLE
- INDICATES SANITARY SEWER, SEWER VENT & MANHOLE
- INDICATES UNDERGROUND TELEPHONE LINE, MANHOLE & BOX
- INDICATES UNDERGROUND ELECTRIC LINE & MANHOLE
- INDICATES UNDERGROUND TELEVISION CABLE & BOX
- INDICATES GUIDE RAIL
- PAVEMENT
- SD-20 — APPROXIMATE LMC SEDIMENT SAMPLING LOCATION
- SW-1 — APPROXIMATE LMC SURFACE WATER SAMPLING LOCATION
- SB-409 — EXISTING LMC SIDE BANK SOIL SAMPLING LOCATION (PHASE IV)
- SB-51 — EXISTING LMC SIDE BANK SOIL SAMPLING LOCATION (PHASE III)
- SB-20 — APPROXIMATE LMC SIDE BANK SOIL SAMPLING LOCATION
- EPSOIL-3 — APPROXIMATE NYSDEC SIDE BANK SOIL SAMPLING LOCATION
- OCDDS-10 — APPROXIMATE ONONDAGA COUNTY SIDE BANK SOIL SAMPLING LOCATION
- PRE-SS-P1 — APPROXIMATE LMC SOIL SAMPLING LOCATION (1997)
- SB-445 — PROPOSED LMC SIDE BANK SOIL SAMPLING LOCATION (PHASE IV ADDENDUM)
- SD-31 — PROPOSED LMC SEDIMENT SAMPLING LOCATION (PHASE IV ADDENDUM)
- SB-445 / 0-2" — PROPOSED SAMPLING INTERVALS
- NS = NOT SAMPLED
- --- = NOT ANALYZED

NOTE:
ALL PHASE III AND PHASE IV SAMPLING LOCATIONS WERE SURVEYED WITH THE EXCEPTION OF SB-206, WHICH IS APPROXIMATE.

REMAINING LMC (SEDIMENT, SURFACE WATER, PHASE I AND II SIDE BANK), NYSDEC, AND ONONDAGA COUNTY SAMPLING LOCATIONS WERE NOT SURVEYED, AND ARE APPROXIMATE.

## NOTES:

Elevations referred to U.S.G.S. Datum.
Location of underground utilities taken by field measurement where practicable, otherwise taken from various other sources and are approximate only.
Property line information taken from record maps and filed deeds and are approximate only.

MAP SCALE
0 60 120 180 FEET

REFERENCE:
BASE MAP SOURCE: IANUZI & ROMANS, P.C.

Shaw Environmental, Inc.

VOLUNTARY CLEANUP PROGRAM
BLOODY BROOK
ONONDAGA COUNTY, NEW YORK

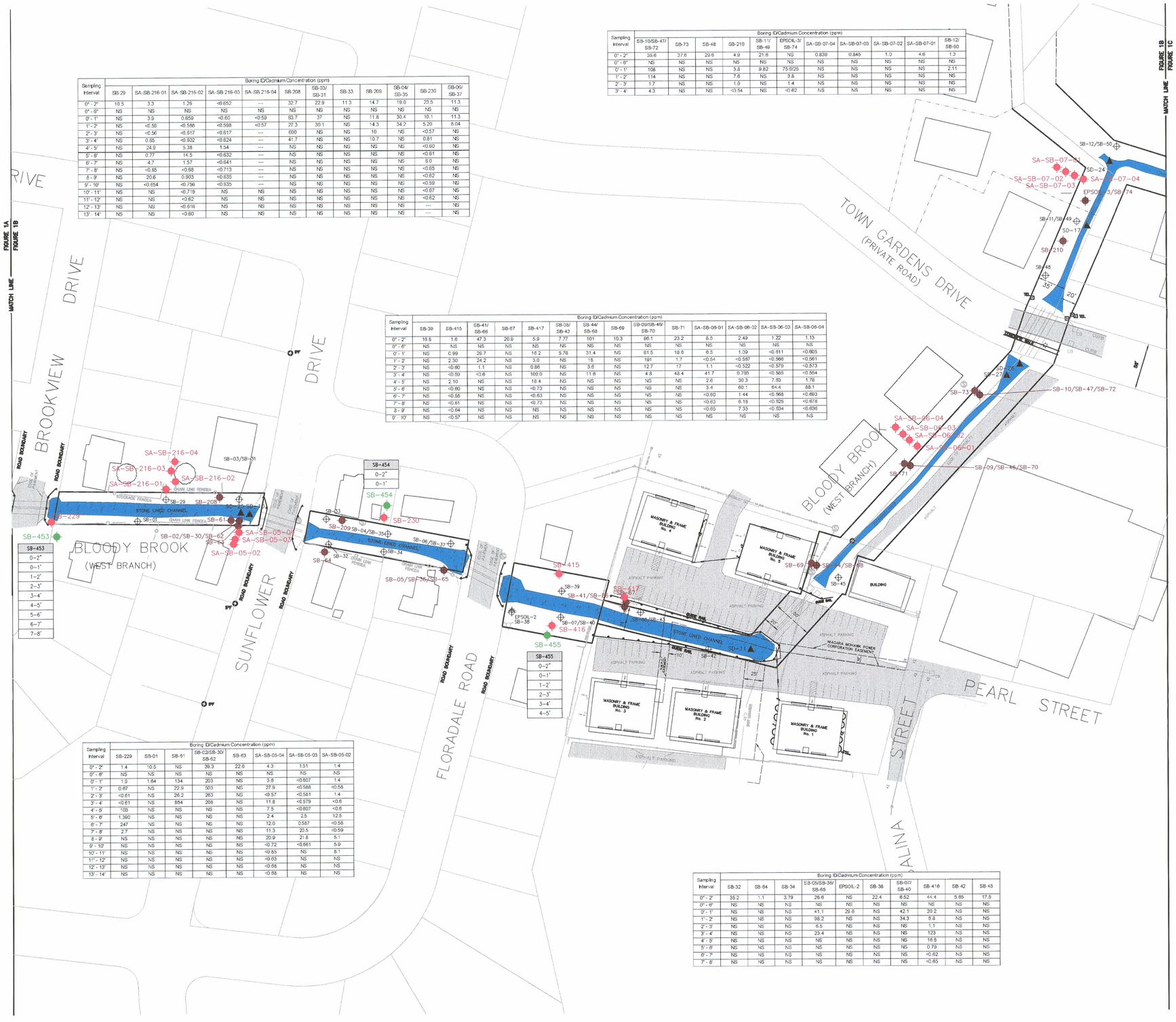
FIGURE 1A
PROPOSED SAMPLING LOCATIONS
PHASE IV-A SIDE BANK
SOIL INVESTIGATION
SHEET 1 OF 3

| OFFICE | DRAWN BY | CHECKED BY | APPROVED BY | DRAWING NUMBER |
|---|---|---|---|---|
| ALBANY, NY | S. SHKOLNIK 04-02-04 | | | 824446D15(1A) |

Image: L:\project\LOCKHEED\BLOODY\824446B.dwg
Xref: L:\project\LOCKHEED\BLOODY\824446b.dwg

L:\project\LOCKHEED\BLOODY\824446D15A.dwg
Plot Date/Time: Apr 15, 2004 - 4:18pm
Format Revised: 7/18/00

| OFFICE | DRAWN BY | CHECKED BY | APPROVED BY | DRAWING NUMBER |
|---|---|---|---|---|
| ALBANY, NY | S. SHKOLNIK 04-02-04 | | | 824446D15(1B) |




| Sampling Interval | Boring ID/Cadmium Concentration (ppm) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | SB-29 | SA-SB-216-01 | SA-SB-215-02 | SA-SB-216-03 | SA-SB-216-04 | SB-208 | SB-03/ SB-31 | SB-33 | SB-209 | SB-04/ SB-35 | SB-230 | SB-06/ SB-37 |
| 0" - 2" | 10.5 | 3.3 | 1.26 | <0.652 | --- | 32.7 | 22.9 | 11.3 | 14.7 | 19.0 | 23.5 | 11.3 |
| 0" - 6" | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 0' - 1' | NS | 3.9 | 0.659 | <0.60 | <0.59 | 63.7 | 37 | NS | 11.8 | 30.4 | 10.1 | 11.3 |
| 1' - 2' | NS | <0.56 | <0.588 | <0.598 | <0.57 | 27.3 | 30.1 | NS | 14.3 | 34.2 | 5.20 | 8.04 |
| 2' - 3' | NS | <0.56 | <0.617 | <0.617 | --- | 690 | NS | NS | 10 | NS | <0.57 | NS |
| 3' - 4' | NS | 0.65 | <0.602 | <0.624 | --- | 41.7 | NS | NS | 10.7 | NS | 0.81 | NS |
| 4' - 5' | NS | 24.9 | 5.38 | 1.54 | --- | NS | NS | NS | NS | NS | <0.60 | NS |
| 5' - 6' | NS | 0.77 | 14.5 | <0.632 | --- | NS | NS | NS | NS | NS | <0.61 | NS |
| 6' - 7' | NS | 4.7 | 1.57 | <0.641 | --- | NS | NS | NS | NS | NS | 5.0 | NS |
| 7' - 8' | NS | <0.65 | <0.68 | <0.713 | --- | NS | NS | NS | NS | NS | <0.65 | NS |
| 8 - 9' | NS | 20.6 | 0.903 | <0.635 | --- | NS | NS | NS | NS | NS | <0.62 | NS |
| 9' - 10' | NS | <0.654 | <0.756 | <0.635 | --- | NS | NS | NS | NS | NS | <0.59 | NS |
| 10' - 11' | NS | NS | <0.719 | NS | NS | NS | NS | NS | NS | NS | <0.67 | NS |
| 11' - 12' | NS | NS | <0.62 | NS | NS | NS | NS | NS | NS | NS | <0.62 | NS |
| 12' - 13' | NS | NS | <0.616 | NS | NS | NS | NS | NS | NS | NS | --- | NS |
| 13' - 14' | NS | NS | <0.60 | NS | NS | NS | NS | NS | NS | NS | --- | NS |

| Sampling Interval | Boring ID/Cadmium Concentration (ppm) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SB-10/SB-47/ SB-72 | SB-73 | SB-48 | SB-210 | SB-11/ SB-49 | EPSOIL-3/ SB-74 | SA-SB-07-04 | SA-SB-07-03 | SA-SB-07-02 | SA-SB-07-01 | SB-12/ SB-50 |
| 0" - 2" | 35.6 | 37.6 | 29.6 | 4.9 | 21.6 | NS | 0.839 | 0.845 | 1.0 | 4.6 | 1.3 |
| 0" - 6" | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 0' - 1' | 108 | NS | NS | 3.8 | 9.82 | 75.6/25 | NS | NS | NS | NS | 2.11 |
| 1' - 2' | 114 | NS | NS | 7.6 | NS | 3.8 | NS | NS | NS | NS | NS |
| 2' - 3' | 1.7 | NS | NS | 1.0 | NS | 1.4 | NS | NS | NS | NS | NS |
| 3' - 4' | 4.3 | NS | NS | <0.54 | NS | <0.62 | NS | NS | NS | NS | NS |

| Sampling Interval | Boring ID/Cadmium Concentration (ppm) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SB-39 | SB-415 | SB-41/ SB-68 | SB-67 | SB-417 | SB-08/ SB-43 | SB-44/ SB-68 | SB-69 | SB-09/SB-46/ SB-70 | SB-71 | SA-SB-06-01 | SA-SB-06-02 |
| 0" - 2" | 19.8 | 1.6 | 47.3 | 20.9 | 5.9 | 7.77 | 101 | 10.3 | 96.1 | 23.2 | 8.5 | 2.49 |
| 0" - 6" | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 0' - 1' | NS | 0.99 | 29.7 | NS | 16.2 | 5.78 | 31.4 | NS | 61.5 | 18.8 | 6.5 | 1.09 |
| 1' - 2' | NS | 2.30 | 24.2 | NS | 3.0 | NS | 18 | NS | 191 | 1.7 | <0.54 | <0.587 |
| 2' - 3' | NS | <0.60 | 1.1 | NS | 0.86 | NS | 3.6 | NS | 12.7 | 17 | 1.1 | <0.522 |
| 3' - 4' | NS | <0.59 | <3.6 | NS | 100.0 | NS | 11.6 | NS | 4.8 | 48.4 | 41.7 | 0.703 |
| 4' - 5' | NS | 2.10 | NS | NS | 18.4 | NS | NS | NS | NS | NS | 2.6 | 30.3 |
| 5' - 6' | NS | <0.60 | NS | NS | <0.73 | NS | NS | NS | NS | NS | 3.4 | 60.1 |
| 6' - 7' | NS | <0.55 | NS | NS | <0.63 | NS | NS | NS | NS | NS | <0.60 | 1.44 |
| 7' - 8' | NS | <0.61 | NS | NS | <0.73 | NS | NS | NS | NS | NS | <0.63 | 6.15 |
| 8 - 9' | NS | <0.64 | NS | NS | NS | NS | NS | NS | NS | NS | <0.65 | 7.35 |
| 9' - 10' | NS | <0.57 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

| Sampling Interval | Boring ID/Cadmium Concentration (ppm) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | SB-229 | SB-01 | SB-51 | SB-02/SB-30/ SB-62 | SB-63 | SA-SB-05-04 | SA-SB-05-03 | SA-SB-05-02 |
| 0" - 2" | 1.4 | 10.5 | NS | 39.3 | 22.9 | 4.3 | 1.51 | 1.4 |
| 0" - 6" | NS | NS | NS | NS | NS | NS | NS | NS |
| 0' - 1' | 1.9 | 1.64 | 134 | 203 | NS | 3.8 | <0.607 | 1.4 |
| 1' - 2' | 0.67 | NS | 22.9 | 503 | NS | 27.9 | <0.588 | <0.56 |
| 2' - 3' | <0.61 | NS | 26.2 | 263 | NS | <0.57 | <0.581 | 1.4 |
| 3' - 4' | <0.61 | NS | 884 | 208 | NS | 11.8 | <0.579 | <0.6 |
| 4' - 5' | 103 | NS | NS | NS | NS | 7.5 | <0.607 | <0.6 |
| 5' - 6' | 1,390 | NS | NS | NS | NS | 2.4 | 2.5 | 12.5 |
| 6' - 7' | 247 | NS | NS | NS | NS | 12.0 | 0.587 | <0.58 |
| 7' - 8' | 2.7 | NS | NS | NS | NS | 11.3 | 20.5 | <0.59 |
| 8 - 9' | NS | NS | NS | NS | NS | 20.9 | 21.8 | 5.1 |
| 9' - 10' | NS | NS | NS | NS | NS | <0.72 | <0.661 | 5.9 |
| 10' - 11' | NS | NS | NS | NS | NS | <0.65 | NS | 6.1 |
| 11' - 12' | NS | NS | NS | NS | NS | <0.63 | NS | NS |
| 12' - 13' | NS | NS | NS | NS | NS | <0.68 | NS | NS |
| 13' - 14' | NS | NS | NS | NS | NS | <0.68 | NS | NS |

| Sampling Interval | Boring ID/Cadmium Concentration (ppm) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SB-32 | SB-64 | SB-34 | SB-05/SB-36/ SB-65 | EPSOIL-2 | SB-38 | SB-07/ SB-40 | SB-416 | SB-42 | SB-45 |
| 0" - 2" | 35.2 | 1.1 | 3.79 | 26.6 | NS | 22.4 | 6.52 | 44.4 | 5.65 | 17.5 |
| 0" - 6" | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 0' - 1' | NS | NS | NS | 41.1 | 29.6 | NS | 42.1 | 20.2 | NS | NS |
| 1' - 2' | NS | NS | NS | 98.2 | NS | NS | 34.3 | 5.8 | NS | NS |
| 2' - 3' | NS | NS | NS | 6.5 | NS | NS | NS | 1.1 | NS | NS |
| 3' - 4' | NS | NS | NS | 23.4 | NS | NS | NS | 123 | NS | NS |
| 4' - 5' | NS | NS | NS | NS | NS | NS | NS | 18.5 | NS | NS |
| 5' - 6' | NS | NS | NS | NS | NS | NS | NS | 0.79 | NS | NS |
| 6' - 7' | NS | NS | NS | NS | NS | NS | NS | <0.62 | NS | NS |
| 7' - 8' | NS | NS | NS | NS | NS | NS | NS | <0.65 | NS | NS |

## LEGEND:

- LS — INDICATES LIGHT STAND
- INDICATES UTILITY POLE, ANCHOR & OVERHEAD LINES
- IP FND / MON. FND — INDICATES IRON PIPE AND/OR MONUMENT FOUND
- 12" CMP — INDICATES STORM CULVERT
- 6" G, GV, GLM — INDICATES GAS MAIN, GAS VALVE & GAS LINE MARKER
- 8" W, WV, WH — INDICATES WATER MAIN, WATER VALVE & HYDRANT
- 18" D, CB, DMH — INDICATES STORM SEWER, CATCH BASIN & MANHOLE
- 8" S, SV, SMH — INDICATES SANITARY SEWER, SEWER VENT & MANHOLE
- TEL MH, UT, TEL — INDICATES UNDERGROUND TELEPHONE LINE, MANHOLE & BOX
- UE, ELEC MH — INDICATES UNDERGROUND ELECTRIC LINE & MANHOLE
- CATV, TV — INDICATES UNDERGROUND TELEVISION CABLE & BOX
- INDICATES GUIDE RAIL
- PAVEMENT
- SD-20 — APPROXIMATE LMC SEDIMENT SAMPLING LOCATION
- SW-1 — APPROXIMATE LMC SURFACE WATER SAMPLING LOCATION
- SB-409 — EXISTING LMC SIDE BANK SOIL SAMPLING LOCATION (PHASE IV)
- SB-51 — EXISTING LMC SIDE BANK SOIL SAMPLING LOCATION (PHASE III)
- SB-20 — APPROXIMATE LMC SIDE BANK SOIL SAMPLING LOCATION
- EPSOIL-3 — APPROXIMATE NYSDEC SIDE BANK SOIL SAMPLING LOCATION
- OCDDS-10 — APPROXIMATE ONONDAGA COUNTY SIDE BANK SOIL SAMPLING LOCATION
- PRE-SS-P1 — APPROXIMATE LMC SOIL SAMPLING LOCATION (1997)
- SB-450 — PROPOSED LMC SIDE BANK SOIL SAMPLING LOCATION (PHASE IV ADDENDUM)
- SB-450 / 0–2" / 0–1' — PROPOSED SAMPLING INTERVALS

NS = NOT SAMPLED

--- = NOT ANALYZED

NOTE:
ALL PHASE III AND PHASE IV SAMPLING LOCATIONS WERE SURVEYED WITH THE EXCEPTION OF SB-206, WHICH IS APPROXIMATE.

REMAINING LMC (SEDIMENT, SURFACE WATER, PHASE I AND II SIDE BANK), NYSDEC, AND ONONDAGA COUNTY SAMPLING LOCATIONS WERE NOT SURVEYED, AND ARE APPROXIMATE.

## NOTES:

Elevations referred to U.S.G.S. Datum.
Location of underground utilities taken by field measurement where practicable, otherwise taken from various other sources and are approximate only.
Property line information taken from record maps and filed deeds and are approximate only.

SCALE
0 60 120 180 FEET

Shaw® Shaw Environmental, Inc.

VOLUNTARY CLEANUP PROGRAM
BLOODY BROOK
ONONDAGA COUNTY, NEW YORK

FIGURE 1B
PROPOSED SAMPLING LOCATIONS
PHASE IV–A SIDE BANK
SOIL INVESTIGATION
SHEET 2 OF 3

REFERENCE:
BASE MAP SOURCE: IANUZI & ROMANS, P.C.

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Format Revised: 7/18/00

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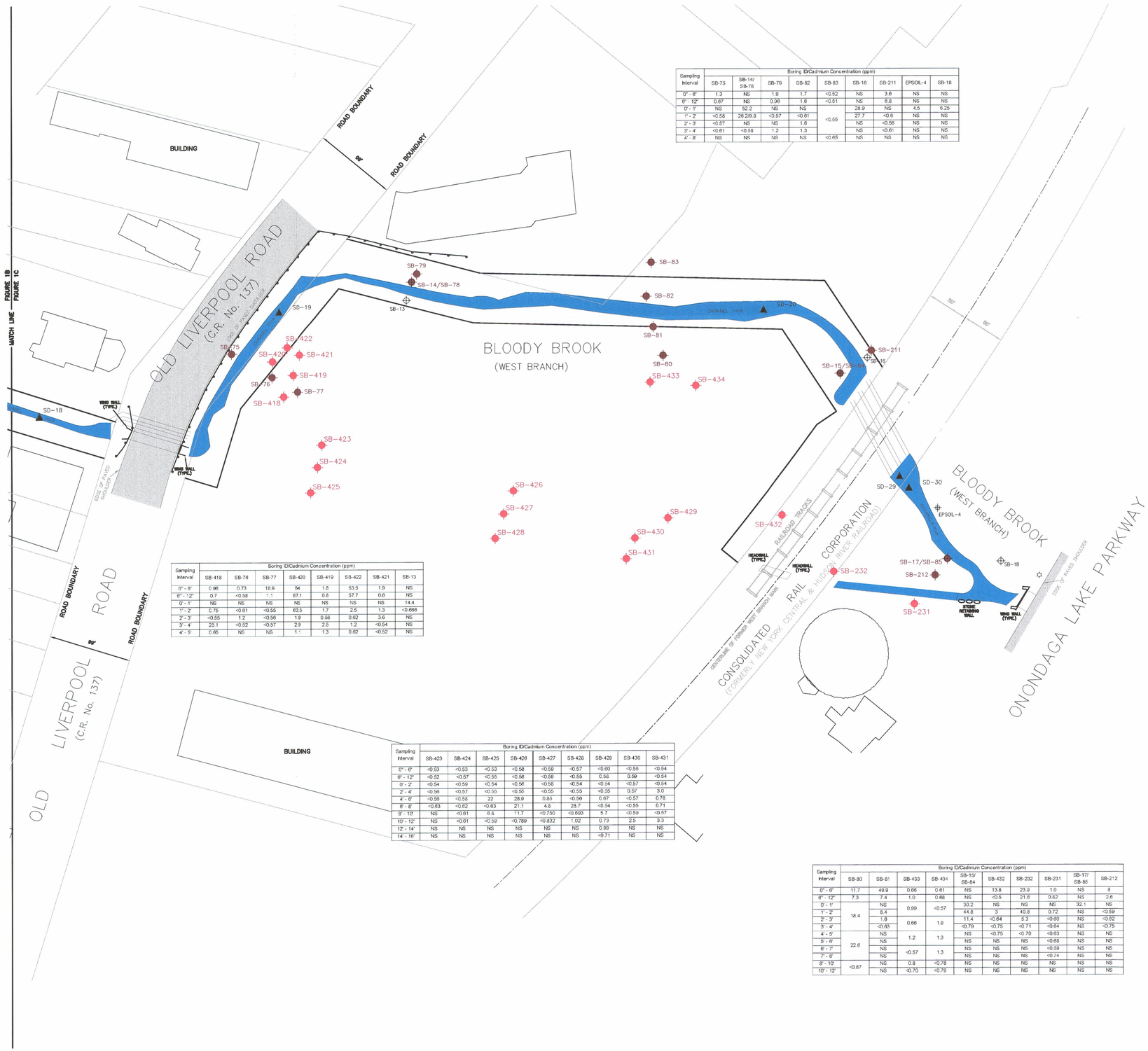


| Sampling Interval | Boring ID/Cadmium Concentration (ppm) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | SB-75 | SB-14/ SB-78 | SB-79 | SB-82 | SB-83 | SB-16 | SB-211 | EPSOIL-4 | SB-18 |
| 0" - 6" | 1.3 | NS | 1.9 | 1.7 | <0.52 | NS | 3.6 | NS | NS |
| 6" - 12" | 0.67 | NS | 0.96 | 1.6 | <0.51 | NS | 6.8 | NS | NS |
| 0' - 1' | NS | 52.2 | NS | NS | <0.55 | 28.9 | NS | 4.5 | 6.25 |
| 1' - 2' | <0.58 | 26.2/9.8 | <0.57 | <0.61 | | 27.7 | <0.6 | NS | NS |
| 2' - 3' | <0.57 | NS | NS | 1.6 | | NS | <0.56 | NS | NS |
| 3' - 4' | <0.61 | <0.58 | 1.2 | 1.3 | | NS | <0.61 | NS | NS |
| 4' - 8' | NS | NS | NS | NS | <0.65 | NS | NS | NS | NS |

| Sampling Interval | Boring ID/Cadmium Concentration (ppm) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | SB-418 | SB-76 | SB-77 | SB-420 | SB-419 | SB-422 | SB-421 | SB-13 |
| 0" - 6" | 0.96 | 0.73 | 18.9 | 64 | 1.8 | 53.5 | 1.9 | NS |
| 6" - 12" | 0.7 | <0.58 | 1.1 | 87.1 | 0.8 | 57.7 | 0.6 | NS |
| 0' - 1' | NS | NS | NS | NS | NS | NS | NS | 14.4 |
| 1' - 2' | 0.75 | <0.61 | <0.55 | 63.5 | 1.7 | 2.5 | 1.3 | <0.666 |
| 2' - 3' | <0.55 | 1.2 | <0.56 | 1.9 | 0.58 | 0.62 | 3.6 | NS |
| 3' - 4' | 25.1 | <0.52 | <0.57 | 2.9 | 2.5 | 1.2 | <0.54 | NS |
| 4' - 5' | 0.65 | NS | NS | 1.1 | 1.3 | 0.62 | <0.52 | NS |

| Sampling Interval | Boring ID/Cadmium Concentration (ppm) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SB-423 | SB-424 | SB-425 | SB-426 | SB-427 | SB-428 | SB-429 | SB-430 | SB-431 |
| 0" - 6" | <0.53 | <0.53 | <0.53 | <0.58 | <0.59 | <0.57 | <0.60 | <0.55 | <0.54 |
| 6" - 12" | <0.52 | <0.57 | <0.55 | <0.56 | <0.59 | <0.55 | 0.56 | 0.59 | <0.54 |
| 0' - 2' | <0.54 | <0.59 | <0.54 | <0.56 | <0.58 | <0.54 | <0.54 | <0.57 | <0.54 |
| 2' - 4' | <0.56 | <0.57 | <0.55 | <0.56 | <0.55 | <0.55 | <0.56 | 0.57 | 3.0 |
| 4' - 6' | <0.56 | <0.58 | 22 | 28.9 | 0.85 | <0.56 | 0.67 | <0.57 | 0.78 |
| 6' - 8' | <0.63 | <0.62 | <0.63 | 21.1 | 4.6 | 28.7 | <0.54 | <0.55 | 0.71 |
| 8' - 10' | NS | <0.61 | 6.6 | 11.7 | <0.750 | <0.693 | 5.7 | <0.59 | <0.67 |
| 10' - 12' | NS | <0.61 | <0.59 | <0.789 | <0.832 | 1.02 | 0.73 | 2.5 | 3.3 |
| 12' - 14' | NS | NS | NS | NS | NS | NS | 0.89 | NS | NS |
| 14' - 16' | NS | NS | NS | NS | NS | NS | <0.71 | NS | NS |

| Sampling Interval | Boring ID/Cadmium Concentration (ppm) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SB-80 | SB-81 | SB-433 | SB-434 | SB-15/ SB-84 | SB-432 | SB-232 | SB-231 | SB-17/ SB-85 | SB-212 |
| 0" - 6" | 11.7 | 49.9 | 0.66 | 0.61 | NS | 13.8 | 23.9 | 1.0 | NS | 8 |
| 6" - 12" | 7.3 | 7.4 | 1.0 | 0.68 | NS | <0.5 | 21.6 | 0.62 | NS | 2.6 |
| 0' - 1' | 18.4 | NS | 0.99 | <0.57 | 30.2 | NS | NS | NS | 32.1 | NS |
| 1' - 2' | | 8.4 | | | 44.8 | 3 | 40.8 | 0.72 | NS | <0.59 |
| 2' - 3' | | 1.6 | 0.66 | 1.9 | 11.4 | <0.64 | 5.3 | <0.60 | NS | <0.62 |
| 3' - 4' | | <0.63 | | | <0.79 | <0.75 | <0.71 | <0.64 | NS | <0.75 |
| 4' - 5' | 22.6 | NS | 1.2 | 1.3 | NS | <0.75 | <0.70 | <0.63 | NS | NS |
| 5' - 6' | | NS | | | NS | NS | NS | <0.68 | NS | NS |
| 6' - 7' | | NS | <0.57 | 1.3 | NS | NS | NS | <0.59 | NS | NS |
| 7' - 8' | | NS | | | NS | NS | NS | <0.74 | NS | NS |
| 8' - 10' | <0.87 | NS | 0.8 | <0.78 | NS | NS | NS | NS | NS | NS |
| 10' - 12' | | NS | <0.70 | <0.79 | NS | NS | NS | NS | NS | NS |

## LEGEND:

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- 12" CMP — INDICATES STORM CULVERT
- 6" G — CV / GLM — INDICATES GAS MAIN, GAS VALVE & GAS LINE MARKER
- 8" W — WV — INDICATES WATER MAIN, WATER VALVE & HYDRANT
- 18" D — CB — INDICATES STORM SEWER, CATCH BASIN & MANHOLE
- 8" S — SV — INDICATES SANITARY SEWER, SEWER VENT & MANHOLE
- TEL MH — UT — TEL — INDICATES UNDERGROUND TELEPHONE LINE, MANHOLE & BOX
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- INDICATES GUIDE RAIL
- PAVEMENT
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- SW-1 — APPROXIMATE LMC SURFACE WATER SAMPLING LOCATION
- SB-409 — NEW LMC SIDE BANK SOIL SAMPLING LOCATION (PHASE IV)
- SB-51 — EXISTING LMC SIDE BANK SOIL SAMPLING LOCATION (PHASE IV)
- SB-20 — APPROXIMATE LMC SIDE BANK SOIL SAMPLING LOCATION
- EPSOIL-3 — APPROXIMATE NYSDEC SIDE BANK SOIL SAMPLING LOCATION
- OCDDS-10 — APPROXIMATE ONONDAGA COUNTY SIDE BANK SOIL SAMPLING LOCATION
- PRE-SS-P1 — APPROXIMATE LMC SOIL SAMPLING LOCATION (1997)
- NS = NOT SAMPLED
- --- = NOT ANALYZED

NOTE:
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## NOTES:

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Location of underground utilities taken by field measurement where practicable, otherwise taken from various other sources and are approximate only.
Property line information taken from record maps and filed deeds and are approximate only.

MAP SCALE
0 60 120 180 FEET

REFERENCE:
BASE MAP SOURCE: IANUZI & ROMANS, P.C.

Shaw Environmental, Inc.

VOLUNTARY CLEANUP PROGRAM
BLOODY BROOK
ONONDAGA COUNTY, NEW YORK

FIGURE 1C
PROPOSED SAMPLING LOCATIONS
PHASE IV-A SIDE BANK
SOIL INVESTIGATION
SHEET 3 OF 3

| OFFICE | DRAWN BY | CHECKED BY | APPROVED BY | DRAWING NUMBER |
|---|---|---|---|---|
| ALBANY, NY | S. SHKOLNIK 04-02-04 | | | 824446D15(1C) |

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Format Revised: 7/18/00

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