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*1*V CONSULTANTS, INC.

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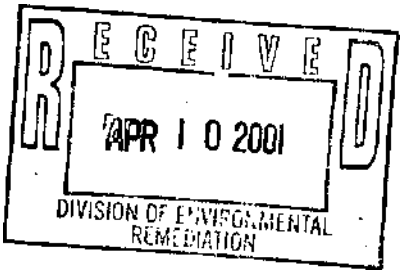
Project No. 98245.30



Mr. Mark Purcell
U.S. Environmental Protection Agency
Region II
290 Broadway, 20th Floor
New York, NY 10007-1866

RE: INDUSTRIAL DRAINAGEWAY COMPOSITE SAMPLE PLAN
KENTUCKY AVENUE WELLFIELD SITE - OU-3
HORSEHEADS, NEW YORK

Dear Mr. Purcell:

Cummings Riter Consultants, Inc. (Cummings/Riter) has received and reviewed the preliminary results from the recent industrial drainageway sediment sampling event. The data are currently being validated. In accordance with the Remedial Design Work Plan (RDWP), the preliminary results have been evaluated with respect to estimating the extent of material to be removed from the industrial drainageway. The RDWP provides for Toxicity Characteristic Leaching Procedure (TCLP) metals analysis (excluding mercury) on samples formulated by compositing individual samples so that each composite represents no more than 100± cubic yards (CY). This letter summarizes the preliminary analytical results and outlines our proposed plan to composite samples for TCLP analysis.

PRELIMINARY ANALYTICAL RESULTS

A total of 263 sediment and bank soil samples were collected from 83 locations in and adjacent to the industrial drainageway. Samples were analyzed for polychlorinated biphenyls (PCBs). Sample collection was attempted to a minimum depth of three feet, with laboratory analysis on each one-foot interval. A few sample locations were terminated at a shallower depth due to refusal. At several sample locations, a three to four foot sample was also collected. These samples were collected as a contingency, but were not analyzed because the holding time had expired.

Figure 1 shows the layout of the entire industrial drainageway. Note that the stationing of the industrial drainageway has been revised between Sta. 11+50 and Sta. 23+00 because Sta. 11+50 was inadvertently skipped during the stationing of the drainageway. Figures 2 and 3 show sample locations, and Table 1 summarizes the PCB results. Samples exhibiting total PCB concentrations greater than 1 part per million (ppm) are highlighted.

339 Haymaker Road • Parkway Building • Suite 201 • Monrpeville, PA 15146
(412) 373-5240 • FAX (412) 373-5242 • E-Mail: crc@cummingsriter.com

As shown in Table 1, Aroclors 1016, 1221, 1232, 1242, and 1248 were not detected in any samples. Aroclor 1254 was the predominant Aroclor detected. Aroclor 1254 was detected in 86 of 263 samples at concentrations greater than 1 ppm, with overall concentrations ranging from not detected to 53 ppm. Sample 215 is a duplicate of 214 with results being 1.1 ppm and 0.036 ppm, respectively..

Aroclor 1260 was detected in two samples (48 and 115). The Sample 115 result was 0.030 ppm, and the PCB 1260 concentrations in Sample 48 was 1.1 ppm; however, the 1.1 ppm was not confirmed by a duplicate sample (47) at the same location, which did not detect Aroclor 1260.

Figures 4 through 9 depict the samples that exhibited a PCB concentration greater than 1 ppm in each one-foot interval to a depth of three feet.

SEDIMENT REMOVAL AND COMPOSITING PLAN

Based on these sample results, a preliminary removal plan was developed. Figure 10 shows the approximate horizontal and vertical extent of removal for sediment in the industrial drainageway and indicates our proposed sample compositing plan for TCLP analysis. Figure 10 also presents an estimated sediment volume to be removed based on the removal plan. The removal plan was developed assuming sediment removal would extend 50 feet upstream or downstream beyond the last sample that exceeds the Remedial Action Objective of 1 ppm in sediment.. Bank soil samples were not included in the compositing scheme for TCLP analysis.

Samples to be composited were selected to assess the difference in TCLP results with depth, therefore, each composite is representative of a specific depth and reach of the drainageway. The stream width and the RDWP requirement that each composite represent approximately 100 CY of sediment to be removed governed the distance along the stream represented by a composite sample. The average channel width was estimated and the distance along the drainageway needed to obtain 100 CY was calculated based on removing one foot of sediment. The following table summarizes these results for those reaches that have samples composited:

Beginning Sta. No.	Ending Sta. No.	Average Width of Drainageway (feet)	Length of Drainageway Representing 100 CY for a One-Foot Excavation
0+00	10+00	10.75	250 feet
12+00	15+50	27.5	100 feet
16+50	17+50	12.75	211 feet

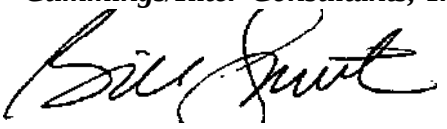
In addition to the 100 CY volume specification, we considered the spatial distribution and the relative size of the impacted areas. Figure 10 shows the area of impacts with respect to depth and the proposed compositing plan. Eleven composite samples will be collected

from the sample intervals indicated. Equal aliquots of sediment material will be used from each sample in the target composite zone. Table 2 lists those samples that are to be used for each composite.

The composite sample will be mixed in the laboratory by in accordance with the attached QA directive by STL (QA Directive [01-1]) (Attachment A). After mixing, the sample will be analyzed for TCLP metals as per the approved Sampling, Analysis, and Monitoring Plan.

If you have any questions, please call Mr. Leo Brausch at 724/444-0377 or me.

Respectfully submitted,
Cummings/Riter Consultants, Inc.



William C. Smith; P.E.
Project Manager

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TABLES

TABLE 1
SEDIMENT SAMPLE ANALYTICAL RESULTS
INDUSTRIAL DRAINAGEWAY
HORSEHEADS, NEW YORK

Station No.	Sample Point	Sample Depth (ft)	Sample Type	Sample ID. No.	Detection Limit ug/kg[w]	Aroclor 1016 ug/kg	Arodor 1221 ug/kg	Arodor 1232 ug/kg	Aroclor 1242 ug/kg	Aroclor 1248 ug/kg	Aroclor 1254 ug/kg	Aroclor 1260 ug/kg
Sample Date: 2/19/01												
23+00	**1**	0-1	Bank	SD-ID-1	**89**		**ND**	**ND**	**ND**	**ND**	390	**ND**
		1-2	Bank	SD-1D-2	**75**	**ND**	**ND**	**ND**	**ND**	**ND**	900	**ND**
		2-3	Bank	SD-1D-3	100	**ND**	**ND**	**ND**	**ND**	**ND**	460	**ND**
23+00	**2**	0-1	Sediment	SD-ID-5	90	**ND**	**ND**	**ND**	**ND**	**ND**	500	**ND**
		1-2	Sediment	SD-ID-6	99	**ND**	**ND**	**ND**	**ND**	**ND**	290	**ND**
		2-3	Sediment	SD-1D-7	53	**ND**	**ND**	**ND**	**ND**	**ND**	110	**ND**
23+00	**3**	0-1	Sediment	SD-ID-9	160	**ND**	**ND**	**ND**	**ND**	**ND**	170	**ND**
		1-2	Sediment	SD-ID-10	93	**ND**	**ND**	**ND**	**ND**	**ND**	490	**ND**
		2-3	Sediment	SD-ID-11	100	**ND**	**ND**	**ND**	**ND**	**ND**	**3600**[(c)]	**ND**
23+00	**4**	0-1	Bank	SD-ID-13	110	**ND**	**ND**	**ND**	**ND**	**ND**	250	**ND**
		1-2	Bank	SD-ID-14	60	**ND**	**ND**	**ND**	**ND**	**ND**	**1300**	**ND**
		2-3	Bank	SD-ID-15	50	**ND**	**ND**	**ND**	**ND**	**ND**	43 **J**	**ND**
22+00	**5**	**0-1**	Bank	SD-ID-17	110	**ND**	**ND**	**ND**	**ND**	**ND**	240	**ND**
		1-2	Bank	SD-ID-18	100	**ND**	**ND**	**ND**	**ND**	**ND**	520	**ND**
		2-3	Bank	SD-ID-19	**70**	**ND**	**ND**	**ND**	**ND**	**ND**	46 **J**	**ND**
22+00	**6**	0-1	Sediment	SD-ID-21	200	**ND**	**ND**	**ND**	**ND**	**ND**	320	**ND**
		1-2	Sediment	SD-ID-22	91	**ND**	**ND**	**ND**	**ND**	**ND**	330	**ND**
		2-3	Sediment	SD-ID-23	**73.**	**ND**	**ND**	**ND**	**ND**	**ND**	340	**ND**
22+00	**7**	0-1	Bank	SD-ID-25	**57**	**ND**	**ND**	**ND**	**ND**	**ND**	420	**ND**
		1-2	Bank	SD-ID-26	44	**ND**	**ND**	**ND**	**ND**	**ND**	**47**	**ND**
		2-3	Bank	SD-ID-27	61	**ND**	**ND**	**ND**	**ND**	**ND**	**1300**	**ND**
Sample Date: 2/20/01												
21+00	**8**	**0-1**	Bank	SD-ID-29	**48**	**ND**	**ND**	**ND**	**ND**	**ND**	260	**ND**
		1-2	Bank	SD-ID-30	49	**ND**	**ND**	**ND**	**ND**	**ND**	190	**ND**
		2-3	Bank	SD-ID-31	42	**ND**	**ND**	**ND**	**ND**	**ND**	**88**	**ND**
		0-1	Bank	SD-ID-33	52	**ND**	**ND**	**ND**	**ND**	**ND**	190	**ND**
21+00	**9**	**0-1**	Sediment	SD-ID-34	130	**ND**	**ND**	**ND**	**ND**	**ND**	470	**ND**
		1-2	Sediment	SD-ID-35	**47**	**ND**	**ND**	**ND**	**ND**	**ND**	**77**	**ND**
		2-3	Sediment	SD-ID-36	39	**ND**	**ND**	**ND**	**ND**	**ND**	22 **J**	**ND**
21+00	10	0-1	Bank	SD-ID-38	**47**	**ND**	**ND**	**ND**	**ND**	**ND**	150	**ND**
		1-2	Bank	SD-1D-39	41	**ND**	**ND**	**ND**	**ND**	**ND**	**no**	**ND**
		2-3	Bank	SD-ID-40	41	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
20+00	11	0-1	Bank	SD-ID-42	49	**ND**	**ND**	**ND**	**ND**	**ND**	950	**ND**
		1-2	Bank	SD-ID-43	51	**ND**	**ND**	**ND**	**ND**	**ND**	250	**ND**
		2-3	Bank	SD-ID-44	**38**	**ND**	**ND**	**ND**	**ND**	**ND**	170	**ND J**

TABLE 1
SEDIMENT SAMPLE ANALYTICAL RESULTS
INDUSTRIAL DRAINAGEWAY
HORSEHEADS, NEW YORK

Station No.	Sample Point	Sample Depth (ft)	Sample Type	Sample ID. No.	Detection Limit ug/kg(11)	Aroclor 1016 ug/kg	Aroclor 1221 ug/kg	Aroclor 1232 ug/kg	Aroclor 1242 ug/kg	Aroclor 1248 ug/kg	Aroclor 1254 ug/kg	Aroclor 1260 ug/kg
Sample Date: 2/20/01												
20+00	12	0-1	Sediment	SD-ID-46	170	**ND**	**ND**	**ND**	**ND**	**ND**	710	ND
		1-2	Sediment	SD-ID-47	51	**ND**	**ND**	**ND**	**ND**	**ND**	550	ND
		1-2	Sediment	SD-ID-48	59	**ND**	**ND**	**ND**	**ND**	**ND**	590	1100
		2-3	Sediment	SD-ID-49	51	**ND**	**ND**	**ND**	**ND**	**ND**	650	ND
20+00	**13**	**0-1**	Bank	SD-ID-51	43	**ND**	**ND**	**ND**	**ND**	**ND**	140	ND
		1-2	Bank	SD-ID-52	44	**ND**	**ND**	**ND**	**ND**	**ND**	170	ND
		2-3	Bank	SD-ID-53	40	**ND**	**ND**	**ND**	**ND**	**ND**	96	ND
19+00	**14**	0-1	Bank	SD-ID-55	39	**ND**	**ND**	**ND**	**ND**	**ND**	19J	ND
		1-3	Bank	SD-ID-56	39	**ND**	**ND**	**ND**	**ND**	**ND**	12J	ND
19+00	15	0-1	Sediment	SD-ID-59	84	**ND**	**ND**	**ND**	**ND**	**ND**	450	ND
		1-2	Sediment	SD-ID-58	49	**ND**	**ND**	**ND**	**ND**	**ND**	120	ND
		2-3	Sediment	SD-ID-60	49	**ND**	**ND**	**ND**	**ND**	**ND**	280	ND
19+00	16	**0-1**	Bank	SD-ID-57	140	**ND**	**ND**	**ND**	**ND**	**ND**	650	ND
		1-3	Bank	SD-ID-61	62	**ND**	**ND**	**ND**	**ND**	**ND**	190	ND
18+00	17	0-1	Bank	SD-ID-62	58	**ND**	**ND**	**ND**	**ND**	**ND**	820	ND
		0-1	Bank	SD-ID-63	57	**ND**	**ND**	**ND**	**ND**	**ND**	820	ND
		1-2	Bank	SD-ID-64	280	**ND**	**ND**	**ND**	**ND**	**ND**	**4100**	ND
		2-3	Bank	SD-ID-65	60	**ND**	**ND**	**ND**	**ND**	**ND**	130	ND
18+00	18	**0-1**	Sediment	SD-ID-66	83	**ND**	**ND**	**ND**	**ND**	**ND**	870	ND
		1-2	Sediment	SD-ID-67	60	**ND**	**ND**	**ND**	**ND**	**ND**	570	ND
		2-3	Sediment	SD-ID-68	44	**ND**	**ND**	**ND**	**ND**	**ND**	**34 J**	ND
18+00	19	0-1	Bank	SD-ID-69	55	**ND**	**ND**	**ND**	**ND**	**ND**	240	ND
		1-2	Bank	SD-ID-70	**44**	**ND**	**ND**	**ND**	**ND**	**ND**	19J	ND
		2-3	Bank	SD-ID-71	41	**ND**	**ND**	**ND**	**ND**	**ND**	11 **J**	ND
17+00	20	**0-1**	Bank	SD-ID-72	78	**ND**	**ND**	**ND**	**ND**	**ND**	**1400**	ND
		1-2	Bank	SD-ID-73	69	**ND**	**ND**	**ND**	**ND**	**ND**	**1100**	ND
		1-2	Bank	SD-ID-74	73	**ND**	**ND**	**ND**	**ND**	**ND**	**2500**	ND
		2-3	Bank	SD-ID-75	49	**ND**	**ND**	**ND**	**ND**	**ND**	**83**	ND
17+00	21	**0-1**	Sediment	SD-ID-76	**41**	**ND**	**ND**	**ND**	**ND**	**ND**	**1400**	ND
		1-2	Sediment	SD-ID-77	53	**ND**	**ND**	**ND**	**ND**	**ND**	260	ND
		2-3	Sediment	SD-ID-78	37	**ND**	**ND**	**ND**	**ND**	**ND**	82	ND
17+00	22	**0-1**	Bank	SD-ID-79	59	**ND**	**ND**	**ND**	**ND**	**ND**	**1800**	ND
		1-2	Bank	SD-ID-80	670	**ND**	**ND**	**ND**	**ND**	**ND**	**12000**	ND
		2-3	Bank	SD-ID-81	42	**ND**	**ND**	**ND**	**ND**	**ND**	220	ND
N/A	**23**	0-1	Bank	SD-ID-82	60	**ND**	**ND**	**ND**	**ND**	**ND**	560	ND
		1-2	Bank	SD-ID-83	1200	**ND**	**ND**	**ND**	**ND**	**ND**	**13000**	ND
		2-3	Bank	SD-ID-84	54	**ND**	**ND**	**ND**	**ND**	**ND**	690	ND

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INDUSTRIAL DRAINAGEWAY
HORSEHEADS, NEW YORK

Station No.	Sample Point	Sample Depth (ft)	Sample Type	Sample ID. No.	Detection Limit ug/kg(,)	Aroclor 1016 ug/kg	Aroclor 1221 ug/kg	Aroclor 1232 ug/kg	Aroclor 1242 ug/kg	Aroclor 1248 ug/kg	Aroclor 1254 ug/kg	Aroclor 1260 ug/kg
Sample Date: 2/20/01												
16+00	24	**0 - 1**	Bank	SD-ID-85	40	**ND**	**ND**	**ND**	**ND**	**ND**	150	ND
		1 - 2	Bank	SD-ID-86	48	**ND**	**ND**	**ND**	**ND**	**ND**	460	ND
		2 - 3	Bank	SD-1D-87	38	**ND**	**ND**	**ND**	**ND**	**ND**	190	ND
16+00	25	0 - 1	Sediment	SD-ID-88	52	**ND**	**ND**	**ND**	**ND**	**ND**	140	ND
		1 - 2	Sediment	SD-ID-89	46	**ND**	**ND**	**ND**	**ND**	**ND**	140	ND
		2 - 3	Sediment	SD-ID-90	41	**ND**	**ND**	**ND**	**ND**	**ND**	**93**	ND
16+00	26	0 - 1	Bank	SD-ID-91	48	**ND**	**ND**	**ND**	**ND**	**ND**	140	ND
		1 - 2	Bank	SD-ID-92	41	**ND**	**ND**	**ND**	**ND**	**ND**	91	ND
		2 - 3	Bank	SD-ID-93	39	**ND**	**ND**	**ND**	**ND**	**ND**	180	ND
Sample Date: 2/21/01												
N/A	**27**	0 - 1	Sediment	SD-ID-94	44	**ND**	**ND**	**ND**	**ND**	**ND**	15J	. ND
		1 - 2	Sediment	SD-ID-95	49	**ND**	**ND**	**ND**	**ND**	**ND**	19 **J**	ND
		2 - 3	Sediment	SD-ID-96	43	**ND**	**ND**	**ND**	**ND**	**ND**	**23 J**	ND
		2 - 3	Sediment	SD-ID-97	50	**ND**	**ND**	**ND**	**ND**	**ND**	18 **J**	ND
N/A	28	0-.25	Sediment	SD-ID-98	65	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	ND
		.25-1	Sediment	SD-ID-99	43	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	ND
		1 - 2	Sediment	SD-ID-100	43	**ND**	**ND**	**ND**	**ND**	**ND**	14J	ND
15+42	29	0 - 1	Bank	SD-ID-101	110	**ND**	**ND**	**ND**	**ND**	**ND**	**2000**	ND
		1 - 2	Bank	SD-ID-102	52	**ND**	**ND**	**ND**	**ND**	**ND**	ISO	ND
		2 - 3	Bank	SD-ID-103	47	**ND**	**ND**	**ND**	**ND**	**ND**	62	ND
15+42	**30**	**0 - 1**	Sediment	SD-ID-104	250	**ND**	**ND**	**ND**	**ND**	**ND**	**3100**	ND
		1-2	Sediment	SD-ID-105	53	**ND**	**ND**	**ND**	**ND**	**ND**	180	ND
		2 - 3	Sediment	SD-ID-106	49	**ND**	**ND**	**ND**	**ND**	**ND**	89	ND
14+80	**31**	**0 - 1**	Bank	SD-ID-107	67	**ND**	**ND**	**ND**	**ND**	**ND**	520	ND
		1-2	Bank	SD-ID-108	59	**ND**	**ND**	**ND**	**ND**	**ND**	68	ND
		2 - 3	Bank	SD-ID-109	47	**ND**	**ND**	**ND**	**ND**	**ND**	150	ND
14+50	**32**	0 - 1	Sediment	SD-ID-110	55	**ND**	**ND**	**ND**	**ND**	**ND**	**27 J**	ND
		1 - 2	Sediment	SD-ID-111	39	**ND**	**ND**	**ND**	**ND**	**ND**	**6J**	ND
		2 - 3	Sediment	SD-ID-112	47	**ND**	**ND**	**ND**	**ND**	**ND**	14 **J**	ND
13+70	**33**	**0 - 1**	Bank	SD-ID-113	51	**ND**	**ND**	**ND**	**ND**	**ND**	16 **J**	ND
		1-2	Bank	SD-ID-114	43	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	ND
		2-2.5	Bank	SD-ID-115	45	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	30 J
14+50	**34**	0 - 1	Bank	SD-ID-116	44	**ND**	**ND**	**ND**	**ND**	**ND**	28 **J**	ND
		1-1.5	Bank	SD-ID-117	43	**ND**	**ND**	**ND**	**ND**	**ND**	26 **J**	ND
		1.5-2	Bank	SD-ID-118	40	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	ND
14+50	**35**	**0 - 1**	Sediment	SD-ID-119	1600	**ND**	**ND**	**ND**	**ND**	**ND**	**14000**	ND
		1-2	Sediment	SD-ID-120	100	**ND**	**ND**	**ND**	**ND**	**ND**	**1100**	ND
		2-2.5	Sediment	SD-ID-121	44	**ND**	**ND**	**ND**	**ND**	**ND**	610	ND

TABLE 1
SEDIMENT SAMPLE ANALYTICAL RESULTS
INDUSTRIAL DRAINAGEWAY
HORSEHEADS, NEW YORK

Station No.	Sample Point	Sample Depth (ft)	Sample Type	Sample ID. No.	Detection Limit ug/kg[w]	Aroclor 1016 ug/kg	Aroclor 1221 ug/kg	Aroclor 1232 ug/kg	Aroclor 1242 ug/kg	Aroclor 1248 ug/kg	Aroclor 1254 ug/kg	Aroclor 1260 ug/kg
Sample Date: 2/21/01												
14+50	36	0 - 1	Sediment	SD-ID-122	330	**ND**	**ND**	**ND**	**ND**	**ND**	**4100**	**ND**
		1 - 2	Sediment	SD-ID-123	620	**ND**	**ND**	**ND**	**ND**	**ND**	**5400**	**ND**
		2 - 3	Sediment	SD-ID-124	1200	**ND**	**ND**	**ND**	**ND**	**ND**	**12000**	**ND**
14+50	37	0 - 1	Bank	SD-ID-125	38	**ND**	**ND**	**ND**	**ND**	**ND**	23 **J**	**ND**
		0 - 1	Bank	SD-ID-126	39	**ND**	**ND**	**ND**	**ND**	**ND**	20 **J**	**ND**
13+50	38	**0 - 1**	Bank	SD-ID-127	43	**ND**	**ND**	**ND**	**ND**	**ND**	340	**ND**
		1 - 2	Bank	SD-ID-128	53	**ND**	**ND**	**ND**	**ND**	**ND**	530	**ND**
		2 - 3	Bank	SD-ID-129	3600	**ND**	**ND**	**ND**	**ND**	**ND**	**42000**	**ND**
13+50	39	**0 - 1**	Sediment	SD-ID-130	1400	**ND**	**ND**	**ND**	**ND**	**ND**	**11000**	**ND**
		1-2	Sediment	SD-ID-131	1800	**ND**	**ND**	**ND**	**ND**	**ND**	**17000**	**ND**
		2 - 3	Sediment	SD-ID-132	41	**ND**	**ND**	**ND**	**ND**	**ND**	670	**ND**
13+50	40	**0 - 1**	Sediment	SD-ID-133	62	**ND**	**ND**	**ND**	**ND**	**ND**	280	**ND**
		1 - 2	Sediment	SD-ID-134	200	**ND**	**ND**	**ND**	**ND**	**ND**	**2300**	**ND**
		2 - 3	Sediment	SD-ID-135	43	**ND**	**ND**	**ND**	**ND**	**ND**	440	**ND**
13+50	41	**0 - 1**	Bank	SD-ID-136	48	**ND**	**ND**	**ND**	**ND**	**ND**	22 **J**	**ND**
		1 - 2	Bank	SD-ID-137	44	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
		2 - 3	Bank	SD-ID-138	40	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
12+50	42	**0 - 1**	Bank	SD-ID-139	59	**ND**	**ND**	**ND**	**ND**	**ND**	510	**ND**
		1-2	Bank	SD-ID-140	100	**ND**	**ND**	**ND**	**ND**	**ND**	**1300**	**ND**
		2 - 3	Bank	SD-ID-141	40	**ND**	**ND**	**ND**	**ND**	**ND**	220	**ND**
		2 - 3	Bank	SD-ID-142	42	**ND**	**ND**	**ND**	**ND**	**ND**	290	**ND**
12+50	43	0 - 1	Sediment	SD-ID-143	77	**ND**	**ND**	**ND**	**ND**	**ND**	560	**ND**
		1 - 2	Sediment	SD-ID-144	210	**ND**	**ND**	**ND**	**ND**	**ND**	**2400**	**ND**
		2 - 3	Sediment	SD-ID-145	1400	**ND**	**ND**	**ND**	**ND**	**ND**	**15000**	**ND**
12+50	44	**0 - 1**	Bank	SD-ID-146	60	**ND**	**ND**	**ND**	**ND**	**ND**	720	**ND**
		1 - 2	Bank	SD-ID-147	60	**ND**	**ND**	**ND**	**ND**	**ND**	940	**ND**
		2 - 3	Bank	SD-ID-148	490	**ND**	**ND**	**ND**	**ND**	**ND**	**5100**	**ND**
11+50	45	0 - 1	Bank	SD-ID-149	44	**ND**	**ND**	**ND**	**ND**	**ND**	360	**ND**
		1 - 2	Bank	SD-ID-150	45	**ND**	**ND**	**ND**	**ND**	**ND**	170	**ND**
		2 - 3	Bank	SD-ID-151	42	**ND**	**ND**	**ND**	**ND**	**ND**	67	**ND**
11+50	**46**	0 - 1	Sediment	SD-ID-152	57	**ND**	**ND**	**ND**	**ND**	**ND**	350	**ND**
		1 - 2	Sediment	SD-ID-153	52	**ND**	**ND**	**ND**	**ND**	**ND**	230	**ND**
		2 - 3	Sediment	SD-ID-154	50	**ND**	**ND**	**ND**	**ND**	**ND**	880	**ND**
11+50	47	0 - 1	Bank	SD-ID-155	3100	**ND**	**ND**	**ND**	**ND**	**ND**	**27000**	**ND**
		1 - 2	Bank	SD-ID-156	180	**ND**	**ND**	**ND**	**ND**	**ND**	**2400**	**ND**
		2 - 3	Bank	SD-ID-157	3600	**ND**	**ND**	**ND**	**ND**	**ND**	**31000**	**ND**

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TABLE 1
SEDIMENT SAMPLE ANALYTICAL RESULTS
INDUSTRIAL DRAINAGEWAY
HORSEHEADS, NEW YORK

Station No.	Sample Point	Sample Depth (ft)	Sample Type	Sample D3.No.	Detection Limit ug/kg(J)	Aroclor 1016 ug/kg	Aroclor 1221 ug/kg	Aroclor 1232 ug/kg	Aroclor 1242 ug/kg	Aroclor 1248 ug/kg	Aroclor 1254 ug/kg	Aroclor 1260 ug/kg
Sample Date: 2/22/01												
10+50	48	0 - 1	Bank	SD-ID-158	63	**ND**	**ND**	**ND**	**ND**	**ND**	490	**ND**
		0 - 1	Bank	SD-ID-159	61	**ND**	**ND**	**ND**	**ND**	**ND**	310	**ND**
		1 - 2	Bank	SD-ID-160	170	**ND**	**ND**	**ND**	**ND**	**ND**	**1700**	**ND**
		2 - 3	Bank	SD-ID-161	570	**ND**	**ND**	**ND**	**ND**	**ND**	**5600**	**ND**
10+50	49	0 - 1	Sediment	SD-ID-162	56	**ND**	**ND**	**ND**	**ND**	**ND**	340	**ND**
		1 - 2	Sediment	SD-ID-163	66	**ND**	**ND**	**ND**	**ND**	**ND**	500	**ND**
		2 - 3	Sediment	SD-ID-164	45	**ND**	**ND**	**ND**	**ND**	**ND**	460	**ND**
10+50	50	**0 - 1**	Bank	SD-ID-165	190	**ND**	**ND**	**ND**	**ND**	**ND**	**1900**	**ND**
		1 - 2	Bank	SD-ID-166	55	**ND**	**ND**	**ND**	**ND**	**ND**	850	**ND**
		2 - 3	Bank	SD-ID-167	2000	**ND**	**ND**	**ND**	**ND**	**ND**	**14000**	**ND**
9+50	51	0 - 1	Bank	SD-ID-168	68	**ND**	**ND**	**ND**	**ND**	**ND**	310	**ND**
		1 - 2	Bank	SD-ID-169	320	**ND**	**ND**	**ND**	**ND**	**ND**	**3200**	**ND**
		2 - 3	Bank	SD-ID-170	460	**ND**	**ND**	**ND**	**ND**	**ND**	**4300**	**ND**
9+50	52	0 - 1	Sediment	SD-1D-171	60	**ND**	**ND**	**ND**	**ND**	**ND**	320	**ND**
		1-2	Sediment	SD-ID-172	13000	**ND**	**ND**	**ND**	**ND**	**ND**	**37000**	**ND**
		2 - 3	Sediment	SD-ID-173	1200	**ND**	**ND**	**ND**	**ND**	**ND**	**13000**	**ND**
9+50	53	0 - 1	Bank	SD-ID-174	70	**ND**	**ND**	**ND**	**ND**	**ND**	200	**ND**
		0 - 1	Bank	SD-ID-175	66	**ND**	**ND**	**ND**	**ND**	**ND**	170	**ND**
		1 - 2	Bank	SD-ID-176	170	**ND**	**ND**	**ND**	**ND**	**ND**	**2500**	**ND**
		2 - 3	Bank	SD-ID-177	310	**ND**	**ND**	**ND**	**ND**	**ND**	**6200**	**ND**
8+50	54	0 - 1	Bank	SD-ID-178	59	**ND**	**ND**	**ND**	**ND**	**ND**	140	**ND**
		1 - 2	Bank	SD-ID-179	260	**ND**	**ND**	**ND**	**ND**	**ND**	**4300**	**ND**
		2 - 3	Bank	SD-ID-180	350	**ND**	**ND**	**ND**	**ND**	**ND**	**4800**	**ND**
8+50	55	0 - 1	Sediment	SD-ID-181	58	**ND**	**ND**	**ND**	**ND**	**ND**	310	**ND**
		1 - 2	Sediment	SD-ID-182	1300	**ND**	**ND**	**ND**	**ND**	**ND**	**18000**	**ND**
		2 - 3	Sediment	SD-ID-183	230	**ND**	**ND**	**ND**	**ND**	**ND**	**3200**	**ND**
8+50	56	0 - 1	Bank	SD-ID-184	64	**ND**	**ND**	**ND**	**ND**	**ND**	220	**ND**
		1-2	Bank	SD-ID-185	58	**ND**	**ND**	**ND**	**ND**	**ND**	660	**ND**
		2 - 3	Bank	SD-ID-186	360	**ND**	**ND**	**ND**	**ND**	**ND**	**5100**	**ND**
7+50	57	0 - 1	Bank	SD-ID-187	59	**ND**	**ND**	**ND**	**ND**	**ND**	530	**ND**
		1-2	Bank	SD-ID-188	65	**ND**	**ND**	**ND**	**ND**	**ND**	**1400**	**ND**
		2 - 3	Bank	SD-ID-189	290	**ND**	**ND**	**ND**	**ND**	**ND**	**6300**	**ND**
7+50	58	0 - 1	Sediment	SD-ID-190	1500	**ND**	**ND**	**ND**	**ND**	**ND**	**24000**	**ND**
		1 - 2	Sediment	SD-ID-191	120	**ND**	**ND**	**ND**	**ND**	**ND**	**2000**	**ND**
		2 - 3	Sediment	SD-ID-192	83	**ND**	**ND**	**ND**	**ND**	**ND**	**1400**	**ND**
7+50	59	**0 - 1**	Bank	SD-ID-193	67	**ND**	**ND**	**ND**	**ND**	**ND**	350	**ND**
		1 - 2	Bank	SD-ID-194	59	**ND**	**ND**	**ND**	**ND**	**ND**	90	**ND**
		2 - 3	Bank	SD-ID-195	1900	**ND**	**ND**	**ND**	**ND**	**ND**	**12000**	**ND**
6+50	60	**0 - 1**	Bank	SD-ID-196	65	**ND**	**ND**	**ND**	**ND**	**ND**	250	**ND**

TABLE 1
SEDIMENT SAMPLE ANALYTICAL RESULTS
INDUSTRIAL DRAINAGEWAY
HORSEHEADS, NEW YORK

Station No.	Sample Point	Sample Depth (ft)	Sample Type	Sample ID. No.	Detection Limit ug/kg*"	Aroclor 1016 ug/kg	Aroclor 1221 ug/kg	Aroclor 1232 ug/kg	Aroclor 1242 ug/kg	Aroclor 1248 ug/kg	Aroclor 1254 ug/kg	Aroclor 1260 ug/kg
Sample Date: 2/22/01												
6+50	60	**1 - 2**	Bank	SD-ID-197	66	**ND**	**ND**	**ND**	**ND**	**ND**	150	**ND**
		1 - 2	Bank	SD-ID-198	68	**ND**	**ND**	**ND**	**ND**	**ND**	210	**ND**
		2 - 3	Bank	SD-ID-199	1300	**ND**	**ND**	**ND**	**ND**	**ND**	**17000**	**ND**
6+50	61	0 - 1	Sediment	SD-ID-200	270	**ND**	**ND**	**ND**	**ND**	**ND**	**3400**	**ND**
		1 - 2	Sediment	SD-ID-201	52	**ND**	**ND**	**ND**	**ND**	**ND**	800	**ND**
6+50	**62**	0 - 1	Bank	SD-ID-202	73	**ND**	**ND**	**ND**	**ND**	**ND**	230	**ND**
		1 - 2	Bank	SD-ID-203	240	**ND**	**ND**	**ND**	**ND**	**ND**	**3800**	**ND**
		2 - 3	Bank	SD-ID-204	47	**ND**	**ND**	**ND**	**ND**	**ND**	230	**ND**
5+50	63	0 - 1	Bank	SD-ID-205	51	**ND**	**ND**	**ND**	**ND**	**ND**	630	**ND**
		1 - 2	Bank	SD-ID-206	50	**ND**	**ND**	**ND**	**ND**	**ND**	970	**ND**
		2 - 3	Bank	SD-ID-207	43	**ND**	**ND**	**ND**	**ND**	**ND**	200	**ND**
5+50	64	0 - 1	Sediment	SD-ID-208	160	**. ND**	**ND**	**ND**	**ND**	**ND**	**2200**	**ND**
		1 - 2	Sediment	SD-ID-209	1100	**ND**	**ND**	**ND**	**ND**	**ND**	**11000**	**ND**
5+50	65	0 - 1	Bank	SD-ID-210	60	**ND**	**ND**	**ND**	**ND**	**ND**	180	**ND**
		1 - 2	Bank	SD-ID-211	57	**ND**	**ND**	**ND**	**ND**	**ND**	120	**ND**
		2 - 3	Bank	SD-1D-212	58	**ND**	**ND**	**ND**	**ND**	**ND**	1000	**ND**
4+50	66	0 - 1	Bank	SD-ID-213	61	**ND**	**ND**	**ND**	**ND**	**ND**	110	**ND**
		1 - 2	Bank	SD-ID-214	45	**ND**	**ND**	**ND**	**ND**	**ND**	1100	**ND**
		1 - 2	Bank	SD-ID-215	47	**ND**	**ND**	**ND**	**ND**	**ND**	360	**ND**
4+50	67	**0 - 1**	Sediment	SD-ID-216	220	**ND**	**ND**	**ND**	**ND**	**ND**	**3000**	**ND**
		1 - 2	Sediment	SD-ID-217	550	**ND**	**ND**	**ND**	**ND**	**ND**	**7100**	**ND**
4+50	**68**	0 - 1	Bank	SD-ID-218	57	**ND**	**ND**	**ND**	**ND**	**ND**	74	**ND**
		1 - 2	Bank	SD-ID-219	59	**ND**	**ND**	**ND**	**ND**	**ND**	**96**	**ND**
		2 - 3	Bank	SD-ID-220	55	**ND**	**ND**	**ND**	**ND**	**ND**	370	**ND**
3+50	69	0 - 1	Bank	SD-ID-220B	59	**ND**	**ND**	**ND**	**ND**	**ND**	100	**ND**
		1 - 2	Bank	SD-ID-221	360	**ND**	**ND**	**ND**	**ND**	**ND**	**4800**	**ND**
		2 - 3	Bank	SD-ID-222	48	**ND**	**ND**	**ND**	**ND**	**ND**	**1100**	**ND**
3+50	70	0 - 1	Sediment	SD-ID-223	58	**ND**	**ND**	**ND**	**ND**	**ND**	**1700**	**ND**
		0 - 1	Sediment	SD-ID-224	60	**ND**	**ND**	**ND**	**ND**	**ND**	**2000**	**ND**
		1 - 2	Sediment	SD-ID-225	58	**ND**	**ND**	**ND**	**ND**	**ND**	**2100**	**ND**
		2 - 3	Sediment	SD-ID-226	34	**ND**	**ND**	**ND**	**ND**	**ND**	370	**ND**
3+50	71	0 - 1	Bank	SD-ID-227	66	**ND**	**ND**	**ND**	**ND**	**ND**	160	**ND**
		1 - 2	Bank	SD-ID-228	1100	**ND**	**ND**	**ND**	**ND**	**ND**	**14000**	**ND**
		2 - 3	Bank	SD-ID-229	41	**ND**	**ND**	**ND**	**ND**	**ND**	**1100**	**ND**
2+50	**72**	0 - 1	Bank	SD-ID-230	57	**ND**	**ND**	**ND**	**ND**	**ND**	510	**ND**
		1 - 2	Bank	SD-ID-231	45	**ND**	**ND**	**ND**	**ND**	**ND**	250	**ND**
		2 - 3	Bank	SD-1D-232	43	**ND**	**ND**	**ND**	**ND**	**ND**	400	**ND**
2+50	73	**0 - 1**	Sediment	SD-ID-233	540	**ND**	**ND**	**ND**	**ND**	**ND**	**3600**	**ND**

TABLE 1
SEDIMENT SAMPLE ANALYTICAL RESULTS
INDUSTRIAL DRAINAGEWAY
HORSEHEADS, NEW YORK

Station No.	Sample Point	Sample Depth (ft)	Sample Type	Sample ID. No.	Detection Limit ug/kg[1"]	Aroclor 1016 ug/kg	Aroclor 1221 ug/kg	Aroclor 1232 ug/kg	Aroclor 1242 ug/kg	Aroclor 1248 ug/kg	Aroclor 1254 ug/kg	Aroclor 1260 ug/kg
Sample Date: 2/22/01												
2+50	**74**	0 - 1	Bank	SD-ID-234	61	**ND**	**ND**	**ND**	**ND**	**ND**	320	ND
		1 - 2	Bank	SD-ID-235	1200	**ND**	**ND**	**ND**	**ND**	**ND**	**8700**	ND
		2 - 3	Bank	SD-ID-236	2300	**ND**	**ND**	**ND**	**ND**	**ND**	**14000**	ND
Sample Date: 2/23/01												
1+80	**75**	0 - 1	Bank	SD-ID-237	160	**ND**	**ND**	**ND**	**ND**	**ND**	**1500**	ND
		1 - 2	Bank	SD-ID-238	160	**ND**	**ND**	**ND**	**ND**	**ND**	**1600**	ND
		2 - 3	Bank	SD-ID-239	38	**ND**	**ND**	**ND**	**ND**	**ND**	260	ND
1+80	**76**	0 - 1	Sediment	SD-ID-240	1000	**ND**	**ND**	**ND**	**ND**	**ND**	**8700**	ND
		0 - 1	Sediment	SD-ID-241	260	**ND**	**ND**	**ND**	**ND**	**ND**	**2900**	ND
		1 - 2	Sediment	SD-ID-242	3200	**ND**	**ND**	**ND**	**ND**	**ND**	**22000**	ND
1+80	**77**	0 - 1	Bank	SD-ID-243	270	**ND**	**ND**	**ND**	**ND**	**ND**	**3000**	ND
		1 - 2	Bank	SD-ID-244	3100	**ND**	**ND**	**ND**	**ND**	**ND**	**21000**	ND
		2 - 3	Bank	SD-ID-245	190	**ND**	**ND**	**ND**	**ND**	**ND**	**1500**	ND
1+00	**78**	0 - 1	Bank	SD-ID-246	50	**ND**	**ND**	**ND**	**ND**	**ND**	690	ND
		1 - 2	Bank	SD-ID-247	130	**ND**	**ND**	**ND**	**ND**	**ND**	**1300**	ND
		2 - 3	Bank	SD-ID-248	2800	**ND**	**ND**	**ND**	**ND**	**ND**	**25000**	ND
1+00	**79**	0 - 1	Sediment	SD-ID-249	260	**ND**	**ND**	**ND**	**ND**	**ND**	**2800**	ND
		1 - 2	Sediment	SD-ID-250	6100	**ND**	**ND**	**ND**	**ND**	**ND**	**53000**	ND
		2 - 3	Sediment	SD-ID-251	2800	**ND**	**ND**	**ND**	**ND**	**ND**	**16000**	ND
1+00	80	0 - 1	Bank	SD-ID-252	51	**ND**	**ND**	**ND**	**ND**	**ND**	540	ND
		1 - 2	Bank	SD-ID-253	300	**ND**	**ND**	**ND**	**ND**	**ND**	**3500**	ND
		2 - 3	Bank	SD-ID-254	2500	**ND**	**ND**	**ND**	**ND**	**ND**	**22000**	ND
0+00	81	0 - 1	Bank	SD-ID-255	38	**ND**	**ND**	**ND**	**ND**	**ND**	84	ND
		1 - 2	Bank	SD-ID-256	50	**ND**	**ND**	**ND**	**ND**	**ND**	400	ND
		1 - 2	Bank	SD-ID-257	50	**ND**	**ND**	**ND**	**ND**	**ND**	500	ND
		2 - 3	Bank	SD-ID-258	57	**ND**	**ND**	**ND**	**ND**	**ND**	710	ND
0+00	82	0 - 1	Sediment	SD-ID-259	49	**ND**	**ND**	**ND**	**ND**	**ND**	280	ND
		1 - 2	Sediment	SD-ID-260	38	**ND**	**ND**	**ND**	**ND**	**ND**	65	ND
		2 - 3	Sediment	SD-ID-261	41	**ND**	**ND**	**ND**	**ND**	**ND**	140	ND
0+00	83	0 - 1	Bank	SD-ID-262	160	**ND**	**ND**	**ND**	**ND**	**ND**	**1700**	ND
		1 - 2	Bank	SD-ID-263	250	**ND**	**ND**	**ND**	**ND**	**ND**	**1 3200**	ND

a. "ug/kg" is micrograms per kilogram, or ppb.
b. "ND" = value is less than the detection limit.
c. Highlighted concentration values indicate total PCB concentration that exceeds the RAO of 1000 micrograms per kilogram, or ppb.
d. "J" = value is estimated; result is less than the reporting limit.

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TABLE 2
TCLP COMPOSITE SAMPLING PLAN
INDUSTRIAL DRAINAGEWAY
HORSEHEADS, NEW YORK

Composite Sample No.	Samples to be used in Compositing
C-1	SD-ID-240,241,249
C-2	SD-ID-242, 250
C-3	SD-ID-251
C-4	SD-ID-216, 223, 224,233
C-5	SD-ID-217, 225
C-6	SD-ID-190, 200, 208
C-7	SD-ID-172, 182
C-8	SD-ID-192, 183
C-9	SD-ID-119, 120
C-10	SD-lD-134, 144
C-11	SD-ID-76

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73
m
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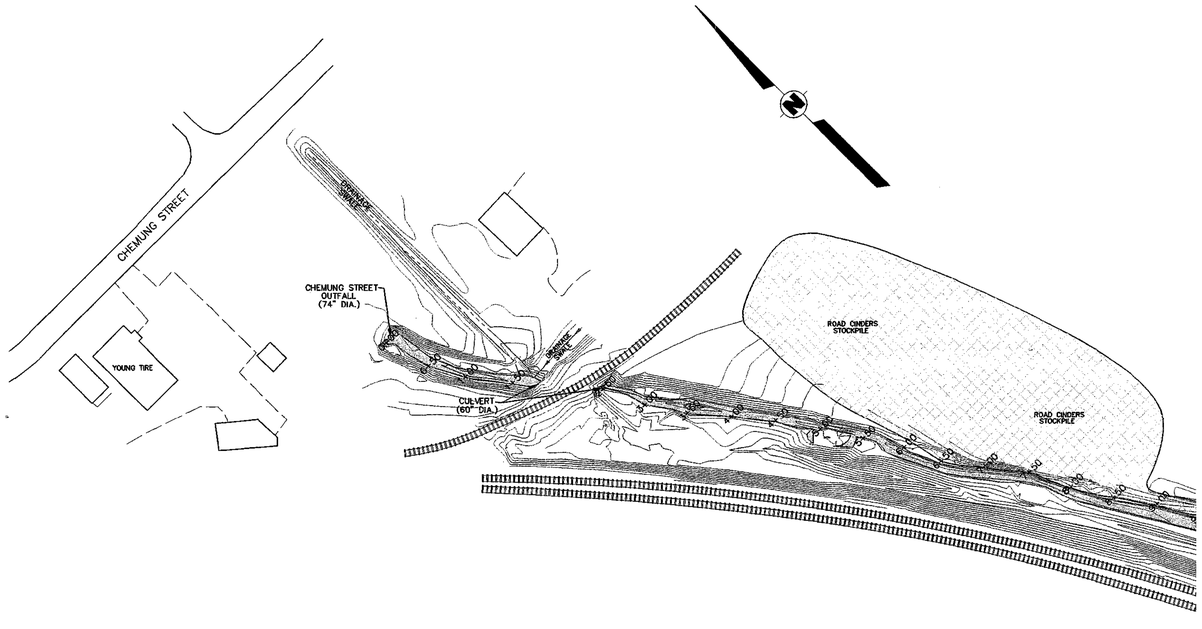
FIGURES



LEGEND

19+50 STATION NO. AS MEASURED FROM FROM CHEMUNG STREET OUTFALL

SCALE

80 0 80 160 FEET

REVISIONS

REV.	DESCRIPTION	DATE	APPROVED

FIGURE 1

INDUSTRIAL DRAINAGEWAY LAYOUT

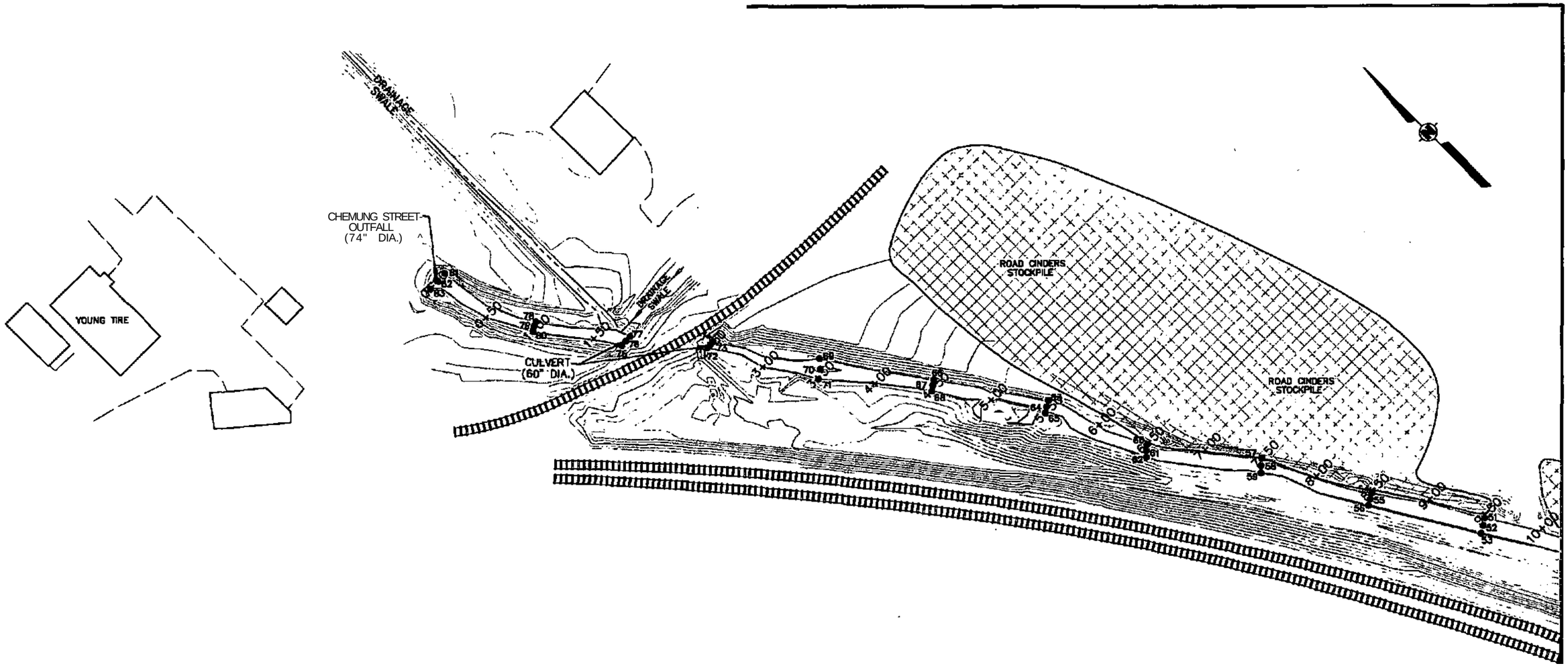
PUMMINGS
J\ CONSULTANTS, INC.
CORPORATE HEADQUARTERS
339 Haymaker Road
Parkway Building, Suite 201
Monroeville, PA 15146
(412) 373-5240
Fax: (412) 373-5242

KENTUCKY AVENUE WELLFIELD SITE - OU3
HORSEHEADS, NEW YORK

PREPARED FOR
VIACOM INC.
PITTSBURGH, PENNSYLVANIA

SIZE E | SCALE: 1" = 80' | REV. X | DRAWING NUMBER 98245E1-1

DRAWN BY: *T.N. Fitzroy* DATE *2-12-01*
CHECKED BY: DATE
APPROVED BY: DATE



LEGEND

19+50 STATION NO. AS MEASURED FROM FROM CHEMUNG STREET OUTFALL.

•^ SAMPLE LOCATION -

K?AFT

SCALE

40 W FEET

REVISIONS

(WE APPRtNED

FIGURE 2
SEDIMENT AND BANK SOIL SAMPLE LOCATIONS STA. 0+00 TO 10+00

KENTUCKY AVENUE WEUFtELD SITE - 0U5
HORSIHE*DS, NEW YORK

MttWMD FM

VUCOU OC

PDTS8UR0H, PENNSYLVANIA

SCALD 1' ^T?

DATE: 2-II-Ot

98245E1-2

338 l i p t t n Soad

Msnaitlla.

(4tQ m-tMQ

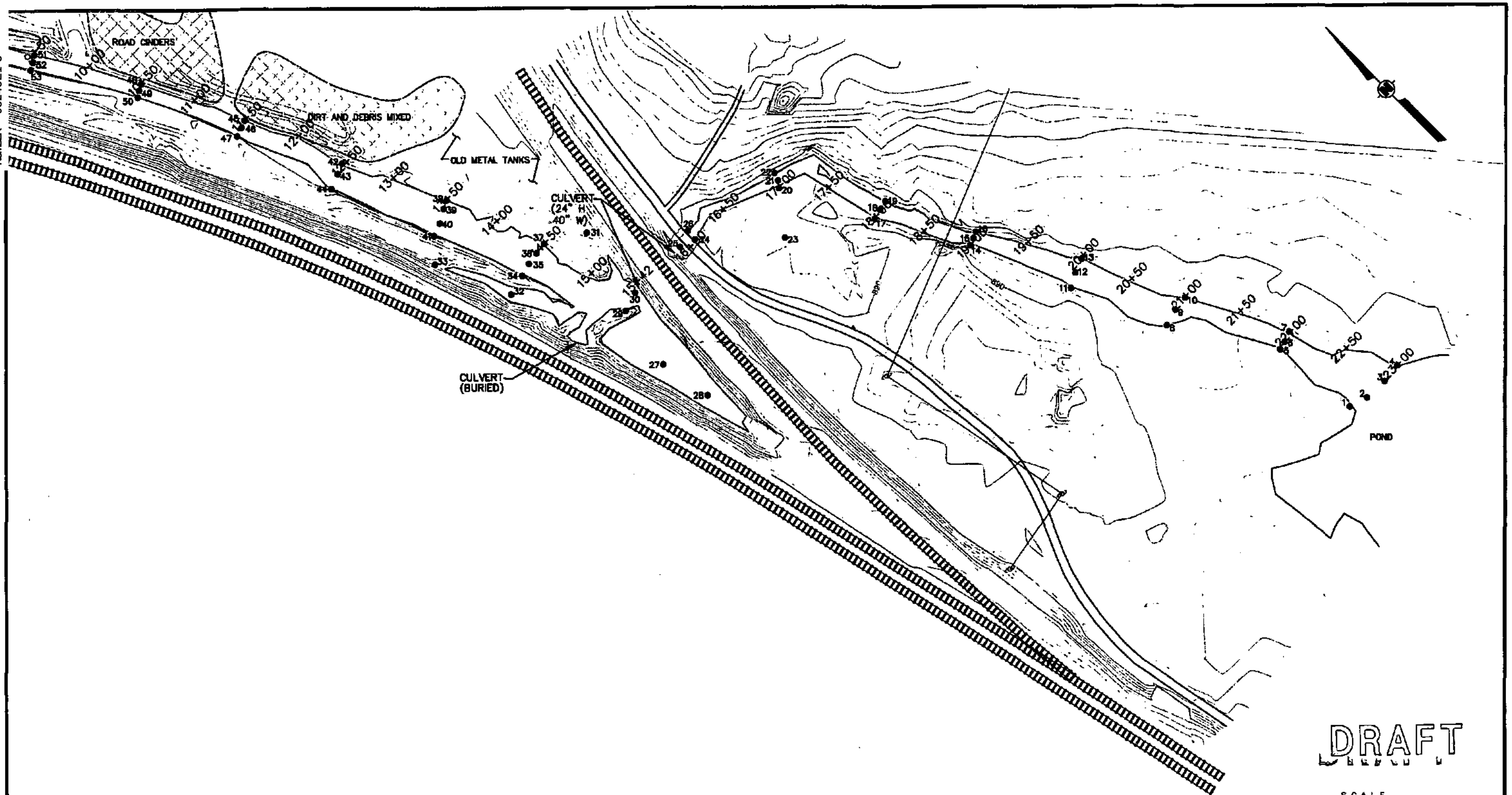
res t«t) ara-BMa

PRAWN BYi TM Fltinrr

CHECKED fftt

APPROVED Bft ~

NUMBER 98245E1-3



DRAFT

SCALE
40 0 40 80 FEET

LEGEND

19+50	STATION NO. AS MEASURED FROM FROM CHEMUNG STREET OUTFALL
●72	SAMPLE LOCATION

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

CUMMINGS RITER CONSULTANTS INC.
CORPORATE HEADQUARTERS
320 Rochester Road
Parkway Building, Suite 201
Moonsville, PA 15145
(412) 375-6340
Fax: (412) 375-6349

FIGURE 3
SEDIMENT AND BANK SOIL SAMPLE LOCATIONS
STA. 9+50 TO 23+00
KENTUCKY AVENUE WELLFIELD SITE - OU3
HORSEHEADS, NEW YORK

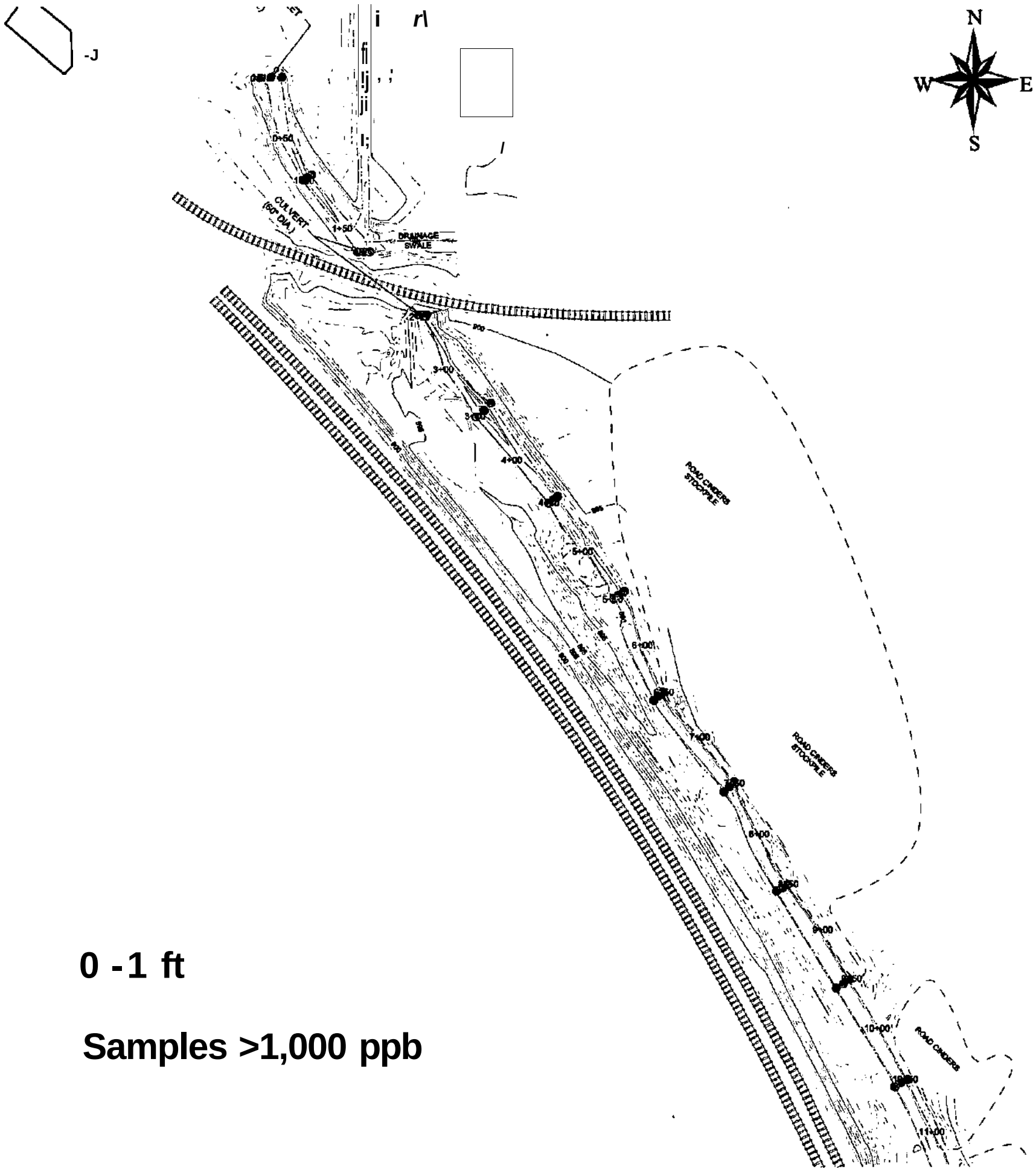
PREPARED FOR
VIACOM INC.
PITTSBURGH, PENNSYLVANIA

SIZE	SCALE	REV.	DRAWING NUMBER
E	SCALE: 1" = 40'	X	98245E1-3

DRAWN BY:	T.M. Tilney	DATE: 5-12-01
CHECKED BY:		DATE:
APPROVED BY:		DATE:

PLOT SCALE: 1=1

Figure 4
Sediment and Bank Samples 0 -1 Feet
Industrial Drainageway
Horseheads, New York

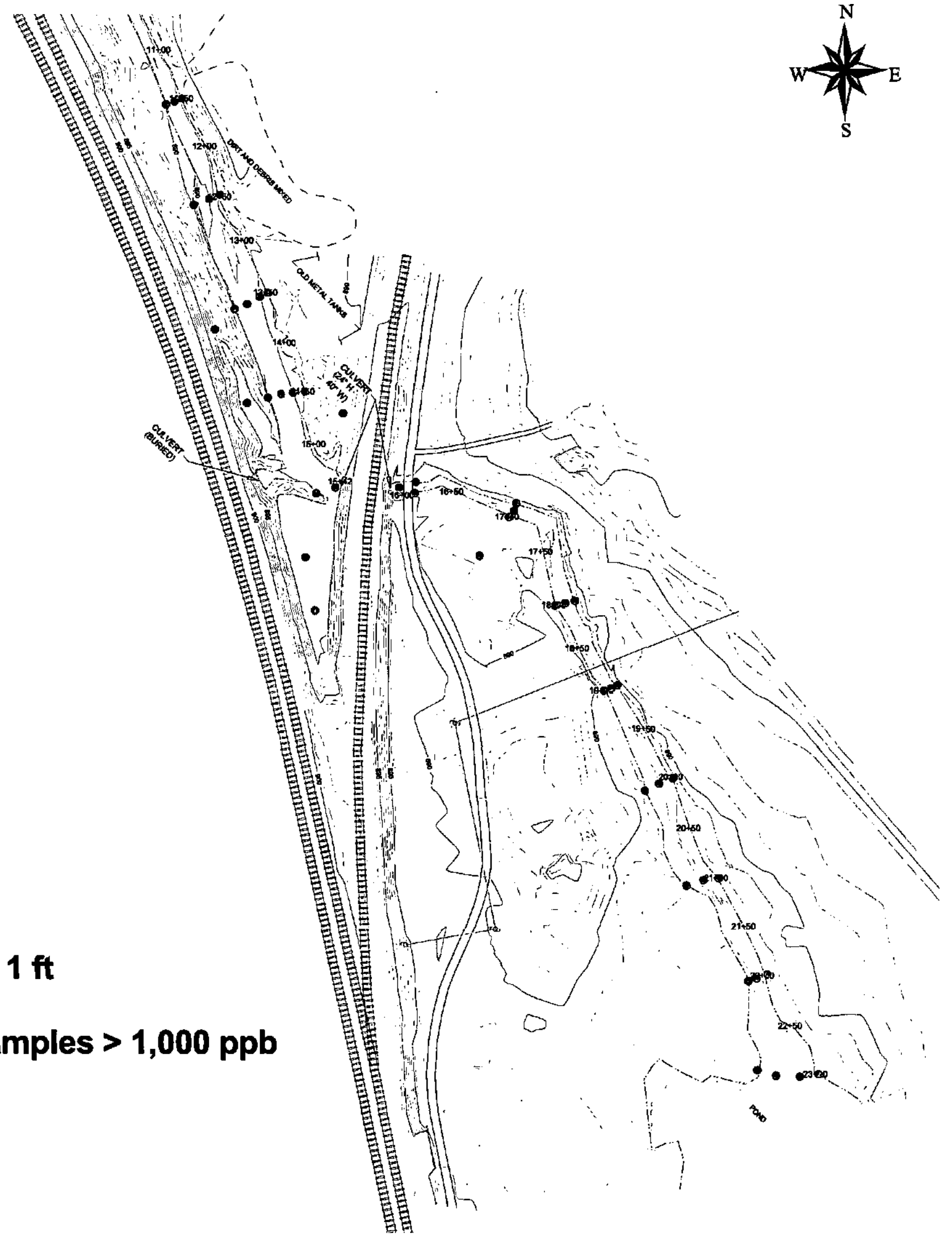


0 -1 ft

Samples >1,000 ppb

100 0 100 200 Feet

Figure 5
Sediment and Bank Samples 0 -1 Feet
Industrial Drainageway
Horseheads, New York

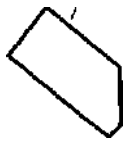


0 - 1 ft

Samples > 1,000 ppb

100 0 100 200 Feet

Figure 6
Sediment and Bank Samples 1 - 2 Feet
Industrial Drainageway
Horseheads, New York



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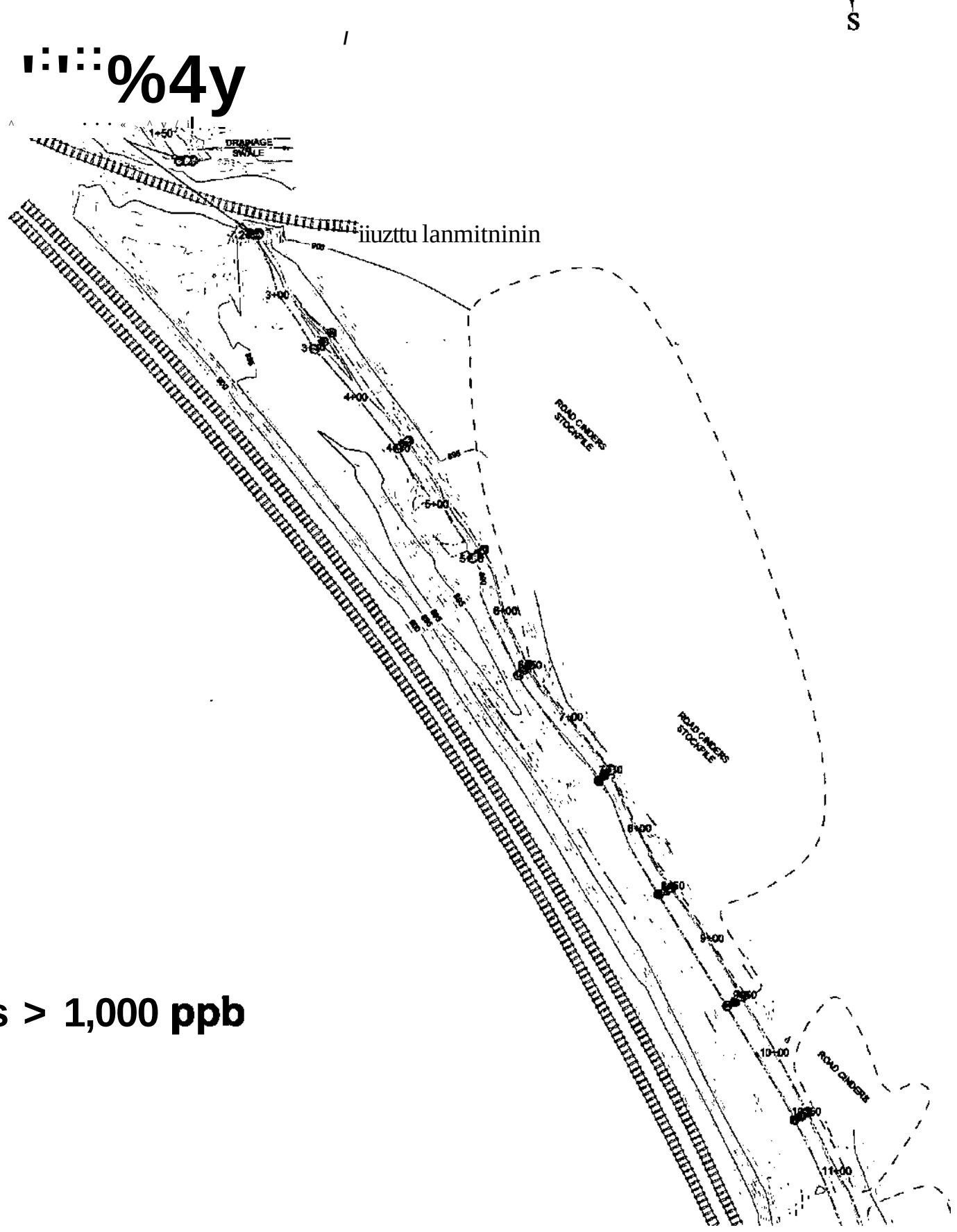

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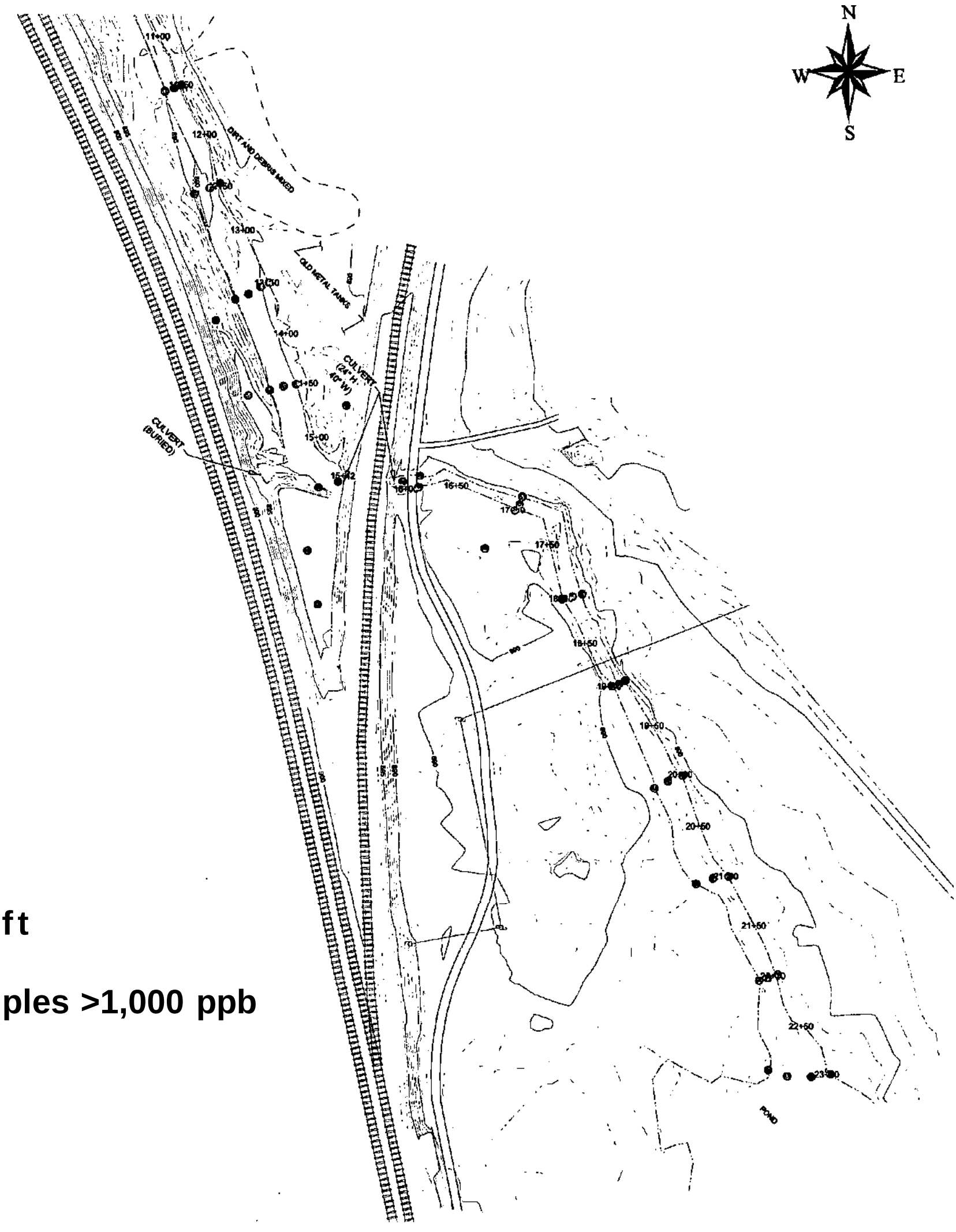
o 1 -2ft

Samples > 1,000 ppb

100 0 100 200 Feet

Figure 7
Sediment and Bank Samples 1 - 2 Feet
Industrial Drainageway
Horseheads, New York

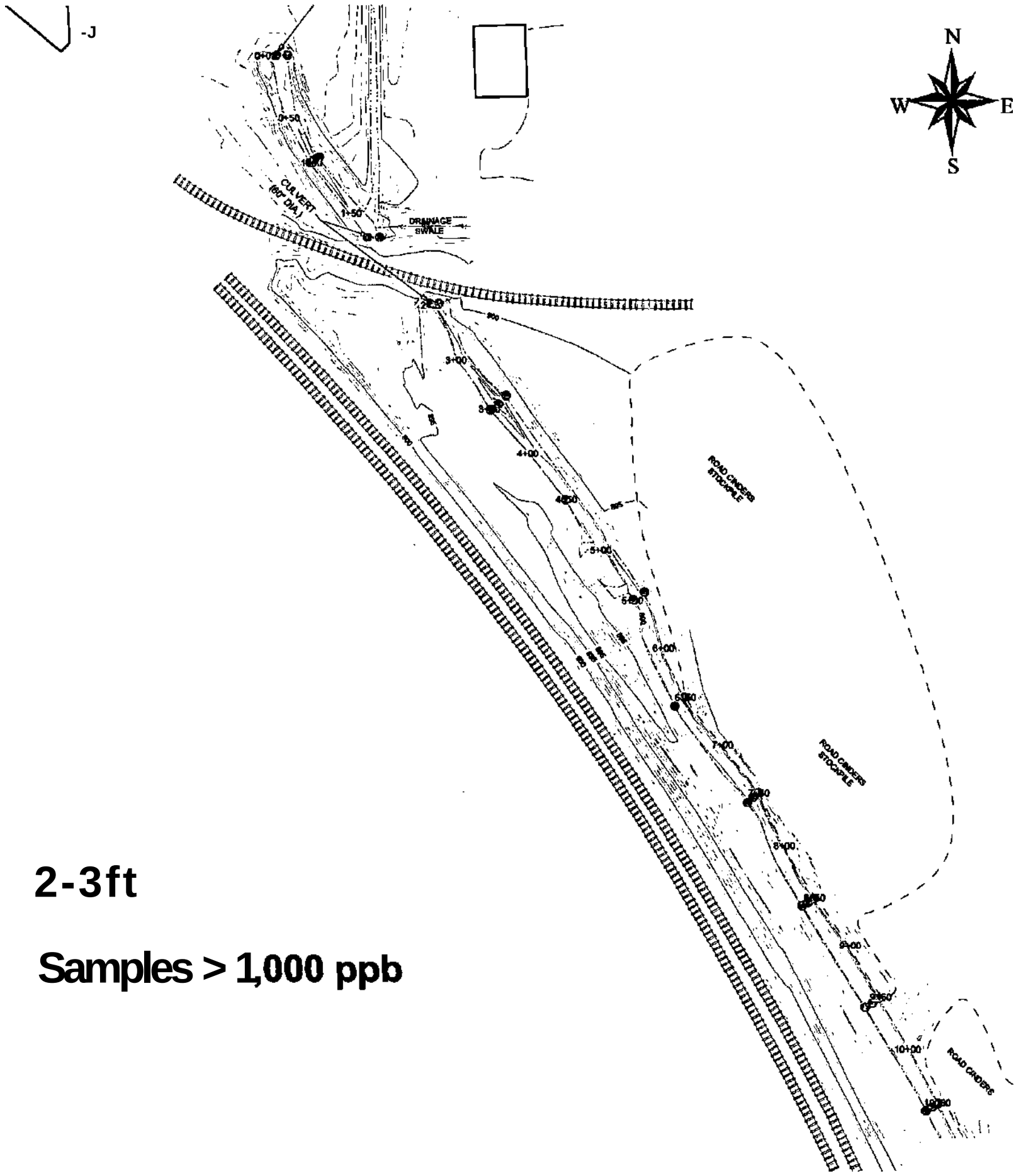


© 1 - 2 ft

Samples >1,000 ppb

100 0 100 200 Feet

Figure 8
Sediment and Bank Samples 2-3 Feet
Industrial Drainageway
Horseheads, New York

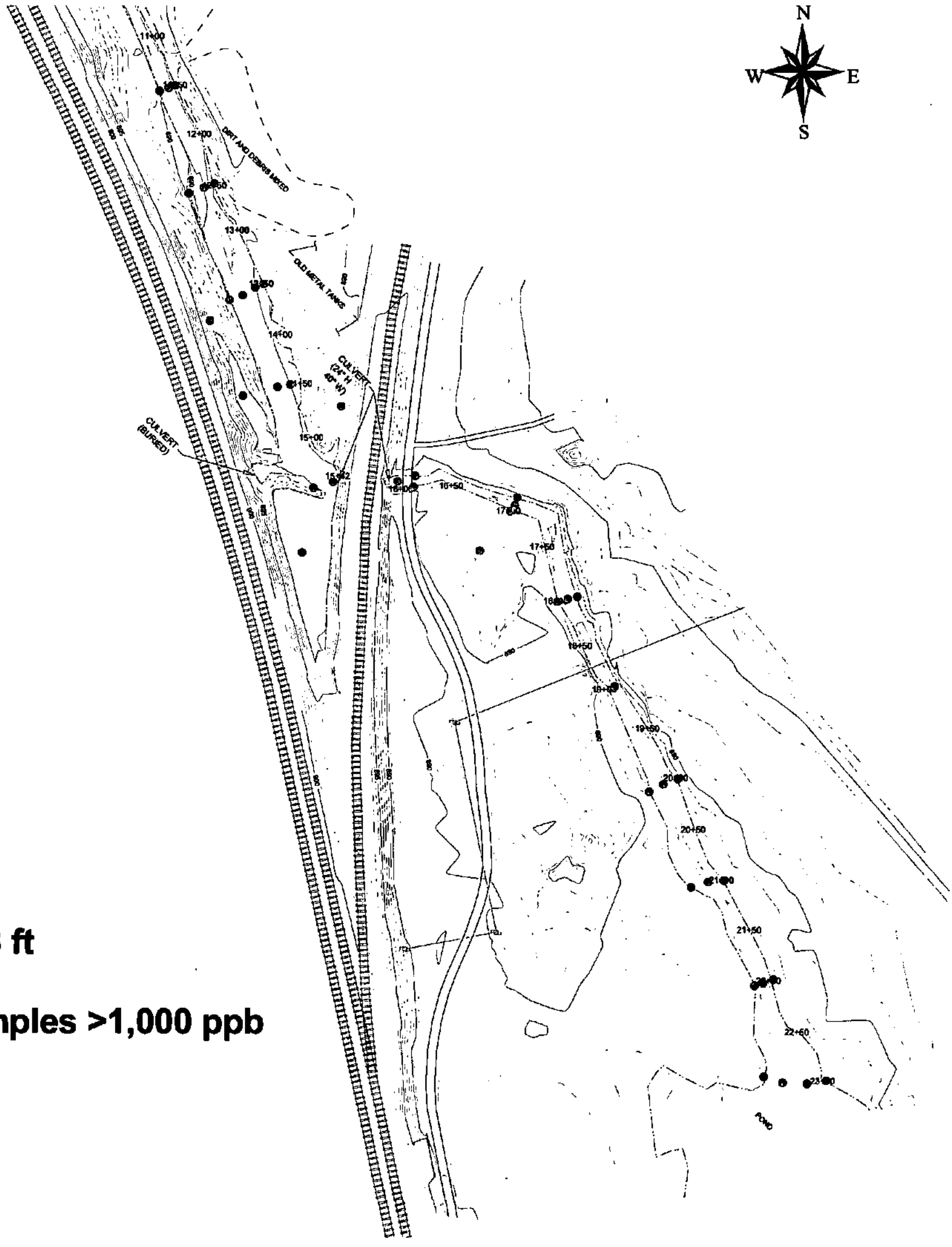


2-3ft

Samples > 1,000 ppb

100 0 100 200 Feet

Figure 9
Sediment and Bank Samples 2 - 3 Feet
Industrial Drainageway
Horseheads, New York



2 - 3 ft

Samples >1,000 ppb

100 0 100 200 Feet

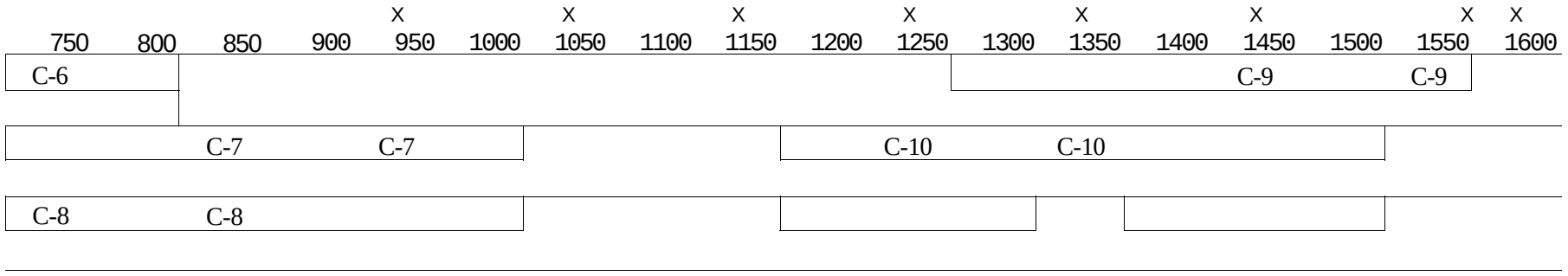
FIGURE 10
EXTENT OF SEDIMENT REMOVAL AND COMPOSITE SAMPLING PLAN
INDUSTRIAL DRAINAGEWAY
HORSEHEADS, NEW YORK

Sample Location	x		x	x	x		x		x		x		x	
Sample Depth || Sta. No.	0	50	100	180	250	300	350	400	450	500	550	600	650	700
0-1			C-1	C-1	C-4		C-4		C-4		C-6		C-6	
1-2			C-2	C-2	C-5		C-5		C-5					
2-3			C-3	C-3										
Sediment Depth, ft.		3	3	3	3	3	2	2	2	2	2	2	1	3
Avg. Channel Width, ft.		10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.75
Sed. Volume, CY		60	60	96	60	60	40	40	40	40	40	40	20	60
Cumul. Reach Subtotal, CY		60	119	215	275	334	374	414	454	494	534	573	593	653
Reach Subtotal, CY														
Total Excav. Volume, CY														

Sediment block targeted for removal based on RAO of 1 ppm.

C-1 Composite sample location and composite number.

FIGURE 10
EXTENT OF SEDIMENT REMOVAL AND
COMPOSITE SAMPLING PLAN
INDUSTRIAL DRAINAGEWAY
HORSEHEADS, NEW YORK



3	3	3	3	3	3		3	3	3	2	2	2	2	1
10.75	10.75	10.75	10.75	10.75	10.75		27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5
60	60	60	60	60	60		153	153	153	102	102	102	102	51
713	772	832	892	952	1011		153	306	458	560	662	764	866	917
					1011									917

Sediment block targeted for removal based on RAO of 1 ppm.

C-1 Composite sample location and composite number.

FIGURE 10
EXTENT OF SEDIMENT REMOVAL AND COMPOSITE SAMPLING PLAN INDUSTRIAL DRAINAGEWAY HORSEHEADS, NEW YORK

1650	x 1700	1750	x 1800	1850	x 1900	1950	x 2000	2050	x 2100	2150	x 2200	2250	x 2300	Totals
	C-11													
1	1	1										3	3	
12.75	12.75	12.75										26.5	26.5	
24	24	24										147	147	2293
24	47	' 71										147	294	
		71											294	
														2293

Sediment block targeted for removal based on RAO of 1 ppm.

C-1 Composite sample location and composite number.

ATTACHMENT A

ATTACHMENT A

QA DIRECTIVE ON COMPOSITING

Memorandum

Patrick Conlon
STL Pittsburgh - Quality Assurance

SEVERN
TRENT
SERVICES

To: All Staff

From: Patrick A. Conlon

Date: April 2, 2001

Subject: **QA DIRECTIVE (01-1) ON COMPOSITING OF CLIENT SAMPLES.**

Wherever possible the client and/or field personnel should composite samples before arrival at the laboratory. Where compositing needs to be performed after receipt at the laboratory the following procedures need to be followed for all samples except for volatile organics. This procedure can only be applied to sample tests, which allow aliquotting a subsample from the original sample bottle.

Choosing an Aliquot Size
A sample aliquot size should be selected that gives a desired final volume and for which there is sufficient sample volume from each samples to be composited. For example, where a final volume of 1 liter is desired, and > 250 mL is available from each of 4 samples to be composited, 250 mL should be the sample "aliquot size" for compositing.

Waters:
Shake each sample to be composited thoroughly. Carefully pour out the selected aliquot volume into a clean graduated cylinder. Transfer sample to a clean sample jar labeled with the appropriate sample composite ID. Repeat this procedure for each sample in the composite until all the appropriate samples have been combined.

Record all associated information on a procedure log sheet.

Soils:
If possible, mix each sample thoroughly with a tongue depressor in the original sample container. If the sample container is full, making in situ mixing impractical, transfer the entire contents of the container to a clean vessel with sufficient room to allow a thorough mixing. When satisfied that the sample is thoroughly mixed take a proportioned volume to achieve the desired final volume, using equal volumes of each sample to be composited. If the final reporting is to be done on dry weight, the client should be contacted in advance to get agreement as to whether the samples should be individually apportioned on wet weight or dry weight.

Sample Handling & Reporting :
A composite sample should always be logged in as a "composite" and the source samples should be clearly identified. All procedures performed should be fully documented. A brief description of the procedures should be included in the sample report.

Copy to: Albert Vicinie