Appendix B

Summary of Previous Investigation Results

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TABLE 1
SAMPLE LOCATIONS, RATIONALE, AND ANALYSES
PEYTON SLOUGH
MARTINEZ, CA.

Location	Sample Name	Analyses	Rationale
SLOUGH EMBANKMENT SAMPLES			
Five Transects	S1E-0	Copper, Zinc, pH, Sulfide	Determine extent of AOPC and assist in selection of
South of Tide Gate	S1W-0	Copper, Zinc, pH, Sulfide	appropriate dredging method
	S2E-0	Copper, Zinc, pH, Sulfide	
	S2W-0	Copper, Zinc, pH, Sulfide	
	S3E-0	Copper, Zinc, pH, Sulfide	
	S3W-0	Copper, Zinc, pH, Sulfide	
	S4E-0	Copper, Zinc, pH, Sulfide	
	S4W-0	Copper, Zinc, pH, Sulfide	
	S5E-0	Copper, Zinc, pH, Sulfide	
	S5W-0	Copper, Zinc, pH, Sulfide	
Five Transects	N1E-0	Copper, Zinc, pH, Sulfide	
North of Tide Gate	N1W-0	Copper, Zinc, pH, Sulfide	
	N2E-0	Copper, Zinc, pH, Sulfide	
	N2W-0	Copper, Zinc, pH, Sulfide	
	N3E-0	Copper, Zinc, pH, Sulfide	
	N3W-0	Copper, Zinc, pH, Sulfide	
	N4E-0	Copper, Zinc, pH, Sulfide	
	N4W-0	Copper, Zinc, pH, Sulfide	
	N5E-0	Copper, Zinc, pH, Sulfide	
	N5W-0	Copper, Zinc, pH, Sulfide	
DREDGE SPOIL PILES			
Eleven Locations	S1-0	Cu, Zn, pH, Sulfide, AVS/SEM	Vegetation healthy, possible control sample
South of Tide Gate	S2-0	Cu, Zn, pH, Sulfide, AVS/SEM	Side-cast dredge spoil. Barren of vegetation.
	S3-0	Cu, Zn, pH, Sulfide, AVS/SEM	Side-cast dredge spoil. Barren of vegetation.
	S4-0	Cu, Zn, pH, Sulfide	Discharge for storm drain outlet.
	S5-0	Cu, Zn, pH, Sulfide, AVS/SEM	Side-cast dredge spoil. Barren of vegetation.
	S6-0	Cu, Zn, pH, Sulfide	Side-cast dredge spoil. Barren of vegetation.
	S7-0	Cu, Zn, pH, Sulfide	Side-cast dredge spoil. Barren of vegetation.
	S8-0	Cu, Zn, pH, Sulfide	Side-cast dredge spoil. Barren of vegetation.
	S9-0	Cu, Zn, pH, Sulfide, AVS/SEM	Side-cast dredge spoil. Barren of vegetation.
	S10-0	Cu, Zn, pH, Sulfide	Side-cast dredge spoil. Barren of vegetation.
	S11-0	Cu, Zn, pH, Sulfide, AVS/SEM	Side-cast dredge spoil. Barren of vegetation.
Nine Locations	N1-0	Cu, Zn, pH, Sulfide, AVS/SEM	Side-cast dredge spoil. Barren of vegetation.
North of Tide Gate	N2-0	Cu, Zn, pH, Sulfide, AVS/SEM	Side-cast dredge spoil. Barren of vegetation.
	N3-0	Cu, Zn, pH, Sulfide, AVS/SEM	Side-cast dredge spoil. Barren of vegetation.
	N4-0	Cu, Zn, pH, Sulfide, AVS/SEM	Side-cast dredge spoil. Barren of vegetation.
	N5-0	Cu, Zn, pH, Sulfide	Heavy vegetation, possible control sample
	N6-0	Cu, Zn, pH, Sulfide, AVS/SEM	Heavy vegetation, possible control sample
	N7-0	Cu, Zn, pH, Sulfide, AVS/SEM	Side-cast dredge spoil. Barren of vegetation.
	N8-0	Cu, Zn, pH, Sulfide, AVS/SEM	Side-cast dredge spoil. Barren of vegetation.
	N9-0	Cu, Zn, pH, Sulfide	Side-cast dredge spoil. Barren of vegetation.
TRENCH SAMPLES			
Eleven Trenches	T1-S-0.5	Cu, Zn, pH, Sulfide	Evaluate as potential source of contamination to the slough
West Side of	T1-S-1.5	Cu, Zn, pH, Sulfide	and/or Suspect old slough bed location.
South Slough	T1-S-3	Cu, Zn, pH, Sulfide	
	T1-FILL	Cu, Zn, pH, Sulfide	
	T2-SPOILS	Cu, Zn, pH, Sulfide	
	T3-S-1	Cu, Zn, pH, Sulfide	
	T3-S-2	Cu, Zn, pH, Sulfide	

TABLE 1
SAMPLE LOCATIONS, RATIONALE, AND ANALYSES
PEYTON SLOUGH
MARTINEZ, CA.

	T3-S-4	Cu, Zn, pH, Sulfide
	T4-FILL	Cu, Zn, pH, Sulfide
	T4-SPOILS	Cu, Zn, pH, Sulfide
	T5-S-0.5	Cu, Zn, pH, Sulfide
	T5-S-1	Cu, Zn, pH, Sulfide
	T5-S-2	Cu, Zn, pH, Sulfide
	T5-S-2.5	Cu, Zn, pH, Sulfide
	T5-S-4	Cu, Zn, pH, Sulfide
	T7-S-0.5	Cu, Zn, pH, Sulfide
	T7-S-1	Cu, Zn, pH, Sulfide
	T7-S-1.5	Cu, Zn, pH, Sulfide
	T9-S-2	Cu, Zn, pH, Sulfide
	T11-S-0.5	Cu, Zn, pH, Sulfide
One Trench West	T12-S-0.5	Cu, Zn, pH, Sulfide
Side of North Slough	T12-S-1	Cu, Zn, pH, Sulfide
	T12-S-2.5	Cu, Zn, pH, Sulfide
	T12-S-4	Cu, Zn, pH, Sulfide

TABLE 2
HISTORICAL AND CURRENT ANALYTICAL RESULTS
FOR SEDIMENT IN SLOUGH BOTTOM,
PEYTON SLOUGH
MARTINEZ, CA

LOCATION	DATE	CONSULTANT/ AGENCY	Cu	Zn	
ERLs			34	150	
ERMs			[illegible]	[illegible]	
NORTH SLOUGH					
21006	95/97	RWQCB	[illegible]	[illegible]	
21005	95	RWQCB	nd	nd	
21306	97	RWQCB	132	[illegible]	
21305	97	RWQCB	[illegible]	[illegible]	
MF22	1991	Flegal/BPTCP	[illegible]	[illegible]	
MF23	1991	Flegal/BPTCP	92	233	
1	1986	CH2M Hill	70	[illegible]	
2	1986	CH2M Hill	100	200	
3	1986	CH2M Hill	[illegible]	[illegible]	
4	1986	CH2M Hill	[illegible]	[illegible]	
5	1986	CH2M Hill	[illegible]	[illegible]	
6	1986	CH2M Hill	[illegible]	[illegible]	
7	1986	CH2M Hill	[illegible]	[illegible]	
8	1986	CH2M Hill	[illegible]	[illegible]	
9	1986	CH2M Hill	90	150	
1	1998	HLA	[illegible]	[illegible]	
2	1998	HLA	[illegible]	[illegible]	
3	1998	HLA	[illegible]	[illegible]	
4	1998	HLA	[illegible]	[illegible]	
5	1998	HLA	[illegible]	[illegible]	
6	1998	HLA	[illegible]	[illegible]	
7	1998	HLA	[illegible]	[illegible]	
8	1998	HLA	51	81	
North SL1	2000	URS	42	68	7.2
North SL1 Mouth	2000	URS	35	65	7.1
North SL2 A	2000	URS	57	90	7.4
North SL2 B	2000	URS	34	73	7.3
North SL2 C	2000	URS	18	32	7.4
SOUTH SLOUGH					
1	1999	HLA	[illegible]	[illegible]	
2	1999	HLA	[illegible]	[illegible]	
3	1999	HLA	[illegible]	[illegible]	
4	1999	HLA	[illegible]	[illegible]	
5	1999	HLA	[illegible]	[illegible]	
6	1999	HLA	156	398	
7	1999	HLA	[illegible]	[illegible]	

ERL = NOAA Effects Range - Low
ERM = NOAA Effects Range - Median

TABLE 3
ANALYTICAL RESULTS FOR SOIL
IN SLOUGH EMBANKMENTS, DREDGE SPOIL PILES, AND TRENCHES
PEYTON SLOUGH
MARTINEZ, CA.

EPA Method 6010, units = mg/kg

Sample Location	depth	Copper	Zinc	pH	Sulfide	Sulfate	AVS/SEM Sulfide
HUMAN HEALTH SCREENING VALUES							
Ind. PRGs		76,000	610,000				
ECOLOGICAL SCREENING VALUES							
ERLs		34	150				
ERMs		270	410				
EMBANKMENT SAMPLES							
S1E-0	0	31	260	7.4	74		
S1W-0	0	540	450	5.9	<10		
S2E-0	0	1,300	520	7.3	130		
S2W-0	0	190	210	5.9	<10		
S3E-0	0	190	360	7.4	260		
S3W-0	0	560	540	6.9	<10		
S4E-0	0	160	290	7.3	<10		
S4W-0	0	110	240	6.3	<10		
S5E-0	0	200	120	7.0	110		
S5W-0	0	95	660	7.3	140		
N1E-0	0	1,100	2,100	6.6	<10		
N1W-0	0	75	240	5.9	<10 UJ		
N2E-0	0	78	98	6.7	38		
N2W-0	0	75	110	6.4	54 J		
N3E-0	0	75	140	6.6	38		
N3W-0	0	63	150	6.3	<10 UJ		
N4E-0	0	390	1,400	7.6	<10		
N4W-0	0	9.8	38	6.7	35 J		
N5E-0	0	34	92	6.7	<10 UJ		
N5W-0	0	82	330	6.8	19 J		
S1W-2	2	9.1	3,200	5.2			
S2E-2	2	29	79	7.3			
S3W-3	3	72	100	7.0			
S5W-2	2	73	43	7.0			
N1E-2	2	53	150				
N4E-3	3	140	830	7.6			
DREDGE SPOIL PILES							
S1-0	0	770	360	6.2	<10 UJ	410	na
S2-0	0	820	1,100	3.6	<10 UJ	730	<0.10
S3-0	0	280	360	3.8	<10 UJ	1,200	<0.10
S4-0	0	570	3,800	5.7	<10 UJ	6,400	na
S5-0	0	870	1,200	4.2	<10 UJ	9,800	<0.10
S6-0	0	240	1,000	3.4	<10 UJ	6,500	na
S7-0	0	1,800	530	3.4	<10 UJ	2,300	na
S8-0	0	1,200	360	3.3	<10 UJ	1,300	na
S9-0	0	1,200	290	3.8	<10 UJ	910	<0.10
S10-0	0	1,700	550	3.1	<10 UJ	4,600	na
S11-0	0	230	380	3.7	<10 UJ	930	<0.10
N1-0	0	480	300	4.1	<10 UJ	670	<0.10
N2-0	0	75	810	3.3	<10 UJ	10,000	<0.10
N3-0	0	890	510	4.4	<10 UJ	1,100	<0.10
N4-0	0	480	300	3.4	<10 UJ	2,200	<0.10
N5-0	0	33	77	6.4	<10 UJ	390	na
N6-0	0	52	86	7.0	<10 UJ	6.2	72
N7-0	0	510	450	4.1	<10 UJ	8,300	<0.10
N8-0	0	830	650	4.0	<10 UJ	2,100	<0.10
N9-0	0	5,900	910	4.3	<10	na	na

TABLE 3
ANALYTICAL RESULTS FOR SOIL
IN SLOUGH EMBANKMENTS, DREDGE SPOIL PILES, AND TRENCHES
PEYTON SLOUGH
MARTINEZ, CA.

Sample Location	depth	Copper	Zinc	pH	Sulfide	Sulfate	AVS/SEM Sulfide
TRENCH SAMPLES							
T1-FILL		[illegible]	[illegible]	4.9			
T1-S-0.5	0.5	[illegible]	[illegible]	5.7	<10		
T1-S-1.5	1.5	[illegible]	[illegible]	5.2	<10		
T1-S-3	3	[illegible]	[illegible]	3.8	<10		
T2-SPOILS (1)		[illegible]	[illegible]	2.6	<10		
T3-S-1	1	[illegible]	[illegible]	4.8	<10		
T3-S-2	2	[illegible]	[illegible]	3.8	<10		
T3-S-4	4	[illegible]	[illegible]	3.7	<10		
T4-SPOILS (2)		[illegible]	[illegible]	3.0	<10		
T4-FILL		[illegible]	[illegible]	4.0			
T5-S-0.5	0.5	[illegible]	[illegible]	4.0	<10		
T5-S-1	1	[illegible]	[illegible]	3.3	<10		
T5-S-2	2	[illegible]	[illegible]	3.1	<10		
T5-S-2.5	2.5	[illegible]	[illegible]	3.0	<10		
T5-S-4	4	[illegible]	[illegible]	4.0	<10		
T7-S-0.5	0.5	22	90	6.6	<10		
T7-S-1	1	[illegible]	[illegible]	6.4	<10		
T7-S-1.5	1.5	[illegible]	[illegible]	5.5	<10		
T9-S-2	2	[illegible]	[illegible]	4.1	<10		
T11-S-0.5	0.5	[illegible]	[illegible]	7.0	<10		
T12-S-0.5	0.5	66	97	3.5	<10		
T12-S-1	1	110	120	3.1	<10		
T12-S-2.5	2.5	[illegible]	[illegible]	4.9	<10		
T12-S-4	4	[illegible]	[illegible]	5.7	62		

Notes: 1) arsenic = < 4.9 mg/kg
2) arsenic = < 5.0 mg/kg

ERL = NOAA Effects Range - Low
ERM = NOAA Effects Range - Median
J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ = The analyte was not detected above the sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

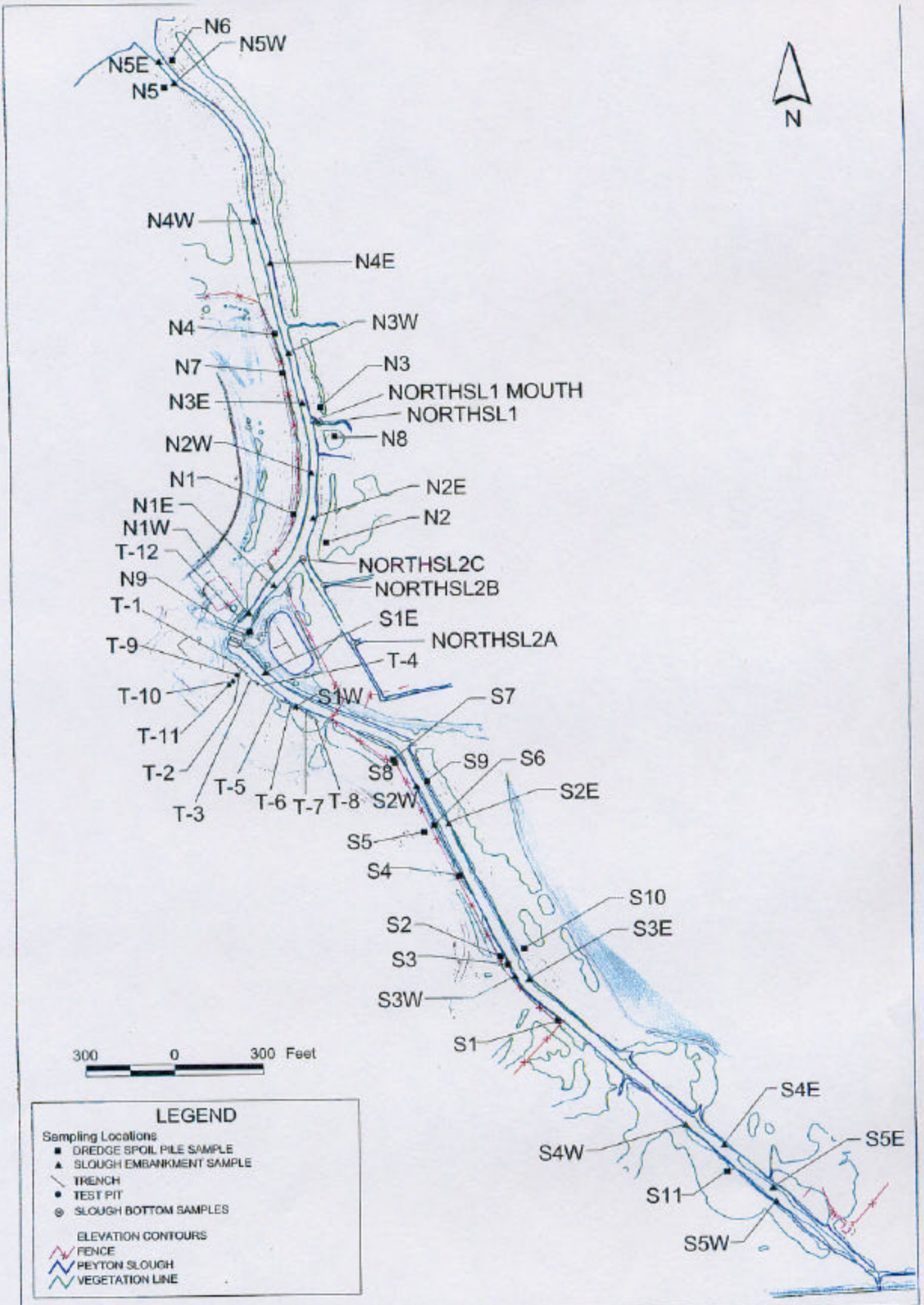
= USEPA Industrial PRG exceedance
= NOAA ERL exceedance
= NOAA ERM exceedance

TABLE 4
ANALYTICAL RESULTS FOR GROUNDWATER AND SURFACE WATER PEYTON SLOUGH MARTINEZ, CA.

EPA Method 6010B; units = ug/L

Sample Location	Copper	Zinc	pH	Sulfide	Salinity (g/kg)
AWQC	3.1	81			
T2-GW	110,000	370,000	3.7	0.089 J	x
T3-GW	56,000	460,000	3.7	0.14 J	x
T4-GW	20,000	550,000	3.5	0.073 J	
T5-GW	5,900	210,000	4.2	0.055 J	
T6-GW	4,000	110,000	4.3	0.13 J	
T7-GW	41	15,000	5.9	0.19 J	4.2
T9-GW (10/24/00)	120,000	590,000	3.5	<0.04 UJ	
T9-GW (10/27/00)	1,400	220,000	4.1	0.19 J	
T11-GW	1,400	850,000	4.7	0.07 J	x
T12-GW	<200	8,300	6.2	0.38 J	4.4
PSS-SW (1)	12	230	8.0	0.058 J	nd(<3.6)

AWQC = USEPA Ambient Water Quality Criteria, chronic marine
x = matrix interference, lab unable to measure the salinity
J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ = The analyte was not detected above the sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
Note 1: this sample was collected from the south Slough near the tide gate
= USEPA marine chronic Ambient Water Quality Criteria exceedance



URS	Rhodia Martinez Peyton Slough	Peyton Slough URS Sampling Locations	Figure 2
	Project No. 51-00070007.00		

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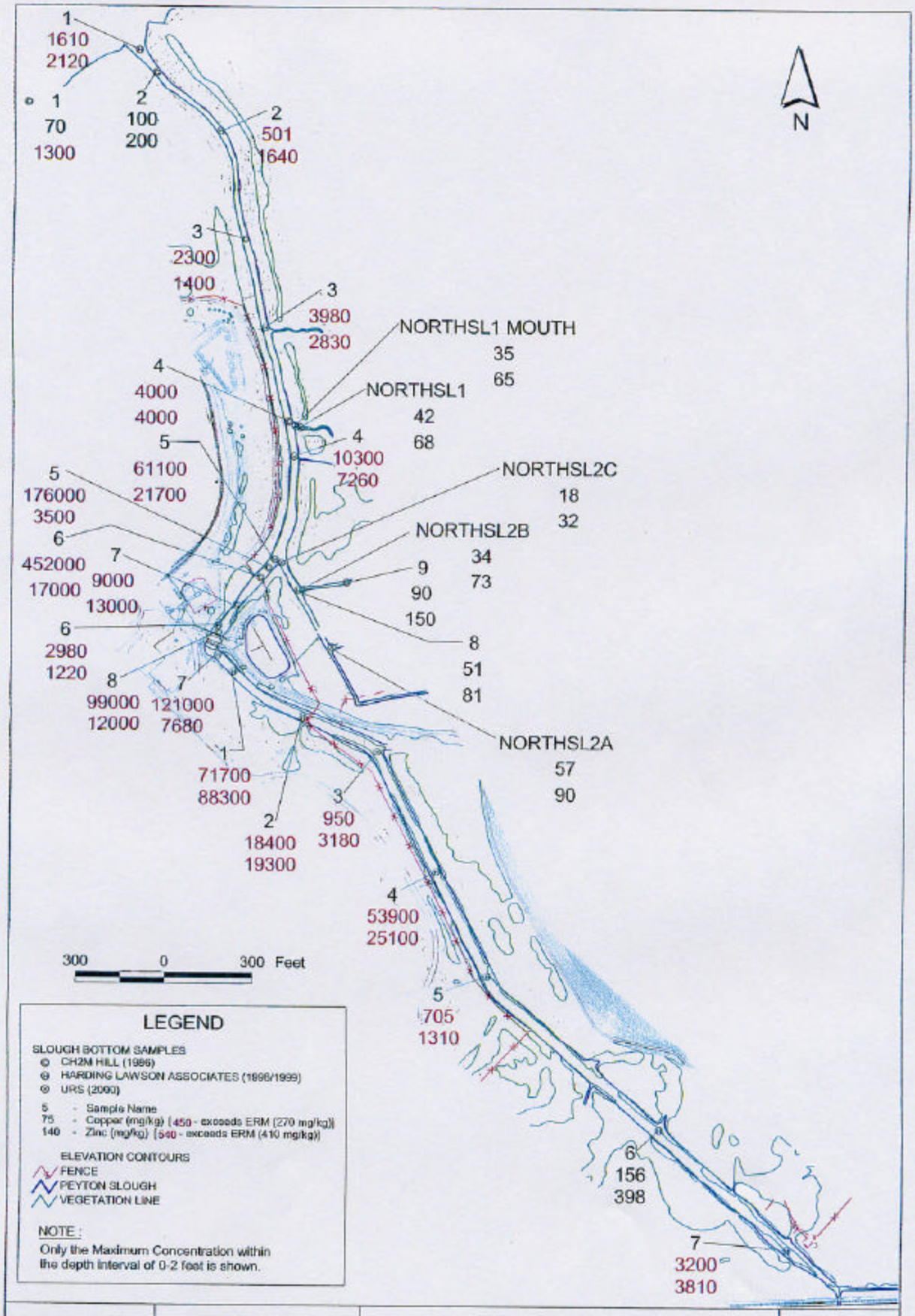

URS	Rhodia Martinez Peyton Slough	Metals in Soil and Sediment Historical and Current Results for Slough Bottom Samples	Figure 3
	Project No. 51-00070007.00		

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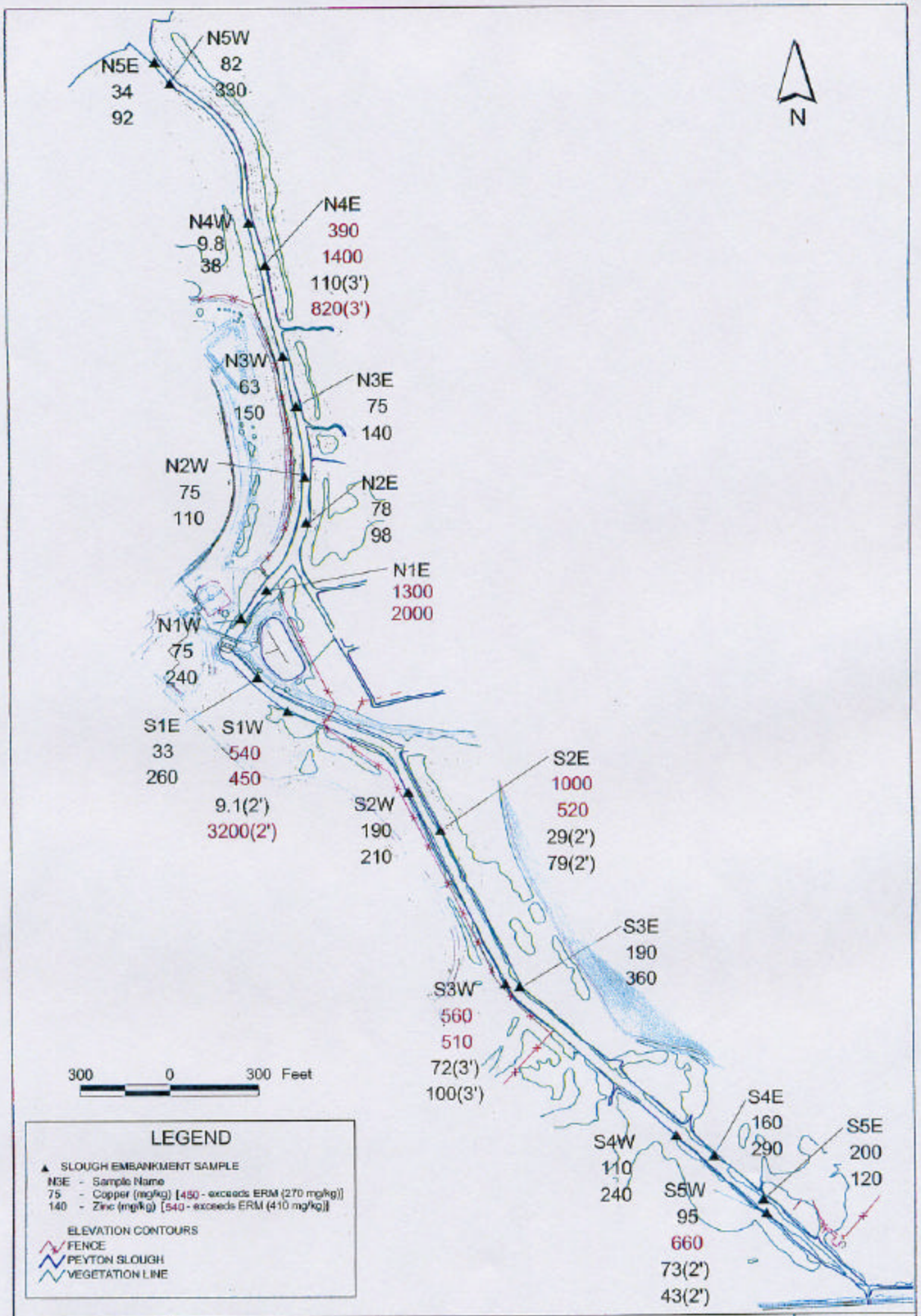

URS	Rhodia Martinez Peyton Slough	Metals in Soil Results for Slough Embankment Samples	Figure 4
	Project No. 51-00070007.00		

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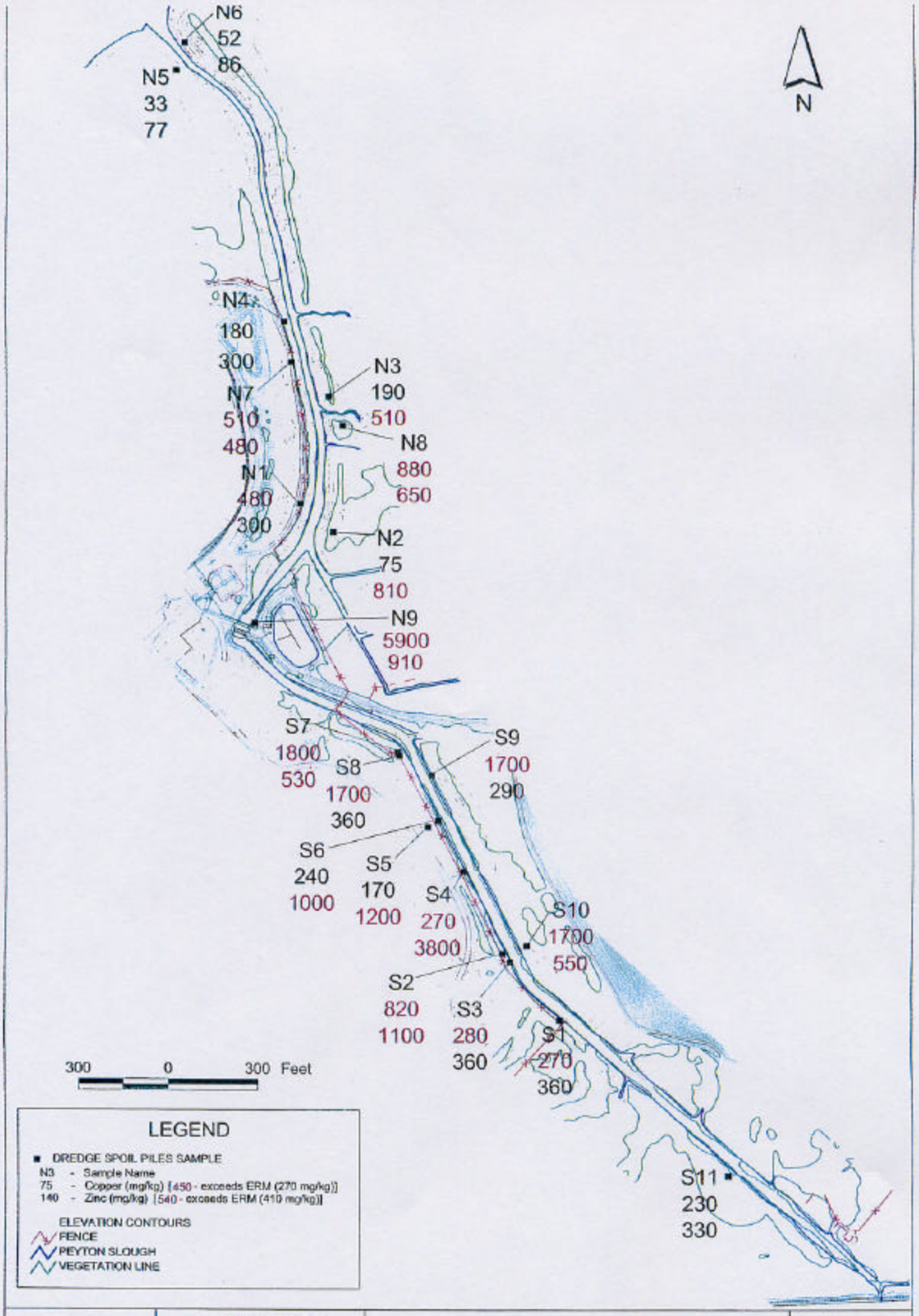

URS	Rhodia Martinez Peyton Slough	Metals in Soil Results for Dredge Spoil Piles	Figure 5
	Project No. 51-00070007.00		

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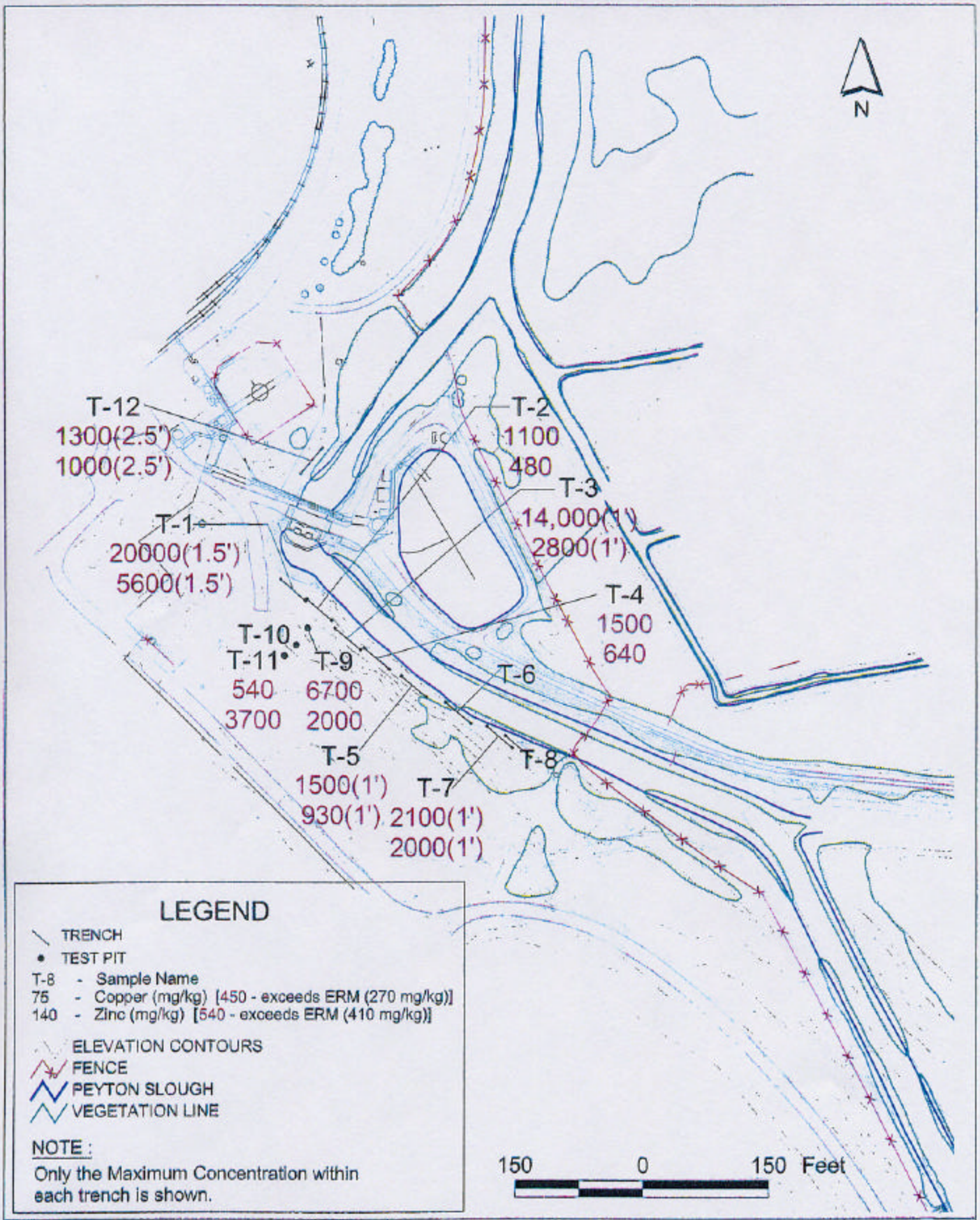

URS	Rhodia Martinez Peyton Slough Project No. 51-00070007.00	Metals in Soil Results for Trenches	Figure 6

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