SITE INVESTIGATION

FOR

MOHAWK TANNERY SITE

NASHUA, NEW HAMPSHIRE

Prepared For:

U.S. Environmental Protection Agency
Emergency Planning & Response Branch
60 Westview Street
Lexington, MA 02173

CONTRACT NO. 68-01-7367

TAT-01-N-00442

TDD NO. 01-8902-09A

Prepared By:

Roy F. Weston, Inc.
Technical Assistance Team
Region I

July 1989

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1.0 Purpose

The purpose of this investigation is to evaluate the site for the presence of hazardous substances that pose a threat to human health, welfare and environment as defined by the Comprehensive Environmental Response Compensation, and Liability Act (CERCLA) as amended.

In March 1989, Roy F. Weston, Inc. Technical Assistance Team (TAT) received a Technical Direction Document (TDD No. 01-8902-09A) to provide technical assistance to the EPA Region I Emergency Planning & Response Branch (EPRB) by conducting a magnetometer survey and subsurface soil sampling operations at the former Mohawk Tannery property (Granite State Leathers) located in Nashua, New Hampshire.

The magnetometer survey and subsurface soil sample operations were requested by EPA Site Investigator Alex Sherrin based upon the preliminary site assessment report issued by Roy F. Weston on March 16, 1989. The Mohawk Tannery Site is not currently a RCRA or NPL site.

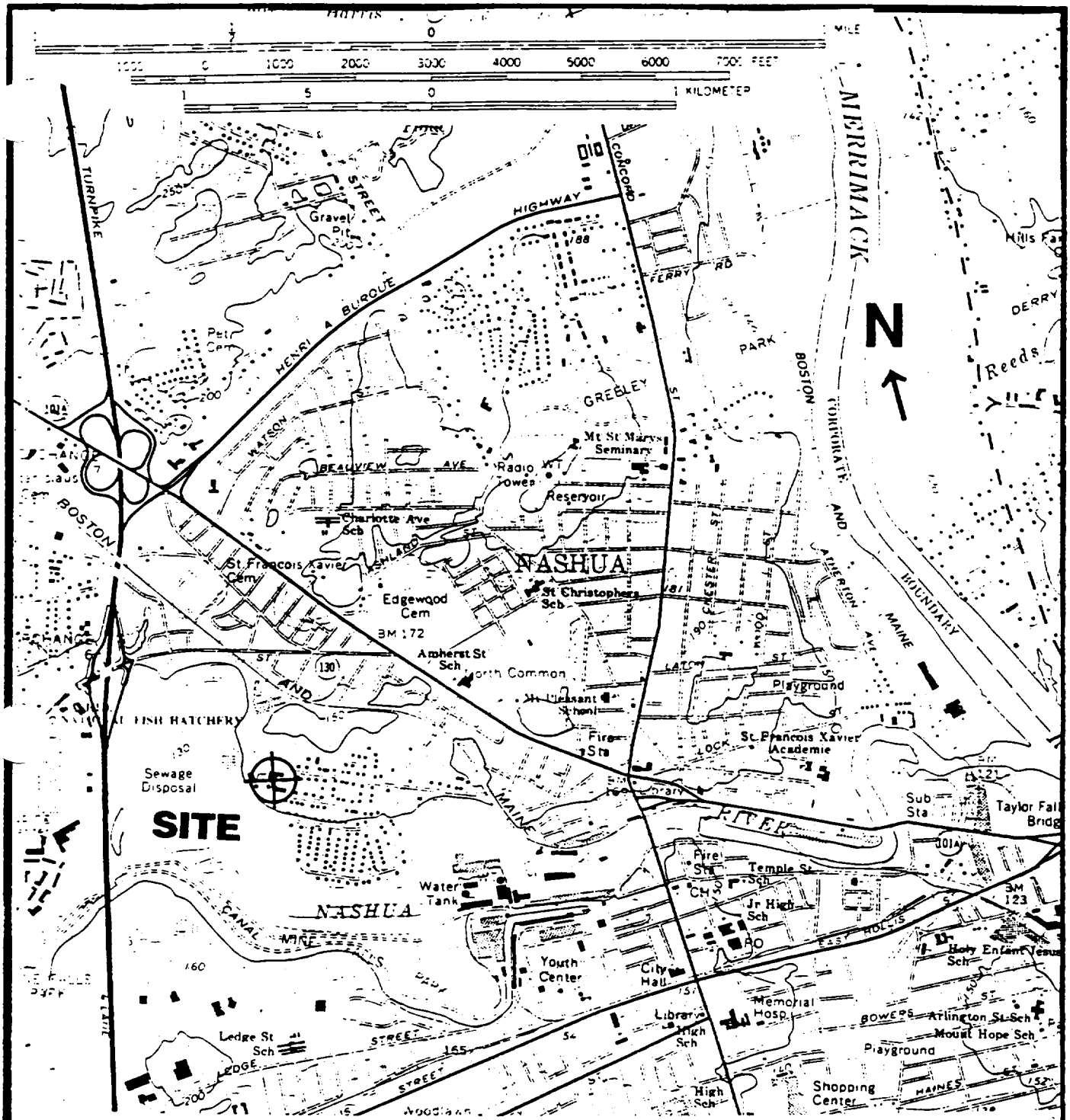
The Mohawk Tannery Site was referred to EPA by Mr. John Duclos New Hampshire Department of Environmental Services (NH DES) on February 7, 1989. NH DES asked the EPA to conduct an investigation of the site due to Mohawk Tannery's past disposal practices and lack of responsiveness of the PRP.

All materials referenced in this report are presently available for inspection at the United States EPA Environmental Services Division located at 60 Westview Street, Lexington, MA 02173.

2.0 Site Description

The former Mohawk Tannery, also known as Granite State Leathers, is located on 41 acres of land along the west side of Warsaw Avenue in Nashua, New Hampshire (Figures 1 and 2). From 1924 until 1984, Mohawk Tannery tanned hides for leather on the 41-acre property. In the southeast portion of the site, partially on an undeveloped 16 acre parcel of land, is an asbestos landfill, known locally as the "Sprague Site". The asbestos was covered in 1983 under EPA Oil & Hazardous Material Section observation. The asbestos was placed on the parcel of land prior to 1983 as part of fill material used to elevate the site.

The facility is bordered to the west and south by the Nashua River; to the east by a residential area; and to the north by the Fimbel Door Facility. The facility is partially surrounded by a fence. The site consists of two lagoons and five disposal areas. Currently, one lagoon (Area I), located adjacent to the Nashua River, is uncapped. Since the facility ceased operation in 1984



U.S.G.S. 7.5 SERIES QUADRANGLE NASHUA NORTH, NH 1968 PHOTOREVISED 1985

GENERAL LOCATION MAP FIGURE 1
MOHAWK TANNERY PROPERTY
NASHUA, NEW HAMPSHIRE

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN ASPLAND	DATE 6/89	PCS # 2170
APPROVED MJM	DATE 7/89	TDD # 01-8902-09A

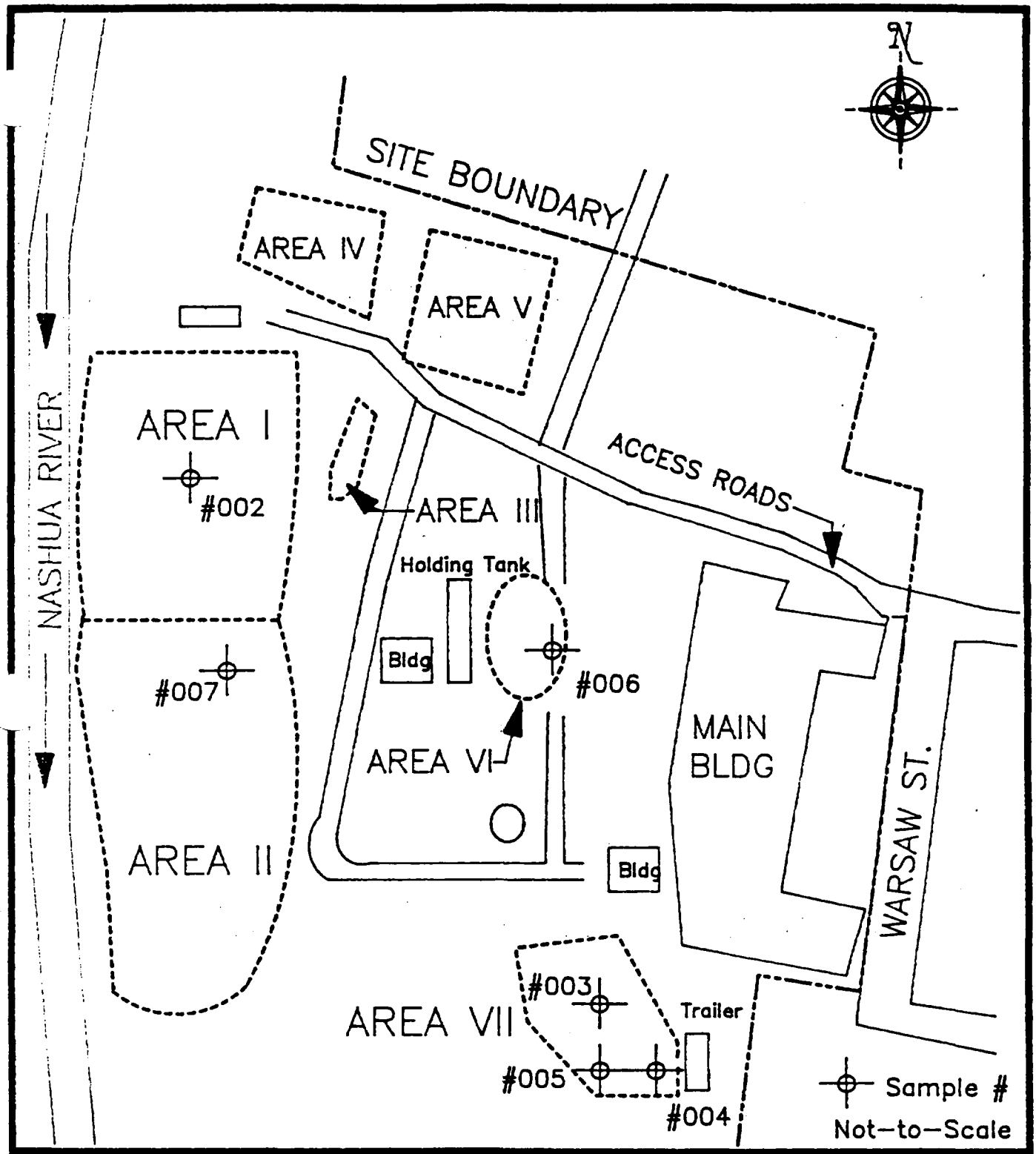


FIGURE 2
SITE SAMPLING MAP
MOHAWK TANNERY SITE
NASHUA, NEW HAMPSHIRE

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN ASPLAND	DATE 5/89	PCS # 2170
APPROVED MJM	DATE 7/89	TDD # 01-8902-09A

the property has been owned by Warren Kean, President, Granite State Leather, Inc., Trustee, Chester Realty Trust, 37 Walden Pond Road, Nashua, NH.

The area surrounding the Mohawk Tannery Facility is primarily urban residential, with some commercial areas. The nearest residences are located across Warsaw Avenue from the property. The facility is located 50 to 80 feet from the eastern bank of the Nashua River. A sewage disposal facility is located directly across the Nashua River from the property. A fish hatchery, which raises salmon to restock the Merrimack River, is located 0.6 miles upriver from Mohawk Tannery. The fish hatchery does not obtain water from the Nashua River; it obtains water from on-site wells. These wells are not used for drinking.

The City of Nashua obtains drinking water from a series of four ponds, the nearest of which is located 1.8 miles upstream (north) of the site.

3.0 Site Background

While in operation the facility produced an effluent which consisted mainly of an alkaline waste stream resulting from the hide pre-tanning preparation process, and an acid waste stream resulting from the tanning process. The alkaline waste stream, which consisted of about 50,000 gallons per day (gpd), was comprised primarily of undissolved lime and proteannceous solids including hair, fleshings, and hide scraps. The acid waste stream, about 100,000 gpd, was comprised primarily of spent chromium tanning materials, some hide residue "pickling" wastes, retanning materials, and alkaline water derived from the pre-tanning process. The effluents were combined and discharged into two lagoons, Areas I & II (Figure 2).

The above treatment process was phased out during 1973-1974. A new treatment plant was constructed and placed in operation in 1981.

During the interim period, between phasing out the above treatment process and construction of the new treatment facility, the alkaline effluent was pumped to a screening building for the removal of solids with the effluent and then pumped into the two lagoons for long term sedimentation.

The acid effluent stream was passed through five settling basins before being discharged into the Nashua River. Sludge buildup was periodically removed and buried in Area VI (Figure 2).

The new treatment facility was built on or near the original sludge disposal areas for the acid effluent. The sludge in the disposal area was excavated and buried in Areas III, IV, and V as well as in the Fimbel Door Landfill adjacent to the property.

4.0 Site Assessment

4.1 Chronological Summary

On May 3, 1989, TAT members George Mavris and Stephen Allen conducted a magnetometer survey of Disposal Area VII in an attempt to determine if any buried drums were present in the disposal area (Appendix A).

On May 26, 1989, TAT members Larry Aspland, Joseph Pilon, Martha Poirier, Mark McDuffee, and Thomas Gauthier collected sludge and soil samples from Areas I, II, VI, and VII. Samples were submitted to a TAT contract laboratory for VOA, BNA and 13 priority pollutant metal analyses. Sampling operations were conducted in accordance with the Mohawk Tannery Site Sampling QA/QC Plan (Appendix D).

4.2 Results of Analyses

Laboratory analyses revealed the presence of several compounds (Tables 1-3) including fluoranthene at levels up to 1.4 parts per million (ppm), pyrene up to levels of 0.820 ppm, phenol up to levels of 27 ppm, 1,2-dichlorobenzene up to levels of 23 ppm, 2-pentanone, 4-hydroxy-4-methyl up to levels of 1,700 ppm, chromium up to levels of 24,200 ppm, copper up to levels of 257 ppm, lead up to levels of 323 ppm, mercury at levels up to 1.57 ppm, and zinc up to levels of 230 ppm.

5.0 Preliminary Findings

Based upon the observations made during the site investigations and the results of the laboratory analyses, TAT has developed these preliminary findings:

- Laboratory analyses has confirmed the presence of fluoranthene, pyrene, phenol, 1,2-dichlorobenzene, chromium, lead, mercury, and zinc in the lagoons and disposal pits.

- Laboratory analyses has confirmed the presence of arsenic, cadmium, chromium, copper, lead, mercury, selenium, and zinc on the surface of the soil.

6.0 References

1. Roy F. Weston Preliminary Site Assessment Report, dated March 1989.

TABLE 1

RESULTS OF SOIL & SLUDGE VOA ANALYSIS

COMPOUND	TRIP BLANK	SAMPLE # (PPB) #002	#003	#004	#006	#007	WQC[3]
Methylene Chloride	4	--	24	17	3[1]	5[1]	--
Trichlorofluo-6 Methane[2]	--	--	--	--	20[1]	--	--
1,4 Dichlorobenzene[2]	--	--	--	--	126[1]	--	400
Heptane 2,3,6-Trimethyl[2]	--	5,516[1]	--	--	--	--	--
Octercosane (8 Cl 9 Cl)[2]	--	8,689[1]	--	--	--	--	--
Bicyclo (3,1,1) hept-2-ene 3,6,6[2]	--	--	760[1]	--	--	--	--
Camphene [DOI](8 Cl)[2]	--	--	115[1]	--	--	--	--
Beta-pinene[2]	--	--	24[1]	--	--	--	--
D-Limonene[2]	--	--	14[1]	--	--	--	--
Bicyclo[2.2.1] heptane, 2 Chlor-1,7[2]	--	--	28[1]	--	--	--	--
Chloroform	--	--	17[1]	--	--	--	0
Toluene	--	--	--	240	--	--	14,300
Bicyclo[3.1.0] hex-z-ene 2 methyl[2]	--	--	--	10[1]	--	--	--
Pentane, 3-methyl(8 Cl 9 Cl)	--	--	--	--	--	33[1]	--
Unknown	8.5	7,516	10	--	17	6	--

NOTES:

(1) Estimated Value
(2) Compound Tentatively Identified
(3) EPA Ambient Water Quality Criteria for Aquatic Organisms & Drinking Water Dated Oct. 1, 1986

TABLE 2

RESULTS OF SOIL & SLUDGE BNA ANALYSIS

COMPOUND	TRIP BLANK	SAMPLE # (PPB) #002	#003	#004	#006	#007	WQC[3]
Fluoranthene	140[1]	--	--	1400	--	--	.042
Benzo(a)anthrancene	--	--	--	450	--	--	--
Chrysene	--	--	--	480	--	--	--
Benzo(b)fluoranthene	--	--	--	390[1]	--	--	--
Benzo(k)fluoranthene	--	--	--	500[1]	--	--	--
Benzo(a)pyrene	--	--	--	540[1]	--	--	--
Indeno(1,2,3-cd)pyrene	--	--	--	2,400	--	--	--
Di-n-Butyl Phthalate	150[1]	--	--	120[1]	--	--	34
Anthracene	--	--	--	260[1]	--	--	--
Phenanthrene	--	--	--	1300	--	--	--
2-chloronaphthalene	--	--	--	160[1]	--	--	--
2,4-Dichlorophenol	--	--	--	110[1]	--	--	3.09
Pyrene	190[1]	--	--	820	--	--	--
Napthalene	--	--	130[1]	--	--	--	--
Phenol	190[1]	27,000[1]	--	--	--	--	3.5
1,2 Dichlorobenzene	--	23,000	--	--	--	--	0.4
4-Methylphenol	--	930,000	--	800	--	--	--
2-Methylnapthalene	--	8,100	--	--	--	--	--
bis(2-ethyl hexyl)phthalate	--	16,000[1]	600	220[1]	23,000	250	--
2-Pentanone, 4-hydroxy-4-methyl[2]	44,000[1]	1,700,000[1]	28,000[1]	19,900[1]	2,240[1]	48,000[1]	--
Butanoic Acid,3-methyl[2]	--	810,000[1]	--	--	--	--	--
Benzene Acetic Acid[2]	--	630,000[1]	--	--	--	--	--
Tetra Decanoic Acid[2]	--	500,000[1]	530[1]	2040[1]	820[1]	--	--
Hepta Decenoic Acid[2]	--	140,000[1]	--	--	--	--	--
Octa Decanoic Acid[2]	--	2,800,000[1]	--	2,500[1]	--	--	--
9-Octa Decenoic Acid[2]	--	--	--	4,500[1]	--	--	--
Pentachlorophenol	--	--	160[1]	170[1]	--	--	1.01
Butylbenzylphthalate	--	--	170[1]	--	--	--	--
2-Pentanone-5-(acetyloxy)[2]	--	--	1,700[1]	--	--	3,810[1]	--
2-Heptanol, acetate[2]	--	--	860[1]	--	--	--	--

TABLE 2 (CONT'D)

RESULTS OF SOIL & SLUDGE BNA ANALYSIS

COMPOUND	TRIP BLANK	SAMPLE # (PPB) #002	#003	#004	#006	#007	WQC[3]
.Alpha.-Pinene (ACN)[2]	--	--	10,400[1]	--	--	--	--
Phenol 4-(2,2,3,3-Tetramet)[2]	--	--	2,900[1]	--	--	--	--
Hexadecanoic Acid[2]	--	--	2,400[1]	9,800[1]	3,470[1]	--	--
2-Phenanthrenamine 9-10-DI[2]	--	--	770[1]	--	--	--	--
1-Phenanthrenecarboxylic Acid[2]	--	--	630[1]	--	--	--	--
Dotriacontane[2]	--	--	360[1]	--	--	--	--
Unknowns[3]	2,200[1]	10,300,000[1]	2,500[1]	3,600[1]	7,870[1]	1,080[1]	--

NOTES:

(1) Estimated Value
(2) Compound Tentatively Identified
(3) Several Unknowns Found - largest Value Listed
(4) EPA Ambient Water Quality Criteria for Aquatic Organisms & Drinking Water Dated Oct. 1, 1986

TABLE 3

RESULTS OF SOIL & SLUDGE METAL ANALYSIS

COMPOUND	SAMPLE # (PPM) #002	#003	#0030	#004	#005	#006	#007	CONC. RANGE IN SOIL (PPM)	AVE. CONC IN SOIL (PPM)
Antimony	--	0.97	1.31	0.42	5.37	--	--	2-10	--
Arsenic	5.84	10.3	8.85	11.8	35.6	7.20	5.49	1-50	5
Beryllium	--	0.42	--	0.21	1.07	0.41	0.99	0.1-40	6
Cadmium	--	1.68	1.81	0.83	1.92	--	--	0.01-0.7	0.06
Chromium	24,200	2,130	2,230	1,630	523	541	416	1-1,000	100
Copper	39.2	28.4	34.9	22.1	257	7.92	7.41	2-100	30
Lead	61.3	114	185	49.0	323	4.74	5.04	2-200	10
Mercury	--	1.56	1.57	0.38	0.28	--	0.06	0.01-0.03	0.03
Nickel	--	12.6	15.6	13.6	29.9	9.95	16.1	5-500	40
Selenium	4.56	--	--	--	1.46	--	--	0.1-2	0.3
Silver	--	--	--	--	--	--	--	0.01-5	0.05
Thallium	--	--	--	--	--	--	--	--	--
Zinc	186	247	230	60.5	84.5	15.6	19.8	10-300	50

APPENDIX A

MAGNETOMETER SURVEY

MAGNETOMETER SURVEY

Introduction

A reconnaissance magnetometer survey was conducted to locate steel drums suspected of being buried at the Mohawk Tannery Site (Area VII) in Nashua, New Hampshire. The survey was conducted on a square grid with sample points located approximately every twenty feet. The grid was oriented along the eastern boundary of the site (Figure 1A). Station numbers 1 through 42 were established on May 3, 1989.

A Geometric G-856 Proton Precession Magnetometer was the instrument used for this survey. This instrument allows discrete measurements of the total magnetic field strength in units of gammas. The presence of any buried steel drums will result in anomalous (positive or negative) deviations from the earth's magnetic field. Small, discrete ferrous objects (e.g. drums) at hazardous waste sites typically have anomalies ranging from one to several hundred gammas. Massive concentrations of buried drums or other large metal objects will produce anomalies ranging from one hundred to over one thousand gammas.*

The G-856 magnetometer is sensitive to one gamma; however, its response may be affected by diurnal variations in the earth's magnetic field, spatial variations caused by magnetic minerals in the soil or bedrock, geologic structures, and manmade structures.

Magnetometer Survey

Prior to conducting the magnetic survey, the instrument was tuned. Readings were taken in areas adjacent to metal objects on the surface and in areas which appeared to be free of any metal objects in order to check the instrument's response. The instrument was also tested for repeatability in these areas. Due to interference caused by metal objects on the surface, repeated readings differed by as much as $\pm$ 100 gammas.

The magnetometer was operated in the survey mode and readings were taken at each sample point along the grid. Randomly selected locations between sampling points were checked to ensure that the entire area of the site would be evaluated. Repeatability of the instrument was also checked to ensure the instrument was operating properly. Repeatability was checked by taking consecutive readings at a sample point without moving the sensor head. The magnetometer survey was conducted on station numbers 1 through 42 on May 3, 1989.

* Geophysical Techniques for Sensing Buried Wastes and Waste Migration, TECHNOS, INC., 1982.

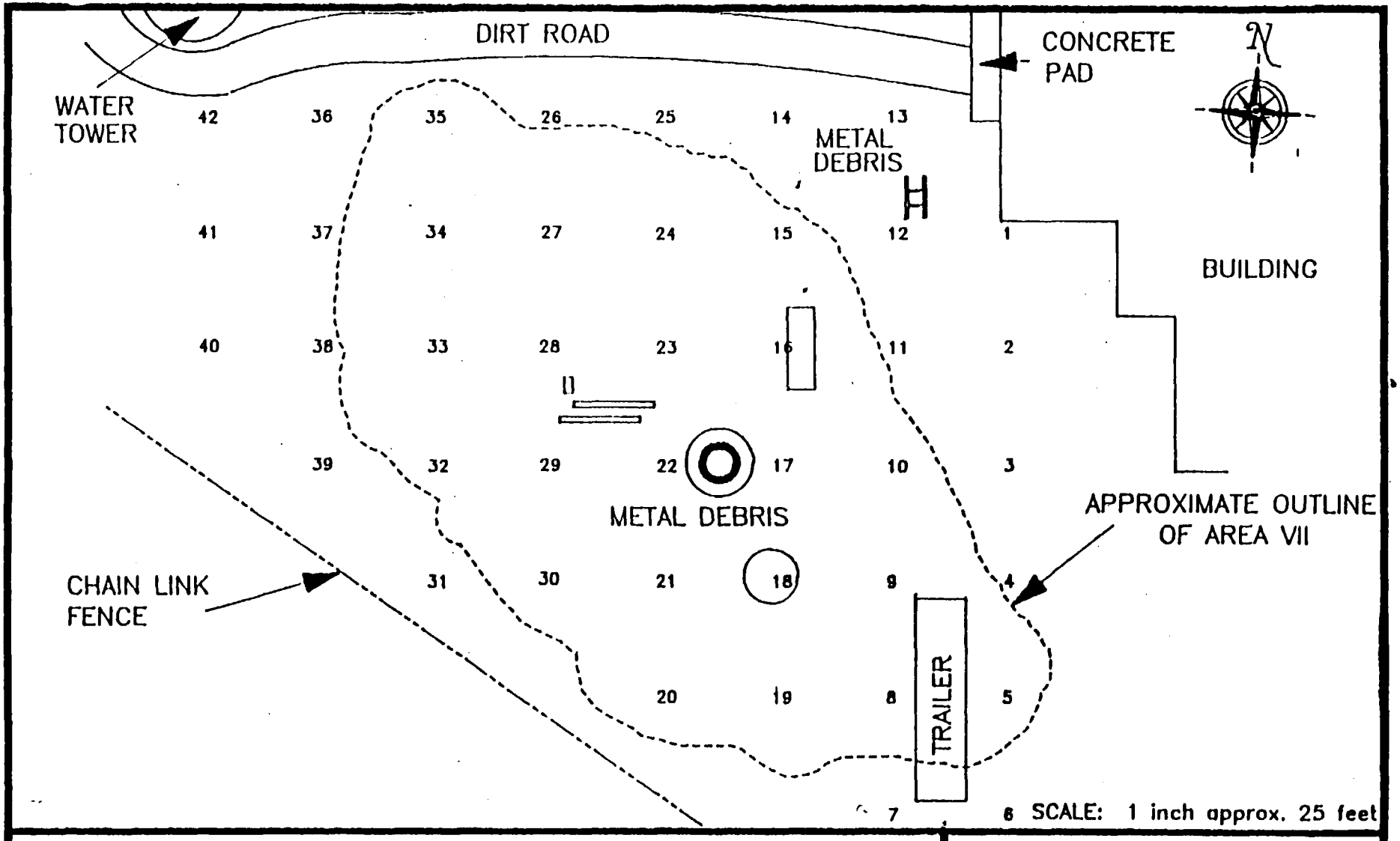


FIGURE 1A.

SITE SKETCH MAP
MOHAWK TANNERY SITE
NASHUA, NEW HAMPSHIRE

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN GEORGE MAVRIS	DATE 5/89	PCS # 2170
APPROVED LARRY ASPLAND	DATE 5/89	TDD # 01-8902-09A

2

TABLE 1A
MAGNETOMETER SURVEY DATA
MOHAWK TANNERY SITE
NASHUA, NEW HAMPSHIRE
MAY 3, 1989

STATION NUMBER	MAGNETOMETER READINGS (GAMMAS)	COMMENTS
1	58,677	CORNER OF CEMENT BUILDING
2	53,248	
3	53,518	
4	58,567	NEAR CORNER OF TRAILER
5	58,574	ADJACENT TO TRAILER
6	52,962	NEAR CORNER OF TRAILER
7	53,603	NEAR CORNER OF TRAILER
8	52,953	ADJACENT TO TRAILER
9	54,446	NEAR CORNER OF TRAILER
10	54,464	
11	53,934	
12	54,530	ADJACENT TO TANK CRADLE
13	58,050	
14	53,916	
15	54,082	
16	54,342	ADJACENT TO METAL DEBRIS
17	54,756	NEAR METAL DEBRIS
18	55,108	ON METAL DEBRIS
19	54,815	
20	55,325	
21	55,180	
22	55,324	NEAR METAL DEBRIS
23	54,921	NEAR METAL DEBRIS
24	54,923	
25	54,428	
26	54,872	
27	54,926	
28	54,714	NEAR METAL DEBRIS
29	54,809	NEAR METAL DEBRIS
30	55,193	
31	55,213	
32	55,127	
33	54,741	
34	54,827	
35	54,436	
36	53,759	
37	54,599	
38	54,774	
39	55,132	
40	54,618	
41	54,592	
42	53,353	

The magnetometer data (Table 1A) was compiled and plotted. A magnetic survey contour map using a 100, 500, and 1,000 gamma contour interval was constructed (Figure 2A).

Two strong positive magnetic anomalies were mapped at the northeastern and southeastern sections of the site. These anomalies are located near station numbers 1 and 13, and 4 and 5, respectively. The magnetic anomalies range from 54,500 to over 58,000 gammas. The anomaly at the northeastern section of the site coincides with the corner of the cement building and a large metal object located on the surface. The other strong positive anomaly coincides with a metal trailer. A lesser positive anomaly is located at the center of the study area and ranges from 55,200 to 55,300 gammas. This anomaly is also located adjacent metal debris strewn about the surface.

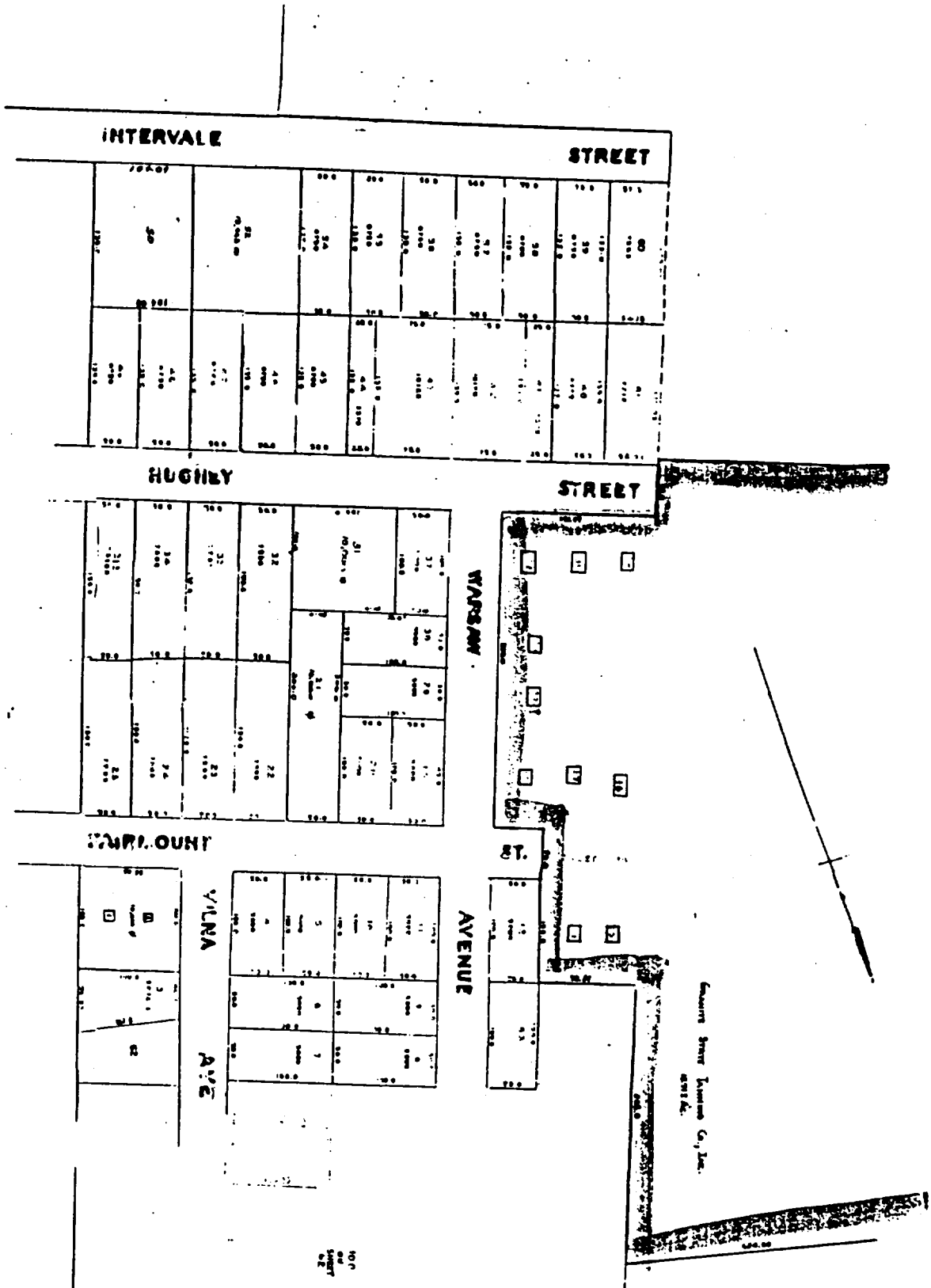
Based on the magnetometer survey conducted on the study area at the Mohawk Tannery Site in Nashua, New Hampshire, the data for evaluating the existence of buried metal objects are inconclusive. The most definite method to determine if any buried metal objects, such as drums, are buried on the site would be to excavate the area. Less intrusive techniques such as Ground Penetrating Radar (GPR) or conductivity could be utilizing but may result in inconclusive data also.

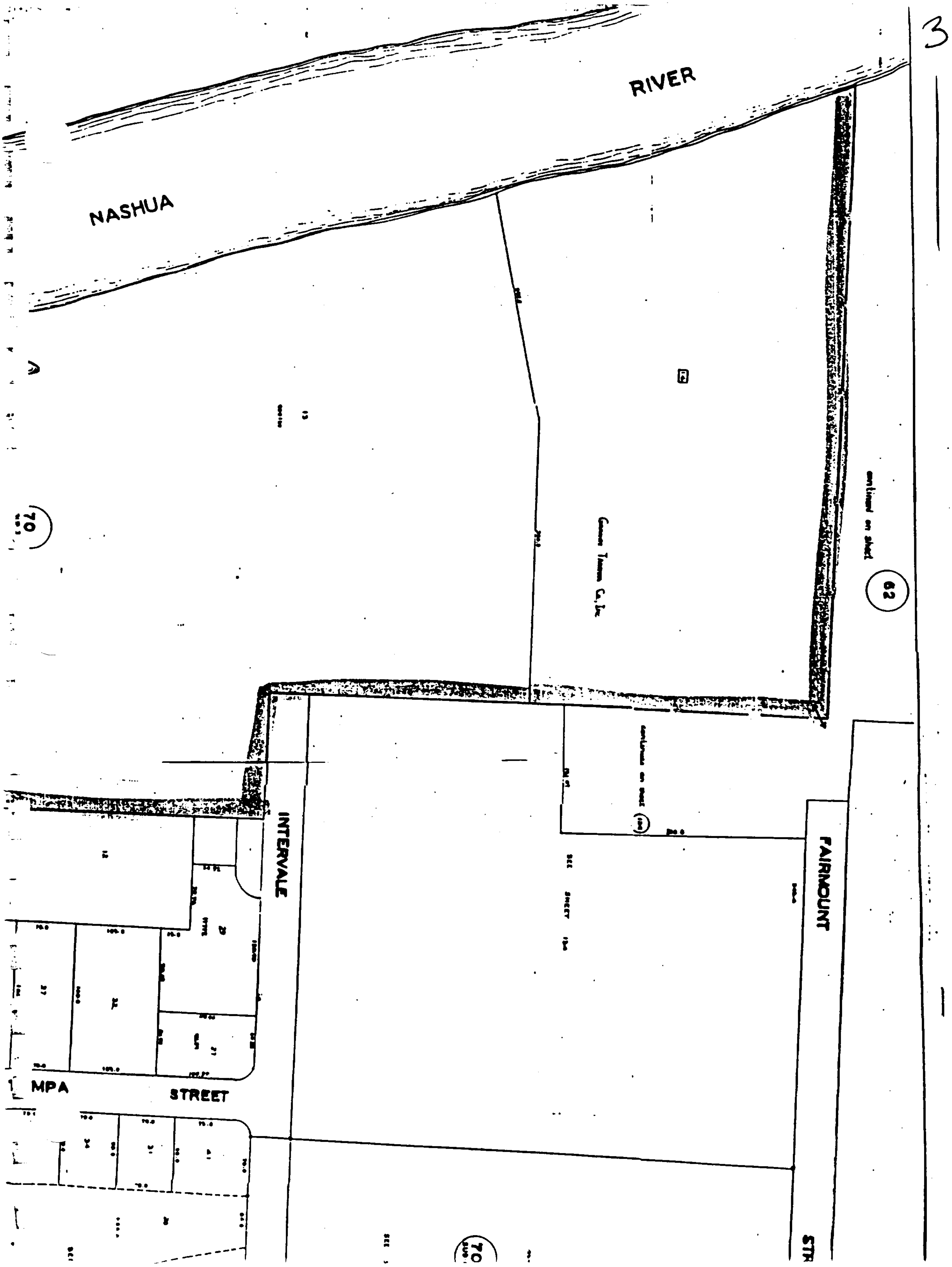
APPENDIX B

PROPERTY OWNER LIST & TAX MAPS

PROPERTY OWNERS LIST

TAX MAP #	LOT #	PROPERTY LOCATION	CURRENT OWNER
70	13	Between Fairmont and River	Warren Kean
70	14	Fairmont St.	Warren Kean
70	12	Lower Intervale St.	Keith Vaskelionis Sr.
70	29	44 Intervale St.	Marion M. Vaskelionis
70	26	Lower Tampa St.	Keith Vaskelionis Sr.
134	12 & 63	Fairmont St.	Leo T. & Andrea R. Pinet
134	14-18 & 27-29	Warsaw Ave.	Warren Kean
134	38-41 & 61	Hughey St.	Warren Kean
134	42	42 Hughey St.	Douglas G. Hardy
134	56-60	Intervale St.	Richard D. & Priscala Silva


INTERVALE
STREET
HUGHEY
STREET
WARSAW
AVENUE
ST.
VILNA
AVE

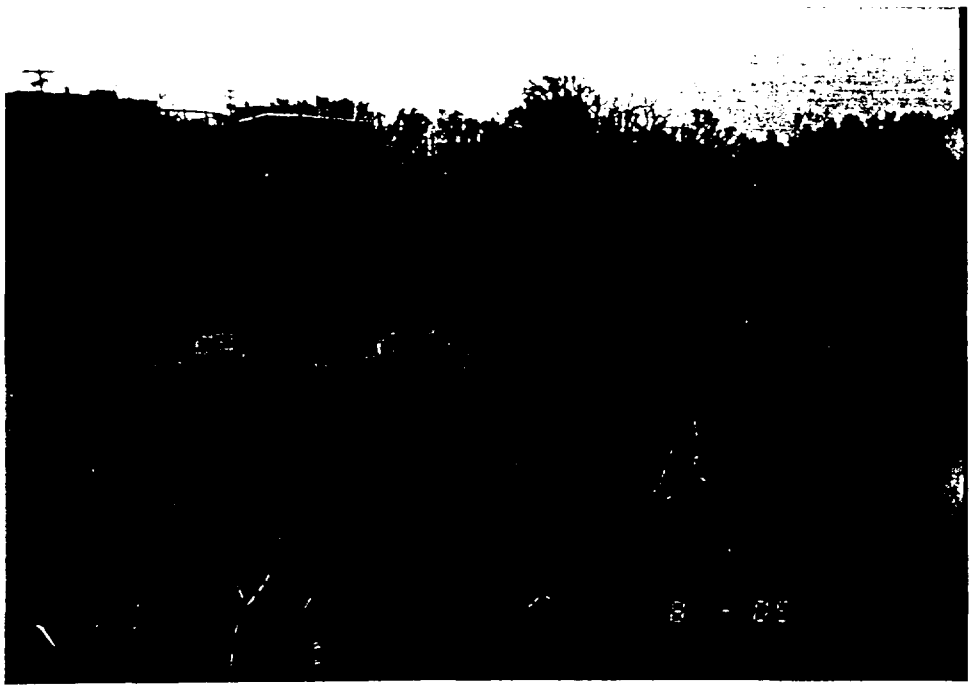

3
NASHUA
RIVER
INTERVALE
FAIRMOUNT
MPA
STREET
STR
62
70
continued on sheet

70
SUB-D
NASHUA
TAMPA
STREET

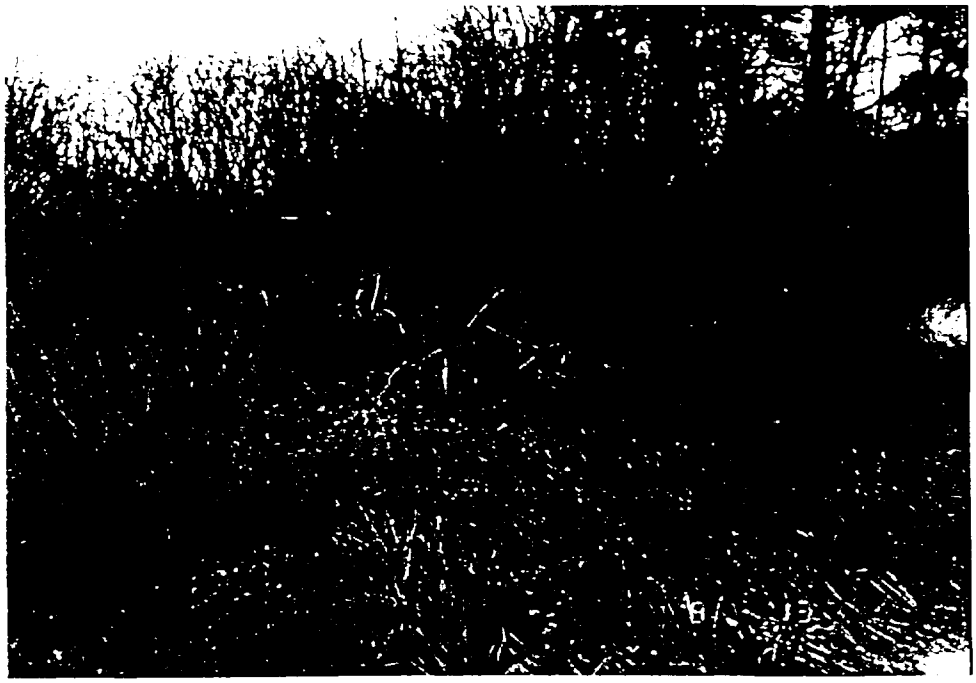
APPENDIX C

PHOTO-DOCUMENTATION LOG

PHOTOGRAPHY LOG SHEET



SCENE: LAGOON AREA # 1
SITE NAME: MOHAWK TANNERY LOCATION: NASHUA, NEW HAMPSHIRE
FRAME NUMBER: 2 DATE: 04/18/89 TIME: 0805 SKY CONDITION: LIGHT RAIN
PHOTO BY: LARRY ASPLAND WITNESSES:
CAMERA: OLYMPUS SETTING: AUTO FILM TYPE: 200 FILM ROLL: 8894



SCENE: DISPOSAL AREA # 7
SITE NAME: MOHAWK TANNERY LOCATION: NASHUA, NEW HAMPSHIRE
FRAME NUMBER: 4 DATE: 04/18/89 TIME: 0813 SKY CONDITION: LIGHT RAIN
PHOTO BY: LARRY ASPLAND WITNESSES:
CAMERA: OLYMPUS SETTING: AUTO FILM TYPE: 200 FILM ROLL: 8894

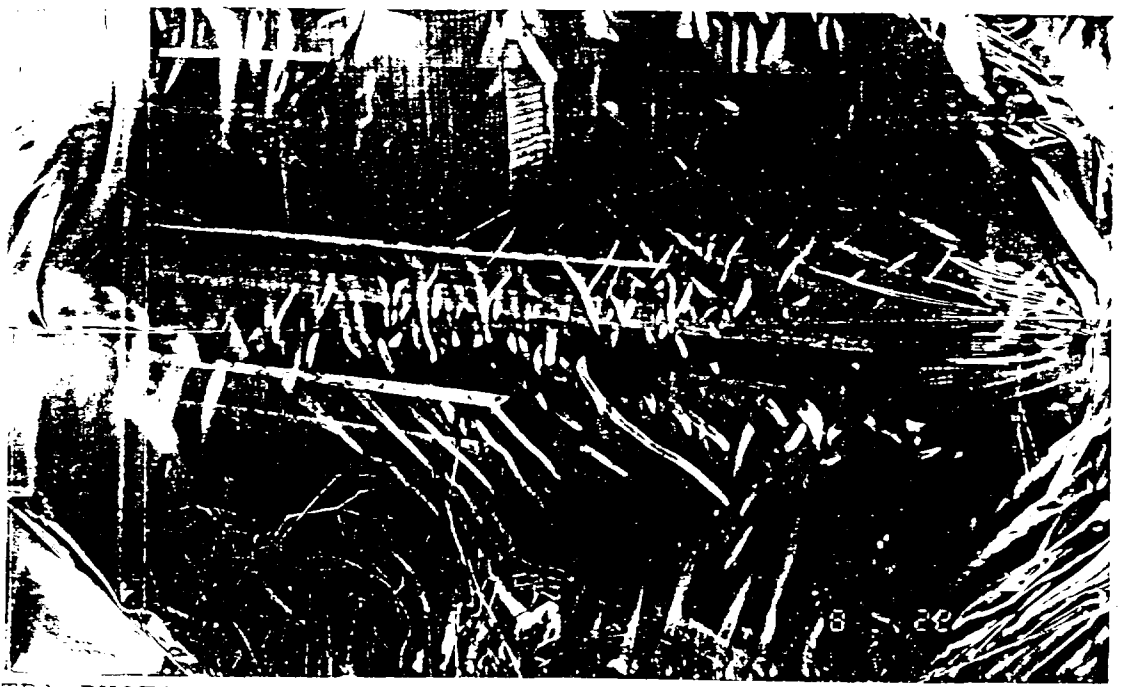
PHOTOGRAPHY LOG SHEET

SCENE: VIEW OF AREA LOOKING AT LAGOON # 1. COVERED LAGOON # 2 ON LEFT
SITE NAME: MOHAWK TANNERY LOCATION: NASHUA, NEW HAMPSHIRE
FRAME NUMBER: 5 DATE: 04/18/89 TIME: 0815 SKY CONDITION: LIGHT RAIN
PHOTO BY: LARRY ASPLAND WITNESSES:
CAMERA: OLYMPUS SETTING: AUTO FILM TYPE: 200 FILM ROLL: 8894

SCENE: COVERED LAGOON # 2
SITE NAME: MOHAWK TANNERY LOCATION: NASHUA, NEW HAMPSHIRE
FRAME NUMBER: 6 DATE: 04/18/89 TIME: 0815 SKY CONDITION: LIGHT RAIN
PHOTO BY: LARRY ASPLAND WITNESSES:
CAMERA: OLYMPUS SETTING: AUTO FILM TYPE: 200 FILM ROLL: 8894

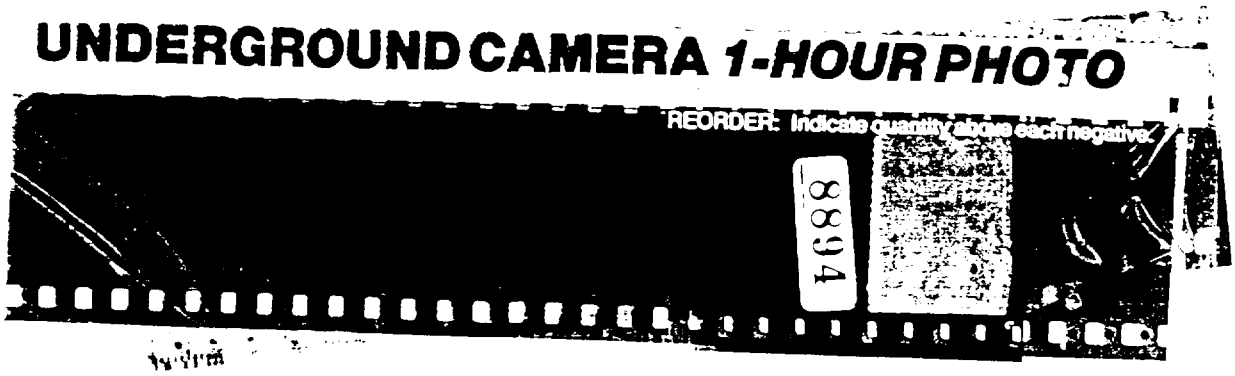
PHOTOGRAPHY LOG SHEET

SCENE: GRAVEL PIT
SITE NAME: MOHAWK TANNERY LOCATION: NASHUA, NEW HAMPSHIRE
FRAME NUMBER: 8 DATE: 04/18/89 TIME: 0825 SKY CONDITION: LIGHT RAIN
PHOTO BY: LARRY ASPLAND WITNESSES:
CAMERA: OLYMPUS SETTING: AUTO FILM TYPE: 200 FILM ROLL: 8894



SCENE: EXTRA PHOTOS
SITE NAME: MOHAWK TANNERY LOCATION: NASHUA, NEW HAMPSHIRE
FRAME NUMBER: 0 DATE: 04/18/89 TIME: SKY CONDITION: LIGHT RAIN
PHOTO BY: LARRY ASPLAND WITNESSES:
CAMERA: OLYMPUS SETTING: AUTO FILM TYPE: 200 FILM ROLL: 8894

PHOTOGRAPHY LOG SHEET

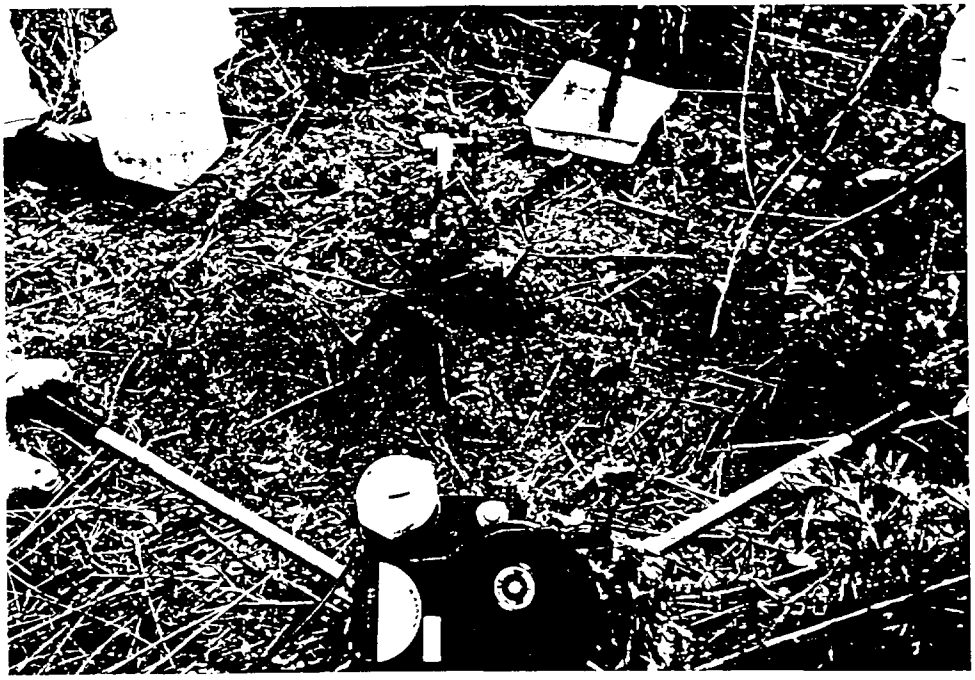


SCENE: NEGATIVES
SITE NAME: MOHAWK TANNERY LOCATION: NASHUA, NEW HAMPSHIRE
FRAME NUMBER: 0 DATE: 04/18/89 TIME: SKY CONDITION: LIGHT RAIN
PHOTO BY: LARRY ASPLAND WITNESSES: ,
CAMERA: OLYMPUS SETTING: AUTO FILM TYPE: 200 FILM ROLL: 8894

SCENE: LAGOON # 1 WHERE SAMPLE # 002 WAS TAKEN
SITE NAME: MOHAWK TANNERY LOCATION: NASHUA, NEW HAMPSHIRE
FRAME NUMBER: 1 DATE: 05/26/89 TIME: 0800 SKY CONDITION: OVERCAST
'OTO BY: TOM GAUTHIER WITNESSES: LARRY ASPLAND ,JOSEPH PILON
IERA: OLYMPUS SETTING: AUTO FILM TYPE: 200 FILM ROLL: 6276

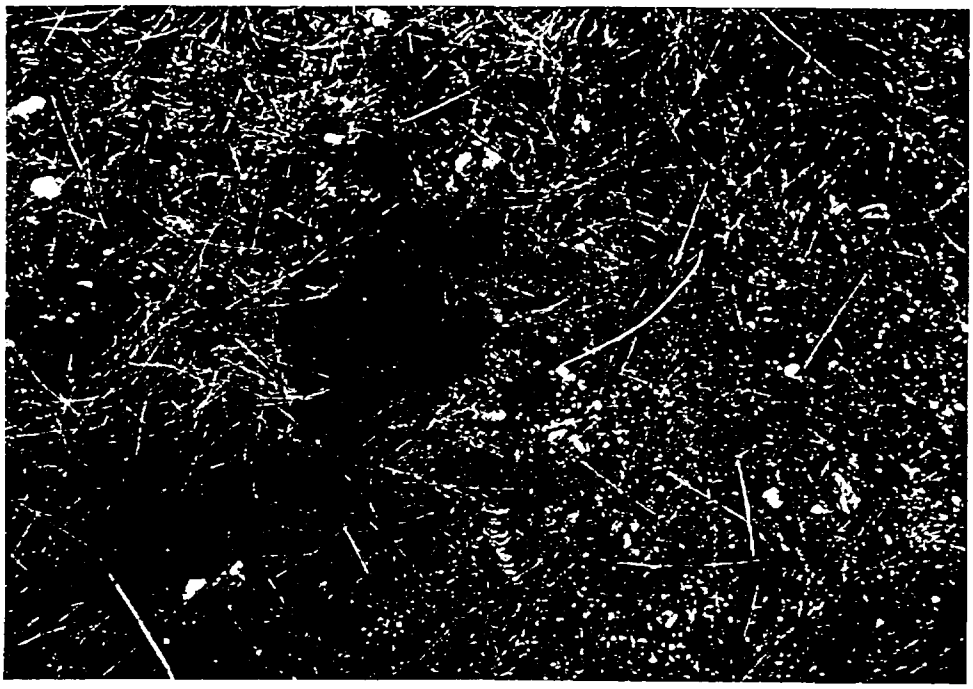
PHOTOGRAPHY LOG SHEET

SCENE: SAMPLE LOCATION # 005 WITH STRESSED VEGETATION
SITE NAME: MOHAWK TANNERY LOCATION: NASHUA, NEW HAMPSHIRE
FRAME NUMBER: 9 DATE: 05/26/89 TIME: 1049 SKY CONDITION: OVERCAST
PHOTO BY: LARRY ASPLAND WITNESSES: TOM GAUTHIER ,JOSEPH PILON
CAMERA: OLYMPUS SETTING: AUTO FILM TYPE: 200 FILM ROLL: 6276



SCENE: SAMPLE LOCATION # 004
SITE NAME: MOHAWK TANNERY LOCATION: NASHUA, NEW HAMPSHIRE
FRAME NUMBER: 10 DATE: 05/26/89 TIME: 1050 SKY CONDITION: OVERCAST
PHOTO BY: LARRY ASPLAND WITNESSES: TOM GAUTHIER ,JOSEPH PILON
CAMERA: OLYMPUS SETTING: AUTO FILM TYPE: 200 FILM ROLL: 6276

PHOTOGRAPHY LOG SHEET



SCENE: SAMPLE LOCATION # 006
SITE NAME: MOHAWK TANNERY LOCATION: NASHUA, NEW HAMPSHIRE
FRAME NUMBER: 12 DATE: 05/26/89 TIME: 1248 SKY CONDITION: OVERCAST
PHOTO BY: LARRY ASPLAND WITNESSES: TOM GAUTHIER ,JOSEPH PILON
CAMERA: OLYMPUS SETTING: AUTO FILM TYPE: 200 FILM ROLL: 6276

SCENE: SAMPLE LOCATION # 007
SITE NAME: MOHAWK TANNERY LOCATION: NASHUA, NEW HAMPSHIRE
FRAME NUMBER: 15 DATE: 05/26/89 TIME: 1340 SKY CONDITION: OVERCAST
PHOTO BY: LARRY ASPLAND WITNESSES: TOM GAUTHIER ,JOSEPH PILON
CAMERA: OLYMPUS SETTING: AUTO FILM TYPE: 200 FILM ROLL: 6276

APPENDIX D

SITE SAMPLING QA/QC PLAN

MOHAWK TANNERY

SITE SAMPLING QA/QC PLAN

NASHUA, NEW HAMPSHIRE

Prepared for:

U.S. Environmental Protection Agency
Region I
60 Westview Street
Lexington, MA 02173

CONTRACT NO. 68-01-7367

TAT-01-N-00411

TDD NO. 01-8902-09A

Prepared by:

Roy F. Weston, Inc.
Technical Assistance Team
Region I

July 1989

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LIST OF FIGURES

LIST OF TABLES

1.0 BACKGROUND[1]

The Mohawk Tannery, also known as Granite State Leathers, is located on 41 acres of land along the west side of Warsaw Avenue in Nashua, New Hampshire (Figures 1 & 2).

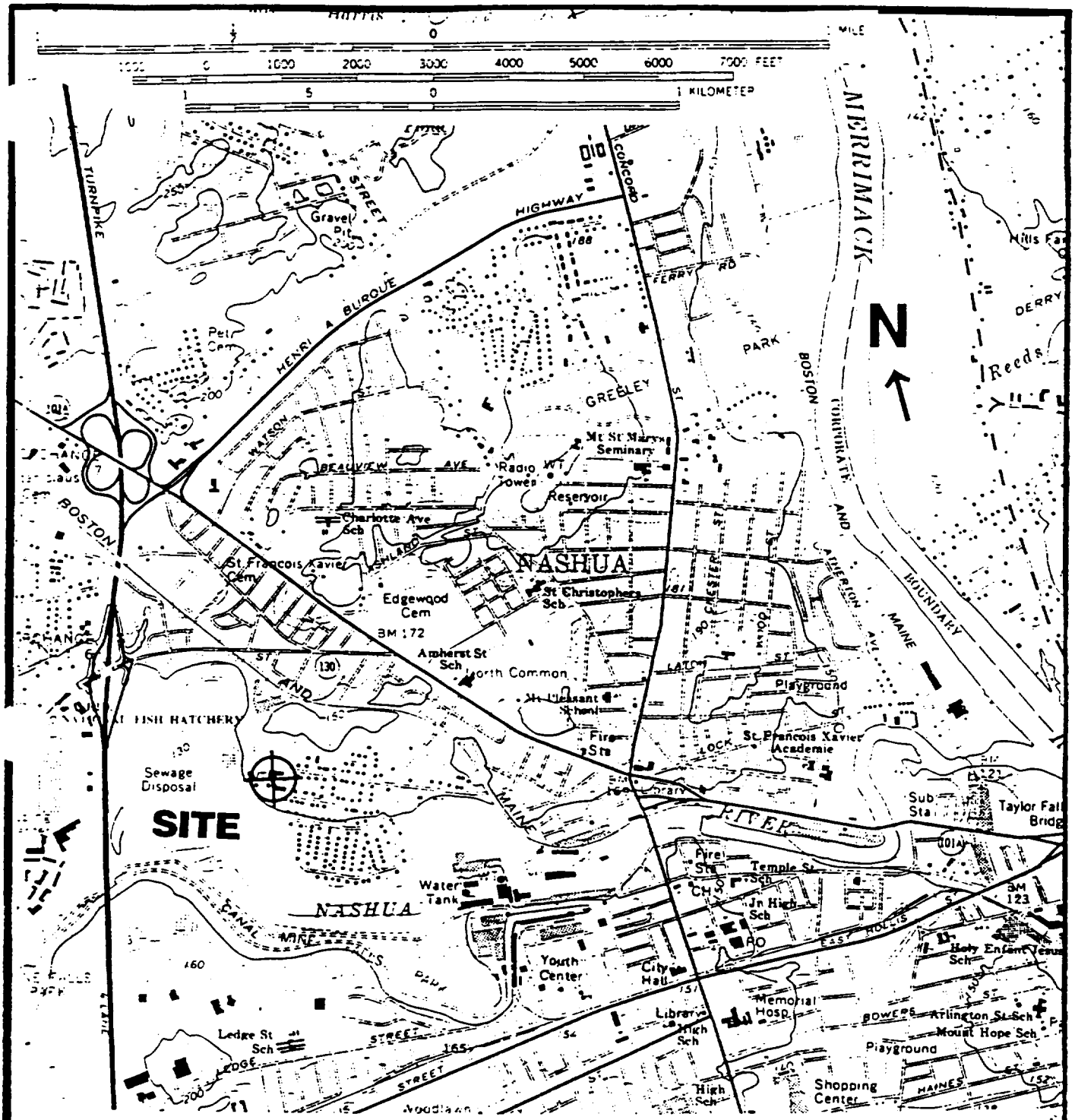
From 1924 until 1984, Mohawk Tannery tanned hides for leather. In the southeast portion of the site, partially on an undeveloped 16 acre parcel of land, is an asbestos landfill which was covered in 1983 under EPA observation. Since the facility ceased operation in 1984, the property has been owned by Warren Kean, President, Granite State Leathers, Inc., Trustee, Chester Realty Trust, 37 Walden Pond Road, Nashua, NH.

While in operation, the facility produced effluents which consisted of alkaline and acid waste streams. The effluents were combined and discharged into two lagoons, AREAS I & II (Figure 2). This treatment process was phased out during 1973-1974. During the interim period of phasing out the above treatment process and the construction of a new treatment facility, the alkaline effluent was screened and then pumped into the two lagoons for sedimentation. The acid effluent was passed through settling basins and then discharged into the Nashua River. Sludge buildup from the lagoons and settling basins was eventually removed and buried in disposal areas III, IV, V and VI.

Two spills of sodium hydrosulfate (NaSH) have occurred at the site. Approximately 100 gallons and 1,282 gallons of NaSH were released on September 23, 1980 and February 2, 1984, respectively. The NaSH was flushed into a gravel pit on-site.

Throughout 1985, various agencies from the State of New Hampshire have conducted inspections at the site. On May 17, 1985, the Mohawk Tannery facility was ordered to develop and implement closure plans for the site. In June 1985, Goldberg-Zoino & Associates (GZA) was hired by Mohawk Tannery to analyze samples of sludge from each disposal area and lagoon as part of a hydrogeologic study. GZA detected organic compounds including tetrachloroethylene at levels up to 380 parts per billion (ppb), 2, 4, 6-trichlorophenol at levels up to 140,000 ppb and pentachlorophenol at levels up to 510,000 ppb in the lagoons and disposal areas on the site. Groundwater samples collected by GZA revealed arsenic, chromium and mercury at levels of up to 10.0 ppb.

In 1986, EPA verified the presence of dioxin isomers in the soil over the lagoons and disposal areas at levels of up to 326 ppb. In October 1987, EPA collected water samples from the surface of the uncapped lagoon and soil samples from the river embankment. EPA's Field Investigation Team Contractor (NUS) conducted a preliminary assessment in July 1987 and an on-site reconnaissance in November 1988.

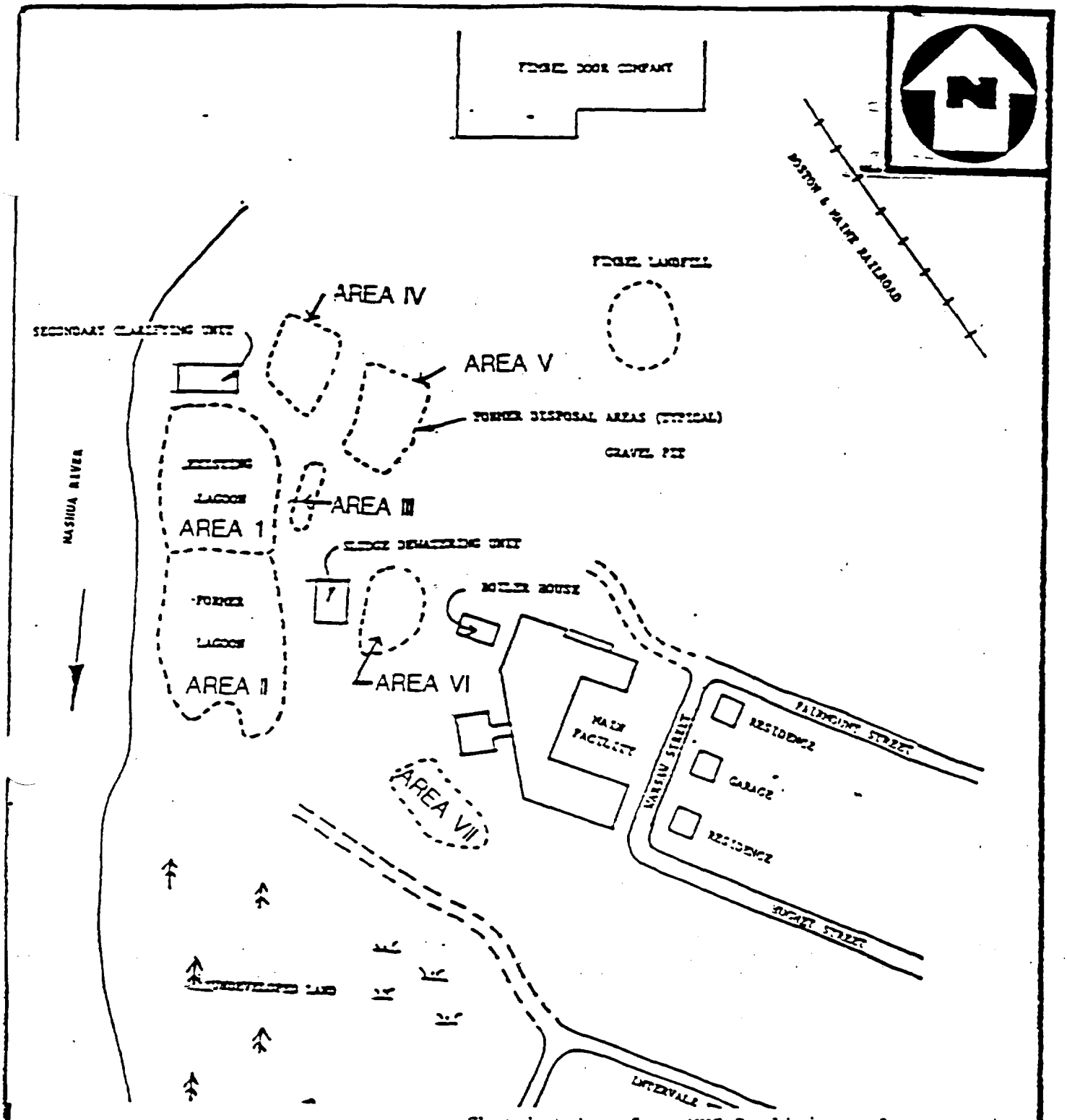


U.S.G.S. 7.5 SERIES QUADRANGLE NASHUA NORTH, NH 1968 PHOTOREVISED 1985

GENERAL LOCATION MAP FIGURE 1
MOHAWK TANNERY PROPERTY
NASHUA, NEW HAMPSHIRE

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN ASPLAND	DATE 6/89	PCS # 2170
APPROVED MJM	DATE 7/89	TDD # 01-8902-09A



Sketch taken from NUS Preliminary Assessment Report dated July 31, 1987 Not-to-Scale

FIGURE 2

SITE LOCATION MAP

MOHAWK TANNERY SITE

NASHUA, NEW HAMPSHIRE

WESTON MANAGERS ENGINEERS/CONSULTANTS

DRAWN ASPLAND	DATE 5/89	PCS # 2170
APPROVED MJM	DATE 5/89	TDD # 01-8902-09A

2.0 OBJECTIVES

The site investigation by the TAT will involve the collection of soil and lagoon sediment samples survey at the Mohawk Tannery Site. The actual number and types of samples collected for analysis at the designated TAT contract laboratory will depend primarily on the results of field screening performed while at the site. The specific objectives of the sampling visit at the Mohawk Tannery Site are as follows:

- Provide the U.S. EPA with analytical data which can be used to support further actions at the site as deemed necessary.
- Provide sufficient analytical data from a representative number of samples so that the characteristics of materials and soils on the site can be approximately determined.

3.0 QUALITY ASSURANCE LEVELS

The quality assurance (QA) levels for the on-site screening activities by the TAT will be QA1. These activities include the use of ambient air monitoring equipment such as the HNu or the OVA detection of organic and/or inorganic vapors. The QA level for the samples sent to the TAT contract laboratory for volatile organic analysis (VOA), semi-volatile organic analysis (BNA), and metals analyses will be QA3 [10% or 2 pairs of matrix spike duplicates (whichever is greater) of the samples collected for VOA and BNA analyses]. See Section 6.0 for details.

4.0 APPROACH AND SAMPLING METHODOLOGIES

The sampling survey will be conducted on or about May 26, 1989. Samples may be obtained from, but are not limited to, lagoons and soils. Each of these media may be screened in the field prior to sampling and the exact quantity of samples obtained will be determined based upon screening results. A random sampling technique, based on best engineering judgement, will be used to determine the exact location for all sampling. The samples will be containerized, preserved and analyzed in accordance with Table 1. Sample volumes and trip blank volumes will be as described in Table 1. Samples will be disposed of by the designated laboratory performing the analyses. All contaminated sampling materials will be disposed of by the EPA New England Regional Laboratory (NERL). The chain of custody procedures will be those utilized by the US EPA Region I NERL.

4.1 LAGOON SAMPLES

Two sediment samples will be obtained from AREA I and AREA II (Figure 2). The area around the two lagoons will be monitored for organic vapors. One sample will be obtained from the uncapped lagoon (AREA I) at a depth of approximately two to three feet below the sediment surface of the lagoon. The lagoon is currently covered with approximately fourteen inches of water. Sampling of AREA I will be accomplished by using a john boat which will be towed out, by the use of ropes, toward the center of the lagoon by the use of ropes. The sample will be collected by inserting a PVC pipe through the water and into the sediment portion of the lagoon to the required depth. The pipe will then be capped which will create a vacuum and then removed from the lagoon and sampled.

One sample will be obtained from the capped lagoon (AREA II) at a depth of approximately two feet below the lagoon cap. The sample will be obtained by using a hand auger to bore down to the required depth. Samples will be submitted for VOA, BNA and metals analyses.

4.2 SOIL SAMPLES

Three subsurface and one surface soil samples will be obtained from AREA VI and AREA VII (Figure 2). The subsurface sample depths will be four feet below ground surface. The surface sample will be taken directly from the surface. A hand or power auger will be used to bore down to the required depth to collect the sample. Samples will be submitted for VOA, BNA and metals analyses.

4.3 DECONTAMINATION

Air monitoring equipment will not come into contact with the ground in the sampling area, and therefore will not need decontamination. All personnel protective equipment will be decontaminated using a methanol wash, soap wash and water rinse. All rinsate will be containerized. Protective clothing will then be placed in a garbage bag along with all other waste generated and garbage bags will be disposed.

5.0 PROJECT ORGANIZATION AND RESPONSIBILITIES

Roy F. Weston TAT Members:

Larry Aspland	Sampling, Lead TAT Member
Joseph Pilon	Sampling
Martha Poirier	Sampling
Thomas Gauthier	Sampling
Mark McDuffee	Sampling

U.S. EPA

Alex Sherrin	Site Investigator

6.0 QUALITY ASSURANCE REQUIREMENTS

The on-site screening for this survey has standard QA/QC protocols for checking the calibration of the instruments used. The HNu photoionization detector calibration will be checked with an isobutylene/air standard and the OVA flame ionization detector calibration will be checked with a methane/air standared. The samples analyzed at the TAT designated contract lab will employ the following data quality procedures per EPA standard operating procedures: chain of custody, sample holding times, initial and continuing instrument calibrations, gas chromatograms and/or mass spectra confirmation via a second GC column or mass spectra for organics, 10% or two pairs of matrix spike duplicates (whichever is greater) of the samples collected, performance evaluation samples, standard calibration data, method blanks and trip blanks for the volatile organic analysis. (See Table 1 for EPA Methodology).

7.0 DELIVERABLES

The Roy F. Weston TAT will generate a formal report on all site activities conducted. Laboratory results will be incorporated into the formal report.

8.0 DATA VALIDATION

A data quality review will be conducted by Weston TAT and EPA QA/QC Section personnel upon receipt of results from the TAT contract laboratory. These results will be incorporated into the formal report, generated by Weston TAT at the completion of all sampling and analyses activities.

9.0 REFERENCES

1. Roy F. Weston "Preliminary Site Assessment Report" dated March 1989.

TABLE 1

SAMPLING SUMMARY, ANALYTICAL METHODS AND QA/QC SAMPLES

MATRIX	# SAMPLES	ANALYTICAL PARAMETER	VOLUME	CONTAINER	PRESERVATIVE	METHOD	TRIP BLANKS
SOIL	4	VOLATILE ORGANIC	40 ML	1 40-ML GLASS VIAL	COOL TO 4 C	8240	3 40-ML ORG. FREE WATER
SOIL	3	BNA	8 OZ	1 8-OZ GLASS JAR	COOL TO 4 C	8270	NONE
SOIL	4	P.P. METALS	4 OZ	1 4-OZ GLASS JAR	COOL TO 4 C	SW846	NONE
SOLID (LAGOON)	2	VOLATILE ORGANIC	40 ML	1 40-ML GLASS VIAL	COOL TO 4 C	8240	3 40-ML ORG. FREE WATER
SOLID (LAGOON)	2	P.P. METALS	8 OZ	1 8-OZ GLASS JAR	COOL TO 4 C	SW846	NONE
SOLID (LAGOON)	2	BNA	8 OZ	1 8-OZ GLASS JAR	COOL TO 4 C	8270	NONE

APPENDIX E

CHAIN OF CUSTODY RECORD

IRC IT... OT... A... Y
(... of Enforcement

-Fl... An... shy... Copper, Nickel, Silver, Thallium + Zinc.

JFK Federal ...ing. Rm. 2203
Boston, Massachusetts 02203

CHAIN OF CUSTODY RECORD

PROJ. NO. | PROJECT NAME: PO# 22818 PCS#2170

SAMPLERS: (Signature) Martha J ... Larry ...

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOA Method 8240	BNA Method 8270	13 PP metals *			REMARKS: * Arsenic - 7060, Cadmium - 7130, Chromium - 7190, Lead - 7420, Mercury - 7741, Selenium - 7740 — VOA BNA 13 PPM
001	5/25/8	1400		X	BLANK	3-40ml	X					#62869
002	5/26/8	0715		X	Sludge from lagoon (with water)	3	X	X	X			#62870, #62871, #62872
003	5/26/8	0945		X	Area 7, sludge	3	X	X	X			#62873, #62874, #62875
004	5/26/8	1100		X	Area 7 soil/sludge	3	X	X	X			#62876, #62877, #62878
005	5/26/8	1040		X	Area 7 soil (gray)	1			X			#62879
006	5/26/8	1145		X	Area 6 soil/sludge	3	X	X	X			# 62880, #62881, 62882
007	5/26/8	1345		X	Area 2 sludge	3	X	X	X			#62887, #62888, #62889

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Larry ...	5/26/8 / 1540				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)

Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks
		[signature]	5-26-8 / 15:50	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

APPENDIX F

HEALTH AND SAFETY PLAN

WESTON SPER DIVISION
HAZARDOUS WASTE SITE INVESTIGATION AND EMERGENCY RESPONSE
HEALTH AND SAFETY PLAN

U.S. EPA CONTACT: ALEX SHERRIN
Date of Inspection: 7/19/89 Time: 0800 TDD No. 01-8902-09A
Original Safety Plan: Yes ✓ No ___ PCS No. 2170
Admendment/Modification No. N/A

SITE SAFETY COORDINATOR: LARRY ASPLAND

Site Name: MOHAWK TANNERY

Site Address: Street No. OFF FAIRMOUNT ST.
City NASHUA
County HILLSBOROUGH
State NEW HAMPSHIRE Zip Code 03061

Site Contact: JOAN ROHR Phone 603-883-3227

Directions to Site: (Attach Map) RT. 3 N TO EXIT 6. GO EAST ON RT. 130 TO BALDWIN ST. FOLLOW TO FAIRMOUNT ST. TURN RIGHT ONTO FAIRMOUNT FOLLOW TO END OF STREET.

SITE HISTORY: FORMER TANNERY FACILITY WITH UNCAPPED LAGOONS AND BURIED HAZARDOUS WASTE ON SITE. VARIOUS STATE AND FEDERAL AGENCIES HAVE CONDUCTED SITE INSPECTIONS DURING FACILITY OPERATIONS AND AFTER PLANT CLOSING.

INCIDENT DESCRIPTION

TYPE: A) Spill ___ Air Release ___ Fire ___ HW Site ✓ Other ___
B) Assessment ✓ Sampling ___ Emergency Response ___
Clean-up/Removal ___ Other (specify) ___
C) Urban/Residential ___ Commercial ___ Industrial ✓
Rural ___ Remote ___

PERSONNEL PHYSICAL SAFETY HAZARDS:

Heat ✓ Cold ✓ Noise ___ Underground Utilities ___
Overhead Utilities ___ Heavy Equipment ___ Slip, Trip, Fall ✓
Confined Spaces ___ Pressurized Airlines ___ Explosive ___
Ladders ___ Scaffolds ___ Unguarded Openings-Wall, Floor ___
Liquids in Open Containers, Ponds/Lagoons ✓
Other ___

CHEMICAL CONTAMINANTS OF CONCERN

CONTAMINANT	TLV PEL	IDLH	PHYSICAL CHARACTERISTICS	ROUTE OF EXPOSURE	SYMPTOMS OF ACUTE EXPOSURE	FIRST AID	INSTRUMENTS TO DETECT
METHYLENE CHLORIDE	100ppm	CA	COLORLESS LIQUID WITH A CHLOROFORM LIKE ODOR	INHALATION INGESTION SKIN/EYE CONTACT	FATIGUE, WEAK, SLEEP, LIGHTHEADED LIMBS NUMB, TINGLE NAUSEA, IRRITATION EYES, SKIN VERTIGO	WASH EYES IMMED. SOAP WASH SKIN, ART. RESP. MED ATTENT.	OVA HNU 11.7 PROBE
ACETONE	250ppm	20,000ppm	COLORLESS LIQUID WITH A FRAGRANT MINT-LIKE ODOR	INHALATION INGESTION SKIN/EYE CONTACT	IRRIT. EYES, NOSE THROAT, HEAD DIZZINESS, DERM.	WASH EYES IMMED. SOAP WASH SKIN, ART. RESP. MED ATTENT.	OVA HNU 10.2 PROBE
2-BUTANONE	200ppm	3000ppm	CLEAR, COLORLESS LIQUID WITH A FRAGRANT MINT-LIKE MODERATELY SHARP ODOR	INHALATION INGESTION SKIN/EYE CONTACT	IRR. EYES ~~IMMEDIATE~~ ~~WATER WASH SKIN~~ ~~FRESH AIR~~ NOSE, HEAD, DIZZINESS VOMIT	IRR. EYES IMMED. WATER WASH SKIN - FRESH AIR. MED ATTENT.	HNU 10.2 e.v.
PENTACHLOROPHENOL	0.5 mg/m³	150mg/m³	LIGHT BROWN SOLID WITH A PUNGENT ODOR WHEN HOT	INHALATION ABSORPTION INGESTION SKIN/EYE CONTACT	IRRIT. EYES, NOSE THROAT, SNEEZ, COUGH WEAK; ANOR LOW-GRADE SWEAT; HEAD - DIZZ. NAU. VOMIT, DYSP, CHEST PAIN	WASH EYE IMMED. SOAP WASH SKIN, ART. RESP. MED. ATTENTION	Filter CASSETTE OR Chlor-in-oil test KIT
PHENOL	5ppm	250ppm	COLORLESS TO PINK SOLID OR THICK LIQUID W/A CHAR. SWEET TARRY ODOR	INHALATION ABSORPTION INGESTION SKIN/EYE CONTACT	IRRIT. EYES, NOSE THROAT, ANOR. LOW GRADE WEAK MUSC ACHE PAIN, DARK URINE CONVULSION, TWITCH	WASH EYE IMMED. SOAP WASH SKIN, ART. RESP. MED. ATTENT.	HNU 10.2 PROBE. OVA
CHROMIUM (METAL)	1mg/m³	500 mg/m³	APPEARANCE AND ODOR VARY DEPENDING UPON SPECIFIC COMP.	INHALATION INGESTION	HISTOLOGIC FIBROSIS OF LUNGS	WASH EYE IMMED. SOAP WASH SKIN. ART RESP. MED ATTN.	Filter CASSETTE
MERCURY (ORGANIC) (INORGANIC)	0.01mg/m³ 0.1mg/m³	10 mg/m³ 28mg/m³	APPEARANCE AND ODOR VARY DEPENDING UPON SPECIFIC COMP.	INHALATION ABSORPTION INGESTION SKIN/EYE CONTACT	PARES, ATAX, DYSART VISION, HEARING, EMOTIONAL, JERKY, SPASTIC, LAC. NAU VOMIT DIARR, CONSTI	WASH EYE IMMED. SOAP WASH SKIN. ART RESP. MED ATTN.	DRAEGER TUBES OR Jerome Mercury Analyzer

Description of Decontamination To Be Used: SOAP WASH/WATER RINSE. GLOVES AND BOOTS REMOVE AND DISPOSE OF EXPENDABLE GEAR, SOAP WASH/WATER RINSE HANDS, REMOVE RESPIRATOR PROTECTION. WASH AND RINSE HANDS AND FACE BEFORE ANY OTHER ACTIVITY.

SPECIFY PPE TYPE

TASK TO BE PERFORMED	ANTIC. LEVEL OF PROTECT.	COVERALL	GLOVE IN/OUT.	AIR PURI RESPIRAT CART/CAN
4/18/89 SITE RECON/PHOTO SITE	D	N/A	N/A	N/A
5/4/89 SAMPLING LAGOON AND SOILS	C	TYVEK	SURGICAL/NITRILE	GMC-

Anticipated Monitoring

Radiation Meter [✓] CGI [✓] HNU [✓] 11.7 / 10.2 eV Probe OVA [ ]

Detector Tube [ ] _____ Other _____

EMERGENCY PHONE NUMBERS:	LOCATION	PHONE	NOTIFIED
FIRE	NASHUA NH	911	
POLICE		911	
AMBULANCE		911	
HOSPITAL	NASHUA MEMORIAL	603-883-5521	

CHEMICAL TRAUMA CAPABILITY? YES

DIRECTIONS TO HOSPITAL: (ATTACH MAP) RTE. VERIFIED BY JA DATE 4/17/89

FAIRMOUNT ST. BACK TO RTE 101A. GO EAST TO MAIN ST.

TURN RIGHT FOLLOW TO HOSPITAL

ADDITIONAL EMERGENCY PHONE CONTACTS:

CHEMTREC	(800) 424-9300
TSCA HOTLINE	(800) 424-9065, (202) 544-1404
ATSDR	(DAY) (404) 329-2888
	(NIGHT) (404) 566-7777
AT & F (EXPLOSIVES INFO.)	(800) 424-9555
NATIONAL RESPONSE CENTER	(800) 424-8802
WESTON MEDICAL EMERGENCY SERVICE	(513) 421-3063
WESTON 24 HOUR HOTLINE	(215) 524-1925, 1926
PESTICIDE INFORMATION SERVICE	(800) 845-7633
EPA ERT EMERGENCY	(201) 321-6660
RCRA HOTLINE	(800) 424-9346
CMA CHEMICAL REFERRAL CENTER	(300) 262-8200
NATIONAL POISON CONTROL CENTER	(800) 942-5969
U.S. DOT	(202) 366-0656 (Day only)

Prepared by: _____ Date: 4/17/89

Pre-Response Approval by: _____ Date: 4/18/89

TDD# 01-8902-09A PCS# 2170

OBSERVED CONDITIONS/ACTIVITIES

Describe Initial Conditions (Source/Type/Quantity): INACTIVE SITE WHERE PREVIOUS EPA SAMPLING HAS OCCURRED. SEVEN DISPOSAL AREAS / LAGOONS EXIST ON SITE. ONLY ONE LAGOON IS UNCOVERED. SITE IS OVERGROWN WITH WEEDS. COVERED AREAS HAD 2-4 FOOT COVERS.

DOCUMENTATION PERFORMED BY: ASPLAND

Type: Photo ✓ Log Book ✓ Recorder N/A Video N/A

PHYSICAL DESCRIPTION

Size of Site: 43 ACRES Topography Terrain: HILLY Weather HOT

Distance to Nearest: Residence 50 ft School 1/4 MILE Hospital 1 MILE

Public Building 1/4 MILE Other _____

Evacuation: Yes ___ No ✓ Number ___ By Whom _____

Nearest Waterway: NASHUA RIVER Distance: ADJACENT TO SITE

Condition	Observed	Potential	None
Surface Water Contamination		✓	
Ground Water Contamination		✓	
Drinking Water Contamination		✓	
Air Contamination		✓	
Soil Contamination	✓		
Stressed Vegetation	✓		
Dead Fish, Other Animals		✓	

ACTIONS TAKEN ON SITE: (Attach Map of Site Control Zones)

Was Entry Made by TAT: YES ✓ NO ___

TASK CONDUCTED: Describe Specific PPE Used and Why

SAMPLED IN PPE C LAGOONS #1 & 2 AND DISPOSAL AREAS VI & VII. LAGOON SAMPLING. PREVIOUS SAMPLING RESULTS INDICATED VOC PRESENCE. AIR MONITORING RESULTS INDICATED LEVEL C WAS APPROPRIATED. PPE LEVEL C INCLUDED TYVEK BOOTIES, APR WITH GMC-H CARTRIDGE, PVC/NITRILE GLOVES

AIR MONITORING LOG

OVA Calibration 5/26/89
INU Calibration N/A
OGI Calibration N/A

Background O_2 21%
Organics 0.6
Radiation N/A

OGI N/A

(ATTACH CALIBRATION DATA TO LOG)

SITE NAME

STATION/ LOCATION	DATE	TIME	NAME OF AIR MONITOR	TYPE OF EQUIPMENT (HNU(PROBE/SPAN), OGI, OVA, RAD MIR	READING	SUMMARY/COMMENTS
SAMPLE #003	5/26/89	0930	TOM GAUTHIER	OVA	7/1000 UNITS	ABOVE BACKGROUND IN HOLE
SAMPLE #001	5/26/89	0930	TOM GAUTHIER	OVA	10-20 UNITS	OF SOIL ON AUGER AT HOLE (ABOVE BACKGROUND)
SAMPLE #003	5/26/89	0930	TOM GAUTHIER	OVA	0 UNITS	BREATHING AREA (ABOVE BACKGR
SAMPLE #004	5/26/89	1000	TOM GAUTHIER	OVA	7/1000 UNITS	IN HOLE
" "	"	"	"	"	4 UNITS	SOIL ON AUGER } (ABOVE BACKG
" "	"	"	"	"	0 UNITS	BREATHING AREA
SAMPLE #006	5/26/89	1230	LARRY ASPLAND	OVA	900 UNITS	IN HOLE
"	"	"	"	"	2 UNITS	SOIL ON AUGER } ABOVE BACKGR
"	"	"	"	"	0 UNITS	BREATHING AREA
SAMPLE #007	5/26/89	1300	TOM GAUTHIER	OVA	7/1000 UNITS	IN HOLE
"	"	"	"	"	0 UNITS	BREATHING AREA } ABOVE BACKGR

Mercury air monitoring not performed because areas with suspected contamin
were covered with 2 to 3 feet soil/water.

SAMPLING: CONDUCTED? YES ✓ NO ____

If Yes, Describe Sampling Method SEE SITE SAMPLING PLAN USING A POWER AUGER, AUGER DOWN 4-6 FEET. TAKE READING IN HOLE AND IN BREATHING AREA. IF VOC ARE PRESENT COLLECT SAMPLE USING PLASTIC/METAL SCOOPS. IN LAGOON USE A PVC PIPE - INSERT 2 FEET INTO SLUDGE MATERIAL. CAP THE PVC PIPE TO CREAT A VACCUM COLLECT SAMPLE.

Has Lab Been Notified of Potential Hazard Level? Yes ✓ No ___ NA ___

Note: This Health and Safety Plan was prepared for work to be conducted under the Technical Assistance Team (TAT) Contract 68-01-7367 Zone 1. Use of this plan by WESTON and its subcontractors on the TAT contract is intended to fulfill the OSHA requirements found in 29 CFR 1910.120. Items not specifically covered in this plan are included by reference to 29 CFR 1910 and 1926.

I have read and understand this safety plan.

NAME (PRINTED)	SIGNATURE	AFFILIATION	DATE
Martha L. Poirier	Martha L. Poirier	TAT	5/26/89
Thomas D. Gauthier	Thomas D. Gauthier	TAT	May 26, 1989
JOSEPH T PICCIN		TAT	[illegible]
LARRY ASPLAND	Larry Aspland	TAT	5/24/89

Final Submission of Plan by Larry Aspland Date 5/30/89

Post Response Approval [signature] Date 5/31/89

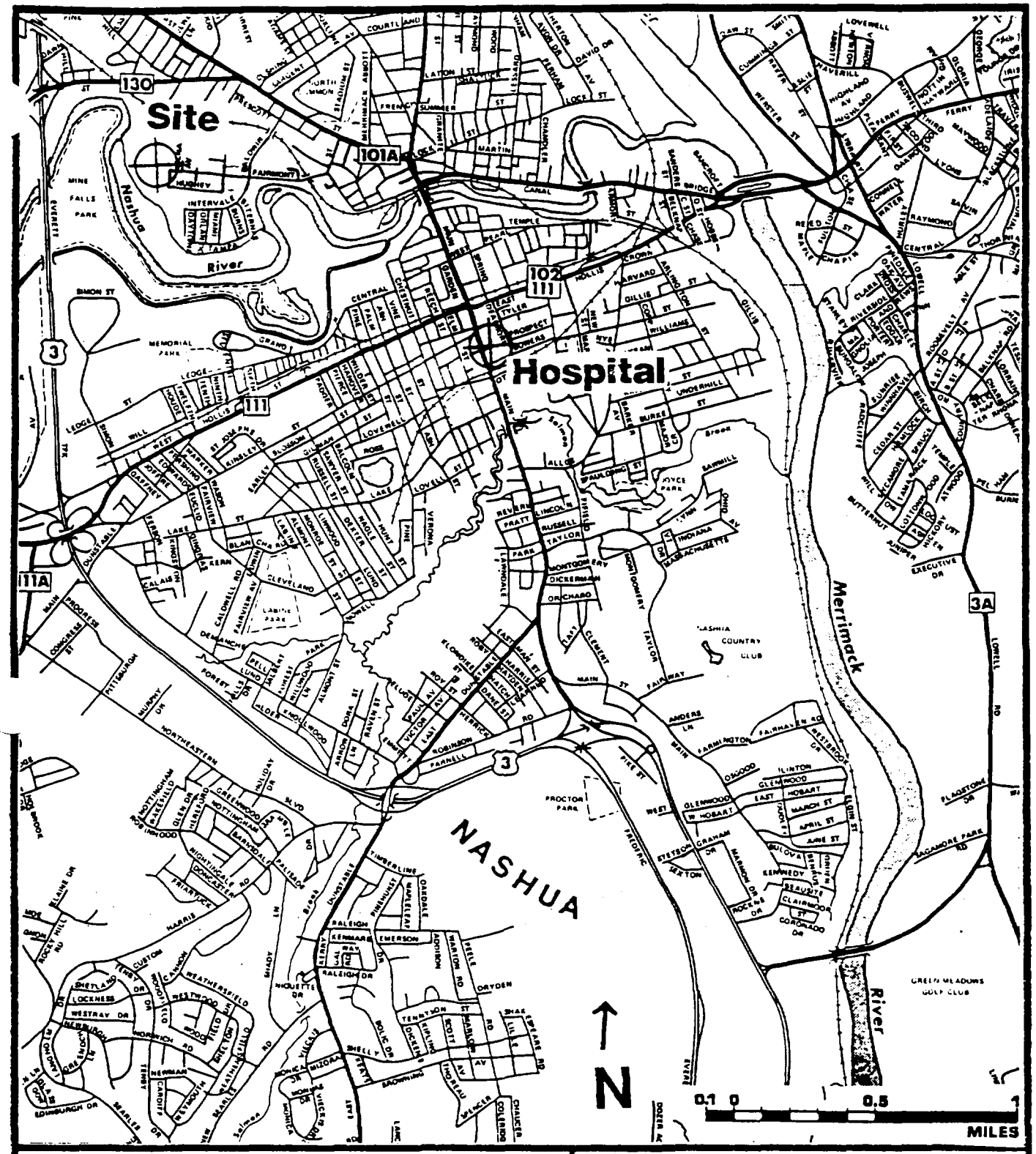
Copy to ZPMO ____ Date ____

SPER HSO Reviewed by: ____ Date: ____

Followup Required: Yes ___ No ___

Followup Performed: Date: ___ With: ___

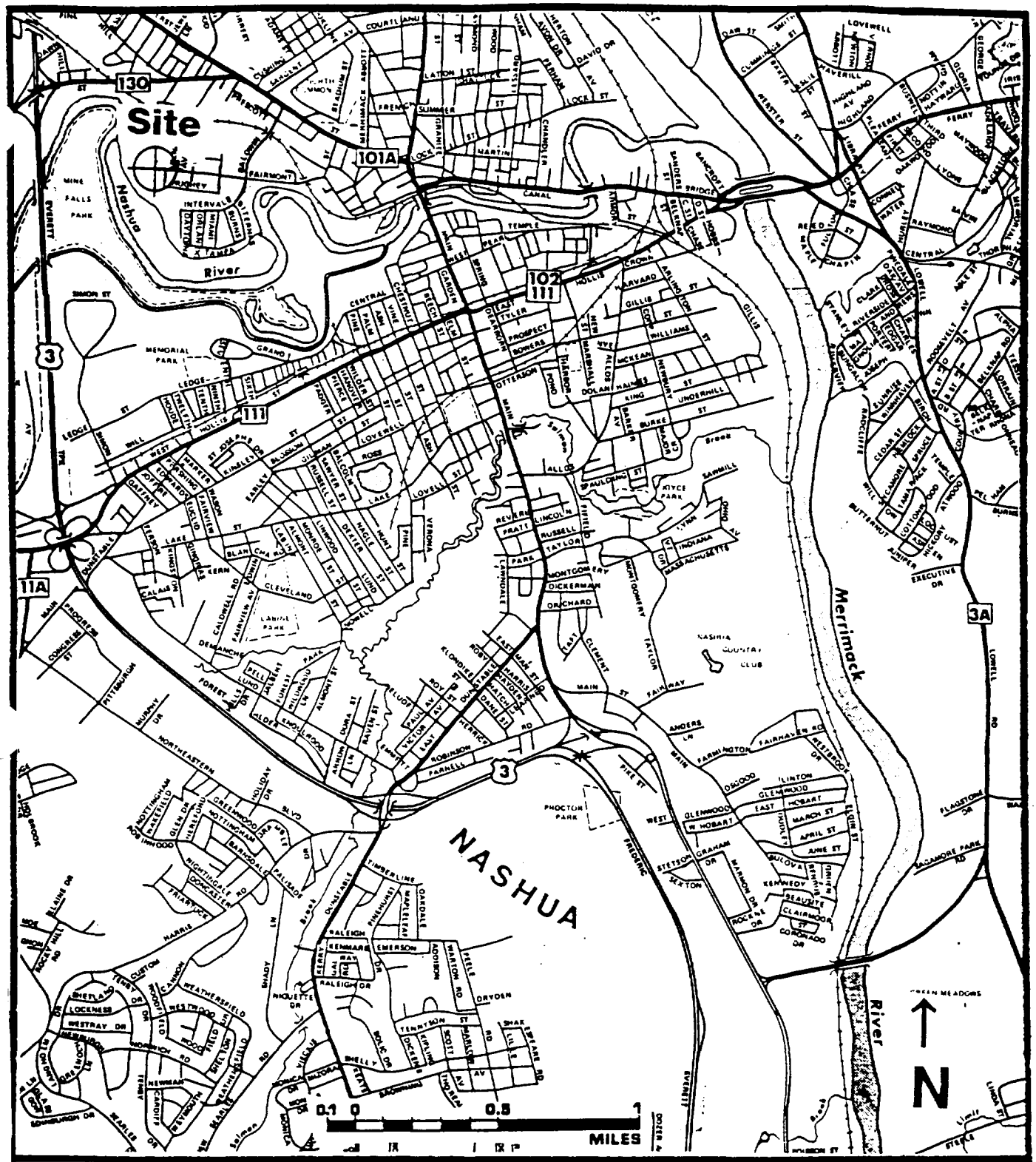
Comments: ____



HOSPITAL DIRECTIONS MAP
MOHAWK TANNERY SITE
NASHUA, NEW HAMPSHIRE

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN	DATE	PCS #
Aspland	5/89	2170
APPROVED	DATE	TDD #
MJM	5/89	01-8902-09A



SITE DIRECTIONS MAP
MOHAWK TANNERY SITE
NASHUA, NEW HAMPSHIRE

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN Aspland	DATE 5/89	PCS # 2170
APPROVED MJN	DATE 5/89	TDD # 01-8902-09A