ORIGINAL

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PROPOSED REMEDIAL ACTION PLAN

For:

NORTON COMPANY
SITE NO. 401010

PREPARED BY:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Hazardous Waste Remediation
February 1991

ANNOUNCEMENT OF PROPOSED REMEDIAL ACTION PLAN (PRAP)

This document describes the New York State Department of Environmental Conservation's (NYSDEC) preferred alternative for remediating the source of contamination and for controlling the migration of the contaminants at the Norton Company site in the Town of Colonie, Albany County, hereafter referred to as "the site." The preferred alternative has been selected by the NYSDEC, as the State agency having primary responsibilities for oversight of site activities. The preferred remedial alternative is based on the Remedial Investigation Report dated January 1990 and the Feasibility Study (FS) dated October 31, 1990 and revised January 18, 1991. The RI/FS Reports were prepared by the Norton Company's consultant, ERM-Northeast Engineers, P.C.

This document provides background on the site, briefly describes the alternatives which were considered to remediate the site, presents the rationale for selecting the preferred alternative, and outlines the public's role in helping the NYSDEC reach a final decision on the remedy.

This proposed plan is being distributed to solicit public comments regarding the most acceptable way to clean up the site. Additional information regarding the alternatives evaluated in the proposed plan is available in the RI/FS Report discussed above. The RI/FS Report can be viewed at the following locations:

Department of Environmental Conservation
Region 4 Headquarters
2176 Guilderland Avenue
Schenectady, NY 12306
(518) 382-0680
8:30 a.m. - 4:30 p.m.
Mon. - Fri.

Local Repository - Watervliet Public Library
1501 Broadway
Watervliet, NY 12189
(518) 274-4471
Monday 9 AM - 12 noon; 1 PM - 4:30 PM and
7:00 PM - 9:00 PM
Tuesday - closed
Wednesday 9:00 AM - 12 noon
Thursday 7:00 PM - 9:00 PM
Friday 9 AM - 12 noon; 1 PM - 4:30 PM
Saturday 10:00 AM - 4:00 PM
Sunday - closed

SITE BACKGROUND

LOCATION

The Norton Company Site is located in the Town of Colonie, Albany County, north of the Norton Company Coated Abrasive Division. The site is 22 acres in size and is approximately pie shaped. Within these 22 acres is a four acre section that includes a landfill for industrial waste. It is these four acres that contain most of the contamination. The site is bounded by the Delaware and Hudson Railroad, the raised tracks of the former New York Central and the lands of the Niagara Mohawk Power Corporation which includes a small wetlands area. Figure 1 shows the site location and surrounding area.

The site is bound on three sides by industrial areas. To the east is a Delaware & Hudson railroad right-of-way and a Maplewood neighborhood, including Lansing and Archabald Avenues. This area is served by a public water supply.

SITE UTILIZATION

The Norton Company has used this site for disposal of a variety of materials in the last 35 years, the goal being to fill the area and prepare for future industrial development. The following is a brief chronological summary of the wastes disposed at the site.

1955-1966

A. Solid - Rolls of waste tape, coated abrasives, paper and fly ash from the boiler house.

B. Liquid - Deposited in drums as clean up waste and settling basin sludge was phenolic resin, animal glue, latex, inert filler, urethane resin, toluene, xylene, methyl isobutyl ketone, and methyl ethyl ketone.

1966-1973

Dilute latex/water solutions in five evaporation ponds (approximately 8,000 gallons per week).

1966-1980

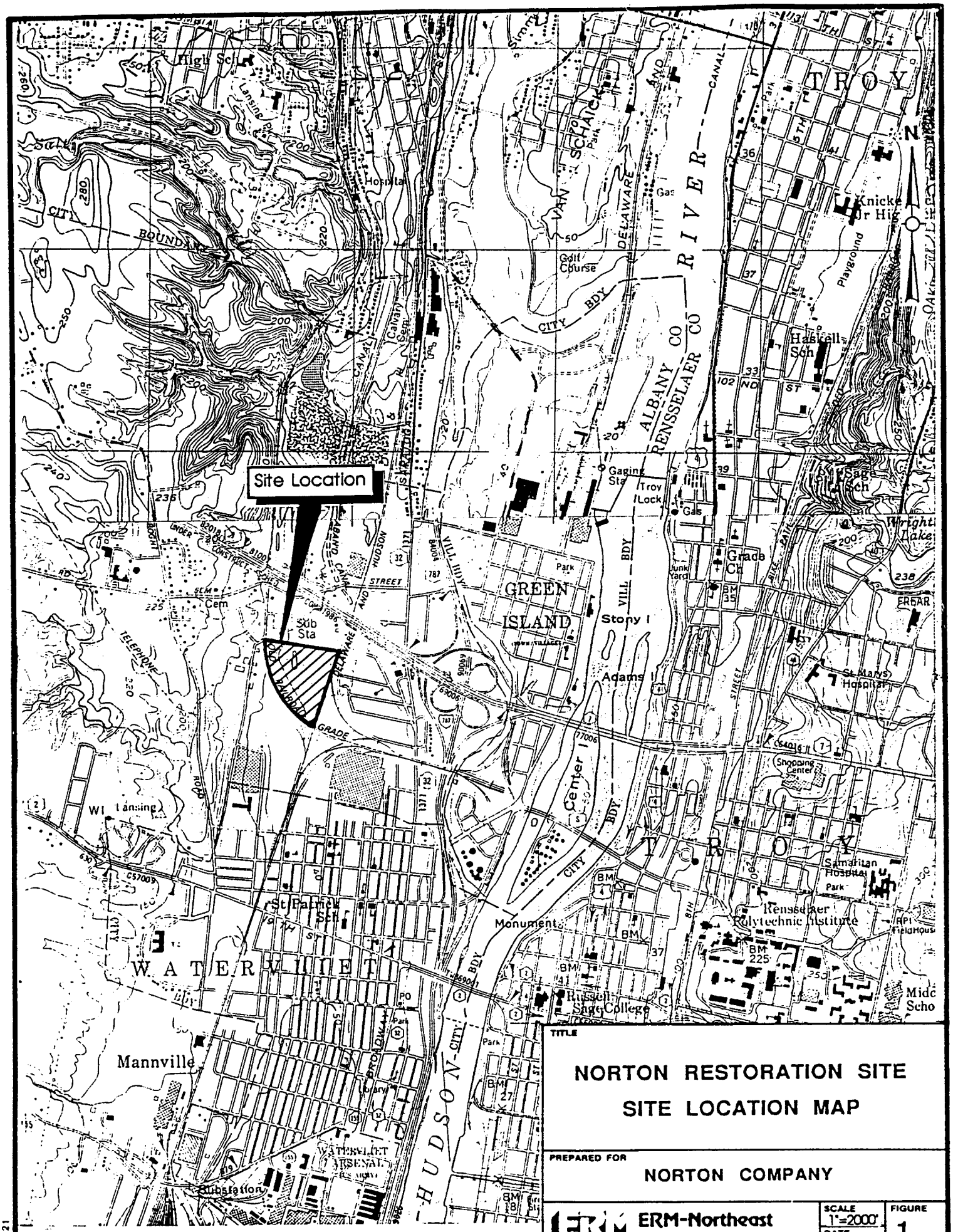
Fly ash from the boiler house.

1973-1980

Construction debris.

1980-Present

The site is inactive except for a small fire training area used until 1986.



SOURCE: U.S.G.S. Quadrangle Maps, Troy North & Troy South, N.Y.

TITLE

NORTON RESTORATION SITE
SITE LOCATION MAP

PREPARED FOR

NORTON COMPANY

ERM-Northeast
Environmental Resources Management

SCALE	FIGURE
1"=2000'	1
DATE Sept.90	

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REMEDIAL PROGRAM HISTORY

The following is a brief chronological summary of investigative and remedial activity.

1979 - Albany County Health Department inspects site.

1980 - In September and October the USEPA inspects the site and conducts soil and water sampling.

1984 - NYSDEC conducts a Phase I investigation.

1986 - Fire training operations on the site are discontinued.

1987 - Norton Company enters into an Order on Consent and conducts a Phase II investigation.

1988 - NYSDEC accepts the Phase II and reclassifies the site as a class 2 because of the significant threat to the public health or environment. Action is required. Norton Company enters into an Order on Consent to perform a Remedial Investigation and Feasibility Study (RI/FS).

Through the RI/FS process, sites requiring remediation go through an intensive examination to define the nature and extent of contamination and collect data necessary to evaluate alternatives for remediating the site. The result is the selection of the most appropriate remedial action which will protect the environment and human health from contaminants at the site.

Throughout this process, DEC keeps the local public informed about work under way at the site and of factors leading to the remedial action decision.

SITE GEOLOGY

Bedrock under the site consists of a competent shale that outcrops at the northwest and northeast corners of the site and forms a shallow trough that slopes to the southeast. This shale is at least 100 feet thick. Overburden deposits are residual from weathered shale soils, natural marsh deposits, and fill materials. The non-industrial fill material consists of iron slag mixed with coal ash, brick fragments, cinders and soils ranging from silts to gravels. This fill on top of marsh deposits has a total thickness that varies over the site from nothing at the bedrock outcrops to 15 feet thick.

CONTAMINATION AT THE SITE

The source of contamination at the site is approximately four acres of industrial fill in the center of the site. This industrial fill contains material such as pressure sensitive tape, rags, wire, drums, abrasive material and ceramics. Contaminants include acetone, benzene, toluene, ethylbenzene and xylene.

During the phase II study a grid of 49 areas were laid out and a magnetometer study was completed. A test pit was dug in each of these 49 areas to determine the characteristics of the overburden. If magnetometer anomalies were found in the specific grid area, then this became the location of the test pit. In this manner, 8 pits were found to contain drums, drum remnants or large pails in the industrial fill area. Drums were in various conditions from partially intact to remnants. Monitoring by an organic vapor analyzer (OVA) showed no response when air in these pits was analyzed in 5 of these 8 occurrences; two showed a slight response and one resulted in a high response. This high response was attributed to large quantities of tape in the excavation rather than to any drum contents. This one pit was near the center of the industrial fill.

REMEDIAL INVESTIGATION FINDINGS

Low levels of volatile organic solvents and tentatively identified semi-volatile compounds were found in the unsaturated industrial fill material above the groundwater. The highest concentrations are in the approximate center of the fill and decreases rapidly away from this center. Acetone, benzene, toluene, ethylbenzene, and xylene were the volatile organic compounds found.

Concentrations of contaminants in the soil were in the parts per billion range (see table 1).

During the Phase II investigation PCB's were detected in a concentration of 16.4 ppm at one location. There were no other findings of PCB's in further studies during the RI/FS and this one finding was viewed as an isolated finding.

Contamination is significantly lower in the perimeter area than in the industrial fill. Only two volatile organic compounds were detected, acetone and tetrachloroethene. Also detected were 17 semi-volatile compounds and 14 metals. The majority of these contaminants are concentrated in the southern corner of the site. The coal ash and slag deposited here over the years serves as the source of these semi-volatiles and metals. As was the case in the industrial fill, no pesticides or PCB's were detected in any of the samples.

TABLE 1A

SOIL SAMPLES FROM INDUSTRIAL FILL AREA
VOLATILE ORGANIC COMPOUNDS
NORTON RESTORATION SITE

TCL Compounds	SB 2 SS 2	SB 3 SS 3	SB 4 SS 2	SB 5 SS 2	SB 6 SS 1	SB 6 SS 2	SB 7 SS 1	SB 7 SS 2	SB 8 SS 2
Acetone	-	15 J	45 J	26 J	59	70	72	140	37
Benzene	-	-	16	32	18	38	-	-	-
Toluene	-	5 J	11	7	-	-	-	-	-
Ethyl Benzene	-	-	80	-	-	-	-	-	-
Xylenes (total)	-	3 J	330 Q	4 J	-	-	-	-	-
TIC Compounds									
Hexane	7 Q	8 Q	-	-	-	-	-	-	-
Propyl Benzene	-	-	60 Q	-	-	-	-	-	-
1,1,2-trichloro-1,2,ethane	-	-	-	10 Q	-	6 Q	-	-	-
Unknown Hydrocarbon(R.T.=16.81)	-	-	-	5 Q	-	-	-	-	10 Q
Dimethyl Cyclopentane Isomer	-	-	-	10 Q	20 Q	10 Q	-	-	-
2,3-Dimethyl Pentane	-	-	-	20 Q	-	-	-	-	-
Unknown Hydrocarbon(R.T.=18.90)	-	-	-	7 Q	-	-	-	-	-
Unknown Substituted Alkane(R.T.=19.83)	-	-	-	100 Q	-	-	-	-	-
Unknown (R.T.=20.30)	-	-	-	80 Q	-	-	-	-	-
Unknown Aromatic (R.T.=23.04)	-	-	-	6 Q	-	-	-	-	-
Unknown (R.T.=17.67)	-	-	-	-	20 Q	10 Q	-	-	-
Unknown (R.T.=19.77)	-	-	-	-	80 Q	-	-	-	-
Unknown Hydrocarbon(R.T.-21.850	-	-	-	-	6 Q	20 Q	-	-	-
Unknown Cyclic Alkane(R.T.=12.10)	-	-	-	-	-	8 Q	-	-	-
1,1,3 Trimethyl Cyclopentane	-	-	-	-	-	7 Q	-	-	-
Trimethyl Benzene Isomer	-	-	-	-	-	30 Q	-	-	-
Unknown (R.T.=11.44)	-	-	-	-	-	-	-	-	6 Q
Unknown Hydrocarbon(R.T.=19.85)	-	-	-	-	-	-	-	-	9 Q

Notes: All concentrations are in parts per billion (ppb).
If a boring number is not listed, no compounds were detected in that boring.
- = Compound not detected in this sample but present in another sample.
J = Semi-Quantitative due to value below CRQL or data validation requirements.
Q = Qualitative due to data validation requirements or compound being a TIC.

TABLE 1B

SOIL SAMPLES FROM INDUSTRIAL FILL AREA
SEMI-VOLATILE ORGANIC COMPOUNDS
NORTON RESTORATION SITE

TCL Compounds	SB 1 SS-2	SB 1 SS-2	SB 1 SS-3	SB 2 SS-2	SB 3 SS-3	SB 4 SS-1	SB 4 SS-2	SB 5 SS-2	SB 6 SS-1	SB 6 SS-2	SB 7 SS-1	SB 7 SS-2	SB 8 SS-1	SB 8 SS-2
Naphthalene	-	-	-	-	-	59 J	120 J	44 J	-	-	-	-	-	-
2-Methylnaphthalene	-	50 J	40 J	42 J	55 J	74 J	140 J	44 J	-	43 J	-	-	52 J	72 J
Dibenzofuran	-	-	-	-	-	32 J	55 J	-	-	-	-	-	-	-
Phenanthrene	-	300 J	330 J	310 J	40 J	290 J	480	300 J	400 J	130 J	120 J	170 J	260 J	330 J
Anthracene	-	42 J	45 J	-	-	41 J	78 J	-	44 J	-	-	-	-	52 J
Fluoranthene	-	540	630	630	170 J	420	950	490	880	190 J	180 J	250 J	460	650
Pyrene	-	500	610	600	170 J	320 J	660	340 J	790	190 J	150 J	230 J	490	560
Benzo(a)Anthracene	-	430	500	500	130 J	260 J	430	300 J	660	120 J	110 J	130 J	340 J	470
Chrysene	-	630	740	760	160 J	400 J	610	480	1100	140 J	150 J	150 J	470	630
Benzo(b)Fluroanthene	-	710	750	960	240 J	390 J	470	560	1200	98 J	94 J	270 J	570	820
Benzo(k)Fluroanthene	-	380	470	450	240 J	260 J	300 J	250 J	660	87 J	260 J	250 J	350 J	430
Benzo(a)Pyrene	-	490	500	560	100 J	270 J	330 J	320 J	790	110 J	110 J	130 J	370 J	560
Indeno(1,2,3-cd)Pyrene	-	360 J	340 J	480 J	87 J	230 J	210 J	270 J	570	-	84 J	-	290 J	350 J
Dibenzo(a,h)Anthracene	-	-	-	-	-	98 J	-	-	-	-	-	-	-	-
Benzo(g,h,i)Perylene	-	380	420	520	92 J	250 J	260 J	320 J	650	-	100 J	-	350 J	410

TIC Compounds														
Assorted Unknowns	2600 Q	-	-	-	-	-	-	-	400 Q	-	300 Q	800 Q	1100 Q	-
Assorted Alkanes	1000 Q	200 Q	100 Q	-	-	800 Q	800 Q	-	1000 Q	200 Q	-	400 Q	2500 Q	500 Q
Assorted Polynuclear Aromatics	-	1600 Q	1600 Q	1400 Q	200 Q	1000 Q	1200 Q	800 Q	1000 Q	80 Q	-	-	2000 Q	900 Q
Assorted Carboxylic Acids	-	300 Q	400 Q	400 Q	-	200 Q	-	200 Q	800 Q	-	-	-	2300 Q	300 Q
Unknown Oxygenated Hydrocarbons	1000 Q	-	-	300 Q	-	-	-	-	-	-	-	-	-	-
Assorted Aromatic Hydrocarbons	-	-	-	-	-	-	1700 Q	-	-	-	-	-	200 Q	-
Assorted Unknown Hydrocarbons	-	-	-	-	-	-	-	-	-	-	-	-	600 Q	-
Assorted Unknown Cyclic Hydrocarbons	-	-	-	-	-	-	-	-	-	-	-	-	-	1600 Q

Notes: All concentrations are in parts per billion (ppb).
- = Compound not present in this sample but present in another.
J = Semi-Quantitative due to value below CRQL or data validation requirements.
Q = Qualitative due to data validation requirements or compound being a TIC.

TABLE 1C

SOIL SAMPLES FROM INDUSTRIAL FILL AREA
PP METALS (EXPANDED)
NORTON RESTORATION SITE

Metal	Background Sample	SB-1 SS-1	SB-1 SS-2	SB-1 SS-3	SB 2 SS 2	SB 3 SS-2	SB-3 SS-3	SB-4 SS-1	SB-4 SS-2	SB-5 SS-2	SB-6 SS-1	SB-6 SS-2	SB 7 SS-1	SB 7 SS 2	SB 8 SS-1	SB 8 SS 2
Arsenic	3.5	8.2	2.3	1.9	3.6	2.8	6.9	1.3	1.5	1.5	0.76	0.72	0.7	4.2	1.0	1.0
Barium	103	135 J	32.3 J	27.9 J	19.1 J	41.6 J	40.6 J	41.5 J	18.8 J	31.7 J	45.8 J	21.1 J	63.2 J	205 J	21.7 J	22.6 J
Beryllium	1.7	0.67	-	-	-	-	-	-	-	-	-	0.33	1.1	.90	0.47	0.32
Cadmium	1.7	1.4 J	1.2 J	0.8 J	1.3 J	1.5 J	1.4 J	1.1 J	1.3 J	1.8 J	1.2 J	1.0 J	1.5 J	2.4 J	1.0 J	0.9 J
Chromium	21	17.7	12.4	18.8	10	10.9	15.4	10.3	6.4	119	17.9	9.0	14.8	26.9	8.6	6.9
Copper	17	17.4	16.2	20.7	27.2	86.0	51.1	56.3	31.6	1350	33.1	21.9	43.5	63.7	24.1	25.6
Iron	29200	29100 J	31300 J	34000 J	47600 J	66900 J	48200 J	37000 J	39700 J	54600 J	36000 J	28200 J	40600 J	39400 J	35700 J	33100 J
Lead	25	22.2	30.6	30.2	40.6	136	154	82.9	46.8	105	84.5	30.9	86.3	295	24.2	43.0
Manganese	763	449 J	388 J	375 J	627 J	710 J	1200 J	475 J	282 J	862 J	769 J	314 J	429 J	798 J	477 J	399 J
Mercury	0.14	0.10	0.08	0.10	0.10	0.09	0.74	0.38	-	0.45	0.28	0.02	0.21	0.51	-	0.11
Nickel	17	14.2	8.4	10.7	6.5	9.6	9.6	8.4	9.3	12.4	10.8	8.2I	56.4	30.8	6.9	7.0
Zinc	64	109 J	43.1 J	43.4 J	36.8 J	73.6 J	90.0 J	93.9 J	31.6 J	70.1 J	118 J	29.3 J	223 J	328 J	28.7 J	41.4J
Selenium	-	-	-	0.33	-	-	-	-	-	-	-	-	-	-	-	-

Notes: All concentrations are in part per million (ppm).
- = Analyte not detected in this sample but present in another sample.
J = Semi-quantitative due to concentration below CRQL or data validation requirements.
B = Value is below CRQL but above instrument detection limit.

Fire training activities that occurred in the southwest portion of the site were not found to have contaminated the soil materials.

The groundwater flow in this area follows the bedrock surface, which slopes to the south. Groundwater flow is very slow. Sampling shows that the contaminated groundwater has not migrated past the site boundary and is localized around the center of the industrial fill area. Further, none of the contaminants detected in the groundwater in the industrial fill area were detected in the down gradient wells. Past investigations detected free product in the groundwater in one well, which was not sampled during the RI because it was clogged with a resin like substance. Secondary soil boring and sampling work was completed to better define the lateral and vertical extent of this resin-like material and associated groundwater contamination. The resin-like substance was not found during this second round of soil boring work.

The level of surface water and sediment contamination is below water quality standards. Offsite migration of contaminants through these pathways does not pose a significant threat to human health and the environment.

REMEDIAL ALTERNATIVES

In order to address the need for remediation at the Norton Company Site, ERM-Northeast Engineers carried out a Feasibility Study which reviewed many remedial technologies and ultimately resulted in the formulation and evaluation of five site specific alternative remedial options. All the remedial alternatives except No. 1, the control or no action alternative, offer protection to human health and the environment from any future impact.

SUMMARY OF ALTERNATIVES

1 - No Action. Consideration of no action is the baseline for evaluation of other alternatives. It was included in the detailed evaluation in accordance with program requirements. The only action envisioned under this alternative is continued site monitoring.

2 - Containment. This alternative would completely encircle the industrial fill area with a low permeability bentonite-soil slurry wall. This wall would be approximately three feet thick, 15 feet deep to solid bed rock and 2,000 feet in length. The industrial fill area would be covered with a 190,000 square foot cap composed of gravel fill, a geofabric material and a two foot thick layer of low permeability clay keyed into the slurry wall. Site monitoring and sampling would occur twice a year.

3 - Vitrification. This in-situ vitrification process uses an electric current which is passed between electrodes in the ground and converts soil and contaminated materials to a stable glass material. After vitrification is complete only fencing and monitoring would be required.

4 - Containment with Groundwater Treatment and Soil Venting. In this alternative a slurry wall and cap would be constructed as described in Alternative No. 2. Additionally, a groundwater collection and soil venting system would be installed. Initially this groundwater would be collected and analyzed for disposal options. The soil venting system would have blowers to create a negative pressure, drawing out the gases to be scrubbed. There would be monitoring and sampling to gauge the progress of the remediation. This monitoring would be done within the waste area and around the containment system.

5 - Source removal. In this alternative the industrial fill area would be dewatered and then excavated, a volume of approximately 110,000 cubic yards. This excavated material would then have to be screened and disposed of in an industrial landfill. Subsequent to screening of soils, the soils would be transported to an incinerator for treatment.

EVALUATION OF REMEDIAL ALTERNATIVES

The alternatives were evaluated with respect to five criteria. Those five criteria are as follows:

- **Overall Protection of Human Health and the Environment**
  The various remedial alternatives were evaluated as to whether they are believed to be able to provide adequate protection of human health and the environment, once the remedial alternative has been completed.

- **Compliance with Clean-up Levels**
  The various remedial alternatives were evaluated as to whether or not they will be able to achieve the desired clean-up levels.

- **Reduction of Toxicity, Mobility or Volume of Contaminants**
  The various remedial alternatives were evaluated as to whether or not they will reduce the toxicity (T), mobility (M) or volume (V) of contaminants at the site.

- **Implementability**
  The various remedial alternatives were evaluated as to whether they are easy, moderate or difficult to implement. There are various factors which were taken into account when determining implementability. The factors include permit requirements, availability of needed equipment, complexity of remedial system, and maintenance.

- **Cost**
  In the cost analysis estimates of expenditures required to complete each measure were developed in terms of both capital and operation and maintenance costs. Once these figures were determined for each alternative, present worth and annual costs were calculated to facilitate comparative evaluation.

A primary goal when developing a remediation strategy for a hazardous waste site is to reduce or remove the contaminants that are the source of the problem. The first alternative, no action, is not further considered as the possible remedy for this site. Although the site is not an immediate health threat, a no action alternative will not reduce its present or future threat as an environmental problem.

By the same reasoning, the second alternative, containment, must also be eliminated. This alternative does offer the advantage of preventing offsite migration of contaminants with the construction of a slurry wall and a clay cap. However, it fails to reduce the toxicity or volume of the contamination and must be rejected.

The third alternative, vitrification, does satisfy requirements for reducing the toxicity, mobility, and volume of the hazardous waste. Vitrification is an innovative technology, and Department policy requires that new technologies be given the opportunity to be implemented when practical. Vitrification is complex and difficult to implement, has uncertainties associated with it and is one of the most expensive alternatives. Vitrification is a patented process and, as such, only one vendor is available to provide a bid.

The fourth alternative, containment with groundwater treatment and soil venting, satisfies the requirements for reducing the toxicity, mobility, and volume of the hazardous waste. The construction of a slurry wall and clay cap will effectively inhibit the infusion of rain water and the subsurface migration of contaminated groundwater. The soil venting and groundwater treatment systems will reduce the toxicity of the site by removing the contaminants and reducing the volume of the contaminated groundwater. As groundwater is lowered and upon exposure to air, any resin like material would likely solidify.

Source removal, the fifth alternative, is a technology that has been used successfully many times in the past. In the long term, this alternative is appealing because it completely removes the source of the contamination. On the other hand, the construction costs and problems associated with this technology make it impractical and cost prohibitive. Because of the large amount of material that would be excavated, up to two years may be required to finish the job. Contaminants would volatilize during excavation, impacting air quality. The contaminated soil would be incinerated, the ash disposed of at a RCRA approved landfill and groundwater would be collected and treated.

For a summary of the Department's evaluation of the various remedial alternatives, with respect to the preceding five criteria, see Table 2.

PREFERRED REMEDIAL ALTERNATIVE

After completion of the remedial investigation and feasibility study, the Remedial Alternative chosen by NYSDEC as the most appropriate for implementation is alternative number 4, Containment with Groundwater Treatment and soil venting. In this alternative, the industrial fill area would be isolated by a three foot thick soil-bentonite slurry wall installed to bedrock. This will prevent migration of groundwater contamination.

Groundwater will be extracted through a subsurface drain installed in the industrial fill. Groundwater will be initailly stored in a large flow control tank on-site. The volume of groundwater anticipated is small so that it will be initially handled as a hazardous waste and managed by trucking to an off-site approved facility for disposal. Stored groundwater will be sampled and analyzed to determine to what levels the contaminated groundwater needs treatment and to develop disposal options.

An in-situ vacuum extraction system will collect contaminated soil vapor within the industrial fill. Installed under a clay cap, this will be used to withdraw air containing volatile organic compounds (VOCs) from the soil. This air will be treated using activated carbon filters for treatment to air quality standards prior to discharge to the atmosphere. Spent carbon will be either regenerated on-site or transported off-site for regeneration or disposal.

A clay-soil cap will be placed and keyed to the bentonite slurry wall to prevent infiltration of water and provide a seal for proper operation of the in-situ vacuum extraction unit.

Deed restrictions will be used at the site to regulate land use.

Monitoring and sampling of the site will be done to determine the effectiveness of the technology and the progress of the remediation. Monitoring will include air quality, groundwater quality, effectiveness of groundwater collection and quality of extracted groundwater.

This alternative provides the advantage of including both source control and management of migration to obtain a comprehensive remedy. This alternative provides source reduction. Only two of the other alternatives have this advantage. This alternative effectively controls emissions during the construction and operation phase, where the other

TABLE 2

Evaluation of the Various Remedial Alternatives

Alternative	Overall Protection of Human Health and the Environment	Compliance with Cleanup levels	Reduction of Toxicity (T) Mobility (M) or Volume (V) of contaminants	Implementability	Estimated Total Cost
1 - No action	NO	NO	NONE	EASY	UNKNOWN
2 - Containment	YES	NO	M	MODERATE	$2,260,000
3 - Vitrification	YES	YES	T,M,V	DIFFICULT	$61,160,000
4 - Containment with Groundwater treatment & soil vapor extraction	YES	YES	T,M,V	MODERATE	$7,190,000
5 - Source Removal	YES	YES	T,M,V	DIFFICULT	$71,685,000

TABLE 3

PRESENT WORTH COST ESTIMATES FOR REMEDIAL ALTERNATIVES AT THE NORTON COMPANY SITE

No.	Alternatives Description	Estimated Capital Costs	O&M Costs As Present Worth	Total Estimated Cost (Present Worth)
1	No Action	0	Unknown	Unknown
2	Containment	$ 2,000,000	$ 260,000	$ 2,260,000
3	Vitrification	$61,000,000	$ 160,000	$61,160,000
4	Containment with Groundwater Treatment	$ 3,700,000	$3,490,000	$ 7,190,000
5	Source Removal	$71,525,000	$ 160,000	$71,685,000

alternatives make emission controls more difficult. This alternative is more reasonable in cost than the other alternatives that provide for source reduction. Finally, the preferred remedial alternative has the advantage that the site can be returned to productive industrial use with minor restrictions.

THE COMMUNITY'S ROLE IN THE SELECTION PROCESS

The New York State Department of Environmental Conservation (NYSDEC) relies on public input to insure that the remedy selected for Inactive Hazardous Waste Sites meet the needs of the local community in addition to being an effective solution to the problem. Based on new information or public comments, NYSDEC may modify the preferred alternative or select another response action presented in this Plan and the RI/FS. The public, therefore, is encouraged to review and comment on all alternatives discussed in this Plan. The RI/FS Report should be consulted for more information on these alternatives.

Written and verbal comments on the Proposed Remedial Action Plan will be welcomed through March 15, 1991.

All written and verbal comments should be addressed to:

Eric J. Hamilton, P.E.
Project Manager
NYS Department of Environmental Conservation
Region 4
2176 Guilderland Avenue
Schenectady, NY 12306

The final remedy selection will be documented in the Record of Decision only after consideration of all comments on any of the alternatives addressed in the PRAP and Feasibility Study. A public meeting will be held at 7:30 p.m. on February 25, 1991 at the Watervliet High School Auditorium to present both the findings of the RI/FS Report and the proposed remedy.

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