Department of Environmental Conservation

Division of Hazardous Waste Remediation

# Dollinger Corporation Site

## Site Number 8-28-078
## Brighton (T)
## Monroe County, New York

# Record of Decision

January 1993

New York State Department of Environmental Conservation
MARIO M. CUOMO, *Governor* THOMAS C. JORLING, *Commissioner*

**New York State Department of Environmental Conservation**
**50 Wolf Road, Albany, New York 12233**

**Thomas C. Jorling**
**Commissioner**

# DECLARATION STATEMENT - RECORD OF DECISION

Site Name and Location:

Dollinger Corporation
Town of Brighton, Monroe County, New York
Site Registry Number: 8-28-078
Classification Code: 2

Statement of Purposes:

This Record of Decision sets forth the selected remedy as described in the Remedial Action Plan (RAP) for the Dollinger Corporation Site. The RAP was developed in accordance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986, and the New York State Environmental Conservation Law (ECL). The selected remedy complies with the National Oil and Hazardous Substance Pollution Contingency Plan (NCP) of 1985 and as revised in 1990.

Statement of Basis:

This decision is based on the Administrative Record for the Dollinger Corporation site and upon public input to the Proposed Remedial Action Plan (PRAP). A copy of the Administrative Record is available at the New York State Department of Environmental Conservation (NYSDEC) Offices in Albany at 50 Wolf Road and in Avon at 6274 East Avon-Lima Road. Copies of the Remedial Investigation/Feasibility Study (RI/FS) and the PRAP are available at the Brighton Memorial Library, 2300 Elwood Avenue, Rochester, NY 14618. An index of those documents included as a part of the Administrative Record is contained in the ROD. A responsiveness summary that documents the public's concerns has also been included.

Description of Selected Remedy:

- Utilization of Soil Vapor Extraction to mitigate source area soils of chlorinated organic contamination and designed and operated to the extent practicable to mitigate and control shallow source area groundwater.
- Excavation of pond sediments contaminated with chlorinated organic and semi-volatile organic compounds. Off-site disposal is anticipated.
- Engineered measures to control migration of contaminated groundwater from reaching surface waters.
- Excavation of shallow surface soils. Off-site disposal is anticipated.
- Monitoring and, if appropriate, administrative controls to ensure the viability of the remedial action.

Declaration:

The selected remedy will be protective of the public health and the environment and will also meet the substantive requirements of NYS Standards, Criteria and Guidelines (SCGs) and Federal Applicable Relevant and Appropriate Requirements (ARARs). The installation of a soil vapor extraction system to mitigate source area soils which is also designed and operated, to the extent technically practicable, to mitigate and control shallow source area groundwater will satisfy the statutory preference for remedies that employ treatment that reduces toxicity, mobility and volume of hazardous substances, pollutants and contaminants. The remedy will also call for the removal and anticipated off-site disposal of contaminated soil and sediment to levels protective of public health and the environment.

Jan. 13, 1993
Date

Ann Hill DeBarbieri
Deputy Commissioner
Office of Environmental Remediation

# REMEDIAL ACTION PLAN

**Dollinger Corporation**
**Site #828078**
**Monroe County**

**Prepared by:**

**New York State Department of Environmental Conservation**
**Division of Hazardous Waste Remediation**
**Project Manager: David Crosby**
**December, 1992**

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**SECTION 1: PURPOSE OF THE REMEDIAL ACTION PLAN**

The New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) have selected vapor extraction and limited soil and sediment excavation as the remedy for remediating the Dollinger Corporation Site.

The purpose of the Remedial Action Plan is to:

a) Identify the preferred alternative and the reasons for the selections;

b) Describe briefly the alternative detailed in the Remedial Investigation/Feasibility Study (RI/FS) report; and

c) Solicit public review and comment on alternatives set forth in the detailed analysis section of the FS.

Public input on all alternatives and on the information that supports the alternatives is an important contribution to the remedial decision-making process. The public was encouraged to comment and comments can modify the positions of the State agencies on the preferred alternative.

The public comment period was opened on September 29, 1992 and closed on October 30, 1992. A public meeting was held on October 15, 1992. A summary of both the written and oral comments are enclosed as attachment B.

This document is a summary of the information that can be found in greater detail in the RI/FS report and other site related documents on file at the document repositories.

The Proposed Remedial Action Plan (PRAP), the Remedial Action Plan (RAP), as well as all significant reports and documents for the site are available for public review at the following repositories:

NYSDEC - Region 8 Office
6274 East Avon Lima Road
Avon, New York 14414
(716) 226-2466
Attn: Linda Vera

Brighton Memorial Library
2300 Elwood Avenue
Rochester, NY 14618
(716) 473-5420

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**SECTION 2: SITE LOCATION AND DESCRIPTION**

The Dollinger Corporation Site is located in the Town of Brighton, Monroe County, New York (see Figure 1). Adjacent property uses are generally commercial and industrial in nature. Property to the west of the site is occupied by a large truck sales and service facility. Residential properties are present approximately 1200 feet south of the site. A small office building is located to the north of the site. Directly to the south of the site is the remainder of the light industrial-office complex in which the Dollinger facility is located. East of the facility is a vacant lot associated with the Metro Park office-light industrial complex.

The Dollinger Facility exists in an area whose surficial geology was formed by several glacial events associated with recession of the continental ice sheets 10,000 - 12,000 years ago. The site resides on a broad-lobe shape hill which separates the Genesee River and Irondequoit Creek watersheets. The soil

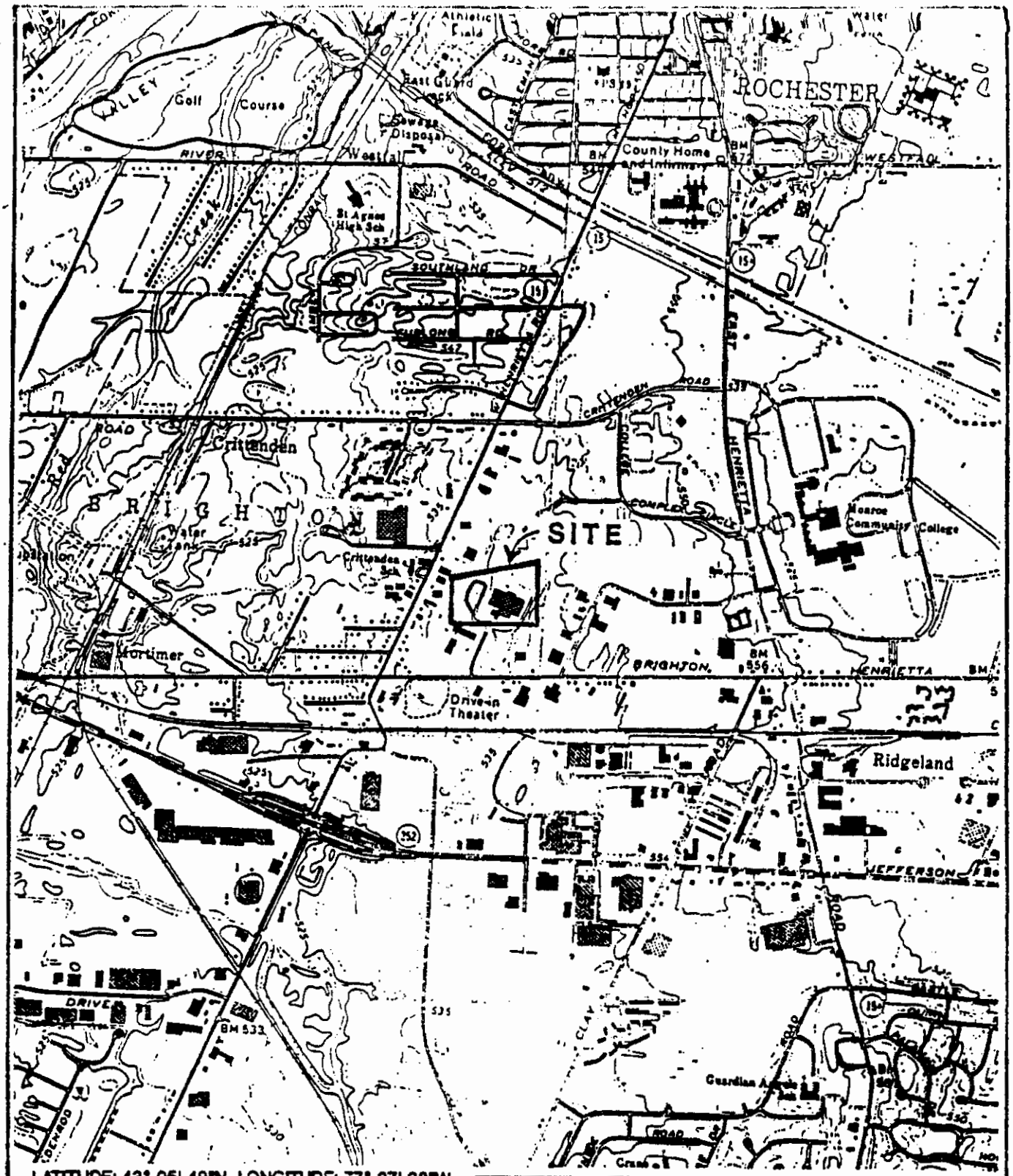
ROCHESTER
SITE
BRIGHTON
Golf Course
Sewage Disposal
County Home and Infirmary
St Agnes High Sch
Crittenden
Crittenden Sch
Water Tank
Mortimer
Drive-in Theater
Monroe Community College
Ridgeland
Guardian Angels
BM 533
BM 556
BRIGHTON
HENRIETTA
JEFFERSON
CRITTENDEN ROAD
SOUTHLAND DR
EAST HENRIETTA ROAD
WESTFALL
RIVER
DRIVE
LATITUDE: 43° 05' 49"N LONGITUDE: 77° 37' 38"W
NEW YORK
QUADRANGLE LOCATION
USGS QUADRANGLE: WEST HENRIETTA AND PITTSFORD, NY
H & A of New York
Consulting Geotechnical Engineers, Geologists and Hydrogeologists
DOLLINGER RI REPORT
DOLLINGER - A FILTRONA COMPANY
BRIGTHON, NEW YORK
PROJECT LOCUS
SCALE: 1 IN. = 2000 FT.
NOVEMBER 1991
FILE NO. 70007-43
CHARRETTE

FIGURE 1

under the site is glaciolacustrine (glacial lake derived) clayey silts which are moderately dense have extremely low permeabilities. The deposits extend approximately 75 feet in depth and overlay the local bedrock, Vernon Shale. At present, there are no public, private or industrial users of the local groundwater and given the low soil permeabilities, it is unlikely that the shallow groundwater will be used in the future.

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**SECTION 3: SITE HISTORY**

Between 1970 and 1982, the facility was used by the Dollinger Corporation for the manufacture and assembly of various types of heavy duty industrial filtration devices. Trichloroethene (TCE) was utilized to degrease parts prior to spray painting. In 1982, the Dollinger Corporation was purchased by American Filtrona Company (AFC) which operated the facility in a similar manner until 1988.

In March of 1988 American Filtrona Corporation moved its operations to Rich Creek, Virginia and the facility was closed. In 1990, the facility was purchased by Wilray of Rochester, Inc. Since the purchase by Wilray Inc. there have been various tenants. At the time of the release of this document, the facility is occupied.

Prior to the sale of the property to Wilray, AFC contracted the engineering services of Sear-Brown Associates to investigate the potential presence of any hazardous contamination. The Phase I and II studies identified several areas of concern at the site. Elevated levels of TCE were identified in the soils near the former drum storage area and adjacent to the former degreasing room. Further, volatile organics were noted in the surface waters of the retention pond and suspected in the groundwater.

In October 1988, AFC contracted with H&A of New York to conduct a hydrogeologic study of the site. During the investigation, H&A installed monitoring wells, conducted a soil vapor study and collected soil samples. The study concluded that the soils adjacent to the degreasing area and immediately north of the building were contaminated with volatile and semi-volatile compounds. Groundwater wells in this area showed levels of trichloroethene above state groundwater standards as well as lower levels of other chlorinated organics. These findings confirmed suspicions raised by the Phase I and II investigations.

Acting on this information, the NYSDEC in March of 1989, listed the site on New York's Registry of Inactive Hazardous Waste Disposal Sites as a class 2. A Class 2 designation indicates that the site poses a significant threat to the environment and/or public health, action required.

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**SECTION 4: CURRENT STATUS**

After the site listing, the NYSDEC actively negotiated with American Filtrona, the potentially responsible party (PRP) identified for the Dollinger site. These negotiations involved development of a workplan to further investigate the extent of contamination.

In June 1991, AFC signed an Order-on-Consent with the NYSDEC to conduct a Remedial Investigation/Feasibility Study (RI/FS). AFC contracted the engineering services of H&A of New York perform the RI/FS.

**4.1 Summary of the Remedial Investigation**

The Remedial Investigation (RI) is the process that the NYSDEC utilizes to characterize the nature and extent of contamination from Inactive Hazardous Waste Sites. At the Dollinger site, the field work for the RI started in July 1991 and continued through March of 1992.

Working on the data from the previous investigation, the RI involved the installation of additional monitoring wells, collection of surface water and sediment samples and numerous soil samples from various depths. A summary of analytical results from selected locations is present in Table 1. Figure 2 provides the sample locations. The details of the RI can be found in the Remedial Investigation Report and its various addendum which is located in the document repository.

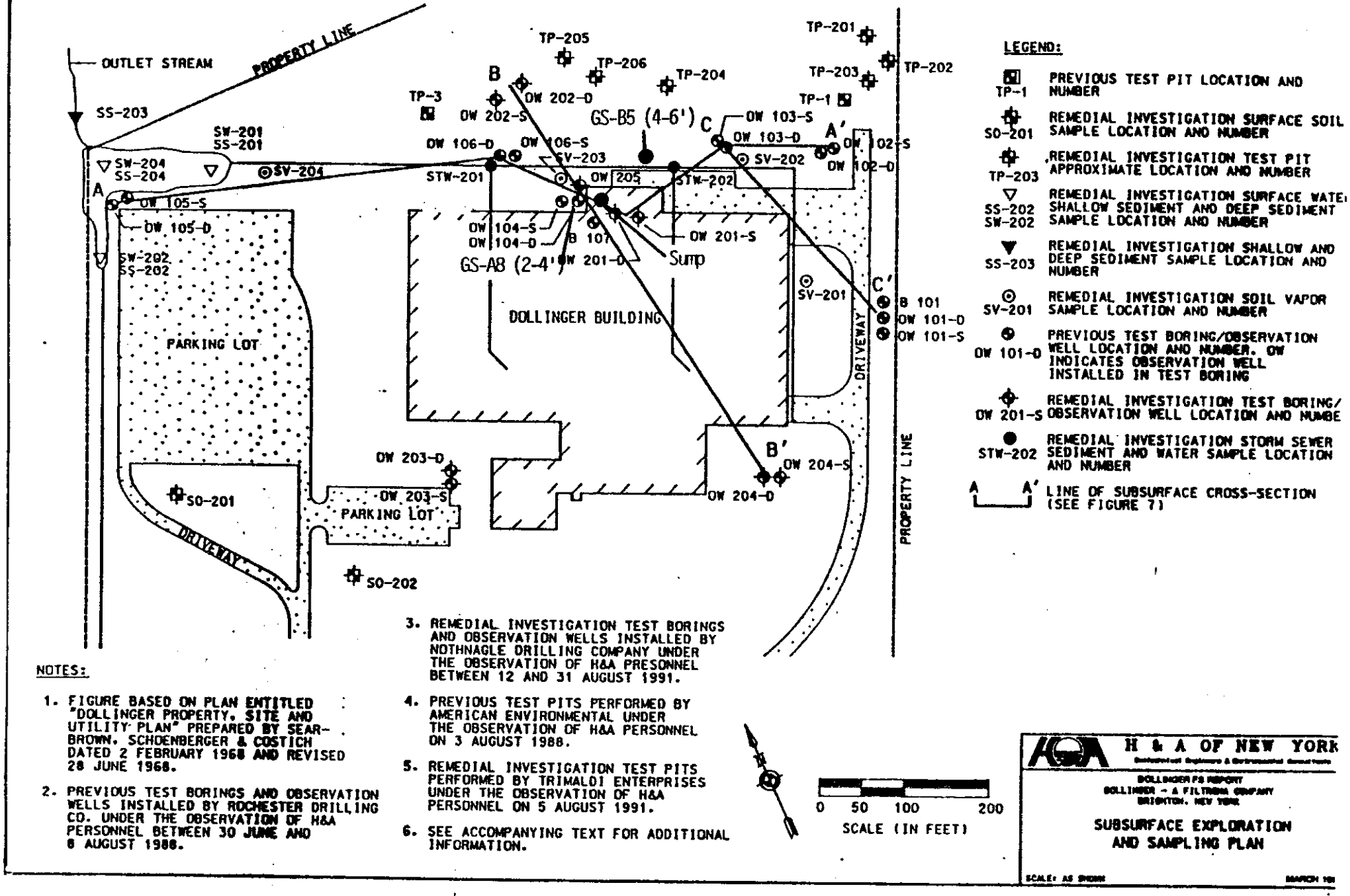
TABLE 1

Summary of Remedial Investigation
Selected Sampling Locations
Dollinger Corporation, Site #828078

**Organic Analysis**
**ppb (unless noted)**

| Media | Sample Location | TCE | 1,2 DCE | PCE | VC |
|---|---|---|---|---|---|
| Groundwater | OW-201S | 36,000 | 11,000 | 23 | 240 |
| | OW-201D | 82 | 56 | <5 | 7 |
| | OW-104S | 10 | 130 | <5 | <10 |
| | OW-104D | 9 | 7 | <5 | <10 |
| | OW-103S | 0.6J | 73 | <5 | 64 |
| | OW-103D | 16 | 0.7J | <5 | <10 |
| Soils | GS-A8(2-4ft) | 51,000 | <1,500 | 230J | <2,900 |
| | GS-B5(4-6ft) | 1,300E | 69 | <6 | <12 |
| | OW-201S (8-10ft) | 2,500 | 550J | <660 | <1300 |
| Sediment | SS-201S | 1,500 | <3,600 | <3,600 | <7,100 |
| | SS-201D | 59 | 18 | <6 | <11 |
| Surface Water | STW-201 | 45 | 45 | <5 | <5 |
| | SW-201 | 14 | 40 | <5 | <5 |
| Degreasing Pit | Sump Water Inside Facility | 3,000 | 1,000 | <5 | 55 |
| Soil Vapor (ppm) | B-205 (9-11ft) | 3,700 | 610 | 4.1 | 12.3 |

NOTES: E - Estimated Concentration
< - Less Than
TCE - Trichloroethene
1,2-DCE - 1,2 Dichloroethene (Total)
PCE - Tetrachloroethene
VC - Vinyl Chloride




LEGEND:

- TP-1 — PREVIOUS TEST PIT LOCATION AND NUMBER
- SO-201 — REMEDIAL INVESTIGATION SURFACE SOIL SAMPLE LOCATION AND NUMBER
- TP-203 — REMEDIAL INVESTIGATION TEST PIT APPROXIMATE LOCATION AND NUMBER
- SS-202 / SW-202 — REMEDIAL INVESTIGATION SURFACE WATER, SHALLOW SEDIMENT AND DEEP SEDIMENT SAMPLE LOCATION AND NUMBER
- SS-203 — REMEDIAL INVESTIGATION SHALLOW AND DEEP SEDIMENT SAMPLE LOCATION AND NUMBER
- SV-201 — REMEDIAL INVESTIGATION SOIL VAPOR SAMPLE LOCATION AND NUMBER
- OW 101-D — PREVIOUS TEST BORING/OBSERVATION WELL LOCATION AND NUMBER. OW INDICATES OBSERVATION WELL INSTALLED IN TEST BORING
- OW 201-S — REMEDIAL INVESTIGATION TEST BORING/OBSERVATION WELL LOCATION AND NUMBER
- STW-202 — REMEDIAL INVESTIGATION STORM SEWER SEDIMENT AND WATER SAMPLE LOCATION AND NUMBER
- A — A' — LINE OF SUBSURFACE CROSS-SECTION (SEE FIGURE 7)

NOTES:

1. FIGURE BASED ON PLAN ENTITLED "DOLLINGER PROPERTY, SITE AND UTILITY PLAN" PREPARED BY SEAR-BROWN, SCHOENBERGER & COSTICH DATED 2 FEBRUARY 1968 AND REVISED 28 JUNE 1968.
2. PREVIOUS TEST BORINGS AND OBSERVATION WELLS INSTALLED BY ROCHESTER DRILLING CO. UNDER THE OBSERVATION OF H&A PERSONNEL BETWEEN 30 JUNE AND 6 AUGUST 1988.
3. REMEDIAL INVESTIGATION TEST BORINGS AND OBSERVATION WELLS INSTALLED BY NOTHNAGLE DRILLING COMPANY UNDER THE OBSERVATION OF H&A PRESONNEL BETWEEN 12 AND 31 AUGUST 1991.
4. PREVIOUS TEST PITS PERFORMED BY AMERICAN ENVIRONMENTAL UNDER THE OBSERVATION OF H&A PERSONNEL ON 3 AUGUST 1988.
5. REMEDIAL INVESTIGATION TEST PITS PERFORMED BY TRIMALDI ENTERPRISES UNDER THE OBSERVATION OF H&A PERSONNEL ON 5 AUGUST 1991.
6. SEE ACCOMPANYING TEXT FOR ADDITIONAL INFORMATION.

0 50 100 200
SCALE (IN FEET)

H & A OF NEW YORK

DOLLINGER FS REPORT
DOLLINGER - A FILTRONA COMPANY
BRIGHTON, NEW YORK

SUBSURFACE EXPLORATION AND SAMPLING PLAN

SCALE: AS SHOWN

FILENAME: FIGURE4.DGN

Figure 2

In general, the RI confirmed the suspicions of the previous investigations and indicated that two areas, the degreasing room and the drum storage area are the source of chlorinated organic contamination.

The major contaminants found in the soil include: trichloroethene, 1,2-Dichloroethene, ethylbenzene, toluene, xylene, benzo(a) pyrene and fluoranthene. The major contaminants found in the groundwater include: Trichloroethene, 1,2-dichloroethene, vinyl chloride and tetrachloroethene (PCE).

**SECTION 4.2 Summary of Health Risks:**

Part of the RI/FS process included the evaluation of risks presented to human health and the environment by the site as it now exists. The results of this baseline risk assessment were used to help identify applicable remedial alternatives and to assist in the selection of a remedy. The components of the baseline risk assessment include:

- identification of site related chemicals and media of concern
- evaluation of the toxicity of chemicals of concern
- identification of exposure routes and pathways
- evaluation of the impacts of the site upon the environment

The full risk assessment may be found in the RI report dated November 1991 and its addendums. The baseline risk assessment evaluated potential impacts on human health and the environment from compounds identified at the Dollinger facility. The assessment used the following substances as contaminants of concern in groundwater: trichloroethene, 1,2-dichloroethene, and vinyl chloride. Substances of concern utilized for risk due to soil ingestion were trichloroethene, 1,2-dichloroethene, ethylbenzene, toluene, xylene, benzo(a) pyrene and fluoranthene.

The risk assessment indicates that the most significant exposure mechanism is an acute risk to a utility personnel working in a trench dug in the source area and potentially being exposed to chlorinated organic vapors exceeding the NIOSH Imminent Danger to Life and Health (IDLH) level for trichloroethene. This acute risk is deemed unacceptable and remedial actions are required in the soil beneath and surrounding the degreasing pit and the drum storage areas.

All other routes of exposure identified in the risk assessment (i.e. through groundwater, surface water and soils) indicated that for the compounds of concerns at the levels reported at the site there was no unacceptable noncarcinogenic risk and the carcinogenic risk falls within the acceptable USEPA range.

**4.3 Summary of Environmental Risk**

An ecological investigation noted site related contamination in pond sediments above criteria which are considered protective of aquatic organism. Therefore, remediation of pond sediment is required.

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**SECTION 5: ENFORCEMENT STATUS**

American Filtrona Corporation (AFC) has been identified by the NYSDEC as a potentially responsible party. AFC entered into an order on consent to perform a RI/FS and has conducted the RI/FS to the satisfaction of the NYSDEC.

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**SECTION 6: GOALS FOR THE REMEDIAL ACTION**

Remedial action was selected for the purpose of reducing the environmental or human health risk by preventing the direct contact with contaminated soil, reducing the levels of contaminants in soil to conform with cleanup goals and to the extent practicable remediate contaminated groundwater. Further, the plan involves mitigation of pond sediments to levels which approach site background and remedial measures to prevent infiltration of contaminated groundwater from reaching surface waters. The recommended site remediation objective are present on Table 2.

*****

TABLE 2

Site Remediation Objectives
Dollinger Corporation, Site #828078

| **Media Sediment:** Remediation to Achieve Levels Associated with the Site's Background | |
|---|---|
| Contaminant | **Site Background (ppm)** |
| 1,1,1-trichloroethane | 0.007 |
| toluene | 0.005 |
| acetone | 0.14 |
| 2-butanone | 0.069 |
| methylene chloride | 0.015 |
| di-n-butylphthalate | 5.5 |
| bis(2-ethylhexyl)phthalate | 4.2 |
| butylbenzylphthalate | 0.48 |
| acenapthene | 0.13 |
| anthracene | 0.68 |
| benzo(a)anthracene | 3.5 |
| benzo(b)fluoranthene | 6.0 |
| benzo(k)fluoranthene | 2.5 |
| benzo(g,h,i)perylene | 1.6 |
| benzo(a)pyrene | 3.7 |
| chrysene | 4.2 |
| dibenz(a,h)anthracene | 0.043 |
| fluoranthene | 10.0 |
| inden(1,2,3-cd)pyrene | 2.8 |
| phenanthrene | 3.8 |
| pyrene | 7.2 |
| arsenic | 6.0 |
| chromium | 23.0 |
| copper | 24.0 |
| lead | 55.0 |
| nickel | 24.0 |
| zinc | 214 |

**Media: Groundwater**
Clean-up Objective: System designed and operated to the extent technically practicable to mitigate and control shallow source area groundwater.

| **Media: Surface Water** Contaminant | Recommended Surface Water Objective (ppm) |
|---|---|
| trichloroethene | 0.011 |
| All other site VOC's | no greater than 0.020 per VOC |
| **Media: Soils** Contaminant | Recommended Soils Cleanup Objective (ppm) |
| trichloroethene | 1.0 |
| xylenes | 1.2 |
| 1,2-dichloroethenes | 0.5 |
| vinyl chloride | 0.15 |
| benzo(a)pyrene | 0.33 or MDL |
| benzo(a)anthracene | 0.33 or MDL |

MDL - Method Detection Limit

## SECTION 7: SUMMARY OF EVALUATION OF THE REMEDIAL ALTERNATIVES

### 7.1 Evaluation Criteria:

In the feasibility study potential technologies to address site contamination are identified and combined into alternatives. These remedial alternatives then undergo preliminary screening in order to narrow the list of potential alternatives that will be evaluated in more detail. During the detailed analysis, each alternative is assessed against the seven evaluation criteria listed below. This evaluation process is identified in more detail in the feasibility study dated March 1992, Addendum I dated May 1992 and Addendum II dated July 1992.

1. Overall Protection of Human Health and the Environment

   The various remedial alternatives were evaluated as to whether they are able to provide adequate protection of human health and the environment, once the remedial alternative has been implemented.

2. Compliance with NYS Standards, Criteria and Guidance Values (SCG's)

   The alternatives were evaluated as to their ability to achieve the desired clean-up levels and meet all applicable standards.

3. Reduction in Toxicity, Mobility or Volume or Contaminants

   The alternatives were evaluated as to their ability to reduce the toxicity, mobility or volume of contaminants on site.

4. Implementability

   The alternatives were evaluated as to the ease or difficulty in implementation. These factors include availability of equipment and materials, permit requirements, complexity, maintenance, etc.

5. Short-term Impacts and Effectiveness

   The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment is evaluated. The length of time needed to achieve the remedial objectives is estimated and compared with other alternatives.

6. Long-term Effectiveness and Permanence

   If wastes or residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude and nature of the risks presented by the remaining wastes; 2) the adequacy of the controls intended to limit the risk to protective levels; and 3) the reliability of these controls.

7. Estimated Total Cost

   This includes the estimated capital and operation and maintenance costs of the remedy and the net worth cost of the alternative.

### 7.2 Summary of Alternatives:

The Feasibility Study describes in detail the various alternatives selected for final consideration. The descriptions of each remedial alternative are organized by environmental media (soil, sediment and groundwater).

No-Action was evaluated for each media and includes institutional controls at a minimal cost. Although easily implemented, this action would not attain the SCG's, nor will it reduce the toxicity at the site. This course of action would not be protective of human health and is not recommended.

1. Soil Remedial Alternatives

- In-situ high vacuum extraction. This alternative involves placing extraction wells or header lines in the source area and extracting contaminated vapors.
- Excavation and off-site disposal of contaminated soils.

2. Sediment Remedial Alternatives

- Excavation and off-site disposal of contaminated sediments.

- Ex-situ stabilization of excavated sediments with on-site or off-site disposal.

3. Groundwater

- In-situ, high vacuum extraction design to the extent technically practicable to remediate and control source area shallow groundwater.

- Contaminant migration control measures which included bentonite collars for control of migration of contaminated groundwater to surface water.

The evaluation of the above-mentioned remedial alternatives is presented on Table 3.

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**SECTION 8: CITIZEN PARTICIPATION**

To inform the local community and provide a mechanism for citizens to make the Department aware of their concerns, a citizen participation program has been implemented. In accordance with a Citizen Participation (CP) plan developed for the project, the following goals have been accomplished:

- information repositories have been established;

- documents and reports associated with the project have been placed into the repositories;

- a contact list of interested parties (e.g., media, public, interest groups, government agencies, etc.) has been created;

- public notice of the completion of the RI/FS and the proposed remedy was issued in local newspapers;

- a public comment period was established and a public meeting was held on October 15, 1992 to describe the proposed remedy. The transcript of the meeting is part of the Administrative Record for the project and is presented as Attachment B as the responsiveness summary. The responsiveness summary is placed in the document repositories for public inspection.

A summary of the comments received during the public meeting and the public comment period is included as Appendix B along with the Department's responses to the comments.

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**SECTION 9: SUMMARY OF THE GOVERNMENT'S DECISION**

**9.1 The Feasibility Study**

The Feasibility Study was performed to identify, evaluate and recommend potential remedial alternatives to address volatile organic compounds (VOCs) and semi-volatile organics found to be present at the Dollinger Site. Remediation was recommended to address the chlorinated VOCs and semi-volatile organics present in soil at the two source areas identified in the RI, degreasing pit and the drum storage area and volatile and semi-volatile organic compounds found in shallow sediments in the drainage pond. Remediation also was recommended to address the migration pathway between the two identified site source areas and the pond, and to address source area groundwater concentrations. The following remedial technologies are selected for implementation at the site:

**9.2 The Remedial Action Plan**

Soil - In-situ high vacuum vapor extraction will be utilized to remediate VOC contaminated soils at the degreasing and drum storage areas. The high vacuum soil vapor extraction (SVE) system is shown in conceptual design on figure 3. It consists of several extraction wells and/or trenches which are placed below ground surface and are used for removal of VOC containing soil vapor. A high vacuum pump (10 to 25 inches of mercury vacuum) is used to pull VOC-containing vapor out of the ground. The soil vapor and water that have been removed from below ground surface flow to a knockout pot which functions to separate the liquid from the vapor phase. The liquid phase is treated, if necessary, to further reduce VOC concentrations and then discharged to a publicly-owned

Table 3

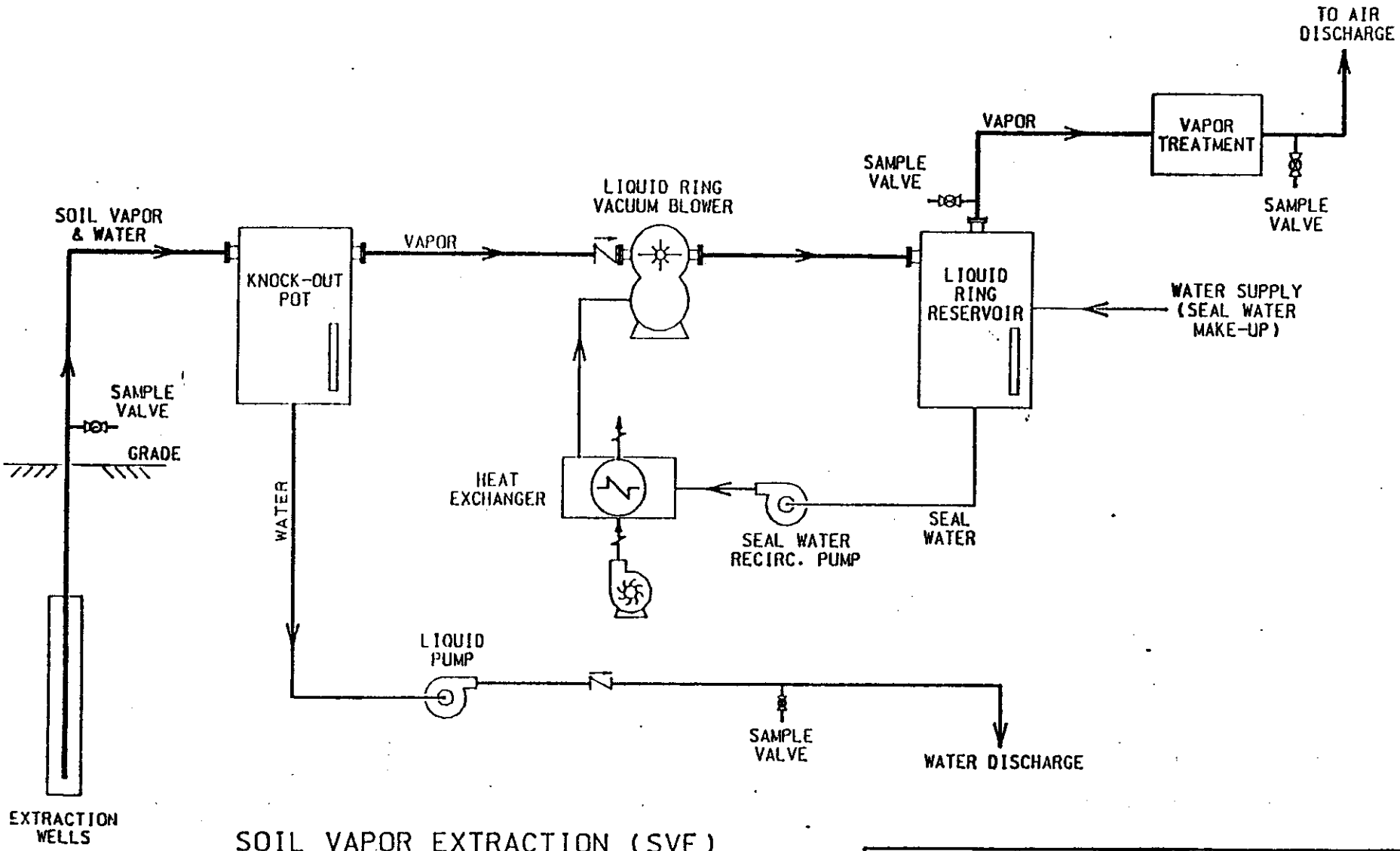
Detailed Analysis - Evaluation of Criteria

| Media<br>Remedial Tech. | Compl. with SCG's<br>(10) | Overall Prot. of Health & Env.<br>(20) | Short Term Effect.<br>(10) | Long Term Effect.<br>(15) | Reduc. of TOC., Mob & Vol<br>(15) | Implement.<br>(15) | Cost $(000) Capital/ Present Worth (i=5%, n=10)<br>(15) | Subtotal |
|---|---|---|---|---|---|---|---|---|
| **Soil** | | | | | | | | |
| No Action | 0 | 2 | 7 | 2 | 0 | 11 | 84.5 (15) | 37 |
| In-Situ High Vac. Extraction | 10 | 20 | 9 | 13 | 13 | 9 | 476.0 (8) | 82 |
| Excavation w/offsite Disposal | 10 | 11 | 8 | 8 | 2 | 9 | 5250.0 (0) | 48 |
| **Sediment** | | | | | | | | |
| No Action | 0 | 12 | 6 | 5 | 0 | 11 | 71.5 (15) | 49 |
| Removal & Off-site Disp. | 10 | 20 | 9 | 12 | 15 | 14 | 143.1[b] (0) | 80 |
| Ex-situ Stabilization of Excavation Sediments | 10 | 20 | 10 | 15 | 6* | 11 | 116.4 (6) | 78 |
| **Groundwater** | | | | | | | | |
| No Action | 0 | 15 | 10 | 5 | 0 | 13 | 143.5 (11) | 54 |
| In-Situ Vacuum Extrac. designed to control & mitigate shallow groundwater | 6 | 20 | 9 | 14 | 13 | 9 | 476.1[c] (0) | 71 |
| Contaminant migration Control Meas. | 3 | 16* | 10 | 12 | 0* | 14 | 14.9 (15) | 70 |

*NOTE: The scoring sheet reflects the Department's evaluation of the alternatives and in some instances differs from the score presented in the FS and various addendum.

[a] Excavation does not include bldg. demolition.
[b] Assume 1/2 of pond sediment are hazardous waste
[c] Cost is same as soil remediation

FILE No. 70007-43




## SOIL VAPOR EXTRACTION (SVE)

## CONCEPTUAL PROCESS FLOW DIAGRAM

NOTES:

1. THIS FIGURE IS A DIAGRAMMATIC REPRESENTATION ONLY. IT IS NOT INTENTED TO BE USED FOR ACTUAL DESIGN OR CONSTRUCTION.
2. REFER TO ACCOMPANYING TEXT FOR ADDITIONAL INFORMATION.

H & A OF NEW YORK
Geotechnical Engineers & Environmental Consultants

DOLLINGER FS
DOLLINGER - A FILTRONA COMPANY
BRIGHTON, NEW YORK

**CONCEPTUAL PROCESS FLOW DIAGRAM FOR SVE**
Figure 3

SCALE: NONE

JULY 1992

treatment works (POTW). The vapor phase is passed through a second mist separator from which water is used to maintain vacuum seals on the high vacuum pump. The vapor from this mist separator is then conveyed to activated carbon canisters which are used to remove the VOCs from the vapor phase before vapor is discharged to the atmosphere. The overall system serves to concentrate VOCs and adsorb them on the activated carbon. These canisters can then be removed from the site, where the VOCs are extracted and destroyed, and the carbon is regenerated for reuse. Air emissions from the carbon canisters and water discharges to the local sewer authority would both need to meet any applicable requirements under air and water quality discharge programs of the NYSDEC.

To remediate semi-volatile contamination of surface soils adjacent to the degreasing room, a surface soil removal (to a depth of 6-12 inches) will be performed in an area approximately 12.5 x 33 feet surrounding sampling point GS-A8. The soil will be removed from this area and temporarily held on-site until confirmatory sampling from the excavated area confirm the soil cleanup goals are obtained. Off-site disposal is anticipated.

Groundwater - It is recognized by the Department that in light of the low soil permeability, soil vapor extraction is an innovative approach with considerable potential to achieve the soil cleanup goals outlined in the RI/FS. Further, it is recognized that the groundwater unit in question is not utilized for either potable or industrial purposes and, because of the low soil permeability, any future uses of the groundwater appear limited.

As such, the soil vapor extraction (SVE) system, as described in the Feasibility Study Report and the various addendum, will be designed and operated to remediate source area soils and the extent technically practicable to concurrently collect shallow groundwater from the source areas (i.e. degreasing pit and drum storage areas). Therefore, the system will be considered a soil media remediation as well as a partial remediation and control measure of shallow source area groundwater, to the extent technically practicable.

The vapor extraction system is to be operated until the soil goals are achieved. Re-evaluation of remedy is required at a minimum of five years, and may be conducted sooner. If the SVE system operations reach asymptotic conditions and the soil goals are not met, modifications to system operations and enhancements to the system will be evaluated. Should modifications and enhancements be infeasible or unsuccessful, a focused feasibility study evaluating the necessity for further remediation of source area soils will be conducted. The focused FS would include the 'no action' alternative.

Once the soil goals are achieved, the necessity for continued operation of the SVE system will be evaluated, with respect to further remediation and control of shallow source area groundwater, to the extent technically practicable.

Migration Control Measures - The second element of groundwater remediation addresses the storm sewer line which runs between the former degreaser and former drum storage source areas and the pond. Remediation of this line would consist of the placement of bentonite collars around the storm sewer line to prevent migration of VOCs along bedding material immediately beneath the storm sewer line, and to prevent buildup of hydraulic head along segments of the line which could result in forcing of VOCs into the storm sewer pipe. Three collars would be installed: one immediately upstream of the storm water pipe discharge to the pond, a second at the immediate downstream side of the source areas, and a third on the immediate upstream side of the source areas. The collars would consist of a bentonite clay/grout mix placed around the storm sewer pipe up to 2 feet in thickness and 3 feet in length along the pipe. Monitoring would be performed following installation of the bentonite collars to determine their effectiveness in cutting off migration of VOCs to the pond. If samples show that concentrations of VOCs in the pond exceed applicable NYSDEC criteria, a second phase of remediation of the stormline would be performed. This would consist of lining of the storm sewer to prevent groundwater from entering the storm sewer line in the section that passes the source areas. The lining would consist of a flexible impervious liner which

would be "slipped" and sealed inside the section of the storm sewer pipe which runs past the source areas.

Sediment - The stormwater drainage pond located downstream from the former degreaser and drum storage source areas appears to have received run-off of semi-volatile compounds. In addition, during periods of high groundwater levels, VOCs appear to migrate to the pond through the storm sewer bedding and/or via infiltration into the storm sewer that runs past the two source areas. Remediation of sediments in the pond will be pursued by two mechanisms.

The first mechanism consists of excavation and removal of semi-volatile and VOC-containing sediment. This would entail excavation of affected sediments from the pond. Off-site disposal is anticipated. It is currently anticipated that excavation in the pond will take place to an approximate depth of one foot below the existing pond bottom and will include the area from the storm sewer discharge pipe, downstream to a location approximately half way between former pond sediment sample points SS201 and SS204. The specific extent of excavation would be based on samples obtained prior to the start of excavation. Additional confirmatory sampling to verify adequate removal will be preformed following completion of excavation. Once the sediments have been excavated, they will be loaded to luggers for temporary site staging. Off-site disposal is anticipated.

Administrative Controls - Administrative controls (i.e. deed restrictions) may be imposed at any point during implementation of the remedy. The administrative controls could include measures to restrict future use of source area groundwater or prevent excavation in areas of known contamination. The controls can also be imposed to protect the integrity of the remedial action (i.e. migration control measures). The results of the monitoring program conducted after implementation of the plan will evaluate the effectiveness of the remedy and determine the need and type of administrative action.

Present Worth - The present worth of the remedy ranges from $790,413 to $1,008,762 (i = 5%, n = 10 years). The range reflects the uncertainty of the volume of sediment which will be removed andconsidered hazardous waste. More detailed cost estimates are provided on Tables 4-8.

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TABLE 4

DOLLINGER SITE
RI/FS
PREFERRED REMEDIAL ALTERNATIVES

| COMPONENT | ESTIMATED BASE COST[1] |
|---|---|
| **In-situ High Vacuum Extraction** | **$302,076** |
| **Remove Sediment and Dispose Off-site (includes shallow soil around GS-A8)** | **$38,881 to $247,510** |
| Bentonite Collars on Storm Sewer | $5,225 to $ 14,945 |
| Slip Liner for Storm Sewer | $29,835 |
| ESTIMATED PREFERRED ALTERNATIVE TOTAL | $376,017 TO $594,366 |
| Total Net Present Worth [2] of Preferred Alternative (Capital + NPW formula for O&M) | |
| (i = 5%, n=5) | $581,365 to 799,714 |
| (i = 5%, n=10) | $790,413 to 1,008,762 |
| (i = 5%, n=20) | $1,082,709 to 1,301,058 |
| (i = 5%, n=30) | $1,262,157 to 1,480,506 |

Notes:

(1) Base cost estimate represents sum of capital cost and one year of estimated operation and maintenance (O&M) costs.

(2) Estimate of Net Present Worth represents present cost (1992 dollars) of capital and O&M for projected operation periods of n = 5, 10, 20 and 30 year periods, with an assumed interest rate of i = 5%.

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REMEDIAL TECHNOLOGY: In-Situ High Vacuum Extraction of Soil Vapor From In-place Soil

## Unit Cost Estimates

| Item | Quantity | Unit | Unit Cost | Capital | O&M |
|---|---|---|---|---|---|
| Pilot test VES/Vac Truck Unit Rental | 1 | ls | $5,000 | $5,000 | |
| Pilot Test Analytical Portable GC | 1 | wk | $1,000 | $1,000 | |
| Pilot Test Monitor Crew 3x40 hr. | 120 | hr | $80 | $9,600 | |
| Add'tl wells assume 7 to 16 ft. | 9 | ea | $2,000 | $18,000 | |
| Extract. trenches 3x100 lf. x 4 ft. depth | 400 | lf | $5 | $2,000 | |
| Piping - Trench | 400 | lf | $10 | $4,000 | |
| Piping - Transfer | 650 | lf | $20 | $13,000 | |
| VES Skid, Installed | 1 | init | $60,000 | $60,000 | |
| Air Phase Carbon Canisters | 4 | ea | $8,000 | $32,000 | |
| Water Phase carbon polish drums (200 lb. ec) | 2 | ea | $600 | $1,200 | |
| Date Acquis. - System/Process Monitor Equip. | 1 | ea | $15,000 | $15,000 | |
| Misc. Construction | 1 | ls | $5,000 | $5,000 | |
| Energy 25 HP x 0.748 HP/KW @ 0.10/kwg for 1 year | 164,000 | kwh | $0.10 | | $16,400 |
| Vapor Carbon - 20% of VOC ext/yr avg. 180 lb/yr @ 10% adsorption | 2400 | lb | $3 | | $7,200 |
| Water Carbon - 2 changes/yr. avg. 200 lb. ea | 5 | ea | $600 | | $3,000 |
| Misc. Maintenance 4 hr/wk x 52 | 250 | hr | $70 | | $17,500 |
| Monitor Soil Progress 2 samples, 2 x/yr | 4 | ea | $200 | | $800 |
| Monitor Air Discharge 4 samples x 4 locations for VOCs | 16 | ea | $200 | | $3,200 |
| Monitor GW x 13 wells for VOCs + 10% QA/QC | 14 | ea | $200 | | $2,800 |
| Sample Crew 2 @ 1 x/yr x 16 hr. | 16 | hr | $70 | | $1,120 |
| Monitor Water Discharge 1 sample/mo + 10% QA/QC | 13 | ea | $200 | | $2,600 |
| Sample Validate 1 hr/sample (GW/Soil only) | 18 | hr | $80 | | $1,440 |
| | | Subtotal | | $165,800 | $56,060 |
| | | Engineering (30%) | | $49,740 | |
| | | Equip. Replace (10%) | | | $5,606 |
| | | Contingency (10%) | | $16,580 | |
| | | Administration (5%) | | $8,290 | |
| | | TOTAL | | $240,410 | $61,666 |
| | Net Present Worth | | (i=5%,n=5) | | $267,014 |
| | | | (i=5%,n=10) | | $476,062 |
| | | | (i=5%,n=20) | | $768,358 |
| | | | (i=5%,n=30) | | $947,806 |

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TABLE 6

REMEDIAL TECHNOLOGY: Remove and Dispose Sediment Without Treatment Off-site

Unit Cost Estimates

| Item | Quantity | Unit | Unit Cost | Capital | O&M |
|---|---|---|---|---|---|
| Mob/Demob. 1.5 cy hoe | 1 | ls | $1,500 | $1,500 | |
| **Load 167 cy in-place w/20% expan.** | **217** | **cy** | **$5** | **$1,085** | |
| **Haul** | **217** | **cy** | **$10** | **$2,170** | |
| Dispose of waste (@ 1.65 T/cy) | | | | | |
| Solid Waste | 326 | ton | $60 | $19,560 | |
| Hazardous at landfill (assume 2/3) | 217 | ton | $300 | $65,100 | |
| Incineration (assume 1/3) | 109 | ton | $1,000 | $109,000 | |
| Confirm. sampling | 5 | ea | $700 | $3,500 | |
| Validation of samples | 4 | ea | $80 | $320 | |
| Backfill 200 (bankrun delivered) | 217 | cy | $2.50 | $543 | |
| Compact 1 ft. lift | 217 | cy | $0.20 | $43 | |
| Re-seed | 40 | sy | $2 | $80 | |
| | | Subtotal | | $28,801 to | $183,341 |
| | | Engineering (20%) | | $5,760 to | $36,668 |
| | | Equip. Replace ( %) | | | |
| | | Contingency (10%) | | $2,880 to | $18,334 |
| | | Administration (5%) | | $1,440 to | $9,167 |
| | | TOTAL | | $38,881 to | $247,510 |

Note:
Table assumes two disposal options: disposal as a solid waste or disposal as a hazardous waste.
If dispoded as a hazardous waste, assume 1/3 vol. goes to incinerator, 2/3 vol. goes to hazardous waste landfill, based on range of sample analytical data.

SBW: 70007-40/estim2

TABLE 7

REMEDIAL TECHNOLOGY: Bentonite Collar Migration Control Along Storm Sewer

Unit Cost Estimates

| Item | Quantity | Unit | Unit Cost | Capital | O&M |
|---|---|---|---|---|---|
| **Mob/demob 0.75 cy hoe** | 1 | ls | $750 | $750 | |
| Excavate @ 5 cy/location x 3 location | 15 | cy | $5 | $75 | |
| Hand Exc. @ 1 cy/location x 3 location | 3 | cy | $50 | $150 | |
| Bentonite grout slurry place @ 2 cy/loc x 3 x 27 cf/cy | 54 | cf | $20 | $1,080 | |
| Backfill 2 cy/loc. x 3 | 6 | cy | $2.50 | $15 | |
| Dispose excess fill 3 cy/loc x 3 | | | | | |
| If On-site Treatment-see on-site treatment | 9 | cy | -- | -- | |
| If Off-site haz. | 9 | cy | $200-1000 | $1800-9,000 | |
| | | | Subtotal | | $3,870-$11,070 |
| | | | Engineering (20%) | | $ 774 - 2,214 |
| | | | Equip. Replace ( %) | | |
| | | | Contingency (10%) | | $ 387 - 1,107 |
| | | | Administration (5%) | | $ 194 - 554 |
| | | | TOTAL | | $5,225-$14,945 |

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TABLE 8

REMEDIAL TECHNOLOGY: Slip Liner Inside Section of Storm Sewer

Unit Cost Estimates

| Item | Quantity | Unit | Unit Cost | Capital | O&M |
|---|---|---|---|---|---|
| **Video Tape inside of sewer line** | 1 | ls | $500 | $500 | |
| **Insert slip liner in existing sewer line** | 300 | lf | $36 | $10,800 | |
| **Low pressure injection of grout-cement mixture into annular space between sewer pipe and slip liner** | 300 | lf | $36 | $10,800 | |
| | | Subtotal | | $22,100 | |
| | | Engineering (20%) | | $4,420 | |
| | | Equip. Replace ( %) | | | |
| | | Contingency (10%) | | $2,210 | |
| | | Administration (5%) | | $1,105 | |
| | | TOTAL | | $29,835 | |

SBW: 70007-40/estim3

APPENDIX A
Administrative Record
Dollinger Corporation, Site #828078, Monroe County

-Citizen Participation Plan, Dollinger Corporation, Site #828078, dated March 1990, prepared by NYSDEC

-Remedial Investigation/Feasibility Study Workplan, Vol. I & II, dated February 1991, prepared by H&A of New York

-Comment Letter on RI/FS Workplan, David Crosby, NYSDEC to Steve Koorse, Hunton and Williams, dated March 6, 1991.

-Remedial Investigation/Feasibility Study Workplan, Addendum I, dated March 12, 1991, prepared by H&A of New York

-Approval Letter for RI/FS Workplan, David Crosby, NYSDEC to Steve Koorse, Hunton and Williams, dated June 5, 1991

-Order on Consent, Dollinger Corporation, Site #828078, dated June 1991.

-Remedial Investigation Report, Vol. I & II, dated November 1991, prepared by H&A of New York

-Comment Letter on the RI Report, David Crosby, NYSDEC to Steve Koorse, Hunton and Williams, dated December 24, 1991

-Remedial Investigation Report, Addendum A, dated January 17, 1992, prepared by H&A of New York

-Remedial Investigation Report, Addendum B, dated January 23, 1992, prepared by H&A of New York

-Comment Letter on the RI Addendum and FS Preliminary Screening, David Crosby, NYSDEC to Lisa Sotto, Hunton and Williams, dated February 11, 1992

-Additional Comment Letter on RI/FS, David Crosby, NYSDEC to Lisa Sotto, Hunton and Williams, dated February 13, 1992

-Remedial Investigation Report, Addendum C, dated February 24, 1992, prepared by H&A of New York

-Comment Letter on RI Addendum with DEC 2/27/91 analytical results, David Crosby, NYSDEC to Lisa Sotto, Hunton and Williams, dated March 11, 1992

-Feasibility Study Report, March 12, 1992, prepared by H&A of New York

-Comment Letter on Draft FS, David Crosby, NYSDEC to Lisa Sotto, Hunton and Williams, dated April 17, 1992

-Feasibility Study Report, Addendum I, dated May 1, 1992, prepared by H&A of New York

-Comment Letter on FS Addendum, David Crosby, NYSDEC to Lisa Sotto, Hunton and Williams, dated May 29, 1992

-Letter Approving RI Report and Addendums, David Crosby, NYSDEC to Steve Koorse, Hunton and Williams, dated July 7, 1992

-Feasibility Study Report, Addendum II, dated July 22, 1992, prepared by H&A of New York

-Letter Approving FS Report and Addendum with Statements/Finding which the Department does not endorse, David Crosby, NYSDEC to Steve Koorse, Hunton and Williams, dated August 10, 1992

-Proposed Remedial Action Plan, Dollinger Corporation Site, prepared by NYSDEC, dated September 30, 1992.

-Remedial Action Plan, Dollinger Corporation Site, prepared by NYSDEC, dated January 13, 1993.

-Responsiveness Summary - Attachment B of RAP, Dollinger Corporation Site, prepared by NYSDEC, dated January 13, 1993.

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# APPENDIX B

## Department of Environmental Conservation
## Responsiveness Summary
## for
## Proposed Remedial Action Plan
## Dollinger Corporation
## Site #828078
## Brighton, New York

A public meeting was held by the New York State Department of Environmental Conservation (NYSDEC) on October 15, 1992 at the Brookside Community Center, Brighton, New York to discuss the Proposed Remedial Action Plan (PRAP) for the Dollinger Corporation Inactive Hazardous Waste Site. The purpose of this attachment is to summarize the meeting and provide a response to the questions posed by the public. The responsiveness summary also addresses written comments received by the NYSDEC during the public comment period which ran from September 30 through October 30, 1992.

The Feasibility Study (FS) Report for the Dollinger Corporation Site was prepared by H&A of New York, consultant for American Filtrona Corporation who is the potential responsible party (PRP) for the site remediation. At the October 15, 1992 meeting, representatives from the NYSDEC and the New York State Department of Health presented the findings of the FS and the preferred remedial action plan. The follow briefly describes the proposed plan:

1. Utilization of Soil Vapor Extraction to mitigate source area soils of chlorinated organic contamination and to the extent practicable shallow source area groundwater.

2. Excavation of pond sediments contaminated with chlorinated organic and semi-volatile organic compounds. Off-site disposal is anticipated.

3. Engineered measures to control migration of contaminated groundwater from reaching surface waters.

4. Excavation of shallow surface soils. Off-site disposal is anticipated.

5. Monitoring and, if appropriate, administrative controls to ensure the viability of the remedial action.

The following is a summary of the written comments and the NYSDEC response:

Q: Dollinger takes exception to the open-ended description of the remedial work for the soil and groundwater identified on page 6 of the PRAP. Dollinger hopes to work closely with the Department in developing reasonable and objective remediation standards to govern forthcoming remediation work.

A: The Department believes that the soil clean-up goal as presented in Table 2 (Site Remediation Objectives) for the soil media are specific and protective of the public health and the environment. Further, the soil goals are based on reasonable engineering principals and are protective of groundwater quality. With regards to groundwater, the Department believes that given the tight nature of site soils, a technology basis to evaluate groundwater cleanup is appropriate. As such, the Department maintains the cleanup objectives, as presented in the PRAP, are appropriate and not open-ended.

Q: Dollinger urges the Department to remain flexible about the "ex-situ stabilization of excavated sediments" option.

A: The Department does not generally endorse the use of stabilization technologies for the remediation of volatile organic contamination. The Department has concerns with the ability of the solidified mass to retain volatile organic contamination and prevent leaching to the environment. As such, any material (pond sediments) which contain volatile organic compounds above, the recommended sediment cleanup objective will not be considered acceptable for stabilization technologies. Any material which is found to be below the agreed cleanup objectives for volatile organics, would be deemed appropriate for stabilization techniques. However, given the relatively small volume of soil and sediment which are expected to be excavated, it is anticipated that off-site disposal will be chosen.

Q: The Dollinger PRAP should be revised to include a statement that the preferred remediation tasks, once performed, will eliminate any significant threat to human health or the environment, and that the site thereafter will be considered a site that has been properly closed and does not require continued operation, maintenance, and/or monitoring.

A: At present the Dollinger Corporation Site is listed on the New York State Registry of Inactive Hazardous Waste Sites as a Class 2, meaning the site poses a significant threat to the environment or public health - action required. The remedial plan identified in the PRAP has been designed to mitigate site contamination and reduce the environmental or health risk posed by the site. The outcome of the remediation will be monitored and evaluated at various times throughout the remedial action. If at such a time, the remedial action is deemed effective and monitoring indicates a reduction in environmental or public health risk, then the site owner may petition the NYSDEC to have the site listing reclassified to a classification indicating that the site is properly closed. However, if it becomes apparent that the remedial action is ineffective, the Department will require a re-evaluation of the chosen remedial action. Therefore, the Department does not intend to revise the PRAP to incorporate the suggested language and would not consider such a statement until it receives a petition to reclassify the site and sufficient information allows for such a determination.

Q: On page 2 of the PRAP, in "Section 3: Site History," the last sentence of the second paragraph states that the facility was vacant at the time of the document's release. It is our understanding that a tenant was (and is currently) occupying the facility.

A: The Department appreciates the information but does not believe this information changes the findings of the PRAP.

Q: On Table 1 of the PRAP, "Summary of Remedial Investigation Selected Sampling Locations", the GS-B5 (4-6ft.) sample is shown as containing 1,300 ppb trichloroethene (TCE). The Department qualified this value with a "J", indicating it is an estimated concentration. On Table IV of the RI, this detection is qualified with an "E", indicating it is an estimated

concentration for a compound that exceeded the calibration range. Subsequent to the initial detection of 1,300 ppb, this sample was diluted and reanalyzed, resulting in the quantitatively more precise value of 340 ppb which is also indicated on Table IV of the RI.

A: It is true that the first analysis exceeded the calibration range, and therefore, the sample required reanalysis to bring the analyte within the calibration range, as required by the contract lab protocol. However, the Department feels the first analysis is more representative of the sample condition based on the following: 1) Generally, an instruments sensitivity decreases as the amount of analyte saturates or overloads the detectors linear range. 2) The reanalysis uses much less sample and is therefore less representative than the original analysis. 3) The smaller sample used in the reanalysis is more likely to have suffered from the sample handling losses (volatilization) during the analysis preparation than the larger sample. While we agree that the protocol was appropriately followed, we feel the original analysis has more validity. The Department concurs that the "E" qualifier is more appropriate and has changed Table 1. However, this change does not effect the preferred alternative.

Q: On Table 2 of the PRAP, "Site Remediation Objectives," the Department listed cleanup objectives for the following three compounds differently from those values listed on revised Table I in the FS Addendum I: the FS listed the acetone sediment cleanup objective as 0.039 ppm, whereas the PRAP states the acetone cleanup objective as 0.14 ppm; the arsenic sediment cleanup objective was stated in the FS as 5.8 ppm, whereas the PRAP lists this objective as 6.0 ppm; and the sediment cleanup objective for copper is indicated in the FS as 30.0 ppm, whereas this objective is listed in the PRAP as 24.0 ppm. Because these values as stated in the FS were agreed to by the Department, we suggest discussing the basis for these changes with the Department.

A: In negotiation with the PRP, it was agreed by both parties, that the pond sediments cleanup objectives would be the levels associated with SS-202S. This is verified in the correspondence. Please refer to the NYSDEC letter to Lisa Sotto, dated April 17, 1992, H&A of New York's response of May 1, 1992 (Comment #5) as well as NYSDEC letter to Lisa Sotto dated May 29, 1992 and H&A of New York response dated July 22, 1992. The levels listed as sediment cleanup objectives on Table 2 of the PRAP correspond with the data present in the Remedial Investigation Report, Table X and Table XI. Therefore, the Department considers the cleanup objectives presented in the PRAP as the appropriate and agreed upon objectives.

It is understood that there is an inherent variability associated with the analysis of sediment samples and, as such, the difference of 5.8 ppm and 6.0 ppm arsenic is insignificant. Further, the cleanup objective are only goals to guide the remedial action and adherence to these levels should also be based on site characteristics and field judgement.

Q: On Table 2 of the PRAP, the soil cleanup goal for benzo(a)pyrene and benzo(a)anthracene is shown as 0.33 ppm or MDL (method detection limit). It is our opinion that, rather than a detection limit or level at which a compound can be detected, the cleanup goal should be related to an appropriately derived level of quantitation or level at which a compound can be confidently quantified. For this reason, we suggest using "0.33 ppm or an appropriate quantitation limit, whichever is the higher of the two" as the soil cleanup objective for these two compounds.

A: The Department understands the inherent variability in analyzing soils and sediments and realizes the problems associated with matrix interference. However, the term "appropriate quantification limit" is an ambiguous term and

not well defined. The Department maintains that the cleanup goals associated with benzo(a) pyrene and benzo(a) anthracene are protective of the environment and that QA/QC procedures to reduce matrix interference are available. Therefore, the Department maintains the cleanup goal stated on Table 2 are appropriate.

Q: On Table 3 of the PRAP, the Department scored the sediment ex-situ stabilization technologies 6 points for the criteria "Reduction of Toxicity, Mobility and Volume." In the FS, we (H&A of New York) assigned to this remedial measure a score of 15 points because (i) all of the material is treated (8 points), (ii) no untreated or concentrated wastes are produced (2 points), and (iii) the method is irreversible (5 points). It is not clear why the Department scored this technology 6 points for "Reduction of Toxicity, Mobility and Volume."

A: The Department does not generally endorse the use of stabilization technologies for the remediation of volatile organic compounds. The Department has concerns with the ability of volatile compounds to leach from the solidified mass. The Department has scored the technology as follows: Analysis Factor 1 (i) "Immobilization Technologies do not score under factor 1", 0 points; Analysis Factor 2 (ii) "Reduce mobility by alternative treatment technology", 3 points; Analysis Factor 3, "irreversible for most constituents" (semi-volatiles), 3 points. As judged by the Department, the total points for this criteria is 6 points.

Q: On Table 3 of the PRAP, the Department scored the bentonite collar contaminant migration control measure 15 out of a possible 20 points for the criteria "Overall Protection of Health and Environment." As shown on Table V and Appendix B of the FS, we scored this remedial measure 20 points under the same criteria. The first question in the evaluation, worth 20 points, is whether there will be unrestricted use of the site after the measure is implemented. Because the collar installation does not affect the use or appearance of the site land or water, we believe the response should be that there will be unrestricted use of the site after the measure is implemented, which response is assigned 20 points.

A: The Department agrees that the score of 15 out of a possible 20 points for the above-mentioned criteria was incorrect. The correct total in our evaluation should be 16 out of 20 for the following reasons:

Assuming the bentonite collar control remediation was evaluated on its own merit and not associated with any other media remedial action (as was the case with this proposed remedial alternative in the FS), the collar would not allow for unrestricted use of the site because groundwater would remain in excess of New York State Standards, as such Analysis Factor 1 scores 0 points. Therefore, the Department evaluates the remaining score as follows: Analysis Factor 2 (i) 3 points, (ii) 0 points (again contaminated groundwater remains), (iii) 3 points; a total of 6 points for the analysis factor. Analysis Factor 3, 5 points, and Analysis Factor 4, 5 points. Therefore, the total points for Protection of Human Health and the Environment, in the view of the Department, is 16 out of a total of 20 points and the scoring on Table 3 has been changed. However, the changes do not effect the selection of the chosen remedial alternative.

Q: The Department also scored the bentonite collar contaminant migration control measure 0 for the criteria "Reduction of Toxicity, Mobility and Volume." In the FS, this measure was given a score of 5 because the method represents an irreversible method of immobilization (one question worth 5 points).

A: It is the Department's view that the bentonite collars are a containment technology and therefore cannot be considered as an irreversible reduction in contaminant mobility. As such, the Department score Analysis Factor 3 zero points and therefore, the total point score for the criteria would be 0. Further, the Department has proposed the use of collars as part of the proposed remedial plan and as such, any increase or decrease in the score for this alternative is irrelevant as the action is already part of the proposed remedy.

Q: On Table 3 of the PRAP, the Department's column for the cost criteria is based on the ten year net present worth value (with a 5% inflation rate). With respect to soil excavation with off-site disposal, however, the Department estimated the cost to be $971,400, which is the value provided in the FS as the capital cost assuming landfilling with no incineration. Factoring in possible incineration costs, if the net present worth value at ten years is used, then estimated capital costs would range from $971,490 (if 100% of the excavated soil is landfilled) to $3,148,490 (if 100% of the excavated soil is incinerated), plus $60,988 in operation and maintenance costs totaling between $1,032,478 and $3,209,478.

A: The Department has re-evaluated the cost estimate for excavation and off-site disposal. The cost estimate presented in Table 3 of the PRAP was for excavation and land disposal of contaminated soils outside of the footprint of the building. This is also the assumption of the cost estimate provide by the questionner. The Department believes that both estimates are misleading because partial excavation of the source area (outside the building footprint) would be an inadequate source remediation. Further, the Department maintains that excavation under the building footprint is technically feasible.

As such, the Department has revised the cost estimate presented in Table 3 for excavation and off-site disposal, to the low end of the cost estimate provided by H&A of New York in the Feasibility Study, Addendum I. The new estimate of excavation and off-site disposal is $5.25 million.

Q: On Table 3 of the PRAP, the Department estimated a cost of $143,100 for sediment removal and off-site disposal, which assumes half the disposed sediments are hazardous wastes. In the FS, we estimated the range to be between $33,885 and $210,249, which represents the range of disposal costs assuming the sediments are classified as either all solid waste or all hazardous waste (with one-third requiring incineration, and two-thirds requiring landfilling).

A: To make a proper evaluation of costs the Department had to rework the cost data provided by H&A of New York into a usable form. The cost for sediment removal and off-site disposal, presented on Table 3, is a direct proportion of the cost data provided by the PRP for solid waste and hazardous waste disposal. As such, as noted on Table 3 (for sediment; removal and off-site disposal), the Department assumes 1/2 of the volume of the pond sediments would be hazardous waste and 1/2 would be industrial solid waste. This assumption is based on the analytical data presented in the Remedial Investigation Report. In this form, the cost is a single value and not a range which allows for proper evaluation of cost as per NYSDEC-DHWR TAGM-4030.

Q: On Table 3 of the PRAP, the Department estimated a cost for ex-situ stabilization of sediments of $116,424. This cost represents use of the Chemfix method; another alternative provided in the FS is the STS Polysilicate method, estimated at $79,130. Both methods should be considered as remedial alternatives.

A: Comment noted. However, please keep in mind the Department does not consider the use of stabilization technologies as appropriate for materials contaminated with volatile organics.

Q: On Table 3 of the PRAP, the in-situ vacuum extraction remedial technology for groundwater shows scores of 14 and 13 for "Long Term Effectiveness" and "Reduction of Toxicity, Mobility and Volume", respectively. Although these scores are the same as those in the detailed screening scoring sheets for groundwater provided in Addendum II of the FS, the following footnote qualified the scores assigned to both criteria: "In light of the low permeability of site soils, it is currently unclear how effectively the SVE system will remove VOCs from the limited source area groundwater."

A: Comment noted. This statement was considered in the PRAP when the Department provided the statement on page 6 that "it is recognized by the Department that in light of the low permeability, soil vapor extraction is an innovative approach." We recognize that the SVE system may not be totally effective and as such, have incorporated mechanisms to evaluate the remedy should the SVE system fail to meet cleanup objectives.

Q: Contaminant Area - based upon the investigations conducted to date, it does not appear that the full extent of groundwater contamination has been identified. Due to the elevated levels of TCE and its breakdown products in monitoring wells 201-S and 104-S, the extent of groundwater contamination to the south of these wells, below the building, does not appear to be completely defined. A considerable increase in size of the groundwater contaminant plume could have a significant effect on the implementability of the chosen soil vapor extraction (SVE) system.

A: The site investigation, as presented in the RI report and subsequent addenda, was performed to the extent necessary to accurately ascertain the identity, concentration, and location of compounds of concern at the site. In the RI report, H&A of New York indicated that the 201-S well is located immediately adjacent to the former TCE degreaser area. As such, the detected concentrations of 36 and 11 parts per million (ppm) TCE and 1,2-DCE, respectively, represent "source area" concentrations. There is a sharp drop in concentrations at the next closest downgradient well cluster, 104-S, where 0.009 and 0.130 ppm TCE and 1,2-DCE, respectively, were detected. At the 106 and 202 well clusters, which are also located immediately downgradient and within 200 feet of the degreaser area, no site compounds of concern were detected. Assuming there is a radial component of groundwater flow originating from the former degreaser area, the radial extent and concentration of site compounds possibly present beneath the building to the south of the degreaser area would likely be similar to what has been detected at the corresponding downgradient well clusters of 104, 106 and 202. Therefore, given that concentrations of site compounds of concern dropped so dramatically from the source area to well cluster 104, and were not even detected at well clusters 106 and 202, it is unlikely that site compounds of concern would be detected south of well 104-S under the building. To the extent the plume extends beyond the point that our interpretation of the technical information indicates, the SVE system as conceptually designed is capable of removing compounds of concern beyond the area in which higher concentrations are known to be located.

Q: SVE Performance - Due to the clayey silt soils below the site having "extremely low permeabilities", as identified in the PRAP, the success of the SVE system is questionable in its ability to remove the identified contaminants from the site soil and groundwater. Based on the physical constraints of the building, and the relatively shallow depth to groundwater,

vapor extraction within the vadose zone would appear to require a significant quantity of extraction wells or trenches, placed at extremely close spacings.

A: While soil permeability influences the rate at which volatile compounds are removed by an SVE system, H&A of New York has concluded, based on studies performed in soils with permeabilities similar to those at the Dollinger site, that the SVE system is a reasonable remediation system. Thus, site conditions have been taken into consideration in the selection and conceptual design of this remedial action. Furthermore, the building is not a constraint to application of the SVE system, but rather an advantage because the building floor slab acts as a cap to the system, providing a no-flow boundary at the ground surface and preventing the compounds vacuumed into the SVE system from being diffused by contact with atmospheric air flow. Additionally, since the system will be designed to vacuum extract compounds of concern from both the vadose zone and the shallow groundwater, the shallow depth to groundwater is not a hindrance to system performance but a site feature that was considered in the system conceptual design. As for the spacing of the wells and trenches, as presented in Appendix C of the Feasibility Study, the initial concept is to provided for the excavation of three trenches in the areas not under the building and the installation of seven additional wells (some of those already in place also will be used) in the former degreaser area. The design of this system, including the number of wells and trenches and their placement, is based on H&A of New York's experience with similar dual phase system at sites with similar geologic settings. In addition, the design phase of the project includes a pilot study to evaluate the design, refine the number of wells and spacing, if required, and consider methods by which to optimize the system's efficiency in light of the specific site conditions.

Q: Contingency Plan - Based on the uncertainties of the successful application of the SVE system in these soils, a contingency plan should be proposed that presents an alternative technology with an equal or greater chance of remediating the site soil and groundwater. Although pilot testing is proposed with possible SVE system enhancements, no potential enhancements have been identified for such an application (i.e. below the building).

A: The FS was performed specifically for the purpose of determining which remedial technology would offer the highest possibility of remediating the degreaser and drum storage area, taking into account various evaluation criteria, such as implementability and cost. Following a lengthy FS process and, after taking into account all the required evaluation criteria, H&A of New York has determined that the SVE system provided the best alternative for remediation. The Department concurs with this approach and has selected the technology as the proposed remedial plan.

In Addendum I to the FS, H&A of New York stated that specific SVE system enhancements would be considered in the event the pilot indicated they may be applicable. Evaluating system efficiency and considering potentially applicable enhancements are some of the goals of a pilot study. Therefore, it is premature to identify system enhancements until we know whether, and what manner of, enhancements may be necessary.

Moreover, on page 6 of the PRAP, explicitly provides a contingency plan if the SVE system should fail to perform as expected.

This plan includes the evaluation of system modification and enhancement should the system fail to reach cleanup objectives. Further, should modification and enhancement fail or be deemed inappropriate, a focused feasibility study is required which revisits various remedial approaches. Without the implementation of the pilot test and the resulting design and

operation of the system, it is not prudent to speculate on other possible remedial approaches. Should the focused feasibility clause of the PRAP be imposed, site conditions may have changed (i.e. partial soil remediation) and therefore alter the basis for the feasibility process.

Q: Groundwater Cleanup Goals - Although the risk assessment did not identify groundwater as a significant exposure pathway, the extent of groundwater impacts has not been positively identified. The PRAP identifies cleanup objectives for site groundwater as remediation "to the extent practicable". With the elevated levels of TCE, and perhaps more importantly the more toxic breakdown product vinyl chloride, coupled with the uncertainties in the size of the contaminant plume, establishing groundwater cleanup goals would ensure that the best available technology, or combination of technologies, would be utilized for complete site remediation. As the breakdown product of TCE is vinyl chloride, which itself is biodegraded only over long periods of time, O'Brien & Gere considers the presence, and continued presence, of vinyl chloride as a soil and/or groundwater contaminant to be an important environmental issue that must be addressed in the monitoring and closure programs.

A: The site investigation was performed to identify compounds of concern, location and magnitude to the extent necessary to develop remedial alternatives which are protective of the public health and the environment. The Department believes that the extent of groundwater impacts has been properly and adequately identified. The actual target concentrations or performance criteria for site compounds and their breakdown products necessary to demonstrate satisfactory remediation of groundwater will be developed during the SVE design phase.

With respect to monitoring site compounds and their breakdown products (including vinyl chloride), breathing zone and ambient air monitoring will take place during site remediation activities. Samples of site soil, sediment and groundwater will be analyzed in the process of site remediation for the site compounds of concern previously identified as well as their respective breakdown products. Further, the Department will require continued post remediation monitoring of the site at a level of effort that ensures the effectiveness of the remedial program.

Q: Groundwater Source - If soil remediation via SVE was effective at the site, particularly below the building, but groundwater was only remediated "to the extent practicable", it would appear that the source area soils could easily by continually "recontaminated" with seasonal fluctuations in the groundwater table. Again, it appears that a groundwater cleanup goal must be established and met to ensure adequate site remediation of all media of concern (soil, sediment, and groundwater).

A: As stated previously, it is anticipated that target concentrations or performance criteria for groundwater will be developed during the SVE design phase. Soil goals have already been determined and are based on criteria that are protective of groundwater.

The dual phase design of the SVE system provides for recovery of both the vapors present in the vadose zone and the shallow groundwater at the source area. The SVE extraction wells will be screened through the vadose zone and into the water table below a depth that would be affected by seasonal fluctuations. In this manner, groundwater that may come into contact with the source area soils as the result of seasonal fluctuations will be recovered from the source area and remediated.

Q: Closure Demonstration - To ensure that the site has been remediated to all applicable standards and criteria, a comprehensive Closure Demonstration Plan must be prepared which identifies the specific sampling locations, frequencies, and parameters, and contains identified cleanup goals which must be followed. Although at this point, it is difficult to specify the exact components of such a plan, the contingency for preparation of a Closure Demonstration Plan must be provided with the appropriate baseline criteria identified. This is especially important since the extent of contamination is not known, and since the responsible party for site remediation does not currently own the facility.

A: It is unclear as to the regulatory requirement referred to in the questionners comment. A "Closure Demonstration Plan" is not a recognized regulatory term. The RI/FS process for this site has followed the CERCLA guidelines. A Closure Demonstration Plan is not a part of this process. Nevertheless, the substantive matters identified by the questionner have been addressed in the RI/FS process. For example, for purposes of evaluating the success of the selected remedial actions, specific sampling and analysis plans were identified in the FS and subsequent addenda (see Addendum I, Comments 1 and 8). These will include soil, groundwater and sediment testing both during the remedial actions to monitor their progress, where appropriate, as well as at the termination of the activities.

Further, the National Contingency Plan calls for a review of the remedial action five years after its implementation and on page 6 of the RAP, the Department indicates the re-evaluation can be conducted sooner. In addition, the Department will require the development and approval of an Operation and Maintenance (O&M) plan which will include a detailed post remediation sampling plan to ensure the proper "closure" of the site. Therefore, the Department maintains that the substantive parts of the questionners comment have been and will be addressed in the chosen remedial program.

Q: Health & Safety Issues - Since the current owner of the facility has leased out manufacturing space within the building (currently 50-60 employees), occupant health and safety issues will require close attention. In order not to disrupt facility operations while still maintaining a safe working environment within the facility, health and safety precautions for facility workers such as air monitoring, routine health checkups, and proper ventilation must be provided. Such precautions must be considered not only during operation of the SVE system, but also during the indoor installation of the remediation system and equipment, since volatile organic materials will be excavated and handled within the building.

A: Environmental monitoring, including monitoring of ambient air and breathing zone, will be in place during SVE installation and operation to protect remedial personnel performing the remedial work. Monitoring and exclusion zones will be established around the work areas, as required by OSHA, and proper ventilation will be provided. Only employees and subcontractors who meet OSHA requirements for remedial work at inactive hazardous waste sites will be allowed in the exclusion zone, and therefore subject to risk of exposure from remediation activities. Further, the Health and Safety Plan used to date at the facility, and future version(s) that would be used during remediation, include provisions for notification of the public (including the building occupants) of conditions that may require increased health and safety protection.

The following is a summary of the questions and answers from the October 15, 1992 public meeting:

Q: Why didn't you go into the ground 50 feet with the investigation?

A: We did investigate the site to such a depth. Inside the facility, there is a large degreasing pit and associated with the pit is a sump which is about a 5 feet below grade. The sump basically collected materials that spilled over from the degreasing operation. We believe that this sump was the source of the contamination to the subsurface. Trichloroethylene would spill out of the degreasing pit and go to the sump and directly into the ground. We placed a well near the degreasing pit and found concentrations in groundwater at approximately 36,000 ppb. This is very high groundwater contamination. The well just below that in the next zone, approximately 25-35 feet, shows contamination in the 20-30 ppb. Another well placed outside the facility but near the degreasing pit to a depth of 60-70 feet showed no contamination. As such, there is a dramatic change in concentration in very short distance both horizontally and vertically. It appears that contamination is migrating slightly but the bulk of the contamination is still right around the degreasing pit and drum storage source areas.

Q: Which way does the contamination migrate?

A: The data we have so far indicates that the groundwater flow is probably mimicking the site topography. So it's probably heading off in the west. One of the problems we had, is that it's a very flat area and the soils are extremely tight. To measure groundwater flow we measure the difference in elevation between two wells. Here, because of site conditions, the determination of that groundwater flow became very difficult but we believe that it's basically towards the west.

Q: Who did the boring?

A: H&A of New York. They were the consultants of the potentially responsible party.

Q: They don't do drilling.

A: That is correct. The Department has taken actions against the potentially responsible party, American Filtrona. We ask them to come forward, investigate the Dollinger Site. The PRP hired the consulting services of H&A of New York. H&A of New York designed the remedial investigation/feasibility study and then implemented it. They then hired contractors, drilling contractors, laboratories, other associated people to assist them to do the work.

Q: Has the investigation found bedrock?

A: We drilled two borings to the top of the bedrock and found no contamination. We have screened a well to a depth of approximately 60-70 feet and found no contamination. Therefore, we would not expect bedrock contamination.

Q: Did H&A or New York State do the work?

A: H&A performed the work for American Filtrona and New York State Department of Environmental Conservation over saw the work that was done.

Q: How did the State find the contamination?

A: The original studies done were conducted by Sear Brown. The State was not party to those investigations. American Filtrona conducted the investigation themselves to evaluate the environmental condition at the site prior to their expected sale of the property. They went ahead and conducted these investigations, found the chlorinated organic contamination and then as a requirement of New York State laws, they were required to come to the State with this data. Acting on this data the State then listed the site on the Regulatory of Inactive Hazardous Waste Sites. We then requested them to go ahead with the RI/FS process.

Q: Based on what State recommendations?

A: At that time, we wanted them to go forward with an RI/FS. Further, we had initial discussion of conducting an Interim Measure to remove some of the contamination.

Q: Can you tell us about what that was?

A: At the time, the PRP proposed removal of the surface soils, in and around the outside of the building and proposed some measures to stop contamination water from entering the storm sewer.

Q: Was that done?

A: No, an IRM was not performed. It was felt by the Department that further characterization was required and the IRM might not be a permanent remedy.

Q: Wasn't there be possible interim preventive measure which would keep the contamination from leaving the area of original contamination?

A: Yes, there was. The Department did not proclude the PRP from conducting the IRM, but we felt that further site characterization was necessary. It was the PRPs decision not to go forward with an IRM because the Department would still require a RI/FS even after the IRM.

Q: Wouldn't that have ended it?

A: No, the RI/FS found contamination under the building which was not known at the time. The Department believes remediate the source is a more appropriate way to try to reduce the risk of the site and prevent the contamination from migrating. The proposed IRM would not have addressed the source.

Q: Early on, the State recommended that some soil be removed and then recommend the removal not occur.

A: No, the State never recommended that. When we were in the IRM thought process, it was never a recommendation from the State to go ahead and remove the soil.

H&A of New York representative: We came in with that as a potential source control measure as an IRM and subsequently, it comes out that first of all, it may not satisfy the State and secondly, as a source control measure, there may not be adequate information for the State to agree that it would constitute an adequate IRM.

DEC representative: We felt that further characterization was needed and it became evident that the RI/FS process should go forward. One of the things that was positive for this action, was the extremely low permeability soils. The contamination was not migrating very quickly, and in the time that we

waited, I don't believe the contaminants migrated very far at all. As a matter of fact, I think at some of the wells, we have seen the levels slowly decrease. It should be noted that prior to the RI/FS, the DEC was unaware of the contamination under the building. The IRM, as proposed, would not have mitigated this contamination.

Q: Does the contamination stay at the same level year round, and is it affected by seasons?

A: What we're finding right now is that contamination doesn't appear to be affected that much by changing seasons. What does occur in the spring is a release of TCE to surface waters. Either via the bedding of the storm sewer, or infiltration directly into the storm sewer, there is the ability of contaminated groundwater to reach surface water. There is a small detention pond constructed for flood control purposes. The pond receives this contaminated water. We've seen surface water samples with chlorinated organic contamination. During the spring, we have a rise in the groundwater table to a point where contaminated groundwater can enter the storm sewer system.

Q: How close to the surface is the groundwater contaminated?

A: The water table varies seasonally from ground surface during wet seasons to 6-8 feet below grade during the summer.

Q: What levels of contamination has been found in the storm water?

A: We're seeing the range of 20-40 ppb TCE in surface waters. The standard for this stream is 11 ppb. So we do have exceedences of states standards. Though it's not as high as the contamination you see in the groundwater wells in the source area.

Q: Why is there negotiation process prior to the start of the remediation?

A: We have stages in remedial projects, milestones, and we are dealing with a responsible party who is looking for legal protection for the things they do. To do that, we have consent orders. Consent order is an agreement between the PRP and the State which directs a part of or phase of the remedial action. The present consent order for this site only covered RI/FS. After the signing of the ROD, the Department will negotiate a Consent Order for the Remedial Design and Action.

Q: You haven't answered my question, why is there negotiation? It seems to me the State has the authority to say this is the way the State would prefer to handle the problem.

A: I would agree with you, but the State also has a responsibility to the tax payers of the state and as required by regulations to attempt to try and get the people that we believe are responsible for the contamination to clean it up. A negotiation process occurs only on the development of the consent order. Once the ROD is signed by the Department that is the remediation which will be followed.

Q: What does the negotiation entail? Does it mean the reduction of safety of cleanup?

A: No, the ROD has to be implemented. We will negotiate with the PRP to do that implementation. There is a lot of wording in consent order that attorneys will want to negotiate. They will come together and try to bring this

document together, but the remedy that's chosen and placed in the ROD will be the remedy they will have to implement.

Q: How many times is a consent order actually be followed? The lawyer doesn't know a thing about what is really in the ground. And you folks from Albany do not know either.

A: It's obvious the lawyers don't know what's in the ground, that's why you have the technical staff assigned to assist in negotiations.

Q: I'm a major stock holder in the company that currently owns and operates the Dollinger Corporation. These negotiations have been going on for approximately 3 years. We have been shut out of negotiations by your office, by the State in this negotiations, even to attend them. I have a voice in them. I've been even told that if I showed up, I would be barred from the meeting. Could you tell us about why that is so?

A: That was a decision made by our legal staff. I'm not exactly sure what the determination was based on or why that action was taken. However, it is my understanding that the site owner was given an opportunity to be a party to the RI/FS consent order and refused. I believe that is part of the reason for the decision.

Q: Is it common practice? Please understand that if AFC ever went bankrupt, we are on the hook to pay for that cleanup. Therefore, don't you think we have a vested interest to at least attend these meetings?

A: Like I said, that determination was made by our legal staff. You may contact them if you wish to know more why he made that decision. I can provide you the legal DEC contact if you wish to follow up on this.

Q: After you've completed what you're recommending, what guarantee are there for the owner, that if it prevails, that contamination won't affect the property? NYS presently lists it as a contaminated property. What guarantee is there for the present owner? What guarantee even if it is taken off the list that the property will be at 100 percent clean?.

A: Normally, when a site gets off the list, we believe it does not pose a significant threat to the public or the environment. Not every site that is on the registry which is remediated automatically gets off the registry. There are some sites that will stay on the registry for a long time, even after recommended remedial action. Depending on the "Remedial Action" and the results of monitoring of the remediation, the period that it will take to remove that site from the registry will be determined. To answer your question, we cannot give you a 100 percent guarantee that this site will be off the registry.

Q: And after it's off the registry? What if it re-occurs or surfaces again?

A: Then we have to deal with it again to the best of our knowledge and capability. At the time we take a site off the registry we act on information available to us. There is always a possibility of a hidden source that we never discovered or know about.

Q: Isn't there sort of a short cut solution instead of addressing each individual problem. Why can't you just remove ten feet of surface soil at the entire site and all your problems are solved?

A: If we had unlimited resources of finance, that may not be a bad idea. However, to remove ten feet from the whole site would cost a lot of money.

Q: Your not liable, the responsibility party is, AFC. They made $13 million over the past three years.

A: If the State imposed an unreasonable remedy, AFC would tell us they can't afford it. Excavation and off-site disposal of hazardous waste is very expensive. If the materials are classified as hazardous waste, it would have to go to a Hazardous Waste Facility, possibly an incinerator because of land ban reductions. There are health and safety implications of removing that soil. It wouldn't be as easy as you think. Further, because the contamination is under the building, there are structural concern which must be dealt with. The Department balances environmental, technical and economic considerates in the selection of remedial alternatives. Excavation had both technical concerns and the highest cost.

Q: It seems to me that somebody contaminated the site then ran away from the property, moved the facility somewhere else. They ducked their responsibility.

A: I disagree, American Filtrona has not ducked their responsibility. They came to the state with the problem; they had negotiated with us to do an RI/FS and appear willing to go ahead and fund this preferred alternative.

Q: I would recommend to protect State, County, and Brighton. Monitoring should be conducted to protect the health of people working in the building.

A: There was air monitoring during the remedial investigation which found no ambient air problems. Air monitoring will be conducted during implementation of the remedy to protect both the health and safety of remedial workers and the community. Further, there will be long term monitoring of groundwater and surface water as part of the program. We'll consider monitoring beyond that when the program is implemented.

Q: There was mention in the reports of wearing leather clothing pants, gloves as a safety measure.

A: Yes, in the risk assessment, we evaluated the exposure of a utility employee working in a pit dug in the soils of the TCE source area. What we did in the RI, is we took a boring in the source area, pulled the drill bit out, took an air sample. That air sample indicated extremely high levels of TCE which would be dangerous to people. But this is only a hypothetical scenario. No levels of contamination were found in the ambient air.

Q: How far off site did you sample the stream outlet?

A: We sampled both the sewer itself, through various manholes, the pond itself and the off-site channel. The contamination dropped off at the outfall of the pond. We measured 50 feet and 200 feet downstream from the outfall and didn't find any contamination.

Q: The levels you referred to before that exceeded surface water standards, are they considered a health threat or not?

A: In order to determine whether a health threat exists, we (NYSDOH) evaluate the type and extent of contamination at the site and determine if there is any exposure route to the public. We have not identified any exposure route to the contamination via surface waters at this site. Therefore, we do not believe that a threat to the public health exists from exposure to surface waters.

Q: Back to the collars, you must feel that instead of doing it all at once, it is better to phase the project.

A: The reason we propose it in two phases, is we are not sure of the migration route. It is either the storm sewer beddings, or infiltration, or both. So instead of just going ahead and doing a remediation, we thought if we phased it, we have the ability to possibly reduce the cost of the remediation.

Q: How does this (remediation) impact any plans for expansion of building?

A: There is an area in the building that we're going to be remediating, where the PRP is going to be putting in the vapor extraction system. We will need to have access to that part of the facility. But other uses of the property, if they take into account what our needs are for remediation, will not be precluded. If you're talking about expanding the building while we're doing our remediation, then we would try to accommodate you and you would be expected to accommodate us to keep the remediation ongoing. But we would not necessarily preclude any activities you plan to expand or change your property but we would want to be involved in that process.

Q: What is the timeframes?

A: When we get to the record of decision, which will hopefully be next month, we'll start actively negotiating PRP and their attorney for the remedial design and remedial action. That typically takes anywhere from two to six months. Once the consent order is signed, it usually takes 8 months to 12 months for a final design Then we have implementation, that usually take 12 months. In this case, I would hope to get the system up and running soon after design approval.

Q: How long before you would expect to see significant results?

A: On other sites I have worked on with vapor extraction, we have seen promising results within the first year. There is a possibility though that we may have to go beyond that, perhaps two to three years. There will be some point when that we will re-evaluate where we've gone. We'll actually re-visit the source area, take some subsurface soil samples, see what the levels are. If the levels are approaching the agreed upon cleanup goals, obviously the system will be effective. However, we may have to do enhancement or system modifications to improve the system effectiveness. There is also the possibility, the system just won't work. Then, we'll have to re-visit the feasibility study and see if there are other options.

Q: Has there been any evidence of natural degradation?

A: We do see some evidence of dechlorination. Trichloroethylene tends to degrade to 1,2 dichloroethane. We are seeing some of the 1,2 dichloroethane and some of the vinyl chloride. Both are less chlorinated subspecies of TCE. I think in some of the wells we've seen a slight decrease in contamination, whether that is dilution or natural degradation, it's hard to say. There will be a point when we get down to a residual contamination in soil and in groundwater where we will then expect natural process and degradation to take place. We don't expect to clean this up to the last molecule.

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