Department of Environmental Conservation

Division of Hazardous Waste Remediation

Record of Decision
ANITEC IMAGE
Operable Unit #2
City of Binghamton, Broome County
Site Number 7-04-022

March 1995

New York State Department of Environmental Conservation
GEORGE E. PATAKI, *Governor* MICHAEL D. ZAGATA, *Commissioner*

DECLARATION STATEMENT - RECORD OF DECISION

ANITEC IMAGE
Operable Unit 2
Inactive Hazardous Waste Site
Binghamton (C), Broome County, New York
Site No.7-04-022

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedial action for the Anitec Image Operable Unit #2 (OU2) inactive hazardous waste disposal site which was chosen in accordance with the New York State Environmental Conservation Law (ECL). The remedial program selected is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300).

This decision is based upon the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the Anitec Image OU2 Inactive Hazardous Waste Site and upon public input to the Proposed Remedial Action Plan (PRAP) presented by the NYSDEC. A bibliography of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

Assessment of the Site

Actual or threatened release of hazardous waste constituents from this site, if not addressed by implementing the response action selected in this ROD, presents a current or potential threat to public health and the environment.

Description of Selected Remedy

Based upon the results of the Remedial Investigation/Feasibility Study (RI/FS) for the Anitec Image OU2 Site and the criteria identified for evaluation of alternatives the NYSDEC has selected Removal of Contaminated Soil Alternative for this operable unit. This alternative will consist of:

- Removal of brush and trees from an area approximately 300 foot by a minimum of 20 foot immediately adjacent to the east-west fence line and an area approximately 200 feet by a minimum of 20 feet immediately adjacent to the north-south fence line. The fence line area to be remediated is adjacent to a portion of the common boundary line between Anitec Image and 51 Mygatt Street. See figure 2 for the area to be remediated.

- Removal of all dead organic matter from the surface the of remediation area.

- Removal of the six inches of surface soil containing high concentrations of metals historically associated with the smelter. An estimated 207 cubic yards will be removed for disposal at a permitted solid waste landfill or equivalent.

- Placement of six inches of topsoil in the remediation area and revegetating as required.

New York State Department of Health Acceptance

The New York State Department of Health concurs with the remedy selected for this site as being protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the statutory preference for remedies that reduce toxicity, mobility, or volume as a principal element.

3/31/95
Date

Michael J. O'Toole, Jr., Director
Division of Hazardous Waste Remediation

TABLE OF CONTENTS

SECTION 1: SITE LOCATION AND DESCRIPTION

The Anitec Image site is located at 40 Charles Street in the City of Binghamton, Broome County, New York. Anitec Image maintains and operates a manufacturing facility on the site. The site occupies a property of approximately 35 acres. Immediately adjacent to the facility are the Spring Forest Cemetery and a cogeneration power facility as well as residential and industrial areas. The location of the Anitec Image facility is shown on Figure 1.

Operable Unit No. 2, which is the subject of this ROD, consists of the small portion of the Spring Forest Cemetery property located at 51 Mygatt Street which is adjacent to the Anitec Image main plant site. An Operable Unit represents a discrete portion of the remedy for a site which for technical or administrative reasons can be addressed separately to eliminate or mitigate a release, threat of release or exposure pathway resulting from the contamination present at a site. The remaining operable unit(s) for this site are described in Section 2.2 below.

SECTION 2: SITE HISTORY

2.1: Operational/Disposal History

Anitec Image Division of International Paper Company ("Anitec") operates an imaging products manufacturing facility in Binghamton, New York. The facility has operated under a succession of different owners. In 1902, a merger between Anthony Company and Scoville & Adams Company resulted in the name Ansco. General Aniline Film (GAF) operated the facility from 1942 to 1981. In 1981, a group of investors formed Anitec Image Corporation and purchased the facility from GAF. International Paper Company purchased Anitec in December 1987, and in January 1990, Anitec was merged into International Paper Company. A smelter located in the northeast corner of the current manufacturing site and adjacent to the 51 Mygatt Street property, was used to recover silver from scrap film from 1958 to the mid 1970s. In 1974, an electrostatic precipitator was added to the smelter to control air emissions. Silver, cadmium and barium were deposited from the smelter's stack onto the immediately adjacent property.

2.2: Remedial History

The Anitec site became the subject of a New York State environmental investigation in May 1991. To date Anitec has performed three independent soil gas surveys, a two phase soil vapor survey, and sampled 11 existing production wells and 22 on-site monitoring wells. The analytical results of groundwater samples and other engineering reports submitted by Anitec have shown dissolved volatile contaminants in the groundwater underlying the site and high levels of inorganic compounds in the soils at various locations.

A consent order was entered into by Anitec and the New York State Department of Environmental Conservation on October 15, 1992 requiring the completion of a remedial investigation of the site. The main plant site, located at 40 Charles Street, is being investigated as Operable Unit No.1 (OU1). Two additional Operable Units were also established. The property located at 51 Mygatt Street is known as Operable Unit No. 2 and is the subject of this PRAP. Operable Unit No. 3 is the area on Clinton Street which houses the decommissioned power plant and current raw material warehouse.

Phase One of the Remedial Investigation for OU1 was conducted between November 1993 and May 1994.

SECTION 3: CURRENT STATUS

In response to a determination that the presence of hazardous waste the Anitec Site present a threat to human health or the environment, Anitec Image has recently completed a Remedial Investigation/Feasibility Study (RI/FS) for Operable Unit 2 which is the subject of this ROD. The investigation of the other operable units continues.

3.1: Summary of the Remedial Investigation

The purpose of the RI was to define the nature and extent of any contamination on the cemetery resulting from previous activities at the Anitec Image site.

The Operable Unit No. 2 RI was conducted in one phase between November 29, 1993 and March 12, 1994. A report entitled "Remedial Investigation/Focused Feasibility Study Report, 51 Mygatt Street, Binghamton, New York" and dated February 1995 has been prepared describing the field activities and findings of the RI in detail. A summary of the RI follows:

The RI activities consisted of the following:

- Collection of fifteen (15) soil samples in November 1993 for site characterization purposes and to determine contaminant distribution of inorganic (metal) compounds in the surface soils.

- Collection of five additional soil samples in May 1994 for confirmatory analysis of metals and to assess the vertical distribution of metals in the surface and shallow subsurface soils. In addition, an analysis of the leaching potential of the metals by the Toxic Characterization Leaching Procedure (TCLP) was completed.

To determine which media (soil, groundwater, etc.) contain contamination at levels of concern, the analytical data obtained from the RI was compared to environmental Standards, Criteria, and Guidance (SCGs). For the evaluation and interpretation of soil and sediment analytical results, NYSDEC soil cleanup guidelines that are protective of groundwater, background conditions, and risk-based remediation criteria were used to develop remediation goals for soil.

Based upon a comparison of the results of the remedial investigation to the SGCs and potential public health and environmental exposure routes, certain areas of the site require remediation. These are summarized below. More complete information can be found in the RI Report.

Chemical concentrations are reported in milligrams per kilogram.

Soils: Twenty surface and subsurface soils samples were collected from fifteen locations in the area adjacent to the former smelter, for characterization purposes. Based on the analytical results of these samples, it was determined that the concentration of four inorganic compounds, arsenic (< 1 mg/kg to 413 mg/kg), silver (4.3 mg/kg to 5,130 mg/kg), cadmium (< 1 mg/kg to 262 mg/kg), and barium (82.7 mg/kg to 12,200 mg/kg), were detected at levels above Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels (TAGM) 4046. For various metals background levels were used to determine clean-up concentrations. See figure 2 for sampling points. Sampling points which were found to

exceed TAGM or background levels for metals, which have been determined to be attributable to the use of the smelter (this excludes arsenic), are within the shaded area of figure 2.

Groundwater: Based on the limited depth of soil contamination (±6 inches which is based on sampling performed in the area of highest of surface contamination), the depth to groundwater at this site (±20 feet), and the nature of inorganic contamination with regard to its immobility in soils, no monitoring wells were required as part of the investigation of this operable unit. Groundwater will be addressed as part of Operable Unit 1.

Surface Water: There is no indication that surface water has been impacted by the contamination associated with this operable unit. This conclusion is based on an evaluation of the surface drainage patterns at this site.

3.2 Summary of Human Exposure Pathways:

This section describes the types of human exposures that may present added health risks to persons at or around the site. A more detailed discussion of the health risks can be found in Section 4 of the RI Report.

An exposure pathway is the process by which an individual comes into contact with a contaminant. The five elements of an exposure pathway are 1) the source of contamination; 2) the environmental media and transport mechanism; 3) the point of exposure; 4) the route of exposure; and 5) the receptor population. These elements of an exposure pathway may be based on past, present, or future events.

Potential exposure pathways which may exist at the site include the ingestion of soil, dermal contact with soil, and the inhalation of airborne particulates released from these on-site soils at the 51 Mygatt Street property. These exposure pathways for on-site soil contamination were considered potentially complete only for on-site excavation workers.

3.3 Summary of Environmental Exposure Pathways:

This section summarizes the types of environmental exposures which may be presented by the site.

No environmental exposure pathways have been identified for Operable Unit No. 2.

SECTION 4: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The NYSDEC and the Anitec Image, a division of International Paper Company entered into a Consent Order on October 15, 1992. The Order obligates Anitec Image to implement a full remedial program for its property.

SECTION 5: SUMMARY OF THE REMEDIATION GOALS

Goals for the remedial program have been established through the remedy selection process stated in 6NYCRR 375-1.10. These goals are established under the guideline of meeting all standards, criteria, and guidance (SCGs) and protecting human health and the environment.

At a minimum, the remedy selected should eliminate or mitigate all significant threats to the public health and to the environment presented by the hazardous waste disposed at the site through the proper application of scientific and engineering principles.

The goal selected for this site is:

- Prevent direct contact with soils containing high concentrations of metals that historically were associated with the operation of the smelter.

SECTION 6: SUMMARY OF THE EVALUATION OF ALTERNATIVES

Potential remedial alternatives for the impacted area of 51 Mygatt Street were identified, screened and evaluated in a Focused Feasibility Study. This evaluation is presented in the report entitled "Remedial Investigation/Focused Feasibility Study Report 51 Mygatt Street, Binghamton, New York" February 1995. A summary of the detailed analysis follows.

6.1: Description of Alternatives

The potential remedies are intended to address the contaminated soils at the site.

Based on the preliminary screening, the following remedial alternatives were retained for detailed evaluation:

- Alternative 1: No Action

Capital Cost	$0
Annual O&M	$0
Present Worth	$0

The no action alternative is evaluated as a procedural requirement and as a basis for comparison. It requires continued monitoring only, allowing the site to remain in an unremediated state, and human health and the environment would not be provided any additional protection.

This is an unacceptable alternative as the site would remain in its present condition.

- Alternate 2: Removal of Contaminated Soils

Capital Cost	$28,000
Annual O&M	$0
Present Worth	$28,000
Time to Implement	6 months

This alternative would consist of the clearing of small brush and trees, removal of dead organic matter on the soil surface, and the removal of the top six inches of topsoil in an area that extends approximately two hundred feet along the existing fence in both the north and east directions by a minimum of twenty feet out from the fence; this is the shaded area shown on figure 2. Clean topsoil would be placed in the excavated areas and new vegetation would be planted. Any non-hazardous soils removed would be disposed of in the Broome County Landfill or other permitted landfill.

- Alternate No 3: Capping of Contaminated Soils

Capital Cost	$17,000
Annual O&M	$0
Present Worth	$17,000
Time to Implement	6 Months

This alternative would also require the clearing of small brush and trees and removal of all dead organic matter. A soil cap consisting of six inches of clean topsoil placed over the contaminated soil and vegetation would be restored as necessary. Safety and health guidelines for excavating through contaminated soils would be developed for the cemetery workers .

6.2 Evaluation of Remedial Alternatives

The criteria used to compare the potential remedial alternatives are defined in the regulation that directs the remediation of inactive hazardous waste sites in New York State (6NYCRR Part 375). For each of the criteria, a brief description is provided followed by an evaluation of the alternatives against that criterion. A detailed discussion of the evaluation criteria and comparative analysis is contained in the Feasibility Study.

The three alternatives being considered have been restated below as a reference for the following evaluation:

- Alternative 1: No Action
- Alternative 2: Removal of Contaminated Soils
- Alternative 3: Capping of Contaminated Soils

1. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether or not a remedy will meet applicable environmental laws, regulations, standards, and guidance.

Alternative 2 and 3 would be designed and implemented to meet SCGs.

2. Protection of Human Health and the Environment. This criterion is an overall evaluation of the health and environmental impacts to assess whether each alternative is protective.

All of the remedial alternatives (except no-action) would be protective of human health and environment. The soil capping alternative would require the development of health and safety guidelines for cemetery workers excavating through the contaminated soils.

3. Short-term Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared with the other alternatives.

Alternative 2 would involve soil excavation. Soil alternatives that involve soil excavation present a potential for short-term risks to on-site workers due to dust migration during implementation. However, due to the small amount of material to be removed, the low level of contamination, engineering controls to suppress dust, and the short time required to implement this alternative, the risk would be minimal. Alternative 3 would not present a potential for short-term risk to on-site workers since no movement of contaminated soils would occur.

4. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of alternatives after implementation of the response actions. If wastes or treated residuals remain on site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the controls intended to limit the risk, and 3) the reliability of these controls.

The no-action alternative would not meet the remedial action objectives for Anitec Image Operable Unit No. 2. Direct contact with the contaminated soils is not prevented.

The capping alternative would meet the remedial objective of preventing direct contact with soils containing high concentrations of metals and would meet the NYSDEC clean-up guidelines, with the possible exception of an cemetery employee unknowingly excavating in the area of contamination.

The soil removal alternative would meet the remedial objective of eliminating direct contact with soils containing high concentrations of metals.

5. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the soils containing high concentrations of metals at the site.

The no action alternative would not permanently and significantly reduce the toxicity, mobility or volume of soils containing high concentrations of metals.

The capping alternative would not permanently remove or reduce the volume or toxicity of the soils containing high concentrations of metals from the site. The alternative would significantly reduce mobility of the metals by preventing transport via surface water runoff.

The soil removal alternative would reduce the volume, toxicity, and mobility of the soils containing high concentrations of metals by eliminating them from the site.

6. Implementability. The technical and administrative feasibility of implementing each alternative is evaluated. Technically, this includes the difficulties associated with the construction, the reliability of the technology, and the ability to monitor the effectiveness of the remedy. Administratively, the availability of the necessary personnel and material is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, etc.

All the alternatives are easily implemented; however, Alternative 1 and 3 would require that all future cemetery workers be advised that soil removal in this area would be prohibited.

7. Cost. Capital and operation and maintenance costs are estimated for each alternative and compared on a present worth basis. Although cost is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the remaining criteria, cost effectiveness can be used as the basis for the final decision. The costs for each alternative are presented in Table 1.

8. Community Acceptance. Concerns of the community regarding the RI/FS reports and the Proposed Remedial Action Plan have been evaluated. The NYSDEC and NYSDOH conducted a public meeting regarding the PRAP on February 28, 1995, at which there were no public objections to the proposed remedy. Based on the comments and questions raised at the public meeting the public is in support of the selected remedy of Removal of Contaminated Soil, relevant concerns raised during the meeting focused on the details of the soil removal and the detection of arsenic at the 51 Mygatt St. property. With regard to the arsenic the public was informed that arsenic was not historically associated with the operation of either the smelter or the Anitec Image facility in general, and therefore is not an issue which will be addressed by this PRAP and ROD. The NYSDEC accepted written comments from February 20,1995 through March 21, 1995. No written comments were received. A "Responsiveness Summary" was prepared to address the comments received at the public meeting and is included herein as Appendix A. The final remedy selected does not differ from the proposed remedy.

SECTION 7: SUMMARY OF THE PREFERRED REMEDY

Based upon the results of the RI/FS, and the evaluation presented in Section 6, the NYSDEC has selected Alternative 2 as the remedy for this site.

This selection is based upon the comparative analysis of the three alternatives:

- The no-action alternative (Alternative No. 1) would not prevent the direct contact with soils containing high concentrations of metals. In addition, it would not reduce the toxicity, mobility, and volume of metals in the soils.

- Alternatives 2 would eliminate the toxicity, mobility and contact with the soils containing high concentrations of metals.

- Alternative 3 would reduce mobility, and prevent contact with the soils containing high concentrations of metals. Alternative 2 would also reduce the volume of soils containing high concentrations of metals on the site.

All of the alternatives except no-action, would be protective of human health and the environment. However, Alternative 2: Removal of Contaminated Soils would be the most cost-effective alternative capable of satisfying the seven evaluation criteria outlined previously, and meeting the Remedial Action Objectives for Operable Unit No. 2

Therefore, Alternative 2 is the selected remedial alternative for soils containing high concentrations of metals at the 51 Mygatt Street site (see Figure 2.)

The estimated present worth cost to implement the remedy is $28,000.

The elements of the selected remedy are as follows:

1. Removal of brush and trees from an area approximately 300 foot by a minimum of 20 foot immediately adjacent to the east-west fence line and an area approximately 200 feet by a minimum of 20 feet immediately adjacent to the north-south fence line. The fence line area to be remediated is adjacent to a portion of the common boundary line between Anitec Image and 51 Mygatt Street. See figure 2 for the area to be remediated.

2. Removal of all dead organic matter from the surface of the remediation area.

3. Removal of the six inches of surface soil containing high concentrations of metals historically associated with the smelter. An estimated 207 cubic yards will be removed for disposal.

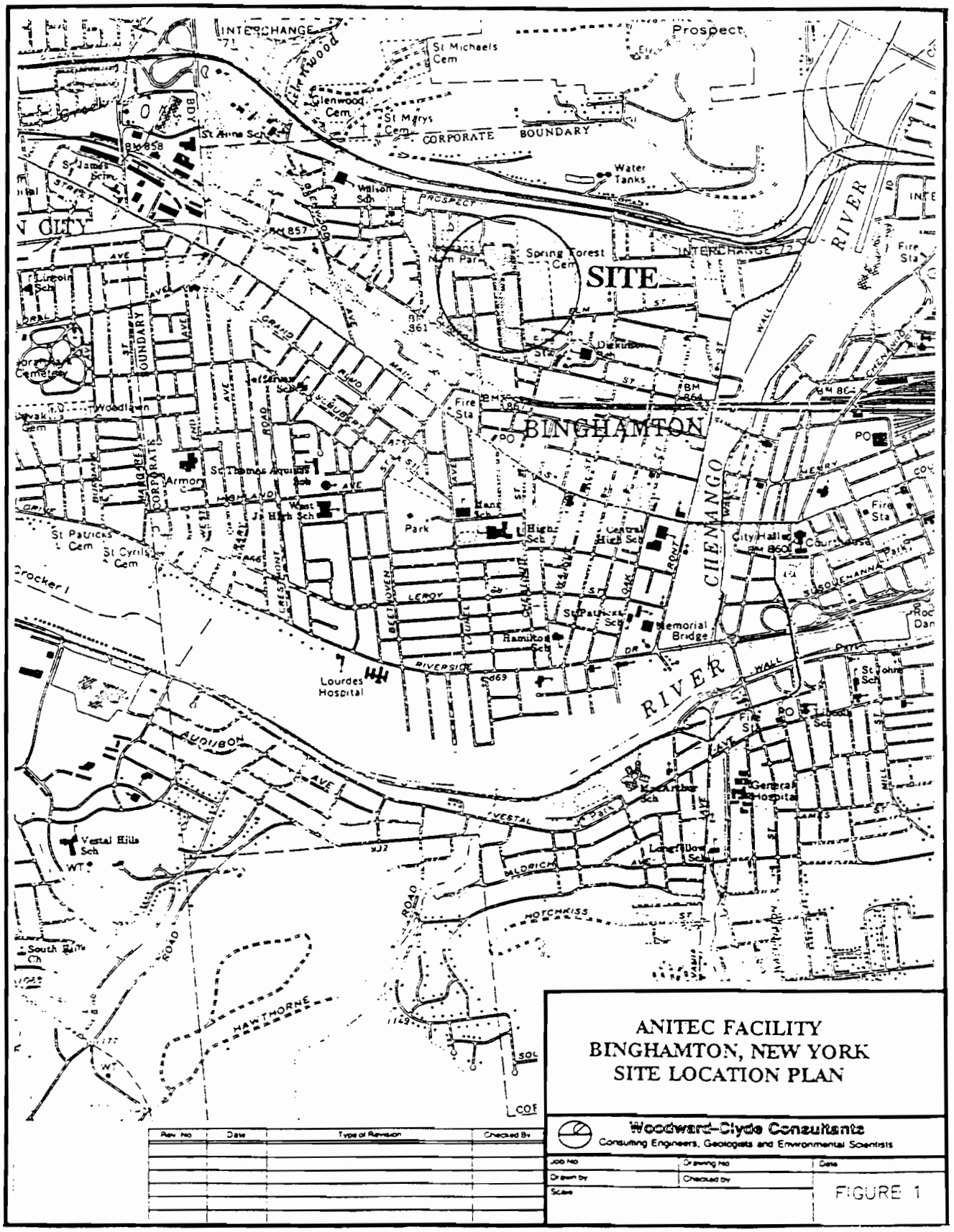
4. Placement of six inches of topsoil in the remediation area and revegetating as required.

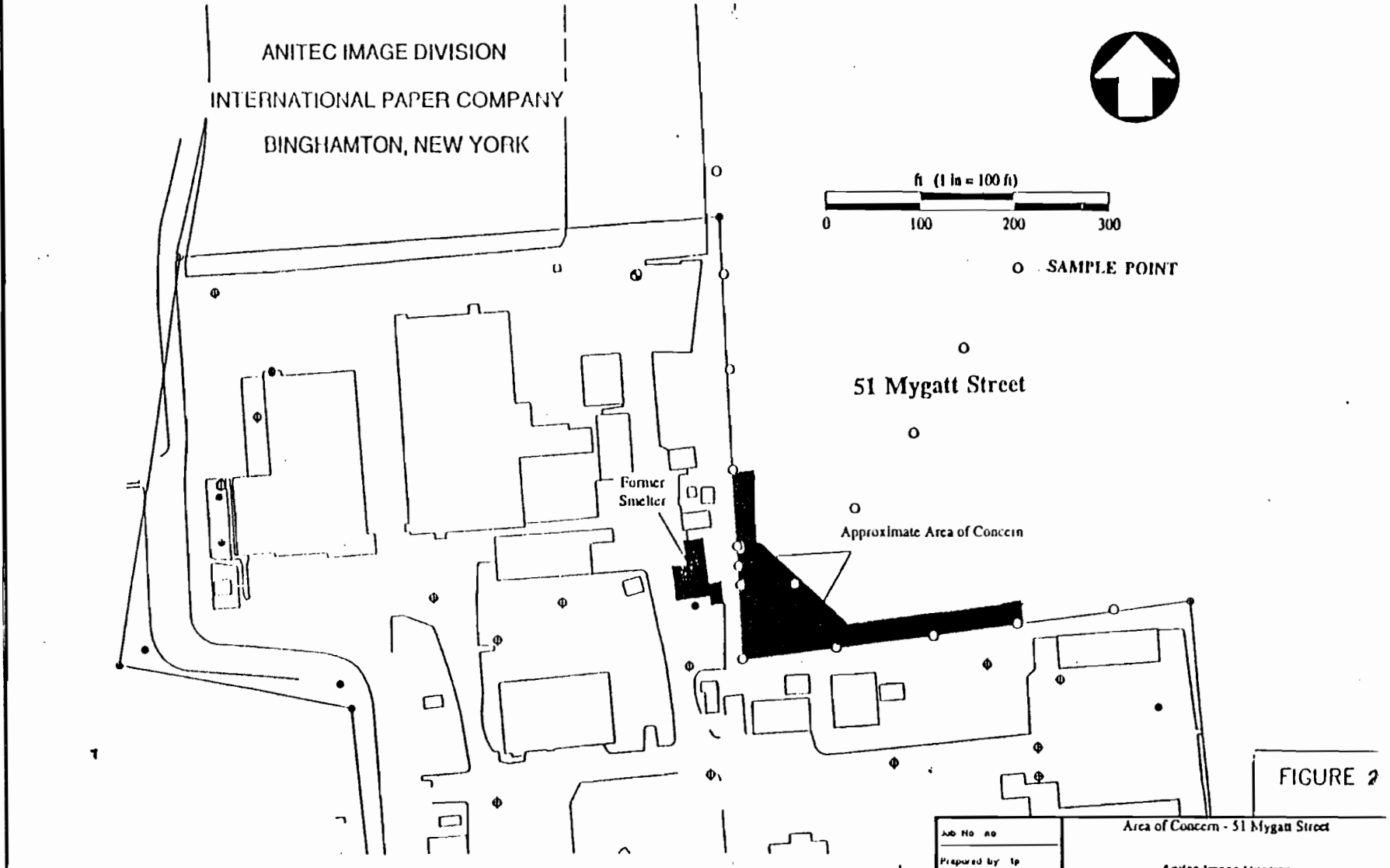
SECTION 8: SUMMARY OF CITIZEN PARTICIPATION ACTIVITIES

As part of the remedial investigation process, a citizen participation plan (Community Awareness Plan) was developed for the Anitec Image OU2 site. The principal objectives of this plan are: inform the public about conditions at the site; educate the public regarding the PRAP; obtain public comment on the PRAP; obtain support (community acceptance) of the selected remedial action; and insure that all comments obtained from the public are evaluated and answered in a Responsiveness Summary.

The following public participation activities were conducted at this site:

- February 20, 1995 — Start of the Public Comment Period for the Proposed Remedial Action Plan (PRAP).
- February 28, 1995 — Public meeting to present the Proposed Remedial Action Plan and receive public comment.
- March 21, 1995 — Close of Public Comment Period for the Proposed Remedial Action Plan.


SITE
BINGHAMTON
CHENANGO RIVER
RIVER
CORPORATE BOUNDARY
Prospect
St Michaels Cem
Glenwood Cem
St Marys Cem
St Anne Sch
Water Tanks
Wilson Sch
Spring Forest Cem
INTERCHANGE 72
Fire Sta
Lincoln Sch
Woodlawn Cemetery
St Thomas Armory
West Jr High Sch
Park
High Sch
Central High Sch
City Hall
Court House
St Patricks Cem
St Cyrils Cem
Crocker I
Memorial Bridge
St Patricks Sch
Hamilton Sch
Lourdes Hospital
St Johns Sch
General Hospital
St Ambrose Sch
Vestal Hills Sch
Lowell Dow Sch
South Side Ch
AUDUBON AVE
VESTAL
MILDRICH
HOTCHKISS ST
HAWTHORNE
ANITEC FACILITY
BINGHAMTON, NEW YORK
SITE LOCATION PLAN
Woodward-Clyde Consultants
Consulting Engineers, Geologists and Environmental Scientists
FIGURE 1


Woodward-Clyde Consultar
ANITEC IMAGE DIVISION
INTERNATIONAL PAPER COMPANY
BINGHAMTON, NEW YORK
ft (1 in = 100 ft)
0
100
200
300
SAMPLE POINT
51 Mygatt Street
Former Smelter
Approximate Area of Concern
FIGURE 2
Area of Concern - 51 Mygatt Street
Anitec Image Division
Binghamton, New York

Anitec Image - Operational Unit No. 2

Table 1
Estimated Alternative Costs

Alt. No.	Description of Alternative	Est. Costs		
No.1	No Action	Capital Cost	$	0
		Annual Cost	$	0
		Present Worth	$	0
No. 2	Surface soil excavation, backfill with clean topsoil	Capital Cost	$	28,000
		Annual Cost	$	0
		Present Worth	$	28,000
No. 3	Capping with soil	Capital Cost	$	17,000
		Annual Cost	$	0
		Present Worth	$	17,000

Appendix A

RESPONSIVENESS SUMMARY
FOR THE
ANITEC IMAGE SITE
OPERABLE UNIT #2
PROPOSED REMEDIAL ACTION PLAN

The Proposed Remedial Action Plan (PRAP) for the Anitec Image Site, Operable Unit #2, was prepared by the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) and issued to the local document repository on February 20, 1995. This plan outlined the preferred remedial measure proposed for the remediation of the contaminated soil at the 51 Mygatt Street site. The preferred remedy is Removal of Contaminated Soil.

The release of the PRAP was announced via a notice to the mailing list, informing the public of the PRAP's availability.

A public meeting was held on February 28, 1995 which included a presentation of the Remedial Investigation (RI) and the Feasibility Study (FS) as well as a discussion of the proposed remedy. The meeting provided an opportunity for the citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. The public comment period for the PRAP ended on March 21, 1995.

This Responsiveness Summary responds to all questions and comments raised at the February 28, 1995 public meeting. No written comments were received.

The following comments received at the public meeting, with the NYSDEC's and the NYSDOH'

COMMENT 1: What kind of threat does this site pose to humans?

RESPONSE 1: The "threat" consists of the potential for exposure to levels of metals above health based levels of concern or background concentrations. Potential exposure pathways which are known to or may exist at the site include the ingestion of soil, dermal contact with soil, and the inhalation of airborne particulates released from these on-site soils at the 51 Mygatt Street property. These exposure pathways for on-site soil contamination were considered potentially complete only for on-site excavation workers.

COMMENT 2: What is an example of someone in close proximity to the area of contamination?

RESPONSE 2: A cemetery worker is an example of someone who would be in close proximity the area of contamination, if that person was actively working in the portion of the

cemetery in question. Activities would which result in exposure to the soil or dust could expose workers to elevated levels of metals.

COMMENT 3: Are you going to plant trees & grass?

RESPONSE 3: The remediated area will be reseeded. No trees will be replanted.

COMMENT 4: Is there any land contaminated in the cemetery?

RESPONSE 4: The entire area to be remediated, which is very limited in size, is located within the Spring Forest Cemetery. The sampling data indicates that the soil contamination is limited to the area shown on figure #2.

COMMENT 5: How far down is cleanup taking place?

RESPONSE 5: Since the contamination is only a surface problem, based on sampling performed to depths of 12 to 18 inches in the area of the highest surface contamination, only the top ± 6 inches of soil needs to be removed.

COMMENT 6: Will the ballpark or basketball park be impacted?

RESPONSE 6: Neither the ballpark nor the basketball park has been, or will be, impacted by this site due to the distance between the parks and this site. The surface soils at these two locations have been sampled and were not found to be contaminated.

COMMENT 7: What did the drums contain at the GAF Site?

RESPONSE 7: To date only nonhazardous chemicals, utilized in the production of photographic film have been detected in the drums at the GAF site. Results of all findings will be made available to the public at the completion of the Preliminary Site Assessment investigation.

COMMENT 8: What happens if they find chemicals in the GAF Site?

RESPONSE 8: The GAF Dump site is currently undergoing a Preliminary Site Assessment (PSA) investigation to determine if hazardous waste as defined by 6NYCRR Part 371 is identified at this site and if the site poses a significant threat to the public health or the environment. Based on the findings of this (PSA) investigation the site will be reclassified or delisted.

COMMENT 9: Why was the concentration of arsenic so high far away from smelter? Why isn't the corrective action addressing the high levels of arsenic? Is an arsenic investigation on-going? Why would the cemetery use arsenic?

RESPONSE 9: The sample data from the area along the fence line does not indicate that the Anitec Plant is the source of the Arsenic. This is supported by data from the plant site itself. Arsenic is not a soil contaminant in other areas around Anitec. The pattern of occurrence of Anitec related contaminants such as Silver, Cadmium and Barium shows that higher levels are detected in soils nearer the smelter site and that the concentrations of all of these metals decrease with distance. This is consistent with what would be expected if the smelter was the source of these metals. This is not the case with Arsenic. The levels of Arsenic along the fence increase and then decrease again as one moves away from the southwest corner of the cemetery where metals from the smelter were found. Furthermore, of the three sampling transects in the cemetery, only the north-south oriented fenceline has elevated levels of Arsenic present in the surface soils.

Arsenic has been used in herbicides, insecticides and rodenticides and could persist in soils where these products were used. It is possible that the presence of arsenic along the fence may be due to past applications of such products in that area. The sample data does not seem to show that arsenic is widespread in the survey area.

The average concentration of arsenic along the north-south fenceline, using the five highest concentrations (all in parts per million - 33.6 ppm, 40.2 ppm, 413 ppm, 277 ppm and 131 ppm as they occur in order along the fence), is 179.6 ppm. This concentration would be a concern if very frequent exposures were likely; for example children playing in soil on a daily basis. The cemetery is an unlikely location for significant community exposures to take place. The land is not used in the same way that a park with athletic fields or a schoolyard area. Daily exposures on the part of the public are unlikely and vegetables are not grown at this site as they would be in a garden on residential property.

Given the concentrations of arsenic found and the infrequent and very limited exposures to the public, no public health hazard is indicated.

COMMENT 10: What does arsenic have to do have to do with immune system?

RESPONSE 10: Information on the adverse effects of arsenic on the immune system is limited. In humans, effects on the immune system following inhalation or oral exposure to arsenic have not been well studied. In one study with laboratory animals (Aranyi et.al., 1985), high level exposure to arsenic trioxide by inhalation led to increased susceptibility to respiratory infections. In another study (Kerkvliet et.al., 1980), animals originally exposed to arsenic at high levels showed no evidence of immunosuppression. The Agency for Toxic Substances and Disease Registry (ATSDR, 1993) concluded that the available information is insufficient to draw firm conclusions about the immunotoxicity of arsenic.

Within the context of this investigation, significant exposures to arsenic are not indicated. This is discussed in more detail in Response #9.

COMMENT 11: I owned a home in the 1st ward when I was pregnant and there were strong chlorine odors. Fortunately I gave birth to a healthy child.

RESPONSE 11: The odors were likely due to chlorine which was used to treat their noncontact cooling water. Anitec Image has discontinued the use of chlorine gas to treat the noncontact cooling water.

COMMENT 12: Is cancer the only concern? What about cataracts?

RESPONSE 12: There is no known link between cataracts and the chemicals of concern associated with the Anitec Image site or the GAF Dump site. If anyone is concerned about any medical problems that they feel may be associated with the Anitec Image site, they should first see their doctor. If their doctor is concerned he or she can contact NYSDOH at 1-800-458-1158 Ext. 402 for assistance.

COMMENT 13: Is there a cancer report coming out in this area?

RESPONSE 13: A cancer incidence study will be released in 1995.

COMMENT 14: Will the cancer survey be another questionnaire?

RESPONSE 14: No. Cancer incidence studies are conducted by using the New York State Cancer Registry. By NYS law hospitals and doctors must report cancer cases to this Registry. The number of cases of cancer observed in the study area (as reported to the Registry) will be compared to the numbers of cases that would be expected in similar areas, accounting for population size, age and sex distribution and population density. Comparisons of observed and expected cases will be performed for all cancers combined and for a variety of different cancers.

COMMENT 15: What were the stacks/tanks right off Charles St?

RESPONSE 15: The stacks and tanks were part of Anitec's ammonia process equipment.

COMMENT 16: Will more areas need to be cleaned up?

RESPONSE 16: Based on preliminary findings it appears that additional areas at the Anitec Image site will require remediation. The extent and nature of the necessary remediation cannot be determined until the full remedial investigation is complete.

COMMENT 17: How is the plant affecting the soil in the area?

RESPONSE 17: Based on surface soil sampling that has been completed there is no indication that soils other than on the Anitec Image site proper and a small portion of the 51 Mygatt Street property have been impacted by any past releases from the facility.

COMMENT 18: Does Anitec have its own water system?

RESPONSE 18: Anitec has a network of groundwater pumping wells, the wells are located both on and off site. Anitec's wells are primarily used for the purpose of supplying noncontact cooling water. Anitec does not currently use its well water as a potable water supply.

COMMENT 19: What will the chemicals do when combined at GAF Site?

RESPONSE 19: Based on the findings to date with regard to the various chemicals identified at the GAF Dump site, NYSDOH and NYSDEC are not concerned with the outcome of the possible combining of site chemicals. The chemicals currently identified are not of the type or quantity to present an additional problem if combined.

COMMENT 20: Worker in 1965 mixed chemicals and poured the chemicals into a floor drain.

RESPONSE 20: Past releases should be identified during the RI/FS process.

Appendix B

Administrative Record

The following documents constitute the Administrative Record for the Anitec Image OU#2 Site Remedial Investigation/Feasibility Study (RI/FS).

1. "Remedial Investigation Report, Anitec Image Division of International Paper Company, Binghamton, New York" February 1995

2. "Remedial Investigation/Focused Feasibility Study Report, 51 Mygatt Street, Binghamton, New York". February 1995

3. "Proposed Remedial Action Plan, Anitec Image, Operable Unite #2, Binghamton (C), Broome County." February 1995

4. "Responsiveness Summary for the Anitec Image Site, Operable Unit #2, Proposed Remedial Action Plan"

5. "Fact Sheet for Anitec Image, Operable Unite #2, Proposed Remedial Action Plan". February 1995

6. Listing in the New York State Registry of Inactive Hazardous Waste Sites