EXHIBIT 2 - USEPA ACTION MEMORANDA

(August 2, 2004, September 30, 2005, and September 27, 2006)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

ACTION MEMORANDUM

DATE: AUG - 2 2004

SUBJECT: Request for a CERCLA Removal Action at the Fort Orange Paper Site, Castleton-on-Hudson, Rensselaer County, New York

FROM: Andrew L. Confortini, On-Scene Coordinator
Removal Action Branch

TO: George Pavlou, Director
Emergency and Remedial Response Division

THRU: Richard C. Salkie, Chief
Removal and Emergency Preparedness Program

Site ID#: UT

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of the proposed removal action described herein for the Fort Orange Paper Site (Site), located at 1900 River Road, Castleton-on-Hudson, Rensselaer County, New York 12033 (see Figure 1). The proposed project ceiling is $284,400, of which $237,000 is for mitigation contracting.

This Action Memorandum will authorize the removal of deteriorated friable asbestos insulation materials located along exterior portions of the facility structures which continue to deteriorate and be released into the environment. This Action Memorandum will also authorize the implementation of Site security measures, the remediation of a mercury spill within the boiler house, and removal of labpack containers.

The Site is not on the National Priorities List (NPL) and there are no nationally significant or precedent-setting issues associated with this removal action.

II. SITE CONDITIONS AND BACKGROUND

The Comprehensive Environmental Response, Compensation, and Liability Information System ID Number for this time-critical removal action is NYD093247062.

A. Site Description

1. Removal site evaluation

On November 7, 2003, the U.S. Environmental Protection Agency (EPA) received a request from the New York State Department of Environmental Conservation (NYSDEC), Division of Hazardous Waste Remediation, to evaluate the Site for a removal action under the provisions of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended, 42 U.S.C. §§ 9601-9675 (see Attachment A).

On December 2, 2003, On-Scene Coordinators (OSC's) from the Removal Action Branch (RAB) and Response and Prevention Branch (RPB) conducted an initial Site inspection accompanied by representatives from NYSDEC. Based upon the size of the facility and nature of observed chemical hazards, a subsequent inspection with members from the Removal Support Team (RST) was scheduled for February 18, 2004. The purpose of this visit was to: 1) obtain representative insulation material samples to determine the presence of asbestos-containing materials; 2) evaluate indoor air quality for the presence of volatile organics; and 3) to gather information regarding the types and quantities of labpack chemicals. The two-day reconnaissance included entering each of the eight Site structures for the purpose of documenting Site environmental conditions, as reported by NYSDEC. A total of ten insulation material samples were collected and submitted to EMSL Analytical, Inc. of Westmont, New Jersey for Polarized Light Microscopy (or PLM) and Transmission Electron Microscopy (or TEM) bulk asbestos analysis. The samples were collected from those areas where appreciable amounts of suspected asbestos-containing material were evident, either on the exterior ground surface or building floor. The approximate location of each sampling point is provided on Figure 2. Attachment B includes a complete set of all digital photographs taken during this phase of the Site evaluation. The Removal Site Evaluation report is included (without attachments) as Attachment C.

Of the ten samples collected by EPA and RST during the reconnaissance, nine contained asbestos fibers. The total asbestos fiber (chrysotile and amosite) content in each sample ranged from 5.9% to 59.3%. A copy of the complete analytical results package is provided in Attachment D. In addition to the asbestos investigation, EPA and RST personnel identified a mercury spill on the second floor of the boiler house. Based upon the location of this spill, it appears to have been created as result of the removal and/or salvaging of boiler components. Personnel also identified several piles of degraded transite piping within a field north of the main building and along the Moordener Kill and various labpack containers throughout the facility structures.

2. Physical location

The Site is located at 1900 River Road (a.k.a. Route 9J) in Castleton-on-Hudson, Rensselaer County, New York (see Figure 1). The Site covers approximately 103 acres and includes eight separate buildings. These structures are constructed of brick and wood building materials, the oldest building being approximately 146 years old. Former operations within these structures included a paper machine area, printing department, an electrical shop, maintenance shop, stripping department, glue department, oil shed, lube shop, polymer blending laboratory, auto shop, locomotive garage and boiler house. Figure 2 provides a layout of the entire facility in greater detail, as it appeared at the time of inspection. In addition, facility operations also included the utilization of a 125-foot by 200-foot wastewater treatment lagoon. The lagoon is located along the northern perimeter of the Site and is shown in operation on the May 1995 aerial photograph included as Figure 3. The Site is bordered in all directions by residential properties. The closest residential dwelling is a nursing home which is located less than one-tenth of a mile to the southwest of the Site.

The area around the Site is generally rural. The facility is located within a valley bordered along the northern and southern borders by ridges. An estimated 1,283 residents from the Village of Castleton-on-Hudson live within a one-mile radius of the Site. Potable water is supplied to the Village of Castleton-on-Hudson via a municipal water supply. The municipal well field is located approximately twelve miles upgradient of the Site.

The Moordener Kill flows through the Site. The majority of the facility buildings and operations were located south of this waterway. The Moordener Kill drains directly into the Hudson River which is located approximately one-half mile west of the Site. Surface water runoff from the facility discharged directly into the Moordener Kill. The Moordener Kill is a New York State Class C trout stream waterway in the area of the Site. According to the Fort Orange Paper Co. Best Management Practices (BMP) document submitted to NYSDEC May 25, 2001, facility floor drains and sumps, including sanitary wastes, were treated in an on-Site wastewater treatment plant before being discharged into the Moordener Kill. The on-Site wastewater treatment consists of a primary clarifier that discharges into one of two aerated lagoons that were constructed to buffer and equalize any releases from the facility prior to discharging into the Moordener Kill.

At this time, no Site-specific information is available regarding the groundwater beneath the property. Due to the proximity of the Hudson River and the Moordener Kill, perched groundwater is anticipated to be relatively shallow, less than ten feet below grade.

Based upon information contained in the BMP documents dated May 25, 2001 and October 1992, it appears that Fort Orange Paper Co. disposed of non-putrescible wastes (strapping, string, broken wooden pallets, etc.) and coal ash solids generated in the boiler house

in an on-Site landfill. The office and putrescible wastes were hauled off-Site and disposed of in a local landfill. The exact location of the on-Site landfill is currently being investigated.

3. Site characteristics

The Site is the location of a former paper manufacturer which operated from 1858 until the plant closed in February 2002. An investigation into the nature of facility operations during its 144-year history is currently underway. The most recent operations involved the manufacture of clay-coated folding box board out of recycled paper for use in cereal boxes and other consumer packaging. A portion of the finished products produced involved the use of lithograph dyes. According to local press reports, the facility had a daily output of 140 tons per day (tpd) of paperboard derived from waste paper.

Power to the facility was cut off due to non-payment of bills causing a cessation of operations at the Site on February 28, 2002. John P. Hay was reportedly the President of Fort Orange Paper Company at the time it ceased operations.

Since the closure of the Site facility, extensive salvage operations have occurred there. According to the State, a New York City-based factoring company, Millberg Factors, either salvaged or arranged for the salvage of various pieces of equipment at the facility. It appears that in the process of the salvage operations, asbestos-containing materials were damaged and/or disbursed throughout the buildings and main plant area grounds and that the mercury spill may have been caused.

4. Release or threatened release into the environment of a hazardous substance, or pollutant, or contaminant

The following hazardous substances have also been identified in various containers located throughout the Site:

Substances Identified	Statutory Source for Designation as a Hazardous Substance
Ammonium chloride	CWA § 311(b)(4)
Ferric chloride	CWA § 311(b)(4)
Perchloroethylene	CWA § 307(a), RCRA § 3001
Phosphoric acid	CWA § 311(b)(4)
Potassium hydroxide	CWA § 311(b)(4)
Sodium hydroxide	CWA § 311(b)(4)
Mercury	CWA § 307(a); CAA § 112; RCRA § 3001
Asbestos	CWA § 307(a); CAA § 112

In the statutory sources cited above, CWA § 311(b)(4) indicates that the source is Section 311(b)(4) of the Clean Water Act, CWA § 307(a) indicates that the source is

Section 307(a) of the Clean Water Act, CAA § 307 (a), and RCRA § 3001 indicates that the source is Section 3001 of the Resource Conservation and Recovery Act (RCRA).

These hazardous substances are acutely and chronically toxic, corrosive, reactive, and/or flammable. The potential health effects from these compounds are identified below:

Potential Health and Toxicological Effects

Chemical	Irritant	Kidney/ Liver Damage	Dermal/ Eye Effects	Blood/ Cardio Damage	Respiratory Effects	CNS Damage
Ammonium chloride					x	x
Ferric chloride	x	x	x		x	
Perchloroethylene	x	x	x		x	x
Phosphoric acid	x		x		x	
Potassium hydroxide	x		x		x	
Sodium hydroxide	x		x		x	
Mercury	x		x		x	x
Asbestos					x	

The environmental threats posed by these materials include airborne release and the potential for migration of contamination into the surface water and groundwater. Numerous events could trigger releases, but the chief concerns are fire, trespassers, and weather conditions. Precipitation can, over time, further erode the asbestos-containing material (ACM) presently outside of the buildings and result in runoff carrying fibers into the soil and migrating off-Site. Followed by dry conditions, the fibers could then become airborne from the soil.

Hazardous materials have been released at the Site. The manner in which the remaining structures are open to the elements (e.g., broken walls, roofs, and windows) and the potential for additional portions of the structure to collapse may result in the release of additional hazardous materials. The sampling results confirmed that asbestos has been released at the Site. During Site reconnaissance, significant quantities of friable asbestos were observed on the floors within many of the facility structures as well as on the ground surface immediately outside the boiler room. As a result of the dilapidated condition of the Site structures, the asbestos material has deteriorated and migrated.

The ten insulation material samples collected on February 18, 2004 during the EPA/RST Site inspection indicate the presence of asbestos in nine of those samples ranging from 5.4 to 59.4%.

A copy of all analytical results are provided as Attachment C. Sample locations are illustrated on Figure 2. The fiber types were identified as either chrysotile or amosite. Sample FOP-PD-06 (54.7% chrysotile) was collected from pipe insulation located within the collapsed portion of the printing department. Due to the roof collapse, some of this material is exposed to the environment. Outdoor sample, FOP-CY-02, was found to contain 7.4% chrysotile. In both cases, a portion of this insulation material has already weathered to the point where it has fallen off the piping.

Eight samples were collected from various areas within the Site structures. Due to many factors, including the lack of heat in the facility, the doors being left open, vandals breaking the majority of the building windows, and salvage activities, much of the ACM indoors has become weathered or damaged. In many cases, the ACM have fallen off piping and can be found on the building floors. This material has become extremely friable due to exposure to the elements. High winds, common at the Site, can easily cause asbestos fibers to be separated from their source and become airborne. Due to the local topography and the relative arrangement of facility structures on the Site, the channeling effect of wind and air currents between these building may increase the dispersion of asbestos fibers.

The releases from the Site could impact unprotected persons on-Site through direct contact or inhalation exposure. The potential exists for trespassers to come into contact with the hazardous materials during salvage operations, which could impact persons in the vicinity of the Site, especially within the residential areas.

When asbestos is friable, it is designated as a CERCLA hazardous substance under 40 CFR § 302.4. Friability is the ease with which a material can be crumbled, pulverized or reduced to powder when dry, by hand pressure. The more friable the material, the greater the potential for fiber release and contamination. It is reported that, once released, asbestos fibers have the ability to remain entrained in the air for extensive periods.

Corrosive liquids in drums are found throughout many of the facility structures. A complete summary of these materials is provided as Attachment E.

5. NPL status

The Site is not a NPL site. A Hazard Ranking System (HRS) package is not being prepared.

B. Other Actions to Date

1. Previous actions

There have been no Federal CERCLA actions taken at the Site. Immediately prior to and concurrent with EPA activities, NYSDEC had removed a variety of hazardous materials from the Site. The scope of NYSDEC work involved contacting the manufacturers of materials found on-

Site to determine if they would remove their products from the Site. As a result, NYSDEC arranged for approximately 8,000 gallons of hazardous materials in various sized containers to be removed from the premises. In addition, NYSDEC contracted a waste oil recycler to remove the 75 55-gallon drums containing waste oil. The removal was 80% completed when persistent freezing weather conditions forced the operations to cease until more favorable weather was present. Approximately 50 containers (ranging from 5-gallon pails to 55-gallon drums) containing waste oils, lube oils, and grease remain at the Site and may or may not be removed by NYSDEC.

2. Current actions

Currently, no actions are being taken at the Site.

C. State and Local Authorities' Role

1. State and local actions to date

NYSDEC has requested that EPA perform a CERCLA emergency response action at the Site.

2. Potential for continued State/local response

At this time, it is not clear whether NYSDEC will remove from the Site the remaining waste oils, lube oils, and grease referenced above in the previous actions section. Other than this potential additional removal activity by NYSDEC, no further State response action is expected at the Site.

III. THREAT TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

A. Threats to the Public Health or Welfare

Hazardous substances, pollutants or contaminants present at the Site represent a threat to the public health and welfare as defined by Section 300.145(b)(2) of the National Contingency Plan (NCP), in that there is a high potential for releases to continue to occur due to exposure to the elements, past salvaging operations, poor housekeeping and the deteriorated condition of the containers. Factors that support the removal action at this Site include:

1. Actual or potential exposures to nearby human populations, animals, or the food chain from hazardous substances, pollutants, or contaminants [40 CFR § 300.415(b)(2)(i)];

There is a potential exposure to nearby human populations, animals or the food chain from hazardous substances or pollutants or contaminants (40 CFR §300.415(b)(2)(i)). The primary potential routes of exposure to asbestos at the Site are inhalation and ingestion, while the primary

potential routes of exposure to the drummed hazardous materials are direct contact and inhalation. Individuals that access the Site may be exposed to the asbestos, the spilled mercury, and the drummed hazardous materials that are in the buildings or rubble piles. Individuals coming into contact with both the asbestos and hazardous materials may transport the materials off-Site on their clothing and/or shoes, thus potentially impacting others.

Asbestos is a general term used to describe minerals that tend to form fibers when they are broken. These minerals are formed under conditions of very high heat and pressure deep within the earth, and they are resistant to the types of temperatures and pressures found in our surface environment. Because their chemical composition is unchangeable, an asbestos mineral will always break into fibers. Large fibers have the potential to break into smaller ones, which eventually results in its reduction to microscopic size. Because of their small size, shape, and lightness, these fibers act are more like a gas than a dust.

Chrysotile is a mineral containing long, flexible fibers that, due to their electron structure, tend to stick to things. This places them in a very good position to become re-entrained. Amosite is a mineral whose fibers are finely divided, harsh, and brittle and are also easily re-entrained.

The most significant human exposure pathway for asbestos is the inhalation of respirable asbestos fibers. The ingestion of fibers may also be an exposure pathway of concern for workers or children who may come into contact with Site materials. In addition to environmental exposures, the improper handling of work clothing from on-Site workers may also pose a danger. Workers can carry the fibers home in their clothing and hair, and expose other family members.

Asbestos exposure may cause two primary classes of health effects. The first is asbestosis, a non-malignant disease characterized by a progressive scarring of the lung and pleura. This condition progresses slowly over many decades, and may continue even after the asbestos exposure has ceased. As microscopic scarring builds up, the lungs become stiff and restricted with thickening in the walls of the breathing spaces. The stiffening of the lungs, when severe, can make it difficult to breathe. The other major class of asbestos-related health effects is mesothelioma and lung cancer which can occur after minimal exposure to asbestos.

There is a considerable time interval between asbestos exposure and when lung cancer, mesothelioma, or the other asbestos-related cancers are seen. This latency period may vary from twenty to forty years, although some cases may occur earlier.

The current OSHA standard for asbestos in the workplace is 0.2 fibers per cubic centimeter of air as an eight-hour time-weighted average. According to the National Institute for Occupational Health and Safety, evaluation of all available human data provides no evidence for a threshold or for a "safe" level of asbestos exposure.

2. Hazardous substances, or pollutants, or contaminants in drums, barrels, tanks or other bulk storage containers, that may pose a threat of release [40 CFR § 300.415(b)(2)(ii)];

NYSDEC is currently completing its work at the Site. The primary focus of NYSDEC's activities has involved coordinating with the suppliers of various petroleum and related materials to remove their products from the premises. As noted in the previous actions section above, a substantial amount of cleanup work has been completed by NYSDEC. However, it is not clear at this time whether approximately 50 containers of waste oils, lube oils, and grease will be addressed by NYSDEC. Many of these containers are located along exteriors portions of the building and are exposed to the elements and trespassers.

3. High levels of hazardous substances, or pollutants, or contaminants may exist in soils largely at or near the surface, that may migrate [40 CFR § 300.415(b)(2)(iv)];

Asbestos may migrate off-Site by wind carrying airborne asbestos. NYSDEC has indicated that high winds are common at the Site due to proximity to the Hudson River and Site elevation. Channeling of winds between the buildings was noted by the OSC during a Site visit on February 18, 2004. The drummed hazardous materials present at the Site exist in various sized drums that are beginning to rust and corrode due to exposure to the elements.

4. Weather conditions exist that may cause hazardous substances, or pollutants or contaminants to migrate or be released [40 CFR § 300.415(b)(2)(v].

Precipitation events may transport asbestos off-Site via surface water runoff; this asbestos can become airborne during dry conditions subsequent to a precipitation event. Precipitation events may potentially contribute to the erosion of the drummed containers, causing the drums to leak their contents; the hazardous materials may then be transported off-Site as the precipitation drains off the Site. This could impact persons in the vicinity of the Site.

5. There is no other appropriate Federal or State response mechanisms available to respond to the situation at the Site [40 CFR § 300.415(b)(2)(vii)].

NYSDEC has requested that EPA abate the threats to public safety and the environment at the Site, with regard to both asbestos and the containerized hazardous materials.

B. <u>Threats to the Environment</u>

Based on the available information, there is a threat to the environment from the asbestos, although it should be noted that an exposure scenario does exist for the wildlife that use the area. Entry of asbestos fibers to surface water is possible through the Moordener Kill, which flows through the Site.

A potential threat to the environment exists from the containerized hazardous materials present throughout the Site. If the materials in the drums were released during salvaging operations or if a building were to collapse, the potential exist for the ground water beneath the Site to be impacted. The potential also exists for surface runoff to flow into the Moordener Kill, a designated trout spawning stream.

IV. ENDANGERMENT DETERMINATION

Actual or potential releases of hazardous substances at or from the Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare and the environment.

V. PROPOSED ACTIONS AND ESTIMATED COST

A. Proposed Actions

1. Proposed action description

The activities proposed under this Action Memorandum are to address immediate threats to the public health, or welfare, or the environment. The following summarizes the activities to be completed during this removal action:

i. Institute Site security (warning signs/securing access points) as a means of limiting access and thereby preventing direct contact with the Site contaminants;

ii. The removal and staging of all friable asbestos present on piping and/or components of the heating system, which are located in exterior portions of the facility. These activities will primarily focus on the boiler house and adjacent structures and the collapsed portion of the print shop (the asbestos within the interior of the building will not be addressed because it is not presently being released to the environment);

iii. The segregation, sampling, and removal of labpack containers found throughout the various Site structures;

iv. The cleanup and disposal of the mercury spill identified in the boiler house;

v. The investigation of the on-Site landfill and wastewater treatment lagoon; and

vi. Removal and disposal of hazardous substances that threaten human health that are identified during the course of the removal action.

The activities proposed under this Action Memorandum will address the threats to the public health or welfare, or the environment consistent with CERCLA. The proposed removal action will secure the Site and allow for the removal of deteriorated friable ACM that is being released to the environment, labpack items, and the mercury spill. This action will help to stabilize the Site and reduce the threat of a release of asbestos fibers, hazardous liquids, and mercury, as well as reduce the potential for direct contact.

2. Contribution to remedial performance

The proposed removal action at the Site is consistent with the requirements of Section 104(a)(2), of CERCLA, which states that "any removal action undertaken ... should, to the extent practicable, contribute to the efficient performance of any long term remedial action with respect to the release of threatened release concerned." Since any remedial action undertaken would encompass the work items in this removal action, the cleanup effort is consistent with any future remedial work.

3. Description of alternative technologies

The selected removal action of securing the Site, removing deteriorated friable ACM, labpack containers, and mercury spill has been determined to be the appropriate method at the Site based upon the criteria of effectiveness, implementability, and cost.

4. Environmental Evaluation/Cost Analysis (EE/CA)

Due to the time-critical nature of this removal action, an EE/CA will not be prepared.

5. Applicable or Relevant and Appropriate Requirements (ARARS)

Federal ARARS that are within the scope of this removal action, which pertain to the cleanup and disposal of hazardous waste, will be identified and addressed to the extent possible. The Federal ARAR preliminarily identified for this removal action is the Clean Air Act, 42 U.S.C. §§ 7401-7671q and the regulations promulgated thereunder.

6. Project schedule

Once the Action Memorandum has been approved, immediate arrangements will be made to coordinate the securing of the Site. It is estimated that four to six weeks will be required for an asbestos removal subcontract to be awarded and the work to be completed.

B. Estimated Costs

The estimated costs for the completion of the proposed removal action are summarized below.

Extramural Costs

Regional Removal Allowance Costs:

Total Cleanup Contractor Cost (including 15% contingency)	$ 237,000
Subtotal, Extramural Costs	$ 237,000
Extramural Cost Contingency (20%)	$ 47,400
TOTAL, REMOVAL ACTION PROJECT CEILING	**$ 284,400**

VI. EXPECTED CHANGE IN THE SITUATION SHOULD NO ACTION BE TAKEN OR ACTION DELAYED

Delayed action to address the exposed asbestos containing material will result in an increased potential for exposure to asbestos fibers that may become airborne due to the disturbance by the elements, wildlife, and trespassers. Two additional buildings collapsed due to the weight of snow this past winter, which has further increased the risk of the release of hazardous substances to the environment.

Based upon the corroded condition of several drums remaining at the facility and the lack of proper security at the Site, a delayed action to address the remaining drummed hazardous materials will result in an increased potential for exposure to both human health and the environment.

VII. OUTSTANDING POLICY ISSUES

No known outstanding policy issues are associated with the Site.

VIII. ENFORCEMENT

EPA has initiated a potentially responsible party (PRP) search. Should a PRP be identified and be willing to undertake timely and appropriate corrective action, all or part of the funds requested herein may not be spent. PRPs who appear to have the financial wherewithal to participate in the performance of the removal action, but who decline to do so, may be pursued for cost recovery.

The total EPA costs for this removal action (based on full-cost accounting practices) that will be eligible for cost recovery are estimated to be:

Direct Extramural Cost	$284,400
Direct Intramural Cost	$ 64,800
Subtotal, Direct Costs	$349,200

Indirect Costs (Regional Indirect Cost Rate 28.18% x $349,200)	$ 98,400
Estimated EPA Costs Eligible for Cost Recovery	$447,600

IX. RECOMMENDATION

This decision document represents the selected removal action for the Fort Orange Paper Company Site, located in the Village of Castleton-on-Hudson, Rensselaer County, New York, developed in accordance with CERCLA, as amended, and not inconsistent with the NCP. This decision is based on the Administrative Record for the Fort Orange Paper Company Site.

Conditions at the Site meet the NCP § 300.415 (b)(2) criteria for a removal action. I recommend your approval of the proposed removal action. The estimated project ceiling if approved will be $284,400, of which an estimated $237,000 is for mitigation contracting. Sufficient funding is available in the current Advice of Allowance to finance this project.

Please indicate your approval and authorization of funding for the Fort Orange Paper Company Site, as per current Delegation of Authority, by signing below.

Approved: _____ Date: 8-3-04
George Pavlou, Director
Emergency and Removal Response Division

Disapproved: _____ Date: _____
George Pavlou, Director
Emergency and Remedial Response Division

cc: (after approval is obtained)
G. Pavlou, ERRD
W. McCabe, ERRD-DD
R. Salkie, ERRD-RAB
J. Rotola, ERRD-RAB
J. Witkowski, ERRD-RAB
G. Zachos, ACSM/O
P. Simon, ORC-NYCSUP ✓
C. Garvey, ORC-NYCSUP
P. Brandt, PAD
R. Manna, OPM-FMB
T. Riverso, OPM-GCMB
T. Grier, 5202G
P. McKechnie, OIG
R. Marino, NYSDEC
A. Raddant, DOI
E. Christman, NOAA
L. Battes, NYSEMO
G. Litwin, NYSDOH
C. Kelly, RST

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

ACTION MEMORANDUM

DATE: SEP 30 2005

SUBJECT: Request for a Ceiling Increase, Removal Action Restart and 12-Month Exemption for the CERCLA Removal Action at the Fort Orange Paper Site, Castleton-on-Hudson, Rensselaer County, New York

FROM: Andrew L. Confortini, On-Scene Coordinator
Removal Action Branch

TO: George Pavlou, Director
Emergency and Remedial Response Division

THRU: Richard C. Salkie, Chief
Removal Action Branch

Site ID#: **UT**

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of a ceiling increase, removal action restart and 12-month exemption for the current removal action at the Fort Orange Paper Site (Site), located at 1900 River Road, Castleton-on-Hudson, Rensselaer County, New York 12033 (see Attachment 1, Figure 1).

On August 3, 2004, an Action Memorandum was signed by William McCabe, Deputy Director of the Emergency and Remedial Response Division (ERRD) authorizing a removal action at the Fort Orange Paper Site. The total project ceiling approved for this removal action was $284,400, of which $237,000 was for mitigation contracting.

Conditions at the Site continue to meet the criteria for a removal action under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as described in Section 300.145 of the National Contingency Plan (NCP). The Site is not on the National Priorities List (NPL) and there are no nationally significant or precedent-setting issues associated with the proposed response.

The additional funding required to complete the actions described in this memorandum is $600,000, of which $500,000 is for mitigation contracting. Once approved, the new site ceiling will be $884,400, of which $737,000 will come from the Regional Advice of Allowance.

The Site is not on the NPL and there are no nationally significant or precedent-setting issues associated with this removal action.

II. SITE CONDITIONS AND BACKGROUND

The Comprehensive Environmental Response, Compensation and Liability Information System ID Number for this time-critical removal action is NYD093247062.

A. Site Description

1. Removal Site Evaluation (RSE)

The initial removal action was completed in November 2004. The work included the removal and disposal of approximately 30 cubic yards of asbestos containing materials (ACM) outside of the buildings, several piles of deteriorated transite pipe, cleanup of two mercury spills, removal and disposal of 650 labpack containers and PCB contaminated transformer oils. When the removal action was conducted the ACM within the buildings (primarily pipe insulation) did not appear to pose a threat of release and was contained within structurally sound buildings. It was, therefore, determined that the ACM did not constitute a release or threat of a release to the environment.

Since that time the Site conditions have changed. During recent visits to the Site, evidence of continued unauthorized entry into the buildings was documented. In addition, asbestos insulation has deteriorated and more of it has fallen on the ground or is dangling from piping. While conducting these Site visits it was also observed that additional areas of building roofing had deteriorated and in several cases roof joists had cracked or become stressed by snow-load and rainfall. It appears that the roofing will continue to deteriorate and eventually cave in, as has already occurred in the Finished Goods Storage and the Printing Department Areas of the building

Because of the changed conditions a comprehensive inspection of the entire facility was conducted to identify any releases or threats of releases to the environment. Approximately 8,000 linear feet of deteriorating asbestos pipe wrapping is present within the glue department, printing department, raw stock area, stripping department, electrical shop, product storage area, paper machine area beater room, hydropulper room, maintenance shop, locker room coater room, automotive shop and ink room. All of these areas areas are located in buildings that have wooden roofs, which are expected to continue to deteriorate and collapse. Samples that were previously collected from some of these areas identified asbestos ranging from 5% to 59% and asbestos fiber types as either chrysotile or amosite. An additional exterior pipeline was also identified as being covered with 150 linear feet of ACM.

The areas without ACM include the finished goods storage area, press room, wood-working/maintenance building, lube shop, project room, oil room, and garage building. The boilerhouse, which contains significant quantities of ACM, is structurally sound, being constructed of concrete/blocks with a steel roof and steel door. The boilerhouse's structure effectively prevents material from escaping to the exterior of the building.

Funding provided by approval of this Action Memorandum will be used to remove asbestos from the interiors of the deteriorating building and any asbestos that has been released from the buildings. Asbestos removal activities will not be performed in the boilerhouse because it does not pose a threat of a release of asbestos to the environment.

(For additional information, please refer to the previous Action Memorandum for the Site (Attachment 1).)

2. Physical location

The Site is located at 1900 River Road (a.k.a. Route 9J) in Castleton-on-Hudson, Rensselaer County, New York (see Attachment 1, Figure 1). The Site covers approximately 103 acres and includes eight separate buildings. These structures are constructed of brick and wood building materials, the oldest building being approximately 146 years old. Former operations within these structures included a paper machine area, printing department, an electrical shop, maintenance shop, stripping department, glue department, oil shed, lube shop, polymer blending laboratory, auto shop, locomotive garage and boiler house. Figure 2 provides a layout of the entire facility.

An active regional power generating plant is immediately adjacent to the facility.

Although the area around the Site is generally rural, it is bordered in all directions by residential properties. A nursing home is located less than 1/10 of a mile from the Site. The facility is located within a valley bordered along the northern and southern borders by ridges. An estimated 1,283 residents from the Village of Castleton-on-Hudson live within a one mile radius of the Site.

(For additional information, please refer to the previous Action Memorandum for the Site (Attachment 1).)

3. Site characteristics

The Site is the location of a former paper manufacturer which operated from 1858 until the plant closed in February 2002. An investigation into the nature of facility operations during its 144-year history is still underway. The most recent operations involved the manufacture of clay-coated folding box board out of recycled paper for use in cereal boxes and other consumer

packaging. A portion of the finished products produced involved the use of lithograph dyes. According to local press reports, the facility had a daily output of 140 tons per day of paperboard derived from waste paper.

Power to the facility was cut off due to non-payment of bills leading to a cessation of operations at the Site on February 28, 2002.

Since the closure of the site facility, extensive salvage operations have occurred there. According to the State, a New York City-based factoring company, Millberg Factors, either conducted or arranged for the salvage of various pieces of equipment at the facility. It appears that in the process of the salvage operations, damaged and/or disbursed ACM throughout the buildings and main plant area grounds, and may have caused the mercury spill.

The lack of building maintenance is also evident since numerous leaks in the roof have been observed. As mentioned previously, portions of the facility have collapsed and several appear to be structurally unsound (glue departments and storage areas) and will likely collapse in the near future.

4. Release or threatened release into the environment of a hazardous substance, or pollutant, or contaminant

Asbestos is the primary hazardous substance that has been identified at the Site.

Substance Identified	**Statutory Source for Designation as a Hazardous Substance**
Asbestos	CWA § 307(a); CAA § 112

In the statutory sources cited above, CWA § 307(a) indicates that the source is section 307(a) of the Clean Water Act, CAA § 112 indicates that the source is section 112 of the Clean Air Act. This hazardous substance has been determined to cause chronic health effects.

Potential Health and Toxicological Effects

Chemical	Irritant	Kidney/ Liver Damage	Dermal/ Eye Effects	Blood/ Cardio Damage	Respiratory Effects	CNS Damage
Asbestos					x	

The environmental threats posed by the asbestos remaining at the Site include airborne releases and the potential for migration via surface water run-off. Numerous events could trigger releases, but the chief concerns are fire, trespassers and weather conditions.

The Site buildings are continuing to deteriorate. The deterioration of the abandoned structures will accelerate as the rainfall, wind and snowfall gain further entry. There is a significant threat that additional portions of the Site structures will collapse, causing further release of asbestos.

Significant quantities of ACM have now fallen off piping and can be found on the floors of the buildings. This material has become extremely friable due to exposure to the elements. High winds, common at the Site, can easily cause asbestos fibers to be separated from their source and become airborne. Due to the local topography and the relative arrangement of facility structures on the Site, the channeling effect of wind and air currents between these building may increase the dispersion of asbestos fibers.

The releases from the Site could impact unprotected persons on-Site through direct contact or inhalation exposure. The potential exists for trespassers to come into contact with the hazardous materials, which could impact persons in the vicinity of the Site, especially within the residential areas.

The Ft, Orange Site is very large, is accessible from Route 9J, is not fenced, and has no active owner. Because of these factors, there is a greater risk that trespassers will be able to access the Site. These conditions increase the risk of contact with asbestos.

When asbestos is friable, it is designated as a CERCLA hazardous substance under 40 CFR Section 302.4. Friability is the ease with which a material can be crumbled, pulverized or reduced to powder when dry, by hand pressure. The more friable the material, the greater the potential for fiber release and contamination. It is reported that, once released, asbestos fibers have the ability to remain entrained in the air for extensive periods.

5. NPL status

The Site is not a NPL Site. Currently, a Hazard Ranking System package is not being prepared.

B. Other Actions to Date

1. Previous actions

The NYSDEC had removed a variety of hazardous materials from the Site. The scope of NYSDEC work involved contacting the manufacturers of materials found on-Site to determine if they would remove their products from the Site. As a result, NYSDEC arranged for approximately 8,000 gallons of hazardous materials in various sized containers to be removed

from the premises. Materials that did not have identification labels, or were not accepted by manufacturers, were left on-Site and were addressed by EPA. In addition, NYSDEC contracted a waste oil recycler to remove from the Site 75 55-gallon drums containing waste oil.

The EPA removal action was conducted between September and November, 2004. The removal action included:

- The collection and disposal of 650 labpack containers of solvents, oils, caustics, flammable, corrosive and acid material.
- The recovery of 420 gallons of PCB contaminated oil from transformers.
- The cleanup of elemental mercury spills on the boiler room and plating area.
- The removal of 60 cubic yards of transite piping containing ACM; and
- The removal of 30 cubic yards of asbestos from areas outside the building and from collapsed portions of the building that was formally the printing shop.

2. Current actions

Currently, no actions are being taken at the Site.

C. State and Local Authorities' Role

1. State and local actions to date

NYSDEC has requested that EPA perform a CERCLA emergency response action at the Site.

2. Potential for continued State/local response

At this time, NYSDEC does not anticipate any additional removal of waste material from the Site. No further action is anticipated by NYSDEC.

III. THREAT TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

A. Threats to the Public Health or Welfare

Asbestos at the Site presents a threat to the public health and welfare as defined by Section 300.145(b)(2) of the NCP, in that there is a high potential for releases to continue to occur. Factors that support the removal action at the Site include:

(i) Actual or potential exposures to nearby human populations, animals, or the food chain from hazardous substances, pollutants, or contaminants [40 CFR §Section 300.415(b)(2)(i)];

There is a potential exposure to nearby human populations, animals or the food chain from hazardous substances, or pollutants, or contaminants (40 CFR §Section 300.415(b)(2)(i)). The primary potential routes of exposure to asbestos at the Site are inhalation and ingestion. Individuals coming into contact with both the asbestos and hazardous materials may transport the materials off-Site on their clothing and/or shoes, thus potentially impacting others. Asbestos is a general term used to describe minerals that tend to form fibers when they are broken. These minerals are formed under conditions of very high heat and pressure deep in within the earth and they are resistant to the types of temperatures and pressures found in our environment at the surface. Because their chemical composition is unchangeable, an asbestos mineral will always break into fibers. Large fibers have the potential to break into smaller ones, which eventually results in its reduction to microscopic size. Because of their small size, shape and lightness, these fibers act are more like a gas than a dust.

Chrysotile is a mineral containing long, flexible fibers that, due to their electron structure, tend to stick to things. This places them in a very good position to become re-entrained. These fibers are usually two centimeters in width. Amosite is a mineral whose fibers are finely divided, harsh, brittle and occur in seams up to 30 centimeters wide (longest fiber type of asbestos). These are also easily re-entrained.

The most significant human exposure pathway for asbestos is the inhalation of respirable asbestos fibers. The ingestion of fibers may also be an exposure pathway of concern for workers or children who may come into contact with Site materials. In addition to environmental exposures, the improper handling of work clothing from on-Site workers may also pose a danger. Workers can carry the fibers home in their clothing and hair, and expose other family members.

Asbestos exposure may cause two primary classes of health effects. The first is asbestosis, a non-malignant disease characterized by a progressive scarring of the lung and pleura. This condition progresses slowly over many decades, and may continue even after the asbestos

exposure has ceased. As microscopic scarring builds up, the lungs become stiff and restricted with thickening in the walls of the breathing spaces. The stiffening of the lungs, when severe, can make it difficult to breathe. The other major class of asbestos-related health effects is mesothelioma and lung cancer after apparently minimal exposure to asbestos.

All asbestos-related malignancies have a latency period. There is a considerable time interval between asbestos exposure and when lung cancer, mesothelioma, or the other asbestos-related cancers are seen. This latency period may vary from twenty to forty years, although some cases may occur earlier.

According to the National Institute for Occupational Health and Safety (NIOSH), evaluation of all available human data provides no evidence for a threshold or for a "safe" level of asbestos exposure.

(iv) High levels of hazardous substances, or pollutants, or contaminants may exist in soils largely at or near the surface, that may migrate [40 CFR § Section 300.415(b)(2)(iv)].

Analytical testing has revealed the presence of friable asbestos throughout the Site. This material is present in the form of pipe insulation and mudded joints. Much of the asbestos is reported to be accessible, friable and poses a threat to migrate outside the building.

(v) Weather conditions exist that may cause hazardous substances, or pollutants, or contaminants to migrate or be released [40 CFR §Section 300.415(b)(2)(v].

Asbestos may migrate off-Site by wind carrying airborne asbestos. NYSDEC has indicated that high winds are common at the Site due to proximity to the Hudson River and Site elevation. Channeling of winds between the buildings was confirmed by the On-Scene Coordinator while conducting the previous removal action.

Precipitation events may transport asbestos off-Site as it drains off the Site; this asbestos can become airborne during dry conditions subsequent to a precipitation event.

(vii) There is no other appropriate federal or State response mechanisms available to respond to the situation at the Site [40 CFR § Section 300.415(b)(2)(vii)].

NYSDEC has requested that EPA abate the threats to public safety and the environment at the Site, with regards to the presence of ACM. The NYSDEC does not address asbestos sites with spill-fund monies.

B. Threats to the Environment

Based on the available information, there is a potential threat to the environment from the asbestos at the Site and an exposure scenario does exist for the wildlife that inhabit the area. Entry of asbestos fibers to surface water is possible through Moordener Kill, which flows through the Site.

IV. ENDANGERMENT DETERMINATION

Actual or potential releases of hazardous substances at or from the Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare and the environment.

V. EXEMPTION FROM STATUTORY LIMITS

Conditions at the Site continue to meet the conditions for an exemption from the statutory time limit.

A. There is an Immediate Risk to Public Health and Welfare or the Environment

Large quantities of friable asbestos have been identified at the Site. Site conditions include areas of the building where asbestos has fallen to the ground and appears to be releasing to areas outside of the building. In addition, based on the condition of the buildings, there is a potential that additional areas will collapse and thereby significantly increase the release of asbestos into the environment.

Incidents of trespassing are commonplace at the Site because of its large size, its proximity to Route 9J, its lack of fencing, and its abandoned state. The Site is also located adjacent to a residential neighborhood, a trout stream (Moordener Kill) and a regional power generation plant (CoGen). In light of these factors, a potential threat to public health exists.

B. Continued Response Actions are Immediately Required to Prevent, Limit, or Mitigate an Emergency

In the event of fire, unauthorized entry or the further deterioration and or collapse of Site structures, a very real threat to public health exists. Since the Site is not secure, the threat of future uncontrolled releases resulting from additional vandalism/salvaging is great.

C. Assistance Will Not Otherwise be Provided in a Timely Manner

There are no other federal, State or local government entities with sufficient resources to accomplish the required removal activities.

VI. PROPOSED ACTIONS AND ESTIMATED COST

A. Proposed Actions

1. Proposed action description

The activities proposed under this Action Memorandum are to address the threats to public health and the environment. The following summarizes the activities to be completed during this removal action:

i. Institute Site security as a means of limiting access and thereby preventing direct contact with the Site contaminant;

ii. The removal and staging of all friable asbestos present on piping and/or components of the heating system, which are located within interior portions of the facility. These activities will primarily focus on the main building complex structures with wooden roofs that are in danger of collapse. The removal of asbestos will also include insulation materials located on water supply lines located behind the main building.

The removal action will not address the boiler house since it does not pose a threat of release of asbestos to the environment.

The proposed removal action will ensure the stability of the Site and minimize the threat of a release of, as well as reduce the potential for direct contact with, asbestos fibers.

2. Contribution to remedial performance

The proposed removal action at the Site is consistent with the requirements of Section 104(a)(2), of CERCLA, which states that "any removal action undertaken.....should, to the extent practicable, contribute to the efficient performance of any long term remedial action with respect to the release of threatened release concerned". Since any remedial action undertaken would encompass the work items in this removal action, the cleanup effort is consistent with any future remedial work.

3. Description of alternative technologies

The selected removal action of securing the Site, removing deteriorated friable ACM, has been determined to be the appropriate method at the Site based upon the criteria of effectiveness, implementability and cost.

4. Environmental Evaluation/Cost Analysis (EE/CA)

Due to the time-critical nature of this removal action, an EE/CA will not be prepared.

5. Applicable or Relevant and Appropriate Requirements (ARARS)

Federal ARARS that are within the scope of this removal action, which pertain to the cleanup and disposal of hazardous waste, will be identified and addressed to the extent possible. The federal ARAR preliminary identification for this removal action is the Clean Air Act, 42 U.S.C. 7401-7671q and the regulations that implement these sections.

6. Project schedule

Once the Action Memorandum has been approved, immediate arrangements will be made to coordinate the securing of the Site. It is estimated that four to six months will be required for an asbestos removal subcontract to be awarded and the work to be completed.

B. Estimated Costs

The estimated costs for the completion of the proposed removal action are summarized below. A detailed cost estimate is included in the Confidential Project file.

Extramural Costs

Regional Removal Allowance Costs:	Current Ceiling	Proposed Increase	New Ceiling
Total Cleanup Contractor Cost (including 15% contingency)	$237, 000	$500,000	$737,000
Subtotal, Extramural Costs	$237,000	$500,000	$737,000
Extramural Cost Contingency (20%)	$ 47,400	$100,000	$147,400
TOTAL, REMOVAL ACTION PROJECT CEILING (Extramural Cost Total)	$284,400	$600,000	$884,400

VI. EXPECTED CHANGE IN THE SITUATION SHOULD NO ACTION BE TAKEN OR ACTION DELAYED

Delayed action to address the exposed asbestos containing material will result in an increased potential for exposure to asbestos fibers that may become airborne due to the disturbance by the elements, wildlife and trespassers. The remaining buildings are expected to continue to deteriorate and collapse, thereby releasing asbestos fibers into the environment.
Based upon the conditions at the Site and lack of proper security at the Site, a delayed action to address these materials will result in an increased potential for exposure to both human health and the environment.

VII. OUTSTANDING POLICY ISSUES

No known outstanding policy issues are associated with the Site.

VIII. ENFORCEMENT

EPA has initiated a potentially responsible party (PRP) search and has sent 104(e) Requests for Information to the Site owners and former operators as part of EPA's cost recovery efforts. (The on-going enforcement actions at the Site are discussed in the confidential enforcement addendum included in the Confidential Project file.)

To date, EPA has received PRP information from John Hay, former President of Ft. Orange Paper Company and several of its related companies. From this information, Mr. Hay appears to have little or no ability to perform or fund this removal work. EPA has also developed information on Ft. Orange Paper and the related companies, all of which are potential Site PRPs and appear to be insolvent and defunct. In conjunction with New York State, EPA is pursuing

recovery of its past costs through enforcement of its lien on the parcels of real property that comprise the Site.

Should a PRP be identified and be willing to undertake timely and appropriate corrective action, all or part of the funds requested herein may not be spent.

The total EPA costs for this removal action, based on full cost accounting practices, are estimated to be:

	Current Ceiling	Proposed Increase	New Ceiling
Direct Extramural Cost	$284,400	$600,000	$ 884,400
Direct Intramural Cost	$ 64,800	$130,000	$ 194,400
Total Direct Costs	$349,200	$730,000	$1,079,200
Indirect Costs (30.30% x $820,000)	$ 98,400*	$221,190	$ 319,590
Estimated EPA Costs Eligible for Cost Recovery	$447,600	$951,190	$ 1,398,790

* At the time the original action memorandum was prepared the Regional indirect cost rate was 28.18%.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Fort Orange Paper Company Site, located in the Town of Castleton-on-Hudson, Rensselaer County, New York, which has been developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP. This decision is based on the Administrative Record for the Fort Orange Paper Company Site.

Conditions at the Site meet the NCP criteria for a removal action and a 12-month exemption. I recommend your approval of the proposed removal action. The estimated project ceiling if approved will be $884,400, of which $737,00 is for mitigation contracting. Sufficient funding is available in the current Advice of Allowance to finance this project.

Please indicate your approval and authorization of funding and the 12-month exemption for the Fort Orange Paper Company Site, as per current Delegation of Authority, by signing below.

Approved: _____ **Date:** 9/30/05
George Pavlou, Director
Emergency and Remedial Response Division

Disapproved: _____ **Date:** _____
George Pavlou, Director
Emergency and Remedial Response Division

cc: (after approval is obtained)
G. Pavlou, ERRD
W. McCabe, ERRD
R. Basso, ERRD
R. Salkie, ERRD-RAB
J. Rotola, ERRD-RAB
G. Zachos, ACSM/O
J. LaPadula, ERRD-NYRB
P. Simon, ORC-NYCSUP
V. Capon, ORC-NYCSUP
C. Garvey, ORC-NYCSUP
P. Brandt, PAD
R. Manna, OPM-FMB
T. Riverso, OPM-GCMB
T. Grier, 5202G
A. English, NYSDEC
G. Litwin, NYSDOH
P. McKechnie, OIG
A. Raddant, USDOI
J. Steger, NOAA
C. Kelley, RST

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

ACTION MEMORANDUM

DATE: SEP 27 2006

SUBJECT: Request for a Ceiling Increase and $2 Million Exemption at the Fort Orange Paper Site, Castleton-on-Hudson, Rensselaer County, New York

FROM: Jack D. Harmon, On-Scene Coordinator
Removal Action Branch

TO: Alan J. Steinberg
Regional Administrator

THRU: George Pavlou, Director
Emergency and Remedial Response Division

Site ID#: UT

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of a ceiling increase and $2 million exemption for the removal action at the Fort Orange Paper Site (Site), located at 1900 River Road, Castleton-on-Hudson, Rensselaer County, New York 12033.

On September 30, 2005, an Action Memorandum was signed by George Pavlou, Director of the Emergency and Remedial Response Division (ERRD), authorizing a ceiling increase, removal action restart and 12-month exemption. The ceiling increase brought the total project ceiling for this removal action from $284,400 to $884,400, of which $737,000 was for mitigation contracting.

Conditions at the Site continue to meet the criteria for a removal action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as described in Section 300.145 of the National Contingency Plan (NCP). The Site is not on the National Priorities List (NPL) and there are no nationally significant or precedent-setting issues associated with the proposed response.

The additional funding required to complete the actions described in this memorandum is $3,231,600, of which $2,543,000 is for mitigation contracting. This funding increase combined with funds approved in previous action memoranda for the Site will result in a total project ceiling of $4,116,000, of which $3,280,000 is for mitigation contracting.

II. SITE CONDITIONS AND BACKGROUND

The CERCLA identification number for this time-critical removal action is NYD093247062.

A. Site Description

1. Removal Site Evaluation (RSE)

The United States Environmental Protection Agency's (EPA's) performed the initial phase of this removal action from August to November 2004 pursuant to an Action Memorandum signed by the EPA Regional Administrator in August 2004. The initial work included the removal and disposal of approximately thirty cubic yards of asbestos-containing material (ACM) outside of the buildings, several piles of deteriorated transite pipe, cleanup of two mercury spills, and removal and disposal of 650 lab-pack containers and PCB-contaminated transformer oils. As of November 2004, the ACM within the buildings (primarily pipe insulation) did not appear to EPA to pose a threat of release insofar as it was contained within structurally-sound buildings. EPA, therefore, determined that the ACM did not constitute a release or threat of release to the environment.

EPA nonetheless continued to monitor the Site after completion of the initial phase of the removal action. EPA's site visits after November 2004 revealed that Site conditions had in fact changed and threats to the public had arisen. Evidence of continued unauthorized entry into the buildings was observed. Asbestos insulation that had been secure in 2004 had been vandalized and was hanging from pipes and strewn around floor areas. The roofs of some of the perimeter buildings showed evidence of structural stress and failure due to ice, snow, and rain.

Based on the observed Site conditions, EPA conducted a comprehensive inspection of the facility in April 2006 to identify all releases or threats of release to the environment. The inspection identified approximately 8,000 linear feet (LF) of thermal surface insulation (TSI) asbestos pipe wrap within twelve sections of the facilities main building. All of the building sections have wood roofs which have been structurally stressed from freeze and thaw weather cycles. A 150' twelve-inch diameter pipeline covered with TSI was identified on the exterior of the main building coming from the sorter room. The TSI on this pipeline is deteriorated and

falling onto the ground surface. Samples collected from TSI located within the building of the facility identified asbestos ranging to 59% with fiber types as either chrysotile or amosite.

As a result of the continued illegal trespassing and threat of direct contact with asbestos, EPA requested additional funds through a "ceiling increase" Action Memorandum (September 2005) to remove or secure deteriorated TSI from the building interiors and the exterior pipeline.

In April 2006, EPA remobilized to the Site to initiate those mitigation activities proposed in the September 2005 Action Memorandum. The restarted removal action was scheduled for April 2006 since weather at that time of year is favorable for asbestos abatement, i.e., temperatures above freezing.

In June 2006, EPA requested that a second survey be performed by a licensed asbestos abatement contractor and a Professional Engineer. The purpose of the asbestos abatement survey was to determine the quantities of asbestos present in and the structural stability of the facility buildings. The asbestos survey, which was completed in August 2006, identified 435,000 square feet and almost 24,000 LF of ACM, and has been used by EPA to determine a cost-effective removal strategy to address the threats posed by the asbestos. The structural survey determined that significant vandalism and deterioration of the main building and warehouse facilities, which had occurred since the facility's closure and abandonment in 2002, had continued since EPA's demobilization from the Site in 2004.

Copies of the surveys are included as Attachment A.

(For additional information, please refer to the previous Action Memorandum for the Site (see Attachment B).)

2. Physical location

The Site is located at 1900 River Road (a.k.a. Route 9J) in the Village of Castleton-on-Hudson, Rensselaer County, New York (see Attachment C, Figure 1). The Site covers approximately 103 acres and includes a large, sprawling main manufacturing building on the south side of Moordener Kill, as well as at least ten separate outbuildings situated on both sides of the Kill. These structures are constructed of brick, wood, and steel building materials, the oldest building being approximately 146 years old.

Former operations within these structures included a rolling mill, printing department, electrical shop, maintenance shop, stripping department, glue department, oil shed, lube shop, polymer blending laboratory, auto shop, locomotive garage and boiler house. Figure 2 (included in Attachment C) provides a layout of the entire facility. As shown in Figure 2, most of the manufacturing operations took place in the main building. (The rolling mill section of the main building is identified in Figure 2 as the "Paper Machine Area," and the boiler house is depicted nearby to the south of the Paper Machine Area.)

An active regional power generating plant is adjacent to the facility.

Although the area around the Site is generally rural, it is bordered to the south, east, and north by residential properties. A nursing home is located less than 1/10 of a mile from the Site. The facility is located within a valley bordered along the northern and southern borders by ridges. An estimated 1,283 residents from the Village of Castleton-on-Hudson live within a one-mile radius of the Site.

(For additional information, please refer to the previous Action Memorandum for the Site (see Attachment B).)

3. **Site characteristics**

The Site is the location of a former paper manufacturer which operated from approximately 1858 until the plant closed in February 2002. The most recent operations involved the manufacture of clay-coated folding box board out of recycled paper for use in cereal boxes and other consumer packaging. A portion of the finished products produced involved the use of lithograph dyes. According to local press reports, the facility had at the time of its closure a daily output of 140 tons per day of paperboard derived from waste paper.

In the wake of a significant downturn in the U.S. paperboard products manufacturing industry and the bankruptcy of several of Ft. Orange Paper Company's customers in the early 2000's, the company encountered substantial financial difficulties. After production was ceased in February 2002, steam to the Ft. Orange Paper facility was cut off in March of 2002 and power cut off in May 2002 for non-payment of bills.

Since the closure of the site facility, salvage operations have occurred there. According to the State, a New York City-based factoring company, Milberg Factors, either conducted or arranged for the salvage of various pieces of equipment in which Milberg reportedly had a security interest at the facility. It appears that in the process of the salvage operations, Milberg Factors or its agents damaged or disturbed a minor amount of ACM in some of the facility buildings. At least some of this ACM would have been addressed by EPA in the initial removal work

The lack of building maintenance is evident since numerous leaks in the roof are present. As mentioned previously, portions of the facility buildings have collapsed and several other portions appear structurally unsound and likely to collapse in the future.

4. **Release or threatened release into the environment of a hazardous substance, or pollutant, or contaminant**

Asbestos is the hazardous substance present at the Site.

Substance Identified	Statutory Source for Designation as a Hazardous Substance
Asbestos	CWA § 307(a); CAA § 112

In the statutory sources cited above, CWA § 307(a) indicates that the source is section 307(a) of the Clean Water Act; CAA § 112 indicates that the source is Section 112 of the Clean Air Act. This hazardous substance has been determined to cause chronic health effects.

Potential Health and Toxicological Effects

Chemical	Irritant	Kidney/ Liver Damage	Dermal/ Eye Effects	Blood/ Cardio Damage	Respiratory Effects	CNS Damage
Asbestos					x	

The environmental threats posed by the asbestos remaining at the Site include airborne releases and the potential for migration via surface water run-off. Numerous events could trigger releases, but the chief concerns are fire, trespassers, unsecured buildings, and weather conditions.

The Site buildings have open windows and doors and are continuing to deteriorate. The deterioration of the abandoned structures will accelerate as the rainfall, wind and snowfall gain further entry. There is a potential for further collapse of building roofs causing possible release of asbestos.

Significant quantities of ACM have fallen off piping and can be found on the floors of the buildings. This material is extremely friable. High winds, common at the Site, can easily cause asbestos fibers to become airborne. Due to accessibility of the facility structures through open doors and windows, the channeling effect of wind and air currents through the buildings will result in the migration of asbestos fibers to the outdoor environment.

The releases from the Site could impact unprotected persons on the Site through direct contact or inhalation of asbestos fibers. Trespassers entering the buildings will come in contact with asbestos. These individuals may carry asbestos fibers on their clothing and potentially expose other persons to asbestos.

There is substantial risk that trespassers will continue to access the Site freely. The Site is very large, easily accessible from Route 9J, and not fenced, and has an absent, defunct owner. The accessibility of the Site to trespassers increases the risk to such persons of contact with asbestos.

When asbestos is friable, it is designated as a CERCLA hazardous substance under 40 CFR Section 302.4. Friability is the ease with which a material can be crumbled, pulverized or reduced to powder when dry, by hand pressure; the more friable the material, the greater the

potential for fibers to be released and contamination to occur. It is reported that, once released, asbestos fibers have the ability to remain entrained in the air for extensive periods.

5. NPL status

The Site is not a NPL Site. Currently, a Hazard Ranking System package is not being prepared.

B. Other Actions to Date

1. Previous actions

In an earlier State-lead removal action, NYSDEC removed a variety of hazardous materials from the Site. The scope of NYSDEC's work involved contacting the manufacturers of materials found on-Site to determine if they would remove their products from the Site. As a result, NYSDEC arranged for approximately 8,000 gallons of hazardous materials in various sized containers to be removed from the premises. Materials that did not have identification labels, or were not accepted by manufacturers, were left on-Site and were addressed by EPA. In addition, NYSDEC contracted a waste oil recycler to remove seventy-five 55-gallon drums containing waste oil.

As noted above, the initial phase of EPA's removal action was conducted between September and November 2004. The removal action included:

- The collection and disposal of 650 lab-pack containers of solvents, oils, caustics, flammable, corrosive and acid material;
- The recovery of 420 gallons of PCB contaminated oil from transformers;
- The cleanup of elemental mercury spills on the boiler room and plating area;
- The removal of 60 cubic yards of transite piping containing ACM; and
- The removal of 30 cubic yards of asbestos from areas outside the building and from a collapsed portion of the building that was formerly the printing shop.

2. Current actions

Twenty-four hour security is now present at the Site through EPA's Emergency and Rapid Response Services ERRS contractor, Earth Technology Inc. Subcontracted services have been provided to conduct asbestos and structural surveys of the buildings in preparation of an asbestos abatement work plan.

C. State and Local Authorities' Role

1. State and local actions to date

The NYSDEC has requested that EPA perform a CERCLA emergency response action at the Site (see Attachment D).

2. Potential for continued State/local response

At this time, NYSDEC does not anticipate any further State response action at the Site.

III. THREAT TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

A. Threats to the Public Health or Welfare

Asbestos at the Site presents a threat to the public health and welfare as defined by Section 300.415(b)(2) of the NCP, in that there is a high potential for releases to continue to occur. Factors that support the restarted removal action at the Site include:

1. Actual or potential exposures to nearby human populations, animals, or the food chain from hazardous substances, pollutants, or contaminants [40 CFR Section 300.415(b)(2)(i)];

There is a potential exposure to nearby human populations, animals, or the food chain from hazardous substances and pollutants or contaminants (40 CFR Section 300.415(b)(2)(i)). Site surveys have documented 435,000 square feet and 24,000 LF of ACM on piping and machinery. The primary potential routes of exposure to asbestos at the Site are inhalation and ingestion. Individuals coming in contact with asbestos may transport the materials off-Site on their clothing and/or shoes, thus potentially impacting others.

Asbestos is a general term used to describe minerals that tend to form fibers when they are broken. These minerals are formed under conditions of very high heat and pressure deep within the earth and, consequently, they are resistant to the types of temperatures and pressures found at the Earth's surface. Because its chemical composition is unchangeable, an asbestos mineral will always break into fibers. A large asbestos fiber has the potential to break into a smaller one, which eventually results in its reduction to microscopic size. Because of their small size, shape, and lightness, these fibers act more like a gas than a dust.

Chrysotile is a mineral containing long, flexible fibers that, due to their electron structure, tend to stick to things. This places them in a very good position to become re-entrained. These fibers are usually two centimeters in width. Amosite is a mineral whose fibers are finely divided, harsh, brittle, and occur in seams up to 30 centimeters wide (longest fiber type of asbestos). These are also easily re-entrained.

The most significant human exposure pathway for asbestos is the inhalation of respirable asbestos fibers. The ingestion of fibers may also be an exposure pathway of concern for workers or children who may come into contact with site materials. In addition to environmental exposures, the improper handling of work clothing from on-site workers may

also pose a danger. Workers can carry the fibers home in their clothing and hair, and expose other family members.

Asbestos exposure may cause two primary classes of health effects. The first is asbestosis, a non-malignant disease characterized by a progressive scarring of the lung and pleura. This condition progresses slowly over many decades, and may continue even after the exposure to asbestos has ended. As microscopic scarring builds up, the lungs become stiff and restricted by thickening in the walls of the breathing spaces. The stiffening of the lungs, when severe, can make it difficult to breathe. The other major class of asbestos-related health effects includes mesothelioma and lung cancer, both of which may be caused after apparently even minimal exposure to asbestos.

All asbestos-related malignancies have a latency period. There is a considerable time interval between asbestos exposure and when lung cancer, mesothelioma, or the other asbestos-related cancers are seen. This latency period may vary from twenty to forty years, although some cases may occur earlier.

According to the National Institute for Occupational Health and Safety, evaluation of all available human data provides no evidence for a threshold or for a "safe" level of asbestos exposure.

2. High levels of hazardous substances, or pollutants, or contaminants may exist in soils largely at or near the surface, that may migrate [40 CFR Section 300.415(b)(2)(iv)].

Laboratory analysis has confirmed the presence of asbestos on the Site. The asbestos is friable and can be found on interior piping, as well as on exterior piping and process machinery. The asbestos is in deteriorated condition in numerous locations and is releasing fibers. Asbestos is visible in soil along the entire 150 feet length of the pipe line located on the exterior of the buildings.

3. Weather conditions exist that may cause hazardous substances, or pollutants or contaminants, to migrate or be released [40 CFR §Section 300.415(b)(2)(v].

High winds are common at the Site due to the proximity of the Hudson River and the topography of the Site. Asbestos fibers may migrate through open windows and doors in the buildings on wind currents which are prevalent at the Site.

Precipitation events may transport asbestos off-site via runoff; this asbestos can then become airborne during dry conditions.

4. Threat of fire or explosion.

The buildings are constructed of masonry walls and wood roofs. Building interiors are strewn with paper debris used in the former manufacturing process. Paper mulch is visible on all

surface areas in the process areas of the main building. Conditions at the Site are favorable for a fire which would result in the release of asbestos fibers from the Site.

5. There is no other appropriate federal or State response mechanisms available to respond to the situation at the Site [40 CFR § Section 300.415(b)(2)(vii)].

NYSDEC is unable to address asbestos with funds from State spill response fund. No other federal or State mechanism is available to respond to the threats presented at the Site.

B. Threats to the Environment

Based on the available information, there is a potential threat to the environment from the asbestos at the Site. Wildlife in the area may be exposed to asbestos fibers in both the air and surface waters. Entry of asbestos fibers to surface water is possible through Moordener Kill, a State of New York Class A stream which flows through the Site. Site surface water drains directly to the Moordener Kill, via a network of underground storm drains.

IV. ENDANGERMENT DETERMINATION

Actual or potential releases of hazardous substances at or from the Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare, and the environment.

A. Emergency Exemption

1. There is an immediate risk to public health, welfare, or the environment.

The Site contains 435,000 square feet and 24,000 LF of asbestos on piping and machinery. At numerous locations the asbestos is in a deteriorated condition and releasing fibers. The Site buildings are open, unauthorized access to all the buildings has been observed, and previously intact ACM has been damaged by vandals.

2. Continued response actions are immediately required to prevent, limit, or mitigate an emergency.

Friable asbestos is present in the facility buildings and on exterior piping. The asbestos is in poor condition at many locations and asbestos fibers are being released. Securing Site buildings along with select asbestos abatement is needed to control the threats.

3. Assistance will not otherwise be provided on a timely basis.

No other governmental of potentially responsible party can provide assistance to mitigate the public health threats on a timely basis at the Site.

V. PROPOSED ACTIONS AND ESTIMATED COST

A. Proposed Actions

1. Proposed action description

The activities proposed under this Action Memorandum are to address the threats to public health and the environment. The following summarizes the activities to be completed during this removal action:

i. Continue Site security to minimize unauthorized access and direct contact with asbestos.

ii. Remove, package, and dispose of all friable asbestos used as TSI on piping located in the perimeter sections of the main building, the outer buildings (on both sides of Moordener Kill), and in exterior areas of the facility. Remove, package, and dispose of friable ACM that has fallen from overhead structures onto floor areas and ACM that are present in the form of gaskets and insulated panels in the perimeter sections of the main building and in the outer buildings (on both sides of Moordener Kill). Approximately 15,520 LF of TSI and 69,000 square feet of ACM will be addressed in the perimeter areas of the main building and in the outer buildings.

iii. Secure doorways, windows, and/or skylights in the boiler house and on the perimeter of the rolling mill section of the main building to prevent access as well as to eliminate any potential for migrating asbestos fibers.

EPA has determined that the boiler house and the rolling mill section of the main building are structurally stable structures in fair condition. Approximately 7,500 square feet and 2,400 LF of ACM is present in the boiler house and approximately 6,500 square feet and 5,000 LF of ACM are present in the rolling mill. Both buildings will be secured by closing windows and doors. To prevent unauthorized access and the migration of asbestos fibers from the inside the boiler house and rolling mill section of the main building, EPA will install steel and plywood panels where building openings cannot be closed. A six-foot high chain link fence will be installed around the boiler house which will provide additional security in the form of a physical barrier.

The proposed restarted removal action will ensure the stability of the Site and minimize the threat of a release of, as well as reduce the potential for direct contact with, asbestos fibers.

2. Contribution to remedial performance

The proposed restarted removal action at the Site is consistent with the requirements of Section 104(a)(2) of CERCLA, which states that "any removal action undertaken...should, to the extent practicable, contribute to the efficient performance of any long term remedial action with respect to the release of threatened release concerned." Since any remedial action undertaken would encompass the work to be performed in the restarted removal action, the continued cleanup effort is consistent with any future remedial work.

TOTAL, REMOVAL ACTION PROJECT CEILING (Extramural Cost Total)	$884,400	$3,231,600	$4,116,000

VI. EXPECTED CHANGE IN THE SITUATION SHOULD NO ACTION BE TAKEN OR ACTION DELAYED

A delay in addressing the ACM will result in an increased potential for exposure to asbestos fibers that may become airborne due to the disturbance by weather conditions, wildlife and trespassers. The ACM is expected to continue to deteriorate, thereby releasing asbestos fibers into the environment. Based upon the conditions at the Site, delayed action to address the ACM will result in an increased potential for exposure to both human health and the environment.

VII. OUTSTANDING POLICY ISSUES

No known outstanding policy issues are associated with the Site.

VIII. ENFORCEMENT

EPA has initiated a potentially responsible party (PRP) search and has sent 104(e) Requests for Information to the Site owner and former operators as part of EPA's cost recovery efforts.

To date, EPA has received PRP information from John Hay, former President of Fort Orange Paper Company, from Fort Orange Paper Company, and from its related company, Recycled Properties LLC, the record owner of the Site facility. From this information, Mr. Hay and the two companies appear to have little or no ability to perform or fund this continued removal work. Fort Orange Paper and Recycled Properties appear to be insolvent and defunct. In conjunction with New York State, EPA is pursuing recovery of its past costs through enforcement of its lien on the parcel of real property that comprises the Site.

Should a PRP be found with the financial wherewithal to undertake this continued removal work in a timely and appropriate manner, all or part of the funds requested herein may not be spent.

The total EPA costs for this removal action, based on full cost accounting practices, are estimated to be:

	Current Ceiling	Proposed Increase	New Ceiling
Direct Extramural Cost	$ 884,400	$3,231,600	$4,116,000
Direct Intramural Cost	$ 194,400	$ 205,600	$ 400,000
Total Direct Costs	$1,078,800	$3,437,200	$4,516,000
Indirect Cost (Total Direct Costs x 30.30%)	$ 319,590*	$1,110,410	$1,368,350
Estimated EPA Costs Eligible for Cost Recovery	$1,398,390	$4,547,610	$5,946,000

- At the time the original action memorandum was prepared the Regional indirect cost rate was 28.18% and 30.3%.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Fort Orange Paper Company Site, located in the Village of Castleton-on-Hudson, Rensselaer County, New York, which has been developed in accordance with CERCLA, as amended, and is consistent with the NCP. This decision is based on the Administrative Record for the Fort Orange Paper Company Site.

Conditions at the Site meet the NCP criteria for a removal action. I recommend your approval of the proposed ceiling increase and $2 million exemption for the removal action. The estimated project ceiling if approved will be $4,116,000, of which $3,280,000 is for mitigation contracting. Sufficient funding is available in the current Advice of Allowance to finance this continued removal action.

Please indicate your approval or disapproval, and authorization of funding per the current Delegation of Authority by signing below.

Approved: _____ **Date:** _____
Alan J. Steinberg
Regional Administrator

Disapproved: _____ **Date:** _____
Alan J. Steinberg
Regional Administrator

cc: (after approval is obtained)
K. Callahan
G. Pavlou, ERRD
W. McCabe, ERRD
R. Basso, ERRD
J. Rotola, ERRD-RAB
J. La Padula, ERRD-NYRB
T. Lieber, ORC-NYCSFB
C. Garvey, ORC-NYCSFB
P. Brandt, PAD
R. Manna, OPM-FMB
T. Riverso, OPM-GCMB
T. Grier, 5202G
P. McKechnie, OIG
A. English, NYSDEC
A. Raddant, USDOI
L. Rosman, NOAA
L. Battes, NYSEMO
G. Litwin, NYSDOH
C. Kelley, RST