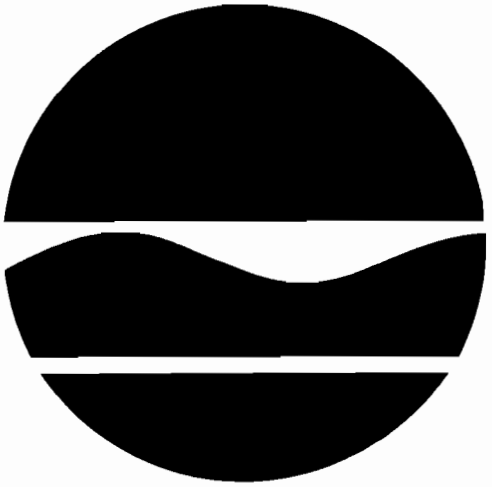
CATSKILL CHROME PLATING COMPANY SITE

Catskill (T),Greene County, New York
Site No. 4-20-023

PROPOSED REMEDIAL ACTION PLAN

February 2000



Prepared by:

Division of Environmental Remediation
New York State Department of Environmental Conservation

PROPOSED REMEDIAL ACTION PLAN

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SECTION 1: SUMMARY AND PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health is proposing a remedy to address the significant threat to human health and the environment created by the presence of hazardous waste at the Catskill Chrome Plating Company Site, a class 2 inactive hazardous waste disposal site. As more fully described in Sections 3 and 4 of this document, the operation of a metal plating business at this location has resulted in the disposal of a number of hazardous wastes, including cadmium, chromium, copper, lead, nickel, zinc and cyanide. Some of these wastes were released or have migrated from the site to surrounding areas, including the surface soils of adjoining properties. These disposal activities have resulted in the following significant threats to the public health and/or the environment:

- a significant threat to human health associated with the direct contact with the contaminated soils due to elevated levels of metals.

In order to eliminate or mitigate the significant threats to the public health and/or the environment that the hazardous wastes disposed at the Catskill Chrome Site have caused, the following remedy is proposed:

- The removal of contaminated soils that are above action levels per Technical and Administrative Guidance Memorandum (TAGM) 4046 (Alternative 4). This alternative consists of three components, the demolition and removal of the on-site building, the excavation and disposal of soils contaminated with metals above action levels and the regrading of the site. This alternative removes the threat to human health and the environment currently posed by the site and allows for the unrestricted reuse and redevelopment of the site.

The proposed remedy, discussed in detail in Section 7 of this document, is intended to attain the remediation goals selected for this site in Section 6 of this Proposed Remedial Action Plan (PRAP), in conformity with applicable standards, criteria, and guidance (SCGs).

This PRAP identifies the preferred remedy, summarizes the other alternatives considered, and discusses the reasons for this preference. The NYSDEC will select a final remedy for the site only after careful consideration of all comments received during the public comment period.

The NYSDEC has issued this PRAP as a component of the citizen participation plan developed pursuant to the New York State Environmental Conservation Law and 6 NYCRR Part 375. This document is a summary of the information that can be found in greater detail in the Remedial Investigation (RI), Feasibility Study (FS) and other relevant reports and documents, available at the document repositories.

To better understand the site and the investigations conducted, the public is encouraged to review the project documents at the following repositories:

NYSDEC Central Office, Room 228, 50 Wolf Road, Albany NY 12233.
Telephone (518) 457-5677
Project Manager, Mr. Robert Edwards

NYSDEC Region 4 Office, 1150 Westcott Road, Schenectady, NY 12306
Telephone (518)357-2234

Catskill Public Library, 1 Franklin Street, Catskill NY12414
Telephone (518)943-4230

The NYSDEC seeks input from the community on all PRAPs. A public comment period has been set from **{DATES}** to provide an opportunity for public participation in the remedy selection process for this site. A public meeting is scheduled for **(DATE}** at the **{LOCATION}** beginning at **{Time}**.

At the meeting, the results of the RI/FS will be presented along with a summary of the proposed remedy. After the presentation, a question-and-answer period will be held, during which you can submit verbal or written comments on the PRAP.

The NYSDEC may modify the preferred alternative or select another of the alternatives presented in this PRAP, based on new information or public comments. Therefore, the public is encouraged to review and comment on all of the alternatives identified here.

Comments will be summarized and responses provided in the Responsiveness Summary section of the Record of Decision. The Record of Decision is the NYSDEC's final selection of the remedy for this site. Written comments may be sent to Mr Robert Edwards at the above address through **{add date comment period closes}**.

SECTION 2: SITE LOCATION AND DESCRIPTION

The Catskill Chrome Plating Company Site (4-20-023) is the location of a former electroplating facility that ceased operations in 1993. The site is located at 370 West Bridge Street in the Village of Catskill, Greene County, New York, near the intersection of Route 23A and Route 9W south. The facility consists of a one story concrete block building with an attached two story wooden house on approximately 0.3 acres. The concrete block portion of the facility housed the main plating operations. The site is situated in a moderately developed residential/commercial area. It is bounded to the north east and west by undeveloped land and to the south by a parking lot, several businesses and the

intersection of Routes 23A and 9W. (See Figure 1)

FIGURE 1

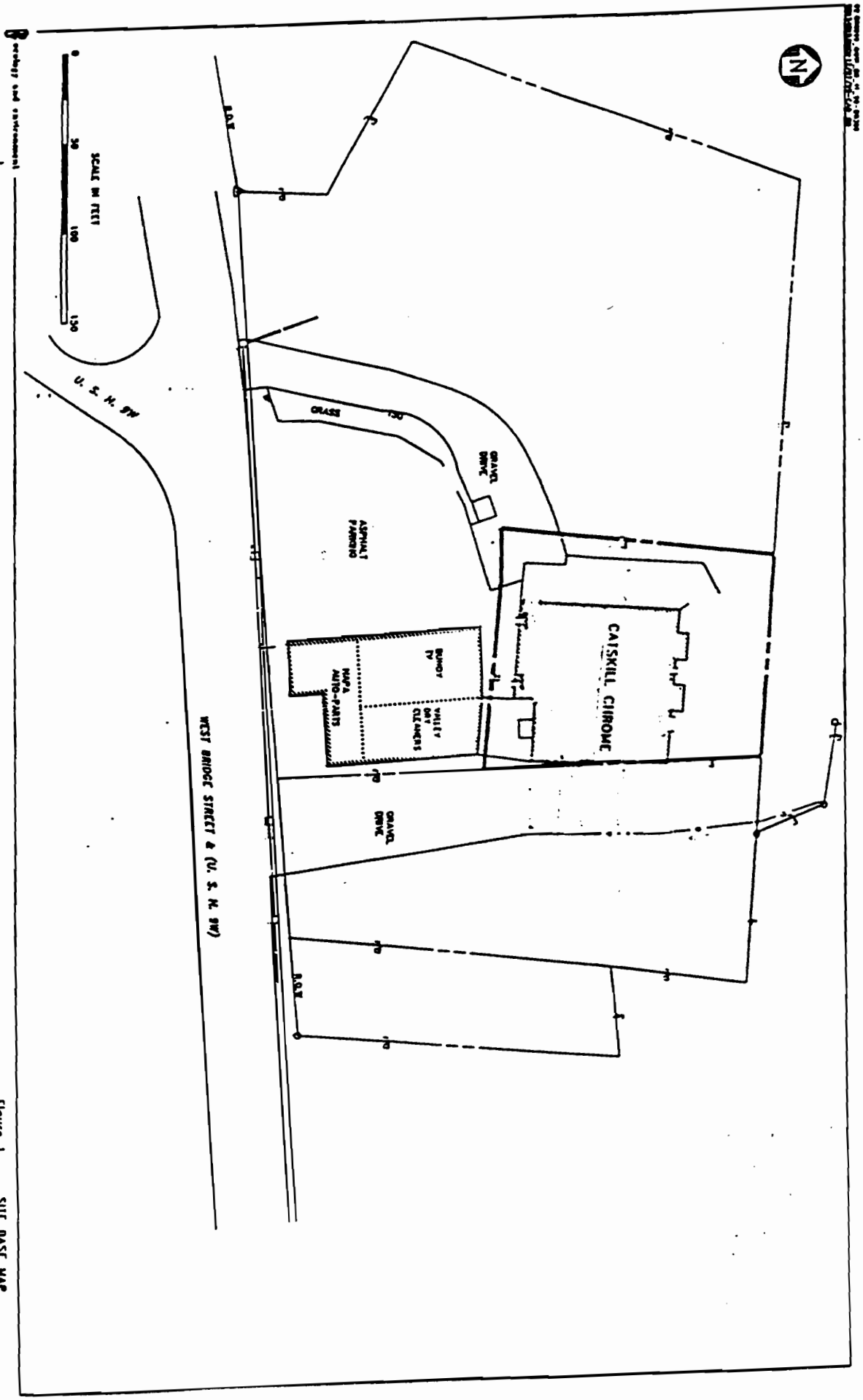

Figure 1 SITE BASE MAP
CAISKILL CHROME SITE
CAISKILL, NEW YORK

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

In approximately 1949, a metal plating operation began at the property. The facility was expanded twice between 1949 and 1980 to the size of the current facility. The facility was in operation until 1993. In early 1994, the owner attempted to reduce the liquid wastes on site by evaporating the material in the plating line vats. The vapors from this activity exited the building via exhaust fans and the vapors condensed on the snow outside the building producing a yellow discoloration. This action is what led to the NYSDEC involvement in the site. Prior waste disposal is suspected to have included draining liquid wastes via sumps connected to the city public sanitary sewer and the dumping of wastes under and adjacent to the building. Site wastes were also taken to the Cauterskill Road Site for disposal on that site. The Cauterskill Road Site was the residence of the former owner and operator of the Catskill Chrome Site and is a separate site on the NYS Registry of Inactive Hazardous Waste Disposal Sites .

3.2: Remedial History

The NYSDEC's involvement in the site began in 1994 when the Department responded to a report of a release from the facilities air vent. The inspection identified a potential threat to human health and the environment due to the storage of incompatible wastes on the site.

The United States Environmental Protection Agency (USEPA) completed a removal action of these wastes in 1994.

The site was added to the NYSDEC Registry of Inactive Hazardous Waste Disposal Sites in 1995.

Additional investigations indicated that soils on the adjacent property were also contaminated by site related wastes and in 1996 an additional removal action was performed by the USEPA to remove an area of contaminated soils.

SECTION 4: SITE CONTAMINATION

The NYSDEC has recently conducted a Remedial Investigation/Feasibility Study (RI/FS) to evaluate the contamination present at the site and to develop alternatives to address the significant threat to human health and the environment posed by the presence of hazardous waste.

4.1: Summary of the Remedial Investigation

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

The RI was conducted in two phases. The first phase was conducted between December 1998 and January 1999 the second phase was conducted in July 1999. A report entitled Remedial Investigation Report of the Catskill Chrome Site Catskill, New York dated September 1999 has been prepared which describes the field activities and findings of the RI in detail.

The RI included the following activities:

- *Surface soil investigation.*
- *Building interior investigation.*
- *Installation of soil borings and monitoring wells for chemical analysis of soils and groundwater as well as*

physical properties of soil and hydrogeologic conditions.

- *Excavation of test pits.*

To determine which media (soil, groundwater, etc.) are contaminated at levels of concern, the RI analytical data was compared to environmental Standards, Criteria, and Guidance values (SCGs). Groundwater, drinking water and surface water SCGs identified for the Catskill Chrome Site are based on NYSDEC Ambient Water Quality Standards and Guidance Values and Part V of New York State Sanitary Code. For soils, NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046 provides soil cleanup guidelines for the protection of groundwater, background conditions, and health-based exposure scenarios. Guidance values for evaluating contamination in sediments are provided by the NYSDEC "Technical Guidance for Screening Contaminated Sediments".

Based on the RI results, in comparison to the SCGs and potential public health and environmental exposure routes, certain media and 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 parts per billion (ppb) and/or parts per million (ppm). For comparison purposes, where applicable, SCGs are provided for each medium.

4.1.1: Site Geology and Hydrogeology

The geologic and hydrogeologic conditions encountered at the Catskill Chrome Site are consistent with the regional geology. The site is underlain with a thin layer of topsoil over approximately 10 feet of glacial silts and clay. These are most likely deposits corresponding to glacial Lake Albany. Beneath this silt and clay layer is a sand and gravel unit which is water bearing. The monitoring wells on site are screened in this unit. Bedrock was not encountered during the field activities.

Groundwater flow on site is generally east to southeast. This is similar to the regional groundwater flow pattern, which is towards the Hudson River. As stated above, all on-site monitoring wells were screened below the Lake Albany silts and clays in the confined sand and gravel unit.

4.1.2: Nature of Contamination

As described in the RI report, many soil, groundwater, surface water and surface drainage soil samples were collected at the site to characterize the nature and extent of contamination. There was also sampling done within the buildings. This included sampling of vats, sumps and wipe samples of the floors and walls.

The main category of contaminants which exceed their SCGs were inorganics (metals). The inorganic contaminants of concern are cadmium, lead, zinc, copper, nickel, chromium and cyanide.

The other main categories of contaminants were either not detected at the site, or the locations where they were detected were restricted to the building interior and sumps.

The volatile organic compounds (VOCs) detected in the building sumps were trichloroethene, dichloroethene and tetrachloroethene.

There were no organic contaminants detected in the groundwater sampling and the only inorganics that exceeded SCGs were iron, manganese, sodium, thallium and silver. These are believed to be background and not site related.

The soils, both on-site and off-site, were found to be contaminated to varying levels with the inorganic compounds listed above.

The samples collected from the building sumps, vats, walls and floors all contained elevated levels of inorganic contaminants.

Based on the results of the investigation, the major exposure pathway identified from the site is via direct contact and ingestion of contaminated material.

4.1.3: Extent of Contamination

Table 1 summarizes the extent of contamination for the contaminants of concern in soils and compares the data with the SCGs for the site. The following are the media which were investigated and a summary of the findings of the investigation.

Soil

The soils beneath the building and adjacent to the building contain elevated levels of site related inorganics, cadmium, copper , nickel, zinc, chromium, lead and cyanide . The soils in the berm to the north of the building contained elevated levels of copper, nickel and zinc. Cyanide levels were elevated in the soils between the buildings.

The maximum levels of these contaminants detected on site and the corresponding TAGM values are as follows:

contaminant	maximum	TAGM 4046
cadmium -	989 ppm	10ppm
copper -	144,000 ppm	57ppm
nickel -	287,000 ppm	49ppm
zinc -	45,500 ppm	164ppm
chromium -	3,630 ppm	31ppm
lead -	3,900 ppm	400ppm
cyanide -	2,770 ppm	1,600ppm

The contamination of the soils impacted by the site is for the most part limited to within 6 feet of the surface. This depth of contamination was used to determine the volumes of soils that would require remediation. The metals contamination is not uniform across the site and several areas of higher concentration or "hotspots" were identified in the feasibility study. NYSDEC TAGM 4046 was used to develop site specific cleanup concentrations for the site contaminants. These action levels and the "hotspot" concentrations were used to develop the remedial alternatives in the FS.

Surface Water

There are no surface water bodies on the site, however, there is a drainage ditch on the site which contained standing water during the RI. This water was sampled along with the soils in the ditch. Seven metals and cyanide were detected above guidance values. Four of the metals detected are considered background (aluminum, barium, iron and manganese) and three are site related (cadmium, copper and lead). The soils in the drainage ditch will be addressed along with the other soils as part of the remediation of the site.

Waste Materials

The majority of the waste material from the plating operations which remained after the facility shut down was removed in 1994 by

the USEPA. Subsequent sampling of the sumps, troughs, vats, walls and floors of the building was conducted by the NYSDEC. No PCBs were detected in the sampling, however, several organic and inorganic compounds were detected in the wastes. These included low levels of volatile and semivolatile compounds, site related metals and cyanide.

4.2: 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 5.8.4 of the RI report.

An exposure pathway is the manner by which an individual may come in contact with a contaminant. The five elements of an exposure pathway are 1) the source of contamination; 2) the environmental media and transport mechanisms; 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.

Pathways which are known to (or may) exist at the site include:

- ingestion of the site soil and /or waste media.

- inhalation of airborne dust is a secondary source of exposure.

The highest levels of contamination are present in the subsurface soils below the foundation of the buildings and adjacent land. With the site in its current state, the threat of exposure to these subsurface soils is diminished, but should the property be redeveloped, exposure through incidental ingestion would be increased as these contaminated soils are exposed through the removal of the building and disturbance of the underlying soils.

4.3: Summary of Environmental Exposure Pathways

This section summarizes the types of environmental exposures and ecological risks which may be presented by the site. The Fish and Wildlife Impact Analysis included in the RI report did not identify any completed pathways of exposure from the site. However, the potential for environmental exposures and ecological risks from the contaminants at the Catskill Chrome Site exists due to the elevated concentrations at the site. A more detailed explanation of the procedures and methodology followed in the impact analysis is included in the RI report in Section 6.

SECTION 5: 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 Potential Responsible Parties (PRP) for the site, documented to date, include the site operators and owners.

The PRPs declined to implement the RI/FS at the site when requested by the NYSDEC. After the remedy is selected, the PRPs will again be contacted to assume responsibility for the remedial program. If an agreement cannot be reached with the PRPs, the NYSDEC will evaluate the site for further action under the State Superfund. The PRPs

are subject to legal actions by the State for recovery of all response costs the State has incurred.

SECTION 6: SUMMARY OF THE REMEDIATION GOALS

Goals for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375-1.10. The overall remedial goal is to meet all Standards, Criteria and Guidance (SCGs) and be protective of human health and the environment. At a minimum, the remedy selected must eliminate or mitigate all significant threats to public health and/or the environment presented by the hazardous waste disposed at the site through the proper application of scientific and engineering principles.

The goals selected for this site are:

- *Eliminate, to the extent practicable, exposures to contaminated site soils.*
- *Eliminate, to the extent practicable, the migration of site related contaminants to the adjacent properties.*

SECTION 7: SUMMARY OF THE EVALUATION OF ALTERNATIVES

The selected remedy must be protective of human health and the environment, be cost effective, comply with other statutory laws and utilize permanent solutions, alternative technologies or resource recovery technologies to the maximum extent practicable. Potential remedial alternatives for the Catskill Chrome site were identified, screened and evaluated in the report entitled Feasibility Study Catskill Chrome Site Catskill, New York, dated 12/99.

A summary of the detailed analysis follows. As presented below, the time to implement reflects only the time required to implement the remedy, and does not include the time required to design the remedy, procure contracts for design and construction or to negotiate with responsible parties for implementation of the remedy.

7.1: Description of Remedial Alternatives

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

No Action

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. This alternative would leave the site in its present condition and would not provide any additional protection to human health or the environment. There would be no costs associated with implementing the no action alternative. The only costs associated with the no action alternative are the costs of monitoring as required by leaving wastes at the site in an unremediated state.

Alternative 2

Consolidation and Covering of Contaminated Soils

Present Worth:	*$ 90,400*
Capital Cost:	*$ 71,346*
Annual O&M:	*$ 1,000*
Time to Implement	*6 months - 1 year*

This alternative consists of two components. It would include the consolidation of

contaminated soils from the off-site areas back to the site and grading and covering the site with clean soil to provide protection from direct contact with the contaminated soils. This alternative would also require the demolition of the existing building on the site. The building would be removed, the basement would be filled to grade, the connection to the sanitary sewer would be removed and grouted shut. Most of the debris would be disposed of as construction and demolition (C&D) debris, however, some material (sumps and residue areas containing high levels of contamination) may be disposed of as hazardous waste.

Because this alternative leaves the contaminated soils on the site , future uses of the site would need to be restricted to be protective of human health and the environment.

Alternative 3

Removal of contaminated soil hot spots with Consolidation and Site Cover

Present Worth:	*$ 635,400*
Capital Cost:	*$ 616,308*
Annual O&M:	*$ 1,000*
Time to Implement	*6 months - 1 year*

This alternative consists of three components: the demolition of the building on the site; the removal of contaminated soil hot spots; and the consolidation and covering of the remaining contaminated soils.

The contaminated soils beneath the building would be removed under this alternative. The concrete floor would be disposed of in accordance with the criteria described in alternative #2. The soils remaining would be consolidated and covered with clean soil as in alternative #2. (See Figure 2) This would include the consolidation of contaminated soils from the off-site areas back to the site.

This alternative would require restricting the future uses of the site to be protective of human health and the environment because contaminated soils would remain on the site.

Alternative 4

Removal of Contaminated Soils Above SCGs

Present Worth:	*$ 660,300*
Capital Cost:	*$ 660,300*
Annual O&M:	*$ 0*
Time to Implement	*6 months - 1 year*

This alternative is identical to alternative #3 with the exception that all soils containing metals above SCGs would be excavated and disposed of off site. The site would be regraded, however, no cover would be required and there would be no need for deed restrictions regarding future use of the property as all contaminated soils above background would be removed under this alternative. (See Figure 3)

Alternative 5

Partial Removal of Contaminated Soils Above SCGs

Present Worth:$ 323,400
Capital Cost:$ 323,400
Annual O&M:$ 0
Time to Implement6 months - 1 year

This alternative is identical to alternative #4 with the exception that the site building and contaminated soils under it would remain. All

soils containing metals above SCGs not under the building would be excavated and disposed of off site. This alternative would leave some of the most contaminated soils at the site under the building. It also leaves the existing building in its current condition. Under this Alternative, the site would remain on the registry. There would be a need to place restrictions for future use of the property to be protective of human health and the environment. Additional remedial actions would be required if the property was to be redeveloped.

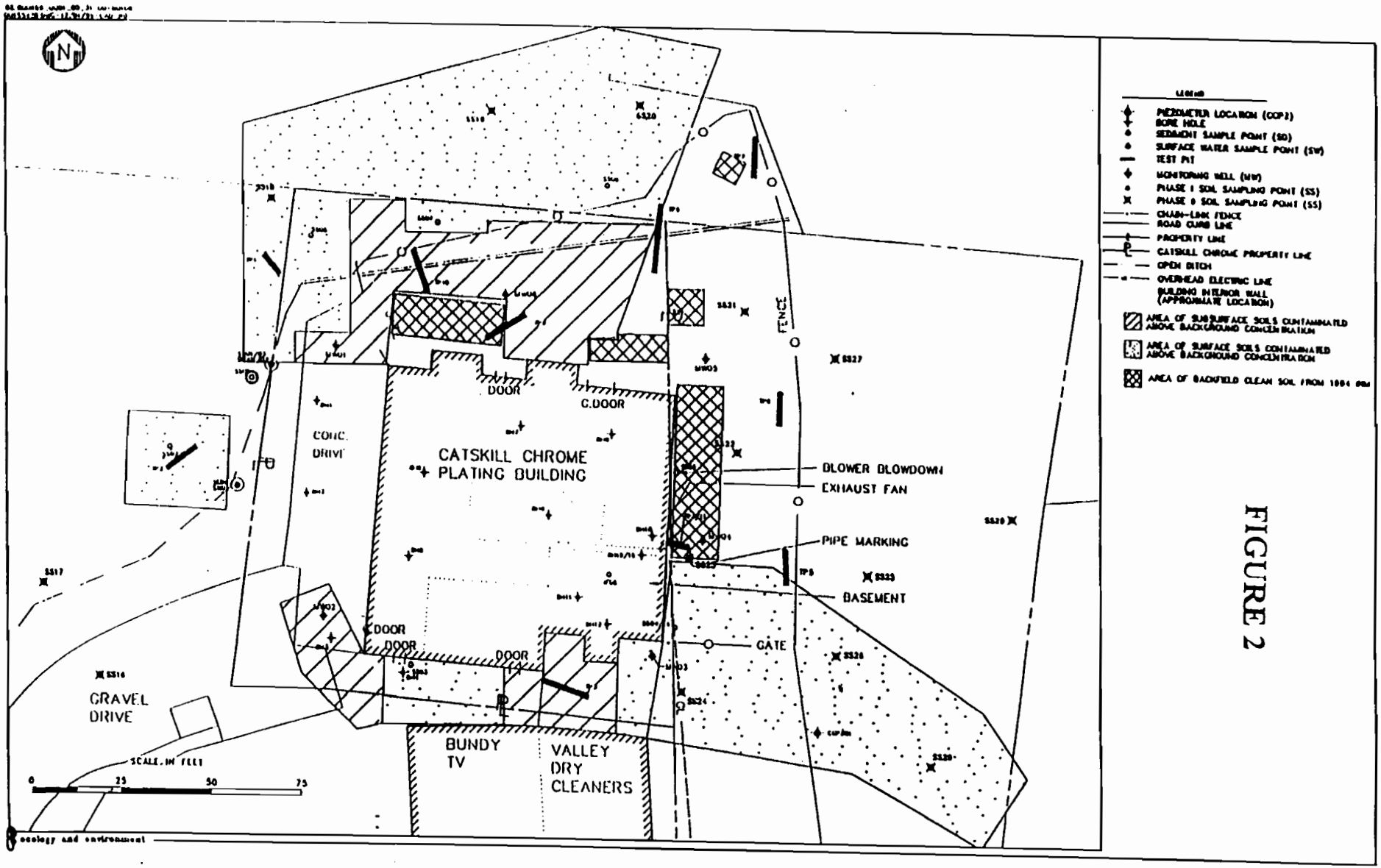

FIGURE 2

AREA OF SOILS CONTAMINATED
ABOVE ALTERNATE CLEANUP GOALS
CATSKILL CHROME SITE
CATSKILL, NEW YORK

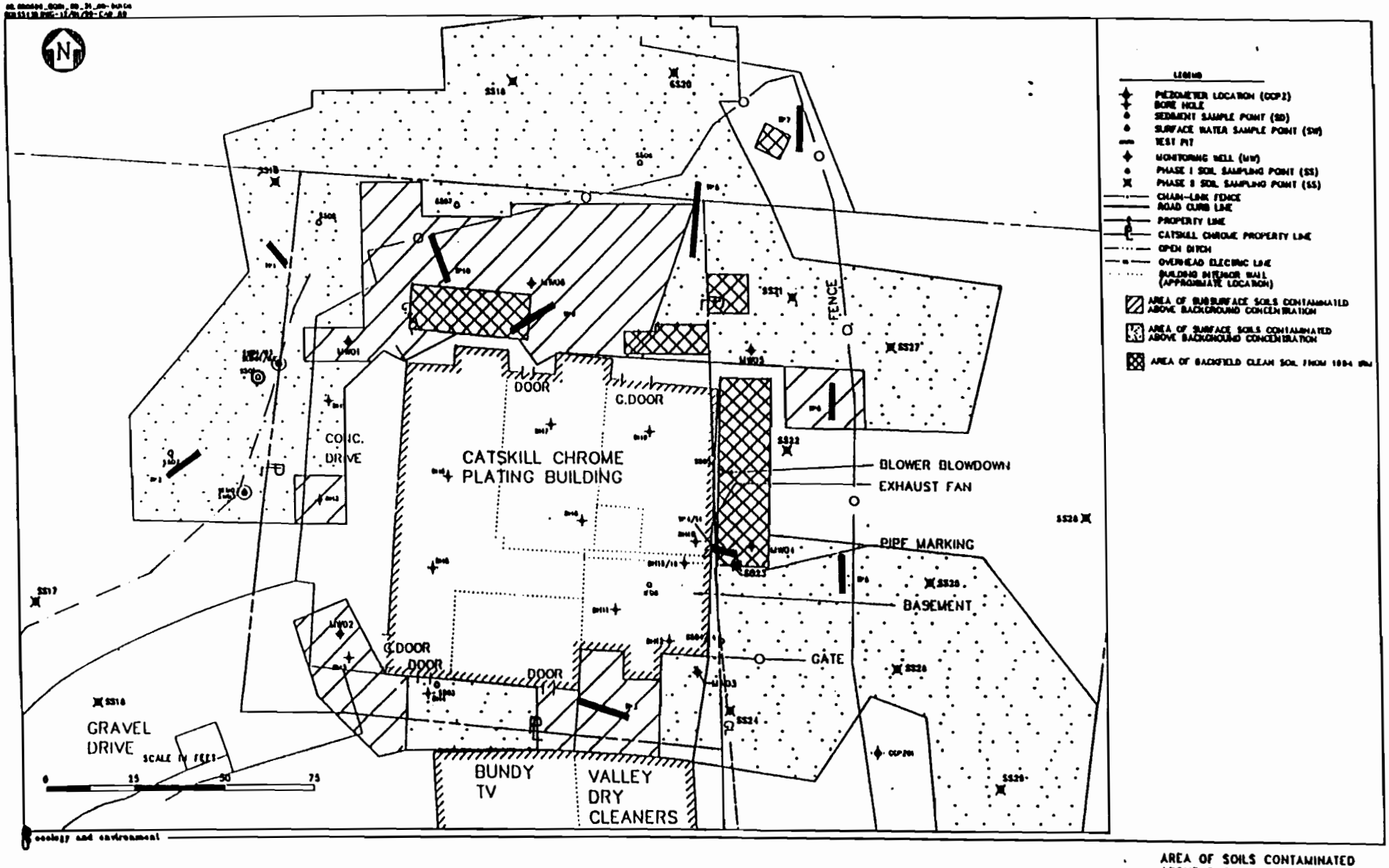

FIGURE 3

AREA OF SOILS CONTAMINATED
ABOVE BACKGROUND
CATSKILL CHROME SITE
CATSKILL, NEW YORK

7.2Evaluation 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 (6 NYCRR 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 included in the Feasibility Study.

The first two evaluation criteria are termed threshold criteria and must be satisfied in order for an alternative to be considered for selection.

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. All alternatives except for Alternative 1 the no action alternative would meet the guidance prescribed in NYSDEC TAGM 4046 for metals contamination.

2. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative's ability to protect public health and the environment. All alternatives except for Alternative 1 the no action alternative, eliminate the exposure route via direct contact for the contaminated soils on the site either by covering the contaminated materials or removing them from the site. The no action alternative would continue to pose a potential threat to human health as nothing would be done to address the exposure pathways.

The next five "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

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/or implementation of the remedy are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives. There would be no short term impacts associated with Alternative 1. The other alternatives would have short term impacts associated with the potential of exposure to contaminated materials during building demolition and soil excavation/capping. These potential exposures would be mitigated with the use of engineering controls during the remedial action.

4. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. 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. Alternative 4 would remove all soils contaminated above background and therefore, be the most permanent remedy for the site. Alternative 3 would leave some contaminated soils on site. The remaining soils would be covered with a soil cap, therefore, reducing the risk from direct contact. Alternative 2 would rely solely on the effectiveness of the soil cap to reduce the threat from direct contact and Alternative 1 would have no long term effectiveness.

5. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site. Technologies that could reduce the toxicity, mobility or volume of the contaminants on the site were determined to be inappropriate for the relatively small volume of waste at the site and the site conditions. Therefore, these technologies were screened out of consideration in the feasibility study. None of the alternatives will reduce the actual toxicity, mobility or volume of the wastes, however, in terms of the site, Alternative 2 would reduce the threat of direct contact with contaminated soils along with the reduction of erosion of surface soils due to the capping of the site. Alternative 3 would remove some of the contaminated soils from the site, thereby, reducing the toxicity, mobility and volume of wastes at the site. Alternative 4 would remove all contaminated soils from the site, providing the greatest reduction of toxicity, mobility and volume of wastes at the site. Alternative 5 would remove all contaminated soils not under the building, thereby reducing the mobility and volume of wastes at the site.

6. Implementability. The technical and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction and the ability to monitor the effectiveness of the remedy. For administrative feasibility, the availability of the necessary personnel and material is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, etc. All of the alternatives evaluated are considered to be implementable.

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 2.

This final criterion is considered a modifying criterion and is taken into account after evaluating those above. It is evaluated after public comments on the Proposed Remedial Action Plan have been received.

8. **Community Acceptance** - Concerns of the community regarding the RI/FS reports and the Proposed Remedial Action Plan are evaluated. A "Responsiveness Summary" will be prepared that describes public comments received and the manner in which the Department will address the concerns raised. If the selected remedy differs significantly from the proposed remedy, notices to the public will be issued describing the differences and reasons for the changes.

SECTION 8: SUMMARY OF THE PROPOSED REMEDY

Based upon the results of the RI/FS, and the evaluation presented in Section 7, the NYSDEC is proposing Alternative 4, the removal of contaminated soils above SCGs, as the remedy for this site. (See Table 1).

This selection is based on the evaluation of the four alternatives developed for the site. With the exception of the no action alternative, each of the remaining alternatives addresses the contamination at the site. The major differences between the Alternatives 2, 3 and 4 are the amount of contaminated material that would remain at the site and the resulting

reuse restrictions that would apply because of the remaining contamination. These three alternatives each are protective of human health because the risk from direct contact with the contaminated site soils is removed. Alternative 4 has been selected because all of the soils contaminated above SCGs would be removed. This alternative is considered the most protective of human health because of the complete removal of contaminated soils. Furthermore, with the removal of all contaminated soils, this alternative would allow for the unrestricted reuse of the site and the site could be considered for delisting from the registry of inactive hazardous waste sites after the remedy is completed.

The estimated present worth cost to implement the remedy is $660,300. The cost to construct the remedy is estimated to be $660,300 and there would be no annual operation and maintenance cost for this alternative.

The elements of the proposed remedy are as follows:

1. A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation and maintenance, and monitoring of the remedial program. Any uncertainties identified during the RI/FS would be resolved.

2. The proposed remedy consists of three components:

- the demolition and disposal of the building on the site,
- the removal and disposal of contaminated soils,
- and the regrading of the site.

Table 1
Nature and Extent of Contamination

MEDIUM	CATEGORY	CONTAMINANT OF CONCERN	CONCENTRATION RANGE (ppm)	FREQUENCY of EXCEEDING SCGs	SCGs (ppm)
Soils	inorganics	cadmium	nd-989	25/60	10
		chromium	6.8-3,630	35/60	31
		copper	10.0-144,000	34/60	57
		lead	11.7 - 3,900	5/60	400
		nickel	10.0-287,000	33/60	49
		zinc	40.7-45,500	29/60	164
		cyanide	non-detect -2,770	2/32	1,600

Table 2
Remedial Alternative Costs

Remedial Alternative	Capital Cost	Annual O&M	Total Present Worth
No Action	$0	$0	$0
Covering of Contaminated Soils	$71,346	$1,000	$90,400
Removal of Contaminated Soil Hot Spots with Site Cover	$616,308	$1,000	$635,400
Removal of Contaminated Soils above SCGs	$660,300	$0	$660,300
Partial Removal of Contaminated Soils above SCGs	$323,400	$0	$323,400