EPA/ROD/R02-92/172
1992

EPA Superfund
Record of Decision:

ACTION ANODIZING, PLATING, & POLISHING CORP.
EPA ID: NYD072366453
OU 01
COPIAGUE, NY
06/30/1992

EPA Superfund Record of Decision:

Action Anodizing & Plating, NY

NOTICE

The appendices listed in the index that are not found in this document have been removed at the request of the issuing agency. They contain material which supplement, but adds no further applicable information to the content of the document. All supplemental material is, however, contained in the administrative record for this site.

ROD FACT SHEET

Site

Name:	Action Anodizing Plating and Polishing
Location/State:	Town of Babylon, Suffolk County, N.Y.
EPA Region:	II
HRS Score (date):	36.61
NPL Rank (date):	Group 11 (proposed June, 1988; listed March, 1989)

ROD

Date Signed:	June 30, 1992
	Selected Remedy- No remedial action, including a 1 year groundwater monitoring program.
Capital Cost:	$0
O and M:	$0
Present Worth:	$0

LEAD

Remedial, EPA	
Primary contact:	Julia Allen- (212) 264-8476
Secondary Contact:	Douglas Garbarini- (212) 264-0109

WASTE

Type and media:	Not applicable
Origin:	Not applicable

RECORD OF DECISION

ACTION ANODIZING PLATING AND POLISHING SITE
TOWN OF BABYLON
SUFFOLK COUNTY, NEW YORK

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

NEW YORK

DECLARATION FOR THE RECORD OF DECISION

Site Name and Location

Action Anodizing Plating and Polishing, Town of Babylon, Suffolk County, New York

Statement of Basis and Purpose

This decision document presents the selected remedial action for the Action Anodizing Plating and Polishing ("AAPP") site ("the Site"), located in the Town of Babylon, Suffolk County, New York, which was chosen in accordance with the requirements of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. 9601-9675, as amended, and to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"), 40 CFR Part 300. This decision document explains the factual and legal basis for selecting the remedy for the Site. The information supporting this remedial action decision is contained in the administrative record for the Site. The administrative record index is attached (Appendix III).

The New York State Department of Environmental Conservation ("NYSDEC") concurs with the selected remedy (Appendix IV).

Description of the Selected Remedy: No Further Action

The United States Environmental Protection Agency ("EPA") in consultation with the State of New York has determined that the AAPP site does not pose a significant threat to human health or the environment and, therefore, remediation is not appropriate. This determination is based on previous cleanup activities conducted at the Site in 1980 and the remedial investigation activities conducted by EPA from March 1989 through March 1992. Thus, "No Action" is the selected remedy for the Site. A one-year monitoring program will be established to ensure that the remedy is protective of human health and the environment.

Declaration

In accordance with the requirements of CERCLA, as amended, and the NCP, it has been determined that no remedial action is necessary to protect human health and the environment at the Action Anodizing Plating and Polishing site. Previous cleanup activities conducted in response to Suffolk County Department of Health Services enforcement actions have remediated the significant contamination present at the Site. However, a program to monitor the groundwater beneath the Site will be implemented. Because this remedy will not result in hazardous substances remaining on-site above health-based levels, the fiveyear review will not apply to this action.

EPA has determined that no further remedial action is necessary at this site. Therefore, the site now qualifies for inclusion in the "sites awaiting deletion" subcategory of the Construction Completion category of the National Priorities List.

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DECISION SUMMARY
ACTION ANODIZING PLATING AND POLISHING SITE

TOWN OF BABYLON
SUFFOLK COUNTY, NEW YORK

United States Environmental Protection Agency

Region II

New York

SITE NAME, LOCATION AND DESCRIPTION

The Action Anodizing Plating and Polishing (AAPP) site is located at 33 Dixon Avenue in the Hamlet of Copiague in the Town of Babylon, Suffolk County, New York. It is approximately one acre in size and is one mile east of the Nassau-Suffolk County line and one-half mile south of Sunrise Highway (see Figure 1).

The population of the Town of Babylon is estimated to be 203,483 (Bureau of the Census, 1980). The area that surrounds the AAPP site is comprised predominantly of light industrial and single family residential units. The Town of Babylon zoning map (May 1986) designates the area as GA-Industry (GAIndustry is defined as light manufacturing, warehouse, storage, offices and retail facilities) and Residential (with typical lot sizes of 7,500 square feet). Public supply wells are the primary source of drinking water in the area and approximately one million residents of Suffolk and Nassau Counties obtain drinking water from public wells within three miles of the Site.

The AAPP facility occupies approximately one-half of the subject property on the corner of Galvani Street and Dixon Avenue (See Figure 2). The operating facility is approximately 3000 square feet in area with an additional 2000 square feet of office space. Attached to the operating facility is an approximate 7500 square foot equipment storage area addition which was built in 1984. The Site is accessed by two unpaved driveways. One driveway enters the southern end of the property from Dixon Avenue and the other driveway enters the eastern side from Galvani Street. On the northern side of the facility, a dirt area, approximately 20 feet wide, separates the building from a heavily vegetated area which extends to the property's northern border. Vegetation in this area consists primarily of ragweed and young black locust trees. A two-story house occupies a lot along the eastern side of the property with frontage on Galvani Street. There does not appear to be any significant wildlife habitat on the property.

The Site is at an approximate elevation of 30 feet above mean sea level. The ground surface of the Site slopes down about one-half foot from the north to the south. The shallowest groundwater in the region, the Upper Glacial Aquifer, occurs approximately 10 feet below ground level at the Site. The thickness of the saturated upper Pleistocene deposits under the Site is estimated to be approximately 75 feet. The Upper Pleistocene deposits and Mattawan/Magothy Aquifers form a thick sequence of sand with varying amounts of silt and clay. The stratification of these silt and clay layers impedes vertical groundwater movement. The groundwater flows approximately one foot/day and is generally towards the south, to the Great South Bay, but local variations in the direction of movement occur. Amityville Creek and Woods Creek, the nearest downgradient surface water bodies to the Site, are located approximately onehalf mile south of the Site (see Figure 1). Residential development abuts both creeks which eventually feed into the Great South Bay. Wildlife observed in these areas include Canada goose, snowy egret, mockingbird, song sparrow and purple finch. Other birds and small mammals common to the area are also likely to utilize these habitats.

SITE HISTORY AND ENFORCEMENT ACTIVITIES

For approximately thirty years prior to 1968, a commercial laundry facility operated on the Site's premises. Since 1968, AAPP has operated at the Site as a small metal-finishing shop.

AAPP's operations primarily involve sulfuric acid anodizing of aluminum parts for the electronics industry, cadmium plating, chromate conversion coatings, metal dyeing and vapor degreasing. Liquid wastes from these

operations include rinses of spent caustic and acidic solutions contaminated with cadmium, chromium, zinc and sodium cyanide. Prior to 1980, rinse water was reportedly stored in a concrete waste holding trough in the floor of the facility from which it was pumped into a low pressure steam boiler. The steam was condensed and reused as process make-up water. The solids from the rinse water were allowed to build up in the boiler tubes until the tubes became plugged, at which time, the boiler would be replaced with a new unit.

The concrete trough had previously been used by the commercial laundry as part of its drainage system. The trough was connected to a septic tank on the north side of the building. Tank overflow fed into a series of six leaching pits on the east side of the building. The bottoms of the pits were reportedly several feet below ground.

During an inspection of the Site by the Suffolk County Department of Health Services (SCDHS) in January 1980, it was discovered that rinse water from AAPP's operation was discharging to the leaching pits rather than the low pressure steam boiler. SCDHS sampled the leaching pits, process tanks, surface soils, and septic tank on the Site. The results showed elevated levels of several metals, notably cadmium, chromium and nickel in the leaching pits. AAPP was told by SCDHS to cease discharge to the leaching pits immediately and remove the soils and sediments of the entire leaching system.

In the spring of 1980, AAPP contracted with the Patterson Chemical Company for the cleanup and closing of the leaching system. This work was supervised and approved by SCDHS. In September 1980, SCDHS notified AAPP that the leaching pits could be back-filled with clean sand and gravel. The 7,500 foot equipment storage area, built in 1984, lies directly on top of the former leaching pits. AAPP reports that its industrial waste is currently hauled off-site for disposal.

In January 1986, the New York State Department of Environmental Conservation (NYSDEC) issued a Phase 1 Investigation Report which summarized past investigations and included a Hazard Ranking System (HRS) score for the Site. Based on the HRS score, the Site was proposed for inclusion on the National Priorities List (NPL) in June 1988 and was placed on the NPL in March 1989.

On March 7, 1989, EPA sent "general notice" letters to two potentially responsible parties (PRPs), affording them the opportunity to conduct the Remedial Investigation and Feasibility Study (RI/FS) for the Site. PRPs are companies or individuals who are potentially responsible for contributing to the contamination at the Site and/or are past or present owners of the property. EPA did not receive any good faith proposals from the PRPs to undertake or finance the RI/FS. Therefore, beginning in July 1989, the necessary work was performed by EPA's contractor, Malcolm Pirnie, Inc., using Superfund monies.

HIGHLIGHTS OF COMMUNITY PARTICIPATION

The RI report and the Proposed Plan for the Site were released for public comment on April 3, 1992. These documents were made available to the public in the administrative record file at the EPA Docket Room in Region II, New York and the information repositories at the NYSDEC, Albany, New York, the Town of Babylon Department of Environmental Control, Babylon, New York and the Copiague Memorial Library, Copiague, New York. A press release announcing the availability of these documents was issued on April 3, 1992. Originally, the public comment period was set by EPA to end on May 2, 1992. At the community's request, an extension to the public comment period was granted until June 8, 1992.

A public participation meeting was conducted by EPA on April 22, 1992 at the Babylon Town Library, Babylon, New York to discuss the RI report and to provide an opportunity for interested parties to present oral comments and questions to EPA. Due to community interest, a follow-up public availability session was held in coordination with the Suffolk County Department of Health Services and the Town of Babylon Department of Environmental Control on May 4, 1992 at the Copiague Junior High School, Copiague, New York. At the community's request, a second public meeting was held on June 2, 1992 at the Copiague Junior High School, Copiague, New York.

A summary of the significant comments relating to the selection of the remedy received during the public meetings and public comment period and EPA's responses to these comments are presented in the Responsiveness Summary (see Appendix V).

SCOPE AND ROLE OF RESPONSE ACTION

This is the first and only planned operable unit for the Site. The primary objective of this operable unit is to determine the nature and extent of contamination at the Site and to take measures, as appropriate, to ensure protection of human health and the environment.

The specific objectives of the RI for the AAPP site were the following:

- to identify all potential source areas of contamination;
- to characterize the nature and extent of possible contamination in environmental media on-site;
- to determine the hydrogeologic characteristics of the Site to assess potential present or future impacts on downgradient receptors; and,
- to assess the present and future potential risks to public health and the environment caused by site contamination in the absence of any remedial action.

SUMMARY OF SITE CHARACTERISTICS

Previous investigations (SCDHS, 1980) showed that there were discharges of untreated process wastewater to leaching pits prior to 1980. Under the direction of EPA, Malcolm Pirnie, Inc. conducted an RI from July 1989 to April 1992 to characterize the geology, groundwater hydrology and chemical quality of the soil and groundwater at the Site. The investigation consisted of drilling borings and constructing monitoring wells, collecting soil and groundwater samples, a geophysical survey and an air-monitoring survey. In addition, a soil-gas survey was performed by EPA in September 1989. The results of the RI are summarized below.

Groundwater

In February 1991, ten wells were installed at the Site. Two wells were drilled upgradient of the Site's operations, four wells were drilled onsite and four wells were drilled downgradient of the Site. The wells were installed and screened in both shallow (20-25 feet below surface) and deep (60-70 feet below surface) portions of the Upper Glacial Aquifer. In March and July 1991, filtered and unfiltered groundwater samples were taken from the ten monitoring wells and analyzed for organic and inorganic constituents.

Table 1 lists the contaminants detected in the groundwater at the Site, as well as the frequency and range of detection. In the first round of groundwater samples, two organic compounds, toluene and xylenes (total), were detected in one on-site well, at 39 and 46 parts per billion (ppb), respectively, and one downgradient well, at 14 and 20 ppb, respectively. These levels exceed the State drinking water standard of 5 ppb for both contaminants, but are well below the Federal standards of 1000 ppb for toluene and 10,000 ppb for xylenes (total). State and Federal primary drinking water standards are often referred to as maximum contaminant levels, or MCLs. Toluene and xylenes (total) were not detected in the second round of groundwater samples. No other volatile organic compounds exceeded their respective MCLs.

With the exception of the chromium analyses, results of the first two rounds of unfiltered groundwater samples indicated relatively low levels of inorganic contamination. In the first round, chromium was detected in the deep upgradient well at 555 ppb, which is significantly higher than the State and Federal MCLs of 50 and 100 ppb, respectively. This level was also significantly higher than the highest level (11.7 ppb in a deep well) detected on-site, where levels did not exceed MCLs, and downgradient where chromium was detected in a deep well at 96.5 ppb. In the second round, chromium exceeded both State and Federal MCLs in the deep upgradient well (130 ppb) and the State MCL in one shallow on-site well (67 ppb) and a deep downgradient well (90 ppb). The highest level of chromium (130 ppb) was detected in the same upgradient well as in round one. Chromium was not detected in any of the filtered samples.

A third round of groundwater samples was taken in January 1992 and analyzed for total chromium only. Chromium was not detected at levels exceeding MCLs in any of the samples collected in the January sampling effort. Given that the highest levels of chromium were detected in an upgradient well, and that the levels

decreased significantly from March 1991 to January 1992, it is likely the chromium contamination originated from a source upgradient of the Site or that the elevated chromium results were due to suspended solids present in the samples.

Lead was also detected in the groundwater at levels which exceeded its applicable standards. Lead was detected in one on-site well at 26 ppb, which is slightly higher than the Federal action level of 15 ppb and the New York State water quality standard of 25 ppb. All other samples contained levels of lead which were below the Federal action level. No other inorganic constituents exceeded MCLs.

Both iron and manganese were detected in the groundwater at levels which exceed the Federal secondary drinking water standards. However, these standards are based on aesthetic qualities rather than health concerns.

In February 1992, SCDHS sampled the residential well of the private residence adjacent to the Site to determine drinking-water quality. Results of the sampling indicated that contaminants were not present above State or Federal MCLs. This is believed to be the only residential well used as a potable water supply in the vicinity of the Site. A homeowner residing diagonally across from the Site on Galvani Street has a well limited to outdoor use. This well was sampled in July 1991 and results showed no contaminants exceeding State or Federal MCLs.

Surface/Subsurface Soils

Soil borings were drilled at the Site in order to obtain information on Site geology and to determine the extent of subsurface contamination. The locations of the indoor and outdoor soil borings and surface soil samples are identified on Figure 3. Results of the subsurface soil samplings from indoor and outdoor test borings did not indicate the presence of inorganic constituents at elevated levels. Similarly, although the results of the analyses for organic constituents indicated the presence of a limited number of organic compounds in both the indoor and outdoor borings, the compounds were not present in any significant concentration or in any consistent pattern.

Surface soil samples were collected from the top six-inch strata at twenty locations across the AAPP site. Table 2 provides a comparison of the surface soil contaminants detected at the Site with the background range reported in the literature for inorganics in surface soils in the United States and typical sandy soils. Of the metals detected in these samples, only cadmium was detected above both the background range for surface soils in the United States (0.01 - 2 mg/kg) and typical sandy soils (0.07 - 1.1 mg/kg) (see Table 2). The highest level of cadmium detected in on-site surface soils was 29.4 mg/kg. All other metals detected on-site were either within or close to reported background ranges. Some semi-volatiles were detected, mostly compounds which are by-products of fossil fuel combustion and are typical of what is found near road surfaces. Two volatile organic compounds were detected in two samples at relatively low levels.

Sediment samples were also taken from two on-site drainage systems. A clam shell sampler was used to take two samples from each pool for a total of eight samples from each drainage system. The samples were composited and then analyzed for inorganic and organic compounds and cyanide (amenable to oxidation). Two organic compounds were detected in trace amounts. Inorganic contaminants were detected at relatively low levels. Results indicate that industrial materials were not being discharged to the drainage systems from site-related operations.

In February 1992, the New York State Department of Health sampled soils in the adjacent resident's backyard to determine whether elevated levels of metals were present. Of the metals detected in the surface soils, two metals, lead and arsenic, were detected at levels much higher on the residential property than on the Site property. These results were confirmed through SCDHS testing of the soils in April 1992. The contaminants are not the result of siterelated plating and polishing operations. The possible application of a lead arsenate pesticide on the property is one explanation for the high levels of lead and arsenic. As lead arsenate does not degrade once applied, it will always remain in the soil as lead and arsenic metals regardless of when it was applied to the soil, unless the soil itself is removed from the area. Cadmium was found at levels generally below those detected on-site. No other metals were detected above background levels. SCDHS will continue to perform additional sampling and monitoring of the metal contamination at the

adjacent homeowner's property. SCDHS has informed EPA that, since the contaminants found at the residence are not site-related, SCDHS will be responsible for implementing any appropriate follow-up measures.

Air Monitoring and Geophysical Surveys

Air monitoring and geophysical surveys were conducted at the Site. The air monitoring data collected at the Site are indicative of typical urban conditions. No unusual metallic subsurface objects, such as buried drums, were identified by the geophysical survey.

Soil-Gas Survey

In September 1989, EPA conducted a soil-gas survey at the Site, the results of which are presented in Table 3. Soil gas contaminated by volatile organic compounds (VOCs) is not widespread throughout the Site. The highest levels of VOCs detected were in soil gas collected from the periphery of onsite structures and paved surfaces. Subsurface soil samples and groundwater samples collected during the RI were relatively free of VOC contamination. Therefore, long-term release of VOCs in the soil gas to the atmosphere is unlikely.

SUMMARY OF SITE RISKS

EPA conducted a baseline risk assessment to evaluate the potential risks to human health and the environment associated with the AAPP Site in its current state. The baseline risk assessment focused on contaminants in the groundwater and surface soils which are likely to pose significant risks to human health and the environment. The summary of the contaminants of concern in sampled matrices is listed in Table 4.

The baseline risk assessment evaluated the health effects, which could result from exposure to contamination at the Site, under current and future land-use scenarios. The potential exposure pathways of concern for current land uses include ingestion of chemicals in the soil, and dermal contact with chemicals in the soil. The potential exposure pathways of concern for future land use include those for current land use as well as the following: ingestion of chemicals in groundwater, dermal contact with chemicals in groundwater and inhalation of airborne chemicals in groundwater.

A summary of the complete exposure pathways at the Site evaluated as part of the risk assessment is provided in Table 5. Based on current land uses, workers may be exposed to contaminants at the Site through incidental ingestion and dermal contact with soils during their designated work activities. Similarly, those who trespass onto the Site may be exposed to the contaminants onsite by dermal contact with soils and by incidental ingestion of the soil. If the upper aquifer serves as a drinking water source for the area in the future, the potential would exist for residents and workers to be exposed to chemicals in groundwater through ingestion of drinking water. Future on-site residents might also be exposed to contaminants in groundwater through dermal contact and inhalation of VOCs during showering or bathing.

Under current EPA guidelines, the likelihood of carcinogenic (cancer causing) and noncarcinogenic effects due to exposure to site chemicals are considered separately. Noncarcinogenic risks were assessed using a hazard index (HI) approach, based on a comparison of expected contaminant intakes and safe levels of intake (Reference doses, or RfDs). RfDs have been developed by EPA for indicating the potential for adverse health effects. RfDs, which are expressed in units of mg/kg-day, are estimates of daily exposure levels for humans which are thought to be safe over a lifetime (including sensitive individuals). Estimated intakes of chemicals from environmental media (e.g., the amount of a chemical ingested from contaminated drinking water) are compared with the RfD to derive the hazard quotient (HQ) for the contaminant in the particular medium. The HQ's are then summed to give a pathway HI. When the HI, or sum of sub-threshold exposures (HQs) exceeds one, there may be concern for potential noncarcinogenic health effects, if the contaminants in question are believed to cause a similar toxic effect. The reference doses for the compounds of concern at the AAPP site and a summary of the noncarcinogenic risks associated with these chemicals across various exposure pathways under both current and future land use scenarios is found in Table 6. The results of the baseline risk assessment indicate that under the current-use scenarios, noncarcinogenic health effects are not likely based on the potential exposure pathways and routes evaluated for workers and trespassers. The calculated HQs for these scenarios, as well as the total exposure HIs, are significantly less than one. Under the future-use scenarios, noncarcinogenic health effects are unlikely based on the potential exposure pathways and routes

evaluated for workers, trespassers and residents. As with the results of the current-use scenarios, all calculated pathway specific HQs are less than one. The highest calculated HQ is 0.7, which is the HQ for ingestion of arsenic in groundwater by children in the event of future residential development on the Site. When the pathway HIs for this future land-use scenario are combined, the total exposure HI exceeds 1; however, the critical effects of the two contributing contaminants, i.e., arsenic (skin disorder) and cadmium (kidney damage), are different. Consequently, the simultaneous subthreshold exposure to these two elements would not be expected to result in adverse health effects.

Potential carcinogenic risks were evaluated using the cancer potency factors developed by EPA for the compounds of concern. Cancer slope factors (Sfs) have been developed by EPA's Carcinogenic Risk Assessment Verification Endeavor for estimating excess lifetime cancer risks associated with exposure to potentially carcinogenic chemicals. SFs, which are expressed in units of (mg/kg-day)[-1], are multiplied by the estimated intake of a potential carcinogen, in mg/kg-day, to generate an upper-bound estimate of the excess lifetime cancer risk associated with exposure to the compound at that intake level. The term "upper bound" reflects the conservative estimate of the risks calculated from the SF. Use of this approach makes the underestimation of the risk highly unlikely. The SFs for the compounds of concern are presented in Table 7.

For known or suspected carcinogens, EPA considers excess upperbound individual lifetime cancer risks of between 10[-4] to 10[-6] to be allowable. This can be interpreted to mean that an individual may have a one in ten thousand to a one in a million increased chance of developing cancer as a result of site-related exposure to a carcinogen over a 70-year lifetime under the specific exposure conditions at the Site.

Under current land-use scenarios, estimated carcinogenic risks are within or less than EPA's allowable cancer risk range based on the potential exposure pathways and routes evaluated for workers and trespassers, respectively. The exposure pathway with the greatest risk (1.17 x 10[-6]) is for ingestion of and dermal contact with chemicals in the soil by workers at the Site. None of the fifteen exposure pathways evaluated under the future land-use scenarios have estimated carcinogenic risks which are greater than EPA's allowable cancer risk range; six of these pathways have risks within the range; the estimated carcinogenic risk for the remaining pathways are less than the range. The exposure pathway with the greatest risk (7.25 x 10[-5]) is for the future ingestion of chemicals in the groundwater by an adult. This assumes that the aquifer beneath the Site would be utilized as an untreated source of drinking water.

In summary, none of the current or future risks to human health posed by carcinogenic and noncarcinogenic contaminants from the various pathways considered exceeded EPA's allowable levels.

Uncertainties

The procedures and inputs used to assess risks in this evaluation, as in all such assessments, are subject to a wide variety of uncertainties. In general, the main sources of uncertainty include:

- environmental chemistry sampling and analysis
- environmental parameter measurement
- fate and transport modeling
- exposure parameter estimation
- toxicological data

Uncertainty in environmental sampling arises in part from the potentially uneven distribution of chemicals in the media sampled. Consequently, there is significant uncertainty as to the actual levels present. Environmental chemistry analysis error can stem from several sources including the errors inherent in the analytical methods and characteristics of the matrix being sampled. Uncertainties in the exposure assessment are related to estimates of how often an individual would actually come in contact with the chemicals of concern, the period of time over which such exposure would occur, and in the models used to estimate the concentrations of the chemicals of concern at the point of exposure. Uncertainties in toxicological data occur in extrapolating both from animals to humans and from high to low doses of exposure, as well as from the difficulties in assessing the toxicity of a mixture of chemicals. These uncertainties are addressed by making conservative assumptions concerning risk and exposure parameters throughout the assessment. As a result, the Risk Assessment provides upper bound estimates of the risks to populations near the Site, and is

highly unlikely to underestimate actual risks related to the Site.

Ecological Risk Assessment

The ecological risk assessment evaluated potential exposure routes of terrestial wildlife and aquatic life to Site contamination. Sampling results from Site soils and groundwater were utilized to conduct this assessment. Cadmium was chosen as the chemical of potential concern for surface soils at the Site because it was detected at levels greater than typical background soil concentrations. However, the overall risk to wildlife in the general vicinity of the Site from exposure to contaminated soils is considered to be low, due to the small size of the contaminated area and the limited habitat potential of the Site. The chemicals of potential concern chosen for assessing environmental risk due to exposure to contaminants in the groundwater at the Site are: aluminum, chromium, copper, lead, nickel and zinc, since the detected levels of these compounds exceeded State and/or Federal Ambient Water Quality Criteria for marine and/or fresh water. Groundwater from the Site may ultimately discharge into Amityville Creek and Woods Creek, both located approximately 1/2 mile south of the Site, and the Great South Bay, located 2 miles south of the Site. The potential risk to aquatic life inhabiting these surface water bodies, however, is considered low. This is due to the natural dilution of any low levels of groundwater contamination that may be associated with the Site. Furthermore, the streams in the Babylon area of Long Island are only partially fed by groundwater and unlikely to receive a large input of groundwater flowing from the Site.

State Acceptance

The State of New York, through the NYSDEC, concurs with EPA's selected remedy. See Appendix IV.

Community Acceptance

Following a substantial community outreach effort by EPA to explain the "no action" remedy selected for the Site, the community in general concurs with the selected remedy. The community outreach effort included three meetings during the public comment period. The first was held at the Babylon Town Library, Babylon, New York on April 22, 1992. Due to community interest, a follow-up public availability session was held in coordination with the SCDHS and the Town of Babylon Department of Environmental Control on May 4, 1992 at the Copiague Junior High School, Copiague, New York. At the May 4, 1992 availability session, the community formally requested, through a signed petition, an extension to the public comment period as well as another public meeting. The community was granted an extension to the public comment period until June 8, 1992. A second public meeting was held on June 2, 1992 at the Copiague Junior High School, Copiague, New York.

DESCRIPTION OF THE "NO ACTION" REMEDY

The risk assessment indicates that the levels of contaminants present in the soil, air and groundwater at the Site present risks which fall within or below the Superfund remediation range. In addition, sampling results indicate the majority of contaminants do not exceed MCLs in the groundwater, or background levels in the soil and air. The 1980 SCDHS-ordered remediation of the leaching pits removed the most significant contamination known to exist at the Site.

Based upon the findings of the RI performed at the Site, the EPA, in consultation with the State, has determined that the Site does not pose a significant threat to human health and the environment. The EPA, therefore, has selected a no action remedy for the Site. A one-year monitoring program will be established to ensure that the remedy is protective of human health and the environment. Because this remedy will not result in hazardous substances remaining on-site above health-based levels, the five-year review will not apply to this action.

DOCUMENTATION OF SIGNIFICANT CHANGES

There are no significant changes from the preferred alternative presented in the Proposed Plan.

APPENDIX I

FIGURES

APPENDIX II
ABLES

APPENDIX III

ADMINISTRATIVE RECORD INDEX

Index Document Number Order
ACTION ANODIZING PLATING AND POLISHING CORPORATION Documents

Document Number: ACT-001-0001 To 0155

Date: 01/01/86

Title: Phase I Investigations, Action Anodizing, Plating and Polishing Corporation, Town of Copiague, Suffolk County, New York

Type: REPORT
Author: none: Woodward-Clyde Consultants
Recipient: none: NY Dept of Environmental Conservation

Document Number: ACT-001-0156 To 0492
Date: 03/01/90

Title: Quality Assurance Project Plan, Remedial Planning Activities at Action Anodizing, Plating and Polishing, Copiague, Suffolk County, New York

Type: PLAN
Author: Griffin, David: Malcolm Pirnie, Inc.
Recipient: none: US EPA

Document Number: ACT-001-0493 To 0591

Date: 03/01/90

Title: Field Sampling Plan, Action Anodizing Plating and Polishing, Copiague, Suffolk County, New York

Type: PLAN
Author: Griffin, David: Malcolm Pirnie, Inc.
Recipient: none: US EPA

Document Number: ACT-001-0592 To 0673

Date: 03/01/90

Title: Health and Safety Plan, Action Anodizing Plating and Polishing, Copiague, Suffolk County, New York

Type: PLAN
Author: Griffin, David: Malcolm Pirnie, Inc.
Recipient: none: US EPA

Document Number: ACT-001-0674 To 0675

Date: 02/11/92

Title: Results of Examination (Results of sampling conducted at the Action Anodizing Plating and Polishing site)

Type: DATA
Author: Laccetti, Jeffrey: NY Dept of Health
Recipient: none: none

Document Number: ACT-001-0676 To 0835

Date: 03/01/90

Title: Work Plan, Action Anodizing Plating and Polishing, Copiague, Suffolk County, New York Type: PLAN
Author: Griffin, David: Malcolm Pirnie, Inc.
Recipient: none: US EPA

Document Number: ACT-001-0836 To 0836

Date: 03/27/92

Title: (Letter forwarding the enclosed Final Remedial Investigation Report for the Action Anodizing Plating and Polishing site)

Type: CORRESPONDENCE
Author: Logigian, John M.: Malcolm Pirnie, Inc.
Recipient: Allen, Julia E.: US EPA
Attached: ACT-001-0837

Document Number: ACT-001-0837 To 1117

Parent: ACT-001-0836

Date: 03/01/92

Title: Action Anodizing Plating and Polishing, Final Remedial Investigation
Report

Type: REPORT
Author: none: Malcolm Pirnie, Inc.
Recipient: none: US EPA

Document Number: ACT-001-1118 To 1118

Date: 11/06/90

Title: (Letter discussing activities being conducted as part of the Remedial Investigation/Feasibility Study and forwarding the attached Superfund update for the site)

Type: CORRESPONDENCE
Author: Echols, Cecilia: US EPA
Recipient: resident: none
Attached: ACT-001-1119

Document Number: ACT-001-1119 To 1121

Parent: ACT-001-1118

Date: 11/01/90

Title: Superfund Update - Action Anodizing Plating and Polishing, Town of Babylon, Nassau County, New York

Type: PLAN
Author: none: US EPA
Recipient: none: none

Document Number: ACT-001-1122 To 1122

Date: 07/24/91

Title: (Letter requesting information so that it can be determined whether any property owners in the area of the site are utilizing private wells)

Type: CORRESPONDENCE
Author: Allen, Julia E.: US EPA
Recipient: Foy, C.J.: Suffolk County Water Authority

Document Number: ACT-001-1123 To 1124

Date: 08/07/91

Title: (Letter stating that the Suffolk County Water Authority does not maintain records of homes and/or businesses utilizing private wells)

Type: CORRESPONDENCE
Author: Foy, C.J.: Suffolk County Water Authority
Recipient: Allen, Julia E.: US EPA

Document Number: ACT-001-1125 To 1126

Date: 08/23/91

Title: (Letter discussing the results of irrigation well sampling conducted on July 18, 1991)

Type: CORRESPONDENCE
Author: Trent, Martin: County of Suffolk
Recipient: Simoneli, Sal: none

Document Number: ACT-001-1127 To 1149

Date: 01/15/92

Title: (Letter responding to questions raised regarding the potential for inhalation of contaminants detected at the Action Anodizing Plating and Polishing site, with attachments)

Type: CORRESPONDENCE
Author: Califano, Richard J.: Malcolm Pirnie, Inc.
Recipient: Allen, Julia E.: US EPA

Document Number: ACT-001-1150 To 1153

Date: 02/14/92

Title: (Letter discussing the results of water sampling conducted on January 22, 1992)

Type: CORRESPONDENCE
Author: Trent, Martin: County of Suffolk
Recipient: Clark, Mrs. W.: none

Document Number: ACT-001-1154 To 1169

Date: 04/13/92

Title: (Letter forwarding the attached revisions of Tables 5-8, 59, 5-10, and Tables 17 and 19 of Appendix C for the Human Health Risk Assessment of the Final Remedial Investigation Report, March 1992)

Type: CORRESPONDENCE
Author: Califano, Richard J.: Malcolm Pirnie, Inc.
Recipient: Allen, Julia E.: US EPA

Document Number: ACT-001-1170 To 1170

Date: 04/15/92

Title: (Memorandum discussing contractor rating for Malcolm Pirnie, Inc.)

Type: CORRESPONDENCE
Author: Swanston, Samara F.: US EPA
Recipient: Lieber, Thomas K.: US EPA
Attached: ACT-001-1171

Document Number: ACT-001-1171 To 1171

Parent: ACT-001-1170

Date: 04/09/92

Title: (Letter discussing the New York State Department of Environmental Conservation's classification of freshwater wetlands within the Town of Babylon, New York)

Type: CORRESPONDENCE
Author: Groh, Richard: Town of Babylon
Recipient: Swanston, Samara F.: US EPA

Document Number: ACT-001-1172 To 1172

Date: 04/27/92

Title: (Memoranda to file regarding the availability of sampling data, guidance documents, and technical literature)

Type: CORRESPONDENCE
Author: Allen, Julia E.: US EPA
Recipient: none: none

Document Number: ACT-001-1173 To 1177

Date: 04/01/92

Title: Superfund Proposed Plan - Action Anodizing Plating and Polishing Site, Town of Babylon, Suffolk County, New York

Type: PLAN
Author: none: US EPA
Recipient: none: none

Document Number: ACT-001-1178 To 1179

Date: 02/19/92

Title: (Letter forwarding the enclosed information about the Action Anodizing Plating and Polishing site and requesting a written statement on whether any endangered or threatened species may be present in the project area)

Type: CORRESPONDENCE
Author: Hargrove, Robert W.: US EPA
Recipient: Corin, Leonard P.: US Fish & Wildlife Service
Attached: ACT-001-1180 ACT-001-1181 ACT-001-1185

Document Number: ACT-001-1180 To 1180

Parent: ACT-001-1178

Date: 02/18/92

Title: (Letter forwarding the enclosed laboratory data package for total chromium from the third round of groundwater sampling and a data assessment)
Type: CORRESPONDENCE Author: Logigian, John M.: Malcolm Pirnie, Inc.
Recipient: Garbarini, Doug: US EPA

Document Number: ACT-001-1181 to 1184

Parent: ACT-001-1178

Date: 01/29/92

Title: Evaluation of Inorganic Data using protocols of the Contract Laboratory Program

Type: DATA
Author: Ponte, Dorothy M.: Malcolm Pirnie, Inc.
Recipient: none: none

Document Number: ACT-001-1185 To 1326

Parent: ACT-001-1178

Date: / /

Title: Sample Data Package

Type: DATA
Author: none: iea
Recipient: none: Malcolm Pirnie, Inc.

Document Number: ACT-001-1327 To 1329

Date: 03/16/92

Title: (Letter responding to a February 19, 1992, letter and enclosing an updated compilation of federally

listed and proposed endangered and threatened species in New York)

Type: CORRESPONDENCE
Author: Corin, Leonard P.: US Fish & Wildlife Service
Recipient: Hargrove, Robert W.: US EPA

Document Number: ACT-001-1330 To 1330

Date: 04/09/92

Title: Affidavit of Publication

Type: LEGAL DOCUMENT
Author: Mangano, Edward P.: Notary Public
Recipient: McCool, H.: The Beacon

Document Number: ACT-001-1331 To 1332

Date: 04/08/92

Title: Affidavit of Publication

Type: LEGAL DOCUMENT
Author: Bortle, Julia: Notary Public
Recipient: Acerra, Pamela: Newsday, Inc.

Document Number: ACT-001-1333 To 1344

Date: 03/07/89

Title: (General Notice Letter and 104(e) Request for Information Letter)

Type: CORRESPONDENCE
Condition: MARGINALIA
Author: Luftig, Stephen D.: US EPA
Recipient: various: various

Document Number: ACT-001-1345 To 1358

Date: 01/27/89

Title: (104(e) Request for Information Letter)

Type: CORRESPONDENCE
Author: Luftig, Stephen D.: US EPA
Recipient: Nemetz, Arthur A.: none
Attached: ACT-001-1359

Document Number: ACT-001-1359 To 1363

Parent: ACT-001-1345

Date: 03/14/89

Title: (Response to 104(e) Request for Information Letter)

Type: CORRESPONDENCE

Author: Nemetz, Arthur A.: none
Recipient: Allen, Dorothy: US EPA

Document Number: ACT-001-1364 To 1378

Date: 01/30/89

Title: (104(e) Request for Information Letter)

Type: CORRESPONDENCE
Author: Luftig, Stephen D.: US EPA
Recipient: Cohen, Shepard: Action Anodizing Plating and
PolishingCorporation Attached: ACT-001-1379

Document Number: ACT-001-1379 To 1396

Parent: ACT-001-1364

Date: 05/31/89

Title: (Response to 104(e) Request for Information Letter)

Type: CORRESPONDENCE
Author: Cohen, Shepard: Action Anodizing Plating and Polishing Corporation
Recipient: Miles, Joan: US EPA

Document Number: ACT-001-1397 To 1410

Date: 03/08/89

Title: (Letter forwarding a copy of the attached Request for Information Letter that was sent to Mr. Nemetz's client, Arthur Nemetz)

Type: CORRESPONDENCE
Author: Miles, Joan: US EPA
Recipient: Nemetz, Jerold: none

Document Number: ACT-001-1411 To 1427

Date: 09/20/91

Title: (104(e) Request for Information Letter with attached response)

Type: CORRESPONDENCE
Author: Callahan, Kathleen C.: US EPA
Recipient: Cohen, Shepard: Action Anodizing Plating and Polishing
Corporation

Document Number: ACT-001-1428 To 1452/A

Date: 09/20/91

Title: (104(e) Request for Information Letter with attached response)

Type: CORRESPONDENCE
Author: Callahan, Kathleen C.: US EPA
Recipient: Cohen, Shepard & Judith: S.J.C. Realty Co., Inc.

Document Number: ACT-001-1453 To 1524

Date: 09/20/91
Title: (104(e) Request for Information Letter with attached response)

Type: CORRESPONDENCE
Author: Callahan, Kathleen C.: US EPA
Recipient: Cohen, Shepard: Action Anodizing Plating and Polishing
Corporation

Document Number: ACT-001-1525 To 1541

Date: 09/20/91

Title: (104(e) Request for Information Letter with attached response)

Type: CORRESPONDENCE
Author: Callahan, Kathleen C.: US EPA
Recipient: Cohen, Judith: none

Document Number: ACT-001-1542 To 1556

Date: 09/20/91

Title: (104(e) Request for Information Letter)

Type: CORRESPONDENCE
Author: Callahan, Kathleen C.: US EPA
Recipient: Hornaday, Florence: none
Attached: ACT-001-1557

Document Number: ACT-001-1557 To 1571

Parent: ACT-001-1542

Date: 10/16/91

Title: (Response to 104(e) Request for Information Letter)

Type: CORRESPONDENCE
Author: Hornaday, Florence: none
Recipient: various: US EPA

Document Number: ACT-001-1572 To 1589

Date: 09/20/91

Title: (104(e) Supplemental Request for Information Letter with attached response)

Type: CORRESPONDENCE
Author: Callahan, Kathleen C.: US EPA
Recipient: Nemetz, Arthur A.: none

Document Number: ACT-001-1590 To 1590

Date: 11/06/91

Title: (Letter stating which entities and/or persons were given an extension until November 27, 1991, to respond to the information Request Letters dated September 20, 1991)

Type: CORRESPONDENCE
Author: Allen, Julia E.: US EPA
Recipient: Cohen, Shepard: Action Anodizing Plating and Polishing Corporation

Document Number: ACT-001-1591 To 1603

Date: 02/21/91

Title: Preliminary Health Assessment for Action Anodizing, Plating, and Polishing Corporation, Copiague, Suffolk County, New York

Type: PLAN
Author: none: Agency for Toxic Substances & Disease Registry (ATSDR)
Recipient: none: none

Document Number: ACT-001-1604 To 1629

Date: 03/01/90

Title: Community Relations Plan, Action Anodizing Plating and Polishing, Copiague, Suffolk County, New York

Type: PLAN
Author: Griffin, David: Malcolm Pirnie, Inc.
Recipient: none: US EPA

Document Number: ACT-001-1630 To 1642

Date: 04/22/92

Title: Public Meeting - Action Anodizing Plating and Polishing Site

Type: CORRESPONDENCE
Author: none: US EPA
Recipient: none: none

Document Number: ACT-001-1643 To 1645

Date: / /
Title: Paid Advertisement: The United States Environmental Protection Agency Announces Proposed Remedial Alternative for the Action Anodizing Plating and Polishing site, Suffolk County, New York

Type: CORRESPONDENCE
Author: none: US EPA
Recipient: none: none
Attached: ACT-001-1646

Document Number: ACT-001-1646 To 1647

Parent: ACT-001-1643

Date: 02/01/90

Title: Superfund Update, Action Anodizing Plating and Polishing, Town of Babylon, Nassau County, New York

Type: CORRESPONDENCE
Author: none: US EPA
Recipient: none: none

Document Number: ACT-001-1648 To 1650

Date: 04/01/92

Title: (News Release:) EPA to Hold Public Meeting to Discuss Findings at Superfund Site in Babylon, Long Island

Type: CORRESPONDENCE
Author: none: US EPA
Recipient: none: none

Document Number: ACT-001-1651 To 1665

Date: 05/23/91

Title: (Memorandum providing guidance for planning and conducting five-year reviews)

Type: CORRESPONDENCE
Author: Longest, Henry L., II: US EPA
Recipient: various: US EPA

APPENDIX IV

NYSDEC LETTER OF CONCURRENCE

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233 -7010

Thomas C. Jorling
Commissioner

JUN 19 1992

Ms. Kathleen C. Callahan
Director
Office of Emergency and Remedial Response
U.S. Environmental Protection Agency
Region II
26 Federal Plaza
New York, NY 10278

Dear Ms. Callahan:

Re: Action Anodizing ROD
Site ID #152037

We have reviewed the Draft Record of Decision for the Action Anodizing site and concur with the no-action alternative. We will require that the groundwater monitoring referred to in the ROD include volatile organics and metal analysis, and that it will be performed twice within the next year on monitoring wells 2, 4, 6 and 10.

If you have any questions regarding this matter, please contact Michael J. O'Toole, Jr., at (518) 457-5861.

Sincerely,

David Markell
Acting Deputy Commissioner

APPENDIX V

RESPONSIVENESS SUMMARY
ACTION ANODIZING PLATING AND POLISHING SUPERFUND SITE - TOWN OF BABYLON, NEW YORK

The U.S. Environmental Protection Agency (EPA) held a public comment period from April 3, 1992 to June 8, 1992 to receive comments from interested parties on the Remedial Investigation (RI) report and Proposed Plan for the Action Anodizing Plating and Polishing (AAPP) Superfund site (Site). A public participation meeting was conducted by EPA on April 22, 1992 at the Babylon Town Library, Babylon, New York to discuss the RI report and to provide an opportunity for the interested parties to present oral comments and questions to EPA. Due to community interest, a follow-up public availability session was held in coordination with the Suffolk County Department of Health Services (SCDHS) and the Town of Babylon Department of Environmental Control (TOBDEC) on May 4, 1992 at the Copiague Junior High School, Copiague, New York. At the community's request, a second public meeting was held on June 2, 1992 at the Copiague Junior High School, Copiague, New York.

This responsiveness summary provides a synopsis of citizens' comments and concerns about the Site as raised during the public comment period, and EPA's responses to those comments. All comments summarized in this document were considered in EPA's final decision for selection of the No Action remedy at the AAPP Site.

This responsiveness summary is divided into the following sections:

I. Responsiveness Summary Overview - This section briefly describes the background of the AAPP Site and selection of the No Action remedy at the Site.

II. Background on Community Involvement and Concerns - This section provides a brief history of community interests and concerns regarding the AAPP Site.

III. Summary of Public Comments and EPA's Responses - This section summarizes comments expressed verbally at the public meetings or in writing during the comment period, and provides EPA's responses to these comments.

IV. Appendices - Attached to the Responsiveness Summary are the following Appendices:

Appendix A - Proposed Plan and Public Meeting Information

1) Attachment A.1 - Proposed Plan, Action Anodizing Plating and Polishing Site, Town of Babylon, Suffolk County, N.Y., April 1992.

2) Attachment A.2 - Public Notice of April 22, 1992 Public Meeting

3) Attachment A.3 - Public Notice of June 2, 1992 Public Meeting and Extension to Public Comment Period

4) Attachment A.4 - Attendance Sheets for the April 22, 1992 and June 2, 1992 Public Meetings

I. Responsiveness Summary Overview

Site Background

The AAPP site is located at 33 Dixon Avenue in the Hamlet of Copiague in the Town of Babylon, Suffolk County, New York. It is approximately one acre in size and is one mile east of the Nassau-Suffolk County line and one-half mile south of Sunrise Highway.

The population of the Town of Babylon is estimated to be 203,483 (Bureau of the Census, 1980). The area that surrounds the AAPP site is predominantly light industrial and single family residential units. The Town of Babylon zoning map (May 1986) designates the area as GA-Industry (GA-Industry is defined as light manufacturing, warehouse, storage, offices and retail facilities) and Residential (with typical lot sizes of 7,500 square feet). Public supply wells have been the primary source of drinking water in the area since

1984; approximately one million residents of Suffolk and Nassau Counties obtain drinking water from public wells within three miles of the Site.

The AAPP facility occupies approximately one-half of the subject property on the corner of Galvani Street and Dixon Avenue. The operating facility is approximately 3000 square feet with an additional 2000 square feet of office space. Attached to the operating facility is an approximate 7500 square foot equipment storage area addition which was built in 1985. The Site is accessed by two unpaved driveways. One driveway enters the southern end of the property from Dixon Avenue and the other driveway enters the eastern side from Galvani Street. On the northern side of the facility, a dirt area, approximately 20 feet wide, separates the building from a heavily vegetated area which extends to the property's northern border. Vegetation in this area is primarily ragweed and young black locust trees. A two-story house occupies a lot along the eastern side of the property with frontage on Galvani Street. There does not appear to be any significant wildlife habitat on the property.

The Site is at an approximate elevation of 30 feet above mean sea level. The ground surface of the Site slopes down about one-half foot from north to south. The shallowest groundwater in the region, the Upper Glacial Aquifer, occurs approximately 10 feet below ground level at the Site. The thickness of the saturated upper Pleistocene deposits under the Site is estimated to be approximately 75 feet. The Upper Pleistocene deposits and Mattawan/Magothy Aquifers form a thick sequence of sand with varying amounts of silt and clay. The stratification of these silt and clay layers impedes vertical groundwater movement. The groundwater flows approximately one foot/day and is generally towards the south, to the Great South Bay, but local variations in the direction of movement occur. Amityville Creek and Woods Creek, the nearest downgradient surface water bodies to the Site, are located approximately onehalf mile south of the Site. Residential development abuts both creeks which eventually feed into the Great South Bay. Several rare and endangered species may utilize the limited open water areas of these creeks.

For approximately thirty years prior to 1968, a commercial laundry facility operated on the Site's premises. Since 1968, AAPP has operated at the Site as a small metal-finishing shop.

AAPP's operations primarily involve sulfuric acid anodizing of aluminum parts for the electronics industry, cadmium plating, chromate conversion coatings, metal dyeing and vapor degreasing. Liquid wastes from these operations include rinses of spent caustic and acidic solutions contaminated with cadmium, chromium, zinc and sodium cyanide. Prior to 1980, rinse water was reportedly stored in a concrete waste holding trough in the floor of the facility from which it was pumped into a low pressure steam boiler. The steam was condensed and reused as process make-up water. The solids from the rinse water were allowed to build up in the boiler tubes until the tubes became plugged, at which time, the boiler would be replaced with a new unit.

The concrete trough had previously been used by the commercial laundry as part of its drainage system. The trough was connected to a septic tank on the north side of the building. Tank overflow fed into a series of six leaching pits on the east side of the building. The bottoms of the pits were reportedly several feet below ground.

During an inspection of the Site by the SCDHS in January 1980, it was discovered that rinse water from AAPP's operation was discharging to the leaching pits rather than the low pressure steam boiler. SCDHS sampled the leaching pools, process tanks, surface soils, and septic tank on the Site. The results showed elevated levels of several metals, notably cadmium, chromium and nickel in the leaching pits. AAPP was told by SCDHS to cease discharge to the leaching pits immediately and remove the sediments of the entire leaching system.

In the spring of 1980, AAPP contracted with the Patterson Chemical Company for the cleanup and closing of the leaching system. This work was supervised and approved by SCDHS. In September 1980, SCDHS notified AAPP that the leaching pits could be back-filled with clean sand and gravel. The 7,500 square foot equipment storage area, built in 1985, lies directly on top of the former leaching pits. AAPP reports that its industrial waste is currently hauled off-site for disposal.

In January 1986, the New York State Department of Environmental Conservation (NYSDEC) issued a Phase 1 Investigation Report which summarized past investigations and included a Hazard Ranking System (HRS) score for the Site. Based on the HRS score, the Site was proposed for inclusion on the National Priorities List

(NPL) in June 1988 and was placed on the NPL in March 1989.

On March 7, 1989, EPA sent "general notice" letters to two potentially responsible parties (PRPs), affording them the opportunity to conduct the Remedial Investigation and Feasibility Study (RI/FS) for the Site. PRPs are companies or individuals who are potentially responsible for contributing to the contamination at the Site and/or are past or present owners of the property. EPA did not receive any good faith proposals from the PRPs to undertake or finance the RI/FS. Therefore, beginning in July 1989, the necessary work was performed by EPA's contractor, Malcolm Pirnie, Inc., using Superfund monies.

Summary of the Selected No Action Remedy

The risk assessment indicates that the levels of contaminants present in the soil, air and groundwater at the Site present risks which fall within or below the Superfund remediation range. In addition, although groundwater sampling results indicate the infrequent occurrence of contaminants exceeding maximum contaminant limits (MCLs), the majority of contaminants do not exceed MCLs in the groundwater or background levels in the soil and air. The 1980 SCDHS-ordered remediation of the leaching pits removed the most significant contamination found at the Site.

Based upon the findings of the RI performed at the Site, the EPA, in consultation with the State, has determined that the Site does not pose a significant threat to human health and the environment. EPA, with the concurrence of NYSDEC, has selected a no action remedy for the Site. A one-year groundwater monitoring program will be established to ensure that the remedy is protective of human health and the environment.

II. BACKGROUND OF COMMUNITY INVOLVEMENT

During the course of the RI and Proposed Plan, EPA has sought to promote community awareness of activities at the Site through local newspaper articles, fact sheets, press releases, public notices and public information meetings.

Because EPA had heard from only a few members of the community and not from any local public officials following distribution of Fact Sheets on the Site in February and November 1990, EPA believed that community interest in the Site was low. It was not until after the Proposed Plan was released to the public on April 3, 1992 that community interest in the Site became evident.

A public meeting was held at the Babylon Town Library, Babylon, New York on April 22, 1992. Due to community interest, a follow-up public availability session was held in coordination with the SCDHS and TOBDEC on May 4, 1992 at the Copiague Junior High School, Copiague, New York. The SCDHS and TOBDEC were asked to participate in this session, since many of the community's concerns fell within their areas of jurisdiction (e.g., public water supply and local ordinance issues). At the May 4, 1992 availability session, the community formally requested, through a signed petition, an extension to the public comment period as well as another public meeting. The community was granted an extension to the public comment period until June 8, 1992. A second public meeting was held on June 2, 1992 at the Copiague Junior High School, Copiague, New York.

III. SUMMARY OF PUBLIC COMMENTS AND EPA'S RESPONSES

The comments detailed below include those expressed at the public meetings on April 22, 1992 and June 2, 1992, and those received in writing during the public comment period. Comments heard during the public availability session held in coordination with the SCDHS and the TOBDEC on May 4, 1992 at the Copiague Junior High School, Copiague, New York were not recorded. However, most of the issues raised at the public availability session on May 4, 1992 were addressed at the public meetings on April 22, 1992 and June 2, 1992.

Significant questions and comments expressed at the two public meetings and/or in writing during the public comment period concerning the Site and EPA's proposed remedy selection are summarized below. Comments contained in this section are grouped according to subject discussed. Each question or comment is followed by EPA's response.

THE SUPERFUND PROCESS

COMMENT: How was the AAPP Site discovered, and had any cleanup action been taken previously at the Site?

ANSWER: SCDHS discovered the discharge of hazardous plating waste to the leaching system during a routine annual inspection of the Site in 1980. SCDHS ordered the owner to clean out the leaching system and fill in the former leaching pools with clean sand and gravel. As a follow-up, SCDHS reinspected the leaching system and determined it to be clean.

COMMENT: How did the AAPP Site get placed on the NPL in 1989?

ANSWER: The HRS score for the Site qualified the Site for placement on the NPL in 1989 at which time EPA assumed responsibility for the Site. The potential for groundwater contamination by the wastewater discharged to the leaching pools prior to 1980 was the major contributor to the HRS score. Once a site gets placed on the NPL, a field investigation is conducted at the site to discover what levels of contamination, if any, are present at the site.

COMMENT: If EPA decides not to do any more studies at the AAPP Site, does the Site automatically get deleted from the Superfund NPL?

ANSWER: A groundwater monitoring program will be developed for the AAPP Site as outlined in the Record of Decision (ROD). If contamination levels generally remain below State and/or Federal drinking water standards, the Site would then be proposed for deletion from the NPL at the conclusion of the groundwater monitoring program. EPA would publish a "Notice of Intent to Delete" the Site and accept and respond to public comment on the proposed deletion. In the event that unacceptable levels of contamination are detected at the Site during the subsequent monitoring program, EPA would reexamine the need for remedial measures at the Site. After a site is deleted from the NPL, it is still eligible for Federal funds for remedial action, should evidence indicate that such action is warranted.

COMMUNITY RELATIONS ACTIVITIES

COMMENT: Why were no signs posted on the Site property notifying the community of the Site's Superfund status?

RESPONSE: Prior to and during the performance of the RI, EPA did not identify any acute health threats associated with this Site. Because of this, and the fact that the Site is a currently operating facility, EPA did not determine that it was necessary to post signs designating the facility as a Superfund site.

COMMENT: Why weren't Site activities and meetings better publicized?

RESPONSE: A Community Relations Plan for the AAPP Site was developed by EPA's contractor, Malcolm Pirnie, Inc., in March 1990.

At that time, a list of interested parties, which included local officials, community civic leaders and neighborhood residents, was developed as a mailing list for the Site.

In November of 1990, a fact sheet announcing major fieldwork for EPA's remedial investigation (RI) was distributed to parties identified on the mailing list.

After completion of the RI, EPA issued a press release on April 3,1992, which announced the release of the RI report and the Agency's Proposed Plan for the Site, as well as the date and location of a public meeting to present and answer questions on the Proposed Plan. In addition, EPA placed a public notice in NEWSDAY on April 8, 1992, and THE BEACON on April 9, 1992, notifying readers of the public meeting.

At the public meeting, which was held on April 22, 1992, many questions and concerns were raised by interested community members encompassing a wide range of site and nonsite-related issues. The community's level of concern at this meeting prompted EPA to plan a Public Availability Session on May 4, 1992. After

providing notification to the community, EPA conducted the Public Availability Session in coordination with the SCDHS and the TOBDEC. At this session, community members formally requested, through a signed petition, an extension to the public comment period, as well as another public meeting.

Based on the level of community concern expressed at the Public Availability Session, EPA issued a press release on May 15, 1992, which announced that the Agency had decided to extend the public comment period to June 8, 1992, and hold a second public meeting on June 2, 1992. In addition, EPA placed a public notice in NEWSDAY on May 18, 1992, and SOUTH BAY'S NEWSPAPER and SUFFOLK LIFE NEWS on May 20, 1992, notifying readers of the meeting. Also, EPA mailed meeting notices and information packages to more than 300 interested residents. At the second public meeting, representatives of EPA, Malcolm Pirnie, Inc. and the New York State Department of Health (NYSDOH) again presented the Proposed Plan and provided a thorough discussion of the conclusions reached from the RI that led EPA to propose the preferred remedy. A vigorous questionand-answer period followed this presentation.

Following the selection of a remedy for the Site and throughout the duration of the monitoring program, EPA will continue to keep the community aware of activities at the Site through fact sheets, press releases, or public notices, as appropriate.

THE REMEDIAL INVESTIGATION AND PROPOSED PLAN

COMMENT: Where did the lead and arsenic detected in soil samples of the adjacent resident's backyard come from, and could these contaminants be site-related?

RESPONSE: The possible application of pesticide on the property is one explanation for the high levels of lead and arsenic detected in the surface soil samples of the adjacent resident's backyard. As lead arsenate does not degrade once applied, it will always remain in the soil as lead and arsenic metal, regardless of when it was applied to the soil. At present, SCDHS is investigating the property and has contacted the owners to try to determine the source of the metals detected in the surface soil samples.

Since both lead and arsenic occur naturally in soil (albeit at relatively low levels), EPA expected to detect some lead and arsenic in surface soil on the AAPP site. The on-site concentrations of these substances were in the typical background range, indicating that they are naturally occurring. This suggests that the lead and arsenic detected in the adjacent resident's backyard are not site-related.

COMMENT: Were the soil and air tested off-site, in the surrounding community?

RESPONSE: During the RI for the AAPP Site, an air-monitoring survey was conducted at and in the immediate vicinity of the Site. Survey stations were established at seven on- and off-site locations. The air-monitoring data collected for the Site indicate typical urban conditions. Data collected at or near Dixon Avenue, a four-lane thoroughfare, were slightly higher than levels observed one block south of the Site on a residential street. Subsurface soil samples were taken from all ten monitoring well boreholes, including the four wells located downgradient of the AAPP property. Concentrations of iron and manganese, which are naturally occurring metals, were slightly higher at the downgradient locations. No metals which represented site-related contaminants were found at elevated levels at downgradient locations. Volatile organic compound levels were insignificant.

COMMENT: Was clean backfill used to fill in the leaching pits following the 1980 cleanup activities ordered by the SCDHS?

RESPONSE: The backfill and gravel used by the Site owner to fill in the excavated leaching pits was reportedly clean fill material. Sampling of the areas which correspond to the location of the old leaching pits during the RI found no contamination in either the fill material or the soil below.

COMMENT: Was a well survey ever performed during the RI?

RESPONSE: EPA did not perform a survey of private residential wells as part of the field investigation at the Site. At the request of EPA and the NYSDOH, SCDHS sampled the two residential wells closest to the Site.

One well is used solely as a potable water supply; the other well is reserved for outdoor use. No contaminants were detected above Federal and/or State primary drinking water standards in these wells. Both the SCDHS and the Suffolk County Water Authority do not maintain records of homes and/or businesses utilizing private wells. TOBDEC estimates that 99% of all homes in Copiague are hooked up to a public water supply for primary drinking water purposes.

COMMENT: How close is the nearest public water supply to the Site?

ANSWER: The nearest public water supply is the Lambert Avenue well field, which is approximately 5000 feet east/southeast from the Site. This well is screened in the Magothy Aquifer at a depth of 558 feet.

COMMENT: Could a groundwater plume of contamination have been generated from this Site, prior to the cleaning of the leaching pits in 1980? Could it have travelled downgradient of the Site and therefore now pose a danger to downgradient residents? This possibility should be investigated.

RESPONSE: EPA conducted a comprehensive RI of soil, groundwater and air at the Site from July 1989 to April 1992. The RI included, among other things, examination of site history and existing data, as well as obtaining soil and groundwater samples. The historical information, together with the soil boring data, suggest that action taken by the Site owners in 1980 pursuant to a directive from the Suffolk County Department of Health Services (SCDHS) resulted in remediation of the significant contamination at the Site. During the course of the RI, EPA did not uncover any evidence that contamination from the Site ever entered groundwater. The groundwater sampling conducted during the RI further indicates that groundwater within 300 feet downgradient of the Site does not contain any evidence of a plume of hazardous substance(s). The SCDHS has also recently sampled some private wells in the area and no hazardous substances were detected.

Therefore, the findings of the RI do not support the notion that a plume of site-related contaminants migrated from the Site in the past. In addition, in the event that a release of hazardous substances into groundwater did occur, the release would have ended 12 years ago, when the contamination was removed from the leaching system. Consequently, a resultant "disconnected" plume of contaminated groundwater would be extremely difficult to find, due to migration of a naturally attenuating plume. Further, if evidence of contamination were found downgradient of the Site, it would be difficult to characterize the plume as site-related, due to the regional existence of other potential sources of similar contamination. The plume would have to be characterized as site-related in order for EPA to be authorized to undertake remedial action.

COMMENT: Why won't the groundwater be remediated, since there was an on-site groundwater sample which detected lead in excess of drinking water standards?

RESPONSE: A total of twenty groundwater samples were analyzed for inorganic compounds. Lead was detected in one sample from an on-site well at 26 ppb, which is slightly higher than the Federal action level of 15 ppb and the New York State drinking water standard of 25 ppb. All other samples contained levels of lead which were below these standards. EPA believes that the small excursion of one out of twenty samples above the Federal action level for lead is not indicative of site-related groundwater contamination, and therefore does not warrant groundwater remediation.

COMMENT: Were there unacceptable levels of cyanide found in the groundwater?

RESPONSE: There were no unacceptable levels of cyanide detected in the two samplings of the ten monitoring wells. Cyanide was reported as non-detected for all cases except one where an upgradient well (MW-1) had a detectable level of cyanide, 0.01 ug/l which is well below the New York State groundwater quality standard of 100 ug/l, or the Federal proposed MCL of 200 ug/l.

COMMENT: Did the RI evaluate the damage to the environment that the prior occupant, the commercial laundry, may have caused?

RESPONSE: EPA analyzed the surface and subsurface soils, air and groundwater for a full range of hazardous inorganic and organic chemical compounds. EPA's investigation did not discern between the type of

contamination, if any, which the prior occupant may have caused at the Site.

COMMENT: Did the risk assessment account for the fact that in the event of future residential development of the Site, the residents of a home situated entirely on the portion of the Site with the highest detectable levels of cadmium in the surface soils would be exposed to greater risks than residents of a home built elsewhere on the property? Would a change in the zoning from GA-Industry (GA-Industry is defined as light manufacturing, warehouse, storage, offices and retail facilities) uses to future residential uses change the results of the risk assessment? In the event of future development of the Site, would soils removed from the site be treated as hazardous and would site construction activities change the risk assessment for potential human contact with surface and sub-surface material?

RESPONSE: The risk assessment which is presented in Chapter 5 of the RI report considered possible future residential development on the undeveloped portion of the Site. Potential exposure to resident adults and children through inadvertent ingestion of and dermal contact with chemicals in soil was evaluated using the reasonable maximum exposure (RME) scenario, which is the highest exposure that might be reasonably expected to occur at the Site, one that is well above the average case of exposure but within the range of possibility. The concentration used to determine the RME is derived by using the 95% upper confidence limit on the mean of representative cadmium soil data. Representative cadmium soil data differed for each potentially exposed population. Worker exposure was calculated using data from surface soil samples SS-1 to SS-13 (RME concentration = 11.0 ppm). Trespasser exposure was calculated using all of the surface soil samples, SS-1 through SS20, since all these samples were collected on the AAPP property (RME concentration = 17.2 ppm). EPA believed that surface soil samples SS-12 and SS-14 through SS-20 represented the areas most suitable for a residential dwelling, and therefore used the data from these samples to estimate potential future residential exposures (RME concentration = 26.7 ppm). Therefore, the data used in the future residential scenario resulted in the generation of a more conservative exposure concentration (26.7 ppm) than would have resulted had all the surface soil data been utilized (17.2 ppm). In fact, the residentialexposure concentration approached the highest cadmium concentration detected in surface soils (29 ppm).

In general, the risk assessment indicated that potential exposure is unlikely to significantly impact human health since the risk estimates are within EPA's allowable risk range. The assessment indicates that, in the event of a zoning change from the present industrial classification to a residential classification, unrestricted residential use of the property would be acceptable.

The soil samples from the indoor soil boring investigation were within the Toxicity Characteristic Leaching Procedure (TCLP) leachable limits for all metals tested. If the soil had to be removed as part of some future development scenario, it would not be handled as a TCLP hazardous waste as defined by the Resource Conservation and Recovery Act.

The public health evaluation did not specifically consider the potential worker exposure through contact with subsurface soil during future construction activities, since the subsurface soil was relatively free of contamination, and consequently deemed to pose little risk to potential workers.

COMMENT: Shouldn't beryllium, which exceeded a USEPA corrective action level, qualify as a potential concern? Why was arsenic chosen as a chemical of special concern, while beryllium was excluded?

RESPONSE: The proposed EPA corrective action levels were used for comparison purposes only in Table 5-1 of the RI report. Proposed EPA corrective action levels are not cleanup standards or legally applicable or relevant and appropriate requirements (ARARs). Contamination exceeding action levels indicate a potential threat to human health or the environment which may require further study.

Since inorganic chemicals are naturally occurring in soils, consideration was given to typical background levels in the selection of chemicals of concern. Beryllium was not selected as a chemical of potential concern, since it was detected in only five of twenty surface soil samples, and at concentrations within naturally occurring background levels. In addition, all of the beryllium concentrations were estimated, because the detected concentrations were below the limit the analytical laboratory is contractually required to quantify. As a result, little significance was given to the estimated concentrations relative to the proposed EPA corrective action level.

Although the arsenic concentrations detected in all twenty of the surface soil samples collected on-site are less than the typical background levels and the proposed EPA corrective action level, arsenic was evaluated as a chemical of potential concern solely because it is classified by EPA as a human carcinogen through oral exposure.

COMMENT: Which level of government has the most stringent allowable contamination standards?

RESPONSE: The answer will vary from State to State, and will also depend on the medium of concern. However, in the Superfund program, EPA typically makes a determination of applicable or relevant and appropriate standards for each affected medium. If there are conflicting standards, EPA generally relies on the more stringent (protective) standard, assuming site-specific circumstances support this approach.

COMMENT: Why were samples that failed quality control standards disregarded and not redrawn?

RESPONSE: The quality control procedures in the Superfund program are very comprehensive and rigorous. Some of the data that are generated during an RI do not pass all the quality control standards. For these cases, additional samples are not customarily obtained, if a sufficient quantity of validated data exist to draw appropriate conclusions. Data that do not meet all the quality control standards are either rejected or qualified for limited use. EPA believes that the amount of valid and qualified data collected at the Site were sufficient to meet the objectives of the RI and to provide a basis for the selected remedy.

COMMENT: Isn't it likely that contaminants detected in the groundwater would affect the Great South Bay rather than the public water supply? What would the potential impact to the Great South Bay be from site-related chemicals that are discharged into the Bay via groundwater transport?

RESPONSE: EPA agrees that groundwater flow from the Site would eventually discharge to the Great South Bay, and not be captured by any public supply wells.

As discussed in the response to a previous question concerning the possibility of a groundwater plume, EPA believes that, given the unlikely possibility that significant groundwater contamination migrated from this Site in the past, groundwater contamination would naturally attenuate en route to the Great South Bay, which is two miles south of the Site. In addition, the Bay's own assimilative capacity would further reduce the potential impacts to the Bay.

COMMENT: Are the cancer incidence figures used by EPA in the risk assessment and at the second public meeting actual figures, or a prediction?

RESPONSE: The figure of 25% cancer incidence that EPA used at the second public meeting was an estimate of the actual cancer incidence presently existing in the United States. The actual national cancer incidence of 25% means that approximately one out of every four people in the U.S. will develop some form of cancer during their lifetime.

The risk numbers presented in the risk assessment (RI Report, Chapter 5) represent a theoretical prediction of the number of cancer incidences that would arise from the documented exposures at the AAPP Site. This prediction is generated by a highly conservative series of technical assumptions and therefore represents an upper bound estimate of cancer risk. The hypothetical upper bound cancer risk for this Site was estimated to be less than 1 person in 10,000 exposed population.

COMMENT: What are the Site owner's current disposal practices?

RESPONSE: The owner stores chemical wastes onsite until they are transported offsite by a licensed chemical transporter.

COMMENT: TOBDEC commented that portions of the Town of Babylon are situated within Groundwater Management Zones I and II, both deep recharge areas, and not entirely within Groundwater Management Zone VII, as stated in the RI report.
RESPONSE: TOBDEC's comments are valid and the record is hereby revised.

Appendix A

Proposed Plan and Public Meeting Information

Attachment A.1

Superfund Proposed Plan

Action Anodizing
Plating and Polishing Site

Town of Babylon
Suffolk County, New York

EPA
Region 2

April 1992

PURPOSE OF PROPOSED PLAN

This Proposed Plan identifies a preferred no action remedy for the Action Anodizing Plating & Polishing (AAPP) Superfund site (the Site). The Proposed Plan was developed by the U.S. Environmental Protection Agency (EPA), as lead agency, with support from the New York State Department of Environmental Conservation (DEC). EPA is issuing this Proposed Plan as part of its public participation responsibilities under Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, and Section 300.430(f) of the National Contingency Plan.

This Proposed Plan is being provided as a supplement to the Remedial Investigation (RI) report to inform the public of EPA's and DEC's preferred no action remedy and to solicit public comments on this action.

The no action remedy described in this Proposed Plan is the preferred remedy for the Site. Changes to the preferred remedy or a change from the preferred remedy to another remedy may be made, if public comments or additional data indicate that such a change will result in a more appropriate remedial action. The final decision regarding the selected remedy will be made after EPA has taken into consideration all public comments. Therefore, we are encouraging public comment on this Proposed Plan and the RI report.

COMMUNITY ROLE IN SELECTION PROCESS

EPA and DEC rely on public input to ensure that the concerns of the community are considered in selecting an effective remedy for each Superfund site. To this end, the RI report, Proposed Plan, and supporting documentation have been made available to the public for a public comment period which begins on April 3, 1992 and concludes on May 2, 1992.

A public meeting will be held during the public comment period at the Babylon Public Library located at 24 South Carll Avenue, Babylon, New York on Wednesday, April 22, 1992 at 7:00 PM to present the conclusions of the RI, to elaborate further on the reasons for recommending the no action remedy, and to receive public comments.

Comments received at the public meeting, as well as written comments, will be documented in the Responsiveness Summary Section of the Record of Decision (ROD), the document which formalizes the selection of the remedy.

Dates to remember: MARK YOUR CALENDAR

April 3, 1992 to May 2, 1992
Public comment period on RI report, Proposed Plan, and remedy considered.

April 22, 1992
Public meeting to be held at 7:00 PM at the Babylon Public Library, 24 Carll Avenue, Babylon, New York.

All written comments should be addressed to:

Julia E. Allen
U.S. Environmental Protection Agency
Emergency and Remedial Response Division
Rm. 29-102
26 Federal Plaza
New York, New York 10278

SITE BACKGROUND

The Site is located at 33 Dixon Avenue in the Hamlet of Copiague in the Town of Babylon, Suffolk County, New York. It is approximately one acre in size and is one mile east of the Nassau-Suffolk County line and one-half mile south of the Sunrise Highway. Public supply wells are the primary source of drinking water in the area and approximately

Copies of the RI report, Proposed Plan, and supporting documentation are available at the following repositories:

Town of Babylon
Department of Environmental Control
Room 23
281 Phelps Lane
North Babylon, New York 11703
(516) 422-7640
Mon.-Fri., 9:00 am - 4:00 pm.

Copiague Memorial Library
50 Deauville Blvd.
Copiague, New York 11726
(516) 691-1111
Mon.-Fri., 9:00 am - 9:00 pm; Sat. 10:00 am - 5:00 pm.

U.S. Environmental Protection Agency
26 Federal Plaza
New York, New York 10278
(212) 264-8476
Mon.-Fri., 9:00 am - 5:00 pm.

New York State Department
of Environmental Conservation
50 Wolf Road
Albany, New York 12233
(518) 457-3976
Mon.-Fri., 9:00 am - 5:00 pm.

One million residents of Suffolk and Nassau Counties obtain drinking water from public wells within three miles of the Site. Prior to 1968, a commercial laundry facility operated on the premises for approximately thirty years. Since 1968, AAPP has operated at the Site as a small metal finishing shop. The operating facility is approximately 3000 square feet in area with an additional 2000 square feet of office space. Attached to the operating facility is an approximate 7500 square foot addition which was built in 1984. The Site is accessed by two unpaved driveways; one enters the southern end of the property from Dixon Avenue and the other enters the eastern side from Galvani Street.

AAPP's operations primarily involve sulfuric acid anodizing of aluminum parts for the electronics industry, cadmium plating, chromate conversion coatings, metal dyeing and vapor degreasing. Liquid wastes from these operations include rinses of spent caustic and acidic solutions contaminated with cadmium, chromium, zinc and sodium cyanide. Prior to 1980, rinse water was reportedly stored in a concrete waste holding trough in the floor of the facility from which it was pumped into a low pressure steam boiler. The steam was condensed and reused as process make-up water. The solids from the rinse water were allowed to build up in the boiler tubes until the tubes became plugged, at which time, the boiler would be replaced with a new unit.

The concrete trough had been used by the commercial laundry as part of its drainage system. The trough was connected to a septic tank on the north side of the building. Tank overflow fed into a series of six leaching pits on the east side of the building. The bottom of the pits was reportedly several feet below ground.

During an inspection of the Site by the Suffolk County Department of Health Services (SCDHS) in January 1980, it was discovered that rinse water from AAPP's operation was discharging to the leaching pits rather than the low pressure steam boiler. SCDHS sampled the leaching pools, process tanks, surface soils, and septic tank on the Site. The results showed elevated levels of several metals, notably cadmium, chromium and nickel in the leaching pits. AAPP was ordered by SCDHS to cease discharge to the leaching pits immediately and remove the sediments of the entire leaching system. In the spring of 1980, AAPP contracted with the Patterson Chemical Company for the cleanup and closing of the leaching system. This work was supervised and approved by SCDHS. In September 1980, SCDHS notified AAPP that the leaching pits could be back-filled with clean sand and gravel. The 7,500 foot equipment storage area, built in 1984, lies directly on top of the former leaching pits. AAPP reports that it currently has its industrial waste hauled off-site for disposal.

In January 1986, DEC issued a Phase 1 Investigation Report which summarized past investigations and included a Hazard Ranking System (HRS) score for the Site. Based on the HRS score, the Site was proposed for inclusion on the National Priorities List (NPL) in June 1988 and was placed on the NPL in March 1989.

On March 7, 1989, EPA sent "general notice" letters to two potentially responsible parties (PRPs), affording them the opportunity to conduct the Remedial Investigation and Feasibility Study (RI/FS) for the Site. PRPs are companies or individuals who are potentially responsible for contributing to the contamination at the Site and/or are past or present owners of the property. EPA did not receive any good faith proposals from the PRPs to undertake or finance the RI/FS. Therefore, the necessary work was performed by EPA's contractor, Malcolm Pirnie, Inc., beginning in March 1989.

REMEDIAL INVESTIGATION SUMMARY

Under the direction of EPA, Malcolm Pirnie, Inc. implemented an RI to characterize the geology, groundwater hydrology and chemical quality of the soil and groundwater at the Site. The investigation consisted of drilling borings and constructing monitoring wells, collecting soil and groundwater samples, conducting a geophysical survey, and conducting an air monitoring survey.

The Site is at an approximate elevation of 30 feet above mean sea level. The shallowest groundwater in the region, the Upper Glacial Aquifer, occurs approximately 10 feet below ground level at the Site. The thickness of the saturated upper Pleistocene deposits under the Site is estimated to be approximately 75 feet. The Upper Pleistocene deposits and Mattawan/Magothy Aquifers form a thick sequence of sand with varying amounts of silt and clay. The stratification of these silt and clay layers impedes vertical groundwater movement. Groundwater movement is generally towards the south, to the Great South Bay, but local variations in the direction of movement occur.

In February 1991, ten wells were installed at the Site. Two wells were drilled upgradient of the Site's operations, four wells were drilled onsite and four wells were drilled downgradient of the Site. In March and July 1991, filtered and unfiltered groundwater samples were taken from ten monitoring wells and analyzed for organic and inorganic constituents.

With the exception of the chromium analyses, results of the first two rounds of unfiltered groundwater samples did not indicate significant contamination. In the first round, chromium was detected in an

upgradient ell at 555 parts per billion (ppb), which is significantly higher than its State and Federal drinking water standards (also referred to as maximum contaminant levels (MCLs)) of 50 and 100 ppb, respectively. This level was also significantly higher than the highest level (11.7 ppb) detected on- site, where levels did not exceed MCLs, and downgradient where chromium was detected in one well above the State drinking water standard (96.5 ppb). In the second round, chromium exceeded both the State and Federal drinking water standards in one upgradient well (130 ppb) and the State drinking water standard in one on-site well (67 ppb) and one downgradient well (90 ppb). The highest level of chromium (130 ppb) was detected in the same upgradient well as in round one. Chromium was not detected in any of the filtered samples.

A third round of groundwater samples was taken in January 1992 and analyzed for total chromium only. Chromium was not detected at levels exceeding MCLs in any of the samples collected in the January sampling effort. The fact that the highest levels of chromium were detected in an upgradient well, and that the levels decreased significantly from March 1991 to January 1992, suggests that a possible source of chromium contamination may be present upgradient of the Site.

Lead was also detected in the groundwater at levels which exceeded its applicable standard. Lead was detected in one on-site well at 26 ppb, which is slightly higher than the Federal action level of 15 ppb. All other samples contained levels of lead which were below the action level. No other inorganic constituents exceeded MCLs.

As noted above, the wells were also analyzed for organic constituents. In the first round of groundwater samples, toluene and xylenes (total) were detected in one on-site well, at 39 and 46 ppb, respectively, and one downgradient well, at 14 and 20 ppb, respectively. These levels exceed the Statedrinking water standard (5 ppb) for both contaminants, but were well below the Federal standard of 1000 ppb for toluene and 10,000 ppb for xylenes (total). Toluene and xylenes (total) were not detected in the second round of groundwater samples. No other volatile organic compounds exceeded MCLs.

Air monitoring and geophysical surveys were conducted at the Site. The air monitoring data collected at the Site indicate typical urban conditions. No unusual metallic subsurface objects, such as buried drums, were identified by the geophysical survey.

Soil borings were drilled at the Site in order to develop information on site geology and to determine the extent of horizontal and vertical contamination. Results of both the subsurface soil samplings from outdoor test borings and indoor test borings did not indicate the presence of inorganic constituents at elevated levels. Similarly, although the results of the analyses for organic constituents indicated the presence of a limited number of organic compounds in both the indoor and outdoor borings, the compounds were not present in any significant concentration or in any consistent pattern.

Twenty surface soil samples were collected at the Site. Of the metals detected in these samples, only cadmium was detected above both the background range reported for cadmium in surface soils in the United States (0.01-2 mg/kg) and typical sandy soils (0.07-1.1 mg/kg). The highest level of cadmium detected in on-site surface soils was 29.4 mg/kg. All other metals detected on-site were either within or close to the background range found in surface soils in the United States or typical sandy soils. Some semi-volatiles were detected, mostly compounds which are by-products of fossil fuel combustion and are typical of what is found near road surfaces. A few volatile organic compounds were detected in one sample, but all were present at insignificant levels.

In February 1992, SCDHS sampled the residential well of the private residence adjacent to the Site to ensure that the water was a suitable source of drinking water. Results of the sampling indicated that this was the case, as contaminants were not present above State or Federal primary drinking water standards. In addition, the New York State Department of Health sampled soils in the resident's backyard to determine whether elevated levels of metals were present. Of the metals detected in the surface soils, two metals, lead and arsenic, were detected at levels much higher on the residential property than on the Site property. However, these contaminants are believed to be the results of residues from the application of a lead arsenate pesticide commonly used in the 1940s and 1950s and not a result of site-related plating and polishing operations. Cadmium was found at levels generally below those detected on-site. No other metals were

detected above background levels.

SUMMARY OF SITE RISKS

Based upon the results of the RI, a baseline risk assessment was conducted to estimate the risks associated with current and future site conditions. The baseline risk assessment estimates the human health and environmental risk which could result from the contamination at the site, if no remedial action were taken.

As part of the baseline risk assessment, the following four-step process is utilized for assessing site-related human health risks for a reasonable maximum exposure scenario: Hazard Identification--identifies the contaminants of concern at the site based on several factors such as toxicity, frequency of occurrence, and concentration-Exposure Assessment– estimates the magnitude of actual and/or potential human exposures, the frequency and duration of these exposures, and the pathways (e.g., ingesting contaminated wellwater) by which humans are potentially exposed. Toxicity Assessment--determines the types of adverse health effects associated with chemical exposures, and the relationship between magnitude of exposure (dose) and severity of adverse effects (response). Risk Characterization– summarizes and combines outputs of the exposure and toxicity assessments to provide a quantitative (e.g., one-in-amillion excess cancer risk) assessment of site-related risks.

The baseline risk assessment began with selecting contaminants of concern which are representative of site risks. Chemicals of concern were identified for Site surface soil and groundwater underlying the Site. These contaminants include benzene, carbon disulfide, 1,1-dichloroethane, ethylbenzene, tetrachloroethene, toluene, 1,1,1-trichloroethane, xylenes (total), arsenic, cadmium, chromium, and lead.

The baseline risk assessment evaluated the health effects, which could result from exposure to contamination at the Site, under current and future land-use scenarios. The potential exposure pathways of concern for current land uses include: ingestion of chemicals in the soil and dermal contact with chemicals in the soil. The potential exposure pathways of concern for future land use include those for current land use as well as the following: ingestion of chemicals in groundwater, dermal contact with chemicals in groundwater and inhalation of airborne chemicals in groundwater.

Based on current land uses, workers may be exposed to contaminants at the Site through incidental ingestion and dermal contact with soils during their designated work activities. Similarly, those who trespass onto the Site may be exposed to the contaminants on-site by dermal contact with soils and by incidental ingestion of the soil. If the upper aquifer serves as a drinking water source for the area in the future, the potential would exist for residents and workers to be exposed to chemicals in groundwater through ingestion of drinking water. Future on-site residents might also be exposed to contaminants in groundwater through dermal contact and inhalation of volatile organic compounds during showering or bathing.

EPA's acceptable cancer risk range is 10[-4] to 10[-6] which can be interpreted to mean that an individual may have a one in ten thousand to a one in a million increased chance of developing cancer as a result of a site -related exposure to a carcinogen over a 70-year lifetime under the specific exposure conditions at the site.

To assess the overall potential for noncarcinogenic effects posed by more than one contaminant, EPA has developed the hazard index (HI). This index measures the assumed simultaneous subthreshold exposures to several chemicals which could result in an adverse health effect. When the sum of subthreshold exposures (i.e., the HI) exceeds one, there may be concern for potential noncarcinogenic health effects, if the contaminants in question are believed to cause a similar toxic effect.

The results of the baseline risk assessment indicate that under the current-use scenarios, noncarcinogenic health effects are not likely based on the potential exposure pathways and routes evaluated for workers and trespassers. The calculated HIs for these scenarios are significantly less than one. Similarly, estimated carcinogenic risks are within or less than EPA's acceptable cancer risk range based on the potential exposure pathways and routes evaluated for workers and trespassers, respectively. The exposure pathway with the greatest risk is for ingestion of and dermal contact with chemicals in the soil by workers at the Site. The estimated carcinogenic risk is 1.17 x 10[-6], which is within EPA's acceptable cancer risk range.

Under the future-use scenarios, noncarcinogenic health effects are unlikely based on the potential exposure pathways and routes evaluated for workers, trespassers and residents. As with the results of the current-use scenarios, all calculated pathway specific HIs are less than one. The highest calculated HI is 0.7, which is the HI for ingestion of cadmium in surface soils by children in the event of future residential development on the Site. For this future land-use scenario, when the subthreshold exposures to arsenic and cadmium by children are combined, the HI exceeds 1; however, the most sensitive adverse effect from arsenic (skin disorder) and cadmium (kidney damage) are different. Consequently, the simultaneous subthreshold exposure to these two elements would not be expected to result in adverse health effects. Six of the fifteen exposure pathways evaluated under the future-use scenarios have estimated carcinogenic risks within EPA's acceptable cancer risk range; the estimated carcinogenic risk for the remaining pathways are less than the range. The exposure pathway with the greatest risk is for the future ingestion of chemicals in the groundwater by an adult. This assumes that the aquifer beneath the Site would be utilized as an untreated source of drinking water. The estimated carcinogenic risk for this pathway is 7.25 x 10[-5], which is within EPA's acceptable cancer risk range.

The ecological risk assessment evaluated potential exposure routes of site contamination to terrestrial wildlife and aquatic life. Cadmium was chosen as the chemical of potential concern for surface soils at the Site because it was detected at levels greater than typical background soil concentrations. However, the overall risk to wildlife in the general vicinity of the Site is considered to be low, due to the small size of the contaminated area and the limited habitat potential of the Site. The chemicals of potential concern chosen for groundwater at the Site are: aluminum, chromium, copper, lead, nickel and zinc, since the detected levels of these compounds exceeded State and/or Federal Ambient Water Quality Criteria for marine and/or fresh water. Groundwater from the Site may ultimately discharge into Amityville Creek and Woods Creek, both located approximately 1/2 mile south of the Site, and the Great South Bay, located 2 miles south of the Site. The potential risk to aquatic life inhabiting these surface water bodies, however, is considered low. This is due to the natural dilution of any low levels of groundwater contamination that may be associated with the Site. Furthermore, the streams in the Babylon area of Long Island are only partially fed by groundwater and unlikely to receive a large input of groundwater flowing from the Site.

SCOPE AND ROLE OF ACTION

This is the first and only planned operable unit for the Site. The primary objective of this operable unit is to determine the nature and extent of contamination at the Site and to take measures, as appropriate, to ensure the protection of human health and the environment.

SUMMARY OF THE PREFERRED NO ACTION REMEDY

Based on the findings of the RI performed at the Site, a no action remedy is protective of human health and the environment, complies with Federal and State requirements that are legally applicable or relevant and appropriate to the remedial action, and is cost-effective.

The risk assessment indicates that the levels of contaminants present in the soil, air and groundwater at the Site present risks which fall within or below the Superfund remediation range. In addition although groundwater sampling results indicate the infrequent occurrence of contaminants exceeding MCLs, the majority of contaminants do not exceed MCLs in the groundwater or background levels in the soil and air. It appears as though the 1980 SCDHSordered remediation of the leaching pits removed the most significant contamination found at the Site. Therefore, EPA and DEC recommend a no action remedy for this site.

State Acceptance

DEC concurs with the preferred no action remedy.

Community Acceptance

Community acceptance of the preferred remedy will be assessed in the ROD, following review of the public comments received on the RI report and the Proposed Plan.

Attachment A.2

PAID ADVERTISEMENT

The United States Environmental Protection Agency Announces
Proposed Remedial Alternative for the
ACTION ANODIZING PLATING AND POLISHING SITE
Hamlet of Copiague, Town of Babylon,
Suffolk County, New York

The U.S. Environmental Protection Agency (EPA) recently completed a Remedial Investigation (RI) for the Action Anodizing Plating and Polishing site in Babylon, New York. Based on the findings of the RI performed at the site, EPA is announcing a preferred no action remedy for the site.

Before selecting a final remedy, EPA will consider written and oral comments on this preferred alternative. All comments must be received on or before May 2, 1992. The final decision document will include a summary of public comments and EPA responses.

EPA will hold an informational public meeting on Wednesday, April 22, 1992, at 7:00 p.m., at the Babylon Town Library, 24 South Carll Avenue, Babylon, New York, to discuss the findings of the RI and the preferred remedy for the site.

An integral component of the RI report, the risk assessment, indicates that the levels of contamination present in the soil, air and groundwater at the site present acceptable risks for each exposure pathway evaluated, i.e. risks which fall within or below the Superfund remediation range. Furthermore, although groundwater sampling results indicate the infrequent occurrence of contaminants exceeding primary drinking water standards, the majority of contaminants do not exceed primary drinking water standards in the groundwater or background levels in the soil and air. Therefore, EPA is not evaluating or proposing cleanup activities at the site. The preferred no action remedy is protective of human health and the environment and complies with federal and state requirements that are legally applicable or relevant and appropriate to any remedial action that must be performed at the site.

The preferred no action remedy is outlined and discussed in the Proposed Plan.

The Remedial Investigation report, Proposed Plan, and other siterelated documents can be consulted at the information repositories listed below:

Town of Babylon
Department of Environmental Control
Room 23
231 Phelps Lane
North Babylon, New York 117073

Copiague Memorial Library
50 Deauville Road
Copiague, New York 11726

Written comments on the preferred alternative, should be sent to:

Julia E. Allen, Project Manager
U.S. Environmental Protection Agency
26 Federal Plaza, Room 29-102
New York, New York 10278

Written comments must be received at the above address on or before May 2,
1992.

Attachment A.3

THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Announces

AN EXTENSION TO THE PUBLIC COMMENT PERIOD FOR THE ACTION ANODIZING PLATING & POLISHING SUPERFUND SITE COPIAGUE, SUFFOLK COUNTY NEW YORK EPA has extended the public period on the proposed plan for addressing the Action Anodizing Plating & Polishing Superfund site at 33 Dixon Avenue in Copiague, New York. The comment period has been extended from May2, 1992 to June 8, 1992 in response to community requests. In addition, EPA will be holding an additional informational meeting at 7:00 p.m. on Tuesday, June 2, 1992 in the Copiague Junior High School at 2650 Great Neck Road, Copiague. Residents may review site-related documents at local information repositories established by EPA at:

Copiague Memorial Library
50 Deauville Blvd.
Copiague, NY 11726

Town of Babylon
Dept. of Environmental Control
281 Phelps Lane, Control Room 23
North Babylon, NY 11703

Written comments may be addressed to:
Julia Allen, Project Manager
U.S. Environmental Protection Agency
Emergency and Remedial Response Division
26 Federal Plaza, Room 29-100
New York, NY 10278

LT672 5/20/92

Attachment A.4

APPENDIX IV

NYSDEC LETTER OF CONCURRENCE

New York State Department of Environmental Conservation 50 Wolf Road, Albany, New York 12233 -7010

Thomas C. Jorling
Commissioner

JUN 19 1992

Ms. Kathleen C. Callahan
Director
Office of Emergency and Remedial Response
U.S. Environmental Protection Agency
Region II
26 Federal Plaza
New York, NY 10278

Dear Ms. Callahan:

Re: Action Anodizing ROD
Site ID #152037

We have reviewed the Draft Record of Decision for the Action Anodizing site and concur with the no-action alternative. We will require that the groundwater monitoring referred to in the ROD include volatile organics and metal analysis, and that it will be performed twice within the next year on monitoring wells 2, 4, 6 and 10.

If you have any questions regarding this matter, please contact Michael J. O'Toole, Jr., at (518) 457-5861.

Sincerely,

David Markell
Acting Deputy Commissioner