FINAL

UPDATED COMMUNITY RELATIONS PLAN WATERVLIET ARSENAL, Watervliet, New York

RCRA FACILITY INVESTIGATIONS AND CORRECTIVE MEASURES AT SIBERIA AREA AND MAIN MANUFACTURING AREA

Baltimore Corps of Engineers
Baltimore, Maryland

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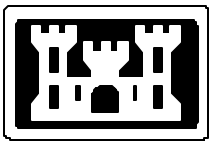

US Army Corps
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Baltimore District
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LIST OF ACRONYMS AND ABBREVIATIONS

ACOE	Army Corps of Engineers
AMC	U.S. Army Materiel Command
AMCCOM	U.S. Army Armament, Munitions, and Chemical Command
AMCPA	Chief of Public Affairs, U.S. Army Materiel Command
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CMS	Corrective Meaures Study
CRP	Community Relations Plan
CTM	C.T. Male Associates
DDD	dichlorodiphenyldichlorethane
DDE	1,1-dichloro-2,2-bis(4-chlorophenyl)-ethylene
DDT	dichlorodiphenyl-trichloroethane
DEH	Directorate of Engineering and Housing WVA
DMRO	Defense Reutilization Marketing Office
ENCON	a popular name for the New York State Department of Environmental Conservation
EPA	U.S. Environmental Protection Agency
EPIC	Environmental Photographic Interpretation Center
ESE	Environmental Science and Engineering, Inc.
EF	degrees Fahrenheit
ft	feet
FOIA	Freedom of Information Act
GOGO	Government-owned, Government-operated

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

HQDA	Headquarters, Department of the Army
IRM	Interim Remedial Measure
m^2	square meter
MCL	Maximum Contaminant Level
mg/l	milligrams per liter
mg/kg	milligrams per kilograms
mm	millimeter
MW	Monitoring Well
NAGE	National Association of Government Employees
NYSDEC	New York State Department of Environmental Conservation
OCLL	Office of the Chief of Legislative Liasison, Department of the Army
OCPA	Office of the Chief of Public Affairs, Department of the Army
OSWER	Office of Solid Waste and Emergency Response
PAH	polynuclear aromatic hydrocarbons
PAO	Public Affairs Officer
PCE	tetrachloroethylene
PBS	Public Broadcast System
PCB	Polychlorinated Biphenyl
POL	Petroleum, Oil and Lubricants
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment

LIST OF ACRONYMS AND ABBREVIATIONS (Continued)

RFI	RCRA Facility Investigation
ROD	Record of Decision
RPI	Rensselaer Polytechnic Institute
RSD	Risk Specific Dose
SARA	Superfund Amendments and Reauthorization Act
SOW	Statement of Work
SDWA	Safe Drinking Water Act
SWMU	Solid Waste Management Unit
TAG	Technical Assistance Grant
TAGM	NYSDEC Technical and Administrative Guidance Memorandum
TCE	trichloroethylene
TRC	Techinical Review Committee
ug/g	micrograms per gram
ug/l	micrograms per liter
USACE	U.S. Army Corps of Engineers
USATHAMA	U.S. Army Toxic and Hazardous Materials Agency
UST	Underground Storage Tank
VOC	Volatile Organic Compound
WVA	Watervliet Arsenal
WWI	World War I
WWII	World War II

1.0 INTRODUCTION AND BACKGROUND

The Community Relations Plan (CRP) for Watervliet Arsenal (WVA) in Watervliet, New York, sets forth a site-specific program to establish communication and information exchange among Army staff and the civilian work force; Army agencies; various federal, state, county, and community agencies; and the public. Effective communication and timely information exchange with all parties are essential for maintaining community understanding and support of the WVA mission and for implementing a successful CRP for investigations and corrective measures at the Siberia Area and investigations at the Main Manufacturing Area at the arsenal. The plan requires the involvement of citizens from area communities and representatives from federal, state, and local agencies who are active in policy and decision-making processes. The implementation of a CRP is required by federal and state laws. It is the responsibility of the U.S. Environmental Protection Agency (EPA) and the New York State Department of Environmental Conservation (NYSDEC) to oversee WVA CRP activities and to ensure that the Army complies with federal and state laws.

Section 1.0 of this CRP presents the history and background of WVA. Section 2.0 presents information about the community surrounding WVA. The details of the community relations program are presented in Section 3.0. The following appendices are included:

- Appendix A B Site Maps
- Appendix B B Draft Fact Sheet
- Appendix C B Glossary of Commonly Used Community Participation Terms
- Appendix D B Media List
- Appendix E B Mailing List
- Appendix F B Program Points of Contact
- Appendix G B Location for Optional Information Repository
- Appendix H B Locations for Community Meetings
- Appendix I B Elected Officials
- Appendix J B Civic and Community Groups
- Appendix K B Community Interview Participants

The point of contact for community relations information is the WVA Public Affairs Officer (PAO) at (518) 266-5418.

The CRP is an essential part of the Army's investigations at WVA. The plan is flexible and will allow implementation of program activities to accompany additional investigative and remedial work that may result from the Corrective Measures Study (CMS) at the Siberia Area and the RCRA Facility Investigation (RFI) at the Main Manufacturing Area at WVA. The Siberia Area is primarily used for storage and the Main Manufacturing Area is where manufacturing and administrative operations occur.

The primary objectives of the CRP are to keep workers at WVA and residents of Watervliet and surrounding areas informed about planned and on-going activities at the Siberia Area and Main Manufacturing Area, to provide a means whereby citizens and agencies can interact with WVA and supporting agencies, and to assist in resolving issues of public interest and concern. The specific purposes of the WVA CRP are to:

1. Provide for the exchange of information regarding the WVA soil and groundwater contamination assessment and remedial actions;

2. Ensure local concerns are addressed by soliciting input, comments, and active involvement from the public, elected and civic leaders, and concerned agencies regarding the plan; and

3. Provide a centralized point of contact for the public and agencies to express concerns and distribute information regarding the CRP for the Main Manufacturing Area and the Siberia Area at WVA.

This plan outlines community relations objectives, prescribes specific policies and procedures governing public involvement activities related to environmental and remedial actions, assigns responsibility for planning and implementing program functions, and presents suggested communication activities and techniques to be used in meeting CRP goals.

1.1 SITE LOCATION

WVA is a U.S. Army facility located in Albany County, New York, on the west bank floodplain of the Hudson River. It is accessible via several major roadways, including Interstate Highway 787, State Highways 155 (Watervliet-Shaker Road) and 378 from the west, and State Highway 32 from the south.

WVA occupies approximately 140 acres. It is located six miles north of Albany, the capital of New York State, in an area of mixed agricultural, residential, and commercial usage. The Siberia Area occupies approximately 15 acres along the western edge of WVA and the Main Manufacturing area occupies the remaining 125 acres. Houses occupied by residents of Watervliet surround the WVA on the northern and southern sides.

The arsenal is situated in the midst of several New York communities including: Watervliet (population 11,061), the Village of Colonie (population 8,019), the Town of Colonie (population 76,494), Cohoes (population 16,825), and Menands (population 4,333). Albany, with an estimated population of 101,968, is located directly south of the arsenal, and Troy (population 54,269) is located to the east, across the Hudson River from WVA. These estimated 1990 census population figures were provided by the Center for Economic Growth, in Albany, New York.

The area's climate is typical of the northeastern states. Average temperatures range from 72 degrees Fahrenheit (^{o}F) in July, with warm and occasionally humid periods, to 21^{o}F in January. Winters are generally cold, but not severe. Average annual precipitation is 36 inches annually, with an average of 64 inches of snowfall.

1.2 SITE HISTORY

WVA is the oldest arsenal in the United States. Many of the buildings were constructed in the 1800s, and several are unique, including one constructed of cast iron. The installation is listed on the National Registry of Historic Places and is a Registered Historic Landmark.

The arsenal was established in 1813 when the U.S. War Department purchased approximately 12.5 acres of land at Gibbonsville, a hamlet on the west bank of the Hudson River, six miles northeast of Albany. Successive purchases of land occurred in 1822, 1826, 1859, 1861, 1866, 1867, 1869, 1918, 1929, and 1942.

Previously known as the AArsenal near Albany≅ or the AArsenal at Gibbonsville,≅ the installation received its present name in 1817. The original site was chosen because of its convenience as a supply distribution point for troops assigned to the northern and western frontiers during the War of 1812. During this period, the arsenal produced ammunition, harnesses, and gun carriages. The Erie Canal, constructed between 1817 and 1824, provided WVA with transportation, power for production machines, and until 1922, water for fire protection.

Approximately 75 acres of land were acquired, and buildings were erected between 1826 and 1859. During the Mexican and Civil Wars, WVA produced small-arms ammunitions, cannon carriages, and leather goods.

From the end of the Civil War until 1883, the installation's main function shifted from production to storage. In 1887, WVA was chosen by Congress as the AArmy Gun Factory,≅ and in 1889 the ABig Gun Shop≅ was built. WVA produced the nation's first 16-inch gun, which was used in the Spanish-American War. Between the end of the Spanish-American War and World War I (WWI), WVA continued to produce the big guns.

The onset of WWI again marked substantial growth in buildings, roadways, and equipment. Between 1935 and 1938, employment averaged approximately 350 persons. In 1939, the shops resumed production and the apprentice school was reactivated. Production of big guns continued until August 1945. A peak employment of 9,000 personnel was reached during World War II (WWII). Following WWII, WVA assumed a major role in research and development of cannons, mortars, and recoilless rifles. One of the arsenal's noteworthy accomplishments was the design of the 280-millimeter (mm) atomic cannon. Modernization of heavy equipment also was a post-WWII WVA project.

In 1950, WVA began production for the Korean Conflict. Manufacturing concentrated on fabrication of new 20-mm aircraft or anti-aircraft weapons and a 90-mm gun for medium tanks. After the war and until the mid-1960s, the arsenal focused on modernization and mobilization

programs. The 152-mm gun launcher, the lightweight 60-mm mortar, and a new 8-inch gun/howitzer were developed in the 1970s.

Peak production periods were reached during WWI, WWII, and the Korean and Vietnam Conflicts. Large numbers of cannons were produced during these periods which supplemented the increased production under WVA's mobilization producers program.

WVA, a non-NPL site, offers a full range of high quality manufacturing services for both metals and composites. Precision machining capabilities offer metal fabrication, welding, specialized machining, composite filament winding and braiding, forging, heat treatment, electroplating coating, painting/packaging, and precision tool and die making, as well as precision inspection and testing of a variety of part and assembly configurations.

The Arsenal=s major programs in current production are:

155mm Cannon and components for self-propelled howitzers
120mm Cannon and components for the Abrams tank
Gun Mount Ballistic Shields for Howitzers
Tow Bar for Wheeled Vehicles
Light Weight Tow Bar for the Abrams tank
120mm Mortar and Baseplate

Benet Laboratories, a tenant organization at WVA, performs basic and applied research for cannon manufacturing, and provides the U.S. Army with practical engineering research, metallurgical analyses, and development for cannon manufacturing applications. The United States Marines also lease space in Building 40 for a Marine Recruiting Center.

In 1999, The New York State division of the National Guard (NYSNG) selected the WVA as the location for a vehicle distribution center. NYSNG personnel occupy a significant portion Building 145 in Siberia and utilize much of the open areas in Siberia for vehicle parking. The NYSNG also rents space in the WVA Motor Pool, in the MMA, for vehicle maintenance and repair. Oak-Mitsui, an electrical circuit board coding company, is a tenant on the first floor of Building 20. Oak-Mitsui employs seven WVA personnel in support of their operations.

1.3 ENVIRONMENTAL STUDIES

WVA is a Government-owned, Government-operated (GOGO) installation under the jurisdiction of the U.S. Army Armament, Munitions and Chemical Command (AMCCOM). From its original 12.5-acre plot, the arsenal has grown to an industrial organization covering approximately 140 acres. Its 93,000 square meters (m^2) of manufacturing floor space are employed primarily in the production and manufacture of tubes and tube assemblies for cannons, mortars, and rifles.

The facility consists of two primary areas:

1. The 125-acre Main Manufacturing Area, which extends from the eastern border of the facility paralleling Interstate 787, westward to Tenth Street and the Route 155 overpass (see Appendix A, Figure A-3); and

2. The Siberia Area, which has been chiefly used for storage activities. It is comprised of approximately 15 acres on the extreme western side of the facility, immediately north of the Route 155 overpass.

William F. Cosulich Associates, P.C. submitted a report to the New York District of the Army Corps of Engineers (ACOE) entitled AOil Pollution Source Elimination Study,≅ dated January 1980. The study was initiated in November 1978 due to the presence of oil in the WVA storm water drainage system. The report identifies a number of oil spills and conditions at the WVA which have contributed to the presence of oil in the storm water discharge.

In May 1980, a study undertaken by the U.S. Army Toxic and Hazardous Materials Agency (USATHAMA) determined that industrial wastes generated at WVA included: chromium, lead, and cyanide plating solutions; sulfuric, nitric, hydrochloric, and phosphoric acids; volatile and water-soluble oils; anodizing and other surface treatment solutions; alkali derusters and cleaning solutions; solvents; and metal chips and cuttings.

On August 12, 1980, WVA informed EPA that it conducts storage, treatment, and land disposal activities involving hazardous wastes and/or hazardous constituents, as defined by RCRA. WVA submitted an application to EPA on November 12, 1980 affirming that typical wastes produced at the facility included chromium bearing waste streams, waste oils and spent fuels, spent

caustic cleaners, and numerous other regulated RCRA hazardous wastes. By way of this application, WVA qualified for interim status, a grace period which allows a facility to continue operating without obtaining a site specific permit.

WVA prepared a report entitled AIdentification and Decontamination of Hydraulic Systems Containing PCBs at Watervliet Arsenal,≅ dated June 1983. This report details a sampling program of all hydraulic oil-containing machines and equipment throughout WVA. During the period of September 1982 and June 1983 over 2,800 samples were collected and analyzed for PCBs. Results indicated that less than one percent of the machines tested were contaminated (i.e., contained greater than 50 mg/l) with PCBs. This accounted for 27 machines, of which 16 were active at that time. These machines were drained, filled, cycled, and retested, this process was continued until the hydraulic oil was below 50 mg/l of PCBs.

The Siberia Area was purchased by the installation in the early 1940s. Because the area was swampy, it was filled in with slag, cinders, and available debris of unknown origin. In 1986, six separate sites within the Siberia Area were identified as potential contaminant sites by EPA's Environmental Photographic Interpretation Center (EPIC). Described in the Update of the Installation Assessment of Watervliet Arsenal prepared by Environmental Science and Engineering, Inc. (ESE) in August 1986, these sites consisted of two areas used for burning scrap lumber and sanitary wastes, two separate mounded material areas of construction rubble, a ground stain from oil spills, and outside storage areas.

In November 1986, an oily substance was found while excavating for footings of a building in the proposed lumberyard area of the Siberia Area. Polychlorinated biphenyls (PCBs) were detected in samples taken of the oily substance, the surrounding soil, and the groundwater. PCBs are regulated as a hazardous waste by the State of New York's Environmental Conservation Law. A groundwater sample from a test pit on the northeastern portion of the Siberia area was handled in the same manner, and chromium was detected. Chromium also is a highly regulated hazardous substance. Three investigations prompted by the discovery of the PCBs determined that, in addition to the PCB-bearing oils, other contaminants were found in the subsurface as presented in Table 1-1.

TABLE 1-1

SUMMARY OF PREVIOUSLY DETECTED CONTAMINATION

Parameter	Matrix	Concentration	Criteria*	Source**
PBCs	Soil	<0.1 - 0.6 µg/g 0.2 - 0.3 µg/g 0.011 - 7.5 µg/g	50 µg/g F 10 µg/g S	CTM GTI EAS
	Groundwater	<0.1 - 2.0 µg/g	0.1 S	CTM
Arsenic	Soil	0.2 - 40 mg/kg		EAS
	Groundwater	<0.006 - 0.019 mg/L	50 µg/L F 25 µg/L S	GTI
Chromium	Soil	19 - 743 µg/g 13 - 85 mg/kg		CTM EAS
	Groundwater	0.012 - 5.9 mg/L 0.016 - 0.047 mg/L <0.001 - 21.0 mg/L	50 µg/L F & S	CTM GTI EAS
Lead	Soil	47 - 300 mg/kg	NA	EAS
	Groundwater	0.057 - 0.7 mg/L 0.02 - 0.15 mg/L	0.025 mg/L S	CTM GTI
Cadmium	Groundwater	<0.1 - 89 µg/L	10 µg/L F & S	EAS
Iron	Groundwater	0.88 - 55 mg/L	0.3 mg/L S	CTM
Trichloroethylene	Groundwater	1.3 - 10.5 µg/L	5 µg/L F 10 µg/L S	CTM

Note: µg/g = microgram per gram
µg/L = microgram per liter
mg/kg = microgram per kilogram

* F = Federal; S = State Standard.
** CTM = C.T. Male, December 1986; GTI = Groundwater Technology, Inc., July 1988;
EAS = EA Science & Technology, August 1988.

Source: Hunter/ESE, 1990.

A Preliminary Site Investigation of the Siberia Area was conducted in 1986 by C.T. Male Associates (CTM), Inc. This study involved the excavation of eight test pits as well as soil and groundwater sampling and analyses. CTM reported that concentrations of chromium were found in the groundwater and soil which exceeded the Safe Drinking Water Act's (SDWA) Maximum Contaminant Level (MCL) by more than 100 times acceptable levels. Lead and iron also were detected in concentrations above NYSDEC`s acceptable standards in the groundwater samples taken from all of the test pits.

In July 1987, a Subsurface Investigation of the Siberia Area was prepared by Groundwater Technology, Inc. The investigation consisted of drilling seven soil borings, installing four monitor wells, and sampling and analysis of the soil and groundwater. PCBs were detected in three of the seven composite soil samples, methylene chloride was found in five out of seven soil samples, and chloroform was detected in six of seven soil samples. Tetrachloroethylene and trichloroethylene were detected in one of the soil samples. Groundwater samples also contained chromium and lead levels exceeding the SDWA MCL standards. Volatile organic compounds (VOCs) also were detected in water sampled from a monitor well (MW) identified as MW-3. Methylene chloride and benzene also were measured at levels exceeding the health-based limit for each chemical. The term health-based limit is the risk specific dose (RSD) developed by EPA for known carcinogens.

In August 1988, EA Science and Technology conducted a study (A Surface and Subsurface Contaminant Characterization of the Watervliet Arsenal Siberia Area≅) in which surface and subsurface soil samples were obtained for chemical analyses from 30 locations throughout the Siberia Area. In the far northeastern part of the site, three exploratory borings were made and four monitoring wells were installed. Groundwater samples were taken for analysis from these newly installed wells and from the four wells installed during a previous investigation.

According to this report, a fuel oil odor was detected during the collection of one soil sample. Discolored groundwater (light yellow) was observed at two of the well locations. Arsenic was found in the soil at a level exceeding the acceptable health-based limit. In the groundwater, chloroform, trichloroethene, cadmium, and chromium were detected in different monitoring wells at concentrations also exceeding acceptable SDWA MCL levels.

The Siberia Area is abutted to the north and east by a largely residential area. EA Science and Technology determined that groundwater is moving in a northwesterly direction. Thus, residents located to the north of the Siberia Area could be potential receptors for contaminated groundwater migrating from this area.

A APhase I RCRA Facility Investigation Report≅ was prepared for ACOE, Huntsville Division by Environmental Science & Engineering in December 1991. The RFI of the Siberia Area included a geophysical survey, a soil gas survey, shallow soil sampling, soil borings, and the installation of nine monitoring wells. The purpose of the geophysical survey was to identify bedrock features, however because of soil conditions (extent of fill materials) and manmade features/obstructions, it was unsuccessful. Analysis of the data collected indicates the presence of trichloroethylene (TCE), tetrachloroethylene (PCE), dichlorodiphenyldichloroethane (DDD), 1,1-dichloro-2,2-bis(4-chlorophenyl)-ethylene (DDE), and dichlorodiphenyl-trichloroethane (DDT) in the soil.

Total chromium, barium, cadmium, lead, and mercury were all detected in groundwater above regulated concentrations. Only chromium was detected above regulated levels in filter samples. The source of these metals was not known although the data generated during this investigation suggested that chromium contaminated groundwater in the northeast corner of Siberia Area was the result of off-site activities.

The results of the Phase II RFI conducted by Malcolm Pirnie are discussed in the ADraft RCRA Facility Investigation (RFI) Report of the Siberia Area≅ dated August 1996. The RFI tasks conducted to assess the nature and extent of contamination included surface soil sampling, geophysical survey, groundwater field screening, soil boring sampling, monitoring well installation, groundwater sampling, surface water and sediment sampling, and storm water and sanitary sewer sampling.

The results of this investigation and previous investigations identified elevated concentrations of polynuclear aromatic hydrocarbons (PAHs) in the soil, free-phase oils in the soil and groundwater, chlorinated volatile organic compounds (VOCs) in the soil and groundwater and inorganic contamination consisting predominantly of arsenic, chromium and lead in the soil and chromium in the groundwater. To better describe the location of the contamination sources

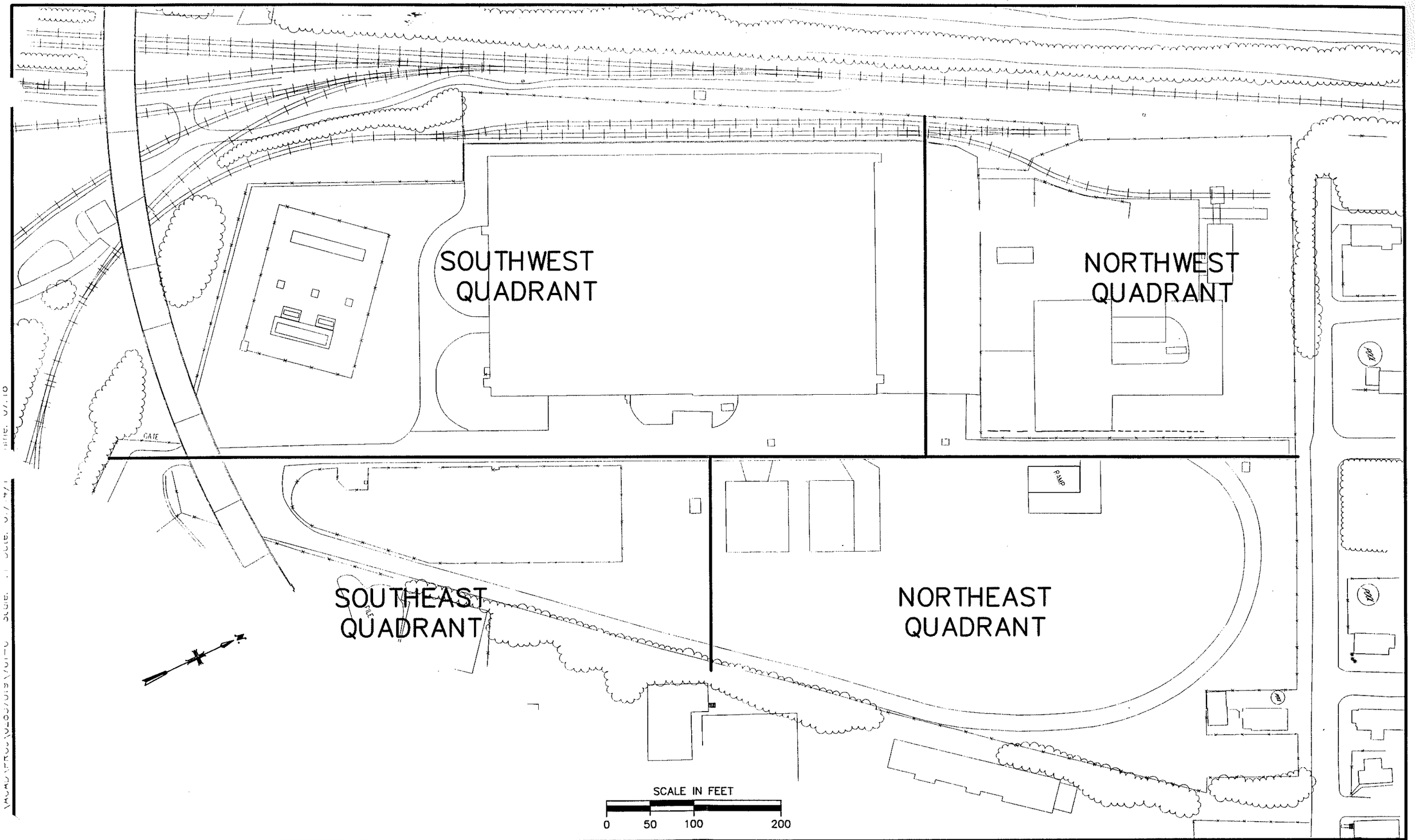
identified during these investigations, the Siberia Area has been divided into the four quadrants shown on Figure 1-1. The sources of contamination identified by these investigations include:

- # Waste oils and solvents mixtures that were used as dust control across all four quadrants of the site.
- # Metal chip handling in the northwest and southwest quadrants.
- # Burn pit area in the northeast quadrant.
- # Storage areas for solvents in the northeast quadrant.

The concentration of contamination detected in various site media at the Siberia Area exceeded NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046. Based on the exceedance of the TAGM guidance values in this area, a Corrective Measures Study (CMS) is required to determine if adverse risks to human health and the environment exist and evaluate and recommend corrective measures to mitigate these risks. Malcolm Pirnie is currently conducting the CMS at the Siberia Area. The risk-based objectives of the CMS include in-situ dechlorination of organic contaminants in the groundwater using permeable reactive wall technology, ex-situ bioremediation of petroleum hydrocarbons and polynuclear aromatic hydrocarbons (PAHs) in the soil, and possible excavation or solidification of metals contaminating the soil.

As part of the CMS, in the Fall of 1998 a Permeable Reactive Wall was installed in the northeast quadrant of Siberia to remediate chlorinated organic contaminants in the groundwater. Also, as part of the CMS, the Former Burn Pit Area was excavated. The excavated soil was screened and staged in Siberia in a Biopile. The goal of this project is to bioremediate petroleum hydrocarbons and PAHs. Periodic sampling and tilling of the biopile are currently underway.

Building 25, located in the southeast portion of the main process area, contained a vapor degreasing operation which used chlorinated solvents, elevated levels of which were detected in an adjacent well. In September 1986, WVA collected groundwater samples and found in the samples trichloroethylene concentrations in excess of the SDWA MCL. The results were reported to the EPA. Unacceptably high trichloroethylene levels also were reported in the first samples from two newly developed wells. On January 11, 1989, results of the analysis of groundwater samples again



US Army Corps of Engineers

SIBERIA AREA
APPROXIMATE QUADRANT BOUNDARIES

WATERVLIET ARSENAL
USACE CONTRACT NO. DACA31-94-D-0017

FIGURE 1-1

XREFs X701-01

indicated the presence of trichloroethylene in excess of the SDWA MCL. CTM were retained by WVA in 1990 to determine if halogenated organics were present in the soil adjacent to the vapor degreaser. The CTM investigation showed that both halogenated and aromatic hydrocarbons were present in the soil. The study also indicated presence of low levels of halogenated organics in the groundwater. WVA collected and analyzed groundwater samples from several wells located in the vicinity of Building 25 between 1990-1993. Chromium, chlorinated solvents, oil and grease were the contaminants which were detected.

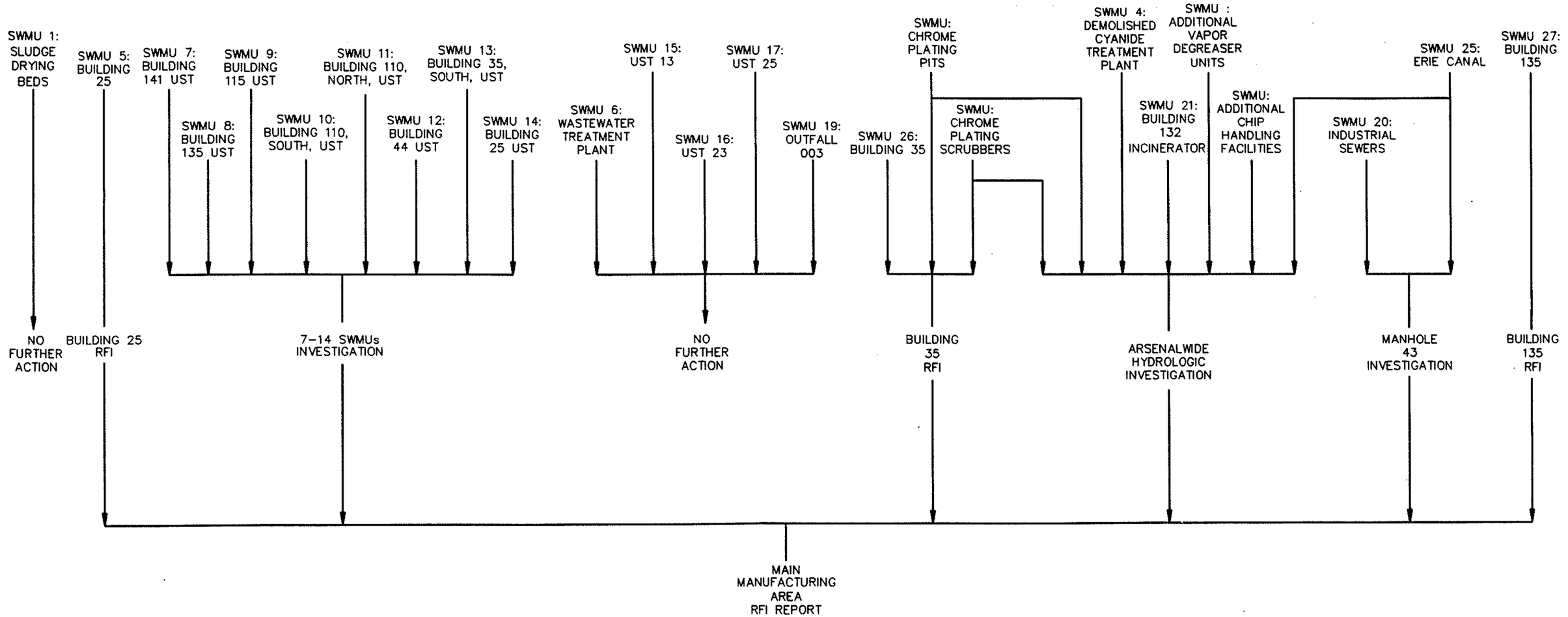
In October 1994, Malcolm Pirnie and Louis Berger & Associates, Inc. prepared Work Plans for Building 25, 35, and 135. The overall objective of the each was to determine the nature and extent and/or the presence of chemical releases from Buildings 25, 35, 135 and to evaluate the threat to public health and environment posed by the contaminant releases.

In October 2000, Malcolm Pirnie prepared a report entitled AFinal RCRA Facility Investigation Report, Main Manufacturing Area, Watervliet Arsenal, Watervliet, New York.≅ The purpose of this report was to tie together existing site information and data that has been gathered from individual site RFIs and RCRA Facility Assessments (RFAs) conducted concurrently at Buildings 25, 35, 36, and 135, the Arsenalwide Hydrogeologic Investigation, Manhole 43 Investigation, and the Solid Waste Management Units (SWMUs) 7-14 Investigation; and present the nature and extent of any release(s) of hazardous constituents resulting from activities in and around the Main Manufacturing Area. Figure 1-2 presents a summary of the stages of the SWMU investigations.

The physical and chemical analytical data generated during these investigations, is of acceptable quality but of insufficient quantity to fully assess the nature and extent of contamination. Further work is on-going to help define the extent of contamination in areas of the Main Manufacturing Area.

Leakage from machinery, storage areas, and sewer lines, as well as discharges relative to historical practices at the site have contributed to site contamination. The primary contaminants of concern are:

- Chlorinated organic compounds. Activities at former vapor degreaser locations have resulted in elevated concentrations of halogenated hydrocarbons in the groundwater.



US Army Corps of Engineers

MAIN MANUFACTURING AREA
SWMU STAGES OF INVESTIGATION

WATERVLIET ARSENAL
USACE CONTRACT NO. DACA31-94-D-0017

FIGURE 1-2

Petroleum, oil, and lubricants (POLs) in soils and as free phase, and to a lesser extent in the aqueous phase. Multiple sources have been identified for POLs, including spills in the Building 121 area, machinery and sumps at Buildings 35 and 135, leaking underground storage tanks (USTs), and ruptured waste oil lines.

Groundwater samples obtained in several areas of the Main Manufacturing Area have detected contamination of inorganics above applicable guidance values. However, these are not believed to be contaminants of concern because they were detected in unfiltered samples (total metals) rather than filtered samples (dissolved metals).

Malcolm Pirnie developed and implemented an Interim Corrective Measures Study Work Plan to remediate the POLs detected in a monitoring well located between Buildings 35 and 110. In addition, Phase II of the RFI of the Main Manufacturing Area has been completed, which established the nature and extent of VOCs in the groundwater. Additional investigations, in support of the CMS, have been scheduled in order to investigate a "hot spot" south of Building 40 on the eastern boundary of the WVA property. These investigations include installation of additional monitoring wells, several pump tests, a geophysical survey, and additional groundwater sampling.

2.0 COMMUNITY BACKGROUND

2.1 COMMUNITY DEMOGRAPHICS AND EMPLOYMENT

WVA is located within the City limits of Watervliet, in Albany County, the Capital Region of northeast, central New York State.

The City of Watervliet was incorporated in 1896 and today is populated by 11,061 residents. It is situated in the Hudson River Valley, near the confluence of the Hudson and Mohawk Rivers, approximately six miles north of Albany, one mile west of Troy, and 15 miles from Schenectady. Watervliet covers 1.54 square miles; 25 percent of the City's total land area is occupied by WVA, a tax-exempt facility employing approximately 612 people. The City government supports 28 miles of paved streets, a sewer and water distribution system, paid police and fire departments, a highway maintenance department, a public library, and senior citizen/youth recreational facilities. A school system, providing education for kindergarten through grade 12, is administered by an independent board of education. Watervliet has no hospitals within its City limits, but major hospitals are located in nearby Troy and Albany. The arsenal is one of the largest employer in the City; other major employers include the Norton Company, Tilley Ladder Company, Passonno Paints, Tek Hughes, and Aqua Clear Industries, Inc.

Watervliet is governed by a mayor-council form of government consisting of a mayor, two councilmen elected at large, and a general manager appointed by the City Council to act as Chief Administrative Officer. The City employs over 100 full-time workers.

An older urban community, Watervliet contains approximately 4,885 households, of which more than 86 percent of the dwellings were built before 1940. In the 1990 census, 48 percent of the households reported total family income of less than $25,000. The average per capita 1989 annual income was $13,007. In 1990, 64.5 percent of adults in Watervliet over the age of 25 reported having an education level of 12 years or less. Watervliet is a community of diverse occupations. The City is ethnically diverse; many people of Italian, Irish, Polish, Ukrainian, and French descent currently live in the area. The primary religion in Watervliet is Roman Catholic; other denominations in the community include Methodist, Episcopalian, and Presbyterian.

Albany County=s 524 square miles of land area encompasses the Cities of Watervliet, Albany and Cohoes, 10 townships and six villages. Albany, the capital of New York State, is the largest City with a population of 101,082. Despite its comparatively low population of 11,061, Watervliet maintains urban characteristics in that it is located six miles from the state capital. Colonie, which borders the western boundary of WVA's Siberia Area, is the largest town in Albany County with a population of 76,494.

According to the Center for Economic Growth, Albany County's total population in 1990 was 292,594. Of these residents, 89.1 percent was Caucasian, 8.4 percent Black, and 2.5 percent from other racial groups. The 1990 average median age was 34.4 years. In 1994, there were 115,900 households in the county, each with an average of 2.4 persons. The average 1994 household income was $38,079; average per capita income was $19,192. The three largest employment sectors in Albany County are services (31 percent), government (26 percent), and wholesale/retail trade (21 percent). Nine percent of the population is employed in manufacturing, six percent in finance/insurance/real estate, three percent in mining/construction, and four percent in transportation/public utilities.

The government is one of the region=s largest employers with 109,100 employees in 1996. An additional 315,900 workers are employed by the area=s 19,429 business enterprises. The structure of the economy has changed over the past six years with a loss in manufacturing jobs being replaced by employment in the financial and service sectors. In 1996, the service sector employed 130,800 persons in more than 7,000 companies.

The Capital Region encompasses six counties within a triangular area cornered by the Cities of Troy, Schenectady, and Albany. Historically, the region has been known as a transportation, trade, and industrial center. Today, the region has further developed into a major center for government, finance, education, technology, health care, services, and tourism. In 1990, the six-county area was home to approximately 854,182 people.

The Capital Region supports excellent public school systems and highly-rated private institutions. Among the 18 local colleges and universities, the State University of New York at Albany, Union College, and Rensselaer Polytechnic Institute are nationally recognized. The area is also home to the highly regarded Albany Law School and Albany Medical College. In 1994-95,

the local colleges and universities granted 2,929 Master=s, 334 Doctoral, 272 Juris Doctorate (Albany Law School), and 130 Medical Doctorate (Albany Medical College) degrees. As a whole, the Capital Region has a higher percentage of high school and associate degree graduates than New York State or the nation.

Research and development is a significant component of the regional economy. Corporate research is carried out by a number of local firms including, General Electric Research and Development Center, Environment One Corp., Mechanical Technology, Inc., Plug Power, Inc., Norton Company, Intermagnetics General and Albany International. Medical research of national and international importance is conducted at the Albany Medical Center complex. The Watervliet Arsenal, Knolls Atomic Power Laboratory, and the Kenneth Kesselring Site (Navy) conduct government funded research.

The region is an active distribution center with more than 80 motor freight carriers operating in the area. Bus service is provided by the Capital District Transportation Authority, and several private commuter lines, including the Adirondack Trailways, Greyhound, Yankee Trails, Arrow, Vermont Transit, and Upstate Transit bus companies. AMTRAK provides passenger service nationwide and to Canada. CSX D&H and CP Rail System carry freight throughout the Northeast and Mid-Atlantic states and Canada. The Albany County Airport, located immediately west of WVA, handled 2,029,393 passengers in 1996. Passenger service is provided by 14 airlines. The Port of Albany has 5,300 feet (ft) of dock apron and a 1,100-ft turning basin which can service ships of 750 ft in length.

Niagara Mohawk Power Corporation, the dominant electric and gas supplier to the Capital Region, has maintained one of the lowest cost per kilowatt hour of all tax-paying utilities in New York State. The region also is served by New York State Electric and Gas and Central Hudson Gas and Electric.

The region offers diverse communications sources, including seven daily and Sunday newspapers, 13 AM and 25 FM radio stations, three national network television stations, one Public Broadcasting System (PBS) television stations, and one independent television station. Verizon provides telecommunications service to the majority of the region's residents and businesses.

The Capital Region has an abundance of natural, cultural, historical, and recreational attractions. Two professional theaters, community and college theaters, a professional symphony orchestra, choral societies, a chamber music group, and a resident contemporary dance company are located in the area. The region is home to professional baseball, arena football, hockey, lacross and soccer teams.

The Hudson and Mohawk Rivers, more than 25,000 acres of state forests, many lakes, plus numerous state and county parks provide year-round outdoor activities. The region is near the Catskill and Adirondack mountain areas in New York, the Green Mountains in Vermont, and the Berkshire Mountains in Massachusetts.

2.2 COMMUNITY INVOLVEMENT HISTORY

WVA has conducted a thorough internal community relations effort for on-post employees and residents regarding the investigations and studies at the Siberia Area and the Main Manufacturing Area. Some activities have taken place as well with external audiences, including regulatory agencies and the media.

On November 24, 1986, while erecting a pole barn at the Siberia Area, WVA discovered oil in the soil. Samples of the soil were taken by WVA's Directorate of Engineering and Housing (DEH) for immediate analysis. On November 25, when it was known that the soil samples contained PCBs, DEH notified the WVA Commander and appropriate officials at the Region 4 office of NYSDEC and the Region II office of EPA. The Commander notified the WVA PAO, who in-turn notified the on-post union (NAGE) official and the media. On November 26 and 27, 1989, all three area network TV stations (WTEN-TV, WNYT-TV, and WRGB-TV) and the Albany Times Union newspaper carried stories about the discovery of PCBs at the Siberia Area. Records of the press coverage were kept. Both the current PAO and then Environmental Coordinator recall that no calls from the community were received by WVA or the media in response to the stories.

On November 28, 1986, chromium was discovered on the Siberia Area in the soil of a garden used by on-post residents to grow vegetables. The WVA Commander notified involved agencies, including NYSDEC Region 4 and the National Response Center. The site was inspected

on November 28 by NYSDEC and on December 3, 1986 by the Albany County Department of Health. During the inspection, the Albany County Department of Health told the WVA Directorate of Engineering and Housing that it had received no complaints or calls concerning the contamination on the Siberia Area. At this time, the WVA Commander wanted to warn on-post residents not to eat food taken from the Siberia Area garden. The Albany County Department of Health apparently stated that is was unnecessary to warn residents because chromium was not metabolized by vegetables. Press releases were not issued about the discovery of the chromium on the Siberia Area. In 1987, the pole barn was erected on another portion of the site known to be free of contamination.

According to the WVA PAO, in 1988 EA Science and Technology conducted a study at the Siberia Area which concluded that the PCBs on the site were a result of WVA activities; however, the chromium discovered on the site, they concluded, had migrated to the site from off-post. The EA Science and Technology report was released to state and federal regulatory agencies. In a 1995 Record of Decision, Perfection Plating was cited at the potential source to the chromium contamination.

During this time, the EPA wrote a letter to the WVA Directorate of Housing and Engineering applauding the aggressive way in which the directorate had pursued sampling and characterization of the contamination at the Siberia Area.

In January 1997, an unauthorized amount of ethylene glycol (the formula typically used in automobile radiators) was released from WVA into the environment. The released glycol quickly dispersed into the river water, therefore, according to comments from NYSDEC, the release did not pose a serious health risk.

Upon discovering the situation, WVA voluntarily ceased all affected manufacturing operations until the system could be restructured in a manner which prevents any future reoccurence. During such down-time, wastewater which continued to have a slight residue of glycol was stockpiled and hauled off-post for proper disposal at an approved treatment facility.

As a result of this incident, WVA entered into a Clean Waters Act (CWA) Administrative Order on Consent with NYSDEC. In accordance with the agreement, WVA is reviewing all

activities throughout the arsenal in order to identify and address other potential leak senarios. The WVA point of contact for CWA issues is Mr. Phil Darcy, at (518) 266-4534.

From 1986 to the present, according to the current WVA PAO and Environmental Coordinator, no complaints or calls from the public or agencies have been recorded concerning the PCB and chromium discoveries on the Siberia Area, the chromic acid waste line leak, or the ethylene glycol leak. No external community relations efforts concerning the environmental studies at the Siberia Area or the Main Manufacturing Area have been undertaken by WVA since in the initial announcements in 1986.

If there is sufficient community interest, a Restoration Advisory Board (RAB) can be formed at WVA. A RAB is intended to provide an opportunity for the local community to provide input on environmental clean-up issues at military installations. A RAB is composed of representatives of the Department of Defense, the US Environmental Protection Agency, state and local government and the affected community. As of August 1995, there was not sufficient interest in the community to form a RAB, but community interest will be continually monitored.

WVA's internal communications program has been more active. Employees and on-post residents have been updated on an as-needed basis since 1986 through a series of regularly held on-post meetings. Announcements about the Siberia Area and Main Manufacturing Area contamination and milestones in the history of their characterization have been made at the monthly Commander's staff meeting with WVA directors and officers. These directors and officers in-turn pass on information at monthly supervisors' meetings. Information provided initially by the Commander passes through the chain-of-command again at monthly directorate meetings and supervisors' safety meetings.

Additional on-post communications techniques include a publication from the Commander containing information on activities and events of note, and SALVO magazine, a monthly publication for employees published by the WVA Office of Public Affairs. From time-to-time, when information needs to be distributed quickly, the Commander of WVA issues an internal press release called the Command Information Bulletin.

WVA historically has conducted an active internal and external community relations program. Its community relations program on the contamination at the Siberia Area and Main

Manufacturing Area, however, has been limited largely to internal distribution of information and interactions with regulatory agencies.

2.3 COMMUNITY INTERVIEW PROGRAM

In October 1989, a representative from Hunter/ESE conducted a door-to-door survey among residents of the Watervliet community and selected residents and employees of WVA. In all, 30 interviews were conducted on October 24, 25 and 26 involving 12 WVA employees and 18 community residents, of which three coincidentally worked at WVA. Additional interviews were conducted by telephone on November 27 and 28, 1989. Responses of two environmental officials interviewed on these dates are included in this report, along with those of the interviewed employees and residents, bringing the total number of people interviewed to 32. The general manager of the City of Watervliet declined the opportunity to participate in a telephone interview.

Interview participants from the community were selected at random; on-post employees were scheduled by the WVA PAO at the request of the representative from Hunter/ESE. Interviews were conducted with a wide range of employees, including an environmental coordinator; an executive vice president of the National Association of Government Employees (NAGE) Union, Local R298, which represented 2,200 of the on-post employees; an assistant manager of civilian personnel; a fire chief; a chief safety officer; two employees of the Defense Reutilization Marketing Office (DMRO), which is located in the Siberia Area; a nonunion machinist; a member of the Federal Managers Association who also serves as a shop foreman; a shop floor chief; a nonunion manufacturing supervisor; and an online tube assembly worker.

A copy of the survey questionnaire is presented in Figure 2-1. It should be noted that Question 9 was not asked in any of the interviews. The WVA Commander required that the question be stricken from all interviews as a condition for permission to interview people who did not live or work at the arsenal. A summary of responses to all interview questions, except Number 9, is provided below.

Question 1: *An environmental study is being conducted at Watervliet Arsenal, New York. Have you heard about this study? If so, do you remember when and how you learned of it?*

FIGURE 2-1
COMMUNITY INTERVIEW QUESTIONNAIRE

WVA CR 11-00a

USACE

U.S. ARMY CORPS OF ENGINEERS

Huntsville, Alabama 35807-4301

COMMUNITY INTERVIEWS
WATERVLIET ARSENAL, NY

NAME _____

ADDRESS _____

CITY/STATE _____ PHONE _____

1. An environmental study is being conducted at the Watervliet Arsenal, NY. Have you heard about this study? If so, do you remember when and how you learned of it?

_____

_____

2. Have you talked with Army, New York, or EPA officials about the environmental study ongoing at Watervliet Arsenal?

_____

_____

3. If you have, were they responsive to your concerns?

_____

_____

4. Do you have any special interest in or any concerns about Watervliet Arsenal or the environmental study?

_____

_____

5. Have any of your friends or neighbors talked with you to express interest or concern about the environmental study, and if so, what were their concerns?

_____

_____

6. If you had a question or concern, what would you do? Is there someone you would call?

_____

Figure 2-1
WVA COMMUNITY INTERVIEW QUESTIONNAIRE
OCTOBER AND NOVEMBER 1989 SURVEY
(PAGE 1 OF 2)
SOURCES: HUNTER/ESE, 1989.

Prepared For:
U.S. Army Corps of Engineers,
Huntsville Division

WVA CR 11/89

7. Would you be interested in joining a mailing list to receive news releases, fact sheets,and other general information about this study?

yes ___ no ___

8. Other than the mailing list, what other ways can Watervliet Arsenal provide you with information?

Newspaper(s) _____

TV _____ Radio _____

Information Repository _____

(Suggested Location) _____

Community Information Line _____

Briefings at Watervliet Arsenal _____

Community Meetings _____

(Suggested time and place) _____

Informal Community Group Workshops _____

Other _____

_____

9. How do you receive your drinking water?

Private well ___ Community well ___ City water ___ Bottled water ___ Other ___

10. Can you suggest anyone else (friend, neighbor, group) that we should contact or who might want to be included on the mailing list?

_____

_____

11. Is there anything else you would like to mention that we have not talked about?

_____

_____

12. (Optional) In your opinion, how sensitive is the community to environmental issues?

_____

_____

_____

Figure 2-1
WVA COMMUNITY INTERVIEW QUESTIONNAIRE
OCTOBER AND NOVEMBER 1989 SURVEY
(PAGE 2 OF 2)
SOURCES: HUNTER/ESE, 1989.

Prepared For:
U.S. Army Corps of Engineers,
Huntsville Division

Summary of Responses:

Twenty-two survey participants were not knowledgeable about the environmental study being conducted at WVA. Of these 22 people, all but three were residents of the community and/or environmental officials who had no formal connection to WVA. A total of 10 participants were aware of the current study; all were employees of the arsenal or DMRO. Among the 10 knowledgeable participants, one learned about the study through newspapers and a union representative, one through USATHAMA and USACE, one by watching engineers work in the Siberia Area, two from a supervisor, and four from management meetings at the arsenal. Of the four interviewees who remembered when they learned about the study, one learned about it two years ago, one approximately one year ago, and one learned about it two weeks before this interview. Three people could not remember when they first learned about the survey.

\# **Question 2:** *Have you talked with Army, New York, or EPA officials about the environmental study ongoing at Watervliet Arsenal?*

Summary of Responses*:*

Thirty-one persons interviewed have never sought environmental study information from the Army, State of New York, or EPA officials. Two participants said they had informally contacted officials about related environmental issues, including the quality of water on the post and chemicals used in manufacturing operations. Of these two people, one talked casually with the WVA Commander about the water quality on post and one had minimal contact with state officials. Only one survey participant had frequent contact with Army, New York, and EPA officials regarding the study at WVA.

\# **Question 3:** *If you have, were they responsive to your concerns?*

Summary of Responses:

The one survey participant who has contact with Army, New York, and EPA officials stated all agencies were very responsive to concerns.

\# **Question 4:** *Do you have any special interest in or any concerns about Watervliet Arsenal or the environmental study?*

Summary of Responses:

Of the 32 people interviewed, 10 employees, nine people living adjacent to the arsenal in the City of Watervliet, and one environmental agency official were very concerned about environmental issues at WVA. Eleven people stated they had no noteworthy concerns about the arsenal or the environmental study. of the unconcerned, two were employees and nine were residents of Watervliet, New York. One environmental official stated he did not know enough about the studies yet to be concerned.

Employee concerns covered a broad range of environmental, health, and safety issues in the workplace. Six employees strongly stated concerns about having to handle hazardous chemicals in the workplace. Five of these people stated they handle or are exposed in the workplace to such hazardous substances as chromium, cadmium**,** nickel, chemicals in salt baths and lead pots, and off-gases from galvanized steel which Ahave made people pass out in the past.≅ One DMRO employee stated strongly the need for full documentation of chemicals in drums shipped through the work area, more knowledge about hazardous chemicals and how to handle each one safely in the event of a spill, and identification of the chemicals being studied in the Siberia Area. Another DMRO employee expressed a desire for cleanup of the Siberia Area so Awe don't have to take the mess home with us that gets on our shoes and clothes, especially the oil that comes to the surface of the ground when it rains.≅ One union representative strongly relayed that all employees are concerned and frequently talk about the quality of the water at WVA. The employee additionally noted people are afraid to make a cup of coffee at the arsenal and everyone brings in their own water. This person further stated the arsenal should dig its own well because Aeveryone knows the water supply from the City runs through the Siberia Area in rusty pipes with holes in them. Anything could be in the water.≅ Three more employees related concerns that air quality is very poor in some WVA buildings. One supervisor stated that a stationary 24-hour cycle recorder should be installed for constant air sampling in his work area. One employee vocalized concern about asbestos problems at WVA and two related that noise levels were unduly high, especially in manufacturing and construction areas. Three employees expressed the general belief that as much as possible should be done to improve health and safety practices and the work environment for employees. One employee expressed an interest in knowing if WVA was drilling wells yet to obtain samples in the Siberia Area; another expressed a special interest in the environment at WVA because he is a major point of contact for information on the study.

Nine residents related diverse concerns about WVA and the environmental study. All nine neighbors live in the area immediately adjacent to the Siberia Area and all have witnessed studies taking place there over the past few years. One resident stated strong concerns on not being informed about the contents of the large drums shipped through DMRO, the current status of the PCB problem in the Siberia Area, and the reasons why men in Anuclear suits≅ took samples close to the family's backyard two years ago. This resident relayed additional concerns that when it rains, Abright green water≅ flows from the Siberia Area and floods his basement and soils overflow into his yard from the former Siberia Area garden. One resident expressed concerns for the family's health due to the overflow of water into the yard and occasionally the house, when heavy rains fall on the Siberia Area. Four residents stated they are concerned because they do not know exactly what pollutants and toxic hazards are stored, buried, or shipped through the Siberia Area. All four residents emphasized they want to know exactly what pollutants and toxic hazards exist in the Siberia Area and if any chemicals are migrating off post. Two were especially concerned about the PCBs found in the Siberia Area two years ago. Two residents stated they worry if their families are being exposed to toxic chemicals because they are uncertain about what kinds of activities take place at-the arsenal. One neighbor wondered if health problems of family members and neighbors could be due to arsenal activities and practices. This resident related the belief that there are an unusually high number of cancer deaths on the block and health abnormalities in children within the family. An incinerator on the WVA property was reported by three residents to occasionally spew black ash and smoke into the neighborhood. The incinerator concerned one resident with bronchial problems, one person whose son has asthma, one person whose clothing is made dirty by the ash while hanging on the clothesline, and one resident who worries if toxic materials are burned in the incinerator. One resident stated that heavy traffic from the arsenal during peak hours was a moderate concern. One neighbor also related that a barking dog was a moderate concern, but the arsenal had corrected the problem.

\# **Question 5:** *Have any of your friends or neighbors talked with you to express interest or concern about the environmental study, and if so, what were their concerns?*

Summary of Responses:

Four persons interviewed said concerns had been expressed to them by friends and neighbors regarding WVA environmental issues; 28 people said no person had ever expressed concerns to them. All four positive responses came from residents of the surrounding community. According to these four individuals, friends and neighbors discuss what kinds of materials might be stored in drums in the Siberia Area and if pollutants might be migrating because water flows from the Siberia Area into yards when it rains. One person said neighbors talked among themselves two years ago when the arsenal was checking for radon in the Siberia Area. Several people stated neighbors talked about the arsenal among themselves, but in all cases except those listed above, topics of conversation

did not involve the environmental study. Asbestos, the Asecrecy≅ of arsenal operations, the former Siberia Area garden, the unsightly condition of the Siberia Area, and the stench of decaying grass stacked in the Siberia Area were among cited topics of conversation.

Question 6: *If you had a question or concern, what would you do? Is there someone you would call?*

Summary of Responses:

Three of the respondents stated they did not know anyone to call and two said they would not call anyone if they had a problem. Of these two, one stated that when calling the arsenal in the past nothing was done (about the problem); another wouldn't call because Athe arsenal can do nothing wrong in my book.≅ Two officials- noted they would call the arsenal and ascertain the appropriate person to contact. Of the residents interviewed in the neighborhood surrounding WVA, three would call Colonel Mayton; two, the arsenal in general; one, Barbara Green of WVA; one the environmental engineer; two, the City of Watervliet; three, the New York State Department of Environmental Conservation (NYSDEC) one, the EPA; and one, the State of New York, generally speaking. All employees of WVA and DMRO gave specific answers to this question. Nine employees stated they would contact the Engineering and Housing Office at WVA. Of these nine people, five would contact Jim Sherman; one John Sadak; one, Russ Wells; one, the Environmental Coordinator in general; and one, the office-in general. Two employees would contact the Industrial Hygiene Office; one of these individuals named Tom Friedman as the primary contact. Two employees would contact Colonel Mayton and two would call Safety Officer John Michaels. One employee each would contact PAO John Swantek, Joe Trombley, Rick Mazenco, the Civilian Executive Assistant, or the Chief of Employee Relations. Another employee identified DMRO Environmental Specialist Rick Klingel. One employee noted primary contacts as Bob Nore and Kevin Healy of USACE, Huntsville Division; USATHAMA; and Bill Cugin, AMCCOM. One employee would first call ENCON (the popular local name for NYSDEC).

Question 7: *Would you be interested in joining a mailing list to receive news releases, fact sheets, and other general information about this study?*

Summary of Responses:

Of the 18 residents interviewed, 14 want to be included on a mailing list; six do not want to receive more- information. Fourteen people, all of the interviewed employees and environmental officials, want to be included on a mailing list.

Question 8: *Other than the mailing list, what other ways can WVA provide you with information?*

Summary of Responses:

Newspaper: Ten survey participants stated they primarily read the Record (published in Troy, New York); eight, the Times Union (published in Albany, New York); and four both the Record and Times Union. Four people read the Schenectady Gazette and three read both the Schenectady Gazette and the Times Union. One person reads the Times Union and New York Post, one the New York Daily News, and another the Saratogian. One person reads the Altamont Enterprise and the Spotlight as secondary sources of local news.

Television: Twenty-eight interviewees primarily watch the three area networks: WTEN Channel 10 (ABC), WYNT Channel 13 (NBC), and WRBG Channel 6 (CBS). Of these people, two said they also watch CNN and WXXA Channel 23 (FOX). One person primarily watches WMHT-WMHX (PBS); another individual prefers CNN. Three of the survey participants do not watch television.

Radio: Thirty of the 32 survey participants listen to area radio stations. The most frequently preferred stations include WTRY, WGY, WGNA, WFLY, and 106FM. Of these stations, five people listen to WTRY, four to WGY, four to WGNA, four to 106FM, and three to WFLY. Other area stations noted as favorites by one person each include WAMC, WEQX, WRGB, 98.3FM, WQBK, FMQ-104, WRW, 101FM, and 96.7FM. One survey participant does not listen to radio; two others listen to a variety of stations.

Information Repository: Eighteen of the survey participants believed that an information repository(ies) would be valuable, 13 did not, and one person held no opinion. Three employees believed that an information repository would be of interest to workers, but not to the community at large. Other members of the WVA and DMRO work force identified several possible on-post locations for a repository, including the WVA cafeteria, on shop floors, the receptionist's area in building 10, the office of civilian personnel, and the lobby of the WVA museum. Off-post sites identified by workers included the Watervliet Public Library, City Hall, and Post Office; area shopping centers or malls; and the Colonie Town Library. Two employees stated information repositories should be established at locations decided by the WVA PAO. Neighborhood residents pointed out several different sites as possible locations for information repositories, including: WVA; the Watervliet Public Library, elementary school, high school, City Hall, and/or Post Office; the Sacred Heart of Mary Church; and the Price Chopper market. One person felt that small businesses in the neighborhood would be suitable sites. Four of those interviewed felt that information should be sent directly to homes because most people would not make an effort to travel to a repository site. One environmental official stated that information repositories were not one of the most important vehicles for information distribution. If used, however, they should be situated in a densely populated area and at a library like the Albany Public Library.

Community Information Line: Twenty-three survey participants felt that a community information line would be beneficial. Of these people, 13 were residents, nine were employees, and one was an environmental official. One of the residents and two of the employees stated that the WVA PAO's telephone number was sufficient. Six interviewees did not feel that an information line would be valuable. Three people did not know if such a telephone line would be valuable to residents or employees.

Briefings at WVA: Fourteen survey participants said they would attend briefings held at the arsenal. Nine of the total 12 interviewed employees stated that briefings would be very helpful to workers who handle hazardous materials. Among the remaining interviewees, 13 would not attend briefings at the arsenal and two stated they might attend-on-post briefings. Both environmental officials stated that briefings would not be attended much, unless the topic was very controversial.

Community Meetings (Suggested Time and Place): The interviewed residents were evenly divided on whether or not community meetings would be attended and/or a valuable method of information distribution. Eight residents believed community meetings would be attended, eight did not believe they would be attended, and two were undecided. Six employees favored community meetings and two did not believe they would be attended. One employee held no opinion. Four survey participants stated such meetings were useful but would be attended only if substantial controversy evolved as a result of the environmental study. Residents in the area noted several practical locations for community meetings. Five residents identified the Watervliet High School; three, City Hall; one, the Holiday Turf Inn; and one, the Watervliet Public Library as possible sites for meetings. Employees also identified similar facilities, with two citing the Watervliet High School; two, City Hall; one, Shaker-Loudonville High School; one, the Watervliet or Colonie Public Libraries; one, the field house at RPI; and one, the cafeteria at WVA. Of the 32 people interviewed, eight suggested meetings be held on weekday evenings.

Informal Community Group Workshops: Twelve residents and seven employees said they would not attend informal workshops. Six residents and five employees expressed interest in attending informal community group workshops. One environmental official stated that workshops would not be attended unless the topic was controversial. Another official stated that workshops, which are always attended by a small group of activists, could be an effective vehicle for information exchange.

Other: Additional methods of providing environmental study information suggested by survey participants included carrying stories about the study in WVA's Salvo magazine; direct mailing of newsletters, fliers, and/or letters to neighbors throughout the area; more releases to newspapers and radio stations, including updates on what the arsenal has done to clean up the environment; distribution of fact sheets to every employee; distribution of information from NYSDEC and EPA; announcements through weekly safety meetings;

and, in the event of an emergency, sending one person on the back of a truck to make announcements at every WVA building. Three area residents stated the arsenal is inaccessible and intimidating. To alleviate this image, it was suggested that the arsenal resurrect Armed Forces Day, establish a special office to handle environmental questions, and improve overall access to the installation. One environmental official suggested that a specialized newsletter should be sent to organized groups, as well as public and private agencies, for wider dissemination in other newsletters.

Question 9: *How do you receive your drinking water? Private well, community well, City water, bottled water?*

Summary of Responses:

At the request of the WVA Commander, this question was not asked of any survey participants.

Question 10: *Can you suggest anyone else (friend, neighbor, group) that we should contact who might want to be included on the mailing list?*

Summary of Responses:

It was suggested that the following individuals be notified of community meetings, added to the mailing list, and sent news releases related to WVA environmental activities:

- Gary DeCarlo
- Mr. and Mrs. Frank Rourke
- Dave Chartrand
- Don Handerhand, Sr.
- Mr. and Mrs. Thomas Malo
- Beverly Gillespie
- Jim and Dorothy Strack
- Kenneth Ray
- Albany County Environmental Management Council
- Albany County Director of Environmental Health

Specific off-post organizations were not identified by the survey participants. Several people, however, said information should generally be distributed to area conservation groups, public and government agencies, all people in area towns and villages, everyone in the surrounding neighborhood, and all concerned citizens. WVA employees noted information should be sent to the senior occupant in all residential quarters, the director of personnel, the director of community activities, the commanding officer, workers in the plating area, the president of NAGE, and to all on-post union members.

The names and address of specified individuals and groups are listed as fully as possible in Appendix E. Addresses could not be obtained for several suggested individuals and groups.

Question 11: *Is there anything else you would like to mention that we have not talked about?*

Summary of Responses :

Ten residents had no additional information to add. Of the remaining eight residents, three stated they wanted more information about the type of work conducted at the arsenal and the results of the study when information becomes available. One resident added that traffic from the arsenal was irritating; one wants to know if nuclear materials are used at the arsenal and, if so, how are they stored; and one wants an alarm system at the arsenal which will alert residents in the event of a spill. One resident requested more information on the various alarms and whistles now used at the arsenal; one whistle, in particular, is very frightening to him. One resident complained that flooding from the Siberia Area ruins the landscaping of his/her property and also requested that the unsightly condition of the site be rectified. Another resident expressed a desire for the arsenal to reinstate its fireworks display on holidays.

One environmental official related that her department managers all share the belief that the acceptance of the arsenal by surrounding communities is very high. For example, at very controversial meetings in the area, which were attended by environmental activists, the arsenal was never been mentioned. According to this official, the perception of all staff members is that the arsenal must already have a strong community relations program in place. Four other employees stated that the arsenal was very responsive and there were no serious problems on-post. One employee wanted it noted that the arsenal has aggressively pursued characterization of the Siberia Area and has fully communicated all results to regulatory agencies. Three employees said that better communication systems are needed because all people (at the arsenal) need to be more aware of the environmental problems. Two employees expressed appreciation that someone had asked for their opinions in this matter. One worker stated that all WVA employees are apprehensive about spills and want more frequent testing for exposure to chemicals and health effects.

Question 12: *In your opinion, how sensitive is the community to environmental issues?*

Summary of Responses:

Of the 32 survey participants, 11 stated the community is very sensitive, eight that the community is somewhat sensitive, and 10 said the community is not sensitive to environmental issues at all. Three people held no opinion about the degree of environmental sensitivity in the community. Four people said the surrounding community is notably more aware of environmental issues than in the past. In general, the interviewees said residents in the Albany Capital Region are environmentally conscious and concerned. Most survey participants believe the community is not sensitive to environmental issues at the arsenal. Several people stated, however, that should the situation become controversial, citizens will react strongly. In general, the interviewees felt that the community would become mobilized only if environmental hazards from the arsenal directly affected their lives. One interviewee said the community was more concerned about the unsightly appearance of the Siberia Area than in possible environmental hazards there. Three employees stated that WVA workers and residents were sensitized to environmental problems at the arsenal, especially regarding closure of the former garden area, rust in the water, the PCBs found in the Siberia Area, and the installation's asbestos problem.

2.4 COMMUNITY ISSUES AND CONCERNS

In October and November 1989, 32 interviews were conducted involving 12 on-post employees, 18 property owners living close to WVA, and two environmental officials. Interviews were conducted with a wide range of employees, including: an environmental coordinator; an executive vice president of NAGE Union, Local R298, which represented 2,200 of the on-post employees; an assistant manager of civilian personnel; a fire chief; a chief safety officer; two employees of DMRO, which is located in the Siberia Area; a nonunion machinist; a member of the Federal Managers Association who also serves as a shop foreman; a shop floor chief; a nonunion manufacturing supervisor; and an online tube assembly worker. The residents were selected at random; interviews were conducted with individuals who accepted a verbal invitation to participate in the survey process. The environmental officials were selected because they represented the interests of both Albany County and the State of New York.

It is important to note that 22 survey participants had no prior knowledge about the environmental studies at WVA; all 10 who knew about the studies were employees of WVA and

DMRO. By far the most knowledgeable of the participants were mid- and high-level managers who receive information through regular meetings with the WVA Commander and other supervisors. Interviewed members of the WVA work force were much less informed about the studies, indicating that information may not filter down well from managers to workers.

Safety and health concerns were preeminent among the issues discussed by members of the WVA work force. The poor quality of drinking water on post, asbestos, poor air quality, and unduly loud noise in the workplace were discussed by several of the employees. The workers also asked for more information, training, and safeguards against exposure to toxic substances used in manufacturing processes employed at WVA. Most of the interviewed employees expressed a desire for more in-depth technical information about the environmental studies and for direct distribution of information to every employee through such vehicles as Salvo magazine, fact sheets, union meetings, and regularly held safety meetings.

Nine residents who live next to the Siberia Area have witnessed study-related activities and expressed diverse concerns about WVA and the environmental studies. The residents were most concerned about contents of large drums shipped through DMRO, the current status of the PCB problem at the Siberia Area, and the reasons why men in Anuclear suits≅ took samples close to a family's backyard two years ago. Because both water and soil overflow from the Siberia Area into neighborhood homes and yards during rains, several neighbors expressed fears about contaminant migration. Four residents stated they are concerned because they do not know exactly what pollutants and toxic hazards are stored, buried**,** or shipped through the Siberia Area. All four residents emphasized they want to know exactly what pollutants and toxic hazards exist in the Siberia Area and if any chemicals are migrating off post. Several residents stated they worry if their families are being exposed to toxic chemicals because they are uncertain about what kinds of activities take place at the arsenal.

Other concerns of note, although not related to the environmental studies, included an incinerator on the WVA property which was reported to occasionally spew black ash and smoke into the neighborhood, heavy traffic during peak hours, the stench of grass left rotting in the former garden area of the Siberia Area, the unsightly condition of the Siberia Area, various alarms and

whistles emanating from the arsenal, and the inaccessibility of the arsenal and its staff to neighborhood residents.

In general, it must be noted that only a few of the people interviewed held strong or defined opinions about the environmental studies. In fact, virtually all off-post participants shared the view that the arsenal is a good neighbor and responsive to citizen needs. No highly emotional comments were made about the arsenal by the survey participants, the environmental studies, or any potential affects on the community from possible contamination on the Siberia Area. There is, however, a desire for more information from the arsenal on the progress and findings of the studies.

Another reason for the low level of citizen concern is that the Albany Capital Region has many serious environmental problems, and potential problems at WVA are considered to be slight in comparison to highly publicized contaminant releases by area industries. One environmental official further noted that the arsenal's name has never been brought up at community meetings, even those attended by environmental activists. The perception among all of the official's department managers is that the arsenal enjoys a positive standing in the Albany Capital Region and is perceived as a good neighbor.

2.5 TECHNICAL ASSISTANCE GRANTS

In order for the public to be as informed and involved as possible in an installation's environmental program, EPA manages a Technical Assistance Grants (TAG) program. The purpose of these grants is to assist citizens' groups in understanding technical information that assesses potential hazards and the selection and design of appropriate remedial actions. information on TAG may be obtained by writing to: U.S. Environmental Protection Agency, Region II, 290 Broadway, New York, New York 10007.

3.0 COMMUNITY RELATIONS PROGRAM

3.1 GOALS AND OBJECTIVE

The goal of the WVA CRP is to provide an effective mechanism for two-way communication and exchange of information among WVA; local communities; installation staff, employees, and residents; the Army; and diverse federal, state, county, and local officials. This CRP has been designed to fulfill requirements of the following community relations references:

1. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (Public Law 96-510), as amended, including Section 117 of the Superfund Amendments and Reauthorization Act (SARA) of 1986 (Public Law 99-499, October 17, 1986).

2. Headquarters, Department of the Army (HQDA) Public Affairs Plan 10-1-87: Installation Restoration Program, October 1987.

3. EPA guidance and publications, including Public Involvement in the Superfund Program (WH/FS-86-004), RCRA Public Participation Manual (EPA530-R-96-007) and CERCLA compliance with other environmental statutes [Federal Register 50(29):5928-5932].

4. The publication Community Relations in Superfund: A Handbook [Office of Solid Waste and Emergency Response (OSWER) Directive No. 9230.0-3A, March 1986].

5. New York State Department of Environmental Conservation guidance document NYS Inactive Hazardous Waste Site Citizen Participation Plan (August 30, 1988).

This CRP has the following specific objectives:

1. Ensure that the public understands that personal and community health and interests are of paramount concern to the Army and WVA.

2. Keep local residents; on-site employees; and federal, state, county, and local officials informed in a timely manner of major findings and recommendations of the RCRA environmental studies, including findings of the soil and groundwater contamination studies, interim remedial actions, and any alternative remedial actions suggested in the future.

3. Provide the local residents; on-site employees; and federal, state, and local regulatory officials with the opportunity to review and comment on the studies being conducted at WVA and on the remedial action alternatives and decisions.

4. Keep WVA and the Army sensitive to changes in community concerns, attitudes, information needs, and activities regarding WVA and to use these concerns as factors in evaluating modifications of the CRP, as necessary, to address these changes.

5. Effectively serve the community's information needs and address citizen inquiries by prompt release of factual information through the media and other information-dissemination techniques, including telephone calls and letters.

6. Effectively respond to the needs of the media by providing timely responses to inquiries and requests for interviews and briefings, thereby resulting in fair and accurate reporting of the findings, recommendations, and actions resulting from the WVA environmental studies.

7. Create and maintain, through an active public affairs program, a climate of understanding and trust aimed at providing information and opportunities for comments and discussion.

8. Ensure that appropriate federal, state, county, and local elected officials are informed of results of the investigations and any recommended additional studies or remedial actions.

9. Provide a single entity for dissemination of information for matters regarding the progress of the environmental studies and other environmental issues at WVA, including the progress of the contamination assessment studies, remedial actions, and other decisions at WVA.

10. Identify issues and potential areas of concern and develop and implement objective means to avoid or resolve conflict.

3.2 RESPONSIBILITIES

The following responsibilities are established for the CRP at WVA:

1. Office of the Chief of Public Affairs (OCPA):

a. Approves press statements or visits concerning the WVA program that have national significance and coordinates with the Office of the Chief of Legislative Liaison (OCLL) for notification of appropriate congressional delegations.

b. Coordinates other required notification actions with OCLL as appropriate or required.

c. Coordinates release of any WVA program information at the national level with USATHAMA, U.S. Army Materiel Command (AMC), and AMCCOM.

2. Office of the Chief of Legislative Liaison (OCLL), HQDA: Coordinates notification of appropriate congressional delegations prior to national release of WVA program matters, as well as other congressional notifications as necessary.

3. Chief of Public Affairs, U.S. Army Materiel Command (AMCPA):
   a. Coordinates with OCPA, USATHAMA, and AMCCOM the release of information not previously cleared for release.

   b. Coordinates with USATHAMA and AMCCOM in advance of congressional and gubernatorial notifications.

   c. Provides additional guidance and assistance in support of this plan as required.

4. Chief of Public Affairs, AMCCOM:
   a. Responsible for implementing the overall Public Affairs Program at the arsenal.

   b. Refers technical queries to USATHAMA for response to WVA program matters.

   c. Acts as liaison between USATHAMA, WVA, and higher headquarters, as required, to provide guidance and coordinate news releases or responses to queries for release at WVA.

   d. Coordinates Freedom of Information Act (FOIA) requests with AMC, USATHAMA, and WVA.

   e. Provides public affairs support for the WVA CRP, as needed.

5. Chief, Public Affairs Office, USATHAMA:
   a. In coordination with AMCCOM, provides public affairs guidance and expertise to support the public affairs program at WVA.

b. In coordination with AMCCOM and WVA, prepares statements and media releases for use at major milestone achievements and during the progress of the WVA program.

c. Refers to AMC for clearance and/or coordination of all material intended for public release which has not been previously cleared or specifically authorized for release in this or subsequent statements and public affairs plans.

d. Informs AMC of any queries, releases, or proposed media visits to WVA concerning the program.

e. Provides public affairs assistance to WVA, EPA Region II, NYSDEC, USACE, and local officials at WVA as required.

f. Coordinates any congressional queries and responses with AMC, AMCCOM, WVA, and other agencies as required.

6. WVA PAO (In the absence of a PAO, a representative appointed by WVA Commander):

a. Maintains community information line; answers questions from public with assistance from Environmental Coordinator.

b. Serves as the on-the-scene spokesperson and community point of contact for the WVA program and responds to local, state, regional, and national queries using statements provided by USATHAMA or as provided in subsequent cleared statements or plans.

c. Informs AMCCOM, USATHAMA, and USACE of all queries, releases, public briefings, tours, or requests for visits pertaining to the WVA program, releases, public briefings, tours, or requests for visits pertaining to the WVA program.

d. Coordinates with AMCCOM, USATHAMA, and USACE all responses to queries concerning WVA program matters that require release of information not previously cleared for release.

e. Coordinates, immediately upon receipt, FOIA requests with AMCCOM, USATHAMA, and USACE.

f. Refers queries pertaining to regulatory agencies such as EPA and NYSDEC to the appropriate agency point of contact or public affairs office.

g. Provides USATHAMA and AMCCOM with information copies of all WVA-released material and copies of newspaper clippings.

h. Coordinates congressional, gubernatorial, and media notifications through AMCCOM, USATHAMA, and USACE.

i. Distributes fact sheets, reports, and other pertinent information to the public information repositories. Also performs quarterly inspections of repositories to ensure materials are available and updated for public use.

j. Coordinates, with WVA Environmental Coordinator, responses to queries from community information line.

k. Provides to operations managers environmental fact sheets, copies of news releases, notifications of public meetings, results of groundwater and soil tests, etc., so relevant information can be provided WVA work force at scheduled meetings.

l. Provides fact sheets, copies of news releases, and notification of public meetings to appropriate leader of Local R298, NAGE.

m. With assistance from USATHAMA PAO and NYSDEC, plans, schedules, and coordinates all necessary requirements for implementation of community meetings.

n. Plans and coordinates on-site tours of study sites and special briefings to elected community and county leaders.

o. Plans, coordinates, and/or presents informative programs relating to WVA environmental studies and remediation to regional civic groups or classes at local schools.

p. With assistance from WVA Environmental Coordinator, prepares, maintains, and updates the information repositories on-post and in the community.

7. Environmental Coordinator, WVA:

a. Assists with community information line; coordinates appropriate responses and provides guidance as needed to PAO.

b. Provides on-post managers with information regarding environmental actions that may impact worker safety so topics may be presented at regular meetings.

c. As needed, assists in planning and coordination of community meetings, tours, briefings, presentations to civic groups and schools, and preparation of fact sheets.

In conjunction with the WVA CRP, EPA Region II, and NYSDEC are requested to:

1. Act as spokesperson on policy, procedure, or operations concerning their respective agency's programs relating to the WVA program; and

2. Respond to media queries, as required, on their agency's involvement in the WVA program and notify other involved agencies of responses and potential problem areas.

3.3 COMMUNICATION ACTIVITIES AND TECHNIQUE

The primary elements of success in a community relations program are to develop an information network for relevant communications and a constructive mechanism for public participation in the program. To develop, maintain, and enhance public involvement and to respond to changes in community concerns, the WVA CRP presents an active approach for identifying and addressing public concerns about environmental issues at WVA. The CRP also allows for continued public involvement during all phases of the investigation and clean-up process, including the RFI, the Corrective Measures Study (CMS), and the implementation of any interim remedial measures (IRMs) as required by the study recommendations. An updated ASchedule of Community Relations Plan≅ for the on-going studies and investigations in Siberia Area and Main Manufacturing Area are presented in Tables 3-1 and 3-2.

Essential to building and maintaining public trust is an on-line communication system by which relevant and accurate information is made available to local citizens, installation staff and workers, state and federal regulators, and the media in a timely and responsible manner. Sections 3.3.1, 3.3.2, and 3.3.3 present methods and techniques for implementing such a system.

TASKS	1st Quarter 1998	2nd Quarter 1998	3rd Quarter 1998	4th Quarter 1998	1st Quarter 1999	2nd Quarter 1999	3rd Quarter 1999	4th Quarter 1999	1st Quarter 2000	2nd Quarter 2000	3rd Quarter 2000	4th Quarter 2000	1st Quarter 2001	2nd Quarter 2001	3rd Quarter 2001	4th Quarter 2001	1st Quarter 2002	2nd Quarter 2002	3rd Quarter 2002	4th Quarter 2002
Final RFI	RR																			
Final CMS/ Selection of Remedial Alternative(s)				FS	RR															
Pilot Study Reports - Soil - Groundwater						FS		FS	RR RR-TBD*											
Final Conceptual Design Report - Soil - Groundwater									FS	RR FS	RR									
Remedial Action Implementation Report (Phase I) - Soil - Groundwater																	FS FS	RR RR		

KEY:
NS = News Release
FS = Fact Sheet
RR = Report Release
TBD* = Pilot Study Report Release date to be determined

NOTES:
News releases will be submitted as required. Quarterly and public meetings will be held as necessary.

RCRA = Resource Conservation and Recovery Act
RFI = RCRA Facility Investigation
CMS = Corrective Measures Study

1st Quarter = January - March
2nd Quartrer = April - June
3rd Quarter = July - September
4th Quarter = October - December

Information Repositories are located at the Watervliet Public Library and the Watervliet Arsenal Public Affairs Office (PAO). The community information line may be accessed by dialing the PAO at (518) 266-5418.

This schedule is subject to modifications.

US Army Corps of Engineers

SIBERIA AREA
PROPOSED SCHEDULE OF COMMUNITY RELATIONS PLAN
WATERVLIET ARSENAL
USACE CONTRACT NO. DACA31-94-D-0017

MALCOLM PIRNIE, INC.

TABLE 3-1

TASKS	1st Quarter 1998	2nd Quarter 1998	3rd Quarter 1998	4th Quarter 1998	1st Quarter 1999	2nd Quarter 1999	3rd Quarter 1999	4th Quarter 1999	1st Quarter 2000	2nd Quarter 2000	3rd Quarter 2000	4th Quarter 2000	1st Quarter 2001	2nd Quarter 2001	3rd Quarter 2001	4th Quarter 2001	1st Quarter 2002	2nd Quarter 2002	3rd Quarter 2002	4th Quarter 2002
Final RFI				FS	RR															
Final CMS/ Selection of Remedial Alternative(s)							FS	RR												
Pilot Study Reports										FS	RR									
Final Conceptual Design Report													FS	RR						
Remedial Action Implementation Report (Phase I)																			FS	RR

KEY:
NS = News Release
FS = Fact Sheet
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NOTES:
News releases will be submitted as required. Quarterly and public meetings will be held as necessary.

RCRA = Resource Conservation and Recovery Act
RFI = RCRA Facility Investigation
CMS = Corrective Measures Study

1st Quarter = January - March
2nd Quartrer = April - June
3rd Quarter = July - September
4th Quarter = October - December

Information Repositories are located at the Watervliet Public Library and the Watervliet Arsenal Public Affairs Office (PAO). The community information line may be accessed by dialing the PAO at (518) 266-5418.

This schedule is subject to modifications.

US Army Corps of Engineers

MAIN MANUFACTURING AREA
PROPOSED SCHEDULE OF COMMUNITY RELATIONS PLAN
WATERVLIET ARSENAL
USACE CONTRACT NO. DACA31-94-D-0017

MALCOLM PIRNIE, INC.

TABLE 3-2

3.3.1 Agency Communication Techniques

Various communication and interactions have occurred with federal and state regulatory agencies regarding the WVA environmental and remedial action programs. Meetings among WVA; USATHAMA; EPA Region II; and USACE, Baltimore District are necessary for the successful completion of the WVA program and should be a part of the CRP. For the WVA CRP, the following agency communication techniques should be used:

1. Project Status Meetings: Held periodically with representatives from NYSDEC, EPA Region II, and USACE to review project status, accomplishments, upcoming activities, and schedules.

2. Technical Review Committee (TRC): Held with NYSDEC, EPA Region II, local public officials, and a volunteer community representative as jointly determined to be needed to review specific study element results, discuss and resolve concerns, and provide a forum for discussion of unanticipated problems or changes in the program.

3. Telephone Conference Calls: Held as needed to keep agencies informed of program activities.

4. News and Fact Sheet: WVA should provide EPA and NYSDEC 48-hour advance review of environmental issue-related news releases. In addition, draft copies of fact sheet and newsletters regarding the environmental study and remediation process will be provided to EPA and NYSDEC for review prior to their release. Once produced, copies of all news, fact sheets, and other information releases as part of the CRP are provided to WVA, U.S. Army Armament, Munitions, and Chemical Command (AMCCOM), USATHAMA, NYSDEC, EPA Region II and USACE, Baltimore District, for informational purposes and also to enable these agencies to adequately respond to any public inquiries regarding the releases.

5. Prior Notice of Scheduled Community Meetings: When community meetings are scheduled as part of the CRP, advance notice will be provided to all agencies to allow maximum agency and public participation in the meetings and facilitate scheduling of required agency coordination meetings. The public meetings will be announced in regional newspapers, union publications, and at regularly scheduled safety meetings of WVA workers.

3.3.2 Local Community and Media Communication Techniques

To date, active communication with the local off-post community regarding the WVA environmental program has not been required. To expand communications and ensure effective two-way interactions between the Army and the local community, the following community relations communication techniques should be used:

1. Community Information Line: To provide local citizens a direct means to obtain information or express concerns relating to environmental issues, a public information line should be established at WVA. The community information line telephone number could be that of the PAO [(518) 266-5418].

2. Fact Sheets/News Releases: These releases are distributed to local citizens, citizen groups, local and state officials, local media, and mailing list participants on a periodic basis. The fact sheets/media releases should be directed specifically to address the concerns of the adjacent property owners/residents and on-post employees. These materials should include information on the status of the environmental studies and clean-up process at WVA, updates on the schedule (e.g., notification of public meetings, well sampling events), and information on public health-related matters (i.e., relevant water quality criteria). Fact sheets are sent out to all individuals on WVA's mailing list (including those persons and/or organizations listed in Appendices D, E, F, I, and J), area residents, regulatory agencies, elected officials, and news media on at least a quarterly basis. The fact sheets and copies of the releases also will be placed in the on-and off-post information repositories. A fact sheet relating to the RFI process will describe the alternatives considered and offer the Army's preferred alternative for public comment. An updated fact sheet will be prepared after the agency selects a remedial alternative. Coupons will be included in fact sheets for those who wish to be placed on the mailing list. Also, news releases, letters, and public notices will advertise the community information line as a number to call if someone wants to add his/her name to the mailing list. A designated contact person, the WVA PAO (or in that person's absence, the WVA Environmental Coordinator), and telephone number, (518) 266-5418, should be identified on all fact sheets, news releases, letters to the community, and public documents.

3. On-site Discussions and Briefings of Local and State Officials: Discussions will be held on an as needed basis with local citizens, local and state officials, congressional representatives, and other interested parties (e.g., civic groups; see Appendix J). Timings of discussions and briefings will be based on the interest of the community and significance of project reports and activities.

4. Information Repository/Project File: Repositories are accessible to the public for review of all program-related reports, fact sheets, and other information on the WVA program. Information repositories should be established minimally at the Watervliet

Public Library and the WVA Visitor=s Lobby. Other optional sites for information repositories are listed in Appendix G.

5. Public Consultations/Community Meetings: WVA will be available for direct consultations and meetings with local citizen groups, following guidelines set forth by EPA in Community Relations in Superfund, Interim Version, June 1988 (Pages 4-4, 4-5, 4-6, 4-10, 4-18, 4-19, and A-38); Draft Guidance on Preparing Superfund Decision Documents: The Proposed Plan and Record of Decision, March 1988 (Pages 2-2, 2-5, 4-4, 6-1, 8-4, and 8-5); and guidelines outlined in CERCLA/SARA Sections 113 and 117. Using these documents as guidance, community meetings may be used as needed to present the study findings, discuss alternatives, respond to questions, and receive public comments.

6. Public Participation Workshops: When considered by the WVA Commander, PAO, Environmental Coordinator, USATHAMA, or a regulatory agency as a useful means to disseminate information or assist the IRP process, workshops should be held at an accessible public building (e.g., community center). Notice of workshop issues and pertinent information should be published in local newspapers and released to other media (i.e., radio and television) for announcement and mailed directly to local citizens and groups who have previously expressed interest in the WVA program.

7. Information Briefings: Interested state and local officials, state and congressional representatives, and key community leaders should be kept informed of plans and progress on a continuing basis. The WVA Public Affairs Office is responsible for maintaining liaison with public officials.

8. Site Tours: Tours of the environmental study areas may be held on an as-needed basis with local citizens, state and local officials, congressional representatives, and the media. Tours can be arranged through the WVA Public Affairs Office.

9. Public Review and Comment Period: Throughout the duration of the program, the public should have the opportunity to review program-related reports, fact sheets, and major technical documents provided by the government at the information repositories and to comment informally through WVA=s Public Affairs Office or Environmental Program Office. In compliance with federal requirements, a public comment period is provided when the draft RFI report is issued. The public comment period is announced 2 weeks prior to the beginning of the comment period through display advertisements published in local newspapers, news releases, general mailings, public notices, and notices provided to WVA unions and workplace supervisors. Formal public meetings are conducted in conjunction with the issuance of the proposed plan. Notice of the meeting includes announcement of the time and place of the meeting, brief description of the proposed remedial actions, identification

of WVA and NYSDEC contact persons, and locations of information repositories. Notification and advertisement of public meetings are implemented in the same manner as the announcement of the public comment period. Additional means to announce the public meeting(s) may include providing notification fliers to the administration of Watervliet High School for distribution to students to take home to parents.

10. Summary of Concerns and Responses: A responsiveness summary should be prepared after the public comment period. The summary documents for the public record community concerns and issues and the responses to these issues. The responsiveness summary is required as a component of the record of decision (ROD).

11. Programs for Civic Groups or Schools: Slide and informational programs may be presented to regional civic groups or schools upon request. Civic and community groups are presented in Appendix J. The mission, history, and economic significance of WVA should be reviewed, with emphasis on the specific RFI environmental actions. Appropriate speakers to review the objectives, studies, findings, and actions of the RFI may include the WVA PAO, the WVA Environmental Coordinator, or persons identified by the WVA Commander. Emphasis should be placed on appropriate presentations to life science classes at Watervliet High School due to the proximity of the school to the plant and interest expressed in community surveys for such presentations. A news release should be distributed to regional media announcing the availability of speakers to make presentations to civic and school groups. All speaking engagements are coordinated by the WVA PAO.

12. Groundwater/Soil Contamination Exhibit: In response to concerns voiced during the October 1989 community interviews regarding direction of groundwater contaminant movement and contaminant concentrations in the soil, it is suggested that an exhibit be prepared and placed in the WVA Visitors Lobby or Museum that visually presents such information. The exhibit should consist of a map depicting installation boundaries and surrounding properties with color-coded dots or pins representing data collection sites where water and/or soil samples are collected for analysis. The colored dots or pins should represent concentrations of chromium and PCBs that: (1) have been detected but are within applicable standards, and (2) have been detected and exceed applicable standards. Property owners should not be identified. The dots or pins will be updated quarterly following scheduled investigations. Notice of the availability of the exhibit should be made through a standard press release.

3.3.3 On-Post Employee Communication Techniques

Approximately 612 workers are employed at WVA. There are a few on-post residents in employee housing areas. Most workers commute to work from nearby cities. Many workers live in the adjacent areas which could be impacted by groundwater or soil contamination migration. Although the workers are not affected directly by the contamination problem, interest has been expressed relating to water quality standards in the workplace and possible health risks from exposure to chemicals and gases used in production areas.

To ensure effective two-way communication between the Army and the on-post employees, the following communication techniques should be used as part of the WVA CRP:

1. Commander's Call: Commander and/or representative at WVA should meet periodically with employees, managers, and employee groups to keep employees informed of program developments and to address questions and concerns.

2. Fact Sheets/Policy Letters: Fact sheets announcing the status of the RFI in the Main Manufacturing Area, the CMS in the Siberia Area, remediation options, and issues relating to worker health and safety will be distributed directly to all employees and union officials as events occur.

3. Bulletin Boards/Posters: Fact sheets, articles, well sampling results, and other pertinent information will be posted on easily accessible bulletin boards. Additionally, in compliance with state health and safety codes, notices of environmental actions will be posted in locations where proposed removal or remediation will occur.

4. On-Post Information Repository: All program-related information and reports should be available for review at the WVA Visitors Lobby or Museum.

5. Union Meetings and Publications: The WVA Commander or representative should meet, as needed or requested, with the local union president and/or at regular union meetings to discuss WVA program results and address questions and concerns. Relevant news releases and notices of public meetings should be mailed to the union president for use in union newsletters. NAGE, which represents union members of the WVA work force, meets. the first Wednesday of every month at 4:15 p.m. in the WVA cafeteria.

6. Staff Meetings: Notice of public meetings, fact sheets, updates of RFI actions, etc., should be provided to appropriate officials for distribution to each worker at regularly scheduled group meetings.

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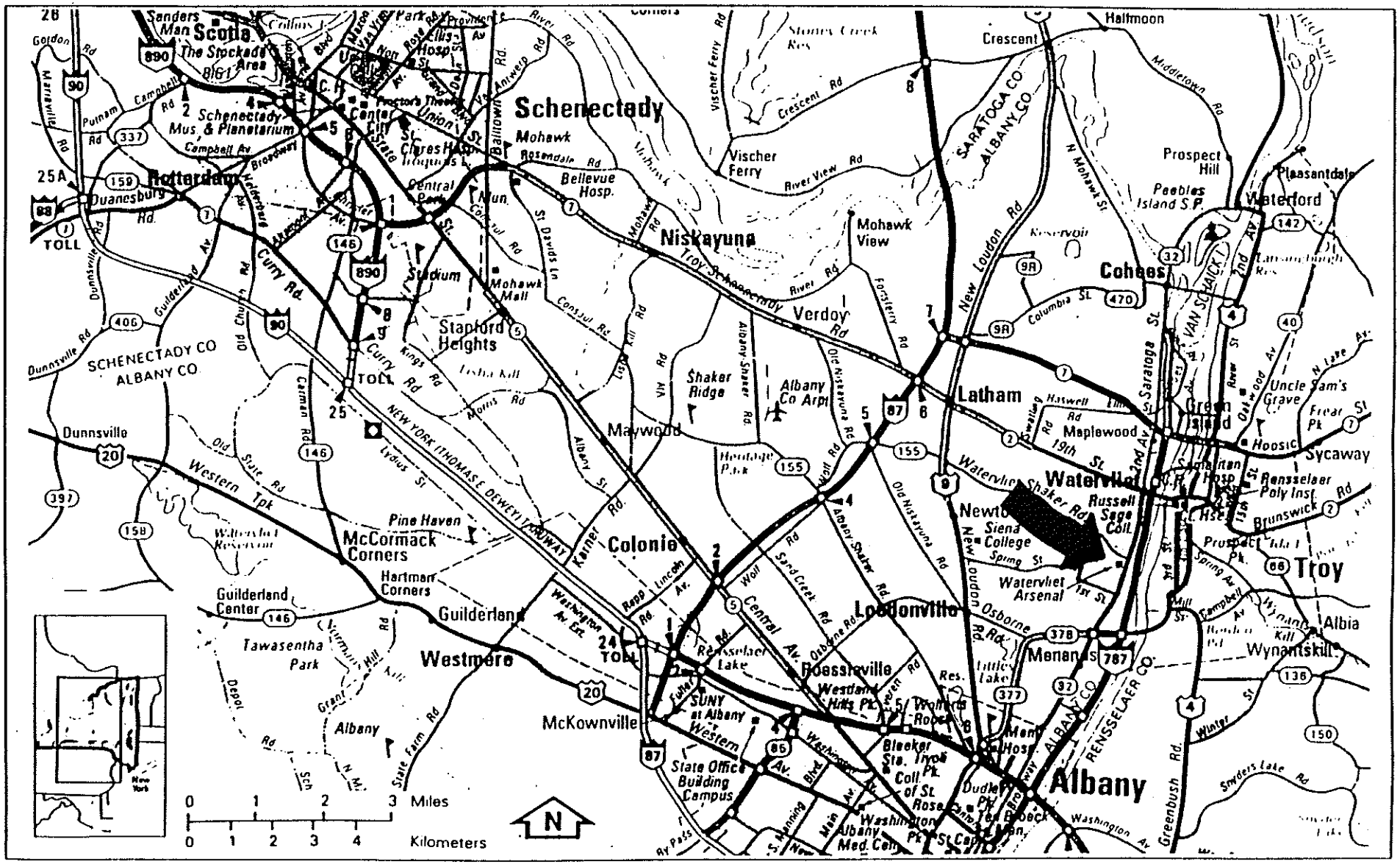
APPENDIX A

Site Maps



SOURCE: RAND McNALLY AND CO., 1988, HUNTER/ESE, 1989

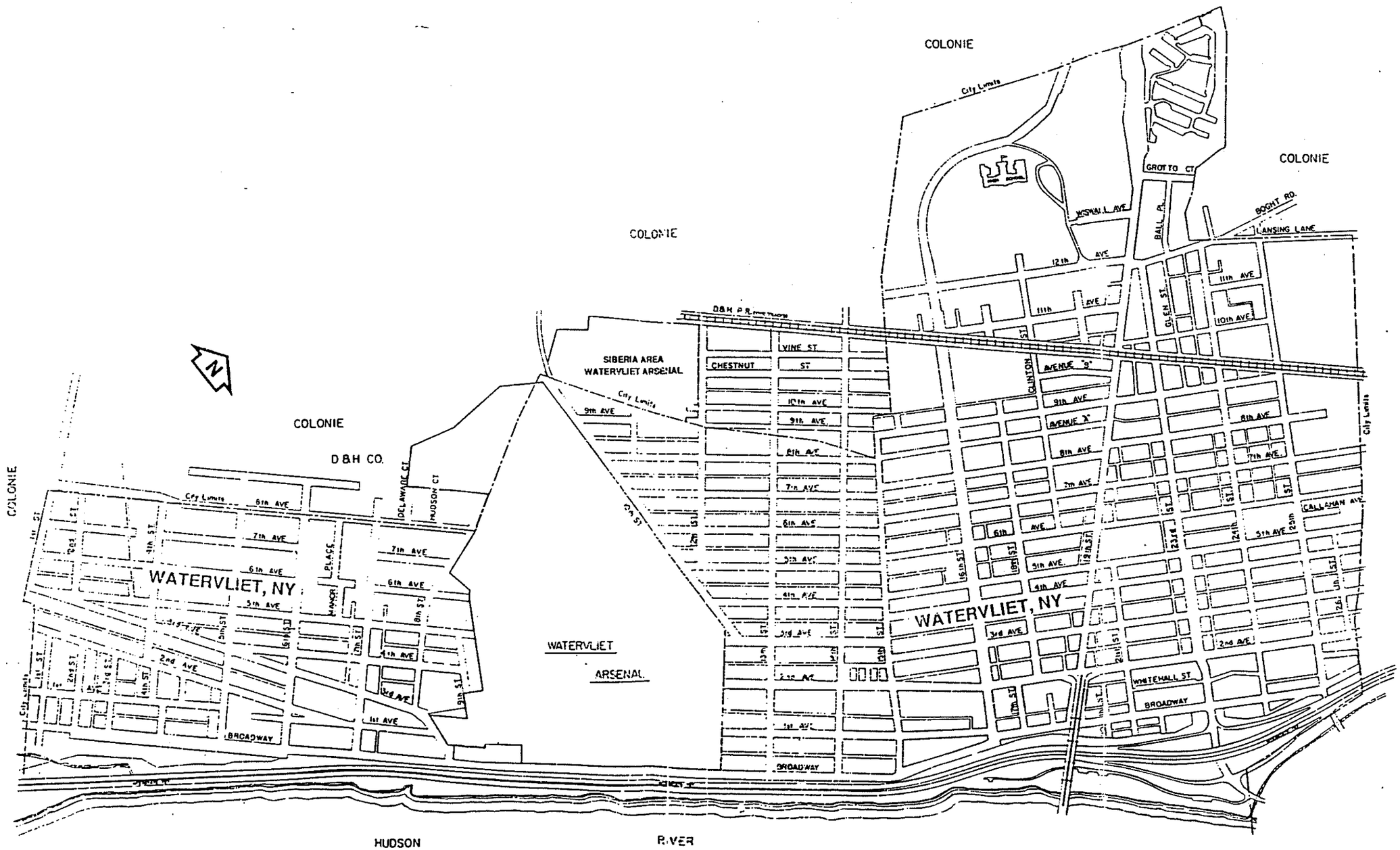
US Army Corps of Engineers

WATERVLIET ARSENAL
USACE CONTRACT NO. DACA31-94-D-0017

WATERVLIET ARSENAL LOCATION MAP

MALCOLM PIRNIE, INC.

FIGURE A-1



SOURCE: EPIC,1983; HUNTER/ESE, 1989

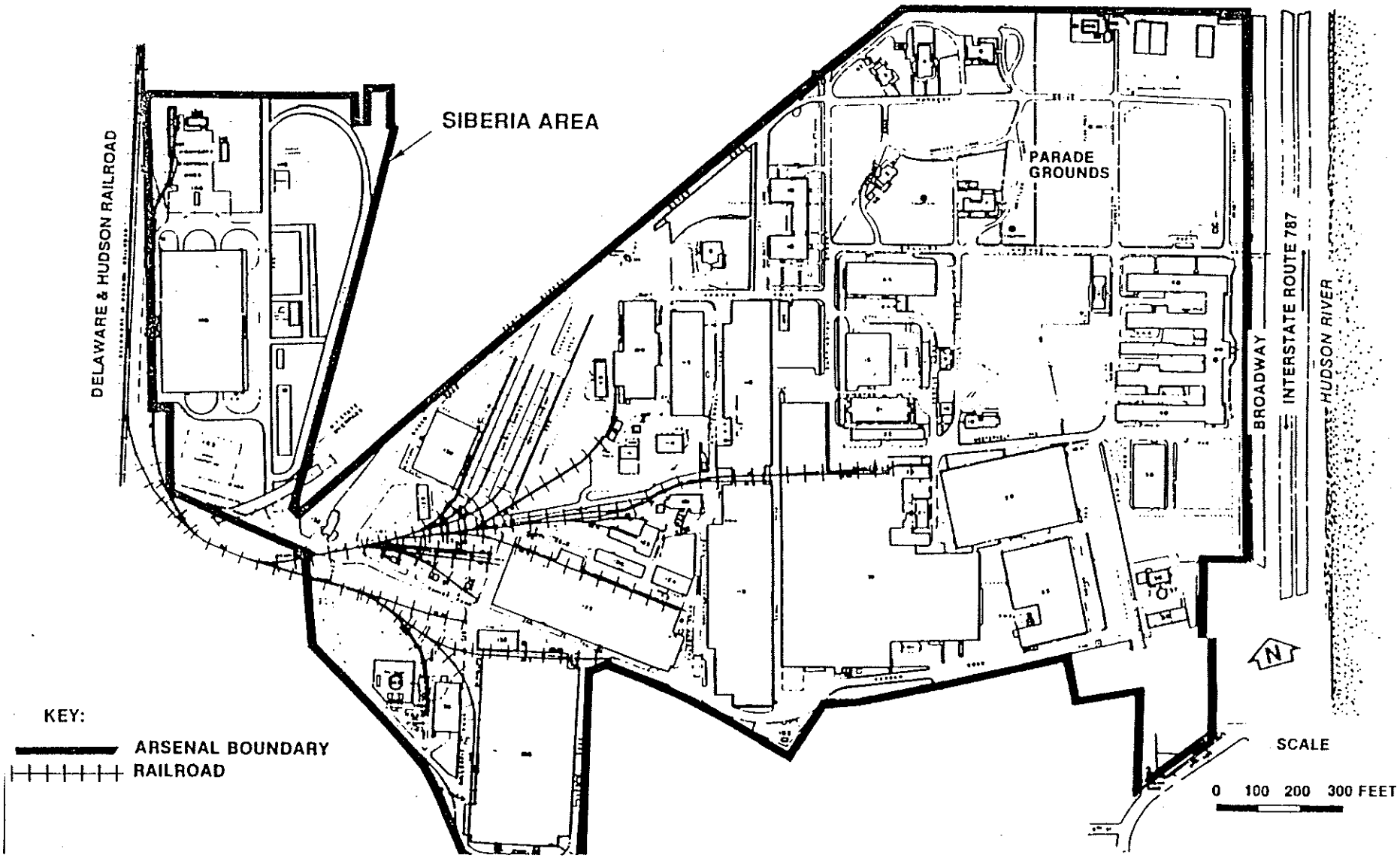
US Army Corps of Engineers

WATERVLIET ARSENAL
USACE CONTRACT NO. DACA31-94-D-0017

WATERVLIET ARSENAL LOCATION MAP

MALCOLM PIRNIE, INC.

FIGURE A-2



SOURCE: EPIC, 1983, HUNTER/ESE, 1989

US Army Corps of Engineers

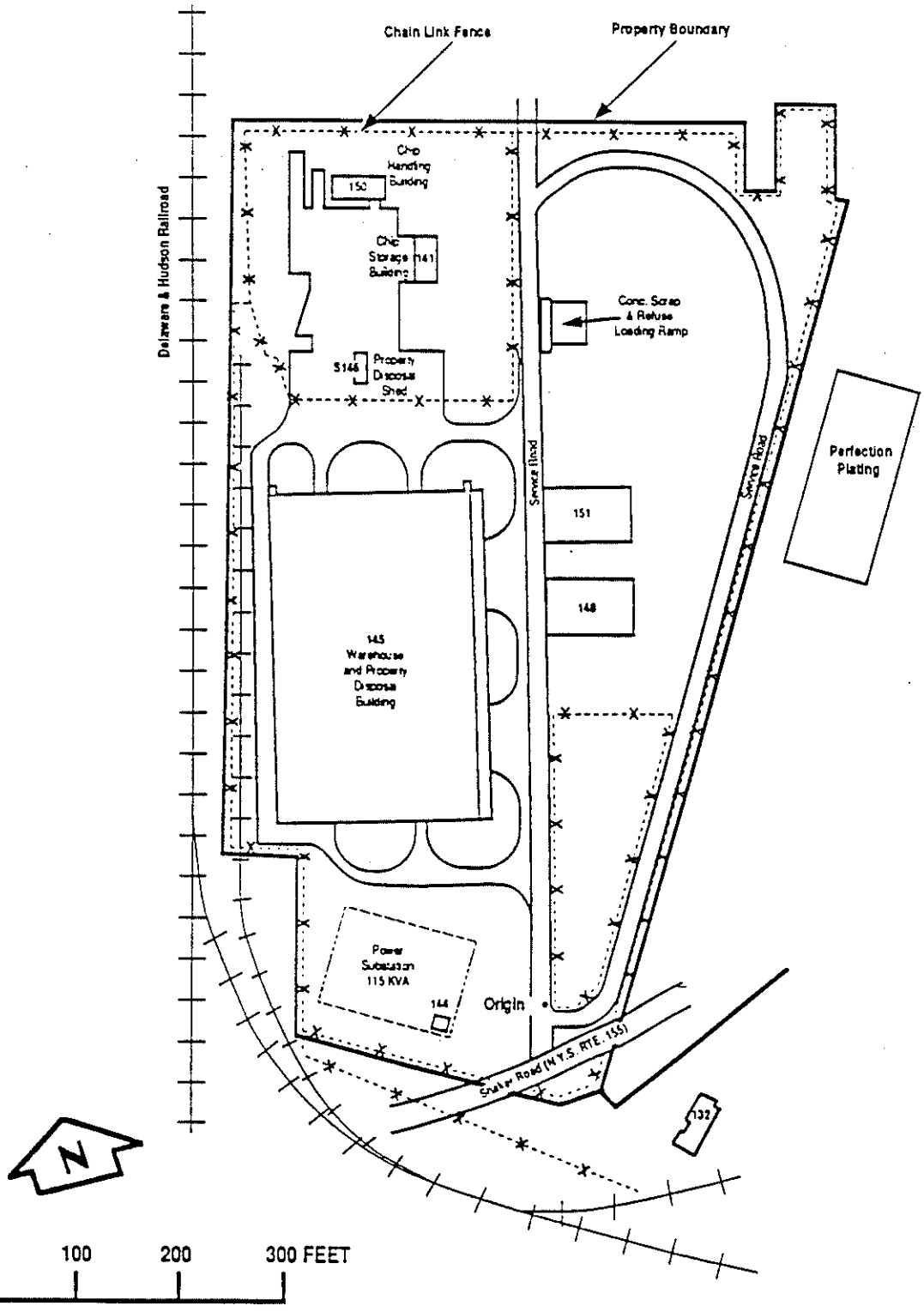
WATERVLIET ARSENAL
USACE CONTRACT NO. DACA31-94-D-0017

WATERVLIET ARSENAL SITE MAP

MALCOLM PIRNIE, INC.

FIGURE A-3

WATERVLIET .2
11/89h



SOURCE: C.T. MALE ASSOCIATES, 1996, HUNTER/ESE 1989

US Army Corps of Engineers	WATERVLIET ARSENAL USACE CONTRACT NO. DACA31-94-D-0017 SIBERIA AREA SITE MAP	MALCOLM PIRNIE, INC. FIGURE A-4

APPENDIX B

Draft Fact Sheet

APPENDIX B

FACT SHEET

This fact sheet is part of the Army=s program to keep members of the community surrounding WVA informed of activities conducted during the investigations and corrective measures at the Siberia Area and investigations at the Main Manufacturing Area at the arsenal. To develop, maintain and enhance public involvement, the Army provides the following information and activities:

- Public Meetings
- On-Post Meetings with Employees
- News Releases
- Fact Sheets
- Information Repositories

The information repository, which contains facts sheets, news releases, site assessment reports, the Community Relations Plan, and other relevant materials, has been established at the following location:

Watervliet Arsenal
Public Affairs Office
Watervliet, NY 12189
(518) 266-5418

The Army encourages the public to visit the information repository and attend public meetings to become more knowledgeable about the environmental studies at WVA. Additional information about the studies and the Resource Conservation and Recovery Act Facility Investigation process can be obtained by contacting the WVA Public Affairs Officer (PAO) at (518) 266-5418, and/or the WVA Environmental Coordinator at (518) 266-5925.

If you would like to be placed on the mailing list to receive further information about the WVA program, please send your request along with your name and address to:

Watervliet Arsenal
Attn: Public Affairs Office
Watervliet, NY 12189

Yes, I would like to be included on the mailing list of citizens and employees interested in environmental studies at Watervliet Arsenal. Please send information to:

NAME:

ADDRESS:

CITY:_____ STATE:_____ ZIP:

PHONE #:(___)

BACKGROUND INFORMATION

WVA is the oldest arsenal in the United States. Many of the buildings were constructed in the 1800s, and several are unique, including one constructed of cast iron. The arsenal is listed as a landmark on the National Historic Register.

The arsenal was established in 1813 when the U.S. War Department purchased approximately 12.5 acres of land at Gibbonsville, a hamlet on the west bank of the Hudson River, 6 miles northeast of Albany. Successive purchases of land occurred in 1822, 1826, 1859, 1861, 1866, 1867, 1869, 1918, 1929, and 1942.

Previously known as the AArsenal near Albany≅ or the AArsenal at Gibbonsville,≅ the installation received its present name in 1817. The original site was chosen because of its convenience as a supply distribution point for troops assigned to the northern and western frontiers during the War of 1812. During this period, the arsenal produced ammunitions, harnesses, and gun carriages. The Erie Canal, constructed between 1817 and 1824, provided WVA with transportation, power for production machines, and, until 1922, water for fire protection.

From the end of the Civil War until 1883, the installation=s main function shifted from production to storage. In 1887, WVA was chosen by Congress as the AArmy Gun Factory,≅ and in 1889 the ABig Gun Shop≅ was built. WVA produced the nation=s first 16-inch gun which was used in the Spanish-American War. Between the end of the Spanish-American War and World War I (WWI), WVA continued production of the big guns.

Peak production periods were reached during WWI, World War II (WWII), and the Korean and Vietnam Conflicts. Large numbers of cannons were produced during these periods which supplemented the increased production under WVA=s mobilization producers program. A peak employment of 9,000 personnel was reached during WWII.

The arsenal currently is responsible for the commodity management of cannon assembly and components and related secondary items, including research and development, pilot line production, and the technical data package. Applications of this total capability have been extended to support mission items for other services and commands. Among the major mission items currently being produced are: 60-mm, 81-mm, and 4.2-inch mortars; 105-mm, 155-mm, and

8-inch howitzers; 155-mm grenade launchers; 20-mm automatic guns; 105-mm and 175-mm guns; and 90-mm and 106-mm rifles.

Benet Laboratories, a tenant organization at WVA, performs basic and applied research for cannon manufacturing, and provides the U.S. Army with practical engineering research, metallurgical analyses, and development for cannon manufacturing applications. The United States Marines also lease space in Building 40 for a Marine Recruiting Center.

In 1999, The New York State division of the National Guard (NYSNG) selected the WVA as the location for a vehicle distribution center. NYSNG personnel occupy a significant portion Building 145 in Siberia and utilize much of the open areas in Siberia for vehicle parking. The NYSNG also rents space in the WVA Motor Pool, in the MMA, for vehicle maintenance and repair. Oak-Mitsui, an electrical circuit board coding company, is a tenant on the first floor of Building 20. Oak-Mitsui employs seven WVA personnel in support of their operations.

LOCATION

WVA is a U.S. Army facility located in Albany County, New York, on the west bank floodplain of the Hudson River. It is accessible via several major roadways, including Interstate Highway 787, State Highways 155 (Watervliet-Shaker Road) and 378 from the west, and State Highway 32 from the south.

WVA occupies approximately 140 acres. It is located 6 miles north of Albany, the capital of New York State, in an area of mixed agricultural, residential, and commercial usage. The Siberia Area occupies approximately 14 acres along the western edge of WVA. Houses occupied by residents of Watervliet surround the Siberia Area on two sides, north and east.

The arsenal is situated in the midst of several New York communities including: Watervliet (population 10,862), the Village of Colonie (population 8,077), the Town of Colonie (population 79,558), Cohoes (population 16,439), and Menands (population 4,486). Albany, with an estimated population of 101,968, is located directly south of the arsenal, and Troy (population 53,727) is located to the east, across the Hudson River from WVA. These estimated 1994

population figures are provided by the Capital District Regional Planning Commission, in Schenectady, New York.

WVA is a Government-owned, Government-operated (GOGO) installation under the jurisdiction of the U.S. Army Armament, Munitions and Chemical Command (AMCCOM). From its original 12.5-acre plot, the arsenal has grown to an industrial organization covering approximately 140 acres. Its 93,000 square meters (m^2) of manufacturing floor space are employed primarily in the production and manufacture of tubes and tube assemblies for cannons, mortars, and rifles.

The facility consists of two primary areas:

1. The 125-acre Main Manufacturing Area which extends from the eastern border of the facility paralleling Interstate 787, westward to Tenth Street, and the New York State Route 155 overpass

2. The Siberia Area, which has been chiefly used for storage activities. It is comprised of approximately 14 acres on the extreme western side of the facility, immediately north of the Route 155 overpass.

SIBERIA AREA

The Siberia Area was purchased by the installation in the early 1940's. Because the area was swampy, it was filled in with slag, cinders, and available debris of unknown origin. It is comprised of approximately 14 acres on the extreme western side of the facility, immediately north of the Route 155 overpass. The Siberia Area has been chiefly used for storage activities. In 1999, The New York State division of the National Guard (NYSNG) selected the WVA as the location for a vehicle distribution center. NYSNG personnel occupy a significant portion Building 145 in Siberia and utilize much of the open areas in Siberia for vehicle parking. The NYSNG also rents space in the WVA Motor Pool, in the MMA, for vehicle maintenance and repair.

In May 1980, a study undertaken by the U.S. Army Toxic and Hazardous Materials Agency (USATHAMA) determined that industrial wastes generated at WVA included: chromium, lead, and cyanide plating solutions; sulfuric, nitric, hydrochloric, and phosphoric acids; volatile and

water-soluble oils; anodizing and other surface treatment solutions; alkali derusters and cleaning solutions; solvents; and metal chips and cuttings.

On August 12, 1980, WVA informed EPA that it conducts storage, treatment, and land disposal activities involving hazardous wastes and/or hazardous constituents, as defined by RCRA. WVA submitted an application to EPA on November 12, 1980 affirming that typical wastes produced at the facility included F001 and F002, D007, and numerous other regulated RCRA hazardous wastes. This application qualified WVA for interim status, a grace period which allows a facility to continue operating without obtaining a site specific permit.

In 1986, six separate sites within the Siberia Area were identified as potential contaminant sites by EPA's Environmental Photographic Interpretation Center (EPIC). Described in the Update of the Installation Assessment of Watervliet Arsenal prepared by Environmental Science and Engineering, Inc. (ESE) in August 1986, these sites consisted of two areas used for burning scrap lumber and sanitary wastes, two mounded material areas of construction rubble, an area of ground stained from oil spills, and outside storage areas.

In November 1986, an oily substance was found while excavating for footings of a building in the proposed lumberyard area of the Siberia Area. Polychlorinated biphenyls (PCBs) were detected in samples taken of the oily substance, the surrounding soil, and the groundwater. PCBs are regulated as a hazardous waste by the State of New York's Environmental Conservation Law. A groundwater sample from a test pit on the northeastern portion of the Siberia area was handled in the same manner, and chromium was detected. Chromium also is a highly regulated hazardous substance.

A Preliminary Site Investigation of the Siberia Area was conducted in 1986 by C.T. Male Associates, Inc.. This study involved the excavation of eight test pits as well as soil and groundwater sampling and analyses. C.T. Male Associates reported that concentrations of chromium were found in the groundwater and soil which exceeded the Safe Drinking Water Act's (SDWA) Maximum Contaminant Level (MCL) by more than 100 times acceptable levels. Lead and iron also were detected in concentrations above NYSDEC`s acceptable standards in the groundwater samples taken from all of the test pits.

In July 1987, a Subsurface Investigation of the Siberia Area was prepared by Groundwater Technology, Inc. The investigation consisted of drilling seven soil borings, installing four monitor wells, and sampling and analysis of the soil and groundwater. PCBs were detected in three of the seven composite soil samples, methylene chloride was found in five out of seven soil samples, and chloroform was detected in six of seven soil samples. Tetrachloroethylene and trichloroethylene were detected in one of the soil samples. Groundwater samples also contained chromium and lead levels exceeding the SDWA MCL standards. Volatile organic compounds (VOCs) also were detected in water sampled from a monitor well (MW) identified as MW-3. Methylene chloride and benzene also were measured at levels exceeding the health-based limit for each chemical. The term health-based limit is the risk specific dose (RSD) developed by EPA for known carcinogens.

In August 1988, EA Science and Technology conducted a study (ASurface and Subsurface Contaminant Characterization of the Watervliet Arsenal Siberia Area≅) in which surface and subsurface soil samples were obtained for chemical analyses from 30 locations throughout the Siberia Area. According to this report, a fuel oil odor was detected during the collection of one soil sample. Discolored groundwater (light yellow) was observed at two of the well locations. Arsenic was found in the soil at a level exceeding the acceptable health-based limit. In the groundwater, chloroform, trichloroethene, cadmium, and chromium were detected in different monitoring wells at concentrations also exceeding acceptable SDWA MCL levels.

The Siberia Area is abutted to the north and east by a largely residential area. EA Science and Technology determined that groundwater is moving in a northwesterly direction. Thus, residents located to the north of the Siberia Area could be potential receptors for contaminated groundwater migrating from this area.

A APhase I RCRA Facility Investigation Report≅ was prepared for the Army Corps of Engineers (ACOE) by Environmental Science & Engineering in December 1991. The RFI of the Siberia Area included a geophysical survey, a soil gas survey, shallow soil sampling, soil borings, and the installation of nine monitoring wells. The purpose of the geophysical survey was to identify bedrock features, however because of soil conditions (extent of fill materials) and man made features/obstructions, it was unsuccessful. Analysis of the data collected indicates the presence of

tricholoethylene, tetrachloroethene, dichlorociphenyldichloroethane (DDD), 1,1-dichloro-2,2-bis(4-chlorophenyl)-ethylene (DDE), and dichlorodiphenyl-thrichloroehane (DDT) in the soil.

Total chromium, barium, cadmium, lead, and mercury were all detected in groundwater above regulated concentrations. Only chromium was detected above regulated levels in filter samples. The source of these metals was not known although the data generated during this investigation suggested that chromium contaminated groundwater in the northeast corner of Siberia Area was the result of offsite activities.

The results of the Phase II RFI conducted by Malcolm Pirnie are discussed in the ADraft RCRA Facility Investigation (RFI) Report of the Siberia Area≅ dated August 1996. The RFI tasks conducted to assess the nature and extent of contamination included surface soil sampling, geophysical survey, groundwater field screening, soil boring sampling, monitoring well installation, groundwater sampling, surface water and sediment sampling, and storm water and sanitary sewer sampling.

The results of this investigation and previous investigations identified elevated concentrations of polynuclear aromatic hydrocarbons (PAHs) in the soil, free-phase oils in the soil and groundwater, chlorinated volatile organic compounds (VOCs) in the soil and groundwater and inorganic contamination consisting predominantly of arsenic, chromium and lead in the soil and chromium in the groundwater. To better describe the location of the contamination sources identified during these investigations, the Siberia Area has been divided into the four quadrants shown on Figure 1-1. The sources of contamination identified by these investigations include:

- Waste oils and solvents mixtures that were used as dust control across all four quadrants of the site.
- Metal chip handling in the northwest and southwest quadrants.
- Burn pit area in the northeast quadrant.
- Storage areas for solvents in the northeast quadrant.

The concentration of contamination detected in various site media at the Siberia Area exceeded NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046. Based

on the exceedance of the TAGM guidance values in this area, a Corrective Measures Study (CMS) is required to determine if adverse risks to human health and the environment exist and evaluate and recommend corrective measures to mitigate these risks. Malcolm Pirnie is currently conducting the CMS at the Siberia Area. The risk-based objectives of the CMS include in-situ dechlorination of organic contaminants in the groundwater using permeable reactive wall technology, ex-situ bioremediation of petroleum hydrocarbons and polynuclear aromatic hydrocarbons (PAHs) in the soil, and excavation or solidification of metals contaminating the soil.

As part of the CMS, in the Fall of 1998 a Permeable Reactive Wall was installed in the northeast quadrant of Siberia to remediate chlorinated organic contaminants in the groundwater. Also, as part of the CMS, the Former Burn Pit Area was excavated. The excavated soil was screened and staged in Siberia in a Biopile. The goal of this project is to bioremediate petroleum hydrocarbons and PAHs. Periodic sampling and tilling of the biopile are currently underway.

MAIN MANUFACTURING AREA

The Main Manufacturing Area consists of 125-acres which extends from the eastern border of the facility paralleling Interstate 787, westward to Tenth Street, and the New York Route 155 overpass.

William F. Cosulich Associates, P.C. submitted a report to the New York District of the Army Corps of Engineers (ACOE) entitled AOil Pollution Source Elimination Study,≅ dated January 1980. The study was initiated in November 1978 due to the presence of oil in the WVA storm water drainage system. The report identifies a number of oil spills and conditions at the WVA which have contributed to the presence of oil in the storm water discharge.

In May 1980, a study undertaken by the U.S. Army Toxic and Hazardous Materials Agency (USATHAMA) determined that industrial wastes generated at WVA included: chromium, lead, and cyanide plating solutions; sulfuric, nitric, hydrochloric, and phosphoric acids; volatile and water-soluble oils; anodizing and other surface treatment solutions; alkali derusters and cleaning solutions; solvents; and metal chips and cuttings.

On August 12, 1980, WVA informed EPA that it conducts storage, treatment, and land disposal activities involving hazardous wastes and/or hazardous constituents, as defined by RCRA. WVA submitted an application to EPA on November 12, 1980 affirming that typical wastes produced at the facility included F001 and F002, D007, and numerous other regulated RCRA hazardous wastes. By way of this application, WVA qualified for interim status, a grace period which allows a facility to continue operating without obtaining a site specific permit.

WVA prepared a report entitled AIdentification and Decontamination of Hydraulic Systems Containing PCBs at Watervliet Arsenal,≅ dated June 1983. This report details a sampling program of all hydraulic oil-containing machines and equipment throughout WVA. During the period of September 1982 and June 1983 over 2,800 samples were collected and analyzed for PCBs. Results indicated that less than one percent of the machines tested were contaminated (i.e., contained greater than 50 mg/l) with PCBs. This accounted for 27 machines, of which 16 were active at that time. These machines were drained, filled, cycled, and retested, this process was continued until the hydraulic oil was below 50 mg/l of PCBs.

Building 25, located in the southeast portion of the main process area, contained a vapor degreasing operation which used chlorinated solvents, elevated levels of which were detected in an adjacent well. In September 1986, WVA collected groundwater samples and found in the samples trichloroethene concentrations in excess of the SDWA MCL. The results were reported to the EPA. Unacceptably high trichloroethene levels were reported in the first samples from two newly developed wells. On January 11, 1989, results of the analysis of groundwater samples again indicated the presence of trichloroethene in excess of the SDWA MCL. C.T. Male Associates (CTM) were retained by WVA in 1990 to determine if halogenated organics were present in the soil adjacent to the vapor degreaser. The CTM investigation showed that both halogenated and aromatic hydrocarbons were present in the soil. The study also indicated presence of low levels of halogenated organics in the groundwater. WVA collected and analyzed groundwater samples from several wells located in the vicinity of Building 25 between 1990 and 1993. Chromium, chlorinated solvents, oil and grease were the contaminants which were detected.

In October 1994, Malcolm Pirnie and Louis Berger & Associates, Inc. prepared Work Plans for Building 25, 35, and 135. The overall objective of each was to determine the nature and

extent and/or the presence of chemical releases from Buildings 25, 35, 135 and to evaluate the threat to public health and environment posed by the contaminant releases.

In October 2000, Malcolm Pirnie prepared a report entitled AFinal RCRA Facility Investigation Report Main Manufacturing Area Watervliet Arsenal, Watervliet, New York.≅ The purpose of this report was to tie together existing site information and data that has been gathered from individual site RFIs and RFAs conducted concurrently at Buildings 25, 35, 36, and 135, the Arsenalwide Hydrogeologic Investigation, Manhole 43 Investigation, and the Solid Waste Management Units (SWMUs) 7-14 Investigation; and present the nature and extent of any release(s) of hazardous constituents resulting from activities in and around the Main Manufacturing Area.

The physical and chemical analytical data generated during these investigations, is of acceptable quality but of insufficient quantity to fully assess the nature and extent of contamination. Further work is on-going to help define the extent of contamination in areas of the Main Manufacturing Area.

Leakage from machinery, storage areas, and sewer lines, as well as discharges relative to historical practices at the site have contributed to site contamination. The primary contaminants of concern are:

- Chlorinated organic compounds. Activities at former vapor degreaser locations have resulted in elevated concentrations of halogenated hydrocarbons in the groundwater.

- Petroleum, oil, and lubricants (POLs) in soils and as free phase, and to a lesser extent in the aqueous phase. Multiple sources have been identified for POLs, including spills in the Building 121 area, machinery and sumps at Buildings 35 and 135, leaking underground storage tanks (USTs), and ruptured waste oil lines.

Groundwater samples obtained in several areas of the Main Manufacturing Area have detected contamination of inorganics above applicable guidance values. However, these are not believed to be contaminants of concern because they were detected in unfiltered samples (total metals) rather than filtered samples (dissolved metals).

In support of the CMS, additional investigations have been scheduled in order to investigate a "hot spot" south of Building 40 on the eastern boundary of the WVA property. These investigations include installation of additional monitoring wells, several pump tests, a geophysical survey, and additional groundwater sampling.

APPENDIX C

Glossary of Commonly Used Community Participation Terms

APPENDIX C

GLOSSARY OF COMMONLY USED COMMUNITY PARTICIPATION TERMS

Community Participation - A process to inform and involve the interested/affected public in the decision-making process during identification, assessment and remediation of inactive hazardous waste sites. This process helps to assure that the best decisions are made from environmental, human health, economic, social and political perspectives.

Community Relations Plan - A document that describes the site-specific community participation activities that will take place to complement the remedial activities. It also provides site background and rationale for the selected community participation program at the site. A plan may be updated or altered as public interest or the technical aspects of the program change.

Contact List - Names, addresses and/or telephone numbers of individuals, groups, organizations and media interested and/or affected by a particular hazardous waste site (Appendix D, E, I, and J). The contact list is used to inform and involve the interested/affected public.

Document Repository - A location, typically a public building, near a particular site at which documents related to remedial and community participation activities at the site are available for public review. The document repository provides access to documents at times and a location convenient to the public.

Fact Sheet - A written discussion of the site=s history, the status of the environmental study, or the remedial process. The fact sheet may be mailed to all or part of the contact list, distributed at meetings, or sent on an Aas requested≅ basis.

Phase I Site Investigation - Preliminary characterizations of hazardous substances present at a site; estimates pathways by which pollutants might be migrating away from the original site of disposal; observes how the disposal area was used or operated; and gathers information regarding who might be responsible for wastes at a site. Involves a search of records from all agencies known to be involved with a site, interviews with site owners, employees and local residents to gather pertinent information about a site. Information gathered is summarized in a Phase I report.

Phase II Site Investigation - A Phase II investigation is performed when additional information is needed to properly classify the site after completion of the Phase I. The Phase II investigation further examines extent of contamination, evaluates remedial alternatives, or prepares a conceptual design for construction.

Project Status Meetings - A scheduled gathering held quarterly with representatives from

NYSDEC, EPA Region II, and USACE to review project status, accomplishments, upcoming activities, and schedules.

Public - The universe of individuals, groups and organizations: a) affected (or potentially affected) by the site and/or its remedial program; b) interested in the site and/or its remediation; c) having information about the site and its history.

Public Consultation/Community Meeting - A scheduled gathering which may present study findings, discuss alternatives, respond to questions and receive public comment.

Remedial Investigation (RI) - A process to determine the nature and extent of contamination by collecting data and analyzing the site. It includes sampling and monitoring, as necessary, and includes the gathering of sufficient information to determine the necessity for, and proposed extent of, a remedial program for the site.

Feasibility Study (FS) - A process for developing, evaluating and selecting remedial actions, using data gathered during the RI to: define objectives of the remedial program for the site and broadly develop remedial action alternatives; perform an initial screening of these alternatives; and perform a detailed analysis of a limited number of alternatives which remain after the initial screening stage.

Remedial Design - Once a remedial action has been selected, technical drawings and specifications for remedial construction at a site are developed, as specified in the final RI/FS report. Design documents are used to bid and construct the chosen remedial actions.

Consent Order - A legal and enforceable negotiated agreement between the NYSDEC and the responsible parties where responsible parties agree to undertake investigation and cleanup or pay for the costs of investigation and cleanup work at the site. The order includes a description of the remedial actions to be undertaken at the site an a schedule for implementation.

Delisting - Removal of a site from the state Registry based on study which shows the site does not contain hazardous wastes.

Responsible Parties - Individuals, companies (e.g. site owners, operators, transporters or generators of hazardous waste) responsible for or contributing to the contamination problems at a hazardous waste site. PRP is a potentially responsible party.

APPENDIX D

Media List

APPENDIX D

MEDIA LIST

NEWSPAPERS

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Marlene Kennedy, Editor-in-Chief
Marlene Kennedy, Editor-in-Chief
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Albany, NY 12212
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APPENDIX D

MEDIA LIST (Continued)

NEWSPAPERS (Continued)

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Saratoga Springs, NY 12866-2314
(518) 584-4242

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Schenectady Gazette
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Melissa Hale-Spencer, Editor
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APPENDIX D

MEDIA LIST (Continued)

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Watervliet Arsenal
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Watervliet, NY 12189
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The Conservationist
NY State Department of
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Albany, NY 12210
(518) 463-2500

APPENDIX D

MEDIA LIST (Continued)

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WABY Radio/WKLI Radio
P.O. Box 13749
Albany, NY 12212
(518) 456-6101

Susan Arbetter, News Director
WAMC Radio
318 Central Avenue
Albany, NY 12206-2522
(518) 465-5233

Joe Gambino, News Director
WFLY/WPTR/WROW Radio
6 Johnson Road
Latham, NY 12110
(518) 786-6600

News Department
Attn: News Director
WGNA Radio
800 New Loudon Road
Latham, NY 12110
(518) 782-1474

Chuck Custer, News Director
WHRL Radio
1 Washington Square
Albany, NY 12205
(518) 283-1123

Rex Gregory, News Director
WHAZ Radio
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Cohoes, NY 12047
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APPENDIX D

MEDIA LIST (Continued)

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WRPI
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(518) 276-6248

News Department
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Schenectady, NY 12309
(518) 785-9800

Chuck Custer, News Director
WGY Radio
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Albany, NY 12205
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News Director
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Union College
Schenectady, NY 12308
(518) 388-6000

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Michael Carrese, Producer
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Schenectady, NY 12301
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(518) 862-2323

APPENDIX D

MEDIA LIST (Continued)

Vicki Moorehead, Assignment Editor
WNYT-TV (Channel 13, NBC)
15 North Pearl Street
Menands, NY 12204
(518) 436-4791

Larry Schwartz, Assignment Editor
WRGB-TV (Channel 6, CBS)
1400 Balltown Road
Schenectady, NY 12309
(518) 346-6666

APPENDIX E

Mailing List

APPENDIX E

MAILING LIST

Army Community Service Office
SMAWV-ASA-A, Bldg. 10
ATTN: MR. JEFF DANIELS
Watervliet, NY 12189-4050

Mr. Russell Stacey
1110 Fifth Avenue
Watervliet, NY 12189

Mrs. Anthony Cutuelle
1011 Ninth Avenue
Watervliet, NY 12189

Ms. Anna M. Stellone
1127 Seventh Avenue
Watervliet, NY 12189

Ms. Carol Sutherland
1107 Seventh Avenue
Watervliet, NY 12189

Mr. Larry Henderson
10 Woodbine Avenue
Watervliet, NY 12189

Mr. Richard J. Oppedisano
6 York Court
Latham, NY 12110

NFFE Local 2109
ATTN: William Fenaughty
Watervliet Arsenal, Bldg. 135
Watervliet, NY 12189-4050

Mr. Frank P. Salvatore
1765 Suffolk Avenue
Schenectady, NY 12303

Mr. Charlie Morse
RD-2, North Road
Averill Park, NY 12018

Mr. Charles H. Collins
P.O. Box 37
Watervliet, NY 12189

Claudia Lupian
912 Twelfth Street
Watervliet, NY 12189

Mr. David MacLean Reed, Sr.
17 Pinewood Drive
Guilderland, NY 12084

Mr. Claude S. Wagner
337 Miller Road
Rexford, NY 12148-1503

Ms. Donna Densmore
1319 Sixth Avenue
Watervliet, NY 12189

Mr. Don Henderhan
1247 Tenth Avenue
Watervliet, NY 12189

APPENDIX E

MAILING LIST (Continued)

Mr. George Walter Jordan
1305 Chestnut Street
Watervliet, NY 12189

Mr. Jim Kapusnik
1204 Chestnut Street
Watervliet, NY 12189

Steven G. Schassler, Director
Region 4
New York State Department of
Environmental Conservation
1150 North Wescott Road
Schenectady, NY 12306-2014

Mr. Don Henderhan, Sr.
19 Hutton Street
Menands, NY 12204

Mr. Gary DeCarlo
272-A Westfall Road
Delanson, NY 12053

Mr. and Mrs. Frank Rourke
1111 Seventh Avenue
Watervliet, NY 12189

Mr. Dave Chartrand
1207 Ninth Avenue
Watervliet, NY 12189

Mr. and Mrs. Thomas Malo
1007 Ninth Avenue
Watervliet, NY 12189

NAGE Union
Building 135
Watervliet Arsenal
Watervliet, NY 12189

Director of Personnel
Watervliet Arsenal
Watervliet, NY 12189

Director of Community Activities
Watervliet Arsenal
Watervliet, NY 12189

Stephen S. Lukowski, P.E., Director
Albany County Department of Health
P.O. Box 678
Albany, NY 12201

Elected officials from Appendix J.

Civic and Community Groups from
Appendix K

APPENDIX E

MAILING LIST (Continued)

APPENDIX F

Program Points of Contact

APPENDIX F

PROGRAM POINTS OF CONTACT

PUBLIC AFFAIRS CONTACTS

1. Department of the Army
   Office of the Chief of Public Affairs
   Attn: SAPA-CRD (Mrs. J.C. Bean)
   Washington, DC 20310-1508
   (703) 697-7591
   fax: (703) 697-2159
   http://www.dtic.mil/armylink

2. Commander
   U.S. Army Materiel Command
   Attn: AMCPA (Mrs. Jan Finnegan)
   5001 Eisenhower Avenue
   Alexandria, VA 22333-0001
   (703) 617-0126
   fax: (703) 617-8382
   amcpa@alexandria-emh1.army.mil

3. Commander
   U.S. Army Corps of Engineers
   Baltimore District (CENAB)
   Attn: Public Affairs Office
   (Lucy Lathers)
   P.O. Box 1715
   Baltimore, MD 21203-1715
   (410) 962-2809

4. Public Affairs Office
   U.S. Army Corps of Engineers
   Headquarters
   Attn: CEPA
   20 Massachusetts Avenue, NW
   Washington, DC 20314-1000
   (202)761-0011

5. Commander
   U.S. Army Corps of Engineers
   Missouri River Region
   Attn: CENWD-MR-PA
   (Paul Johnston)
   12565 West Center Road
   Omaha, NE 68144
   (402) 697-2552

6. Commander
   U.S. Army Industrial Operations Command
   Public Affairs Office, Bldg. 390
   Attn: AMSIO-EA
   (Mr. Stephen Abney)
   Rock Island, IL 61299-6000
   (309) 782-5421
   fax: (309) 782-5011
   sabney@ria-emh2.army.mil
   http://www.ioc.army.mil

7. Commander
   Watervliet Arsenal
   Attn: Public Affairs Office
   (John Swantek)
   Watervliet, NY 12189-4050
   (518) 266-5418
   swantek@wva.army.mil
   http://www.wva.army.mil

8. Office of External Programs
   U.S. Environmental Protection Agency, Reigon 2
   Attn: Bonnie Bellow
   290 Broadway
   New York, NY 10007
   (212) 637-5000

APPENDIX F

PROGRAM POINTS OF CONTACT (Continued)

PUBLIC AFFAIRS CONTACTS (Continued)

9. Public Information Office
   New York Department of
   Environmental Conservation
   Attn: Gary Sheffer
   50 Wolf Road
   Albany, NY 12233
   (518) 457-5400

10. Public Information Office
    Reigon 4
    New York State Department of
    Environmental Conservation
    Attn: Darwin Roosa
    1150 N. Westcott Road
    Schenectady, NY 12306-2014
    (518) 357-2234

11. U.S. Army Corps of Engineers
    North Atlantic Division (CENAD)
    Attn: Public Affairs Office
    90 Church Street
    New York, NY 10007-9998
    (212) 264-7500

12. U.S. Army Corps of Engineers
    New York District (CENAN)
    Attn: Public Affairs Office
    (Peter H. Shugert)
    26 Federal Plaza
    New York, NY 10278-0090
    (212) 264-9113

TECHNICAL CONTACTS

1. Commander
   U.S. Army Materiel Command
   Attn: Mr. Krishna Ganta
   5001 Eisenhower Avenue
   Alexandria, VA 22333
   (703) 617-8889

2. Commander
   U.S. Army Environmental Center
   Attn: SFIM-AEC (Mr. Glen Boldt)
   Aberdeen Proving Ground
   Aberdeen, MD 21010-5401
   (410) 671-1611

3. Commander
   Industrial Operations Command
   Attn: SOSMA-EQE
   (Mr. Timothy Howard)
   Rock Island, IL 61299-6000
   (309) 782-1088

4. Commander
   Watervliet Arsenal
   Attn: SMAWV-ISH, Bldg. 20
   Installation Restoration Program
   (Mrs. JoAnn Kellogg)
   Watervliet, NY 12189-4050
   (518) 266-5286
   fax: (518) 266-3610
   kellogg@wva.army.mil

5. Commander
   Watervliet Arsenal
   Attn: SMAWV-ISH, Bldg. 20

APPENDIX F

PROGRAM POINTS OF CONTACT (Continued)

Environmental Coordinator
(Mr. James Kardas)
Watervliet, NY 12189-4050
(518) 266-5716
fax: (518) 266-3610
kardas@wva.army.mil

TECHNICAL CONTACTS
(Continued)

Albany, NY 12233-7252
(518) 457-9254

6. U.S. Environmental Protection Agency, Region 2
   Attn: Dale Carpenter
   26 Federal Plaza
   New York, NY 10278
   (212) 290-6190

7. U.S. Army Corps of Engineers
   Baltimore District
   Attn: Mr. Steven Wood
   10 South Howard Street
   P.O. Box 1715
   Baltimore, MD 21203-1715
   (410) 962-3506

8. U.S. Army Corps of Engineers
   New York District
   Attn: Mr. Ayed Y. (AEddie≅) Ireitey
   26 Federal Plaza
   New York, NY 10278-0090
   (212) 264-3259

9. Commander
   Missouri River Division
   Corps of Engineers
   Attn: CEMRD-ED-EA
   (Doug Plack)
   P.O. Box 103 - Downtown Station
   Omaha, NE 68101-0103
   (402) 691-4538

10. New York State Department of Environmental Conservation
    Attn: Victor Valaitis, P.E.
    50 Wolf Road

11. New York State Department of Environmental Conservation
    Region 4
    Attn: Carl Johnson, Director
    1150 N. Westcott Road
    Schenectady, NY 12306-2014
    (518) 357-2234

12. Division of Sold & Hazardous Materials
    New York State Department of Environmental Regulation
    Attn: Norman Nosenchuck
    50 Wolf Road
    Albany, NY 12233-7250
    (518) 457-6934

13. Division of Environmental Remediation
    New York State Department of Environmental Conservation
    Attn: Michael O=Toole, Director
    50 Wolf Road
    Albany, NY 12233
    (518) 457-5861

APPENDIX F

PROGRAM POINTS OF CONTACT (Continued)

TECHNICAL CONTACTS
(Continued)

14. Division of Air Resources
    New York State Department of
    Environment Conservation
    Attn: Arthur Fossa, Director
    50 Wolf Road
    Albany, NY 12233
    (518) 457-7230

APPENDIX G

Location for Optional Information Repository

APPENDIX G

LOCATION FOR OPTIONAL INFORMATION REPOSITORY

Watervliet Arsenal
Attn: SMAWV-IM, Bldg. 10
Public Affairs Office
Watervliet, NY 12189
(518) 266-5418

APPENDIX H

Locations for Community Meetings

APPENDIX H

LOCATIONS FOR COMMUNITY MEETINGS

Watervliet Civic Center
P.O. Box 164
Watervliet, NY 12189

Contact:	George Roe, Executive Director
	(518) 273-5922
Capacity:	100 in gymnasium (not always available); 20-25 per meeting room
Lead Time:	2 weeks to 1 month
Fee:	Optional donation

Shaker Senior High School
445 Watervliet-Shaker Road
Latham, NY 12110

Contact:	Barbara Strand
	(518) 785-5511
Capacity:	30-40 per classroom; cafeteria 250-300
Lead Time:	2 weeks to 1 month
Fee:	Varies according to crowd size; government organizations charge $26 to $30 per hour only for custodial, electrical, and heating services

Colonie Community Center
1653 Central Avenue
Albany, NY 12205

Contact:	Dennis Mclaughlin
	(518) 456-2135
Capacity:	100 to 150 in auditorium; 35 to 40 per meeting room
Lead Time:	1 or 2 months
Fee:	Varies by room, file room-use request form, 1 million liability insurance

Russell-Sage College
Office of Conferences and Events
Troy, NY 12180

Contact:	Chris Gleason		
	(518) 244-2395		
Facility:	Schacht Fine Arts Center Auditorium	Facility:	Classroom
Capacity:	1,275	Capacity:	20 to 75
Lead Time:	1 to 3 months	Lead Time:	1 to 3 months
	(only available July and August)	Fee:	$75 to $100

Fee: $600

APPENDIX I

Elected Officials

APPENDIX I

ELECTED OFFICIALS

U.S. Senate

Senator Charles Schumer (R)
Rm 313 Hart Office Building
Washington, DC 20510
(202) 224-6542

also:
Leo O=Brien Office Building
Room 420
Albany, NY 12207
(518) 431-4070

Senator Daniel Patrick
Moynihan (D)
United States Senate
Washington, DC 20510-3201
(202) 224-4451

also:
Guarantee Building #203
28 Church Street
Buffalo, NY 14202
(716) 551-4097

U.S. House of Representatives

Representative Michael McNulty
O=Brien Federal Building
Room 827
Albany, NY 12207
(518) 465-0700

also:
33 Second Street
Troy, NY 12180
(518) 271-0822

State of New York

Governor George E. Pataki (R-C)
Office of the Governor
Executive Chamber, State Capitol
Albany, NY 12224
(518) 474-8390

Lieutenant Governor Mary
O. Donohue (R)
Office of the Lieutenant Governor
State Capitol, Room 326
Albany, NY 12224
(518) 474-4623

Senator Neil D. Breslin (D)
Legislative Office Building
Room 606
Albany, NY 12247
(518) 455-2225

Senator Joseph L. Bruno (R)
Legislative Office Building
Room 909
Albany, NY 12247
(518) 455-3191

Senator Hugh T. Farley (R)
Legislative Office Building
Room 412
Albany, NY 12247
(518) 455-2181

Assemblyman John J. Faso (R-L)
State Capitol, Room 933
Albany, NY 12248
(518) 455-5314

APPENDIX I

ELECTED OFFICIALS (Continued)

State of New York (Continued)

Assemblyman John J. McEneny (D-L)
Legislative Office Building
Room 648
Albany, NY 12248
(518) 455-4178

Assemblyman Ronald J. Canestrari (D)
Legislative Office Building
Room 731
Albany, NY 12248
(518) 455-4474

Assemblyman Dan J. Burling
Legislative Office Building
Room 938
Albany, NY 12248
(518) 455-5314

Senator Carl Marcellino, Chairman
Environmental Conservation Committee
Legislative Office Building
Room 812
Albany, NY 12247
(518) 455-2390

Senator Kemp Hannon, Chairman
Health Committee
Legislative Office Building
Room 609
Albany, NY 12247
(518) 455-2200

Assemblyman Richard L. Brodsky,
Chairman
Environmental Conservation Committee
Legislative Office Building
Room 625
Albany, NY 12248
(518) 455-5753

Assemblyman Richard N. Gottfried,
Chairman
Health Committee
Legislative Office Building
Room 822
Albany, NY 12248
(518) 455-4941

John T. Cahill, Director
Department of Environmental
Conservation
State of New York
50 Wolf Road
Albany, NY 12237
(518) 474-3446

Antonia C. Novella, Commissioner
Department of Health Room 1495
State of New York
Corning Tower
Empire State Plaza
Albany, NY 12237
(518) 474-2011

Ronald Tromontano, Director
Center for Environmental Health
State of New York
2 University Place
Albany, NY 12203
(518) 458-6440

APPENDIX I

ELECTED OFFICIALS (Continued)

Albany County

Michael G. Breslin
Albany County Executive
112 State Street, Room 200
Albany, NY 12207
(518) 447-7040

Christopher Andreucci
Deputy County Executive
Albany County Courthouse
Albany, NY 12207-1094
(518) 447-7040

Dr. James Crucetti
Commissioner of Health
175 Green Street Box 678
Albany, NY 12202-0678
(518) 447-4691

Albany County Department of
Conservation, Soil and Water
Box 497
24 Martin Road
Voorheesville, NY 12186
(518) 765-7923

Stephen S. Lukowski, P.E., Director
Division of Environmental Health
Services
Albany County Department of Health
S. Ferry & Green Streets
Albany, NY 12201
(518) 447-4620

Albany County Legislators

Charles Houghtaling, Chairman
Albany County Legislature Room 200
112 State Street
Albany, NY 12207

Thomas A. Morelli
2307 4th Avenue
Watervliet, NY 12189

John A. Graziano, Jr.
9 Flicker Drive
Latham, NY 12110

Paulette M. Barlette
90 Fiddlers Lane
Latham, NY 12110

Phillip G. Steck
12 Paul Holly Drive
Loudonville, NY 12211

Sean E. Ward
31 High Street
Green Island, NY 12183

Paul E. Scaringe
27 Huntleigh Drive
Loudonville, NY 12211

APPENDIX I

ELECTED OFFICIALS (Continued)

City of Watervliet

City Hall
Broadway and 15th Street
Watervliet, NY 12189
(518) 270-3800

Mayor:	Robert D. Carlson
General Manager:	Paul S. Murphy
Councilman:	William F. Anderson
Councilman:	Charles J. Diamond
City Clerk:	Bruce A. Hidley
Director of Finance:	Robert Fahr
Fire Chief:	Daniel Spratt
Police Chief:	Francis A. Landrigan
Public Works Director:	Paul S. Murphy

Town of Colonie

Colonie Memorial Town Hall
Newtonville, NY 12128
(518) 783-2700

Supervisor:	Mary F. Brizzell
Deputy Supervisor:	Paul Burgdorf
Town Board:	Kevin Broner
	Frank Mauriello
	Monica Bell
	Paul Burgdorf
	Peter Tunny
	JosephMahan
Town Clerk:	Elizabeth A. DelTorto
Information Officer:	Dean Rueckert
Director of Fire Prevention:	Larry Isabella
Police Chief:	John Grebert
Superintendent of Highways:	Ronald Langdon
Director of Environmental Services:	Joseph Stockbridge

APPENDIX I

ELECTED OFFICIALS (Continued)

Village of Colonie

Colonie Village Hall
2 Thunder Road
Albany, NY 12205
(518) 869-7562

Mayor: Frank Leak
Deputy Mayor: John Murphy
Board of Trustees: Michael Aidala
John Murphy
Elizabeth Film
Tom Tobin
Village Clerk: Kathleen Haas
Finance Officer: Kathleen Haas
Fire Chief: Edward Sin
Public Works Director: Joseph Quackenbush
Environmental & Traffic Commission Chairperson: Edward Sin
Attorney: David Marinucci

Rensselaer County

Henry J. Zwack, County Executive
Rensselaer County Building
1600 Seventh Avenue
Troy, NY 12180
(518) 270-2880

Rensselaer County Legislative Officers:

Rensselaer County Office Building
1600 Seventh Avenue
Troy, NY 12180
(518) 270-2880

Chairman: Neil J. Kelleher
Vice-Chairman: Edward C. Swartz
Majority Leader: Ralph Vartigan
Minority Leader: Louis R. Posinello, jr.
Clerk of the Legislature: Christine Chesley

James J. Brearton
Health Department
Rensselaer County Office Building
1600 Seventh Avenue
Troy, NY 12180
(518) 270-2664

Cynthia Engel, Chairperson
Environmental Management Council
Rensselaer County Office Building
1600 Seventh Avenue
Troy, NY 12180
(518) 270-2880

APPENDIX I

ELECTED OFFICIALS (Continued)

Rensselaer County (Continued)

Soil and Water Conservation
Department
Rensselaer County Office Building
1600 Seventh Avenue
Troy, NY 12180
(518) 270-2880

City of Troy

City Hall
1 Monument Square
Troy, NY 12180
(518) 270-4495

Mayor:	Mark Pattison
Deputy Mayor:	James Conroy
Council Members:	
	Elizabeth Walsh
	Daniel Doran
	Keith Rogers
	Frank LaPosta
	James Gray
	Harry Tutanjian
	Saverio Bizzarro
	Edward McGrath
	William Pascarell
City Clerk:	Lawrence Quinn
Comptroller:	Martin Dunbar
Treasurer:	Joseph Buchanan
Fire Chief:	Thomas Garnett
Commissioner Public Safety:	Mark Whitman

William P. Miller, Chief of Police
Troy Police Department
55 State Street
Troy, NY 12180
(518) 270-4443

APPENDIX J

Civic and Community Groups

APPENDIX J

CIVIC AND COMMUNITY GROUPS

Elks Club
Watervliet Lodge #1500
501 Fourth Avenue
Watervliet, NY 12189
(518) 273-9878

Knights of Columbus
Watervliet Council
1623 Second Avenue
Watervliet, NY 12189
(518) 273-8044

Watervliet Senior Citizens Center
1501 Broadway
Watervliet, NY 12189

Rensselaer County Regional
Chamber of Commence
Timothy Hulbert, President
21 Second Street
Troy, NY 12180
(518) 274-7020

Elks Club
Brunswick Lodge #2556
665 Brunswick Road
Troy, NY 12180
(518) 279-1344

Elks Club
Troy Lodge #141
134 North Greenbush Road
Troy, NY 12180
(518) 283-1193

Elks Club
Cohoes Lodge #1317
P.O. Box 308
Cohoes, NY 12047
(518) 235-3222

Boys Scouts of America
Twin Rivers Council
Richard Allen, Director
253 Washington Avenue Ext.
Albany, NY 12205
(518) 869-6436

Hudson Valley Girl Scout Council, Inc.
Dianne Lowrey, Executive Director
750 Delaware Avenue
Delmar, NY 12054
(518) 439-4936

Junior League of Troy
502 Broadway
Troy, NY 12180

Jaycees
451 Broadway
Troy, NY 12180

Tory Kiwanis
Michael Barna, President
199 Stow Avenue
Troy, NY 12180

Elks Club
Colonie Lodge #2192
Elks Lane
Latham, NY 12110
(518) 785-5714

Knights of Columbus
Troy Council #176
55 Third Street
Troy, NY 12180
(518) 272-6981

APPENDIX J

CIVIC AND COMMUNITY GROUPS (Continued)

Lansingburg Citizens Council
Arlene Cahill, Chairwoman
69 Sixth Avenue
Troy, NY 12180
(518) 235-7317

League of Woman Voters
35 Maiden Lane
Albany, NY 12207
(518) 465-4162

Troy Lions Club
36 Locust Avenue
Troy, NY 12180
(518) 273-2229

Loyal Order of Moose
27 Newcomb Street
Cohoes, NY 12047

Masonic Temple
9 Brunswick Road
Troy, NY 12180
(518) 272-3171

Northeastern New York Camp Fire Council, Inc.
27 114th Street
Troy, NY 12182
(518) 235-1045

Rensselaer Boys= Club
Theodore D. Diamond, Director
544 Broadway
Rensselaer, NY 12144
(518) 465-3403

Rensselaer County Democratic Committee
251 River Street
Troy, NY 12180
(518) 274-4591

Rensselaer County Republic Committee
200 Broadway
Troy, NY 12180
(518) 272-2111

Rotary Club of Albany, New York
310 State Street
Albany, NY 12210
(518) 448-5060

Troy Area Council of Churches, Inc.
35 State Street
Troy, NY 12180
(518) 274-5920

Troy Jewish Community Center and Council
2430 21st Street
Troy, NY 12180
(518) 274-0700

Troy Public Library
100 Second Street
Troy, NY 12180
(518) 274-7071

YMCA
2500 21st Street
Troy, NY 12180
(518) 272-5900

APPENDIX J

CIVIC AND COMMUNITY GROUPS (Continued)

YWCA
Albany Branch
274 Washington Avenue
Albany, NY 12203

Albany Moose Lodge #80
281-A Washington Avenue
Albany, NY 12210
(518) 463-9212

American Legion
Post 1493
31 Voorheesville Avenue
Voorheesville, NY 12186
(518) 765-4712

Masonic Template
607 Second Avenue
North Troy, NY 12182
(518) 235-9834

Veterans of Foreign Wars
481 Washington Avenue
Albany, NY 12206
(518) 463-0740

Veterans of Foreign Wars
Department Headquarters
1044 Broadway
Albany, NY 12206
(518) 463-7427

Woman=s Club of Albany
725 Madison Avenue
Albany, NY 12208
(518) 465-3626

Albany Executives Association
48 Howard Street
Albany, NY 12207
(518) 462-8535

Albany Girls= Club, Inc.
25 Western Avenue
Albany, NY 12203
(518) 436-9964

Business Council of NYS, Inc.
12 Corporate Woods Boulevard
Albany, NY 12211
(518) 465-1571

Elks Lodge
Cohoes-Waterford Lodge #1317
45 North Mohawk
Cohoes, NY 12047
(518) 235-3222

Firemens Association of the
State of New York
107 Washington Avenue
Albany, NY 12210
(518) 434-0987

Masonic Temple
211 Park Avenue
Mechanicville, NY 12118
(518) 664-5531

New York Chamber of Commerce
and Industry
90 South Swan
Albany, NY 12210
(518) 463-4319

New York State Association of

APPENDIX J

CIVIC AND COMMUNITY GROUPS (Continued)

Counties
111 Pine Street
Albany, NY 12207
(518) 465-1473

Veterans of Foreign Wars
Post 8692
Karner Road
Colonie, NY 12203
(518) 456-7794

Albany-Colonie Regional Chamber of Commerce
518 Broadway
Albany, NY 12204
(518) 434-1214

Albany Convention and Visitors Bureau
52 South Pearl
Albany, NY 12207
(518) 454-1217

Cohoes Commerce and Industry Association
99 Remsen Street
Cohoes, NY 12047
(518) 237-1766

New York State Community Action Association
754 4th Avenue
Troy, NY 12182
(518) 238-1955

Schenectady Chamber of Commerce
306 State Street
Schenectady, NY 12305
(518) 372-5656

Environmental Groups and Organizations

Adirondack Mountain Club - Albany Chapter
65 Wineberry Lane
Ballston Spa, NY 12020
(518) 899-2725

Berlin Mountain Fish and Game Club
Taborton Road
Sand Lake, NY 12153
(518) 674-8902

Hudson-Mohawk Bird Club, Inc.
Game Farm Road
Delmar, NY 12054
(518) 439-8080

Troy Motor Boat and Canoe Club, Inc.
763 1st Avenue North
Troy, NY 12182
(518) 235-9697

West Albany Rod and Gun Club
100 Willoughby Drive
Colonie, NY 12211
(518) 869-9102

Environmental Clearing House Organization
P.O. Box 113
Rexford, NY 12148

APPENDIX J

CIVIC AND COMMUNITY GROUPS (Continued)

Environmental Groups and Organizations (Continued)

New York Parks and Conservation Association
35 Maiden Lane
Albany, NY 12207
(518) 272-0062

New York State Recreation and Park Society
119 Washington Avenue
Albany, NY 12210
(518) 463-1232

Rensselaer County Environmental Action
RR1, Box 1024
Poestenskill, NY 12140

Citizens for Safe Water
53 Second Street
Waterford, NY 12188

National Wildlife Federation
RD1, Box 75
Westerlo, NY 12193

Adirondack Woodsmen Sport Club
91 Pershing Avenue
Troy, NY 12180

Rensselaer County Environmental Management Council
1600 Seventh Avenue
Troy, NY 12180

New York Waste Industries Association
Ms. Patricia Laws, Executive Director
1 Steuben Place, Suite #9
Albany, NY 12207

Rensselaer Fresh Water Institute
RPI
Troy, NY 12181

New York Land Institute, Inc.
315 19th Street
Watervliet, NY 12189

New York Environmental Institute
353 Hamilton Street
Albany, NY 12210

Sierra Club
353 Hamilton Street
Albany, NY 12210

Hudson River Foundation
Mr. Peter A. Gerle, Director
Suite 1901
122 E. 42nd Street
New York, NY 10168

Laboratory Environmental Coalition
Mr. Edward Block, President
1 Dussault Drive
Latham, NY 12110

APPENDIX J

CIVIC AND COMMUNITY GROUPS (Continued)

The Audubon Society of NYS, Inc.
46 Rarick Road
Hollyhock Hollow
Selkirk, NY 12158

Citizens Environmental Coalition
33 Central Avenue
Albany, NY 12210

APPENDIX K

Community Interview Participants

The list of community interview participants is maintained at the

Watervliet Arsenal Public Affairs Office