Iowa Army Ammunition Plant
Community Relations Plan Update
February 2001

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EXECUTIVE SUMMARY

BACKGROUND: This is an update for the Public Involvement and Response Plan developed in May 1991 that determined the level of community concerns and interests in the Installation Restoration Program at Iowa Army Ammunition Plant (IAAAP). It also addresses concerns raised by the current Restoration Advisory Board on their effectiveness to keep local communities updated on clean-up efforts at the plant.

This document focuses on clean-up efforts since 1991 and evaluates the effectiveness of past efforts to keep the general public informed of restoration activities at IAAAP. It recommends communication techniques to keep the public informed of the current restoration efforts and recommends methods to involve the public in future clean-up efforts.

PURPOSE: The purposes of this update are to:

- Establish avenues for sharing knowledge and encouraging community participation regarding the environmental restoration activities, both underway and planned.
- Comply with requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).
- Outline specific community relation's strategies for addressing these goals, and to provide mechanisms for maintaining a flexible, "living" document that evolves with changing community needs and concerns.

SCOPE: This update is divided into seven sections with nine appendices. They are:

Section 1.0: Contains a brief introduction to the scope of the update and the authority Under which it is written and implemented

Section 2.0: Contains a brief current site description and history of IAAAP since 1991

Section 3.0: Defines the roles and responsibilities in the development and Implementation of the CRP

Section 4.0: Summarizes past community relation's activities since 1991, and identifies Those that are expected to continue through the present. A community survey was conducted during May/June 2000 to identify the specific concerns, priorities, and personalities of the communities affected by environmental matters

Section 5.0: Highlights the results of the community survey

Section 6.0: Defines the strategy to be carried out in improving two-way communication Between IAAAP and the surrounding communities. It also combines the Update's objectives and activities to form a comprehensive community Relation's strategy in line with that of the Army's Public Affairs Office

Section 7.0: Lists the references and resource material used in the development and preparation of this update

APPENDICES: The following appendices contain supporting information:

Appendix A -- Lists definitions for technical terms and acronyms used in this document

Appendix B -- Describes site history from 1991 to present and physical characteristics of the installation, which have a bearing on environmental restoration, archaeology and cultural resources, and potential biotic receptors

Appendix C -- Describes the regulations and statutes governing the environmental restoration at IAAAP

Appendix D -- Contains a fact sheet on the Restoration Advisory Board (RAB)

Appendix E -- Provides the questions and summary of the responses from the May/June 2000 community survey

Appendix F -- Lists the names, addresses, and phone numbers of key representatives of Iowa Army Ammunition Plant, the Restoration Advisory Board, and federal, state, and local agencies and officials

Appendix G -- Lists the locations of information repositories that contain documents related to IAAAP

Appendix H -- Lists the recommended locations for public meetings

Appendix I -- List mail-in forms for citizens to comment on and respond to the updated community relations plan

The Community Relations Plan (1991) and this update are on file in the information repositories. The update will be periodically revised, depending on activities taking place at IAAAP. Comment/Response forms will be available with all documents for citizens to record their opinion concerning this update. Public comment on this document is welcomed at any time.

1.0 INTRODUCTION

Most citizens want to become better educated on how to participate in decisions that may affect their community. The purpose of this Community Relations Plan Update (CRPU) is to continue to expand avenues for sharing knowledge and to encourage community participation regarding the hazardous waste restoration activities both underway and planned for at the Iowa Army Ammunition Plant (IAAAP), located in Middletown, Iowa. Preparation of a CRPU is also a requirement of the Comprehensive Environmental Response, Compensation, and Liability act (CERCLA, also known as Superfund) under 40 CFR 300.430 and 300.435. The original CRP, dated May 1991, and this update, outline specific community relation's strategies for addressing these goals and assure that the CRP and update are flexible, "living" documents that can adjust to evolving community needs and concerns

In this update, IAAAP presents community relations objectives and strategies to promote public awareness about environmental restoration efforts at IAAAP. Decisions about CRPU efforts are based on public input collected during the community surveys. IAAAP will implement this update upon review by the U.S. Environmental Protection Agency (EPA), the Iowa Department of Natural Resources (IDNR), and with input from IAAAP's citizen-based Restoration Advisory Board (RAB).

Environmental activities at IAAAP are regulated by the EPA under CERCLA, and monitored by the Army under the Department of Defense (DOD) Installation Restoration Program (IRP).

1.1 ORGANIZATION OF THE CRP

The Army originally developed IAAAP's CRP in May 1991. The plan was developed to meet the specific needs of the communities that surround IAAAP and those communities that are affected by the groundwater contamination attributed to the site. This update reevaluates those needs and updates the CRP accordingly. This update is divided into seven sections and nine appendices.

The Points of Contact for this update and related information are the IAAAP Administrative Officer (PAO) -(319) 753-7600 or the IAAAP Environmental Restoration Program Manager (319-753-7130).

2.0 CAPSULE SITE DESCRIPTION

The purposes of the following sections are to provide additional information describing the location, missions, history of IAAAP, and to provide an update to the information published in the Community Relations Plan of May 1991. It will also review, in general, the nature and extent of environmental programs at the installation since 1991, including the objectives of IAAAP's restoration activities.

A synopsis of historical environmental restoration is provided in Appendix B.

2.1 SITE DESCRIPTION

IAAAP is located in southeastern Iowa in the southern portion of Des Moines County, which borders Lee County to the south and Henry County to the west. The installation borders the town of Middletown and is approximately 10 miles west of Burlington; the county's most populated city, located on the west bank of the Mississippi River. (See Appendix A, Figure A-1)

IAAAP is located on U.S. Highway 34, which runs east and west through Iowa from Illinois to Nebraska. U.S. Route 61, which runs north and south on the western shore of the Mississippi River, is accessible approximately 10 miles to the east in Burlington. The Great River Bridge on Highway 34 in Burlington spans the Mississippi River, connecting southeast Iowa with west central Illinois.

Regional transportation needs are met by air, bus, and rail transportation services. The Burlington Airport, southwest of the city, provides freight and passenger services, the Burlington Northern Railroad and AMTRAK provide rail services, and the Burlington Trailways and Hawkeye Express provide bus transportation throughout the region.

The facility is a government-owned, contractor-operated (GOCO) military industrial installation under the jurisdiction of the U.S. Army Operations Support Command, headquartered in Rock Island, Illinois. Its primary mission is to manufacture, load, assemble and pack (LAP) ammunition items. The facility is currently operated by American Ordnance, Limited Liability Corporation and currently employs 756 personnel. In addition, there are four other private contractors operating other businesses on the site: East Camden & Highland Railroad Company has railcar storage, GE Capital Railcar does railcar repair, Advanced Environmental Technology is planning a hazardous waste treatment facility and there is the IOP Federal Credit Union.

IAAAP was established in July 1941 as the Iowa Ordnance Plant. The plant's mission was to load, assemble, and pack 75 millimeter (mm) and 155 mm artillery shells and 100 pound to 1,000 pound aerial bombs. The original cost of the plant was $30 million. It produced munitions for World War II until August 1945, and munitions for military activities in Southeast Asia in the 1960s and early 1970s. Activities continued at a reduced level during peacetime. The former Atomic Energy Commission operated at Line 1 from 1949 through the mid-1970s. Plant operations reverted to U.S. Army control from 1946 until 1951. The plant has been a GOCO since 1951. (See the CRP dated May 1991 for a more detailed history, pages 1-3 to 1-4).

Since the original CRP dated May 1991, IAAAP continues to be an active Army production facility. IAAAP possesses extensive ammunition manufacturing capabilities with special emphasis on the cast loading of large caliber artillery projectiles, guided missile warhead loading, press loading of munitions and the assembling of specialized munitions involving the integration of electronic components with precision explosive components. Today IAAAP currently produces detonators, demolition blocks, cratering kits, 155-mm rocket-assisted artillery projectiles, 8-inch rocket-assisted projectiles, and 120-mm tank rounds. Rocket warheads are produced for the Patriot, Copperhead, Hellfire, Stinger, Chaparral, Hawk, TOW I and TOW II rockets. Additionally, components are manufactured for the RAM 155-mm remote anti-armor mine, GATOR antitank and antipersonnel mines, and the Ground Emplaced Mine Scattering System. It has been determined that past disposal practices at IAAAP have released hazardous substances into the environment. The Army's primary concern is the protection of human health and the environmental restoration of the site.

2.2 DEMOGRAPHICS AND EMPLOYMENT

In 1998 Des Moines County had a population of 42,000. The current population of Burlington, which is estimated by the Burlington/West Burlington Chamber of Commerce, is approximately 26,565 and the Middletown population is approximately 400. Additional communities near IAAAP include, to the east, West Burlington (1998) population of 3,190; to the northeast Mediapolis (1998) population 1,650; to the northwest, Danville (1998) population 1,000 and New London (1998) population 2,043; and to the south, the small unincorporated communities of Augusta and Wever. Middletown, Danville, Wever, and Augusta are primarily rural communities, with IAAAP being the largest single source of employment. Incorporated towns are governed by council/manager or council/mayor structures.

Located in Des Moines County, IA, IAAAP's work force is dominated by residents of Middletown, Danville, New London, Mt. Pleasant, West Burlington, Burlington, and Ft. Madison. Some workers commute to IAAAP from Illinois and Missouri. Due to its continuity of operations and consistently large payroll, the site has developed support from many business and community leaders. Also, since it has been operational since WWII, numerous current and former workers residing in local communities have developed and maintained loyalty and identification with the installation.

Des Moines County's industrial base centers in diversified manufacturing that includes production of antenna systems, batteries, cattle and hog feeders, safety paper, chemicals, cleansing compounds, desks, gypsum, electronic instruments and components, furniture, medium voltage switchgear, mattresses, millwork, oil, lubricants, paint, paper boxes, printing, spark pugs, industrial tractors, turbines, burial vaults, and potato chips.
Regional agricultural crops include corn, soybeans, and pasture grasses. Beef, dairy cattle, hogs, and poultry are also raised on the area farms.

Major regional industries in 1998 identified by the Burlington Area Development Corporation included:

Over 1,000 Employees
American Ordnance LLC (Iowa Army Ammunition Plant)
Great River Medical Center

500 to 1,000 Employees
Burlington Community School
Case Corporation
Federal Mogul (Champion Sparkle Plug)
General Electric
Visa Bakery, Inc.

200 to 500 Employees
Burlington Northern/Santa Fe Railroad
City of Burlington
CSI Employment
Des Moines County
Exide Corporation
Hope Haven Development Center
Hy-Vee
LaMont Limited
Pzazz! Motor Inn
Raider Precast Concrete, Inc.
Southeastern Community College
U.S. Gypsum
Wal-Mart Stores, Inc.
Winegard Company

75 to 200 Employees
Aldi, Inc.
Antenna craft Company
APAC Customer Services and Sales
Burlington Basket Company
Chittenden & Eastman Company
The Hawk Eye
Manpower Temporary Services
Precision Resistive Products (PRP)
Tuthill Corporation – Murray Turbo Division

Numerous newspapers serve Des Moines County, including dailies such as the "Des Moines Register" and "Burlington Hawk Eye" and weeklies such as the "Des Moines County News" and the "Shoppers Spree". Burlington radio stations include KBUR-AM, KGRS-FM, KKWD-FM, and KCPS-AM. KJMH-TV, Channel 26, in Burlington is the first television station to serve specifically the Burlington, Ft. Madison, Mt. Pleasant, and Western Illinois markets. Regional television viewers have access to Central Cable TV, which provides 30 channels including network stations in the Quad City area of Davenport, Rock Island, and Moline.

Medical facilities include the Great River Medical Center, four intermediate care facilities (nursing home), and the Mental Health Unit in Mt. Pleasant. The Southeast Iowa Homemaker-Home Health Aide Service, Inc. and Home Health Care provide home health services ranging from medical to protective and respite needs. Burlington also has three skilled nursing facilities, the Burlington Medical Center, the Klein Center and the St Francis Continuation Care and Nursing Home Center.

Numerous public and private elementary and secondary schools exist throughout the county, including the K through 12 Danville Community School, along with 10 elementary, 4 middle, and 2 high schools in Burlington/West Burlington.

The Burlington Community School District is the ninth largest district in Iowa, with an enrollment of approximately 5,000 students. The Middletown School closed several years ago, and students from that town now attend school in Burlington on Danville.

Southeastern Community College (SCC), located in West Burlington, offers a comprehensive 2-year program of studies including Arts and Sciences courses and vocational-technical training. Coursework also can be completed at the SCC campus for classes offered from Western Illinois University, St. Ambrose College, and Iowa Wesleyan College. Additional colleges and university near Des Moines County include Iowa Wesleyan College in Mt. Pleasant; Knox College in Galesburg, IL; Western Illinois University in Macomb, IL; and Monmouth College in Monmouth, IL.

Regional recreational and social opportunities are diverse. Hunting for quail, turkey, and deer is a popular regional sport, while the lakes plus the Mississippi River offers fishing for catfish, crappie, and bass. The Des Moines County Conservation Board manages the Starr's Cave Preserve and Geode State Park west of Burlington, which offers 1,573 acres of woodlands for camping and hiking.

Regional parks with picnic facilities include Crapo Park, Dankward Park, Perkins Park, Sunnyside Park, Mosquito Park, and Riverfront Park. In addition, there are two public golf courses in the county and two bowling centers. Community Field, which seats 3,500, is the home of the Burlington Bees, professional baseball team, which competes in the Class A Midwest minor league.

A major regional event that attracts visitors from Iowa, Illinois, and northern Missouri is the 6-day-long Burlington Steamboat Days and American Music Festival, which begins the second Tuesday in June of each year. The activities include daily performance of country, rock, big band, rhythm and blues, and jazz on the Miller Outdoor Stage and Memorial Auditorium. Additional festival activities include fireworks, river cruises, the Shoquoquon Sailboat Regatta, and the Snake Alley Art Fair.

2.3 RESTORATION PROGRAMS AND REGULATIONS

2.3.1 FEDERAL REGULATIONS

CERCLA, which was passed by Congress in 1980, amended by the Superfund Amendments and Reauthorization Act (SARA) in 1986, and implemented through the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), provides regulatory authority to the U.S. Environmental Protection Agency (EPA) for environmental restoration of sites where hazardous substances have been released to the environment.

The main steps of an environmental restoration program typically include: Preliminary Assessments, Site Investigation, Remedial Investigation, Feasibility Study, Proposed Plan, Record of Decision, Remedial Design, and Remedial Action. These steps for IAAAP are detailed in Appendix B.

EPA added the IAAAP to the National Priorities List (NPL) in 1989. The NPL is the EPA's list of sites that appear to post the greatest threat to human health and the environment, based upon the site assessment process.

The CERCLA process was implemented at IAAAP through the Federal Facilities Agreement (FFA) for site cleanup signed in 1990 by the Army and the EPA, following public comment. The FFA provides the framework for CERCLA response actions, including investigation and cleanup of contamination. The state of Iowa declined to participate as a signatory party to this FFA.

Community involvement in the CERCLA process is required. Community relations activities for IAAAP have included: periodic public meetings, public comment on the FFA, the community interviews conducted in 1990 (documented in Section 2.3 of the 1991 CRP), the publication of the CRP in 1991, establishment of public information repositories (listed in Appendix G) public tours, disseminating information on environmental issues through press releases to the local media, slide show presentations, and establishment of a Restoration Advisory Board (RAB) in 1997.

2.3.2 ARMY PROGRAM

In 1975 the DoD began a program to identify and investigate potentially hazardous sites at military installations. In 1980, the Installation Restoration Program (IRP) was developed. The IRP is authorized by the Defense Environmental Restoration Program (DERP) and is modeled after EPA's CERCLA. Both of the laws establish the legal requirements for identifying, investigating and remediating inactive hazardous waste sites. The Army follows EPA guidelines in conducting investigation and restoration work in the program.

The Department of Defense (DoD) established the Defense Environmental Restoration Account (DERA) to address sites under CERCLA, and as amended by SARA that are within the responsibility of DoD. The Defense Environmental Restoration Account was renamed Environmental Restoration, Army (ER, A). The Army, as an agency within the DoD, is the lead

agency for implementing the interim remedial action at IAAAP. As the support agency, the EPA oversees cleanup activities conducted by the Army to ensure that the requirements of CERCLA/SARA and the National Contingency Plan (NCP) have been met.

2.4 OBJECTIVES OF ENVIRONMENTAL RESTORATION

The objectives of CERCLA at IAAAP are to:

- Evaluate the nature and extent of the releases of hazardous waste or constituents;
- Evaluate facility characteristics
- Identify, develop and implement an appropriate corrective measure or measures to protect human health and the environment

The objectives of the Army's IRP at IAAAP are to:

- Comply with existing federal and state statutes and regulations;
- Cleanup contaminated sites as quickly as feasible to protect human health and the environment;
- Promote and encourage community involvement during each phase of the environmental restoration process.

3.0 Community Relations Program Organization

The Community Relations Program is implemented by the IAAAP in consultation with regulatory agencies and in response to community concerns. Each of these groups provides input and/or oversight in varying degrees to the activities and presentation materials that constitute the Community Relations Program.

3.1 Roles and Responsibilities

IAAAP holds lead responsibility for developing, maintaining, and updating the installation's Community Relations Program, including this CRP. These activities are typically initiated through the Administrative/Public Affairs Office, with support and oversight from the Operations Support Command's (OSC) Public Affairs Team. Activities include, but are not limited to, public programs, presentations, and materials for distribution.

The United States Environmental Protection Agency (EPA) provides technical and non-technical review of materials referencing permitted activities that are intended for public information. The EPA reviews this material for technical content, factual accuracy, and concurrence with EPA-established community relations' guidelines. Materials may include news releases, brochures, newsletters, reference information, and other presentation materials. EPA monitors and ensures IAAAP's compliance with federal regulatory requirements. The EPA is also a member of the IAAAP Restoration Advisory Board.

The Iowa Department of Natural Resources (IDNR) is a limited partner in IAAAP environmental restoration activities. They receive copies of all draft and final documents for information and their file. The IDNR is a member of the IAAAP Restoration Advisory Board.

The Iowa Department of Public Health (IDPH) may review some materials intended for public information from a public health standpoint. IDPH may also assist in the development of activities and/or materials for the community to ensure appropriateness for the intended audience and cohesiveness with other community health-based issues. The IDPH is a member of the IAAAP Restoration Advisory Board.

The surrounding communities provide the focus and directions of IAAAP's Community Relations Program through input during community interviews, public meetings, public comment periods, RAB meetings, through correspondence, and through local officials. Program organization is intended to channel this input into a Community Relations Program that will best serve the needs and concerns of the surrounding communities.

4.0 HISTORY OF COMMUNITY RELATIONS

Historically, IAAAP's community relations activities related to environmental restoration had been limited until 1989, when the CRP was in development. The final version of the initial CRP was released in 1991. Recent community relations' activities have included:

- Restoration Advisory Board formed in 1997 at the community's request to provide input into ongoing environmental restoration projects, and to satisfy regulatory requirements (see the fact sheet at Appendix D)
- Tours of IAAAP clean up sites to local high school science classes by IAAAP's environmental specialist
- Earth Day Tours of the installation

Other ongoing community relations activities implemented since 1991 have included: preparation and issuance of news releases and fact sheets; responses to oral and written inquiries about installation activities; media interviews; direction, coordination, and /or assistance with special activities, tours, and briefings on IAAAP for local and state officials and other interested citizens; setting up the IAAAP Hotline information number; and holding public meetings when significant progress is made at IAAAP. All of these activities are expected to continue.

IAAAP's administrative officer plans IAAAP community relation's activities. The administrative officer receives support from the IAAAP environmental specialist and the OSC environmental and public affairs offices. The activities described above all pertain to environmental restoration at IAAAP and are prepared for on-site personnel and residents of the local communities.

Since the publication of the first IAAAP CRP in 1991, the surrounding communities are becoming better informed and educated about the installation's environmental restoration. The nature and complexity of IAAAP's mission, and news media scrutiny of environmental issues have raised public awareness and concern about environmental and potential public health impacts due to past and present IAAAP operations. This CRP update will address and reflect the changing community concerns. Comments, issues and concerns are addressed in Section 5.0. Strategies for addressing these comments, issues and concerns are discussed in Section 6.0.

5.0 CURRENT COMMUNITY COMMENTS AND CONCERNS

The most usable and effective community involvement plans are those, which take into account the specific concerns, priorities, and personalities of the communities involved. To obtain this information, Iowa Army Ammunition Plant (IAAAP) conducted a simple random survey of the residents near plant in Middletown, IA.

The purpose of the survey was to assess the public's environmental concerns associated with a government facility, and estimate public awareness of the IAAAP's Restoration Advisory Board (RAB). The data collection was in the form of a mailed survey. The target population was focused on the residents living around the installation along with those individuals that either work at or visit the installation. The sampling technique was a simple random sample taken from the telephone listing with the probability of selection considered equal within each household. In addition, the surveys were also available to members of the public upon request. This fact was publicized in the newspaper.

The sample size was not predetermined but set at the number of returned surveys. 2007 surveys were mailed in May of 2000. The Army requested that the surveys be returned in two weeks. The analysis includes all 169 surveys that were returned by the end of June, 2000.

5.1 THE SURVEY RESULTS

About 85 percent of the respondents were aware that the Restoration Advisory Board (RAB) existed at the IAAAP. About 15 percent of the respondents learned about the RAB through the survey process.

Over 70 percent of the respondents learned, for the first time, about the RAB from the local newspaper (Hawk Eye), followed by the survey instrument itself, and then a friend (15 percent and 2 percent respectively).

Over 70 percent of the respondents think that the local newspaper is the best way to keep them informed. The radio was second with 4 percent, followed by e-mail and a Web site (3 percent and 2.4 percent respectively).

Almost 90 percent were aware that environmental restoration work was underway at IAAAP. 40 percent of the respondents would go to IAAAP and 30 percent to the RAB if they had environmental questions.

In general the respondents had not talked to the IAAAP, RAB, Local, State, or Federal officials about the environmental issues at the IAAAP. About 11 percent of the respondents had talked to IAAAP officials, 5 percent talked to the RAB, and lesser percentages to other agencies

The top three environmental concerns of the respondents were Groundwater, Surface Water, and Air Quality. 62 percent of the respondents cited groundwater as their number one environmental concern; 14 percent listed it as a second or third concern. Surface water and air

quality were the other top environmental concerns, each being listed in the top three by over 50 percent of the respondents.

A rating scale of 1 to 10 was used, with 10 being the best, to rate how well the IAAAP was doing with regards to: safeguarding the health of residents in their community, safeguarding the environment, complying with regulations, and keeping the public informed about environmental activities at the IAAAP. For the ease of sampling for both the survey developer and the survey taker a scale of 1-10 was selected. The value of (1) equaled "inadequate" and the value of (10) to equaled "adequate". Everything in between was a relative measure of both. The people surveyed who chose to answer question 8 were then given the opportunity to identify how they felt knowing that a number closer to (1) indicated inadequate and a number closer to (10) indicated adequate. Any answer below (5) could indicate that improvements could be made, while answers greater than (5) indicate acceptance of the existing process. During the analysis of the responses the responses were combined, with a value of 1-3 given an "inadequate" rating and combined responses with a value of 8-10 given an "adequate" rating.

- 28% of the respondents felt the IAAAP is doing an inadequate job at safeguarding the health of the residents in their community, while 28% of the respondents felt that the IAAAP is doing an adequate job at safeguarding the health of the residents in their community.
- 28% of the respondents felt the IAAAP is doing an inadequate job of safeguarding the environment, while 27% felt they are doing an adequate job of safeguarding the environment.
- 28% of the respondents felt the IAAAP is doing an inadequate job of complying with regulations, while 36% felt they are doing an adequate job of complying with regulations.
- 33% of the respondents felt the IAAAP is doing an inadequate job of keeping the public informed, while 35% felt they are doing an adequate job of keeping the public informed.

THE COMMENTS

Of the 169 surveys returned, 36 had "Other Comments." Comments were categorized as follows:

18 – Concerned
8 – Cover-ups
7 – Positive comments
2 – Don't Know, Liability, Political, Request for Information
1 – Balanced, Explanation, Operating Errors, Restoration, Suggestion

Here are several of the most motivating/telling/useful comments:

I have watched this with great interest as I lived at the IOP residential area from 1950 to 1969 -- my father worked for the government during this time. He went to the area to fish, hunt, and mushroom hunt, etc and he died 2 years ago of a rare blood disease. I often wonder, what I was

exposed to drinking the water, swimming in the pool and eating many things from my parents garden.

My husband died of leukemia Sept 99. We feel drinking the water or living next to the IAAAP for 50 years and experiencing the testing of bombs could definitely been a factor. I did report his conditions & others have too but no response. So the time it took to fill this out could be taxpayers' money spent for another fruitless study.

8A. (Safeguarding health of residents) Antiquated waste treatment -- impurities released into streams and creeks.
8B. (Safeguarding environment) Waste treatment handled by individuals coming to work drunk and on drugs, sleeping on duty, falsifying govt. documents -- lax supervision. Many red water spills not reported.
8C. (Complying with environmental regulations) How would you know? Waste water (records? --illegible) not reliable; supervisor covers mistakes; people threaten other people's lives and well being. I was forced to resign from this dept. (powerhouse)
8D. (Keeping public informed) Definitely not.

I don't feel that the environmental cleanup teams are searching for radioactive waste materials at the right depth. It is common practice for this waste to be buried at a much greater depth 20' to 25' feet. There is a much better chance of discovering the source of the groundwater pollution if they look at this depth.

6.0 COMMUNITY RELATIONS PROGRAM STRATEGY

Community participation is an important aspect of a site's restoration. Only through the combined efforts of the communities, state and federal agencies, and the IAAAP can effective restoration plans be identified and implemented. The IAAAP's community involvement program includes objectives and strategies that are responsive to public comments, and the issues and concerns described in Section 5.0. The strategies are:

1. Maintain open lines of communication with the surrounding communities on environmental issues.
2. Inform and educate the surrounding communities and local public officials about environmental restoration activities as they occur.
3. Solicit input from the surrounding communities on environmental restoration efforts.

6.1 COMMUNITY RELATIONS PROGRAM OBJECTIVES

The objectives for each strategy of IAAAP's community relations program are as follows:

Strategy1: Maintain open lines of communication with the surrounding communities on environmental issues.

Objective 1A: Facilitate two-way communication among the surrounding communities and IAAAP on environmental issues. All written materials will emphasize the various avenues for community members to easily receive information, have questions answered, or convey comments. Since the survey found that 70% of the respondents thought the newspaper is the most effective medium for communication, information will consistently be sent to the local newspapers. Technical information will be explained as clearly and concisely as possible to increase the public's understanding of the Army's Installation Restoration Program (IRP), the Federal Superfund Program, and IAAAP's IRP. Organized opportunities for the public to comment on IAAAP's presentation materials, programs and/or events will be publicized. Community input and inquiry are encouraged at any time via telephone, written correspondence, or visits to IAAAP. Efforts to maintain open two-way communications are part of the IAAAP plan to make the surrounding communities active partners with IAAAP in the restoration process. In addition, IAAAP has an active Restoration Advisory Board (RAB). This board is a citizen-based advisory group that provides the input that the installation needs for community-based decision-making and is responsive to community needs and concerns. The RAB is also charged with the responsibility of passing information about environmental restoration on to the community it represents.

Objective 1B: Maintain communication with local officials and environmental interest groups. Members of local governments are valuable contacts for both the citizens of Des Moines County and IAAAP. The cooperation between local officials and IAAAP is necessary to ensure a harmonious working relationship and a reliable flow of information. Local officials will be on the environmental mailing list, invited to RAB meetings, and open houses, and will be given information/tours upon request. Because protecting the health and the environment of the surrounding communities is a priority expressed by most citizens during community interviews, the IAAAP will communicate regularly with environmental interest group representatives interested in protecting the community.

Objective 1C: Provide information to surrounding communities about potential impacts on human health or the environment. IAAAP will inform the surrounding communities of public health issues and environmental issues when information becomes available through field investigation or other processes. Efforts will be coordinated with the Iowa Department of Public Health. Information on former Atomic Energy Commission (AEC) operations at IAAAP will be forwarded to the Department of Energy (DOE) because DOE has the primary responsibility for the former AEC sites. IAAAP will provide DOE contact information upon request.

Strategy 2: Inform and educate the surrounding communities and local public officials about environmental restoration activities as they occur.

Objective 2A: Educate the surrounding communities about the Superfund process, the Army's IRP, and IAAAP's IRP. Information will be readily provided on the Superfund process, the Army's IRP and IAAAP's IRP as requested or required. In addition, the surrounding communities will be given information about: a) past remediation/restoration activities and the reasoning behind finishing or closing IRP sites including maps, schedules and the results of tests; b) the investigation and restoration of each of the IRP sites; and c) how all of these activities fit into IAAAP's overall restoration effort. This will include enough detail that citizens do not develop unreasonable expectations about the timing or scope of restoration plans.

Strategy 3: Solicit input from the surrounding communities for the development of appropriate environmental restoration efforts.

Objective 3A: Provide a forum for citizens' input into IRP activities at the installation. Community input and participation is an important aspect of successful site restoration. IAAAP's RAB is a citizen – based advisory group that provides the input to the installation for community – based decision making that will be responsive to community needs and concerns. The RAB is also charged with the responsibility of passing information about environmental restoration to the community it represents. Progress reports on corrective action processes and technical support to the RAB are key factors in promoting informed and valuable reviews and comments from this group. The May/June 2000 survey found that 90% of the respondents were aware of the restoration work at IAAAP and 89% were aware of the existence of the RAB. RAB meetings are open to the public and a public comment/question period is on each agenda.

6.2 COMMUNITY INVOLVEMENT ACTIVITIES

The activities described below are designed to address the community issues summarized in Section 5.0 and to meet the community relations' objectives discussed in Section 6.2 above. Following each activity are the specific required objectives.

6.2.1 Activities

Designate a central contact person at IAAAP. The IAAAP Commander has designated the Administrative Officer (see Appendix F) as IAAAP's contact person. He is responsible for preparing accurate, consistent, and timely responses to questions from citizens, civic leaders, and local officials and for coordinating non-routine responses with the Commander. He is also responsible for implementing this Community Relations Plan Update. Providing a central contact person who represents IAAAP allows concerned citizens and official's access to an installation official for site inquiries and concerns. It further allows the installation to address promptly any community concerns as they arise, resulting in direct communication that enhances opportunities for community input into the restoration process. (Objectives 1A, 1B, 1C, 2A)

Maintain an information repository. IAAAP has established three information repositories to enable the community to have access to information regarding installation and IRP activities and to stay informed of findings at the sites. Documents such as work plans, technical reports, proposed remediation plans, site fact sheets, updates, along with RAB and other public meeting minutes are located in each repository. Appendix G provides addresses and telephone numbers for each repository. (Objectives 1B, 1C, 2A).

Maintain a mailing list of individuals and organizations interested in receiving information about IAAAP. A list of local residents and officials, and also other individuals, community groups, or government officials interested in IRP activities will be maintained by the IAAAP. The Army actively solicits additions to the mailing list at public meetings and will add those who call IAAAP with questions. Contacts on the mailing list receive copies of the installation's newsletter, fact sheets, and other information updates as they develop. The mailing list is updated

continually throughout the restoration process. Anyone who wishes to be added to the list should contact the Administrative Officer at IAAAP (see Appendix F). (Objectives 1B, 1C, 2A).

Conduct community interviews/informal discussions as necessary. IAAAP will interview volunteers or conduct surveys periodically in order to stay informed about changing community perceptions, needs, and concerns and to update this CRP. Interviewees/survey recipients may be identified at public meetings or by telephone, mail contact, or word-of-mouth. The confidential interviews/surveys will be used to develop presentation materials and programs, to evaluate the effectiveness of IAAAP's community relations program (and this CRP update), and to provide information for future revisions of the CRP. (Objectives 1A, 1B, 2A, 3A)

Support the IAAAP Restoration Advisory Board (RAB). An active RAB exists at IAAAP and is comprised of an IAAAP co-chair, a community co-chair, representatives of the Iowa Department of Natural Resources (IDNR), the Iowa Department of Public Health (IDPH), the Environmental Protection Agency (EPA), and interested community members. The RAB was formed using Department of Defense RAB Guidelines and community input, and will recruit new members periodically to ensure a diverse community representation; recruitment will be monitored by the installation commander. RAB meetings are open to the community and will be announced in a timely manner to the public through local newspapers. The RAB functions in an advisory capacity to IAAAP, who provides financial, administrative and leadership support (Army Co-Chair) to the RAB. (Objectives 1A, 1B, 2A)

Provide clear and accurate information about site boundaries. The approximate locations of IAAAP's IRP sites are shown in Figure 1. More exact boundaries and/or changes may be shown in fact sheets and technical documents dealing with individual sites that will be available on the website and at the information repositories. In addition, a large viewing map may be generated and placed on display at public meetings. (Objectives 1A, 1B, 2A)

Send news releases to local media. To ensure that the general public receives the results of site activities, notification of upcoming meetings and public comment period, and other site-related information, IAAAP may send news releases or public notices (as appropriate) to newspapers, radio and television stations servicing the area. News releases and/or public notices will be issued at the completion of significant technical and non-technical milestones to individuals on the facility mailing list and members of the news media. News releases will also be posted on the website and sent to the members of the RAB. (Objectives 1A, 1B, 1C, 2A)

Conduct tours of the installation. Tours of the installation are available through the Administrative Officer to private citizens and public groups as requested. Handouts and other visual aids may be included as part of a tour. Open houses, which includes tours of restoration sites, are held once a year, usually around Earth Day in May. (Objectives 1A, 1B, 1C, 2, 3)

Distribute a newsletter on installation activities. IAAAP currently publishes The Eye newsletter. The newsletter summarizes, in non-technical language, activities pertaining to IAAAP environmental restoration. It may include information regarding the current status of all IRP sites, articles on such activities as the start or completion of field work, interim actions, remediation, the submittal of draft and final documents to regulatory agencies, summaries of

sampling and test results, health risk information and results, RAB meetings, announcements of upcoming public meetings, and new materials in the information repositories. The newsletter, published several times annually, is sent to all individuals on IAAAP's mailing list, is available at public meetings, and is posted on the IAAAP RAB Website. (Objectives 1A, 1B, 1C, 2)

Revise this Community Relations Plan Update. IAAAP will revise this CRP update periodically to reflect significant changes in the level and nature of community concerns during IRP environmental restoration activities. Revisions will evaluate the effectiveness of previous community relations activities for IAAAP based on consultations with the RAB. It will also include input from ongoing community interviews/surveys, and will propose additional or modified activities, if necessary. The nature, extent, and frequency of CRP revisions will be determined by IAAAP. (Objectives 3, 1A, 1B)

Provide clear and accurate information about the location and boundaries of each IRP site. Because of the confirmed off-site migration of contamination and the presence of civilians at IAAAP, all written and graphic materials will make clear where each IRP site is located. More exact boundaries and/or changes may be shown in fact sheets and technical documents dealing with individual sites that will be available on the website and at the information repositories. In addition, a large viewing map may be generated and placed on display at public meetings.

IAAAP will inform the surrounding communities of the schedule for conducting field investigations and other activities that involve the mobilization of workers and equipment in advance of the beginning of those activities. This advance notice will ensure that people are not surprised by the presence of field personnel and can help IAAAP anticipate increases in public interest that may occur when on-site activities occur.

Provide residents with timely follow-up explanations of sampling and test results. Concise and easily understood information will be made available to the surrounding communities on the outcome of technical activities. On the rare occasions when information cannot be released to the public (i.e., due to government classifications), a clear and simple explanation as to why information cannot be released should be provided.

Provide information on Technical Assistance for Public Participation (TAPP) and Technical Assistance Grants (TAGs). IAAAP will provide information on TAPPs and TAGs to any interested party. The Army TAPP program provides community members of the RABs independent support through the use of government purchase orders. These members may apply to the Installation Commander for independent assistance in interpreting scientific and engineering issues with regard to the nature of environmental hazards and restoration activities at the installation. The EPA's TAG program enables groups of interested citizens to obtain assistance in interpreting and understanding data generated during the remedial process. TAGs provide up to $50,000 to community groups wishing to hire consultants to interpret sampling results, reports and other documents. The group must match Twenty percent of the requested funding amount. The matching funds may come from cash or in-kind contributions and originate from any non-federal source. TAGs cannot be used to duplicate field or laboratory work. They can only be used to understand or interpret existing documents and activities conducted at the site. The EPA must be contacted for TAGs. It is not an Army program. (Objectives 2, 3)

6.2.2 REGULATORY TECHNICAL MILESTONES

The following activities will be implemented by IAAAP to the extent possible, as required or relevant, to assist the community in understanding IAAAP's environmental restoration program activities. The milestones and associated activities are listed in the order the milestones are likely to occur.

Provide opportunities for the public to review Feasibility Studies (FS) and develop and distribute information about the remediation plan upon the completion of a Draft Feasibility Study. IAAAP will publish a public notice announcing the availability of the documents in the information repositories and will include a brief summary of the proposed plan. The notice must also announce a public comment period of at least 30 days.

Hold a public information meeting to discuss the FS/Proposed Plan. A public meeting will give community members an opportunity to participate in the progress of corrective measures. The public notice will be published in the IAAAP The Eye newsletter and in local newspapers announcing any public meeting to discuss the FS. The public meeting would present the proposed alternatives for remediating the site and the Army's preferred plan for addressing site restoration. This meeting will also serve as an opportunity for citizens to discuss their concerns on the proposed alternatives with facility personnel. Meeting proceedings will be transcribed and placed in the information repositories. Other meetings, workshops, and/or open houses may be held as needed. Suggested locations for public meetings are listed in Appendix H.

Announce the closure of an IRP site. When the corrective action program for an IRP site is completed and approved by the regulatory agencies, IAAAP will announce the IRP site's closed or finished status either through a fact sheet, The Eye newsletter, and/or in a news release sent to the local media. Closure of an IRP site may require a permit modification, and the community involvement activities described previously for that activity would be followed.

APPENDIX A

List of Acronyms and Glossary

AMC	Army Materiel Command
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act 1980
CRP	Community Relations Plan COC contaminant of concern
DERA	Defense Environmental Restoration Account
DERP	Defense Environmental Restoration Program
DoD	Department of Defense
EPA	Environmental Protection Agency
FS	Feasibility Study
FFA	Federal Facilities Agreement
FWMP	Fish and Wildlife Management Plan
GOCO	Government-Owned, Contractor-Operated
HAL	Health Advisory Levels
HSWA	Hazardous and Solid Waste Amendments of 1984
IRA	Interim Remedial Action
IRP	Installation Restoration Program
ISS	Installation Services Support
ISV	In-site volatilization
NTC	Non – Time Critical
NCP	National Contingency Plan
NPL	National Priorities List
OSC	Operations Support Command
OU	Operating Units
PA	Preliminary Assessment
PP	Proposed Plan
RA	Remedial Action
RD	Remedial Design
RPM	Remedial Project Manager
RAB	Restoration Advisory Board
RI	Remedial Investigation
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act of 1986
SI	Site Investigation
SWMU	Solid Waste Management Unit
TNT	Trinitrotoluene
USACE	U.S. Army Corps of Engineers
USAEC	U.S. Army Environmental Center
VOC	Volatile Organic Compound

GLOSSARY

Administrative Record – All documents containing information that the government uses to select response actions, and to impose administrative sanctions for violations of CERCLA and Title III of SARA, the Emergency Planning and Community Right-to Know Act. This paper trail includes correspondence, the RI/FS, the Record of Decision, and public comments. This public record includes documents of a final nature that are primary and secondary to the Federal Facilities Agreement.

Aquifer – An underground geologic formation or group of formations composed of materials such as sand, soil, or gravel that can store and supply usable amounts of groundwater to supply wells and springs. Most aquifers used in the United States are within a thousand feet of the earth's surface.

Biotic receptor – Any organism that will take materials into its system.

Cleanup – Actions taken to deal with a release or threatened release of hazardous substances that could affect public health or the environment. The term is often used broadly to describe various response actions of phases or removal or remedial responses.

Comment Period – A time period for the public to review and comment on various documents and actions.

Community Relations Plan (CRP) – Formal plan for community relations activities at a facility. The CRP is designed to ensure opportunities for community involvement at the facility, determine activities that will provide for such involvement, and allow citizens the opportunity to be informed and educated about the facility.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) – This federal legislation of 1980, which addresses contamination from past disposal activities, established a federal program to finance the cleanup of contaminated waste sites, to set guidelines for cleaning the sites, and to establish a system of legal responsibility for site cleanup. CERCLA is commonly known as Superfund.

Defense Environmental Restoration Account (DERA) – A transfer account, established by the Defense Appropriation Act of 1984, that funds the Installation Restoration Program for active installations and the Formerly Used Defense Sites Program for formerly owned or used installations. The account also funds the other goals of the Defense Environmental Restoration Program. Currently known as ER, A

Defense Environmental Restoration Program (DERP) – Provides centralized program management for the cleanup of DoD hazardous waste sites consistent with the provisions of CERCLA. The goals of the program are: (1) the identification, investigation, research and development and cleanup of contamination from hazardous substances, pollutants and contaminants; (2) correction of other environmental damage which creates an imminent and

substantial endangerment to the public health, welfare or to the environment; and (3) demolition and removal of unsafe buildings and structures.

Endangered Species – Those wildlife and plant species that have been determined by the U.S. Fish and Wildlife Service or state Agency to be endangered or threatened.

Environmental Cleanup – Environmental cleanup is a general term used to refer to environmental site investigation and cleanup.

Environmental Restoration – Environmental restoration is used to describe activities such as site investigation, cleanup, and remedial action leading to the restoration of a facility to its original state or condition prior to facility activities.

Environmental Restoration, Army (ER, A) – The Army established support funds for Installation Restoration Program. These funds are intended to assist installations in meeting environmental clean up requirements. Formerly known as DERA.

Explosives – Any substance or article, including a device, which is designed to function by explosion (i.e., extremely rapid release of gas and heat) or which, by chemical reaction within itself, is able to function in a similar manner.

Explosives – Related Compounds – Any compounds that are either used in the manufacture of explosives or compounds that become by-products or degradation products as the result of the manufacture or destruction of explosives.

Facility (as stated in CERCLA) – Any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, aircraft or any site or area where a hazardous substance has been deposited, stored, disposed of, placed or otherwise come to be located; but does not include any consumer product in consumer use or any vessel.

Feasibility Study –This study develops and evaluates final cleanup actions based on data collected during the RI.

Federal Facility Agreement – An agreement between the EPA and the federal facility, which defines how the cleanup of the facility will be administered and managed.

Geophysical Survey – The intent of a geophysical survey is to provide high resolution mapping of shallow (upper 10 to 15 feet) buried material, lagoons, and trenches that were used to dispose of wastes and other contamination anomalies. A geophysical survey is usually conducted in a grid arrangement or linear profile over the selected site area.

Groundwater – Water found beneath the earth's surface that fills pores between materials such as sand, soil, or gravel. In aquifers, groundwater occurs in sufficient quantities that it can be used for drinking water, irrigation, and other purposes.

Hazard Ranking System (HRS) –The method EPA uses to determine which sites should be listed on the National Priorities List (NPL) under CERCLA. The HRS ranks sites by means of a mathematical rating system that combines the potential to release, with the severity/magnitude of the potential impacts, and the number of people who may be affected. Using the scores, EPA and the states list sites by priority and allocate resources for site investigation, enforcement, and cleanup. Sites with the highest scores appear on the NPL.

Hazardous Substance –Any material that poses a threat to public health and/or the environment. Typical hazardous substances are materials that are toxic, corrosive, ignitable, explosive, or chemically reactive.

Hazardous Waste – Any solid waste, or a combination of solid wastes, which because of its quantity, concentration, physical, chemical, or infectious characteristics may cause, or significantly contribute irreversible, or incapacitating reversible, illness that pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

Information Repository – A file and/or location containing current information, technical reports, reference documents and other materials pertaining to investigation of a facility .The information repository is typically located in a public building that is convenient and easily accessed by local residents, such as a public school, city hall, or library.

Installation –All contiguous property under the control of the Iowa Army Ammunition Plant.

Installation Restoration Program (IRP) –The IRP is an environmental cleanup program for military installations. It was created by the U.S. Department of Defense in 1975. This program focuses on the cleanup of contamination from past activities. It includes research, development, and demonstration of innovative and cost-effective site cleanup technologies.

Interagency Agreement –See Federal Facility Agreement.

Interim Measure –Cleanup or control measure implemented when there is an immediate threat to human health and the environment.

Maximum Contaminant Level (MCL) –The maximum permissible level of a contaminant in water, which is delivered to any user of a regulated water system.

Media of Concern –That part of the environment affected by a release, including groundwater, surface water, soil, soil gas and ambient air.

Metals –Elements or compounds, which may be reactive, leachable, and toxic.

National Contingency Plan (NCP) –The basic policy directive for federal response actions under CERCLA. It sets forth the Hazard Ranking System and procedures and standards for responding to releases of hazardous substances, pollutants, or contaminants. The plan is subject to regular revision.

National Priorities List (NPL) –A list of site designated as needing long-term environmental cleanup. The purpose of the list is to inform the public of the most serious hazardous waste sites in the nation. EPA revises the list periodically to add new sites or to delete sites following cleanup.

Parts Per Billion (ppb) –An expression of concentration representing the volume of a solid or liquid contained in a larger volume of another solid or liquid. Equivalent terms are micrograms per kilogram (ug/kg) and micrograms per liter (ug/l). An example: one drop of liquid in an adult-size swimming pool.

Parts Per Million (ppm) –An expression of concentration representing the volume of a solid or liquid contained in a larger volume of another solid or liquid. Equivalent terms are milligrams per kilogram (mg/kg) and milligrams per liter (mg/l). An example: one drop of liquid in a child-size wading pool.

Point of Exposure – The location in the environment at which contact is made between a receptor and a hazardous constituent.

Preliminary Assessment (PA) – The process of collecting and reviewing available information about a known or suspected waste site or release.

Propellants – Explosive composition used for propelling projectiles and to generate gases for powering auxiliary devices.

Proposed Plan (PP) – A document prepared in conjunction with the FS to provide the public with detailed information about the recommended choice for clean up action.

Receptor Populations –Those human populations and environmental systems (wildlife and plants) that could potentially be exposed to hazardous constituents emanating from a solid waste management unit.

Record of Decision (ROD) –The ROD identifies the remedial alternative chosen for implementation at a Superfund site. The ROD is published by the government after completion of the RI/FS.

Regulatory Compliance Values – Any values or standards that have been promulgated by government agencies including federal, state, city, etc., that establish emission, discharge, disposal, treatment or cleanup levels for compounds and characteristics of air, water, and solid materials.

Release – The spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping, or disposing of hazardous wastes or constituents into the environment (including the abandonment or discarding of barrels, containers, or other closed receptacles/ Q containing hazardous wastes or hazardous constituents).

Remedial Action (RA) –The RA involves the construction, operation, and implementation of the final
cleanup remedy. Long-term RAs require continued monitoring, operation, and maintenance for a number of years.

Remedial Design (RD) – An RD involves the actual design of the selected cleanup remedy. It includes development of engineering drawings and specifications for site cleanup.

Remedial Investigation (RI) – An RI is an extensive field investigation. Its purpose is to characterize the nature and extent of contamination at a site. The RI also assesses the risks posed by on-site contamination to human health and the environment.

Remediation – Actions consistent with permanent remedy taken instead of, or in addition to, removal actions in the event of a release or threatened release of a hazardous substance into the environment. Remedial actions prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger to present or future public health or welfare, or the environment. This is the process of reducing and/or eliminating contamination from media (soil, surface water, groundwater, air).

Restoration Advisory Board (RAB) – A citizen-based committee made up of community citizens, a community co-chair, Army representatives, an Army co-chair, and representatives of the EPA, IDNR and IDPH. The purpose of the group is to "enable the early and continued flow of information between the affected community, DoD, and environmental oversight agencies." The RAB ensures that "all stakeholders have a voice and can actively participate in a timely and thorough manner in the review of restoration documents and activities." (DoD/EPA RAB Implementation Guidelines).

Route of Exposure – The pathway(s) by which a hazardous constituent travels from its initial release, through the environmental media (groundwater, surface water, soil, soil gas and ambient air) to a receptor population.

Semi-Volatile Organic Compounds (SVOCs) – Compounds that do not have the tendency to volatilize as readily as VOCs.

Site Investigation (SI) – Documented site visited conducted after the Preliminary Assessment to gather specific information to determine whether further investigation is warranted.

Soil Vapor – A gas released from the degradation of a contaminant found in soil or groundwater. Also known as soil gas.

Solid Waste Management Units (SWMUs) – Any discernible unit which has been used for the treatment, storage, or disposal of solid waste at any time, irrespective of whether the unit is or ever was intended for the management of solid or hazardous waste, also any discernible unit at which solid wastes have been placed at any time. Such units include any areas at a facility at which solid wastes have been routinely and systematically released.

Superfund Amendments and Reauthorization Act (SARA) – This legislation of 1986 reauthorized and significantly strengthened CERCLA.

U.S. Environmental Protection Agency (EPA) – The federal agency charged with responsibility for administering and enforcing the nation's environmental laws.

Volatile Organic Compounds (VOCs) – VOCs are a group of chemicals that have a tendency to evaporate when exposed to air. Due to this tendency, VOCs disappear more rapidly from surface water than groundwater. Since groundwater does not usually come in contact with air, VOCs can be present in groundwater for many years.

APPENDIX B

ENVIRONMENTAL PROGRAM UPDATE

See the 1991 CRP for a detailed history of the installation (Section 1.2) and of the environmental studies up until 1991 (Section 1.3).

The primary environmental concern at IAAAP is the contamination attributable to past operating practices. Explosives-contaminated wastewater and sludge was discharged in uncontrolled, on-site lagoons and impoundments.

The Army has conducted numerous investigations at the site from 1980 to the present, and the FFA was signed in 1990. Then a Preliminary Assessment (PA) and Site Investigation (SI) were conducted to identify areas of potential contamination; this resulted in the finding 43 areas of known or suspected contamination. In August 1991, an SI was conducted for each of the 43 areas. Limited soil, sediment, groundwater, and surface water sampling was conducted in an effort to determine whether chemical constituents were present, at levels of concern, at suspected source areas and in associated migration pathways. The data obtained during the PA/SIs was used to supplement previous information and to develop the list of areas to be investigated within Remedial Investigation (RI). The presence of chemical constituents above the analytical reporting limits indicated a need for further evaluation.

The Army conducted Phase 1 of RI from July through November 1992. The investigation included: an expanded characterization of the background levels of metals in soils; a soil gas sampling effort in order to discern the extent of contamination by volatile organic compounds (VOCs); base-wide surface water and sediment sampling; base-wide groundwater sampling; installation of temporary groundwater monitoring wells (piezometers); off-post residential well sampling; field screening for metals and explosives in soils; and fixed laboratory analyses of approximately 20 percent of the field screening samples collected and analyzed. The results of the off-post-residential well sampling effort indicated the presence of explosives in excess of EPA health advisory levels (HAL) in five of the wells sampled. Contaminated wells were located southwest of the site near the town of Augusta, and off-site in the Brush Creek watershed. As an interim action, the Army provided affected residences with bottled water. They then contracted with the local public water supply company to have the potential impacted residences located south of the IAAAP boundary connected to the rural water supply district.

Results of the Phase I RI were used to refine the soil and groundwater investigation in the Phase II, which commenced in April 1993. During the Phase II RI, 13 soil borings were advanced to depths of approximately 15 feet below the ground surface to obtain additional information on their subsurface conditions. A total of 80 groundwater-monitoring wells were placed at the site during the RI. During the placement of each well, soil samples were obtained at the soil/groundwater interface and submitted for fixed laboratory analysis. Following the placement of the monitoring wells, each well was sampled for chemical constituents indicated by the previous data and knowledge of the past operational and waste handling practices of each site.

The Army submitted the Draft RI Report, with data from the Phase I and Phase II RI, in 1993 to the EPA for review and comment. It was subsequently determined that the collection of additional data was necessary to complete the site characterization. The Follow – On Sampling field effort was conducted in April through August 1995. The purpose was to obtain additional data to characterize the nature and extent of the on-site contamination. This field effort consisted of: the placement of 28 additional soil borings and 26 groundwater monitoring wells; soil sample collections adjacent to previously ensampled wastewater sumps; shallow soil samplings to verify the positive results from the soil gas sampling during Phase I of RI, and the collection of stream gauging data and shallow groundwater levels to characterize the hydraulic connection between surface water and shallow groundwater. Following the additional field sampling effort, the Draft Final RI Report was submitted in November 1995. The Army received and incorporated comments from EPA. The Revised Draft-Final RI Report, dated May 21, 1996, was accepted as final in accordance with the FFA.

Due to the complexity of the environmental problems at IAAAP, the site was divided into the Operating Units (OUs) to facilitate project management. These are:

1. Soils OU (#1) – addressing the contamination in the soils.
2. Groundwater OU (#3) – addressing the contamination of groundwater both within the boundaries of IAAAP and off-site.
3. Installation-wide OU (#4) – addressing the closure of the CAMU, institutional controls, previously non - addressed areas of soil contamination, VOC-contaminated media, and ecological risks.

OU#2 was originally established for the Non-Time Critical (NTC) soils removal action, but was subsequently merged into OU#1 for simplicity and completeness.

The actions and studies being completed to address groundwater contamination (OU#3) are: the Supplemental Remedial Investigation data for Line 800 Pinkwater Lagoon; the Off Site Groundwater Investigation; the Contaminant Source Assessment; and an Ecological Risk Assessment Addendum. Long term groundwater monitoring continues on a semiannual basis.

Based on the data collected at the site, the Army has initiated non-time critical (NTC) removal actions at IAAAP to address soil contamination, including: the Pesticide Pit, the Explosives-Contaminated Sumps, the former Fire Training Pit, the Inert Landfill, the Line 1 impoundment, the Line 800 Pink Water Lagoon, the North Burn Pads, the North Burn Pads Landfill, the East Burn Pads, and part of Line 5A/5B. These removal actions were completed between 1994 and 2000.

Approximately 150 cubic yards of pesticides-contaminated soils were excavated in the spring of 1995 from the former Pesticide Disposal Pit and disposed of at an approved off-site waste disposal facility.

Explosives – contaminated soils associated with over 50-abandoned wastewater sumps also were excavated in the spring of 1995. These contaminated soils were temporarily stored in a lined

stockpile near the Inert Landfill at IAAAP and were moved to the Soil Repository for permanent disposal in the spring of 1997.

An NTC removal action to address as estimated 1,000 cubic yards of soils contaminated with VOCs from the various fuel and solvent sources at the former Fire Training Pit was completed in 1997. The Army used Low Temperature Thermal Desorption and soil vapor extraction to complete this cleanup.

In the fall of 1996, the Army began activities to construct a low permeability cover on the 17-acre Inert Landfill site. The cover consisted of a genet drainage layer and a low permeability geomembrane with an appropriate vegetative cover. The liners prevent infiltration of precipitation into the landfill material and the subsequent transport of contaminants from wastes to groundwater. Industrial and municipal-type wastes had been disposed in the Inert Landfill by the Army prior to the advent of current-day waste management regulations. The migration of contaminants leaching from these wastes to the groundwater represents a continuous source of contamination that will be mitigated by the construction of the cover.

The Line 1 impoundment and line 800 pink Water Lagoon are considered to be the greatest sources of explosive contamination at IAAAP. As part of the NTC removal actions, soils have been sampled, analyzed, and segregated according to the risk or contaminant level detected. Depending on the concentration of explosives in the excavated soils, the soils have been place in one of three areas: in the Soil Repository constructed adjacent to the Inert Landfill; in the designated Corrective Action Management Unit (CAMU), also adjacent to the Inert Landfill; or beneath the cap at the Inert Landfill as random fill to achieve final grade. Contaminated soils at the Line 1 Impoundment and the Line 800 Pink Water Lagoon were excavated and segregated in August of 1997. Site restoration activities were completed in early 1998.

In addition to those areas where NTC removal actions have been undertaken, the Army has identified 15 additional areas were soils are containing chemical constituents at concentrations greater than the cleanup goals for the site. The evaluation of potential remedial alternatives and the identification of a preferred alternative to address these areas have been addressed in the final Soil Record of Decision (ROD) dated August 1998. A listing of the areas proposed for cleanup within the scope of the soils OU interim remedial action and their respective contaminant types is presented at Table 1.

In 1999, the Agency for Toxic Substances and Disease Registry issued their Public Health Assessment for IAAAP. They concluded that the groundwater contamination from IAAAP poses no public health hazards because: 1) contaminant concentrations were too low; 2) past exposure to the general public was extremely limited; and/or 3) interim actions have minimized or prevented exposures.

Iowa AAP IRP Schedule

(Based on current funding constraints)

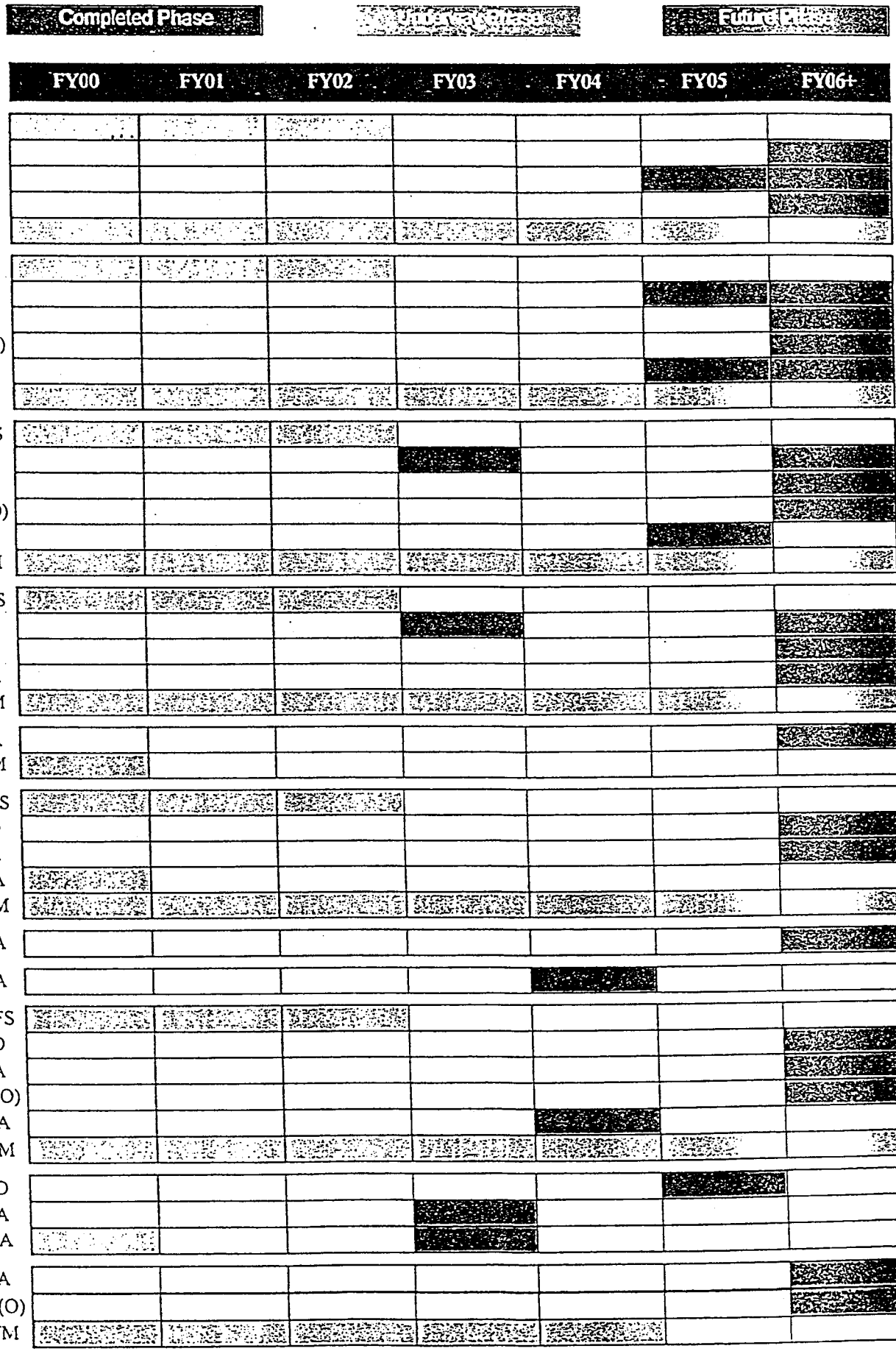

Table 2

Iowa AAP IRP Schedule

(Based on current funding constraints)

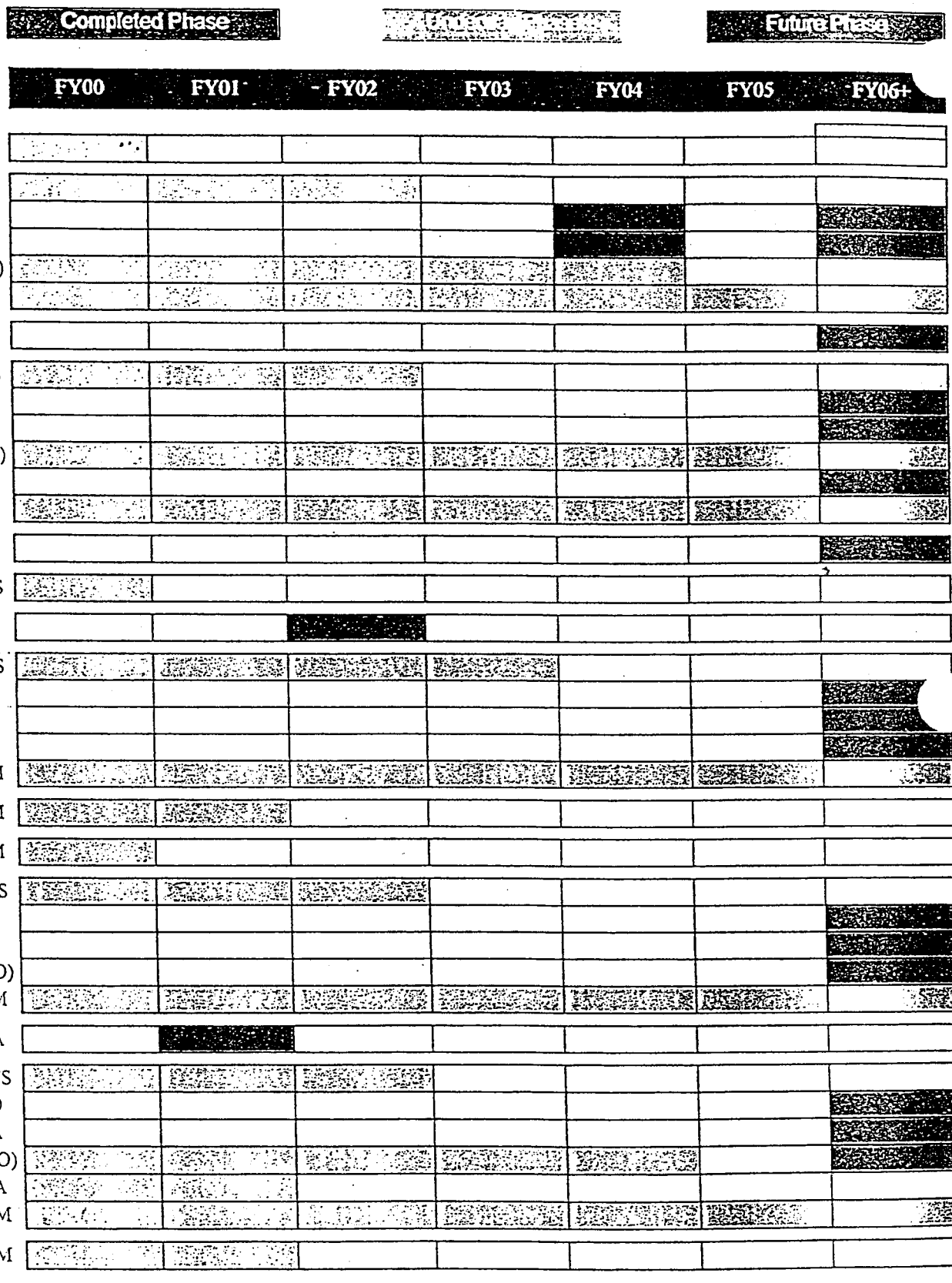

Table 2

TABLE 1

Contaminants by volume in cubic yards

Site	Metals	Explosives	Metals/ Explosives	SVOCs	Radio-nuclides	Explosives/ SVOCs	PCBs	TOTAL
Line 1 (R01)	219	4,853	1,486	587	266			7,411
Line 2 (R02)	885	769	294					1,948
Line 3 (R03)	546	1,884	835		119	109		3,493
Line 3A (R04)		1,352	684					2,036
Lines 4A & 4B (R05)	153							153
Lines 5A & 5B (R06)	80	626	25					731
Line 6 (R07)	445							445
Line 8 (R09)	476							476
Line 9 (R10)	469							469
Line 800 (R11)	117	1,208						1,325
EDA/East Burn Pads (R12)		21,411						21,411
Demolition Area	753							753
Burn Cages/ West Burn Pads Area (R24)	423	339	689					1,451
North Burn Pads (R25)	41							41
Roundhouse Transformer Storage Area (R28)							599	599
TOTAL	4,607	32,442	4,013	587	385	109	599	42,742

Volumes are in cubic yards

PREVIOUS STUDIES/ACTION DOCUMENTS AT IAAAP

1. U.S. Army Medical Research & Development Command, Aquatic Field Survey, Iowa Army Ammunitic Plant, November 1976, Washington, D.C.

2. U.S. Army Toxic & Hazardous Materials Agency, Installation Assessment of Iowa Army Ammunition Plant, Report No. 127, January 1980, Aberdeen Proving Ground, Maryland.

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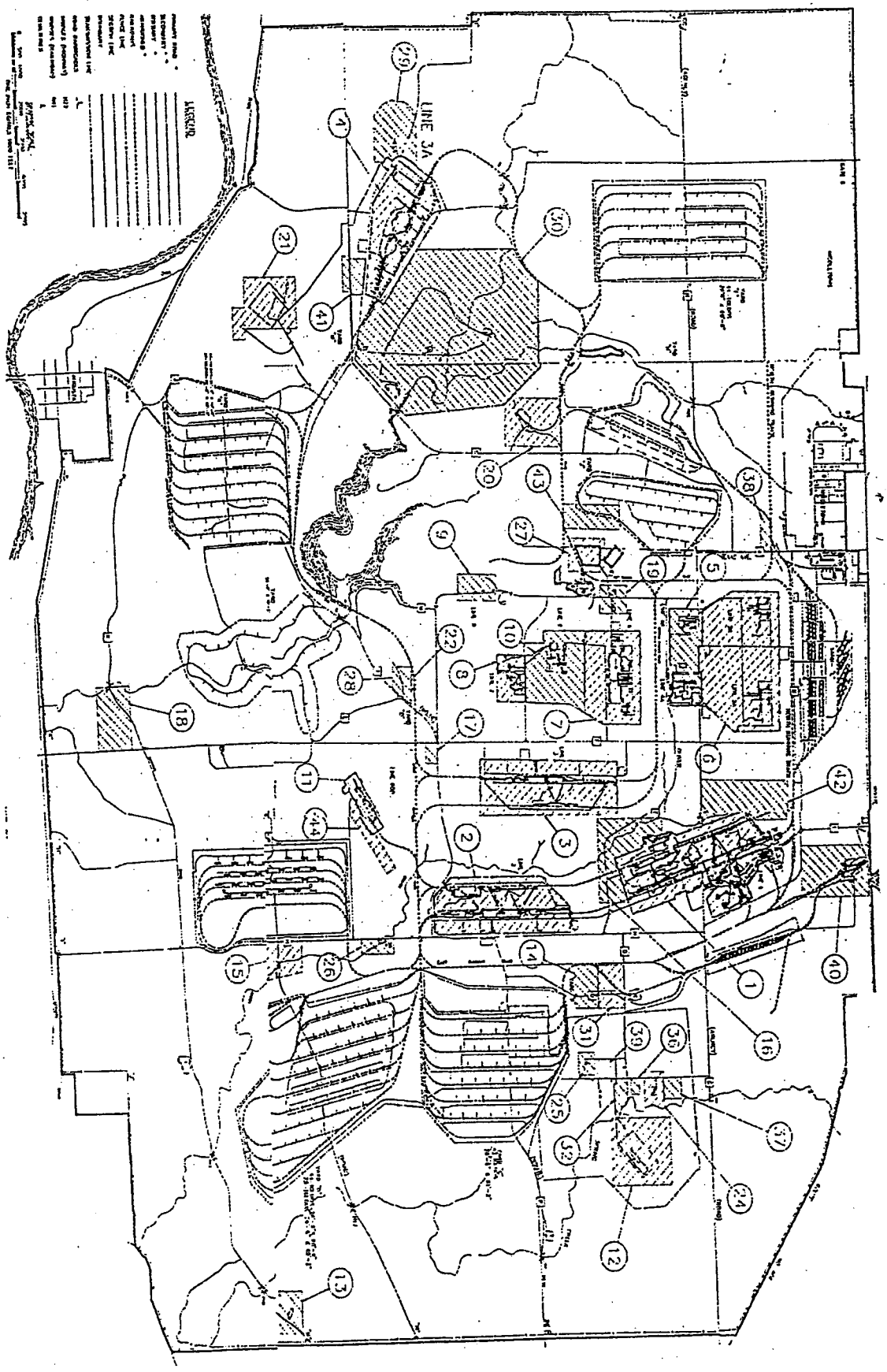

Figure 1

SITE NAME	SITE DESCRIPTION
IAAP-001	LINE 1
IAAP-002	LINE 2
IAAP-003	LINE 3
IAAP-004	LINE 3A
IAAP-005	LINE 4A & 4B
IAAP-006	LINE 5A & 5B
IAAP-007	LINE 6
IAAP-008	LINE 7
IAAP-009	LINE 8
IAAP-010	LINE 9
IAAP-011	LINE 800

SITE NAME	SITE DESCRIPTION
IAAP-012	EXPLOSIVE DISPOSAL AREA
IAAP-013	INCENDIARY DISPOSAL AREA
IAAP-014	BOXCAR UNLOADING AREA
IAAP-015	OLD FLYASH WASTE PILE
IAAP-016	LINE 1 FORMER WASTEWATER IMPOUNDMENT
IAAP-017	PESTICIDE PIT
IAAP-018	POSSIBLE DEMOLITION SITE
IAAP-019	CONTAMINATED CLOTHING LAUNDRY
IAAP-020	INERT DISPOSAL AREA
IAAP-021	DEMOLITION AREA / DEACTIVATION FURNACE
IAAP-022	UNIDENTIFIED SUBSTANCE (OIL) WASTE SITE

SITE NAME	SITE DESCRIPTION
IAAP-024	CONTAMINATED WASTE PROCESSOR
IAAP-025	EXPLOSIVE WASTE INCINERATOR
IAAP-026	SEWAGE TREATMENT PLANT / DRYING BEDS
IAAP-027	FLYASH LANDFILL (BLD. 400-139)
IAAP-028	CONSTRUCTION DEBRIS LANDFILL
IAAP-029	LINE 3A SEWAGE TREATMENT PLANT / DRYING BEDS
IAAP-030	FIRING SITE AREA
IAAP-031	YARD B AMMO BOX CHIPPER DISPOSAL PIT
IAAP-032	BURN CAGES (3) / BURN CAGE LANDFILL
IAAP-036	NORTH BURN PADS (2)
IAAP-037	NORTH BURN PADS LANDFILL

SITE NAME	SITE DESCRIPTION
IAAP-038	BUILDING 600-86 SEPTIC SYSTEM
IAAP-039	FIRE TRAINING PIT
IAAP-040	ROUNDHOUSE TRANSFORMER STORAGE AREA
IAAP-041	LINE 3A POND
IAAP-042	ABANDONED COAL STORAGE YARD
IAAP-043	FLY ASH DISPOSAL AREA
IAAP-044	LINE 800 PINKWATER LAGOON

Figure 1 Key

APPENDIX C

ENVIRONMENTAL REGULATIONS

C.1.0 UNDERSTANDING THE ENVIRONMENT RESTORATION PROCESS

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) are the primary Federal laws governing the investigation and cleanup of contaminated sites. U.S. Department of Defense (DOD) installations typically have multiple contaminated sites regulated by CERCLA. The following section provides a brief summary.

C.1.1 CERCLA

CERCLA, as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986, establishes a comprehensive framework within which to identify, investigate, and clean up releases of hazardous substances to the environment. CERCLA authorizes the President to take response actions when a release or the threat of a release is discovered. Through Executive Order 12580, signed in January 1987, the President directed the Secretary of Defense to implement investigation and cleanup measures in consultation with the U.S. Environmental Protection Agency (EPA) for releases of hazardous substances from facilities under the jurisdiction of the Secretary. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes EPA's response policy and lays out the key response steps for implementing CERCLA.

DOD refers to the program for meeting its responsibilities under CERCLA as the Installation Restoration Program, or IRP. The IRP is the major element of DOD's environmental restoration program. All DOD installations are included is this program, whether or not they are on the National Priorities List (NPL).

C.1.2 HOW THE PROCESS WORKS

All environmental restoration sites require assessments and investigations to determine the need for cleanup and the selection, design, and implementation of appropriate remedies to ensure protection of human health and the environment. Activities conducted under the environmental restoration program are referred to by the terms investigation, interim action, design, and cleanup. These terms are defined as follows:

- Preliminary Assessment (PA) – The process of collecting and reviewing available information about a known or suspected waste site or release.

- Site Investigation (SI) – Documented site visits conducted after the Preliminary Assessment to gather specific information to determine whether further investigation is warranted

- Remedial Investigation (RI) – An RI is an extensive field investigation. Its purpose is to characterize the nature and extend of contamination a site. The RI Also assesses the risks posed by on – site contamination to human health and the environment.

- Feasibility Study – this study develops and evaluates final cleanup actions based on data collected during the RI.

- Proposed Plan (PP) – A document prepared in conjunction with the FS to provide the public with detailed information about the recommended choice for clean up action.

- Record of Decision (ROD) – Identifies the remedial alternative chosen for implementation at a Superfund site. The ROD is published by the government after completion of the RI/FS.

- Remedial Action (RA) – The RA involves the construction, operation, and implementation of the final cleanup remedy. Long – term RAS require continued monitoring, operation, and maintenance for a number of years.

- Remedial Design (RD) – An RD involves the actual design of the selected cleanup remedy. It includes development of engineering drawings and specifications for site cleanup.

The documentation for the decisions to perform these steps is outlined in Figure 2.

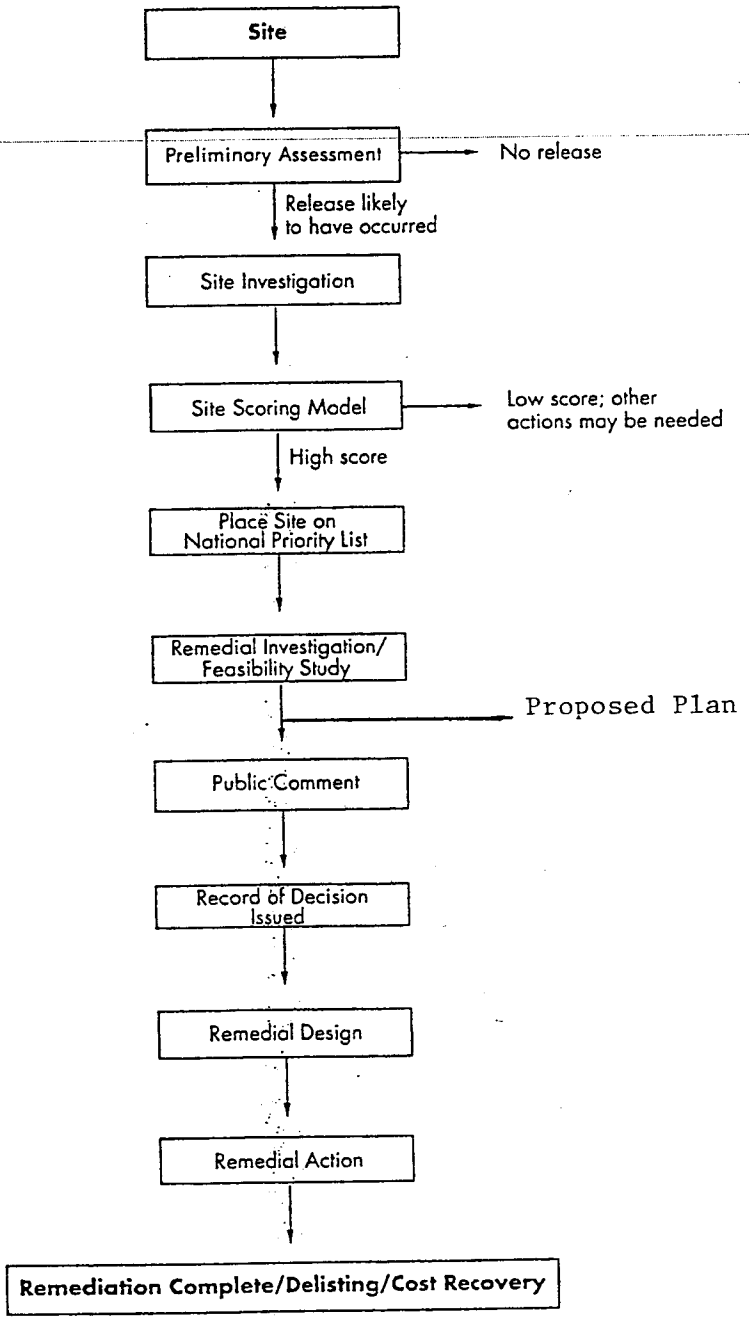

Figure 2
Superfund Site Remediation Process

APPENDIX D

Iowa Army Ammunition Plant
Restoration Advisory Board
Fact Sheet

Quick Facts

- Organized in August 1997
- 13 community members
- Members are from surrounding towns of Burlington, West Burlington, Danville, Fort Madison, and Wever.
- 4 members from governmental agencies
- Meets quarterly

SITE DESCRIPTION

The Iowa Army Ammunition Plant (IAAAP) is located adjacent to Middletown, Des Moines County, Iowa. The IAAAP is approximately 10 miles west of the largest city in Des Moines County, Burlington, with an estimated population of 27,208 people. The installation consists of 19,011.42 acres. IAAAP is an active U.S. Army Operations Support Command facility operated by the civilian contractor American Ordnance, LLC. IAAAP's current mission is to load, assemble and pack (LAP) ammunition items, including projectiles, mortar rounds, warheads, demolition charges, and munitions components such as fuzes, primers, and boosters. IAAAP was founded in 1941, and has undergone modernization and expansion. Production of supplies for World War II began in September 1941 and ended in August 1945. From 1946 to 1951, the IAAAP was operated by the government to produce ammonium nitrate and store munitions. Ammunition production resumed in 1949 and has continued to the present. The former Atomic Energy Commission operated facilities on the site from 1947 to 1975.

RAB MISSION STATEMENT

The RAB enables the local community and representatives of Government agencies to meet and exchange information about the Iowa AAP's environmental cleanup program. It provides an opportunity for the community to review progress and participate in dialogue, address concerns, and make recommendations to the Commander of the Iowa AAP.

REGULATOR PARTICIPATION

FEDERAL:

- U.S. Environmental Protection Agency, Region VII, Site Assessment and Federal Facilities Section, Superfund Branch, Waste Management Division
- U.S. Fish and Wildlife Service, Region 3, Rock Island District

STATE:

- Iowa Department of Natural Resources

COMMAND ORGANIZATION

MAJOR COMMAND: U.S. Army Materiel Command; Engineering, Housing, Environmental and Installation Logistics, Environmental Quality Division

MAJOR SUBORDINATE COMMAND: U.S. Army Operations Support Command, Rock Island, IL

SUBORDINATE COMMAND: Munitions and Armaments Command, Production Directorate, GOCO LAP/ARTY/40MM/Mortars Team, Iowa/Milan/Lonestar Subteam, Rock Island, IL

INSTALLATION: Iowa AAP Installation Management Division

INSTALLATION RESTORATION PROGRAM (IRP) EXECUTING AGENCY

- U.S. Army Corps of Engineers, Omaha District, North West Division
- U.S. Army Operations Support Command (PROV); Industrial Base Management Center; Restoration Management Team, Rock Island, IL
- U.S Army Environmental Center, Aberdeen Proving Ground, MD
- U.S. Army Center for Health Promotion and Preventive Medicine, Aberdeen Proving Ground, MD

NATIONAL PRIORITIES LIST

The installation was proposed for the National Priorities List (NPL) in August 1989 due to surface water contaminated with explosives leaving the installation boundary. IAAAP's Hazard Ranking Score (HRS) is 29.73. A Federal Facilities Agreement (FFA) signed by the U.S. Environmental Protection Agency (USEPA) Region VII and the U.S. Army became effective in December of 1990. This agreement defines objectives, responsibilities, procedural, and schedule frameworks for implementing the Installation Restoration Program (IRP) at IAAAP.

INSTALLATION RESTORATION PROGRAM

The Installation Restoration Program (IRP) effort is to identify, investigate and mitigate past hazardous waste disposal practices that may have contributed to the release of pollutants into the environment at Army installations/facilities. The IRP cleanup efforts are to be accomplished under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) as amended by Superfund Amendments and Reauthorization Act (SARA) of 1986 requirements

and if applicable, consistent with the substantive requirements of the Resource Conservation and Recovery Act (RCRA) corrective action process.
Our program management goals are:

- Identify, investigate, and remediate/cleanup contamination associated with past industrial activities.

- Protect human health and the environment.

- Work with environmental regulators and stakeholders in achieving the above goals, and include members of the surrounding communities in the IRP effort at the IAAAP.

CLEANUP ACCOMPLISHMENTS
Various Studies covering groundwater and ecological risks continue today as the Army prepares to initiate the groundwater portion of the clean-up effort. Soils removals that have been accomplished so far are:

- Line 6
- Former Pesticide Disposal Pit
- Various wastewater sumps
- Former Line 1 Impoundment Area
- Line 800 Pinkwater Lagoon
- East Burn Pads
- North Burn Pads
- North Burn Pads Landfill
- Former Fire Training Pit

Two Army Records of Decision have been signed that cover the removal, placement, and treatment of contaminated soils at the IAAAP.

RAB ACCOMPLISHMENTS
The RAB has been very active since its inception by meeting approximately every month to receive training and provide input to the environmental restoration process. Some of their more notable accomplishments are:

- Presenting Earth Day Displays
- Hosting public tours at the Iowa AAP
- Provide comment and input for Army Records of Decision
- Provide comment and advice for the Army's selection of soil treatment
- Provide comment and advice to the Army and the EPA regarding impacted off post drinking water wells
- Help establish clean up priorities
- Worked with the public, legislative representatives, and numerous governmental agencies to help address Congressional inquiries and concerns

Information Repositories

Burlington Public Library
501 North 4th St.
Burlington, Iowa 52601
(319) 753-1647

Danville City Hall
105 West Shepard
Danville, IA 52623
(319) 392-4685

Iowa Army Ammunition Plant
Visitor's Welcome Center
Building 100-101
Middletown, IA 52638-5000
(319) 753-7710

For More Information

Rodger Allison
Iowa AAP
ATTN: SMAIA-INE
17571 Hwy 79
Middletown, IA 52638-5000

Scott Marquess
USEPA –Region 7
901 North 5th St.
Kansas City, KS 66101
(913) 551-7131
(319) 753-7130

APPENDIX E

SURVEY RESULTS

1. Are you aware that a Restoration Advisory Board (RAB) exists at the IAAAP?
   84.6% YES
   14.8% NO

2. Are you aware that environmental restoration work is underway at the IAAP?
   88.8% YES
   9.5% NO

3. Have you received the information you need to understand the environmental work at the IAAP?
   32.0% YES
   53.8% No

4. How did you first learn about the RAB?
   10.7% This survey
   71.0% Newspaper
   1.2% Meetings
   1.2% Documents
   1.8% Television
   2.4% Friend
   1.8% Radio
   4.1% Other

5. What would be the best way to keep you informed about the activities of the RAB?
   71.0% Newspaper
   4.1% Radio
   1.8% Documents
   3.0% E-mails
   4.7% Television
   1.8% Meetings
   2.4% Websites
   3.6% Other

6. If you had concerns regarding the environmental work at IAAAP, where would you go for answers?
   29.6% RAB
   11.8% Local Officials
   39.6% IAAAP
   7.7% State Officials
   4.7% Federal Officials

7. What would be your top three environmental concerns?

	Fisheries	Vegetation	Groundwater	Surface water	Air Quality	Wildlife	None	Other
1st Concerns	0.6%	2.4%	62.7%	4.7%	8.3%	4.7%	4.1%	0.0%
2nd Concerns	3.6%	6.5%	11.2%	31.4%	21.3%	6.5%	0.6%	0.0%
3rd Concerns	4.1%	13.6%	2.4%	18.9%	26.0%	11.2%	0.6%	0.0%

8. Have you talked to any of the following agencies regarding the environmental work at the IAAP?

	Yes, I have talked with:	Yes, I have talked with and I am satisfied	Yes, I have talked with and I am not satisfied	No, I have not talked with:
IAAP	0.6%	8.3%	2.4%	83.4%
RAB	0.6%	4.7%	0.0%	89.3%
Community Officials	1.2%	3.6%	0.0%	89.9%
State DNR	1.2%	2.4%	1.2%	89.9%
State EPA	0.6%	1.2%	0.6%	92.3%
Federal FWS	0.0%	0.6%	0.6%	93.5%
Federal EPA	0.0%	2.4%	0.6%	91.1%

9. How do you feel the IAAAP is doing in the following areas – on a scale of 1 – 10?

	Safeguarding the Health	Safeguarding the Environment	Complying with Regulations	Keeping the Public Informed
10	11.3%	10.1%	12.4%	12.8%
9	4.3%	5.0%	12.4%	6.4%
8	12.8%	12.1%	10.9%	15.6%
7	7.1%	10.0%	6.6%	5.7%
6	11.3%	8.6%	7.3%	8.5%
5	18.4%	18.6%	17.5%	15.6%
4	6.4%	7.1%	5.1%	2.8%
3	5.0%	5.7%	2.2%	4.3%
2	6.4%	5.7%	6.6%	11.3%
1	17.0%	17.1%	19.0%	17.0%
Blanks	28	29	32	28
Avg.	5.34	5.31	5.6	5.43

Comments from the survey:

(grouped by topic)

Balanced

I feel everything is being done the best that can be considering the type of material used. The only other thing is to shut down the plant. But we need the products for defense and the area people need employment.

Concerned

I read that "5 nations agree to trash nukes." My hope is that all these wasted materials will be done away with in a safe manner and as soon as possible. It is essential that our ground water and air be safe.

I feel that protection of the environment is far below standard.

Concerned landowner in Augusta Iowa

Clean residue up as soon as possible and as good as possible. Don't let it happen again.

I took a blood test at B.M.C. and my blood checked OK. But the Oak Ridge Dr. said that really don't mean too much as you can come down with beryllium dust later on. I was around quite a bit of plutonium & that was why I wanted the test.

My husband died of leukemia Sept 99. We feel drinking the water or living next to the IAAP for 50 years and experiencing the testing of bombs could definitely been a factor. I did report his conditions & others have too but no response. So the time it took to fill this out could be tax payers money spent for another fruitless study.

We are quite concerned about groundwater contamination as we are residents of Timberline and have a well we get our water from.

I have watched this with great interest as I lived at the IOP residential area from 1950 to 1969 -- my father worked for the government during this time. He went to the area to fish, hunt, mushroom hunt, etc and he died 2 years ago of a rare blood disease. I often wonder, what I was exposed to drinking the water, swimming in the pool and eating many things from my parents garden.

Why do you use IAAAP in reference to the IAAP? Keep on top of pollution.

I think there should be great concern for anyone drinking well water in Middletown or surrounding areas.

Living this close to IAAP, my biggest concern is having my well-water fully tested.

We are concerned about our water, the underground more than surface.

The air quality is my biggest concern. I never had asthma or upper respiratory problems before moving to Iowa 13 yrs ago.

Concerns regarding high levels of radon in the area.

Worked at IAAP in late 60's & early 70's as a truck driver hauling contaminated waste to burning field & sump dump. Severely hurt on line 2 in 1969.

Nobody has any idea what is going on or has been going on inside the fences! All anyone knows is what they (IAAP) wants them to know! There isn't any way for local people to know what we are being exposed to because IAAP only lets out what they want us to know! Which it is part of the armed forces so we don't need to know everything just what affects our water, air, and communities. Why is it that there is so much sickness and cancer in our area? (IAAP)

You started about 25 years too late.

The IAAP supplied rural water to residents south of the plant and are testing subsoil for contaminants in areas south & east of the plant. Will the residents living north of the IAAP receive similar treatment? I live close to the IAAP and feeder creeks on either side of the flow from the direction of the IAAP and into the Little Flint Creek bottom. I am concerned about the quality of subsoil moisture and underground water supplies for my well.

Coverup

Regarding question 8, they are telling the public now, but what about all that went on the last 30 yrs that wasn't told until now.

Disappointed to find out about nuclear weapons cover up story at IAAP -- and that was some spill needing clean up that was improperly handled the first time and needs to be done again at considerable cost/contamination -- sad we cannot trust people making the weapons that are meant to protect us.

In all the recent news releases no mention of the radioactive contamination that is spreading through the local ground water is mentioned or why.

Just be out in the open with people and don't cover up anything

This problem has existed. Why has it taken so long to acknowledge and then do something about it? The IAAP has been polluting the area surface water for as long as I can remember (about 48 years).

Things are looking better as far as wanting to comply to regulations but some of that (most of that) is only due to being in the public eye. It would be nice if the Government would be the

good neighbor. The government doesn't play by the rules everyone else does so we mistrust, when there should be honor.

Government tells people only what they have to keep them satisfied.

Only total openness will be acceptable, so far there seems to be more cover-up than being open with the public. Possibly a new change in command at the IAAP might be in order.

Don't Know

Don't really know enough about the cleanup to make good decisions about what's being done

I knew nothing of this matter until now.

Explanation

I am a RAB member.

Liability

I think that companies that are responsible for contaminating the environment should be liable for the cleanup. I think these companies knew what they were doing.

I am very concerned about health & environmental effects. The first 3 yrs of my life I spent in the H housing at the I.A.A.P. Middletown IA and from 1967 to current time I live only 3 to 4 miles away in Danville IA.

Any possible health effects I may have been exposed to, as a direct cause of the Atomic Energy Commission should be taken care of!

Operating Errors

8A. (safeguarding health of residents) Antiquated waste treatment -- impurities released into streams and creeks.

8B. (safeguarding environment) Waste treatment handled by individuals coming to work drunk and on drugs, sleeping on duty, falsifying govt. documents -- lax supervision. Many red water spills not reported.

8C. (complying with environmental regulations) How would you know? Waste water (records? --illegible) not reliable; supervisor covers mistakes; people threaten other people's lives and well-being. I was forced to resign from this dept. (powerhouse)

8D. (keeping public informed) Definitely not.

Political

I am all for environment, but I feel this is all political started by Sen Harkin.

This is a silly survey -- they have been working on cleaning up at IAAAP since the 70's. It's a political game to make people think they are shocked and concerned with the area & the people that worked there. You had to have your head in the sand to not know what was being manufactured there in the 60's and 70's. And when it was discovered what a danger there was with the waste -- efforts were made to clean up -- How do I know all this and I'm only 44? I pay attention -- even when it's not politically correct. Don't treat the citizens like idiots -- We are not all stupid or easily fooled by political garbage.

Positive

Would be interested in serving on RAB

No problems with work being accomplished.

Am glad to hear that there is environmental restoration work underway. Protecting our environment is _very important especially to people living near the IAAP.

It is obvious the IAAP, EPA & USACE as well as all members of the Restoration effort is willing to do all they can to clean up and protect the environment. Great job!!!

I'm glad someone cares about the world we live in.

Believe current efforts will finally resolve the problem.

Recent open house at IAAP was a good way to get the word out about the environmental work being done. Have talked with people doing well sampling while hunting the IAAP. I believe an all out effort is being made to correct problems.

Remediation

Why was only part of the people close to the IAAP plant paid to hook up to rural water? I feel all people around the plant should have been. I was told there had to be a stopping point and my place wasn't in it.
Thank you.
Request for Information

Please send me information on the activities of the RAB.

At one time I received notice of each meeting and minutes for each meeting.

Suggestion

I don't feel that the environmental cleanup teams are searching for radioactive waste materials at the right depth. It is common practice for this waste to be buried at a much greater depth 20' to 25' feet. There is a much better chance of discovering the source of the groundwater pollution if they look at this depth.

APPENDIX F

INFORMATION RESOURCES

Iowa Army Ammunition Plant

LTC Bruce Elliott
Commander
Iowa Army Ammunition Plant
17571 State Highway 79
Middletown, IA 52638
319-753-7200
DSN 585-7200

Rodger Allison
Environmental Restoration Program Manager
Iowa Army Ammunition Plant
17571 State Highway 79
Middletown, IA 52638
319-753-7130
DSN 585-7130

Darlene Norton
Environmental Coordinator
Iowa Army Ammunition Plant
17571 State Highway 79
Middletown, IA 52638
319-753-7613
DSN 585-7613

Larry Johnson
Administrative Officer
Iowa Army Ammunition Plant
17571 State Highway 79
Middletown, IA 52638
318-753-7600
DSN 585-760

American Ordnance

Jean Brewster
Manager, Environmental & Waste Management
American Ordnance
Iowa Army Ammunition Plant
17575 State Highway 79
Middletown, IA 52638
319-753-7721
DSN 585-772

Federal, State and Local Agencies

Scott Marquess
Project Manager
U.S. Environmental Protection Agency
Region VII
901 N. 5th St.
Kansas City, KS 66101

Ken Hertowski
U.S. Environmental Protection Agency

Region VII
901 N. 5th St.
Kansas City, KS 66101

Dana Blubaugh
Public Affairs
U.S. Environmental Protection Agency
Region VII
901 N. 5th St.
Kansas City, KS 66101

U.S. Army Corps of Engineers

Kevin Howe
Project Manager
U. S. Army Corps of Engineers
CENWO-PM-H
215 North 17th St.
Omaha, NE 68102

State of Iowa Department of Public Health

Donald A. Flater
Chief, Bureau of Radiological Health
Iowa Department of Public Health
Lucas State Office Building
Des Moines, IA 50319-0075

Dan McGhee
Iowa Department of Public Health
Environmental Department
Lucas State Office Building
Des Moines, IA 50319-0075

Mike Guely
Iowa Dept. of Public Health
Lucas State Office Building
Des Moines, IA 50319 – 0075

Federal Elected Officials

Senate

Senator Chuck Grassley
133 Hart Senate Building
Washington, D.C. 20510-1501

Senator Tom Harkin
133 Hart Senate Building
Washington, D.C. 20510-1501

House of Representatives

Third District

Leonard Boswell
1029 Longworth House Office Building
U.S. House of Representatives
Washington, D.C. 20515

State Official
Iowa Senate

District 49
Mark Shearer
Iowa Legislature
Second Floor, State Capital
Des Moines, IA 50319

District 50
Eugene Fraise
Iowa Legislature
Second Floor, State Capital
Des Moines, IA 50319

Iowa House of Representatives

District 97
Dave Heaton
Iowa Legislature
Second Floor, State Capital
Des Moines, IA 50319

District 99
Rick Larkin
Iowa Legislature
Second Floor, State Capital
Des Moines, IA 50319

District 100
Dennis Cohoon
Iowa Legislature
Second Floor, State Capital
Des Moines, IA 50319

APPENDIX G

INFORMATION REPOSITORIES

Burlington Public Library
501 N. 4th Street
Burlington, IA 52601
(319) 753-1647

Danville City Hall
105 W. Shepard Street
Danville, IA 52623
(319) 392-4685

Visitors Welcome Center
IAAAP Administrative Building
Building No. 100-101
IAAAP
17571 Hwy 79
Middletown, IA 52638
(319) 753-7710
Open Monday through Thursday, 7:30 A.M. – 5:00 P.M.

APPENDIX H

PUBLIC MEETING LOCATIONS

Iowa Army Ammunition Plant
17571 State Hwy 79
Middletown, IA 52638

Ramada Inn
2759 Mt. Pleasant Street
Burlington, IA 52601

Pzazz Motor Inn
3001 Winegard Drive
Burlington, IA 52601

The Burlington Apartments
206 North 3rd
Burlington, IA 52601

Starrs Cave Nature Center
11627 Starrs Cave Road
Burlington, IA 52601

APPENDIX I– COMMENT/SUGGESTION FORM FOR FUTURE CRP REVISIONS

COMMUNITY COMMENT RESPONSE FORM

IAAP would like to here your comments on its Community Relations Plan. What you liked? Disliked? What should be added? Changed? Deleted? All responses will remain Confidential, and will be considered in preparing future revisions to the Community Relations Plan. If you would prefer to discuss your views with someone directly, please provide your telephone number in the space provided below.

(Please write clearly)

(If additional space is required, please continue on the back of this form)

Mail to: Iowa Army Ammunition Plant

Middletown, Iowa

Please have an IAAP representative contact me:
Name: _____

Telephone No.: _____

Best Time To Be Reached: _____

COMMUNITY COMMENT RESPONSE FORM
(continued)

Floyd - SPL 23 May 91
CEB 5/22/91

DEPARTMENT OF THE ARMY
US ARMY TOXIC AND HAZARDOUS MATERIALS AGENCY
ABERDEEN PROVING GROUND, MARYLAND 21010-5401

1991 MAY 20 PM 4:35

REPLY TO ATTENTION OF

May 7, 1991

M & H-SM CO

Public Affairs Office

TO: MH-SM CO. PLT MGR.
FM: COR
OFC OF REC: SMCIO - IN
DATE 20 May 91 INITIALS
INFO ✓ NEC ACT ✓
REPLY REQ. ____ DATE REQ. ____
REMARKS Cy to SMCIO-AO

Mr. Alan L. Wehmeyer, Deputy Director
Waste Management Division
U.S. Environmental Protection Agency
Region VII
726 Minnesota Avenue
Kansas City, Kansas 66101

Dear Mr. Wehmeyer:

Reference Interagency Agreement (IAG) effective December 10, 1990, and U.S. Environmental Protection Agency's January 15, 1991, schedule approval.

In accordance with Item 8 of above schedule, enclosed is the final Community Relations Plan. Your comments have been incorporated, and our written responses to each comment are enclosed. The document is now final.

Thank you for input on this document. Questions on this matter may be directed to Mr. Leon Baxter, Iowa Army Ammunition Plant Environmental Office, at (319) 753-7130.

Sincerely,

Elizabeth A. Sergeant

ELIZABETH A. SERGEANT
Acting Chief
Public Affairs Office

Enlcosures

Copies Furnished (with enclosures):

Commander, U.S. Army Armament, Munitions and Chemical Command, Attention: AMSMC-IN(R) (Mr. Ray Gall), Rock Island, Illinois 61299-6000
✓ Commander, Iowa Army Ammunition Plant, Attention: SMCIO-AO (Mr. Leon Baxter), Building 100, Middletown, Iowa 52638-5000

RC: DOC CONTROL M & H-SM CO., INC.	FILE 0001-525.4/4		DATE: 5-21	
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MATERIEL				
MECHANICAL				
OPERATIONS				
PROG. MGMT.				
SUPPORT ACT.				
IS&S DEPT.				
LEXINGTON				

In accordance with the Interagency Agreement for Iowa Army Ammunition Plant, the following are the Army's responses to the written comments sent by the U.S. Environmental Protection Agency, Region VII, on March 14, 1991:

1. COMMENT: In the future, please submit documents in a "draft" form, not "draft final."

RESPONSE: It is the Army's opinion that "draft final" documents are not final. The report reviewed by your agency was not considered final, although your comment to rename that particular draft has been noted, and will be applied to future draft reports.

2. COMMENT: Please rename the document from Public Involvement and Response Plan to Community Relations Plan, in accordance with the Interagency Agreement.

RESPONSE: The reason the U.S. Army named the document the Public Involvement and Response Plan is because we want to involve the public, not just influence community opinion, which is what a Community Relations Plan suggests. We have re-titled the document, with PIRP as a sub-title.

3. COMMENT: Please note that the Community Relations Plan needs to be included in the Administrative Record.

RESPONSE: Document will be placed in the Administrative Record.

4. COMMENT: Page 1-2: Need to mention that the Community Relations Plan will be updated or amended on an as-needed basis.

RESPONSE: The following statement was added to page 1-3: "The PIRP will be updated or amended on an as-needed basis throughout the environmental investigation. A community survey will be conducted again following the final remedial action decision."

5. COMMENT: Page 1-10, para 3: Delete the last sentence in this paragraph and delete any references to the 10 -4 risk level.

RESPONSE: Last sentence in paragraph 3 was deleted, as well as the next full paragraph. The following text was inserted: "Following regulatory review, these alternatives will be presented to the public before a final Record of Decision (ROD) is made."

6. COMMENT: Page 1-11: It is not appropriate to list the Army's preferred alternative in this plan since the EPA has not yet completed review of the FS, and this document is not final.

RESPONSE: Page 1-11, first full paragraph was deleted.

7. COMMENT: Page 1-11, para 4: Change date that IAAP was proposed for inclusion to the NPL.

RESPONSE: Date has been changed to read "July 1989."

2-2-2
IAAP comments

8. COMMENT: Page 2-13, Summary of Responses: Correct typographical error.

RESPONSE: Error has been corrected.

9. COMMENT: Page 2-39: Please add Ms. Hattie Thomas as a point of contact on Technical Assistance Grants.

RESPONSE: Ms. Thomas' name, address and phone number have been added to page 2-39.

10. COMMENT: Appendix E: Please add or correct the following entries:
a. James W. Callier is the new section chief for the RCRA Iowa section.

RESPONSE: Mr. Callier's name, address and phone number have been added to page E-3.

b. Please add a Superfund contact to Appendix E.

RESPONSE: Ms. Cecila Tapia's name, address and phone number have been added to page E-3.

c. Please add the EPA Office of Public Affairs toll-free number.

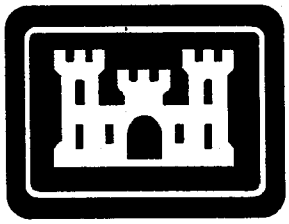
RESPONSE: The telephone number has been added on page E-1.

11. COMMENT: Please remove Appendix K to protect citizen privacy, and insert a referral page in the Community Relations Plan.

RESPONSE: The Army has never kept this list in the final document that is released to the public. It was left in the draft version so the regulatory agencies can see who is on the list. A referral page has been inserted in the final document, and Appendix K will be maintained by the IAAP Public Affairs Office.

12. COMMENT: Please remove Appendix L to protect citizen privacy, and insert a referral page in the Community Relations Plan.

RESPONSE: The Army has never kept this list in the final document that is released to the public. It was left in the draft version so the regulatory agencies can see who is on the list. A referral page has been inserted in the final document, and Appendix L will be maintained by the IAAP Public Affairs Office.



US Army Corps of Engineers

Toxic and Hazardous Materials Agency

COMMUNITY RELATIONS PLAN FOR IOWA ARMY AMMUNITION PLANT

(Public Involvement and Response Plan)

Prepared by:

William K. Boe, Evelyn Knauft, and Norma Miller

ENVIRONMENTAL SCIENCE & ENGINEERING, INC.
P.O. Box 1730
Gainesville, FL 32602-1703

May 1991

Prepared for:

U.S. ARMY TOXIC AND HAZARDOUS MATERIALS AGENCY
Public Affairs Office
Aberdeen Proving Ground, MD 21010-5401

FINAL
Contract No. DAC 45-87-C-0115
Call Order No. 0012-88
ESE No. 3-90-9003-3170-3170

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Form Approved
OMB No. 0704-0188

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CETHA-PA-CR-91005

6a. NAME OF PERFORMING ORGANIZATION
Environmental Science and Engineering, Inc.

6b. OFFICE SYMBOL (If applicable)

7a. NAME OF MONITORING ORGANIZATION
U.S. Army Toxic and Hazardous Materials Agency

6c. ADDRESS (City, State, and ZIP Code)
P.O. Box 1703
Gainesville, Florida 32602

7b. ADDRESS (City, State, and ZIP Code)
ATTN: CETHA-PA
Aberdeen Proving Ground, MD 21010-5401

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U.S. Army Toxic and Hazardous Materials Agency

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William K. Boe, Evelyn Knauft and Norma Miller

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17. COSATI CODES		
FIELD	GROUP	SUB-GROUP

18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)
Public involvement and response plan; public involvement; public affairs office; communication.

19. ABSTRACT (Continue on reverse if necessary and identify by block number)
A Public Involvement and Response Plan was developed to determine the level of community concern and interest in the Installation Restoration Program at Iowa Army Ammunition Plant. This document presents the results of community interviews conducted in April 1990, and recommends communication techniques to keep the public informed of the study progress, and ways to involve the public in the final decision-making process.

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21. ABSTRACT SECURITY CLASSIFICATION
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22a. NAME OF RESPONSIBLE INDIVIDUAL
Lori E. Simmers

22b. TELEPHONE (Include Area Code)
(301) 671-2556

22c. OFFICE SYMBOL
CETHA-PA

DD Form 1473, JUN 86 *Previous editions are obsolete.*

SECURITY CLASSIFICATION OF THIS PAGE
UNCLASSIFIED

TABLE OF CONTENTS

TABLE OF CONTENTS
(Continued, Page 2 of 3)

LIST OF FIGURES

LIST OF ACRONYMS

AEC	U.S. Atomic Energy Commission
AMC	U.S. Army Materiel Command
AMCCOM	U.S. Army Armament, Munitions and Chemical Command
AMCPA	U.S. Army Materiel Command, Chief of Public Affairs
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CMS	Corrective Measures Study
DNT	2,4-dinitrotoluene
DOD	Department of Defense
EA	Endangerment Assessment
EP	Extraction Procedure
EPA	U.S. Environmental Protection Agency
ERDA	Energy Research and Development Administration
ESE	Environmental Science & Engineering, Inc.
FOIA	Freedom of Information Act
FS	Feasibility Study
ft	foot
GOCO	Government-Owned, Contractor-Operated
HMX	High Melting Explosive (cyclotetramethylenetetranitramine)
HQDA	Headquarters, Department of the Army
IA	Installation Assessment
IAAP	Iowa Army Ammunition Plant
IDNR	Iowa Department of Natural Resources
IRM	Interim Remedial Measure

LIST OF ACRONYMS

(Continued, Page 2 of 3)

IRP	Installation Restoration Program
LAP	Load, Assemble, and Pack
lb	pound
Mason & Hanger	Mason & Hanger-Silas Mason Company
mm	millimeter
NCP	National Oil and Hazardous Substances Pollution Contingency Plan NPL National Priorities List
OCLL	Office of the Chief of Legislative Liaison, Department of the Army OCPA Office of the Chief of Public Affairs, Department of the Army OSWER Office of Solid Waste and Emergency Response
ppm	parts per million
PAO	Public Affairs Officer
PIRP	Public Involvement and Response Plan
RCRA	Resource Conservation and Recovery Act
RDX	cyclotrimethylenetrinitramine
RFI	RCRA Facility Investigation
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act
SCC	Southeastern Community College

LIST OF ACRONYMS

(Continued, Page 3 of 3)

SWMU	Solid Waste Management Unit
TAG	Technical Assistance Grant
TNB	1,3,5-trinitrobenzene
TNT	2,4,6-trinitrotoluene
USACE	U. S. Army Corps of Engineers
USAEHA	U.S. Army Environmental Hygiene Agency
USAMBRDL	U.S. Army Medical Bioengineering Research and Development Laboratory
USATHAMA	U.S. Army Toxic and Hazardous Materials Agency
WWII	World War II

1.0 INTRODUCTION AND BACKGROUND

The Public Involvement and Response Plan (PIRP) for Iowa Army Ammunition Plant (IAAP) in Middletown, IA, sets forth a site-specific program to establish a communication and information exchange between Army staff, the civilian work force, and ammunition plant workers; installation residents; Army agencies; various federal, state, county, and community agencies; and the public. Effective communication and timely information exchange are essential for maintaining community understanding and support of the IAAP mission and for implementing a successful PIRP in conjunction with the Installation Restoration Program (IRP). The plan requires the involvement of citizens from the area communities and representatives from federal, state, and local agencies who are active in policy and decisionmaking processes. It is the responsibility of the U.S. Environmental Protection agency (EPA) and the Iowa Department of Natural Resources (IDNR) to oversee the IAAP PIRP activities and to ensure the Army complies with the federal and state laws.

Section 1.0 of this PIRP presents the history and background of IAAP, and Section 2.0 presents information about the community surrounding IAAP. The details of the public involvement program are presented in Section 3.0. The following appendices are included:

Appendix A--Site Maps
Appendix B--Fact Sheets, News Releases, and Information Papers
Appendix C--Representative Newspaper Articles
Appendix D--Media List
Appendix E--Program Points of Contact
Appendix F--Schedule for Public Involvement Activities at IAAP
Appendix G--Locations of Information Repositories
Appendix H--Locations for Community Meetings
Appendix I--Elected Public Officials
Appendix J--Civic and Community Groups

Appendix K--Mailing List
Appendix L--Community Interview Participants

The Points of Contact for PIRP-related information are the IAAP Public Affairs Officer (PAO) -(319) 753-7600- or the IAAP Industrial Engineer -(319) 753-7130-.

The goal of this PIRP is to inform and to promote two-way communication among on-post workers and residents and citizens from surrounding communities concerning environmental studies being conducted at IAAP as a part of the Army's IRP. The PIRP is flexible, allowing implementation of program activities for additional investigative and remedial work that may result from the IRP at IAAP. The primary objectives of the PIRP are to keep workers and residents at IAAP and local residents and surrounding areas knowledgeable of planned and ongoing environmental activities at IAAP, to provide a means whereby citizens and agencies can interact with IAAP and supporting agencies, and to assist in resolving issues of public interest and concern. The specific purposes of the IAAP PIRP are to:

1. Provide for the exchange of information regarding the IAAP groundwater and soils contamination assessments and remedial actions;
2. Solicit input, comments, and active involvement from the public, elected and civic leaders, and concerned agencies regarding the plan to ensure local concerns are addressed;
3. Provide a centralized point of contact for the public and agencies to express concerns, and to distribute information regarding the IAAP PIRP.

This plan outlines public involvement 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 PIRP goals. The PIRP will be updated or amended an an as-needed basis throughout the environmental investigation. A community survey will be conducted again following the final remedial action decision.

1.1 SITE LOCATION

IAAP is a government-owned, contractor-operated (GOCO) military industrial installation under the jurisdiction of the U.S. Army Armament, Munitions and Chemical Command (AMCCOM). The plant is located on U.S. Route 34 in Middletown, IA, and is approximately 6 miles west of Burlington, IA, in the southeastern corner of the state. (See Appendix A, Figure A-1) The facility, currently operated by the Mason & Hanger-Silas Mason Company, Inc. (Mason & Hanger) of Lexington, KY, is situated on 19,127 acres adjacent to Middletown's southwestern boundary.

The closest airports to IAAP are the Burlington Municipal Airport, south of the city, and the Quad City Airport at Moline, IL, approximately 60 miles northeast of the plant.

1.2 SITE HISTORY

IAAP, a GOCO industrial installation, produces ammunition for all branches of the U.S. Armed Forces and for foreign military sales to U.S. allies. IAAP operates under the direction of Headquarters, AMCCOM, which is located at Rock Island, IL. Technical assistance is provided to IAAP by Headquarters, U.S. Army Armament Research and Development Center, which is located at Picatinny Arsenal, NJ, and by Headquarters, Missile Command, which is located at Redstone Arsenal, AL.

IAAP was established in July 1941 as the Iowa Ordnance Plant. The plant mission was to load, assemble, and pack 75- and 155-millimeter (mm) artillery shells and 100- to 1,000-pound (lb) aerial bombs. The original cost of the plant was $30 million, not including Lines 3A, 7, and 9, which were built later. Loading operations began in September 1941, and

high-level production of bombs and projectiles continued until after September 2, 1945 (V-J Day). At that point, high-level production ceased.

The principal mission of IAAP has been Load, Assemble, and Pack (LAP) operations involving a variety of conventional ammunition and fusing systems. LAP lines were operated at high production rates from 1941 to 1945 and from 1949 to 1952. Activities during the interim period from 1945 to 1949 consisted mainly of completing work in progress, reconditioning, demilitarization, surveillance, and long-term storage. Varying rates of munitions production have occurred since 1952, including renewed production in 1961 during the years of the Vietnam Conflict. A portion of the installation, Line 1 facilities, was modified and operated by the U.S. Atomic Energy Commission (AEC) (later the Energy Research and Development Administration (ERDA) from 1947 to 1975. AEC added many new facilities within Line 1.

During peak World War II (WWII) activities, over 12,000 workers were employed at the plant. By September 1943, 13.7 million shells and bombs containing 229 million lb of high explosives had been assembled.

Following WWII, the plant was converted from a contractor-operated facility to a government-staffed installation. From 1946 to 1948, when 227 employees staffed the plant, operations were limited to long-term storage; surveillance activities; and the renovation, demilitarization, and reconditioning of ammunition. Ammunition production was resumed at the beginning of the Korean Conflict. By January 1, 1951, an expanded production schedule had created the need for 1,245 government employees at the facility.

Silas Mason Company (now Mason & Hanger) became the operating contractor in March 1951. By June 1952, employment totaled 5,425 contractor and 260

government personnel. Contractor employment eventually declined with the end of the Korean Conflict, dropping to 1,860 by December 1957.

The Vietnam Conflict increased employment and production at IAAP. By the end of 1968, 7,200 contractor and 155 government personnel were employed at the plant. During this period, production included artillery projectiles; hand grenades; demolition blocks; aerial mines; mortar shells; and such components as primers, boosters, detonators, and fuses. IAAP continued to produce similar munitions products throughout the 1970s.

By 1982, contractor employment had dropped to 857. Currently, there are approximately 1,300 contractor employees and 44 government employees at IAAP.

IAAP possesses extensive ammunition manufacturing capabilities with special emphasis on cast loading of large caliber artillery projectiles, guided missile warhead loading, press loading of munitions, and the assembly of specialized munitions involving the integration of electronic components with precision explosive components.

End items currently being produced at IAAP in May 1990 included detonators, demolition blocks, cratering kits, 155-mm rocket-assisted artillery projectiles, 8-inch rocket-assisted projectiles, and 120-mm tank rounds. Rocket warheads are produced for the Patriot, Copperhead, Hellfire, Stinger, Chaparral, Hawk, TOW I, and TOW II rockets. Additionally, components are manufactured for the RAAM 155-mm remote anti-armor mine, GATOR antitank and antipersonnel mines, and the Ground Emplaced Mine Scattering System.

1.3 ENVIRONMENTAL STUDIES

In support of the installation's mission, thirteen production areas, or lines, load munitions at IAAP (see Appendix A, Figure A-2). Several of these areas are idle and/or no longer in use and have been deactivated and dismantled. Some of the solid wastes generated by these production areas consist of explosive processing sludges, spent carbon from the treatment of explosive processing wastewater, and sludges from lead-based initiating compound wastewater. These solid wastes are treated onsite using current treatment methods regulated under the Resource Conservation and Recovery Act (RCRA) program and then disposed in a hazardous waste landfill approved by the U.S. Environmental Protection Agency (EPA). Ashes from incineration and open burning are disposed of offsite by commercial hazardous waste handling firms.

Since 1980, several environmental studies have been conducted at IAAP as a part of the IRP. Some of these studies indicate that munitions production and renovation operations at IAAP that were state-of-the-art at the time have caused wastewaters containing explosives and explosives byproducts to be discharged to the installation's surface waters, including holding ponds and impoundments. Production and renovation operations at IAAP are now conducted using environmentally acceptable methods of treatment. Other potential sources of contamination are the result of other disposal operations, including burning and detonation of explosives. Potential contaminants in the soil, surface water, and groundwater consist primarily of 2,4,6-trinitrotoluene (TNT), cyclotrimethylenetrinitramine (RDX), and related compounds used as precursors during the manufacturing processes or resulting from degradation of the primary explosives.

A remedial investigation (RI) to determine contamination levels and off-post migration potential was conducted from February 1981 to October

1982. The RI revealed RDX surface water contamination migration in Brush and Spring Creeks, and localized RDX groundwater contamination was detected in the Pink Water Lagoon/Line 800 Area (see Figure 1.3-1). Potential sources of RDX contamination in Brush Creek include permitted wastewater discharges into Brush Creek, discharge of contaminated groundwater associated with the Former Line 1 Impoundment or Line 800 Pink Water Lagoon, or sediments from the Former Line 1 Impoundment. Data from later studies did not support the hypothesis that contaminated groundwater from the Line 800 Pink Water Lagoon could be discharging into Brush Creek because the plume from this site has not reached Brush Creek. Significant levels of RDX and 2,4,6-TNT were present in groundwater at the Line 800 Pink Water Lagoon. Surface water in the lagoon exhibited fewer contaminants at lower concentrations.

The RI also alluded to the need for additional studies to assess the horizontal and vertical extent of groundwater contamination at the Line 800 Pink Water Lagoon, identification of the principal source of contamination for Brush Creek, and delineation of the extent of contaminated sediment at the Former Line 1 Impoundment. Additional studies, such as the Feasibility Study (FS) and the Endangerment Assessment (EA) are discussed later in this section.

A follow-on RI of the Former Line 1 Impoundment and Line 800 Pink Water Lagoon was conducted between September 1982 and August 1984. No explosives contamination was found in surface water or groundwater at the IAAP boundary near Spring Creek. However, RDX groundwater contamination levels exceeded human health criteria at the IAAP boundary near Brush Creek.

The RI study could not conclusively prove that explosives contamination in the Pink Water Lagoon was localized. This study concluded that

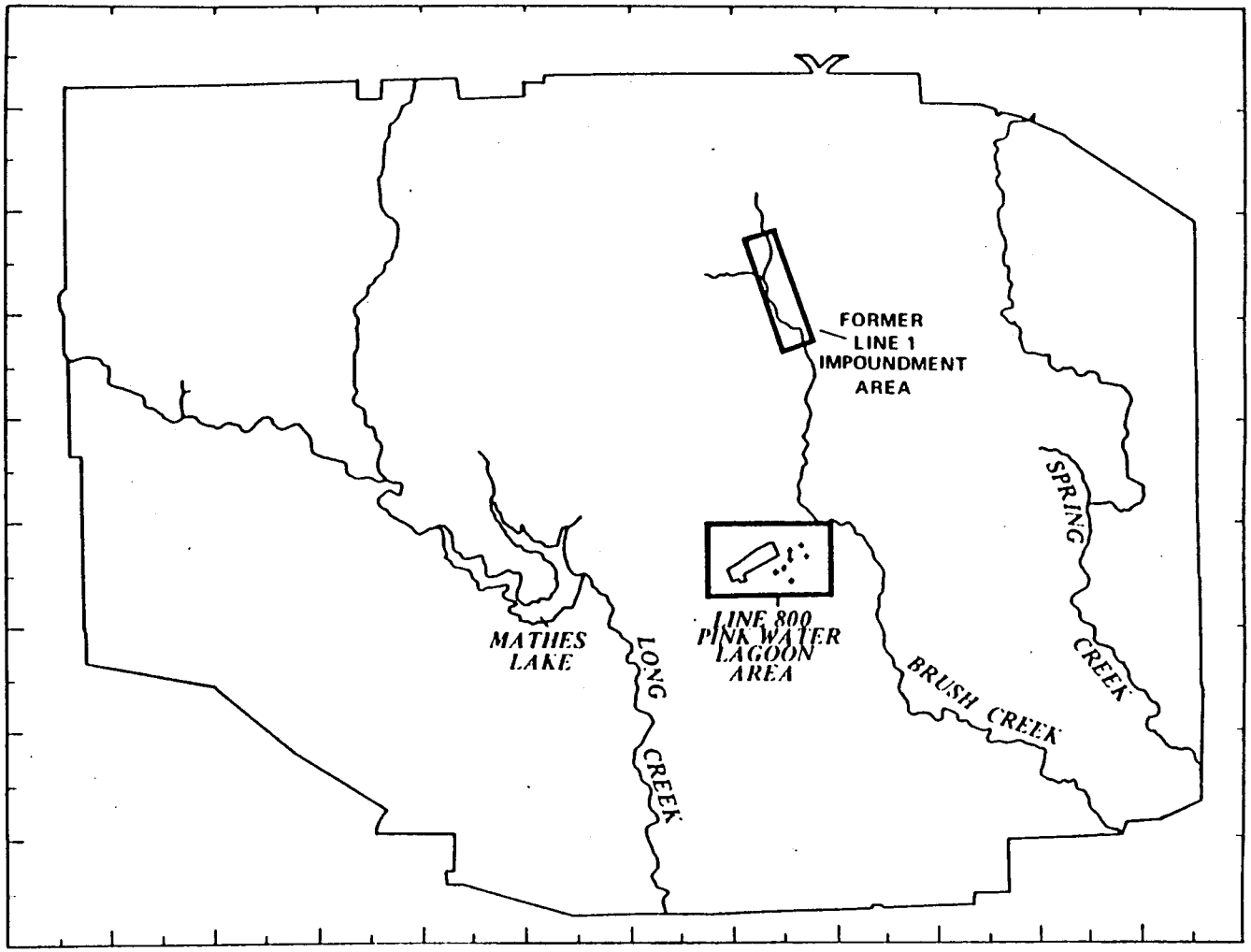

Figure 1.3-1
FORMER LINE 1 IMPOUNDMENT AND LINE 800 PINK WATER LAGOON AREAS

SOURCE: DAMES & MOORE, 1989.

Prepared for:
U.S. Army Toxic and Hazardous Materials Agency
Aberdeen Proving Ground, Maryland

further work (discussed later in this section) would be necessary to define the impact of current surface water discharges on contamination within the Brush Creek drainage system. Continued monitoring of the wells at the Line 800 Pink Water Lagoon was recommended to confirm the possibility of groundwater contaminant migration at this area.

In response to a congressional inquiry concerning potential contamination of an offsite domestic drinking water well, the U.S. Army Environmental Hygiene Agency (USAEHA) conducted an investigation of groundwater contamination at IAAP from March through May 1985. The scope of this investigation primarily involved collection and analysis of groundwater samples from 7 onsite wells in the vicinities of the 2 study sites and from 31 offsite residential wells. This investigation concluded that contaminant sources at IAAP were not affecting offsite wells. USAEHA recommended future monitoring of all perimeter wells and further investigation of known sources of contamination at IAAP.

Studies performed by Dames & Moore from September to October 1985 confirmed the presence of RDX and HMX contamination in shallow groundwater at the Former Line 1 Impoundment. RDX was detected in surface water in Brush Creek downstream from the Former Line 1 Impoundment. Low levels of copper, selenium, and silver were detected in surface water samples from Brush Creek. A broader range of explosives -RDX; 2,4-dinitrotoluene (DNT); 2,6-DNT; 1,3,5-trinitrobenzene (TNB); and 2,4,6-TNT)- were detected in the surface water at the Line 800 Pink Water Lagoon. Copper was also detected.

An Endangerment Assessment (EA) to assess present and future risks at the Former Line 1 Impoundment and Line 800 Pink Water Lagoon Areas was conducted by Dames & Moore from September 1985 to July 1989. Estimates were made of human exposure to contaminants of concern by current and

future pathways that included consumption of deer that drink contaminated water and feed on vegetation growing in areas of contaminated soil, dust inhalation by IAAP maintenance personnel, consumption of beef and dairy products from cattle that drink water from Brush Creek, dermal contact with surface water and sediments by children with access to Brush Creek south of the IAAP boundary, and consumption of groundwater from potential future shallow offsite wells along Brush Creek.

In conjunction with the EA, a feasibility study (FS) to evaluate and recommend remedial action alternatives for the Former Line 1 Impoundment and Line 800 Pink Water Lagoon Areas was conducted by Dames and Moore from September 1985 to August 1989. Based on RDX and DNT contamination levels found at the two areas, remedial action criteria were established to meet EPA's target cancer risk levels of 10 -4, 10 -5, and 10 -6. These risk levels were selected as a basis for both the EA and the FS, because EPA has historically considered a risk range of 10 -4 to 10 -6 in mandating regulatory actions for site cleanup.

Separate analyses of remedial action alternatives were conducted for each of those three risk levels, as appropriate. After identification and screening, remedial action alternatives for each site were identified based on effectiveness, implementability, and cost criteria. Following regulatory review, these alternatives will be presented to the public before a final Record of Decision (ROD) is made.

In April 1988 a Federal Facilities Compliance Agreement defining responsibility for managing RCRA units was signed by IAAP and EPA Region VII.

An assessment to evaluate contamination at the IAAP service station site (Petroleum Leak/Spill Area) was conducted by Dames & Moore from June 1989 to March 1990. Results from groundwater, surface water, soil, and sediment samples revealed localized hydrocarbon and aromatic contamination

in the soil and shallow groundwater. Semiannual monitoring of the ten wells is to be conducted by the installation for two years.

IAAP was designated as a proposed National Priorities List (NPL) site in July 1989. In August 1990, IAAP was listed as a final NPL site.

In 1989, IAAP applied for a 10-year hazardous waste management permit (RCRA Part B Permit) to operate 5 container storage units, 38 treatment tanks, and 2 incinerators. The operation of the hazardous waste management units is solely for wastes generated at IAAP, such as solvents,water containing heavy metals, waste explosives, and wastewater treatment sludges. A public meeting was held by EPA Region VII and IAAP in conjunction with the permit application. EPA approved the permit for IAAP on November 8, 1989.

In May 1990, drafting of an Interagency Agreement (IAG) between the Army and EPA was initiated. During the summer of 1990, negotiation sessions were conducted to finalize the terms and conditions of the IAG. Final signing of the IAG was completed in September 1990. The IAG became effective on December 10, 1990, after completion of the mandatory public review and comment period.

Several site closure operations have been completed at IAAP. Closure of the Inert Landfill Trench 5, conducted by the U.S. Army Corps of Engineers (USACE), Huntsville Division, was completed in September 1990. A clay cap covering the trench was installed to provide protection from surface water seepage at the site, thus minimizing the migration of contamination into shallow groundwater. Closure of the Line 6 Gravel Filter Bed, also conducted by USACE, Huntsville, was completed in August 1990. Soil near the filter beds and drainage trenches was excavated and transferred to an approved landfill, thus removing the confirmed source of contamination.

Additional environmental activities to support the IAG include the December 26, 1990, award of a contract to perform a comprehensive Remedial Investigation and Feasibility Study (RI/FS). All IAAP sites will be initially considered under this contract. The contractor, Jaycor from Vienna, VA, is responsible for conducting the RI/FS within the schedule mandated by the IAG. Completion of the entire RI/FS process is anticipated in 1995.

2.0 COMMUNITY BACKGROUND

2.1 COMMUNITY DEMOGRAPHICS AND EMPLOYMENT

IAAP is located in southeastern Iowa in the southern portion of Des Moines County, which borders Lee County to the south and Henry County to the west. The installation borders the town of Middletown and is approximately 6 miles west of Burlington, the county's most populated city, located on the west bank of the Mississippi River. (See Appendix A, Figure A-1)

IAAP is located on U.S. Highway 34, which runs east-west through Iowa, from Illinois to Nebraska. U.S. Route 61, which runs north-south on the western shore of the Mississippi River, is accessible 6 miles to the east in Burlington. The MacArthur Bridge on Highway 34 in Burlington spans the Mississippi River, connecting southeast Iowa with west-central Illinois.

Regional transportation needs are met by air, bus, and rail transportation services. The Burlington Airport, southwest of the city, provides freight and passenger services. Burlington Trailways and Hawkeye Express provide bus transportation throughout the region. Rail services are provided by Northern Burlington Railroad and AMTRAK.

Des Moines County had a 1985 (most recent available) population of 44,600. The current population of Burlington is estimated by the Burlington/West Burlington Chamber of Commerce to be approximately 29,500 and the Middletown population to be approximately 500. Additional communities near IAAP include, to the east, West Burlington (1980 (most recent info. available) population of 3,371); to the northeast, Mediapolis (1980 (most recent info. available) population, 1,685); to the northwest, Danville (1980 (most recent info. available) population 994) and New London (1990 (most recent info. available) population 2,043); and to the south, the small unincorporated

communitites of Augusta and Wever. Middletown, Danville, Wever, and Augusta are primarily rural communities, with IAAP being the largest single source of employment. Incorporated towns are governed by council/manager or council/mayor structure.

Located in Des Moines County, IA, IAAP's work force is dominated by residents of Middletown, Danville, New London, Mt. Pleasant, West Burlington, Burlington, and Ft. Madison. Some workers commute to IAAP from Illinois and Missouri. Due to its continuity of operations and consistently large payroll, IAAP has developed support from many business and community leaders. Also, since IAAP has been operational since WWII, numerous current and former workers residing in local communities have developed and maintained loyalty and identification with the installation.

The largest single source of personal income (over 28 percent or $167 million) in Des Moines County in 1987 (most recent info. available) was derived from manufacturing employment. The second largest source is income derived from dividends, interest, and rent (over 19 percent or $118 million). The third largest source of income derived from transfer payments (social security, veterans' and retirement benefits, entitlement programs, etc.), which constituted 13 percent, just under $80 million. Other income sources include business and personal services, 11 percent; retail trade, 7 percent; government employment, 6 percent; transportation and public utilities, 5 percent; wholesale trade, 3 percent; construction, 3 percent; farm production, 3 percent; finance, insurance, and real estate, 2 percent. Less than 1 percent of county personal income is derived from agricultural services, fishing, and mining.

Des Moines County's industrial base centers in diversified manufacturing that includes production of antenna systems, batteries, cattle and hog

feeders, safety paper, chemicals, cleansing compounds, desks, gypsum, electronic instruments and components, furniture, medium voltage switch gear, mattresses, millwork, oil, lubricants, paint, paper boxes, printing, spark plugs, industrial tractors, turbines, burial vaults, and potato chips. Regional agricultural crops include corn, soybeans, and pasture grasses. Beef and dairy cattle, hogs, and poultry are also raised on area farms.

As of April 1990, IAAP, the largest employer in Des Moines County, employed approximately 1,300 workers. Major regional industries in 1990 identified by the Burlington Area Development Corporation included:

Over 1,000 Employees
Mason & Hanger (Iowa Army Ammunition Plant)
JI Case

500 to 1,000 Employees
Burlington Medical Center
General Electric
Burlington Community School
Iowa Industries, Inc.

100 to 200 Employees
Burlington Basket Company
Wal-Mart Discount Store
Chittenden & Eastman Company
K-Mart Discount Store
Aldi Warehouse

200 to 500 Employees
Winegard Company
City of Burlington
Exide Corporation
LaMont Limited
Hy-Vee Stores
Antennacraft Company
Des Moines County
Southeastern Community College
Midwest Biscuit Company
Burlington Northern Railroad
U.S. Gypsum
Murray-Turbomachinery Corp.
Pzazz! Motor Inn
U.S. Post Office
"The Hawk-Eye"
Hope Haven Development Center

Des Moines County is served by numerous newspapers, including dailies such as the "Des Moines Register" and "Burlington Hawk-Eye" and weeklies such as the "Des Moines County News" and the "Shoppers Spree". Burlington radio stations include KBUR-AM, KGRS-FM, KDWD-FM, and KCPS-AM. KJMH-TV, Channel 26, in Burlington is the first television station to serve specifically the Burlington, Ft. Madison, Mt. Pleasant, and Western Illinois markets. Regional television viewers have access to Centel Cable TV, which provides 30 channels including network stations in the Quad City area of Davenport, Rock Island, and Moline.

Medical facilities include the 396-bed Burlington Medical Center, four intermediate care facilities (nursing homes), and the Mental Health Unit in Mt. Pleasant. The Southeast Iowa Homemaker-Home Health Aide Service, Inc. and Home Health Care provide home health services ranging from medical to protective and respite needs. Burlington also has two skilled nursing facilities, one at the Burlington Medical Center, and the other at St. Francis Continuation Care and Nursing Home Center.

Numerous public and private elementary and secondary schools exist throughout the county, including the K through 12 Danville Community School and 10 elementary, 4 middle, and 2 high schools in Burlington/West Burlington.

The Burlington Community School District is the ninth largest district in Iowa, with an enrollment of approximately 5,700 students. The Middletown School closed several years ago, and students from that town now attend school in West Burlington.

Southeastern Community College (SCC), located in West Burlington, offers a comprehensive 2-year program of studies including Arts and Sciences courses and vocational-technical training. Coursework also can be completed at the SCC campus for classes offered from Western Illinois University, St. Ambrose College, and Iowa Wesleyan College. Additional colleges and universities near Des Moines County include Iowa Wesleyan College in Mt. Pleasant; Knox College in Galesburg, IL; Western Illinois University in Macomb, IL; and Monmouth College in Monmouth, IL.

Regional recreational and social opportunities are diverse. Hunting for dove, quail, turkey, and deer is a popular regional sport, and lakes and the Mississippi River offer fishing for catfish, crappie, and bass. The Des Moines County Conservation Board manages the Starr's Cave Preserve and Geode State Park west of Burlington, which offers 1,573 acres of woodlands for camping and hiking.
Regional parks with picnic facilities include Crapo Park, Dankwardt Park, Perkins Park, Sunnyside Park, Mosquito Park, and Riverfront Park. Additionally, there are two public golf courses in the county and two bowling centers. Community Field, which seats 3,500, is the home of the Burlington Braves professional baseball team, which competes in the Class A Midwest minor league.

A major regional event that attracts visitors from Iowa, Illinois, and northern Missouri is the 6-day-long Burlington Steamboat Days and American Music Festival, which begins the second Tuesday in June each year. The activities include daily performances of country, rock, big band, rhythm and blues, and jazz on the Miller Outdoor Stage and Memorial Auditorium. Additional festival activities include fireworks, river cruises, the Shoquoquon Sailboat Regatta, and the Snake Alley Art Fair.

2.2 COMMUNITY INVOLVEMENT HISTORY

Since its initial development as Iowa Ordnance Plant in 1940, IAAP has been a major source of employment for workers in southeastern Iowa. Despite fluctuations in the work force during wartime and peace, IAAP continues to be a a major contributor to the economy of Des Moines County with a work force of 1,300 military and civilian staff. However, due to the presence of other major industries in Burlington and the isolation of IAAP from large population centers, the major impact of the installation to the regional economy is not always readily apparent.

Due to the complexity of IAAP's mission and past media coverage of environmental issues, local citizens are aware of and in many cases concerned about environmental and public health impacts possibly due to past IAAP production practices. In particular, residents living adjacent to IAAP have voiced concerns about the quality of surface water flowing from the installation, the possibility of contamination of private wells from on-post environmental problems, and damage to property from IAAP testing activities. The Army has continually conducted environmental studies to assure public health and well-being.

Interaction with local residents and citizens of neighboring communities consists of formal and informal contacts. Since many of the past and current environmental studies require the installation and sampling of groundwater monitor wells along the IAAP perimeter, there is frequent contact between environmental staff and perimeter neighbors. During the past studies, private wells of many residents living near IAAP have been sampled. Public scrutiny and interest in the studies intensified in 1985 when it was announced that high levels of methylene chloride, trichloroethane, and acetone were present in some samples. Test results coincided with a local family's claim that

numerous family members' health problems may be linked to IAAP contamination. Consequently, some residents questioned the accuracy and effectiveness of IAAP environmental management practices. The Iowa Department of Water, Air, and Waste Management assisted in evaluating well samples from the family's wells and concluded family problems did not appear to be related to environmental contamination. Nonetheless, suspicion of Army environmental monitoring programs continues among some perimeter residents.

As part of the formal community involvement program regarding environmental issues, public meetings have been conducted at the Burlington City Council Chambers. Two local citizens attended the most recent public meeting conducted on October 25, 1989, in conjunction with an application for a RCRA Part B permit.

Additional interaction with IAAP and local communities and citizens is frequent and diverse. The public is allowed access to on-post lakes for fishing, and special permits are issued for deer and turkey hunting on the installation, at the discretion of the Commander Officer. In addition, potential hunters are required to attend a plant safety and security briefing. Boy and Girl Scout troops use the Mathes Lake recreational site, owned and maintained by the Army, for camping. The public also has access to the IAAP Recreation Hall for diverse social activities, including wedding receptions, private parties, and employee reunions. A bike route has been established across plant property for special biking events. Armed Forces Day features an open house with military displays provided by state Army Reserve and National Guard units and exhibits of materials produced at IAAP. As part of the event, a tour of the installation is provided, with guests riding flatbed rail cars pulled by an IAAP locomotive. Armed Forces Day is considered a major regional event by many local residents.

As part of Army Energy Awareness Week, IAAP sponsored an art contest in local schools for students to depict energy awareness and conservation creatively. Students participating in the contest toured the plant. In conjunction with the Burlington/West Burlington Chamber of Commerce Quality Days, IAAP hosted an open house for 75 regional business leaders and exhibited methods of quality control in ordnance production.

The IAAP commander is personally active in the Burlington Kiwanis Club and participates in Memorial Day observations with local military service clubs. He has also been a guest on Burlington radio station KBUR talk shows. Military and Mason & Hanger employees are active in civic and professional groups. The current president of the Burlington School Board is an IAAP employee.

Radio and newspapers provide frequent news coverage of IAAP events, including Armed Forces Day activities and change-of-command ceremonies, which receive live radio coverage. Mason & Hanger also provides input to the "Burlington Hawk-Eye" financial/business sections.

Formal tours of the installation are provided to U.S. Congressional delegations. Local elected and civic leaders are also invited to participate in the congressional visits. Special briefings and tours are also periodically provided for city and county officials representing surrounding towns and governmental units. Figures 2.2-1 and 2.2-2 present a news story of a regional mayors' visit to IAAP and the agenda of the visit. Other news stories published since 1985 that involve environmental issues are presented in Appendix C.

US ARMY ARMAMENT MUNITIONS CHEMICAL COMMAND
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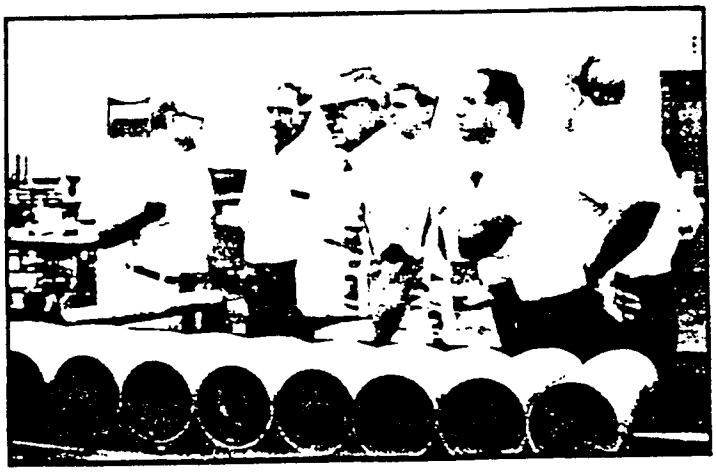
VOLUME 33 NUMBER 16 26 AUGUST 1988



Mayors Visit IAAP

Fifteen city and county officials representing the surrounding area visited the Iowa Army Ammunition Plant for an orientation meeting and tour through parts of the plant. The tour, conducted by LTC Jack Conway, Commanding Officer; Captain Wayne W. Johnson, Executive Officer; and Pete A. Richardson, Division Manager, Mechanical, visited parts of Line 1, the Explosive Waste Incinerator, Contaminated Waste Processor, Sewage Treatment Plant (Pink Water Lagoon) and Test Fire.

Mayors attending were Lowell Bauer, Burlington; Bob Summers, West Burlington; Arlan Walker, Middletown; Goldie Albright, Danville; Mike Foster, Ft. Madison and City Council Member Duane Griggs representing New London. City Managers attending were Sam Coxson, Ft. Madison and Richard Wardenburg, West Burlington. County Supervisors representing Des Moines County were Dale Anderson, Joe Beckman and Phil Rappenecker. Frank Mohrfield represented Lee County. Others attending were Ed Farley, Civil Defense Director, Mt. Pleasant; Clayton Fulknier II, Executive Director, BADCO and Tony Burton, Executive Assistant, Chamber of Commerce.

A primary purpose of the visit was to discuss environmental concerns and problems, and show the officials what we are doing to manage the environment. The officials were pleased and have expressed appreciation for the opportunity to learn more about our plant.

Save Your Blood

On October 5 the Mississippi Valley Regional Blood Center (MVBC) will set up equipment at the IAAP Rec Hall so that all plant employees will have an opportunity to donate blood. We are asking all current blood donors and those interested in donating blood to wait until October 5 so that everyone can participate in the IAAP blood drive. MVBC provides all transfusion needs for our community. Additional information will follow at a later date.

Dry Weather Alert

It is an extreme concern to all employees to be alert in the existing dangers of fire at this installation. The long and hot dry spell that we have been experiencing has increased the hazards of fire to the extent that each plant resident and each plant employee need be on watch for anything that could kindle a fire. It only takes one small spark, one almost extinguished cigarette or paper match, one welder spark or a very warm catalytic converter on an automobile parked in a grassy area.

Each person within the confines of the Iowa Army Ammunition Plant is urged to take extreme caution with anything that could possibly cause an unseen spark or in any way be able to start a fire.

Maintenance workers using torches and welders should first wet down the working area and proceed with extreme care while working with any flame-producing devices and/or equipment. The area should be checked periodically while working and as soon as the use of the torch/welder is completed. Engineers working with subcontractors should stress the need for the same procedures to be followed as with the maintenance worker. Another final check should be made before leaving and it is suggested the same area be wetted down again as a final precaution.

Don't Forget Your Keys

The Plant Protection Division wants everyone to be aware of "Keys to Security," the monthly newsletter discussing security problems and/or issues. Security is a priority concern here at IAAP and "Keys to Security" is an easy way for everyone to keep up on the latest security news. This month's issue discusses the issuing and termination of Personnel Security Clearances and will be posted on all IAAP bulletin boards. Don't forget to read this month's issue of "Keys to Security," your monthly security newsletter.

Figure 2.2-1
"THE EYE" (FRONT PAGE), MAYORS' VISIT, AUGUST 26, 1988

SOURCE: MASON & HANGER, 1990.

Prepared for:
U.S. Army Toxic and Hazardous Materials Agency
Aberdeen Proving Ground, Maryland

AGENDA

for the visit of

MAYORS AND COUNTY OFFICIALS

15 July 1988

1300	Arrive at the Iowa Army Ammunition Plant
1305	Welcome and Briefing
1345	Depart for Tour of Line 1 (RAAM)
1400	Tour Line 1 (RAAM)
1500	Tour Building 1-70-1 and former contaminated area
1520	Drive around Explosive Waste Incinerator, Contaminated Waste Processor and Sewage Treatment Plant with stop at the "Pink Water Lagoon"
1540	Depart for Test Fire Site
1550	Observe Test Fire of Warhead
1610	Return to Administration Area with a Drive Past the Monitoring Wells at the Inert Landfill
1625	Guest Departure

Figure 2.2-2
AGENDA FOR VISIT OF MAYORS AND COUNTY OFFICIALS, JULY 15, 1988 (page 1 of 2)

SOURCE: IAAP, 1990.

Prepared for:
U.S. Army Toxic and Hazardous Materials Agency
Aberdeen Proving Ground, Maryland

PARTICIPATING PERSONNEL

VIP's

Lowell Bauer	Mayor of Burlington
Bob Summers	Mayor of West Burlington
Duane Griggs	City Council Member Representing Mayor of New London
Goldie Albright	Mayor of Danville
Arlan Walker	Mayor of Middletown
Mike Foster	Mayor of Ft. Madison
Sam Coxson	City Manager of Ft. Madison
Richard Wardenburg	City Manager of West Burlington
Dale Anderson	Des Moines County Supervisor
Joe Beckman	Des Moines County Supervisor
Phil Rappenecker	Des Moines County Supervisor
Frank Mohrfield	Lee County Supervisor
Ed Farley	Civil Defense Director of Mt. Pleasant
Clayton Fulknier II	Executive Director, BADCO
Tony Burton	Executive Assistant, Chamber of Commerce

IOWA ARMY AMMUNITION PLANT

LTC Jack D. Conway	Commanding Officer
CPT Wayne W. Johnson	Executive Officer
Leon Baxter	Industrial Engineer
Darlene Norton	Administrative Officer

MASON & HANGER-SILAS MASON CO., INC.

Peter A. Richardson	Acting Plant Manager
James M. Farren	Division Manager, Operations
Darl J. Heffelbower	Division Manager, Management
Earl L. Garrels	Production Supt., Line 1
Edward A. Place	Test Fire Supt.

Visitors will be provided with safety glasses and protective footwear. Tour guides will assure compliance with safety regulations.

Figure 2.2-2
AGENDA FOR VISIT OF MAYORS AND COUNTY OFFICIALS, JULY 15, 1988 (page 2 of 2)

SOURCE: IAAP, 1990.

Prepared for:
U.S. Army Toxic and Hazardous Materials Agency
Aberdeen Proving Ground, Maryland

Participants in the April 1990 public involvement survey indicated IAAP enjoys a broad base of community acceptance and support. With continued groundwater monitoring, additional studies, and remediation occurring at numerous IAAP sites, interaction between the Army, private citizens, community leaders, and the media can be expected to continue and intensify. Activities to assist in developing and expanding the IAAP public involvement program are identified in Section 3.0.

2.3 COMMUNITY INTERVIEW PROGRAM

To identify community attitudes and concerns regarding IAAP environmental studies and remedial activities related to contamination of groundwater, surface water, and soils/sediments, USATHAMA, Environmental Science and Engineering (ESE), and IAAP representatives conducted community surveys on April 10, 11, and 12, 1990. The surveys involved input from 28 persons, including 11 residents of properties adjacent to IAAP boundaries; 2 members of the IAAP work force, 1 of which was a union member and 1 a governmental employee; 3 residents of IAAP housing units; residents and local officials of nearby towns; a local pastor; and an Iowa state senator. Interviews were coordinated by the IAAP PAO and the IAAP Industrial Engineer.

A summary of the responses to interview questions is provided in this section.

Question 1

An environmental study is being conducted at the Iowa Army Ammunition Plant (IAAP). Have you heard about this study? If so, do you remember when and how you learned of it?

Summary of Responses

Twenty-three of the 28 survey participants were knowledgeable of environmental studies taking place at IAAP and, in many cases, had acquired information from several sources.

Collectively, the primary source of information for IAAP studies was newspaper stories in regional media (11), with most persons reading the "Burlington Hawk-Eye" or the "Des Moines Register." IAAP employees also learned of the studies through the contractor's employee newsletter "The Eye", and by reviewing environmental reports. Local residents gained information from conversations with IAAP plant workers; IAAP workers and perimeter residents learned of the studies by observing groundwater well drilling and sampling and studies taking place at IAAP. Housing area residents received information from town meetings and letters sent to housing area residents.

Question 2

Have you talked with Army, state of Iowa, or EPA officials about the environmental study ongoing at IAAP?

Summary of Responses

Twenty-one of the survey participants had not sought information from the Army, the state of Iowa, or EPA. Five persons interviewed had asked for information from the Army. One resident of property next to IAAP had requested information from the Army and the Iowa Health Department. An Iowa state senator had sought information from DNR regarding groundwater monitor wells being installed along the IAAP perimeter.

Question 3

If you have, were they responsive to your concerns?

Summary of Responses

Five persons seeking information regarding IAAP environmental studies stated the agencies contacted had been responsive to their requests. Two survey participants said the Army had not satisfactorily responded to their questions or requests for information.

Question 4

Do you have any special interests or concerns about IAAP?

Summary of Responses

All 11 of the survey participants living adjacent to IAAP had one or more concerns regarding activities at IAAP. Seven of the residents stated noise and vibration to their home from testing at IAAP are concerns. One person stated she felt cracks in the foundation of her home were caused by explosive detonations at IAAP. Another resident feared that vibrations from plant testing activities may damage the hard drive on his personal computer. Citizens in Danville are also concerned about noise and vibration from testing at IAAP.

Four of the residents stated that hunters allowed to use IAAP properties are irresponsible in their actions and fire deer slugs toward their homes and barns, endangering property and personal safety of perimeter residents. They said that fewer hunters should be allowed onto IAAP and closer scrutiny of hunting activities of those using plant properties should be provided. It was noted, however, that a controlled thinning of the IAAP deer herd had eliminated most crop and property damages caused by the animals. Two residents also mentioned that area goats and dogs are dying from cancer and large tumors exist in their livestock. They stated they observe large numbers of sick wild animals in the area of their farms and fear the illnesses are caused by exposure to contaminants possibly at IAAP.

Four residents expressed concerns that surface water flowing from IAAP may be contaminated and may adversely affect off-post streams and lakes. One person said he remembered a fish kill at Anderson Lake, which he felt was caused by surface runoff entering the lake from lands sprayed with herbicides. He said he wants the Army to monitor carefully the quality of surface waters to safeguard regional recreational fishing. Two residents also questioned the accuracy and frequency of the Army's sampling of groundwater monitor wells and stated they do not trust the analytical reports of the tests and said the "...Army's credibility is low." One resident noted his home well had been sampled by the Army and he would appreciate being told of the results. Two residents stated they are concerned that their personal health may be endangered from surface and groundwater contamination.

Two perimeter residents said they had observed "black clouds from burning" at IAAP and would like to know what is being burned at the installation and why burning is practical there. One resident also expressed concern that property values may have decreased because of environmental problems at IAAP.

Survey participants also had other concerns. One on-post resident said her heater sometimes emits smoke, and another resident said she would like to have the quality of her home water tested since the water smells when it first flows from the taps. An IAAP worker stated she is concerned about work place ventilation and health hazards related to work materials. A local school officials noted there is a high cancer rate in southeast Iowa, and the disease is a major community concern. An area business leader stated the Army is a good neighbor and he wants the community to feel comfortable with the presence of the plant. He said the plant is needed by local communities and that it is essential to prevent an "...us and them mentality" from developing in the area.

Five persons interviewed had no special interests or concerns regarding IAAP.

Question 5

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

Summary of Responses

Nineteen survey participants said concerns relating to IAAP had been expressed to them, and nine persons said IAAP environmental concerns had never been mentioned by anyone. The concerns expressed fall into three general categories: surface and groundwater contamination, noise and vibration, and various.

Nine of the eleven local residents stated neighbors or friends had talked to them about one or more environmental issues related to IAAP. Five of the residents said concerns regarding the quality of surface water leaving IAAP, specifically in Brush Creek, had been expressed to them. It was noted that many years ago the water in Brush Creek was red as it flowed from the installation. Although the red-water flow has ceased, residents said memories of the water coloration heightened sensitivity to the water quality issue. One person said he remembers the red waters caused local raccoons to become "reddish-white."

Five of the residents stated concerns had also been expressed to them regarding the quality of drinking water from private wells. Two persons interviewed noted that several years ago a family had claimed the Army had contaminated their well and that media coverage of the incident had caused perimeter residents to be concerned about the safety of their water. Two residents of IAAP housing units said nieghbors had expressed concerns about quality of drinking water in the housing area. Several local officials and perimeter neighbors

noted that concerns regarding noise and vibration from testing activities at IAAP had been expressed to them.

Other concerns were also expressed by survey participants. An IAAP employee said fellow workers have expressed concerns about workplace ventilation, and another worker said a neighbor had stated he is concerned about smoke from installation burning. One housing area resident said concerns regarding the possible health hazards from radon in the home had been expressed to her. A local official said concerns have been expressed regarding high levels of radium in drinking water and that some citizens believe it is caused by activities at IAAP. A regional business leader said economic concerns expressed to him included the role of the plant in the regional economy and that possible plant layoffs worry local residents since IAAP is the county's largest employer.

Question 6

If you have a question or concern, what would you do? Is there someone you would call?

Summary of Responses

Survey participants said they would contact a variety of people if they had a questions or concern. Local residents stated that they would contact the IAAP commanding officer. Of the perimeter residents who were interviewed, four said they would contact the IAAP commanding officer; two would contact the PAO; two would contact Patty Thompson, an Army employee and neighbor; one would contact his godfather, who is a former Army employee at IAAP; and two did not know of anyone to contact.

One plant worker said she would contact her foreman and another worker said she would contact Leon Baxter of the Army's environmental staff. The three IAAP housing unit residents who were interviewed

stated they would seek information from Owen White, the IAAP Housing Manager. Other contacts included Bob Reid, a division manager at Mason & Hanger; Floyd Laue, an environmental scientist with Mason & Hanger; "the Army staff"; the post office in Middletown; and the IAAP guard headquarters.

Question 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?

Summary of Responses

All 28 survey participants said they want to be included in the Army's mailing list to receive environmental information regarding IAAP.

Question 8

Other than the mailing list, what other ways can IAAP provide you with information?

Summary of Responses

Newspapers--All 28 survey participants regularly read the "Burlington Hawk-Eye." Additional newspapers read by survey participants include the "Des Moines Register" (8), "Des Moines News" (2), "Mt. Pleasant News" (1), and the "Ft. Madison Democrat" (1). IAAP workers also read "The Eye," a publication produced by the Mason and Hangar staff.

Television--Survey participants primarily view the Quad City stations KWQC-TV, Channel 6, Davenport, IA; WHBF-TV, Channel 4, Rock Island, IL; and WQAD, Channel 8, Moline, IL. Additional stations viewed include KJMH, Channel 26, Burlington, IA, and KTVO, Channel 3, Kirksville, MO. Six survey participants do not watch television.

Radio--Twenty survey participants listen regularly to KBUR, Burlington, IA. Additional stations listened to by persons interviewed included KGRS, Burlington, IA; KDWD, Burlington, IA; KCPS, Burlington, IA; KILJ, Mt. Pleasant, IA; KBKB, Ft. Madison, IA; WOC, Davenport, IA; and WHO, Des Moines, IA. Four persons interviewed do not listen to radio.

Information Repository--All persons surveys said public access to environmental study reports would be useful and was desired. The Burlington Public Library, already in use as a repository for IAAP reports, was identified by thirteen survey participants as a suitable location for study reports. IAAP workers and housing unit residents suggested reports be placed in the IAAP recreation hall, lobby area in Building 100-101, plant
clinic, or rotate among the IAAP Change Houses in the different production areas. Danville officials suggested reports be placed in the Danville City Hall, Danville Library, or Danville State Savings building. New London officials said the New London Town Hall or New London High School would be practical locations for repositories. The post office in Middletown and the Augusta Town Hall were suggested as repository sites by two residents living on properties adjacent to IAAP.

Community Information Line--Twenty persons interviewed said the need existed for a community information line to IAAP to gain environmental information. Several people said the line may not be used frequently but should be available to the community. Eight persons said there is no need for a community information line.

Briefings at IAAP--Twenty-three survey participants stated briefings to IAAP would be useful and informative and that they would attend a briefing. It was suggested by one participants that briefings be held in both morning and afternoon sessions to allow shift workers to participate in the activity. An IAAP worker suggested the briefings be

incorporated into regularly scheduled safety meetings. Residents of IAAP housing units stated briefings could be part of town hall meetings conducted bi-annually for installation residents. A regional business leader suggested briefings be held on Tuesdays, Wednesdays, or Thursdays to avoid conflicts in work schedules.

Community Meetings (Suggested Time and Place)--Twenty-two persons interviewed said they would attend a community meeting about IAAP environmental studies and remedial actions. Suggested locations for the meetings included the IAAP Recreation Hall, Machinists Union Hall, Plumbers Union Hall, Augusta Town Hall, Burlington Council Chambers, Danville Community Building, New London Town Hall, New London High School, Southeast Community College, and area churches. A Danville resident said notices of meetings should be placed in the post offices in Middletown and Danville. One person emphasized that public meetings are effective only if properly planned and presented, and diverse methods of communication, including visuals, should be used in the meetings. Six persons said community meetings would not be a practical method for them to receive information. One person noted meetings are too frequently dominated by activists and needed information is not effectively presented.

Informal Community Group Workshops--Fifteen survey participants said informal workshops were not a practical method of public involvement, eight said they would attend and participate in workshops, and five persons had no opinion on the subject. A business leader noted that workshops can be effective but only when specific goals are being sought.

Other--Residents living adjacent to IAAP said the Army needs to develop a citizen involvement activity that will allow more interaction between residents and the Army. Two perimeter residents said more

news releases on environmental actions at IAAP are needed. A local pastor suggested that the Army provide speakers to discuss environmental management at parish council meetings.

An IAAP employee said environmental documents should be rotated among the Change Houses so documents could be reviewed by workers during their lunch breaks. It was noted workers are in a hurry to go home after work
and would seldom visit the IAAP main lobby area to review the documents. It was further suggested that information dissemination should be integrated into regularly scheduled activities, such as safety meetings, to provide maximum distribution of information with least interference to work or after-work recreational and family time.

A resident of IAAP housing stated information should be directly distributed to the on-post housing units. Another resident suggested environmental information could be presented at the housing unit Town Hall meetings or included in The Eye, the plant publication of Mason and Hanger.

Local officials mentioned various ways of spreading information, to include placing information flyers in the Danville post office where community notices are posted, in local banks, and in the Danville City Hall. Two other officials suggested that the local cable television service broadcast IAAP briefings or public meetings.

A regional business leader stated the IAAP commander and PAO's direct and personal interaction in the community is an essential method of communication. He said being part of a team and interacting with public groups presents the Army in a personal forum. He emphasized the Army should use Armed Forces Day activities to gain community exposure and suggested developing an environmental management exhibit for use at the Des Moines County Fair or Westland Mall.

Question 9

How do you receive your drinking water? Private well? Community well? City water? Bottled water? Other?

Summary of Responses

Nine of the survey residents living on properties adjacent to IAAP receive their drinking water from private wells. Two perimeter residents interviewed had drinking water trucked to their property and stored in tanks.

Residents of IAAP housing units receive water from the installation water system. Survey participants from Middletown, Danville, New London, West Burlington, and Burlington receive drinking water from city water systems.

Question 10

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

Summary of Responses

Survey participants suggested that several groups, organizations, or individuals be added to the IAAP mailing list and be provided environmental study fact sheets, news releases, and notifications of public meetings and the placement of documents into information repositories. Addresses of these individuals and groups have been included in Appendix K, Mailing List.

Question 11

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

Summary of Responses

Survey participants mentioned a wide variety of items. Residents of homes adjacent to IAAP stated they would like to know how the Army controls and monitors contaminants that may leave IAAP in surface water runoffs, specifically in streams. Groundwater monitoring was also mentioned as a concern. Residents said they wish to be informed of analytical reports of samples collected from groundwater monitor wells along the perimeter of IAAP. Two residents questioned whether the wells are being sampled at all.

Two residents said Army fences are not well maintained and their cattle sometimes enter installation property and are hard to locate and recover. A resident stated he is confused as to why the Army practices open burning that "causes black smoke over the plant." He said he is concerned that arsonists may create problems for IAAP and that lightning rods may exist at IAAP that seemingly attract frequent lightning strikes to the plant. A perimeter resident also asked if asbestos cleanup is occurring at the plant and where the asbestos is taken for disposal.

Concern was expressed about Army monitoring of soils leaving the installation. Two residents noted contractors from IAAP had provided dirt from the plant to a neighbor and nothing grows in the dirt. One perimeter resident said corn fields on plant property are sprayed with weed killer and pesticides and concern exists to whether wildlife may be harmed eating the corn. A Danville resident noted the IAAP deer herd still creates significant crop damage to farms adjacent to the installation and that the Army should "get rid of the deer."

A resident of the IAAP housing area voiced concern about the risk of acquiring Lyme disease from ticks in the woods at IAAP. Another IAAP housing resident said she would like to see a recycling program implemented at IAAP.

A school official said the Danville school is starting environmental science classes and Army environmental staff would be welcome speakers to the classes. He said the Army could have access to the school's bimonthly school newsletter to announce public meetings and to provide notification of the placement of study documents in area information repositories. It was also suggested that environmental information about IAAP be printed in church bulletins.

Survey participants also expressed favorable attitudes toward the Army and IAAP. One participant said he thinks the Army is a good neighbor to this community. One participant stated he thinks the Army is doing a good job with its programs. An IAAP employee stated the Army is improving in its sharing of information with the plant work force. A regional business leader stated the Army is "...doing an outstanding job of being a prominent and good citizen." It was noted that 75 members of the Chamber of Commerce participated in the Fall 1989 Quality Day tour of IAAP, and Army and Mason & Hanger staff made the visit a success. An Iowa state senator said, "The Army has beeen a terrific corporate citizen."

Question 12

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

Summary of Responses

Five survey participants said the community is very sensitive to environmental issues, six stated there is moderate interest in environmental matters, four stated environmental sensitivity is increasing, seven said the
community is not very sensitive to environmental issues, two said they "haven't worried much" about the environment, and four persons interviewed did not express an opinion on the subject.

2.4 COMMUNITY ISSUES AND CONCERNS

Interviews conducted by USATHAMA, ESE, and IAAP staff in 1990, revealed numerous concerns relating to environmental issues at IAAP. Similar concerns were expressed to an EPA survey team that prepared the November 1989 public involvement plan for IAAP in conjunction with a permit application for hazardous waste disposal.

The 1989 survey and the April 1990 survey indicated the primary concern of local citizens and officials was the impact to property from blasting occurring at IAAP as part of ordnance testing. Complaints were voiced that cracks in windows, walls, and foundations may be caused by vibrations from the testing. Noise was mentioned as intrusive.

Additional concerns expressed in the April 1990 interviews centered on the possible impact of contaminants in surface and groundwater on human, livestock, and wildlife health. Residents adjacent to IAAP stated red water flow in Brush Creek from IAAP in the 1950s heightened awareness of pollutants at IAAP that may leave the installation in surface water and runoff. Participants in both surveys mentioned that concerns about human health impacts from consumption of contaminated well water had been intensified because of claims made in 1985 that a local family's personal health problems may be caused by contamination at IAAP.

April 1990 survey participants stated that black smoke clouds from burning at IAAP were a concern. Several residents stated they desired more frequent information relating to the findings of groundwater monitoring activities at IAAP, specifically results from monitor wells along the perimeter of IAAP. Perimeter residents noted their property and personal health are endangered by deer hunters at IAAP who hunt close to property lines and frequently fire deer slugs from shotguns in

the direction of family residences. Crop and property damage from the IAAP deer herd was also noted.

An IAAP employee said work place ventilation is a concern, and a local city official said New London citizens are concerned that high levels of radium in city drinking water may be linked to environmental problems at IAAP.

Participants in the 1989 survey (which included six area residents and officials) expressed a general lack of understanding of and familiarity with the permitting process and believed local residents were also unfamiliar with the process. Several 1990 survey participants said they want more information on the permitting program, including specific information on IAAP's application and hazardous waste management practices. Another county official commented he would like to be briefed on environmental issues affecting the local population before such information is shared with the media. Briefings would help county officials be aware of potential environmental controversies and enable officials to prepare responses prior to dealing directly with the public on these issues.

An examination of regional newspaper stories published since 1985 about IAAP revealed that groundwater test results in April and May 1985 created community concerns when high levels of methylene chloride, trichloroethane,
and acetone were reported in samples collected in several monitor wells. Controversy was created when the validity of the sampling was questioned and the high levels were suggested as being a result of the method of laboratory analysis. Additional tests indicated contaminant levels were not as high as indicated in the previous samples. Two survey participants in the April 1990 interviews stated they continue to question the accuracy of groundwater monitoring, sampling, and

analysis and feel the Army lacks credibility in its environmental reports.

Environmental controversies also were evident in 1985 when the "Burlington Hawk-Eye" and the "Des Moines Register" printed stories in January and February regarding a family living on property adjacent to IAAP. Family members felt that many of their health problems were caused by their drinking private well water possibly contaminated by IAAP. June 1988 articles in the "Des Moines Register" reported that EPA visits to IAAP revealed serious waste disposal problems at the installation.

2.5 INSTALLATION PUBLIC AFFAIRS AND COMMUNICATION ACTIVITIES

IAAP's formal public affairs and communication activities are guided by IAAP's Commander and the PAO. Primary activities of the PAO include preparing and issuing news releases, responding to inquiries directed to the PAO for public response and action, coordinating and assisting in special activities such as Armed Forces Day and Memorial Day observations, scheduling and participating in news conferences regarding environmental events and issues, and coordinating and participating in tours and onsite briefings for community and governmental officials and groups. The Quarterly Public Affairs Report for Second Quarter 1990 is presented as Figure 2.5-1.

Members of the IAAP environmental engineering staff and appropriate plant contractor technical staff assist the IAAP PAO in preparing environmental news stories and releases. Additionally, the plant contractor employee newsletter, "The Eye," regularly prints news stories about the environmental management program, training courses, and environmental study findings. "The Eye" is published twice monthly and is distributed to all employees, military staff, residents

SMCIO-AO (360-61a) 9 April 1990

SUBJECT: Quarterly Public Affairs Report

FROM: CDR, IAAP, ATTN: SMCIO-AO

TO: CDR, AMCCOM, ATTN: AMSMC-IN

1. Reference E-Mail, AMCCOM, ATTN: IN01, 28 Mar 90, SAB.

2. Iowa AAP submits the Public Affairs for 2nd Qtr FY 90:

Part I: Significant Events:

a. Representatives from the Burlington, Iowa newspaper, The Hawk Eye, visited the IAAP to discuss noise that the IAAP produces at its test fire site. The visit was in response to a local columnist's article in the paper concerning our noise. We explained that the IAAP has had an Installation Compatible Use Zone (ICUZ) study done by the U.S. Army Environmental Hygiene Agency (USAEHA), and the study indicated no undesirable noise levels were emanating from the plant. We also cited a study conducted at McAlester AAP (MCAAP) to assess the effects of noise on local surroundings. The MCAAP study indicated that the closest private structures, 2.5 miles away, have not suffered damage due to blasting items having explosive weight up to 400 pounds. We also told them that USAEHA is planning to visit the IAAP to further document the ICUZ by obtaining noise data with instrumentation. We gave the representatives a tour of a production line and allowed them to witness a test fire. As a result of this visit, two articles were published in the 21 Jan 90 Sunday edition of the Hawk Eye. Both of the articles were generally positive.

b. On 27 Feb we hosted a meeting of representatives from the U.S. Department of Agriculture; Soil Conservation Service; State of Iowa Department of Natural Resources; Des Moines County Conservation Board; Corps of Engineers, Missouri River District; AMC Installation and Services Activity; AMCCOM IS directorate; and plant personnel. We discussed changes in the agricultural (AG) outleasing policies for the IAAP which will reduce soil loss and use of AG chemicals while furthering multiple use and enhancing the environment. One of the changes is to enforce crop rotation. This will mean fewer row crops and possible reduction in revenue from the leases. However, we feel the long-range effects on the environment at our installation will be very positive.

Figure 2.5-1
QUARTERLY PUBLIC AFFAIRS REPORT, APRIL 1990 (PAGE 1 OF 2)

SOURCE: IAAP, 1990.

Prepared for:
U.S. Army Toxic and Hazardous Materials Agency
Aberdeen Proving Ground, Maryland

c. BG William J. Schumacher visited the plant with over 40 members of the American Defense Preparedness Association (ADPA) and representatives from AMCCOM on 15 Mar. They received the plant briefing and toured our production and support areas. The briefing and tour were well received and resulted in positive public relations for the IAAP. The evening culminated in an ADPA-hosted dinner at the Burlington Country Club. BG Schumacher was the guest speaker for the dinner.

PART II: Main Issues: The main issues facing this command in the near future as relates to the media are to continue to address environmental issues and keep the community informed on employment levels during this time of decreasing resources.

PART III: This installation will be conducting numerous activities in conjunction with Armed Forces Day on 10 Jun 90. Projected activities include air assault, air defense and dog team demonstrations, a pellet van and weaponeer display, and a large uniform and medal display.

PART IV: Not applicable for this report.

PART V: None.

ROBERT B. REEVES, JR.
CPT, OD
Acting Commander

Figure 2.5-1
QUARTERLY PUBLIC AFFAIRS REPORT, APRIL 1990 (PAGE 2 OF 2)

SOURCE: IAAP, 1990.

Prepared for:
U.S. Army Toxic and Hazardous Materials Agency
Aberdeen Proving Ground, Maryland

of IAAP housing units, and community leaders. Figures 2.5-2 and 2.5-3 present sample environmental stories printed in "The Eye."

Installation residents are informed of IAAP activities and events at biannual town meetings held in the spring and fall in the installation Recreation Hall, Building 500-116. The meetings are coordinated by the IAAP Housing Officer and include updates on environmental studies, guidelines for home safety practices, and a question-and-answer session with the IAAP commander and staff. A town meeting agenda and information handout for residents are presented as Figures 2.5-4 and 2.5-5.

Additional informal public affairs activities occur with involvement of IAAP employees in numerous local and regional religious, social, civic, and professional organizations. Past and current IAAP commanders have been active in civic clubs and have been speakers at club meetings. Also, since the public is allowed access to the IAAP Recreation Hall and outdoor recreational and hunting areas, there is regular interaction between IAAP staff and workers and the residents of local communities. Intense information exchange occurs informally between IAAP staff and local citizens.

2.6 TECHNICAL ASSISTANCE GRANTS

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 TAGs is available at the information repositories listed in Appendix G, or information may be obtained by writing to: U.S. Environmental Protection Agency, Region VII, 726 Minnesota Avenue, Kansas City, KS 66101, (see Figure 2.6-1, Superfund Technical Assistance Grants).

Spill control practice

Some IAAP employees may have witnessed what they believed to be a motor vehicle accident involving spillage of hazardous waste from barrels. This was a staged event - only a simulated training exercise. No one was actually hurt and there was no hazardous waste actually spilled.

The scenario was set for a practice (Spill Prevention Control & Countermeasures) exercise. Army and RCRA (Resource Conservation & Recovery Act) requirements were satisfied through the exercise.

Instructions and coordination for required action was prepared by Floyd C. Laue, Environmental Coordinator. Material simulating waste was actually colored water which was poured around the simulated accident scene to provide realism. Smoke bombs were used to simulate a fire, which could occur when volatile solvents are spilled in the immediate vicinity of motor vehicles.

No advance notice was given to emergency response teams. They arrived promptly and accomplished assignments efficiently and effectively. Ambulance personnel provided treatment to simulated injured; firemen controlled the simulated fire; security personnel controlled traffic; and the emergency spill response team soaked up simulated waste and cleaned up soaked sand and snow.

The IAAP's new "Emergency Spill Trailer" was utilized for the first time in this exercise. It is equipped with necessary materials and equipment needed for an oil or hazardous waste spill. The trailer contains sandbags, absorbent materials, burlap, coveralls, boots, gloves, respirators, and other equipment necessary to immediately control a small spill.

The simulated exercise provided training for personnel involved and demonstrated that the IAAP's emergency response teams were capable of handling an emergency situation should one occur.

Credit Union annual meeting

The annual business meeting of the IOP Federal Credit Union will be held January 26th, 7:00 p.m., at the IAAP Recreation Hall. Drawings will be held for cash prizes. Free liquid refreshments will be served after the meeting.

NEW
IOP CREDIT UNION
PHONE NUMBER

7654

USE THIS NUMBER
FROM IN-PLANT ONLY!

IOP FEDERAL CREDIT UNION - HERE TO SERVE YOU
HOURS: 8:30 AM - 5:00 PM MONDAY thru FRIDAY

Dan retire

DAN BIED

A retirement party, held for Dan Bied, long-time editor of The Eye, on Thursday, November 19, was attended by his wife Millie, Mrs. John Jamison and his many friends at IAAP. Cards and a gift of "Cold Cash" (packed in dry ice) presented by John Jamison were received by Dan (as any former Safety Inspector should do) wearing gloves. John reminded Dan that he had started his Mason & Hanger career in 1949 as a Forklift Operator at $1.36 an hour. Dan spoke of his many years at IAAP, those he worked with in the Safety Department and that he felt fortunate to pick his time of leaving as many are unable to, due to poor health, etc. He mentioned that retirement was a highlight in his life as had been his marriage and discharge from service. He also spoke of how he began his writing career and of his enjoying the many people he had worked with through the years. Refreshments were served by Joan Wright and Nita Eden, Security and Safety Departments. His retirement was on Friday, November 20, 1987.

50th anniversary celebrated

Former employee John Crowner and wife Anna will celebrate their 50th wedding anniversary on Saturday, January 23rd. A party will be held at the Knights of Columbus Hall at 6:00 p.m. and all friends and relatives are invited to attend.

Figure 2.5-2
"THE EYE" (INSIDE PAGE), JANUARY 15, 1988

SOURCE: MASON & HANGER, 1990.

Prepared for:
U.S. Army Toxic and Hazardous Materials Agency
Aberdeen Proving Ground, Maryland

US ARMY ARMAMENT MUNITIONS CHEMICAL COMMAND
IOWA ARMY AMMUNITION PLANT

the eye

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VOLUME 34 NUMBER 1 13 JANUARY 1989

Asbestos Hazard Classes Taught At Rec Hall

Asbestos Worker and Contractor/ Supervisor Training courses, approved by the Environmental Protection Agency (EPA), for Asbestos Hazard Emergency Response Act (AHERA) compliance were attended by twenty-one Army and M&H employees at the Rec Hall in December. The courses, taught by Greg Corder, Training Center Manager for Hall-Kimbrell Environmental Services, consisted of three and four days of classroom and hands-on training followed by an exam at the end of the three days, plus an additional day of classes and exam for Supervisors.

In learning the clean-up and disposal of hazardous waste, the classes studied the characteristics of asbestos, medical aspects of asbestos exposure, respiratory protection, personnel protective equipment, personal hygiene and decontamination, bulk sampling and air monitoring and remediation methods. In addition, the supervisory classes studied respiratory protection and medical surveillance, recordkeeping for asbestos abatement projects, insurance and liability issues, supervisory techniques for abatement activities and reviewed federal, state and local regulatory requirements, procedures and standards.

Attendees and departments represented were as follows: Lynn A. Daniels, Army Safety Specialist; Richard Luttenegger, Plant Engineering; Thomas R. Noel, Nicholas Kieler, Rob Jones, Craig Holzmiller, Safety; Ralph W. Kitch, Terry L. Salisbury, Dale Shoemaker, Charles Rukgaber, Jim Lindquist, Donald Larr, Gary Stinson, Richard Krouse, Arlen Shofe, Art Dilsaver, C. D. Wolgemuth, John Pilger, Ron Wilkerson, Pipe Shop; Melvin Stansbury, Stan Heidbreder, Utilities.

New Officers For CEA

L. S. (Scott) Brodsky is the new CEA President-elect for the 1988-89 year. Vice President is Craig Osborn. The following were chosen as committee chairpersons: Concessions - Jeff Hibler, Promotions - Connie Hutchcroft; Youth Affairs & Activities - Loren Nihart; Bingo - Carolyn Nickell and Thomas Bailey; Recreation Hall - Craig Osborn, Steve Busse and Bruce Forsberg. The secretarial duties remained with Mary Lou Johnson and Annette Peterson is Treasurer.

Figure 2.5-3
"THE EYE" (FRONT PAGE), JANUARY 13, 1989

SOURCE: MASON & HANGER, 1990.

Prepared for:
U.S. Army Toxic and Hazardous Materials Agency
Aberdeen Proving Ground, Maryland

AGENDA
TOWN MEETING
10 OCTOBER 1989

OPENING REMARKS	LTC PETTERSON
POLICIES/ISSUES	LTC PETTERSON
PROJECTS	JUDI MORGAN
SELF-HELP	JUDI MORGAN
PM INSPECTION	JUDI MORGAN
RADON DETECTORS	NICK KIELER
FIRE PREVENTION & PROTECTION	CHIEF CANNON
ENERGY	RICHARD TIEMEIER
QUESTIONS & ANSWERS	

Figure 2.5-4
TOWN HALL AGENDA, OCTOBER 10, 1989

SOURCE: IAAP, 1990.

Prepared for:
U.S. Army Toxic and Hazardous Materials Agency
Aberdeen Proving Ground, Maryland

*** HOME FIRE CAUSES AND CURES ***

Even with a smoke detector, you can die in a home fire. Here are some ways to prevent fires from starting.

Smoke detectors can only warn you that a fire has started; they do nothing to prevent fires. We have come to rely on these electronic watchdogs, but at the cost of overlooking the basics of fire prevention: controlling sources of ignition, so that fires don't start, and controlling the fuels that feed them, so fires don't spread. To keep fires from starting we must begin by changing family habits.

Smokers in the family must obey a cardinal rule: No smoking in bed or when overly tired. The most common scenario for fire tragedy is a person falling asleep while smoking. Fire authorities state that as much as 30 percent of our home fire death toll can be blamed on careless smokers. Sleeping people don't necessarily wake up when they smell something burning. Many die, taking innocent family members with them.

Another scenario involves the smoker who awakens from a nap and goes to bed, unaware that his lit cigarette lies smoldering deep in the folds of his favorite upholstered chair. As the chair smolders, it emits deadly gases. By the time it burst into flames hours later, the family may already have died from the toxic gases. While smoking may be the No. 1 cause of residential fire deaths, heating and electrical equipment run a close second.

ELECTRICAL OVERLOADING

As modern technology enriches our lives with labor-saving, leisure-time and comfort-providing electrical appliances, we use more and more electricity. But can the electrical systems in our homes carry these added loads? Overburdening wiring with high-wattage appliances can cause the insulation to break down and eventually catch fire, which, in turn can spread to other combustibles. So, if fuses or circuit breakers frequently blow, or electric heat-producing appliances are slow to heat, or if three-way plugs and extension cords are part of you permanent wiring, you are overloading your system. Electrical appliances themselves can catch fire, either because they are inadequate to begin with or are not used or maintained properly. Always buy appliances that will do what is expected of them. Pushing them beyond their capacities not only shortens their lives but also sets up conditions for overloading and fire.

LOOK FOR THE LABEL

Whenever there is a choice, purchase an appliance that bears the Underwriters Laboratories (UL) or other recognized label. This label indicates that the product meets accepted standards for safety, that similar ones have been thoroughly tested, and that surprise inspectors and tests are conducted in the factory. Most appliances need air to cool them down to their ideal operating temperatures, even those motors that are intended to run "hot". Directions specifying clearances on all sides should be carefully followed.

Figure 2.5-5
SAFETY SUGGESTIONS FOR IAAP RESIDENTS HANDOUT, OCTOBER 1989 TOWN MEETING (PAGE 1 OF 2)
SOURCE: IAAP, 1990.

Prepared for:
U.S. Army Toxic and Hazardous Materials Agency
Aberdeen Proving Ground, Maryland

POLICIES/ISSUES -

PETS
MOTOR CYCLE REQUIREMENTS
CHILD SUPERVISION
GARDENS
PLAYGROUNDS

*** GARDEN PLOTS ***

FALL PLOWING OF GARDEN PLOTS. Expenditure of housing funds is not authorized for plowing of gardens however, we are going to try to get them plowed at no expense to the occupant if anyone is interested.

*** CHILD SUPERVISION ***

Discuss child supervision. Respecting neighbors. Playing in driveways.

*** PETS ***

ALL PETS ARE REQUIRED TO BE REGISTERED AND ALL PETS MUST HAVE RABIES VACCINATIONS. PETS MUST BE UNDER LEASH OR VOICE CONTROL. HOUSING OCCUPANT HANDBOOK CHAPTER 4 COVERS PETS.

*** PLAYGROUND ***

PLAYGROUND WILL BE RELOCATED BY SWIMMING POOL AS SOON AS FUNDING IS AVAILABLE.

*** MOTORCYCLE REQUIREMENTS ***

HOUSING OCCUPANTS HANDBOOK, CHAPTER 3, PAGE 3-3, PARAGRAPH 3-6.

Figure 2.5-5
SAFETY SUGGESTIONS FOR IAAP RESIDENTS HANDOUT, OCTOBER 1989 TOWN MEETING (PAGE 2 OF 2)
SOURCE: IAAP, 1990.

Prepared for:
U.S. Army Toxic and Hazardous Materials Agency
Aberdeen Proving Ground, Maryland

What They Are and How to Apply

Enacted in 1980, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)—otherwise known as "Superfund"—established a trust fund for the cleanup of hazardous waste sites in the United States. CERCLA was subsequently amended and reauthorized when Congress passed the Superfund Amendments and Reauthorization Act (SARA) of 1986. The U.S. Environmental Protection Agency (EPA), working in concert with the states, is responsible for administering the Superfund program.

In tandem with the roles played by federal and state agencies, an important aspect of the Superfund program is citizen involvement—at the local level—in decision-making that relates to site-specific cleanup actions. For this reason, community outreach activities are under way at each of the 951 sites that are presently on, or proposed for listing on, the National Priorities List (NPL). The NPL is EPA's published list of the most serious abandoned or otherwise uncontrolled hazardous waste sites nationwide, identified for possible remedial cleanup under Superfund.

In addition to regulatory and legal requirements, decisions concerning cleanup initiatives at NPL sites must take into account a range of technical considerations. These might include analytical profiles of site-specific conditions, the nature of the wastes involved (as determined in chemical analyses), and the kinds of technology available for performing the necessary clean-up actions. In planning and implementing site-specific clean-up efforts, EPA and the states seek comments from citizens who live near these sites and therefore have a vested interest in cleanup actions being considered.

Clearly, an understanding of the technical issues concerning a hazardous waste site in their locality helps citizens provide thoughtful, informed comments to government decision-makers considering proposed Superfund actions. Recognizing the importance of community involvement, and the need for citizens living near NPL sites to be well-informed, Congress included provisions in SARA to establish a Technical Assistance Grant (TAG) Program intended to foster informed public involvement in decisions relating to site-specific cleanup strategies under Superfund.

The TAG program provides up to $50,000 to community groups for the purpose of hiring technical advisors to help citizens understand and interpret site-related technical information for themselves. Congress and EPA have established certain basic requirements concerning the proper use of TAG funds by a recipient group. For example, the group must provide 35 percent of the total costs of the project to be supported by TAG funds and must budget the expenditure of grant funds to cover the entire clean-up period (which averages six years). Congress has also stipulated that there may be only one TAG award per NPL site at any one time.

Who May Apply

As stated in the 1986 Superfund amendments, groups eligible to receive grants under the TAG program are those whose membership may be affected by a release or threatened release of toxic wastes at any facility which is listed on the NPL, or proposed for listing, and at which preliminary site work has begun. In general, eligible groups would be groups of individuals who live near the site and whose health, economic well-being, or enjoyment of the environment are directly threatened.

Applications are encouraged from community groups having a genuine interest in learning more about the technical aspects of a nearby hazardous waste site and that have, or intend to establish, an organization to manage a grant efficiently and effectively. Such groups could be existing citizens' associations, environmental or health advocacy or similar organizations, or coalitions of such groups formed to deal with community concerns about the hazardous waste site and its impact on the surrounding area. (Also, any group applying for a TAG must be incorporated under applicable state laws for the purposes covered by the grant.)

Groups that are *not* eligible for grant funds are:

- Potentially responsible parties: any individuals or companies (such as facility owners or operators, or transporters or

Figure 2.6-1
SUPERFUND TECHNICAL ASSISTANCE GRANTS
(PAGE 1 OF 4)

SOURCE: EPA, 1989.

Prepared for:
U.S. Army Toxic and Hazardous Materials Agency
Aberdeen Proving Ground, Maryland

generators of hazardous waste) potentially responsible for, or contributing to, the contamination problems at a Superfund site.

- Academic institutions.
- Corporations that are not incorporated for the specific purpose of representing affected individuals (in relation to the Superfund site).
- Groups established and/or sustained by governmental entities (including emergency planning committees and some citizen advisory groups).

Uses Of Technical Assistance Grants

In general, grant funds may be used to hire technical advisors to increase citizen understanding of information that already exists about the site, or that is developed during the Superfund cleanup process. Acceptable uses of these grant funds include payments to technical advisors for services such as:

- Reviewing site-related documents, whether produced by EPA or others.
- Meeting with the recipient group to explain technical information.
- Providing assistance to the grant recipient in communicating the group's site-related concerns.
- Disseminating interpretations of technical information to the community.
- Participating in site visits, when possible, to gain a better understanding of cleanup activities.
- Traveling to meetings and hearings directly related to the situation at the site.

TAG funds may **not** be used to develop new information or to underwrite legal actions in any way, including the preparation of testimony or the hiring of expert witnesses.

A complete list of eligible and ineligible uses of grant funds can be obtained by contacting your EPA regional office or the headquarters information number listed at the end of this pamphlet. This information is also included in the EPA publication entitled *The Citizens' Guidance Manual for the Technical Assistance Grant Program* (OSWER Directive 9230.1-03), available from your regional EPA office.

Choosing A Technical Advisor

When choosing a technical advisor, a group should consider the kind of technical advice the group needs most and whether a prospective advisor has the variety of skills necessary to provide all of the advice needed.

Each technical advisor must have knowledge of hazardous or toxic waste issues, academic training in relevant fields such as those listed below, and ability to translate technical information into terms understandable to lay persons. In addition, a technical advisor should have experience working on hazardous or toxic waste problems, experience in making technical presentations and working with community groups, and good writing skills.

Some of the specific subjects that a technical advisor may need to be skilled in include:

Chemistry: Analysis of the chemical constituents and properties of wastes at the site.
Toxicology: Evaluation of the potential effects of site contaminants upon human health and the environment.
Epidemiology: Evaluation of the pattern of human health effects potentially associated with site contaminants.
Hydrology and Hydrogeology: Evaluation of potential contamination of area surface water and ground-water wells from wastes at the site.
Soil Science: Evaluation of potential and existing soil contamination.
Limnology: Evaluation of the impact of site runoff upon the plant and animal life of nearby streams, lakes, and other bodies of water.
Meteorology: Assessment of background atmospheric conditions and the potential spread of contaminants released into the air by the site.
Engineering: Analysis of the development and evaluation of remedial alternatives and the design and construction of proposed cleanup actions.

Figure 2.6-1
SUPERFUND TECHNICAL ASSISTANCE GRANTS
(PAGE 2 OF 4)

SOURCE: EPA, 1989.

Prepared for:
U.S. Army Toxic and Hazardous Materials Agency
Aberdeen Proving Ground, Maryland

A grant recipient may choose to hire more than one technical advisor to obtain the combination of skills required at a particular site. For example, a group may be unable to find a single advisor experienced in both hydrology and epidemiology, two of the skills most needed at its site. Another approach would be to hire a consulting firm that has experience in all the needed areas. EPA's *The Citizens' Guidance Manual for the Technical Assistance Grant Program* identifies other issues pertaining to hiring a technical advisor that community groups may find helpful.

How To Apply For A Grant

When applying for a TAG, a group must provide information to EPA (or to the state, if the state is involved in administering the TAG program) to determine if the group meets specific administrative and management requirements. The application also must include a description of the group's history, goals, and plans for using the technical assistance funds. Factors that are particularly important in this evaluation process include:

- The group's ability to manage the grant in compliance with EPA grant and procurement regulations.
- The degree to which the applicant groups' members health, economic well-being, and enjoyment of the environment are adversely affected by a hazardous waste site.
- The group's ability to inform others in the community of the information provided by the technical advisor.
- Broad representation of affected groups and individuals in the community.
- Whether the applicant group is incorporated for TAG purposes. (Only incorporated groups are eligible for grants.)

In general, a group must demonstrate that it is aware of the time commitment, resources, and dedication needed to manage successfully a TAG. Applicant groups should consult *The Citizens' Guidance Manual For The Technical Assistance Grant Program* for detailed instructions as to how such information should be presented.

The 1986 Superfund amendments state that only one TAG may be awarded per site at any one time. Thus, an applicant's ability to make technical assistance available to a large number of interested individuals in an affected community, broad representation of groups and individuals affected by the site, and plans for establishing procedures for disseminating a technical advisor's findings or interpretations of technical documents to the community are all important factors in the evaluation of applications. In general, applications submitted on behalf of more than one group will be evaluated more favorably than will other applications.

In an effort to ensure that all eligible groups have equal access to technical assistance and an equal opportunity to compete for a single available grant (if a coalition of groups proves to be impossible), EPA has established a formal notification process. Thus, groups wishing to apply for a technical assistance grant must first submit to EPA a letter of intent. If site project work is already underway or scheduled to begin, EPA will conduct either mailings, meetings, or public notices to provide formal notice to other interested parties that a grant for the site soon may be awarded. Other potential applicants then would have 30 days to contact the original applicant to form a coalition. If they are unable to form a coalition, they will notify EPA within this time period and separate applications from all interested groups will be accepted for an additional 30-day period. A grant would then be awarded to one of the competing applications, based on the evaluation criteria.

The maximum grant that can be awarded to any group is $50,000. The actual amount

Figure 2.6-1
SUPERFUND TECHNICAL ASSISTANCE GRANTS
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SOURCE: EPA, 1989.

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Aberdeen Proving Ground, Maryland

depends on what the group intends to accomplish. A group's minimum contribution of 35 percent of the total costs of the technical assistance project can be covered with cash and/or "in-kind" contributions, such as office supplies or services provided by the group. These services might include, for example, publication of a newsletter, or the time an accountant donates to managing the group's finances. The value of donated professional services is determined based on rates charged for similar work in the area.

In special cases where an applicant group intends to apply for a single grant covering multiple sites in close proximity to each other, EPA can allow a waiver of the $50,000 grant limit to reduce the administrative burden on the recipient group. In such cases, however, the recipient cannot receive more than $50,000 for each site to which they intend to apply funds (example: 3 sites x $50,000 = maximum grant amount of $150,000).

Where To Obtain Information

For further information on the application process or any other aspect of the TAG program, please contact an EPA regional office or call the national information number listed on the back page. An application package is available free by calling the EPA regional office for your State (see map on back cover). In addition to all the necessary application and certification forms, each application package includes a copy of *The Citizens' Guidance Manual For The Technical Assistance Grant Program*, which contains sample forms with detailed instructions for proper preparation of a TAG application.

EPA Regional Offices

EPA Region 1
JFK Federal Building
Boston, MA 02203
(617) 565-3424
Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, Vermont

EPA Region 2
26 Federal Plaza
New York, NY 10278
(212) 264-2515
New Jersey, New York, Puerto Rico, Virgin Islands

EPA Region 3
841 Chestnut Street
Philadelphia, PA 19107
(215) 597-9370
Delaware, Maryland, Pennsylvania, Virginia, West Virginia, District of Columbia

EPA Region 4
345 Courtland Street, NE.
Atlanta, GA 30365
(404) 347-3004
Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee

EPA Region 5
230 South Dearborn Street
Chicago, IL 60604
(312) 353-2072
Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin

EPA Region 6
1445 Ross Avenue
Dallas, TX 75202
(214) 655-2200
Arkansas, Louisiana, New Mexico, Oklahoma, Texas

EPA Region 7
726 Minnesota Avenue
Kansas City, KS 66101
(913) 236-2803
Iowa, Kansas, Missouri, Nebraska

EPA Region 8
One Denver Place
999 18th Street, Suite 1300
Denver, CO 80202-2413
(303) 293-1692
Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming

EPA Region 9
215 Fremont Street
San Francisco, CA 94105
(415) 974-8083
Arizona, California, Hawaii, Nevada, American Samoa, Guam, Trust Territories of the Pacific

EPA Region 10
1200 Sixth Avenue
Seattle, WA 98101
(206) 442-1465
Alaska, Idaho, Oregon, Washington

EPA Headquarters
401 M Street SW.
Washington, DC 20460
(202) 382-4454

Additional information about TAGs may also be obtained from:

Ms. Hattie Thomas
Office of Public Affairs
EPA Region VII
726 Minnesota Avenue
Kansas City, KS 66101
(913) 551-7762

Figure 2.6-1
SUPERFUND TECHNICAL ASSISTANCE GRANTS
(PAGE 4 OF 4)

SOURCE: EPA, 1989.

Prepared for:
U.S. Army Toxic and Hazardous Materials Agency
Aberdeen Proving Ground, Maryland

3.0 PUBLIC INVOLVEMENT PROGRAM

3.1 GOALS AND OBJECTIVES

The goal of the IAAP PIRP is to provide an effective mechanism for 2-way communication and the exchange of information among local communities; IAAP military staff, residents, and government/ammunition plant employees; the Army; and diverse federal, state, county, and local agencies. This PIRP has been designed to fulfill requirements of the following 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. Army Regulation 200-1, "Environmental Protection and Enhancement," and the U.S. Army Materiel Command (AMC) and AMCCOM supplements to the regulation.
4. EPA guidance and publications, including Public Involvement in the Superfund Program (WH/FS-86-004) and CERCLA compliance with other environmental statutes [Federal Register 50(29):5928-5932].
5. The EPA publication Community Relations in Superfund: A Handbook [Office of Solid Waste and Emergency Response (OSWER) Directive No. 9230.0-3B, June 1988 - Interim Version].
6. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

This PIRP 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 IAAP.
2. Keep local residents; IAAP military personnel, residents, and ammunition plant employees; and federal, state, county, and local officials informed in a timely manner of major findings and recommendations of the IRP.
3. Provide local community residents, IAAP residents, installation military personnel, and ammunition plant workers an opportunity to review studies and review and comment on remedial action alternatives.
4. Provide federal, state, and local regulatory officials an opportunity to review and comment on the studies being conducted at IAAP and on any suggested additional studies, remedial action alternatives, and decisions.
5. Keep IAAP and the Army sensitive to and informed about changes in community concerns, attitudes, information needs, and activities regarding IAAP and use these as factors in evaluating modifications of the PIRP, as necessary, to address these changes;
6. Effectively serve the installation's and neighboring communities' information needs and address citizen queries through prompt release of factual information through the media and other information dissemination techniques;
7. 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 and recommendations resulting from the IAAP IRP studies;

8. Maintain, through an active public affairs program, a climate of understanding and trust aimed at providing information and opportunities for comments and discussion;
9. 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;
10. Provide a single entity for dissemination of information for matters regarding the progress of the IRP and other environmental issues at IAAP; and
11. 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 communication activities suggested in Section 3.3:

1. Office of the Chief of Public Affairs (OCPA)--
   a. Approves press statements or visits concerning the IAAP 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 notification actions with OCLL as appropriate or required.
   c. Coordinates release of any IAAP program information at the national level with USATHAMA and AMC.
2. Office of the Chief of Legislative Liaison (OCLL), HQDA--a. Coordinates, with OCPA, notification of appropriate congressional delegations prior to national release of IAAP 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. Provides public affairs support for the IAAP PIRP, as needed.

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

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

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

5. Chief, Public Affairs Office, USATHAMA--

a. In coordination with AMC and AMCCOM, provides public affairs guidance and expertise to support the public affairs program at IAAP.

b. In coordination with AMC, AMCCOM, and IAAP, prepares statements, media releases, and fact sheets for use at major milestone achievements and during the progress of the IAAP 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 IAAP concerning the program.

e. Provides public affairs assistance to IAAP, EPA Region VII, IDNR, and local officials of communities near IAAP as required.

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

6. Commander, IAAP--

a. Responsible for implementation of the IAAP PIRP.

b. Reviews and approves news releases and fact sheets.

c. Provides final approval of any onsite tour of study areas.

d. As needed or requested, meets with local union presidents and/or at regular union meetings to discuss study activities and environmental issues relevant to IAAP work force, or selects staff member(s) to do so.

e. As deemed necessary by the commander, will meet periodically with employees, manager, and employee groups to keep employees informed of program developments and to address questions and concern.

f. Provides final approval of contents of materials being presented to civic group meetings and personally makes presentations or selects staff members to participate in or present the program.

g. Participates, as needed, in town meetings conducted for residents of IAAP housing units.

h. Participates in special briefings conducted for area civic and business leaders and elected federal, state, county, and community officials.

i. Participates in as-needed briefings to property owners and residents of lands adjacent to IAAP to be held in the IAAP Recreation Hall as a component of the Perimeter Neighbor Program. Provides final approval or selection of staff to participate in or present the briefings.

j. Approves development of a Citizen's Concerns and Liaison Committee and provides approval of Army staff to be included in committee activities and selects site for committee meetings.

7. PAO, IAAP--

a. Serves as the on-the-scene spokesperson and community Point of Contact for the IAAP program and responds to local, regional, and national queries using statements coordinated with AMCCOM and USATHAMA, or as provided in subsequent cleared statements or plans.

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

c. Coordinates with AMCCOM and USATHAMA all responses to queries concerning IAAP program matters that require release of information not previously cleared for release.

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

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

f. Provides USATHAMA and AMCCOM with information copies of all IAAP-released material and copies of newspaper clippings.

g. Coordinates congressional, gubernatorial, and media notifications through AMCCOM and USATHAMA.

h. Distributes fact sheets, reports, and other pertinent information to the public information repositories listed in Appendix G and to members listed in Appendices I, J, and

h. Also performs quarterly inspections of repositories to ensure materials are available and updated for public use.

i. Coordinates, with IAAP Industrial Engineer, responses to queries from public information line.

j. Provides to the plant contractor Manager and Personnel Director environmental fact sheets, copies of news releases, notifications of public meetings, results of well tests, etc., so relevant information can be provided to ammunition plant work force at regularly scheduled work place meetings and to new employees during their orientation.

k. Provides fact sheets, copies of news releases, and notification of public meetings to appropriate leaders of IAAP unions.

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

m. Plans and coordinates onsite tours of study sites and special briefings to elected community and county leaders.

n. On an as-needed basis, assists USATHAMA and/or the AMCCOM PAO in the preparation of fact sheets relating to the RI/FS.

o. In coordination with the IAAP Industrial Engineer and the IAAP Commander, prepares environmental news stories for "The Eye."

p. Coordinates the distribution of fact sheets, project updates, and notices of public meetings for placement on installation bulletin boards and to installation work areas and housing units.

q. Provides assistance to the IAAP Industrial Engineer in the preparation and distribution of any special memorandum or notice that requires delivery within 24 hours to IAAP residents and workers.

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

s. On an as-needed basis, participates in town meetings held twice yearly in the IAAP Recreation Hall for residents of installation housing units.

t. With assistance from the IAAP Industrial Engineer, coordinates and directs activities of the Perimeter Neighbor Program, including the maintenance of the mailing list, mailing updates of RI/FS activities, and coordinating the as-needed briefings for program participants at the IAAP Recreation Hall,

u. With assistance from the IAAP Industrial Engineer, administers and coordinates the activities and meetings of the Citizen's Concerns and Liaison Committee.

v. With assistance from the IAAP Industrial Engineer and appropriate contractor staff, prepares an environmental management exhibit for display at Armed Forces Day and various community events, on an as-needed basis.

8. Industrial Engineer, IAAP--

a. Responsible for coordinating with IAAP PAO appropriate and timely responses to environmental inquiries received on community information line.

b. Will assist in presenting or present environmental issues seminar or program at least once a year at a town meeting held for IAAP housing unit residents and similar programs, as requested, to regional civic, school, or church organizations.

c. Provides the contractor Plant Manager information regarding environmental actions that may impact worker safety so topics may be presented at quarterly safety meetings.

d. Participates, as needed, in the planning and implementation of community meetings.

e. Provides assistance to the IAAP PAO in planning and coordinating onsite tours of RI/FS sites and in providing special briefings to elected community and county leaders.

f. Assists, as needed, the IAAP PAO and USATHAMA in the preparation of fact sheets relating to the RI/FS.

g. With assistance, as needed, from the IAAP PAO and/or USATHAMA, provides environmental updates and news articles for use in "The Eye."

h. Assists the IAAP PAO in planning and implementing activities of the Perimeter Neighbor Program.

i. Assists IAAP PAO in coordinating and implementing activities of the Citizen's Concerns and Liaison Committee.

j. Assists IAAP PAO, as needed, in distribution of fact sheets and notices of community meetings to IAAP housing units.

k. Responsible for identifying environmental situations warranting the printing and distribution of special memoranda or notices to be provided to on-post workers and residents in a rapid response 24-hour timeframe. Responsible for the preparation of such notices, with assistance from IAAP PAO. Assistance in distribution of notices to be provided by appropriate plant contractor staff and IAAP PAO.

l. Provides at least 48-hour advance notice to commander and PAO of scheduled project activities that may occur in neighborhoods of adjacent communities and require interaction with area residents. Additionally, as in the past, provides advance notice to residents of scheduled events to occur near their homes.

m. Assists IAAP PAO in preparing an environmental management exhibit to be displayed at Armed Forces Day activities and appropriate community events.

n. Coordinates distribution to on-post housing units of special memoranda or notices regarding environmental issues that are relevant to IAAP residents.

In conjunction with the IAAP PIRP, EPA Region VII and IDNR are requested to:

1. Act as spokesperson on policy, procedure, or operations concerning their respective agency's programs relating to the IAAP program; and
2. Respond to media queries, as required, on their agency's involvement in the IAAP program and notify other involved agencies of responses and potential problem areas.

3.3 COMMUNICATION ACTIVITIES AND TECHNIQUES

The primary elements of success in a public involvement program are to develop an information network for relevant communications and a constructive mechanism for public participation in the program. To maintain, and enhance public involvement and to respond to changes in community concerns, the IAAP PIRP presents an active approach for identifying and addressing public concerns about environmental issues at IAAP. The PIRP will also allow continued public involvement during all phases of the investigation and cleanup process, including the RI/FS and the implementation of interim remedial measures (IRMs) as required by the study recommendations.

Essential to maintaining public trust is an on-line communication system by which relevant and accurate information is made available to local citizens, installation staff and residents, 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, and Appendix F presents a recommended schedule for some of these activities.

3.3.1 AGENCY COMMUNICATION TECHNIQUES

Various communication and interactions have occurred with federal and state regulatory agencies regarding the IAAP environmental and remedial action programs. IAAP and USATHAMA have met frequently with EPA Region VII and IDNR to review previous and ongoing assessment studies, identify additional study needs, and develop program schedules. These meetings are necessary for the successful completion of the IAAP program and will be continued as part of the PIRP. For the IAAP PIRP, the following agency communication techniques are recommended:

1. Project Status Meetings--Held periodically with representatives from IDNR and EPA Region VII to review project status, accomplishments, upcoming activities, and schedules.
2. Telephone Conference Calls--Held as needed to keep agencies informed of program activities.
3. News and Fact Sheet Releases--IAAP will provide EPA Region VII, IDNR, USATHAMA, AMCCOM, AMC and officials of Des Moines County and adjacent communities courtesy copies of environmental issue-related news releases at least 48 hours in advance of public release so that agencies can respond adequately to any public inquiries regarding the releases.
4. Prior Notice of Scheduled Community Meetings--When community meetings are scheduled as part of the PIRP, advance notice will be provided to all involved 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 Mason & Hanger workers at IAAP.

3.3.2 LOCAL COMMUNITY AND MEDIA COMMUNICATION TECHNIQUES

To date, communication with the local off-post community regarding the IAAP program has consisted of informal conversations with local residents during sampling of their private wells, formal community-wide surveys in 1989 (EPA PIRP) and 1990 (USATHAMA PIRP), interviews with local media, press releases, briefings and tours for elected officials and civic and business leaders, and responses to telephone inquiries directed to the IAAP PAO and IAAP Industrial Engineer by local residents. To expand communications and ensure effective two-way interactions between the Army and the local community, the following community relations communications techniques are recommended:

1. Community Information Line--To provide local citizens a direct means to obtain information or express concerns relating to environmental issues, a community information line should be established at IAAP. The community information line telephone number is (319) 753-7600, and the Point of Contact to coordinate responses to environmental inquiries is IAAP PAO Larry Johnson.

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 specifically directed to address the concerns of the adjacent property owners/residents and on-post employees and will include information on the status of the cleanup process at IAAP, updates on the schedule (i.e., notification of public meetings, well sampling events, etc.), and information on public health-related matters (i.e., relevant water quality criteria for surface and groundwater). Fact sheets should be sent out to all individuals on IAAP's mailing list (including those persons and/or organizations listed in Appendices D,E,I,J,K, and L), residents

participating in the offsite monitoring program, regulatory agencies, elected officials, and news media as newsworthy events occur. The fact sheets and copies of the releases should also be placed in the on-post and off-post information repositories. After the FS is completed, a fact sheet relating to the RI/FS process should describe the alternatives considered and offer the Army's preferred alternative for public comment. An updated fact sheet should 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 should advertise the community information line as a number to call if someone wants to add his/her name to the mailing list. A designated control person -the IAAP PAO, (319) 753-7600, or in that person's absence, the IAAP Industrial Engineer, (319) 753-7130- should be identified on all fact sheets, news releases, letters to the community, and public documents.

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

4. Information Repository/Project File--Repositories should be accessible to the public for review of all program-related reports, fact sheets, and other information on the IAAP program. Information repositories have been established at the Burlington Public Library, 501 N. 4th, Burlington, IA; Danville City Hall, 105 W. Shepherd, Danville, IA; and the IAAP Administration Building (Building 100-101), Middletown, IA.

5. Public Consultations/Community Meetings--IAAP representatives should be 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 IAAP Commander, PAO, Industrial Engineer, USATHAMA, or a regulatory agency as a useful means to disseminate information or assist the IRP process, workshops can be held at an accessible public building (i.e., IAAP Recreation Hall or Danville Community Building). 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 IAAP 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 IAAP Public Affairs Office should be 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 IAAP Public Affairs Office or IAAP Industrial Engineer and appropriate contractor officials.

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 comment informally through IAAP's Public Affairs Office or the Industrial Engineer's office. In compliance with federal requirements, a public comment period is provided when the draft FS report is issued. The public comment period will be 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 IAAP unions and workplace supervisors. Formal public meetings will be conducted in conjunction with the issuance of the proposed plan. Notice of the meeting will include announcement of the time and place of the meeting, brief description of the proposed remedial actions, identification of IAAP and IDNR contact persons, and locations of information repositories. Notification and advertisement of the public meeting will be implemented in the same manner as the announcement of the public comment period. Additional means to announce the public meeting may include providing notification fliers to the administration of Danville Community School for distribution to students to take home to parents. Additionally, the Burlington/West Burlington Chamber of Commerce has stated it will print notices of public meetings in its monthly publication (Burlington/West Burlington Chamber of Commerce address is 807 Jefferson St., Burlington, IA 52601).

10. Summary of Concerns and Responses--A responsiveness summary will be prepared after the public comment period. The summary will document 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 IAAP should be

reviewed, with emphasis on the specific RI/FS environmental actions. Appropriate speakers to review the objectives, studies, findings, and actions of the RI/FS may include the IAAP Commander, PAO, the Industrial Engineer, or persons identified by the IAAP Commander. Emphasis should be placed on appropriate presentations to environmental science classes at Danville Community School due to the proximity of many of the students' homes to the plant and interest expressed in community surveys for such presentations. A news release announcing the availability of speakers to make presentations to civic and school groups should be distributed to regional media. All speaking engagements will be coordinated by the IAAP PAO.

12. Perimeter Neighbor Program--Property owners of lands adjacent to IAAP should be mailed updates on groundwater and surface water contamination studies and remedial activities when deemed necessary by the IAAP commander. Briefings for these residents should be held as needed at the IAAP Recreation Hall, or other suitable location, to provide an open forum to discuss study findings, interim actions, and remedial alternatives. Participants in the meetings should include the IAAP Commander, PAO, Industrial Engineer, civilian contractor if appropriate, and staff deemed necessary by the IAAP Commander. Middletown and Danville officials, IDNR, and EPA may be invited as participants.

13. Citizen's Concerns and Liaison Committee--The IAAP PAO and the IAAP Industrial Engineer should form a Citizen's Concerns and Liaison Committee to assist IAAP in identifying and resolving community environmental affairs on an ongoing basis. The committee should be comprised of a member of on-post housing selected by the Housing Manager, a resident of Middletown appointed by the Middletown City Council, a resident of Danville appointed by the Danville City Council, a randomly selected resident of property adjacent to IAAP, and a local educator selected by the Superintendent of Danville

Community Schools. Additional committee members representing IAAP should include the IAAP PAO and Industrial Engineer and, if appropriate, a representative of the plant contractor. The committee should meet quarterly in the IAAP Headquarters conference room or wherever deemed appropriate by the IAAP commander and IAAP PAO.

14. Environmental Management Exhibit--A portable exhibit that presents an overview of environmental management activities at IAAP, including RI and cleanup activities, should be prepared. The exhibit should include photographs of sampling of monitor wells and cleanup actions and a map showing locations of IAAP perimeter groundwater monitor wells and locations where sampling of surface water occurs. Fact sheets should be available whenever the exhibit is used.

The exhibit may be used as part of IAAP Armed Forces Day activities and may be exhibited at other regional events, including the Des Moines County Fair.

3.3.3 ON-POST RESIDENTS AND EMPLOYEE COMMUNICATION TECHNIQUES

As of April 1990, approximately 123 on-post residents are living in 43 active housing units at IAAP, and 1,100 workers are employed by Mason & Hanger, the plant contractor, as ammunition plant workers. Additionally, two military staff, supported by a staff of 31 civilian workers, are assigned to IAAP. To ensure effective two-way communication between the Army and the on-post residents, civilian and ammunition plant workers, military staff, and local unions, the following command information communication techniques are recommended as part of the IAAP PIRP:

1. Commander's Call--The commander at IAAP will 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 Letter--Fact sheets announcing the status of site investigations, interim remedial actions, and remedial

alternatives/actions should be distributed to work area supervisors to distribute to employees at scheduled staff meetings or quarterly safety meetings, as deemed necessary by the IAAP Commander. Additionally, fact sheets should be distributed to the Change Houses in the nine production areas and IAAP dining areas. Fact sheets should also be provided to the Housing Manager for distribution to on-post residents and should be mailed to IAAP union leaders.

3. Contractor Newspaper Article/Editorials--Program-related news releases and articles should be provided to the Mason & Hanger newsletter, "The Eye," as deemed necessary by the IAAP Commander. Due to public and worker interest in environmental subjects, a designated column could be introduced in "The Eye" to address specifically issues of interest to workers and residents such as radon and asbestos sampling, on-post drinking water standards, etc.

4. Bulletin Boards/Posters--Fact sheets, articles, sampling results, and other pertinent information should be posted on easily accessible bulletin boards, including those in the Change Houses and dining areas.

5. On-Post Information Repository--All program-related information and reports should be available for review by employees in the IAAP Administration Building lobby area, Building 100-101.

6. Union Meetings and Publications--The IAAP commander, as needed or requested, should meet with local union presidents and/or at regular union meetings to discuss IAAP RI/FS activities and address questions and concerns relevant to IAAP workers. Relevant news releases and notices of public meetings should be mailed to the union presidents for requested use in union publications and newsletters.

7. Safety Meetings--Information regarding environmental actions that relate to worker safety and health could be made available by the IAAP Industrial Engineer to work area supervisors to present as topics of discussion at quarterly safety meetings.

8. Employee Information Packets--Environmental study fact sheets and notification sheets of the community information telephone line and location of the IAAP information repository should be made available by the PAO to the plant contractor Personnel Director so materials may be distributed to new employees during orientation activities.

9. Town Meetings--The IAAP commander and/or Industrial Engineer should present an environmental issues seminar or program at least once every 18 months or as needed as part of the town meetings held for residents of IAAP housing units. Meetings are coordinated by the commander and the IAAP Housing Manager and are held twice yearly (in fall and spring) at the IAAP Recreation Hall, Building 500-116.

10. Special Memoranda or Notices--If deemed necessary by the IAAP commander and the IAAP Industrial Engineer, notices of environmental actions can be produced and distributed within 24 hours to work areas and housing units at IAAP. Distribution of special notices to work areas will be coordinated with the Mason & Hanger plant manager, and distribution of flyers to housing units will be provided by the IAAP Housing Manager.

These techniques may be implemented depending upon the level of public interest and resources available.

REFERENCES

Demographic and Economic Data, Burlington Area Development Corporation, Box 1024, Burlington, IA 52601

Draft Final Feasibility Study Iowa Army Ammunition Plant: Former Line 1 Impoundment and Line 800 Pink Water Lagoon, August 1989. Dames and Moore, 7101 Wisconsin Ave., Bethesda, MD 20814

REM IV Remedial Planning Activities at Selected Uncontrolled Hazardous Waste Sites--Zone II, Environmental Protection Agency Hazardous Site control Division, Final Public Involvement Plant, Iowa Army Ammunition Plant, November 1989.

U.S. Army Toxic and Hazardous Materials Agency (USATHAMA), 1990. Fact Sheet, Iowa Army Ammunition Plant, Installation Restoration Division.

U.S. Army Corps of Engineers (USACE). Draft Environmental Impact Statement, Proposed RDX Facility for the Iowa Army Ammunition Plan. Huntsville Division. October 1989.

U.S. Environmental Protection Agency (EPA). 1989. Fact Sheet, Iowa Army Ammunition Plant, Middletown, Iowa. EPA Region VII.

APPENDIX A

SITE MAPS

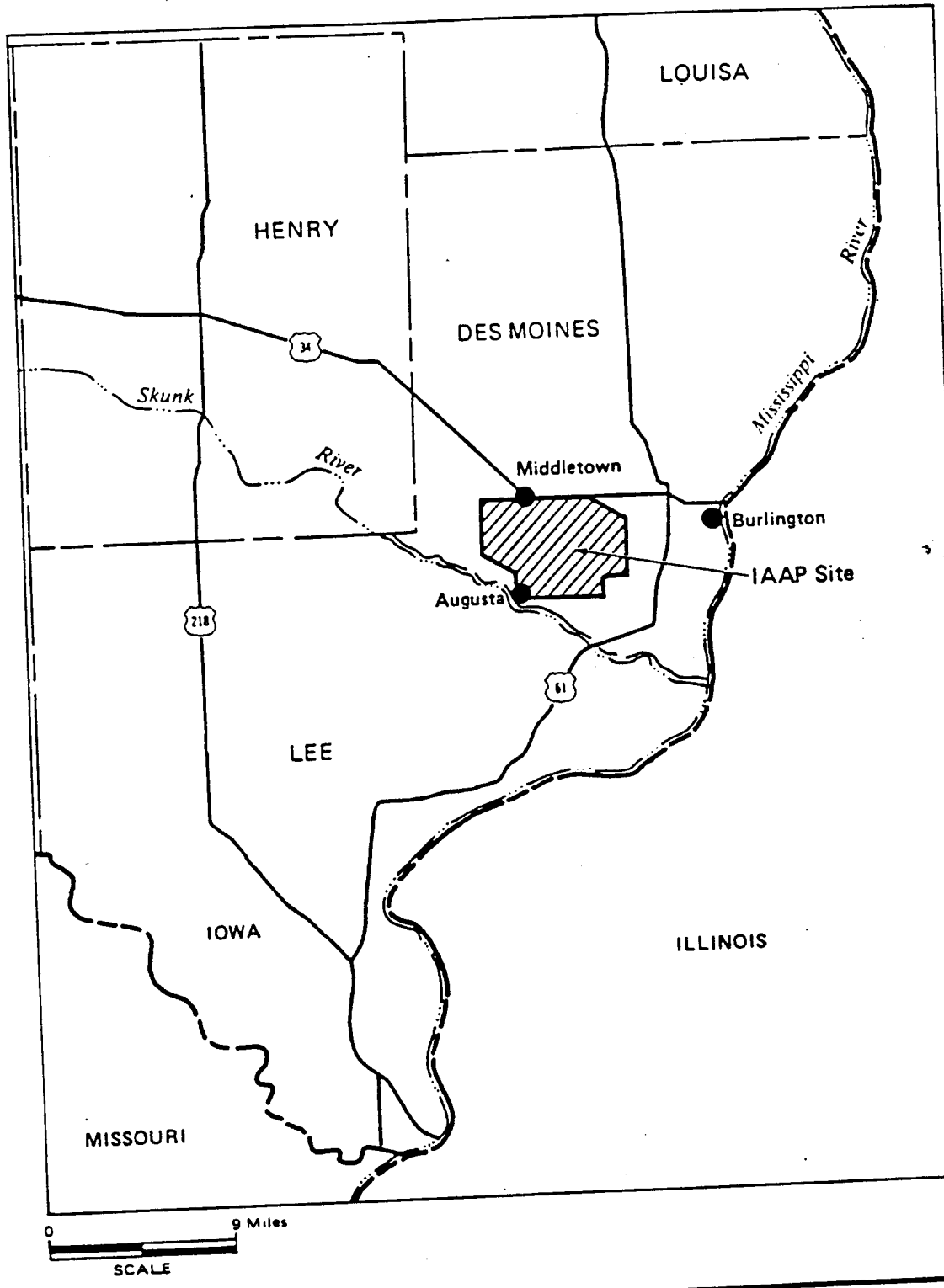

Figure A-1
LOCATION OF IOWA ARMY AMMUNITION PLANT

SOURCE: DAMES & MOORE, 1989.

Prepared for:
U.S. Army Toxic and Hazardous Materials Agency
Aberdeen Proving Ground, Maryland

Site Vicinity Map
Iowa Army Ammunition Plant
Middletown, Iowa

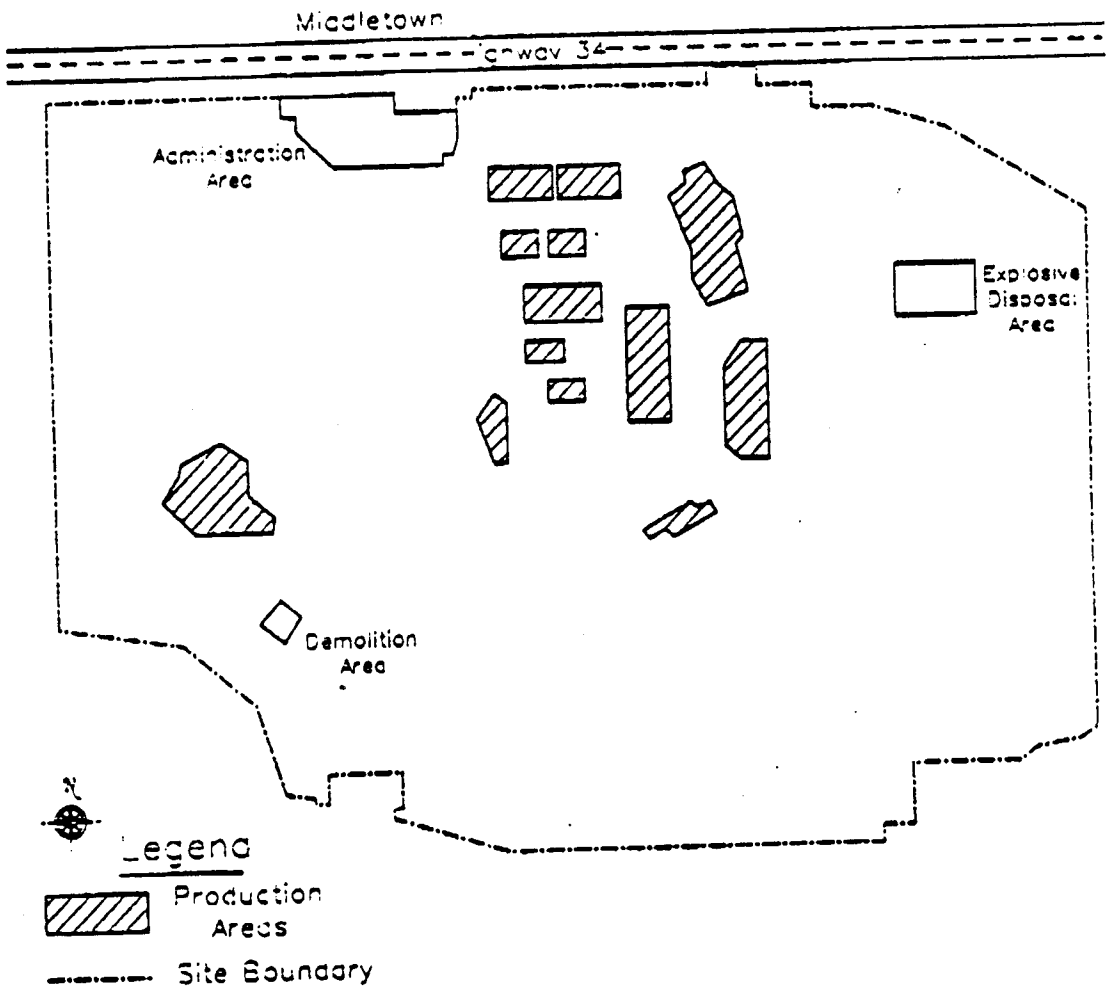

Figure A–2
SITE MAP OF IOWA ARMY AMMUNITION PLANT

SOURCE: EPA, 1989.

Prepared for:
U.S. Army Toxic and Hazardous Materials Agency
Aberdeen Proving Ground, Maryland

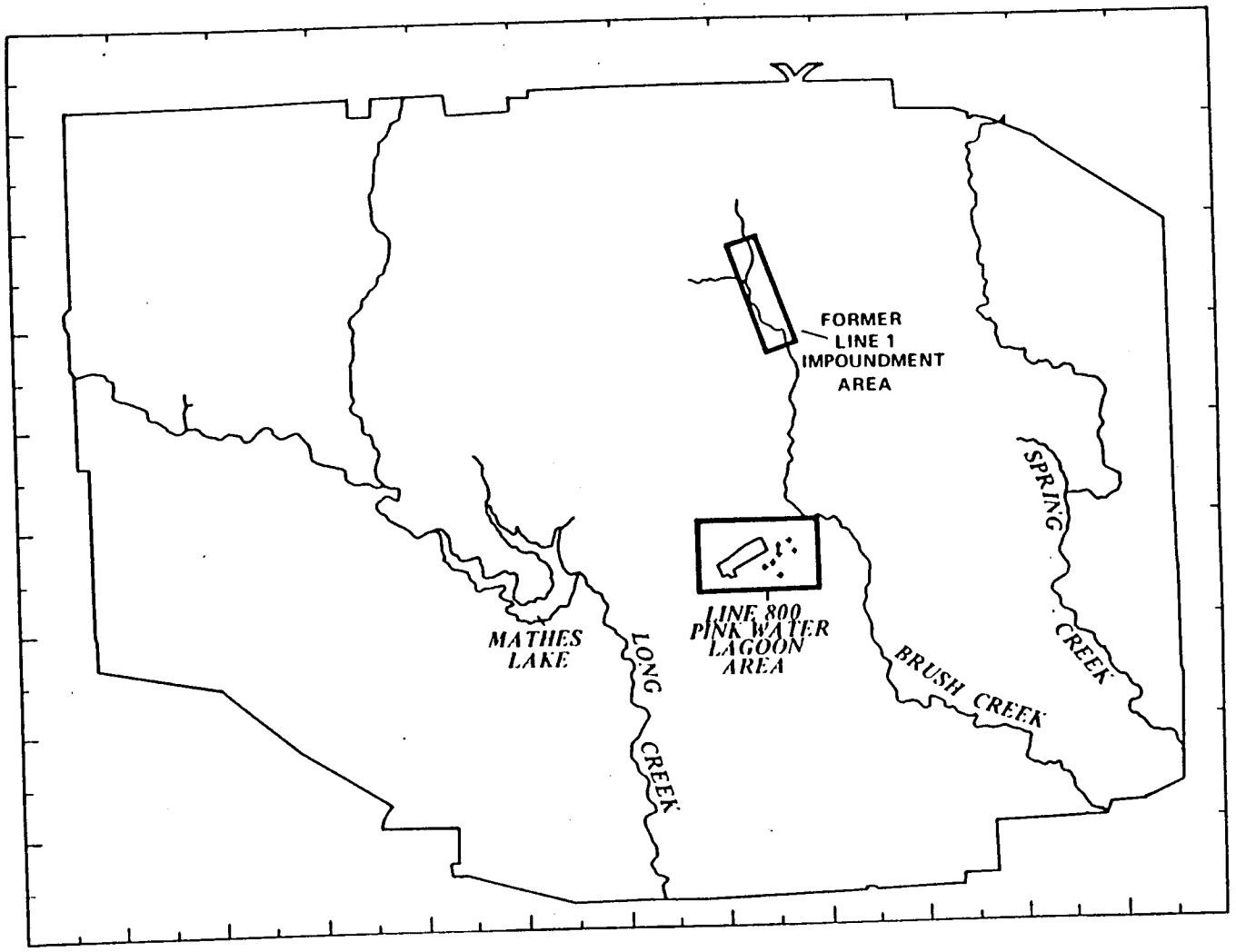

Figure A-3
INSTALLATION MAP SHOWING LOCATIONS OF FORMER LINE 1 IMPOUNDMENT AND LINE 800 PINK WATER LAGOON AREAS, IOWA ARMY AMMUNITION PLANT
SOURCE: DAMES & MOORE, 1989.

Prepared for:
U.S. Army Toxic and Hazardous Materials Agency
Aberdeen Proving Ground, Maryland

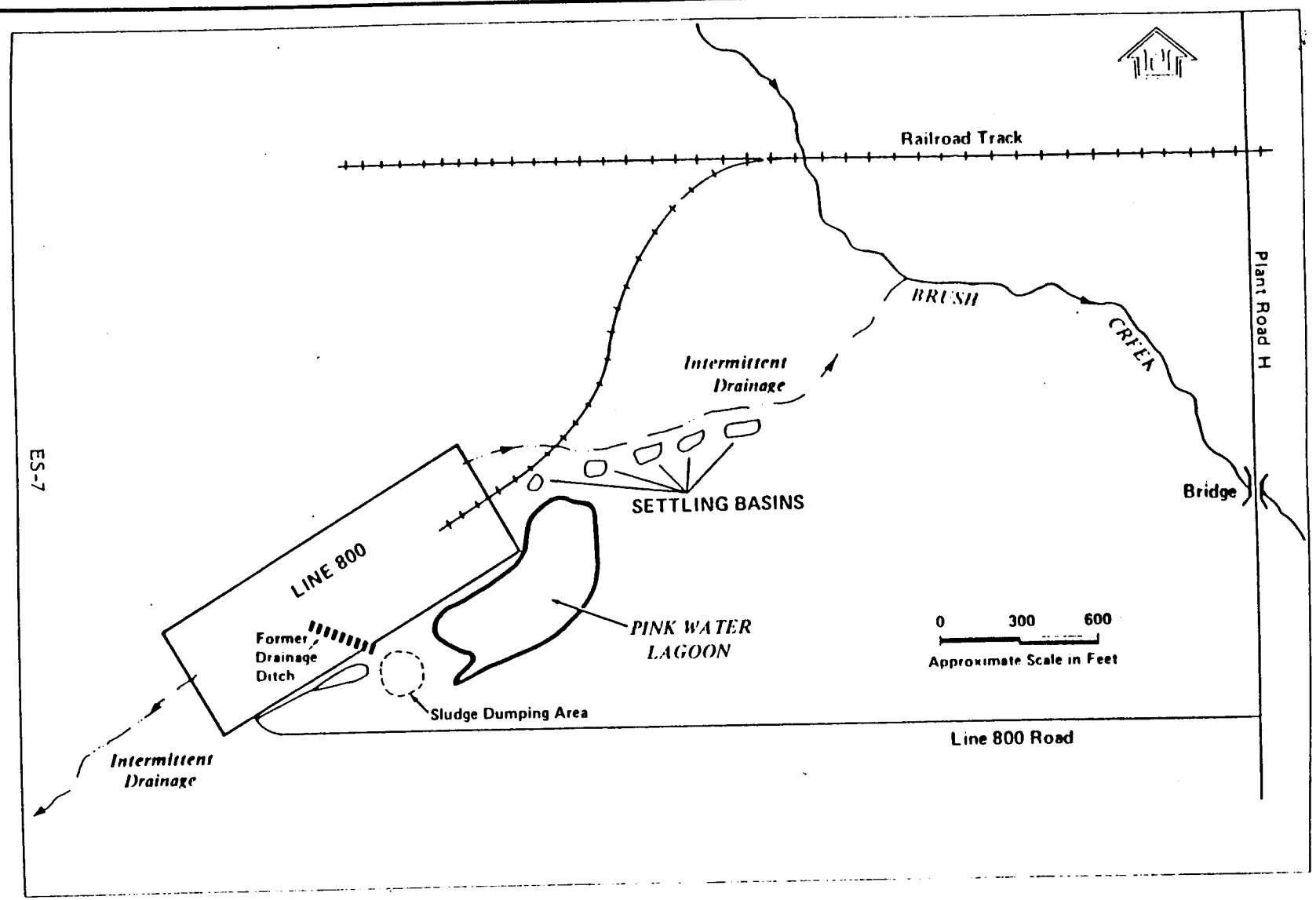

Figure A- 4
LINE 800 PINK WATER LAGOON AREA

SOURCES: DAMES & MOORE, 1989; AIRPHOTO, 1969; USGS TOPOGRAPHIC QUAD, 1976; BATTELLE, 1984.

Prepared for:
U.S. Army Toxic and Hazardous Materials Agency
Aberdeen Proving Ground, Maryland

APPENDIX B

FACT SHEETS, NEWS RELEASES, AND INFORMATION PAPERS

SMCIO-EN
14 February 1989

INFORMATION PAPER

SUBJECT: Iowa Army Ammunition Plant's (IAAP) Noise Abatement Program

1. Purpose. Outline the IAAP's and the Department of the Army's noise abatement program.

2. Facts.

a. The IAAP has an established program for abating noise emanative from the IAAP operations. Test firing is not to be conducted at the IAAP during periods of unfavorable weather conditions; i.e., cloud cover, high winds, approaching storms, thermal inversions, etc. Test fire activities are curtailed until such weather conditions have dissipated. The IAAP is acquiring meteorological equipment which will be installed near our Administrative area. Some of the equipment is on-site and will be installed soon. This equipment can be constantly monitored and documented for test fire situations. Another method used to contain test fire noise consists of use of acoustical test fire chambers. This method has previously been investigated and was determined to be cost prohibitive and could not be justified on the basis of the benefits to be obtained.

b. The Department of the Army, per AR 200-1, requires that every installation conduct a Installation Compatible Use Zone (ICUZ) study. This study is to protect the test firing mission of the installation and to achieve development of land-use around the installation that will be compatible with noise generated by future activities. IAAP's ICUZ study was revised 19 October 1988. This study was based upon an assessment performed by the U.S. Army Environmental Hygiene Agency (USAEHA). This assessment uses a computer model to define specific noise zones. These zones are defined by the percent of population that may be annoyed and a specific decibel level. The Zone I designation (less then 62) is considered acceptable for housing, schools, medical facilities and other noise sensitive land uses. The Zone II designation is considered normally unacceptable for noise sensitive land-use but is acceptable for industrial, manufacturing and agricultural land uses. Zone III is clearly unacceptable for noise sensitive land-use and is normally used for industrial applications. The following items and quantities (annual) were used to define the Zones for the ICUZ study: M718/M741 Main Charges-195, M718/M741 Booster-40, Hellfire Warhead-70, Copperhead-69, FASCAM Mines-296, I-TOW-496, and TOW-2 Warhead. Recent noise complaints were received during periods of TOW test firing. The 1988 TOW test fire data was compared to the above listed data and there was not much difference in CY 88 values versus above used data. The USAEHA ICUZ assessment reported that normally unacceptable (Zone II) and clearly unacceptable (Zone III) did not extend beyond the installation boundary. USAEHA did issue concern that annoyance and noise complaints could occur during certain meteorological conditions; i.e., when the winds blow in the direction from test fire area to the nearest installation boundary and/or during a temperature inversion resulting in an increase in the propagation of sound.

c. The IAAP has had, and is requesting again, an on-site extended monitoring study of noise generated from IAAP's test fire activities.

Leon D. Baxter/7130

PRESS RELEASE

RELEASED BY:
Lieutenant Colonel Jack D. Conway
Commander
Iowa Army Ammunition Plant
Middletown, Iowa 52638-5000

FOR MORE INFORMATION CALL:
Darlene Norton
319/753-7600
Release No. 10-89
17 July 1989

F O R I M M E D I A T E R E L E A S E

THE IOWA ARMY AMMUNITION PLANT (IAAP) IS LOCATED IN THE SOUTHEASTERN PORTION OF THE STATE OF IOWA APPROXIMATELY TEN MILES WEST OF THE MISSISSIPPI RIVER. THE PRIMARY MISSION OF THE IAAP HAS BEEN TO LOAD, ASSEMBLE, AND PACK AMMUNITION ITEMS. THE CURRENT OPERATING CONTRACTOR IS MASON & HANGER-SILAS MASON CO., INC. WASTES CURRENTLY PRODUCED AT THE IAAP CONSIST OF VARIOUS EXPLOSIVE WASTE AND MATERIALS CONTAMINATED WITH EXPLOSIVE. WASTEWATERS CONTAINING EXPLOSIVE MATERIAL (PINK WATER) ARE TREATED AND DISCHARGED UNDER A STATE PERMIT. THE IAAP HAS BEEN ONE OF THE LEADERS IN THE USE OF ACTIVATED CARBON FOR THE REMOVAL OF THE EXPLOSIVE PINK WATER UNDER STUDIES DATING BACK TO THE MID 1950'S. THE FIRST PINK WATER TREATMENT FACILITY WAS INSTALLED ON AN OPERATING LINE IN THE EARLY 1970'S. ALL OTHER OPERATING LINES USE THIS TECHNOLOGY WITH THE SIMILAR FACILITIES THAT ARE IN OPERATION. ASHES FROM INCINERATION OF EXPLOSIVE AND CONTAMINATED WASTE ARE ANALYZED, STORED, AND TRANSPORTED UNDER CURRENT ENVIRONMENTAL PROTECTION AGENCY (EPA) PERMITS. WASTE SOLVENTS FROM INDUSTRIAL AND LABORATORY OPERATIONS ARE RECYCLED. ANY SOLVENT MATERIAL THAT CANNOT BE RECYCLED IS DISPOSED BY A QUALIFIED VENDOR. THERE HAVE BEEN 117 GROUNDWATER MONITORING WELLS INSTALLED ON THE IAAP WITHIN THE PAST TEN YEARS AND HAVE BEEN SAMPLED WHOLLY OR IN PART ON AT LEAST FIVE OCCASIONS.

SEVERAL AREAS LOCATED ALONG BRUSH CREEK HAVE BEEN IDENTIFIED UNDER THE DEPARTMENT OF DEFENSE (DOD) INSTALLATION RESTORATION PROGRAM AS REQUIRING FURTHER INVESTIGATION. THEY ARE THE FORMED LINE 1 IMPOUNDMENT AND THE PINK

WATER LAGOON AT LINE 800. THE DOD IS EXPECTED TO RELEASE SEVERAL REPORTS IN LATE SUMMER DENOTING THE EXTENT OF THE PROBLEM AND RECOMMEND CORRECTIVE ACTIONS FOR BOTH OF THESE AREAS. BOTH OF THE AREAS WERE USED TO TREAT PINK WATER PRIOR TO THE INSTALLATION OF THE INDUSTRIAL WASTE WATER FACILITIES. THE LINE 1 IMPOUNDMENT WAS CONSTRUCTED IN 1948 AND INTERMITTENT TREATMENT OF THE EXPLOSIVE WASTEWATER WAS CONDUCTED UNTIL 1957 WHEN IMPOUNDING WAS DISCONTINUED AND SOME OF THE ACCUMULATED SEDIMENTS WERE REMOVED. THE LINE 800 LAGOON WAS DUE IN 1943 AND USED UNTIL 1940. THE LAGOON NOW ONLY HOLDS ABOUT 0-2 FEET OF STANDING WATER. THE RESULTS OF GROUNDWATER MONITORING AND OTHER SAMPLING IN THESE TWO AREAS INDICATE THAT THERE IS NO HEALTH ENDANGERMENT OFF SITE. THIS WAS CONFIRMED WHEN PRIVATE DRINKING WATER WELLS AROUND THE PLANT WERE SAMPLED IN MAY 1985 AND NO CONTAMINATION WAS FOUND. THE INERT LANDFILL TRENCH NUMBER 5 AND LINE 6 GRAVEL FILTER BEDS AND DRAINAGE DITCHES, AS WELL AS THE INSTALLATION UNITS REGULATED UNDER RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) AND COMPLIANCE IS OUTLINED IN THE FEDERAL FACILITY COMPLIANCE AGREEMENT (FFCA) EXECUTED BETWEEN THE DEPARTMENT OF THE ARMY AND EPA ON 29 APRIL 1988. THE INERT LANDFILL TRENCH NUMBER 5 IS SLATED FOR AN EPA APPROVAL CLOSURE BY OCTOBER 1989 AND THE LINE 6 AREA WILL HAVE PRELIMINARY WORK COMPLETED BY OCTOBER WITH EPA APPROVED CLOSURE COMPLETED BY THE SPRING OF 1990.

PRESS RELEASE

RELEASED BY:
Lieutenant Colonel Maurice E. Petterson
Commander
Iowa Army Ammunition Plant
Middletown, Iowa 52638-5000

FOR MORE INFORMATION CALL:
Darlene Norton
319/753-7600
Release No. 15-89
28 November 1989

F O R I M M E D I A T E R E L E A S E

FEDERAL FACILITIES COMPLIANCE AGREEMENT

AS PART OF THE FEDERAL FACILITIES COMPLIANCE AGREEMENT SIGNED BETWEEN THE ENVIRONMENTAL PROTECTION AGENCY (EPA) AND THE IOWA ARMY AMMUNITION PLANT (IAAP), THE GRAVEL FILTER BEDS AND DRAINAGE DITCHES LOCATED IN PRODUCTION LINE 6 OF THE IAAP ARE TO HAVE SOIL ANALYSIS PERFORMED. IF THE SCIL CONTAINS LEAD ABOVE THE SPECIFIED EPA LEVEL THIS MATERIAL WILL BE REMOVED FOR APPROPRIATE DISPOSITION. LINE 6 HAS BEEN USED FOR THE MANUFACTURE OF DETONATORS. THE EXPLOSIVES USED FOR DETONATORS CONTAIN LEAD.

A CONTRACT HAS BEEN AWARDED TO THE ENVIRONMENTAL PROTECTION INSPECTION COMPANY (EPIC) AND PRELIMINARY WORK HAS BEGUN. NUMEROUS SOIL SAMPLES HAVE BEEN TAKEN FOR ANALYSIS AND MONITORING WELLS HAVE BEEN DRILLED. THE SAFETY HEALTH PLAN, QUALITY MANAGEMENT PLAN AND HAZARDOUS WASTE REMOVAL PLAN HAVE BEEN SUBMITTED AND REVIEWED BY THE CORPS OF ENGINEERS, HUNTSVILLE DIVISION (CEHND). EPIC HAS RETURNED TO IAAP TO TAKE ADDITIONAL SAMPLES. THE 90% DESIGN FOR CLEANUP WILL BE COMPLETED BY THE CEHND BY DECEMBER 22, 1989 AND WILL BE SUBMITTED TO THE EPA REGION VII.

FINAL CLOSURE ACTIVITIES ARE TO BEGIN BY APRIL 5, 1990.

THE U.S. ARMY TOXIC AND HAZARDOUS MATERIALS AGENCY (USATHAMA) HAS PROGRAMMED $994,000 FROM THE CALENDAR YEAR 1990 INSTALLATION AND RESTORATION PROGRAM FOR THE CLEANUP AND CLOSURE OF THE LINE 6 GRAVEL FILTER BEDS AND DRAINAGE DITCHES. THE SCHEDULED COMPLETION DATE FOR THIS CLOSURE IS JULY 5, 1990.

FACT SHEET

Installation Restoration Division
Mr. Peter J. Rissell
AUTOVON 584-1504/3921
15 October 1990

SUBJECT: Iowa Army Ammunition Plant (IAAP)

1. PURPOSE: To provide IAAP project summary and status to the Commander.

2. FACTS:

a. An Installation Assessment (IA) to assess IAAP environmental quality, conducted by the U.S. Army Toxic and Hazardous Materials Agency (USATHAMA), was completed in January 1980. The IA identified four major contaminated areas: Line 1, Load/Assemble/Pack (LAP) Areas, Waste Lagoons, and Demolition Areas. Contaminants included ammunition primer mixes and the explosives Cyclotrimethylenetrinitramine (RDX), Cyclotetramethylenetetranitramine (HMX), and 2,4,6-Trinitrotoluene (TNT).

b. A Remedial Investigation (RI) to determine contamination levels and off-IAAP migration potential was conducted by Environmental Research Group from February 1981 to October 1982. The RI revealed that RDX surface water contamination migration was occurring in Brush and Spring Creeks and that localized RDX groundwater contamination was detected in the Pink Water Lagoon/Line 800 Area.

c. A follow-on RI to evaluate contamination levels and to characterize off-IAAP migration was conducted by Battelle from September 1982 to August 1984. The RI study concluded that explosives contamination was not found in surface or groundwater at the IAAP boundary near Spring Creek. However, RDX groundwater contamination levels exceeded human health criteria at the IAAP boundary near Brush Creek. The RI study could not conclusively prove localized explosives contamination in the Pink Water Lagoon. In addition, insufficient data was available to determine whether Brush Creek RDX contamination resulted from Impoundment Area sediment leachate or from surface discharges.

d. A multi-phased hydrogeologic assessment was conducted by U.S. Army Environmental Health Agency (USAEHA), at EPA Region VII's request, in response to health concerns over potential off-IAAP migration. Samples were collected from the IAAP boundary and off-IAAP to assess risk to the general public. Chemical results indicated that domestic supply and boundary wells were not contaminated with explosives or volatiles.

e. Sampling and analysis of all IAAP monitoring wells and selected surface water sites was performed by Dames & Moore from September 1985 to October 1985. The study found localized contamination within the Pink Water Lagoon Area where the explosives RDX, TNT, 2,4-Dinitrotoluene (24DNT), and 2,6-Dinitrotoluene (26DNT) exceeded criteria levels.

f. An Endangerment Assessment (EA) to assess present and future risks at the Line 1 Impoundment and Line 800 Pink Water Lagoon Areas was conducted by Dames & Moore from September 1985 to July 1989. Remedial Action Criteria for the Cancer Risk Levels (CRLs) of 10(-6), 10(-5), and 10(-4) were identified.

g. A Feasibility Study (FS) to evaluate Remedial Action Alternatives for the Line 1 Impoundment and Line 800 Pink Water Lagoon Areas was conducted by Dames & Moore from September 1985 to August 1989. Based on RDX and 26DNT contamination levels found at the two areas, remediation is recommended for the 10(-6) and 10(-5) CRLs. At the 10(-4) CRL, monitoring of Line 800 groundwater and Line 1 surface water, in lieu of remediation, is recommended.

h. A Federal Facilities Compliance Agreement (FFCA) defining the responsibilities for managing Resource Conservation and Recovery Act (RCRA) units was signed by IAAP and EPA Region VII in April 1988.

i. An assessment to evaluate contamination at the IAAP service station site (Petroleum Leak/Spill Area) was conducted by Dames & Moore from June 1989 to March 1990. Results from groundwater, surface water, soil, and sediment samples indicated localized hydrocarbon and aromatic contamination in the soil and shallow groundwater. Semi-annual monitoring of the ten wells is performed.

j. IAAP was designated as a proposed National Priority List (NPL) site in July 1989 with an Hazard Ranking System (HRS) score of 29.73. IAAP was listed as a Final NPL site in August 1990.

k. A RCRA Part B permit became effective in December 1989. The eight Solid Waste Management Unit sites identified in the permit will be incorporated into an RI/FS task scheduled for initiation in 1QFY91.

l. Site closure operations for the Line 6 Gravel Filter Bed, conducted by the U.S. Army Corps of Engineers (COE) District, Huntsville, was completed in August 1990. Capping of the Inert Landfill Trench 5, also conducted by COE, Huntsville, was completed in November 1989.

m. Drafting of an Interagency Agreement (IAG) was initiated in May 1990. Negotiation sessions with EPA Region VII were held during the summer of 1990. Final signing of the IAAP IAG was completed in September 1990.

APPENDIX C

REPRESENTATIVE NEWSPAPER ARTICLES

The Hawk-Eye
Burlington, IA
January 28, 1985

Who watches water?

This is the second in a series of articles examining the possible contamination of Long Creek.

By Anne Woehrle

Who is responsible for watching the water?

Des Moines County residents, looking for explanations of mysterious health problems, have been asking state, county and federal officials for help testing their water supplies.

Among these residents are members of the Albert Maddox family, who suspect water on their farm at Skunk River Road near Long Creek may be connected to a series of health problems during the past year.

Dr. R.J. Cowles, director of the county public health center, said there is no county record of well testing, but "we have given out a lot of cards" for application for state testing.

The State Hygienic Laboratory, a branch of University Hospitals, Iowa City, will test private wells at the request of property owners. There are two catches, however. The tests can be expensive, especially if the owner of a well asks for a wide range of tests. And the lab technicians have to have a list of specific chemicals for which to run tests.

Des Moines County residents can obtain application forms from the county health center. If the well owner can supply the names of chemicals suspected in the water, the lab will send a sample bottle for each substance. Each bottle, Cowles said, is designed to test for a single chemical.

If the owner does not know of a specific substance that may be causing health problems, Cowles said, the lab will contact the owner's physician to discuss the possibilities.

The most common contaminants are nitrates (common ingredients of household chemicals) and bacteria.

Cowles said a county ordinance requiring testing of all wells would help officials investigate health problems. The Des Moines County health board last fall approved such an ordinance; county supervisors have yet to act on the proposed ordinance.

The Iowa Army Ammunitions Plant, which occupies land west of Burlington and south of Middletown, has been under scrutiny for handling of hazardous wastes. The plant produces the explosives RDX and TNT, both of which the U.S. Army considers hazardous. The state has no standards for those substances, according to commander Col. Kernan Nucci.

Nucci said the plant does not produce any other substances that might endanger human health. He said farmers who lease IAAP land use "the same herbicides as everyone else," which he suggested might turn up in water leaving plant property.

The state department of Water, Air and Waste Management holds records on water safety tests, including those from the army plant. WAWM has ordered all Iowa counties to tighten their regulations on water safety.

The Hawk-Eye
Burlington, IA
January 31, 1985

'Mystery' ills plague Long Creek residents

(This is one of a series of articles concerning the possibile contamination of Long Creek.)

By Anne Woehrle

A patient with a mysterious illness can spend many months and many dollars looking for causes, as Vicki Maddox's family has recently discovered.

The Maddoxes, who live on the Skunk River access road beside Long Creek, have suffered a series of unexplained illnesses, some of them apparently related, during the past several years. Their search for explanations has, so far, turned up only vague answers.

They suspect their water supply may have something to do with it, but environmentalists and physicians are only beginning to understand the possible connections between pollution and disease. When a cause for persistent pain cannot be found, patients are often left to their own devices.

"We need somebody who can coordinate environmental with medical facts," said Steve Hoambrecker, a state Department of Water, Air and Waste Management official who drew water samples from the Maddox farm last week. In response to a letter from the Maddoxes stating that five out of six family members had been treated for unnamed illnesses in the past year, Hoambrecker was sent to look for a possible cause.

DESCRIPTIONS of the symptoms didn't help much, he said. One surgeon who had worked with three members of the family told him this was "an abnormal case of benign tumors," and that Vicki Maddox had a paralysis, "but there didn't seem to be the medical evidence there usually is with strokes," Hoambrecker said.

For lack of a better place to start, Hoambrecker sent off samples for 123 tests on some of the more common harmful water pollutants.

Dr. A.G. Lipede, the surgeon with whom Hoambrecker consulted, said he has tried "many diagnoses, but the confirmation tests have all been negative," in dealing with Vicki's medical problems. She has been treated for chronic headache and is now at Burlington Medical Center, recovering from a stroke that has left one side of her body partially paralyzed.

Vicki's husband, Albert Maddox, showed similar symptoms, including sudden loss of consciousness. Albert also had a complete mastectomy last October, because of a tumor that turned out to be benign, Lipede said. Other members of the family have had surgery for unexplained growths.

"There is a rash of illness in the family," Lipede said. "You begin to suspect a common agent. Verification (of the cause of illness) depends on isolating that agent ... There are over 2,000 chemicals that we call pollutants."

BECAUSE of the gap between environmental and medical science, a few doctors are beginning to specialize in diagnosing illnesses in which pollution is suspected.

Dr. Dale Harding, Eagle Grove, has extended his practice in treating allergies to include hunting down environmental problems. So far, he said, doctors are only beginning to see patterns in diseases caused by the pesticides, insecticides, and industrial wastes dumped into Iowa's soil and waterways over the years.

"We're seeing the big role of chemicals now," he said. "I'm seeing more and more farmers that we have to take out of the fields." One common reaction to insecticides, he said, is a breakdown of neural transmitters in the brain, which can cause depression or paranoia. Farmers also have a higher incidence of cancer than other sectors of the population, he said.

OFTEN THE ONLY response to such an illness is treatment of the symptoms, he said. "If we can reproduce the symptoms then make it go away, in the office, then we can treat it," he said. Sometimes a cause can be found, if the doctor and the patient "ask the right questions."

Harding would like to see more research on environmental causes of illness, he said, "but there's more incentive not to do it than to do it." The universities are paid to find the benefits of farming chemicals; finding their evils "doesn't pay professors," Harding said.

Families like the Maddoxes, in other words, may wait a long time before doctors and environmentalists can figure out what causes their mysterious diseases.

The Hawk-Eye
Burlington, IA
April 23, 1985

Carcinogens found in IAAP wells

By Dale Alison

Water samples taken from wells on Iowa Army Ammunition Plant property have turned up high levels of three hazardous chemicals, an official from the state department of Water, Air and Waste Management said Tuesday.

Pete Hamlin, director of WAWM field services, said "relatively high" levels of acetone, trichloroethane and methylene chloride were found in monitoring wells on the southern perimeter of the plant.

The samples were taken March 21 after Vicki Maddox, who lives south of the plant, wondered aloud to state and army officials if health problems her family was experiencing could be related to water the family was drinking.

While chemical samples from the army wells tested high, Hamlin said there was "nothing to concern us" about samples taken from three Maddox wells.

Scan tests searching for high levels of pesticides and heavy metals were administered by a special team of army scientists working with WAWM officials. The samples were split and separate laboratory analyses were conducted by the army and the state.

The high chemical levels have caused officials to wonder whether the samplings were accurate. Hamlin said the army and WAWM will administer separate tests to confirm the results. He hoped to have the new tests taken by the end of this week.

Officials at IAAP said they had been notified of the results, but until an official written report is received from Washington, they declined to comment. Darlene Norton, a public information officer, said the report is expected "sometime later this week or early next."

According to Hamlin, the tests indicated 130 parts per billion of methylene chloride — over 65 times the preferred level — which Hamlin called "priority compound, one of 129 we have to be very careful with." Hamlin said it was an "experimental" carcinogen, meaning it causes cancer in laboratory animals but not necessarily in humans.

High levels of methylene chloride can cause dermatitis, irritation to the eyes and upper respiratory system and skin burns. Hamlin also said it is a "mild narcotic and can cause headaches, numbness, a tingling in limbs and giddiness."

"Preferably, we'd like a zero amount in water," Hamlin said, but 1.9 parts per billion allows for one case of cancer per 1,000 population.

"That's based on a lifetime consumption of two gallons of water per day for 70 years," Hamlin said.

Trichloroethane tested at 63 parts per billion — over five times the acceptable level. Also a suspected carcinogen, TCE can cause depression, liver and kidney damage. The state has established a 4.9 parts per billion level as acceptable.

The third chemical, acetone, tested at 3 to 5 parts per million. Hamlin said the state has no acetone standard, but that it should be avoided. Acetone can enter the body through inhalation or skin contact, as well as ingestion.

Among the list of Maddox family ailments are chronic headaches suffered by Vicki Maddox, unexplained tumors on three family members and another resident, and a son's kidney problems.

Hamlin said symptoms experienced by the Maddox family are similar to reactions caused by contact with the three chemicals.

WAWM can order the army to undertake "an extensive" groundwater monitoring program and develop a plan to deal with the pollution.

The Des Moines Register
Des Moines, IA
April 24, 1985

Hazardous chemicals found in well

By WILLIAM RYBERG
Of The Register's Davenport Bureau

Tests have indicated there are high levels of hazardous chemicals in a well on U.S. Army property near the home of a rural Burlington family that suffers from mysterious health problems, a state official said Tuesday.

Peter Hamlin, an administrator with the Iowa Department of Water, Air and Waste Management, said the potentially dangerous levels of three industrial chemicals are polluting a monitoring well at the southern border of the Iowa Army Ammunition Plant.

None of the tests showed any contamination in three wells on the family's adjoining land. Hamlin said more extensive tests are planned because Army officials believe the testing of water samples from the Army well may have been flawed.

In the past 18 months, Albert and Vicki Maddox and three of their children have suffered from a variety of ailments, including non-malignant tumors, seizures, depression, infections and headaches. Vicki Maddox also has complained that she has lost part of the use of the left side of her body.

She has questioned whether the Army plant could be the source of some type of air, water or soil pollutant that might be responsible for the family's medical problems.

So far, Hamlin said, the tests have raised "more questions than they answer." He said tests on water samples from one monitoring well on the Army property showed high levels of these chemicals:

- Methylene chloride, which has been shown to cause cancer in laboratory animals and which can cause headaches, stupor and numbness in limbs, was present in the sample at 130 parts per billion. That concentration is about 85 times the acceptable limit of 1.9 parts per billion, according to Hamlin.
- Trichloroethane, a suspected carcinogen that also can cause kidney and liver damage, was present at the rate of 63 parts per billion, about 13 times the acceptable limit.
- Acetone, which can cause headaches, dizziness and skin problems, was present at 3 to 5 parts per million. No acceptable limit has been set, according to Hamlin.

Some of the health problems reported by the Maddoxes appeared to be in line with some symptoms linked to the chemicals, Hamlin said, but added that there "doesn't seem to be a direct correlation at this time" because the pollutants were not found in the Maddox wells. "But that doesn't mean there isn't [a correlation]," he said.

Hamlin said Army officials believe the tests might have been flawed because acetone was used to "flush" sampling equipment and because the other chemicals may be left from materials used in plumbing work on the well.

Maddox said Tuesday that she believes the Army is "just looking for an excuse" to explain away the problem.

Capt. David Versage, the plant's executive officer, said the Army had no comment on the tests.

The Hawk-Eye
Burlington, IA
May 5, 1985

John Gross photo

Thomas Runyon (left) and Steve Hoambrecker take a water sample from a monitoring well at the Iowa Army Ammunition Plant Wednesday. Runyon is an environmental engineer for the US Army. Hoambrecker is field engineer for the Iowa Department of Water, Air and Waste Management. They are watched by George Dreuer, University of Iowa chief organic analyst.

Water may have been tainted in lab

Dale Allison

High levels of three potentially dangerous chemicals found in groundwater samples taken from the Iowa Army Ammunition Plant March 21 may very well have been introduced during the sampling process, according to spokesmen from three different laboratories.

Officials from the Iowa Department of Water, Air and Waste Management and the Water Quality Engineering Division of the US Army took more samples of the water Wednesday to determine if dangerous levels of methylene chloride, trichloroethane and acetone do, indeed, exist in the groundwater.

But according to Sharon Kneiss, a groundwater specialist with the Chemical Manufacturers' Association in Washington, D.C., at least two of the chemicals — methylene chloride and acetone — are common laboratory solvents that are used either to clean test tubes or to extract water samples. The third, trichloroethane, is a common degreaser found in products such as Drano.

Spokesmen for the Environmental Protection Agency in Kansas City and McKesson Envirosystems in San Francisco confirmed Kneiss' statement. None of the chemicals is produced at IAAP, according to Col. Kernan Nucci, plant commander.

Groundwater along IAAP's southern border is being tested to determine if it might be related to mysterious medical problems a neighboring family is experiencing. Curiously, ailments the Albert and Vicki Maddox family has complained about during the past 18 months closely parallel symptoms of long-term exposure to methylene chloride, trichloroethane and acetone.

Those chemicals have been shown to cause cancer, dermatitis, and chronic headaches, among other maladies. The March tests indicated 85 times the acceptable level of methylene chloride and 13 times the acceptable limit of trichloroethane. The tests also showed three to five parts per million of acetone, a chemical for which neither the state nor the EPA has established an acceptable level.

Thomas Runyon, an environmental engineer from Aberdeen, Md., and Steve Hoambrecker, a WAWM field engineer, were members of the team that drew the March 21 samples and were back at IAAP Wednesday to confirm the presence of the chemicals and to look for traces of 30 other volatile compounds in groundwater along the plant's southern border.

Separate samples were taken that will be analyzed by both the state and the army. The laboratory results are not expected for two to three weeks.

Runyon acknowledged that acetone may have been introduced to the samples at the test site. A metal bailer is used to retrieve samples from monitoring wells. Between samples, the bailer is rinsed three times: once with distilled water, once with acetone and again with distilled water.

Kneiss said a false positive reading of acetone could be achieved if the chemical was not allowed to dry from the bailer before the final distilled water rinse.

Methylene chloride is a common laboratory solvent used for extracting samples, said Charles Hensley, a Kansas City EPA lab technician, indicating a possible source of that contaminant.

Nobody was willing to hazard a guess on the source of the trichloroethane, however.

"The Army's objective is to get to the bottom of this," Nucci said. "But we do not see a tie-in with the ill health of the Maddoxes — not yet."

The Hawk-Eye
Burlington, IA
May 17, 1985

Groundwater testing expanded

By Bob Sogard

The search for contaminants in groundwater around the Iowa Army Ammunition Plant will be expanded later this month with testing of drinking water sources outside the IAAP.

This was reported Friday by Lt. Col. Kernan Nucci, IAAP commanding officer, who termed the checks a "follow-on effort to prior ground water sampling" in the plant area.

The sampling will be done May 28-30 by the Iowa Department of Water, Air and Waste Management as well as army specialists.

Merritt Van Lier, WAWM regional administrator from Washington, Iowa, said the samples he takes will be analyzed at the State Hygienic Laboratory, Iowa City. The Department of Army Environmental Hygiene Agency samples will be analyzed at a lab in Aberdeen, Md.

Nucci said the sampling is part of a program to determine whether there is any contamination resulting from migration of materials from the plant area. It will be done at places selected by WAWM, from one to two miles outside ordnance plant boundaries, but concentrated south of the plant and north of the Skunk River.

"Individual well owners will be notified by the state in advance before sampling takes place. Samples will also be taken north, east and west of the plant boundary," Nucci added.

Van Lier said the water on the Albert Maddox farm on Skunk River Road won't necessarily be among those sampled because it's been sampled several times recently.

Maddox, his wife, Vicki, and two of their children have complained of many ailments, and had surgery on a number of tumors they suspect was caused by water running off the federal reservation onto their farm on Skunk River Road. The 19,000-acre IAAP drains southeast.

Samples of water taken from wells inside the IAAP on March 21 showed dangerous levels of methylene chloride, trichloroethane and acetone. However tests were repeated May 1 because methylene chloride and acetone, both solvents used in the lab, may have contaminated the samples.

Results of the May 1 tests are expected to be available next week.

The Hawk-Eye
Burlington, IA
May 29, 1985

New tests show IAAP groundwater is not dangerous

By Dale Alison

New tests of groundwater taken from the Iowa Army Ammunition Plant show no dangerous levels of three chemicals that concerned state Water, Air and Waste Management officials a month ago.

The tests were ordered after March 21 tests indicated high amounts of methylene chloride, trichloroethane and acetone were found in samples taken from monitoring wells along the southern border of the plant at Middletown. The chemicals have been shown to cause cancer and other diseases.

"I can only speculate," said Pete Hamlin, director of WAWM field services, "that the first set of samples was taken improperly or analyzed improperly." The three chemicals are common laboratory solvents — indicating a possible source of contamination.

"When you're talking about 'parts per billion' you have to be careful not to introduce false readings," Hamlin said. "Rinsing (testing equipment) improperly with methylene chloride two weeks ago can bias a sample."

The WAWM official said special precautions were taken when the second samples were drawn May 1 to ensure correct results.

Hamlin said traces of methylene chloride, trichloroethane and acetone were either not present or present but below detectable levels (less than one part per billion of a substance).

"But that does not mean we'll accept that as gospel," he said. "My goal is that we continue doing this until we get no conflicting information."

WAWM and army specialists are sampling wells around the ordnance plant this week to determine the purity of the groundwater in the area.

The quality of the water has been suspect since a family living on the southern border of the plant began experiencing mysterious illnesses two years ago. Coincidentally, the ailments members of the Albert Maddox family have complained of closely resemble those associated with long-term exposure to the three chemicals found in the March 21 samples.

The Des Moines Register
Des Moines, IA
June 7, 1988

U.S. study cites Iowa arms plant as polluter

By FRANK SANTIAGO
Register Staff Writer

Operators of the sprawling munitions plant near Burlington were accused by a congressional committee Monday of polluting water and soil with TNT and other contaminants.

The Iowa Army Ammunition Plant, a 19,008-acre installation owned by the federal government, was among 16 U.S. Department of Defense "horror stories" cited by the committee for improperly disposing of hazardous wastes.

"Our investigation suggests that military facilities are among the worse violators of our hazardous waste laws," said Congressman John D. Dingell, a Michigan Democrat who is chairman of the House subcommittee on oversight and investigations, which prepared the report.

"They've caused extensive soil and ground water contamination both on their installations and off," he said. "The Defense Department's attitude varies between reluctant compliance to active disregard for the law."

Officials said the report follows six months of investigation.

Lt. Col. Jack Conway, the commander of the Iowa plant, had not read the subcommittee's report and had no comment on its conclusions, said Darlene Norton, a plant spokeswoman.

The plant, west of Burlington in the town of Middletown, was built by the federal government during World War II. The plant now produces nonnuclear missile warheads and artillery shells. At one time, however, the plant was involved in the production of nuclear bombs.

The plant is operated for the government by a Lexington, Ky., company, Mason and Hanger-Silas Mason Co. Inc. A company spokesman was not immediately available for comment Monday.

The subcommittee's report says the EPA has visited the Iowa plant and found serious waste disposal problems, including "Class 1 violations," the most severe infractions. Analyses of water and soil samples from the Iowa plant found that they contained hazardous substances, including pesticides (DDT), explosives (TNT), lead and barium, the report said.

"Concentrations of explosive wastes such as TNT have been detected in groundwater and in the sediment and the surface soil of several creeks on the facility's grounds," the report said.

A 1986 EPA investigation concluded [illegible] have contaminated water and soil, the report said. The

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Iowa plant among major polluters

PLANT

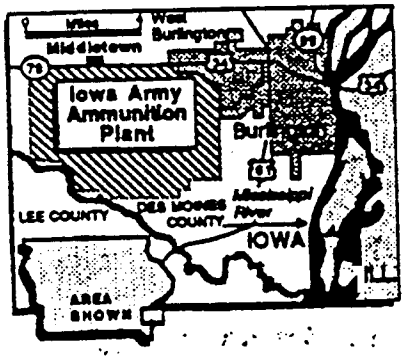
Continued from Page One

agency cited the plant for failing to submit adequate groundwater monitoring plans, according to the congressional subcommittee.

In July 1985, leaky drums were found at the plant, the report said. But the contents of the drums were not identified.

Congressional investigators said waste produced at the plant included sludges from processing explosives, carbon that had been used to treat water used in processing the explosives, solvents and ash from incineration of plant wastes.

According to the subcommittee, "the enforcement process isn't working at all" at the Defense Department sites.



The subcommittee report blamed the U.S. Justice Department for part of the problems. The report noted that the Justice Department said in a memorandum last year that "the EPA couldn't enforce hazardous waste laws against federal agencies and therefore tied EPA's hands."

"Because the Justice Department has opposed strong enforcement action against federal agencies that are polluters, these are the toughest cases for EPA and the state environmental agencies to enforce," said Dingell, the Michigan congressman.

Other Defense Department sites named by the committee included munition plants and military installations across the nation.

The Des Moines Register
Des Moines, IA
June 8, 1988

Munitions plant says polluting days are over

By FRANK SANTIAGO
Register Staff Writer

The commander of the Iowa Army Ammunition Plant near Burlington said Tuesday the plant is in compliance with all rules and regulations concerning the disposal of hazardous wastes.

"Extensive amount of work has been done and needs to be done, but the bottom line is that we are in compliance now," said Lt. Col. Jack Conway.

The plant was among 16 U.S. Department of Defense installations declared major polluters Monday by a congressional subcommittee. The plant sits on 19,000 acres near Middletown, west of Burlington.

Congressman John D. Dingell, a Michigan Democrat and chairman of the House subcommittee on oversight and investigations, said the 16 military facilities have caused "extensive soil and groundwater contamination both on their installations and off."

The Iowa plant, built by the government in 1941, was said to have polluted water and soil with hazardous substances, including pesticides (DDT), explosives (TNT), lead and barium.

"The plant was a polluter from 1941 through the early 1970s, although it functioned with accepted practices of all industries at that time," Conway said.

"Since that time rules and regulations have stiffened up quite a bit and we now are operating in compliance."

He said earlier pollution at the plant site had been cleaned up, but "extensive work needs to be done."

He said four areas of the plant site had been contaminated with explosive wastes.

"At this point, it's very difficult to detect it because the contamination has reached into the soil. We do have areas on the installation that we're monitoring," he said.

A statement issued at the plant said "no untreated contaminated water has been discharged to streams or lagoons since the early 1970s."

An agreement in handling the polluting wastes was reached at the plant in April between the U.S. Defense Department and Environmental Protection Agency, said the statement.

APPENDIX D

MEDIA LIST

05/08/91

APPENDIX D

MEDIA LIST

Newspapers

Daily Newspapers

The Hawk-Eye
P.O. Box 10
800 S. Main St.
Burlington, IA 52601
(319) 754-8461/754-6824

Des Moines Register
P.O. Box 957
715 Locust St.
Des Moines, IA 50304
(515) 284-8000/286-2504

Mt. Pleasant News
P.O. Box 240
215 W. Monroe St.
Mt. Pleasant, IA 52641
(319) 385-3131/385-8048

Ft. Madison Democrat
P.O. Box 160
1226 Avenue H
Ft. Madison, IA 52627
(319) 372-6421

Weekly Newspapers

Bee/Donnellson Star
P.O. Box 66
West Point, IA 52656
(319) 837-6722

New London Journal
P.O. Box 116
New London, IA 52645
(319) 367-2366

Mediapolis News
P.O. Box 548
Mediapolis, IA 52637
(319) 394-3174

The Shoppers Spree
P.O. Box 661
3208 Division St.
Burlington, IA 52601
(319) 752-4555/753-5167

The Des Moines County News
204 Broadway
West Burlington, IA 52655
(319) 752-8328

Special Publications

Iowa Conservationist
ATTN: Julie Sparks, Editor
Iowa Department of Natural Resources
Wallace Building
Des Moines, IA 50319-0034
(515) 281-5145

APPENDIX D

MEDIA LIST
(Continued, Page 2 of 4)

Special Publications (Cont'd.)

Iowa Resource Enhancement and
Protection Act (REAP) Newsletter
Iowa Department of Natural
Resources
Wallace Building
Des Moines, IA 50319-0034
(515) 281-8653

Radio Stations

*KBUR-AM/KGRS-FM (ABC)
1411 N. Roosevelt Ave.
Burlington, IA 52601
(319) 752-2701

*KCPS-AM (CBS)
402 N. Main St.
Burlington, IA 52601
(319) 754-6698

*KDWD-FM
P.O. Box 832
Burlington, IA 52601
(319) 752-5402

*KILJ-AM and FM (ABC)
281 Radio Rd.
Mt. Pleasant, IA 52641
(319) 385-3111

*KBKB-AM and FM (NBC)
P.O. Box 369
Ft. Madison, IA 52627
(319) 372-1241

*WOC-AM/KIIK-FM (NBC)
3535 E. Kimberly Rd.
Davenport, IA 52807
(319) 344-7000

*WHO-AM/KLYF-FM (NBC)
1801 Grand Ave.
Des Moines, IA 50308
(515) 242-3500

WAIK-AM/WGBQ (ABC)
235 E. Main St.
Galesburg, IL 61401
(309) 342-3161

WGIL-AM/WAAG-FM
P.O. Box 1227
Galesburg, IL 61401
(309) 342-5131

*Stations listened to by survey participants.

APPENDIX D

MEDIA LIST
(Continued, Page 3 of 4)

Radio Stations (Cont'd.)

WVKC
P.O. Box 154, Knox College
Galesburg, IL 61401
(309) 343-9940

Television Stations

*KJMH, Channel 26 (Fox)
P.O. Box 982
200 Jefferson St., 4th Floor
Burlington, IA 52601
(319) 752-0026

KLJB, Channel 18 (Fox)
937 E. 53 St., Suite D
Davenport, IA 52807
(319) 386-1818

*KWQC, Channel 6 (NBC)
805 Brady St.
Davenport, IA 52808
(319) 383-7000

*WHBF, Channel 4 (CBS)
231 18 St.
Rock Island, IL 61201
(309) 786-5441

*WQAD, Channel 8 (ABC)
3003 Park 16 St.
Moline, IL 61265
(309) 764-8888

WQPT, Channel 24 (PBS)
6600 34 Ave.
Moline, IL 61265
(309) 796-2424

KHQA, Channel 7 (CBS)
P.O. Box 905
Quincy, IL 62306
(217) 222-6200

WGEM, Channel 10 (NBC)
P.O. Box 80
Quincy, IL 62301
(217) 228-6600

WTJR, Channel 16
P.O. Box 3112
Quincy, IL 62305
(217) 228-1275

*KTVO, Channel 3 (ABC)
P.O. Box 949
Kirksville, MO 63501
(816) 627-3333

*Stations viewed by survey participants.

APPENDIX D

MEDIA LIST
(Continued, Page 4 of 4)

Cable Service

West Marc Cable
3210 Division St.
Burlington, IA 52601
(319) 753-6571

Nationwide Cable (Advertising)
321 Tama Building
Burlington, IA 52601
(319) 752-4437

APPENDIX E

PROGRAM POINTS OF CONTACT

APPENDIX E

PROGRAM POINTS OF CONTACT

Public Affairs Contacts

1. Department of the Army
   Office of the Chief of Public Affairs
   ATTN: OCPA
   Washington, DC 20310-1509
   (703) 695-5732

2. Commander
   U.S. Army Materiel Command
   ATTN: AMCPA-MR (Jan Finnegan)
   5001 Eisenhower Blvd.
   Alexandria, VA 22333-0001
   (703) 274-8013

3. Commander
   U.S. Army Armament, Munitions and Chemical Command
   ATTN: AMSMC-IN (Ray Gall)
   Rock Island, IL 61299-6000
   (309) 782-5838

4. Commander
   U.S. Army Toxic and Hazardous Materials Agency
   ATTN: CETHA-PA (Lori Simmers)
   Aberdeen Proving Ground, MD 21010-5401
   (301) 671-2556

5. Commander
   Iowa Army Ammunition Plant
   ATTN: PAO
   Middletown, IA 52638
   (319) 753-7600

6. L. Dale Armstrong, Community Involvement Coordinator
   EPA, Region VII
   PBAF
   726 Minnesota Ave.
   Kansas City, KS 66101
   (913) 551-7003 or 1-800-223-0425

7. Iowa Department of Natural Resources
   Chief of Information and Education
   ATTN: Ross Harrison
   Wallace Building
   Des Moines, IA 50319
   (515) 281-5973

APPENDIX E
PROGRAM POINTS OF CONTACT

(Continued, page 2 of 5)

Technical Contacts

1. Department of the Army
Environmental Office
ATTN: CEHSC-E
Washington, DC 20310-2600
(703) 694-1163

2. Commander
U.S. Army Materiel Command
ATTN: AMCEN-A
5001 Eisenhower Ave.
Alexandria, VA 22333
(703) 274-9106

3. Commander
U.S. Army Armament, Munitions and Chemical Command
ATTN: AMSMC-ISE-E (Dr. Henry Crain)
Rock Island, IL 61299-6000
(309) 782-1434

4. Commander
U.S. Army Armament, Munitions and Chemical Command
ATTN: ANSMC-ISE-E (Capt. Mike Leggieri)
Rock Island, IL 61299-6000

5. Commander
U.S. Army Armament, Munitions and Chemical Command
ATTN: AMSMC-GCS (Joe Kang)
Rock Island, IL 61299-6000

6. Commander
U.S. Army Toxic and Hazardous Materials Agency
ATTN: CETHA-IR-A (Derek Romitti)
Aberdeen Proving Ground, MD 21010-5401
(301) 671-3921

7. Commander
U.S. Army Environmental Hygiene Agency
ATTN: HSHB-ME-AS (Dave Daughdrill)
Aberdeen Proving Ground, MD 21010-5422

8. Commander
Iowa Army Ammunition Plant
ATTN: CO-IAAP
Middletown, IA 52635-5000
(319) 585-7200

9. Cecila Tapia
EPA, Region VII
Waste Management Division/Superfund Branch
726 Minnesota Avenue
Kansas City, KS 66101

10. Ken Herstowski
EPA, Region VII
RCRA-Iowa
726 Minnesota Ave.
Kansas City, KS 66101
(913) 551-7058

11. James W. Callier
EPA, Region VII
RCRA-Iowa
726 Minnesota Ave.
Kansas City, KS 66101
(913) 551-7058

12. Craig Berstein
EPA, Region VII
Federal Facilities Coordinator
Federal Activities Section
726 Minnesota Ave.
Kansas City, KS 66101
(913) 551-7688

13. Luetta A. Flournoy
EPA, Region VII
Chief, Iowa Section
Waste Management Division
726 Minnesota Ave.
Kansas City, KS 66101
(913) 551-7058

14. Darrel McAllister
Iowa Department of Natural Resources
Surface and Groundwater Protection Section
Wallace Building
900 E. Grand Ave.
Des Moines, IA 50319
(515) 281-8869

(Continued, page 4 of 5)

15. Pete Hamlin
Iowa Department of Natural Resources
Chief, Air Quality and Solid Waste Bureau
Wallace Building
900 E. Grand Ave.
Des Moines, IA 50319
(515) 281-8852

16. Richard Bishop
Iowa Department of Natural Resources
Chief, Wildlife Section
900 E. Grand Ave.
Des Moines, IA 50319
(515) 281-6156

17. Des Moines County Health Department
ATTN: Charles Russell
522 N. Third
Burlington, IA 52655
(319) 753-8217

18. Des Moines County Civil Defense Agency
ATTN: Pat Wondra
512 Main
Burlington, IA 52655
(319) 753-8206

19. Leon D. Baxter
Industrial Engineer
Iowa Army Ammunition Plant
ATTN: SMCIO-IN
Middletown, IA 52638
(319) 753-7130

20. Floyd C. Laue
Environmental Coordinator
Mason & Hanger-Silas Mason Co., Inc.
Iowa Army Ammunition Plant
Middletown, IA 52638
(319) 753-7538

(Continued, page 5 of 5)

22. Keith Miller, Scientist
Mason & Hanger-Silas Mason Co., Inc.
Iowa Army Ammunition Plant
Middletown, IA 52638
(319) 753-7538

23. Housing Manager
Iowa Army Ammunition Plant
Middletown, IA 52638
(319) 753-7605

24. Sam Sang, Environmental Engineer
Huntsville Division
U.S. Army Corps of Engineers
ATTN: CESND-ED-CS
P.O. Box 1600
Huntsville, AL 35807
(205) 895-5190

APPENDIX F

SCHEDULE FOR INVOLVEMENT ACTIVITIES AT IAAP

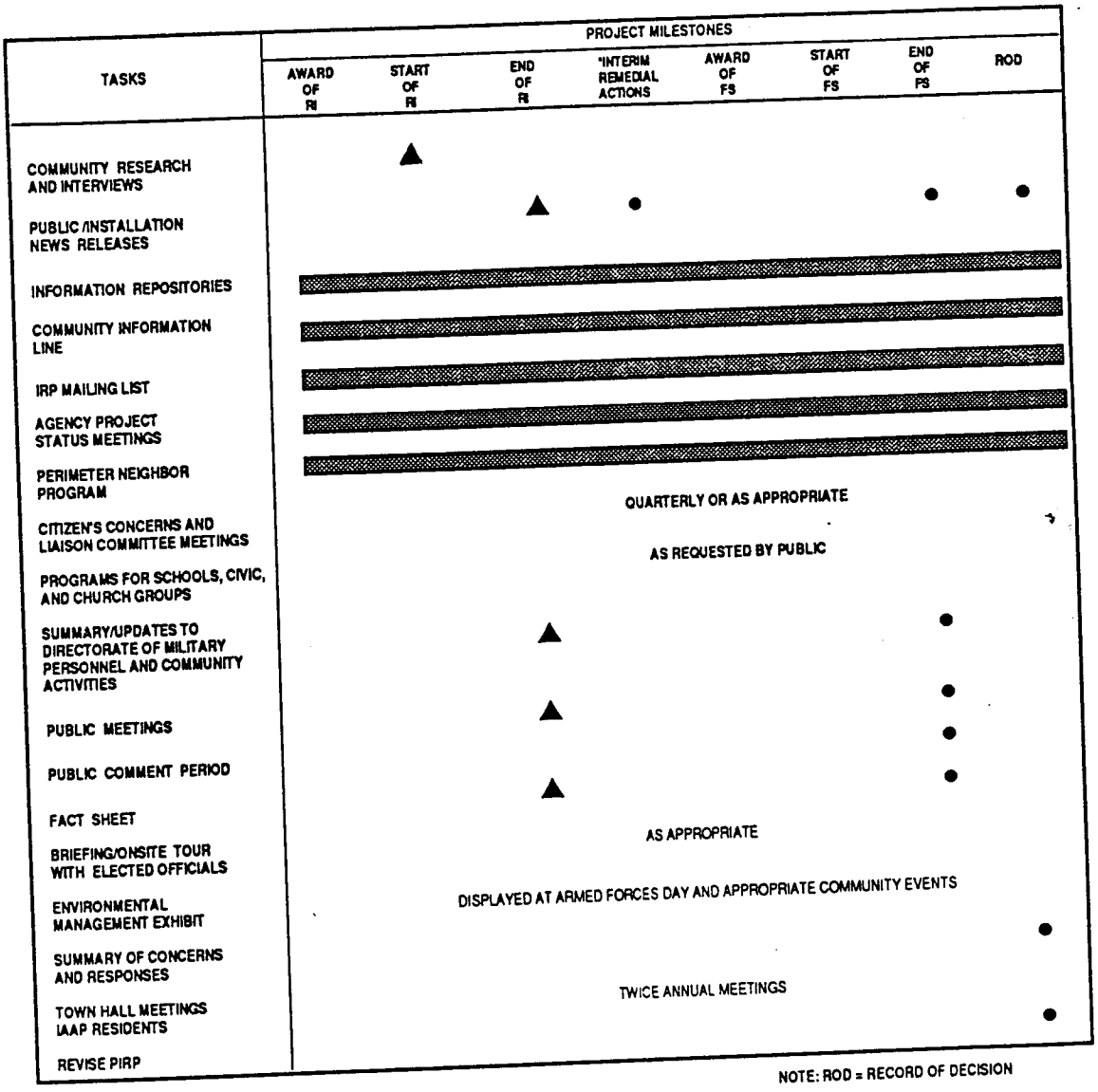


Figure F-1
SCHEDULE FOR COMMUNITY INVOLVEMENT ACTIVITIES AT IOWA ARMY AMMUNITION PLANT

SOURCE: ESE, 1990.

Prepared for:
U.S. Army Toxic and Hazardous Materials Agency
Aberdeen Proving Ground, Maryland

APPENDIX G

LOCATIONS OF INFORMATION REPOSITORIES

APPENDIX G
LOCATIONS OF INFORMATION REPOSITORIES

Burlington Public Library
501 N. 4th St.
Burlington, IA 52601
(319) 753-1647

Librarian: Joanne Guest

Hours: Monday through Thursday--9:00 A.M. to 9:00 P.M.
Friday and Saturday--9:00 A.M. to 5:00 P.M.
Sunday--Closed

Lobby Area, IAAP Administration Building
Building No. 100-101
IAAP
Rural Route 1
Middletown, IA 52638
(319) 753-7130

Contact: Larry Johnson or Leon D. Baxter

Hours: Monday through Thursday--7:00 A.M. to 5:30 P.M.
Friday through Sunday--Closed

Danville City Hall
105 W. Shepherd St.
Danville, IA 52623
(319) 392-4685

Contact: Judy Brayton, City Clerk

Hours: Monday through Friday--8:30 A.M. to 12:30 P.M.
1:30 P.M. to 5:00 P.M.

APPENDIX H

LOCATIONS FOR COMMUNITY MEETINGS

APPENDIX H
LOCATIONS FOR COMMUNITY MEETINGS

Danville Community Building
Adjacent to Danville City Hall
105 W. Shepherd St.
Danville, IA 52623
(319) 392-4685

Contact: Judy Brayton, City Clerk
Capacity: 100
Lead Time: 3 weeks' advance notice requested
Fees: Optional, decided by City Council
Special Note: Not available on Mondays

Danville School Gymnasium
419 Main St.
Danville, IA 52623
(319) 392-4223

Contact: Ron Bickford, Superintendent,
Danville Community School District
Capacity: 600 to 800
Lead Time: 2 weeks' advance notice requested
Fees: None
Special Note: Not available during months of December, January, and February

New London Town Hall
106 N. Division
New London, IA 52645
(319) 367-7707

Contact: Paula Turner, New London City Clerk
(319) 367-7701
Capacity: 120
Lead Time: 2 weeks' advance notice required
Fees: None

APPENDIX H
LOCATIONS FOR COMMUNITY MEETINGS

(Continued, Page 2 of 2)

Burlington City Council Chamber
400 Washington
Burlington, IA
(319) 753-8120

Contacts: W.G. Lawley, City Manager
Kathleen Salisbury, City Clerk
Capacity: 164
Lead Time: 2 weeks' advance notice required
Fees: None
Special Note: Avoid scheduling meetings on Monday or weekend days; recommended facility use for Tuesday, Wednesday, Thursday, or Friday

IAAP Recreation Hall Auditorium
Mason & Hanger
IAAP
Middletown, IA 52638
(319) 753-7428

Contact: Connie Hutchcroft
Capacity: 300
Lead Time: 30 days' advance notice requested
Fees: None
Special Note: Movie screen available

APPENDIX I

ELECTED OFFICIALS

APPENDIX I
ELECTED OFFICIALS

Federal Level

Senator Charles E. Grassley
135 Hart Senate Office Building
Washington, DC 20510
(202) 224-3744
FAX (202) 224-0473

ALSO

116 Federal Building
131 E. 4th St.
Davenport, IA 52801
(319) 322-4331

Tom Harkin
316 Hart Senate Office Building
Washington, DC 20510
(202) 224-3254
FAX (202) 224-7431

ALSO

Federal Building, Room 314-B
131 E. 4th St.
Davenport, IA 52801
(319) 322-1338

Congressman Jim Leach
1514 Longworth House Office Building
Washington, DC 20515
(202) 225-6576
ALSO

306 F&M Bank Building
Third and Jefferson St.
Burlington, IA 52601
(319) 752-4584

State Level

Governor Terry Branstad
State Capitol Building
Des Moines, IA 50319
(515) 281-5211

State Senate

(Representing Des Moines, Senator Lee, and Henry Counties)

Senator Richard F. Drake
420 Parkington Drive
Muscatine, IA 52761
(319) 263-2573

Senator Eugene S. Fraise
Rural Route 1, Box 310
Ft. Madison, IA 52627
(319) 528-6176

Senator Mark R. Hagerla
Rural Route 4, Box 125
West Burlington, IA 52655
(319) 752-0294

APPENDIX I

ELECTED OFFICIALS
(Continued, Page 2 of 5)

State House of Representatives

(Representing Des Moines, Lee, and Henry Counties)

Representative Dennis M. Cohoon
Midtown Gardens #46
Burlington, IA 52601
Home: (319) 752-5057
Work: (319) 753-2211

Representative Mark S. Shearer
Rural Route 2, Box 35-L
Columbus Junction, IA 52738
Home: (319) 728-7101
Work: (319) 728-2413

Representative Clay R. Spear
1914 River
Burlington, IA 52601
(319) 754-5273

Representative Gregory A. Spenner
1303 Haynes Court #5
Mt. Pleasant, IA 52641
Home: (319) 385-7177
Work: (319) 385-8728

Representative Philip L. Wise
503 Grand Ave.
Keokuk, IA 52632
Home: (319) 524-3643
Work: (319) 524-2542

Des Moines County

Des Moines County Board of Supervisors
Courthouse
Burlington, IA 52601
(319) 753-8284

Members:
Dale Anderson
Dan Cahill
Kent Selters

City of Burlington

Burlington City Council
City Hall
400 Washington
Burlington, IA 52601
(319) 753-8124

Council Members:
Nancy Neafie, Mayor
Jeff Heland, Mayor Pro Team
Lowell Bauer
Janet McCannon
John Sandell
W.G. Lawley, City Manager

City of West Burlington

West Burlington City Hall
122 Broadway
West Burlington, IA
(319) 752-5451

APPENDIX I

ELECTED OFFICIALS
(Continued, Page 3 of 5)

City of West Burlington (Cont'd)
Richard Logan, Mayor
Members of City Council:
Steven Haggerla
Steven Nelson
Gary Scott
Richard Huston
Marsha Benge

City of Middletown

Middletown City Hall
P.O. Box 100
Middletown, IA 52638
(319) 752-8340

Arlan Walker, Mayor

Members of City Council:

Orin Asmus
Dan Huffman
William Walker
Cindy Wilson
Jeff Miller

City of Danville

Danville City Hall
105 W. Shepherd St.
Danville, IA 52623
(319) 392-4685

APPENDIX I

ELECTED OFFICIALS
(Continued, Page 4 of 5)

Leroy L. Lippert, Mayor

Council Members:
Harold Fraise
William McGinnis
Frain Wagner
James Wolbers
William Porter

City of New London

New London City Hall
112 W. Main St.
New London, IA 52645
(319) 367-5623

Paul Lorber, Mayor
103 Cypress Circle
New London, IA 52645
(319) 367-2731

Council Members:

Duane Griggs
212 Sunset Dr.
New London, IA 52645
(319) 367-5308

Edward Marshall
100 E. Linder
New London, IA 52645
(319) 367-2267

APPENDIX I

ELECTED OFFICIALS
(Continued, Page 5 of 5)

City of New London
(Cont'd)

Tony Wick
106 Cypress Circle
New London, IA 52645
(319) 367-2357

John Willey
302 S. Walnut
New London, IA 52645
(319) 367-2332

Jack Wilson
205 Sunset Dr.
New London, IA 52645
(319) 367-2677

Other Officials

Richard Cosby
Police Chief
112 W. Main
New London, IA 52645

Donald J. Bell
City Attorney
210 Sunset Dr.
New London, IA 52645
(319) 367-5227

Ronald Barron
Sewer Superintendent
112 W. Main
New London, IA 52645
(319) 367-5519

Utility Board Members:

Robert H. Dameron, Chairman
107 Cypress Circle
New London, IA 52645
(319) 367-2416

Mark Westerbeck
405 E. McKinley
New London, IA 52645

Russell Harper
312 Newland St.
New London, IA 52645
(319) 367-5436

APPENDIX J

CIVIC AND COMMUNITY GROUPS

APPENDIX J

CIVIC AND COMMUNITY GROUPS

Burlington/West Burlington

American Association of Retired Persons, Chapter No. 2923
Elmyra Benhart
712 Remick
Burlington, IA 52601
(319) 754-7227

American on Aging, Inc.
Southeast Iowa
Dennis Zegarac
509 Jefferson
Burlington, IA 52601
(319) 752-5433

Alpha Omicron Chapter of Epsilon Sigma Alpha
Ernestine Babcock
427 Denmark St.
Burlington, IA 52601
(319) 752-8248

American Association of University Women
Beverly Quirk
2533 Sunnylawn
Burlington, IA 52601
(319) 752-6227

American Business Women's Association
Janet Johnson
613 Brentwood Dr.
West Burlington, IA 52655
(319) 754-6511

American Cancer Society
Des Moines County Unit
Lorene Ellerhoff
P.O. Box 225
Burlington, IA 52601
(319) 752-4008

American Heart Association
Iowa Affiliate
Michelle Moore
F&M Bank Building, Suite 715
Burlington, IA 52601
(319) 754-7063

American Heart Association
Iowa Chapter
Bonnie Kendell
2529 Cliff Rd.
Burlington, IA 52601
(319) 754-5939

American Heart Society
R. "Jim" Cowles
R.F.D. Box 242, Route 1
Burlington, IA 52601
(319) 752-1166

American Legion Post No. 52
Ted Cockrell, Commander
P.O. Box 57
Weaver, IA 52658
(319) 372-3788

APPENDIX J

CIVIC AND COMMUNITY GROUPS
(Continued, Page 2 of 9)

American Lung Association of Iowa
Craig Redshaw
1025 Ashworth Rd., Suite 410
West Des Moines, IA 50265
1-800-362-1643

American Red Cross
Des Moines County Chapter
Brian K. Chip Rendinger
P.O. Box 1337
Burlington, IA 52601

Art Guild of Burlington
Lois Rigdon
P.O. Box 5
Burlington, IA 52601
(319) 754-8069/753-2661

Association for Retarded Citizens
Mary McAllister
P.O. Box 172
Burlington, IA 52601
(319) 753-6692

Bar Association
Matthew C. Warren
203 F&M Building
Burlington, IA 52601
(319) 752-4537

Baseball Association of West Burlington
Bud Carruthers
313 W. Pennington
West Burlington, IA 52655
(319) 754-6183

The Beehive
Ron Brozone
1400 Mt. Pleasant
Burlington, IA 52601
(319) 754-7944

Bel Canto Chorale
Debbie Dittner
1127 Ash
Burlington, IA 52601
(319) 753-6803

Big Brother/Big Sister of Southeast Iowa
Charles Gates
105 Valley St.
Burlington, IA 52601
(319) 752-4000

Bike Burlington
Bill Schwerin
1615 Elm Ct.
Burlington, IA 52601
(319) 752-5715

APPENDIX J

CIVIC AND COMMUNITY GROUPS
(Continued, Page 3 of 9)

Birthright of Burlington
Trudy Reusch
1115 S. Main
Burlington, IA 52601
(319) 753-2702

Blackhawk Booster Club, Inc.
Loren H. Walker
910 Maple St.
Burlington, IA 52601
(319) 752-6346

Boy Scouts of America
Southeast Iowa Council
Breck Dokken
3007 Flint Hill Dr.
Burlington, IA 52601
(319) 754-8431

Burlington Area Council of Churches
Polly Rein
417 West Burlington Ave.
West Burlington, IA 52655
(319) 754-6959

Burlington Business and Professional
Women Organization
Helen Berry
P.O. Box 373
Burlington, IA 52601
(319) 754-6206

Burlington Business Association
Tom Clayton
P.O. Box 901
Burlington, IA 52601
(319) 752-0015

Burlington Northern Ladies
Auxiliary No. 4
Ruth Wells
2209 Gilbert St.
Burlington, IA 52601
(319) 754-5983

Burlington Policy Auxiliary
Blackhawk Unit No. 3
Bambi Lee Orth
728 Lewis St.
Burlington, IA 52601
(319) 753-5324

Burlington/West Burlington
Chamber of Commerce
Clayton Fulknier
P.O. Box 6
Burlington, IA 52601
(319) 752-6365

Burlington Women's Club
Margaret Rutherford
418 Ruthella Dr.
West Burlington, IA 52655
(319) 752-3968

APPENDIX J

CIVIC AND COMMUNITY GROUPS
(Continued, Page 4 of 9)

C.B. Paddlewheeler
Kenny Swan
601 S. Roosevelt
Burlington, IA 52601
(319) 752-4023

Civic Music Association
Bobby Wilson
2429 Herman Ave.
Burlington, IA 52601
(319) 754-8461

Civic Newcomers, Inc.
Joanne Schwarm
818 White St.
Burlington, IA 52601
(319) 752-4814

Community Action Organization, Inc., Southeast Iowa
Sharon Ford
Memorial Auditorium, Third Floor
Burlington, IA 52601
(319) 753-0193

Conservation Board of Des Moines County
Barbara Kinneer
512 Main
Burlington, IA 52601
(319) 753-8260

Conservation Foundation of Des Moines County
Glen Rossiter
512 Main
Burlington, IA 52601
(319) 753-8260

Convention and Tourism Bureau
Michael Gould
P.O. Box 6
Burlington, IA 52601
(319) 752-6365

Dental Society of Des Moines County
Kirk D. Massner, D.D.S.
611 F&M Bank Building
Burlington, IA 52601
(319) 752-5494

Des Moines County/Municipal Office of Emergency Management
Pat Wondra
512 N. Main
Burlington, IA 52601
(319) 753-8206

Des Moines County Soil and Water Conservation District
Sherman Smith
704 S. 9th
Burlington, IA 52601
(319) 752-1828

APPENDIX J

CIVIC AND COMMUNITY GROUPS
(Continued, Page 5 of 9)

Downtown Burlington Business Association
Tom Clayton
P.O. Box 901
Burlington, IA 52601
(319) 752-6251

E.C. Blackmar Chapter No. 306, O.E.S.
Carolyn Bouguet
835 Curran
Burlington, IA 52601
(319) 754-4006

Fine Arts League
Sue Dwyer
2800 Garden Circle
Burlington, IA 52601
(319) 752-7526

Friends of the Library
Cynthia Brown
723 Lewis
Burlington, IA 52601
(319) 753-2514

Friends of Southeast Iowa Symphony
Cleo Hassell
2440 S. 3rd St.
Burlington, IA 52601
(319) 752-6151

Geneological Society of Des Moines County
Linda Auwaerter
1419 Division
Burlington, IA 52601
(319) 753-2083

Girl Scouts, Inc.
Shining Trail Council
Marcia Holsinger
P.O. Box 814
Burlington, IA 52601
(319) 752-3639

Hetta Gilbert Jr. Circle
Ronda Behrens
P.O. Box 602
Burlington, IA 52601
(319) 752-6042

Hetta Gilbert Sr. Circle
Ruth Ringland
2512 River Dr.
Burlington, IA 52601
(319) 752-4043

Historical Society of Des Moines County
Betty Beck
1616 Dill St.
Burlington, IA 52601
(319) 753-2449

APPENDIX J

CIVIC AND COMMUNITY GROUPS
(Continued, Page 6 of 9)

Jaycees
Brad Buhmeyer
2623 Kirkwood
Burlington, IA 52601
(319) 754-8116

Junior Women's Club
Julie Smith
Ridgeview Dr.
Burlington, IA 52601
(319) 752-6464

Just Jazz
Betty Shawgo
2401 Surry Road
Burlington, IA 52601
(319) 753-0187

King's Daughters of
Des Moines County
Alice M.J. Young
1307 N. 8th St.
Burlington, IA 52601
(319) 754-7279

Kiwanis Club, Burlington Noon
Dick Weiss
P.O. Box 15
Burlington, IA 52601
(319) 754-8461

Knights of Columbus
Leo Ertz
232 Columbus Dr.
Burlington, IA 52601
(319) 754-8541

Ladies Golf Association
Erma Young
719 Morningside Dr.
Burlington, IA 52601
(319) 752-7726

Lions Club, Burlington Noon
Gib McKenzie
203 N. 3rd St.
Burlington, IA 52601
(319) 754-7588

Lions Club of West Burlington
Allen Motley
2911 Madison Ave., Apt. 1
West Burlington, IA 52655
(319) 752-4523

March of Dimes of Southeast Iowa
321 Tama Building
Burlington, IA 52601
(319) 752-8080

Moose Lodge No. 579
James W. Waugh
2529 Mt. Pleasant
Burlington, IA 52601
(319) 752-3957

APPENDIX J

CIVIC AND COMMUNITY GROUPS
(Continued, Page 7 of 9)

Municipal Band
Michael Lachnitt
632 McKinley Ave.
Burlington, IA 52601
(319) 752-1239

NAACP, Burlington Chapter
Lynn Stinson
P.O. Box 1194
Burlington, IA 52601
(319) 752-2942

National Association of Letter Carriers
AFL-CIO, Branch 222
Thomas L. Little
P.O. Box 785
Burlington, IA 52601
(319) 394-3019

Optimists
Ed Minard
Rural Route 5, Box 431
Burlington, IA 52601
(319) 753-6561

Players Workshop
Al Christensen
510 Columbia
Burlington, IA 52601
(319) 752-5386

Preceptor Alpha Tao Chapter of Beta Sigma Phi
Lois Wellman
Rural Route 1, Box 14
Yarmonth, IA 52660
(319) 865-3521

Radio Club, Iowa-Illinois Amateur
George E. Smyth
1720 Barret
Burlington, IA 52601
(319) 752-7324

Retired Senior Volunteer Program (RSVP)
Lorene Ellerhoff
400 Washington
Burlington, IA 52601
(319) 753-8155

Rotary
Scott Power
321 N. 3rd St.
Burlington, IA 52601
(319) 754-6587

Southeast Iowa Association for Handicapped Children
Julie Buckless
2120 Highland Ave.
Burlington, IA 52601
(319) 754-7713

APPENDIX J

CIVIC AND COMMUNITY GROUPS
(Continued, Page 8 of 9)

SCORE
B.L. Swords
2110 Summer St.
Burlington, IA 52601
(319) 752-5104

Sierra Club
R. "Jim" Cowles
R.F.D. Box 242, Route 1
Burlington, IA 52601
(319) 752-1166

Southeast Iowa Symphony Orchestra
Elaine Cedarquist
118 Glendale Dr.
Burlington, IA 52601
(319) 752-2555/6440

St. Francis Continuation Care
Center Auxiliary
Evelyn Trautner
1821 River
Burlington, IA 52601
(319) 754-7924

Stars and Stripes Chapter, NSDAR
Sally O'Riley
Rural Route 5, Box 728
Burlington, IA 52601
(319) 752-6196

Toastmasters
Russell Myatt
Rural Route 4, Box 210D
Marathon Acres
Burlington, IA 52601
(319) 754-6257

United Comm. Travelers
of America
Arthur Weiler
104 S. Woodlawn Ave.
Burlington, IA 52601
(319) 752-3876

United Nations Association
Burlington Chapter
Sally McMillan
1825 Vogt
Burlington, IA 52601
(319) 753-1142

United Way, Burlington Area
Daniel D. Lanshe
214 1/2 N. 4th St.
P.O. Box 842
Burlington, IA 52601
(319) 752-7831

Visiting Nurses Association
Richard Lies
1000 N. 5th St.
Burlington, IA 52601
(319) 753-6428

APPENDIX J

CIVIC AND COMMUNITY GROUPS
(Continued, Page 9 of 9)

YWCA
Sharon Gilbert
2410 Mt. Pleasant
Burlington, IA 52601
(319) 753-6734

YMCA/YWCA
Dan Dalzeil
2410 Mt. Pleasant
Burlington, IA 52601
(319) 753-6734

Danville

Danville Lions Club
Rick Querna, President
Rural Route 2
Danville, IA 52623
(319) 392-8383

Danville Junior Women's Club
Diana Klaus, President
520 S. Main
Danville, IA 52623
(319) 392-8860

APPENDIX K

MAILING LIST

(This list is maintained by the IAAP PAO.
For more information, please contact
(319) 753-7600)

APPENDIX L

COMMUNITY INTERVIEW PARTICIPANTS

(This list is maintained by the IAAP PAO. For more information, please call (319) 753-7600.)