Environmental

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POINT PAPER

AMSTA-AN-RK 26 February 2004

SUBJECT: Implementation of ISO 14001-Based Environmental Management System

PURPOSE: Provide information on current status and future plan for implementation of ANAD's Environmental Management System (EMS).

FACTS:

o Initial EMS Efforts:

o In September 2002, to facilitate a work requirement, ANAD brought Bldg 145 Machine Shop and Bldg 117 Welding Shop into ISO (International Organization of Standards) 14001 conformance.

o By January 2003, ANAD brought the four major depot painting shops (Bldgs 130, 143, 409 and 433) into conformance.

o At the Commander's request, ANAD kicked off an installation-wide program in August 2003. The plan is to bring the depot into ISO 14001 conformance by September 2004, and to be compliant (third party ISO 14001 certified) by July 2005.

o EMS Drivers and Benefits:

o Executive Order 13148 requires federal facilities to implement an EMS by December 2005.

o Army policy requires installations to implement an ISO 14001-based EMS by December 2005, and to be fully conformant by September 2009.

o EMS improves environmental compliance, promotes pollution prevention, complements business/strategic plans, and enhances market competitiveness.

o Current Progress and Planned Schedule:

- EMS Implementation Workshop – March 2004
- EMS Training – March 2004
- EMS Documentation and Web site – July 2004
- Annual Self-Assessment and Senior Management Review – August 2004
- Remedy Non-conformances and Achieve Conformance – September 2004
- Pre-certification Self-Audit – March 2005
- Remedy Non-conformances – April to May 2005
- Third Party ISO Certification Audit – June 2005
- ISO 14001 Certification – July 2005

POINT PAPER

AMSTA-AN-RK 17 March 2004

SUBJECT: Resource Conservation and Recovery Act (RCRA) Program at Anniston Army Depot (ANAD)

PURPOSE: To provide information on ANAD's Waste Management and Permit Status.

FACTS:

o ANAD generates two types of solid waste: municipal waste and hazardous waste.

o Municipal Waste. Municipal wastes are those wastes typically generated by personnel performing office duties; food preparation (including break areas of shops and offices); packaging items for storage or shipment; unpacking items prior to use in the shops; and other operations that do not use hazardous materials. These wastes generated at ANAD are disposed of off-site through a contract with a local waste management company. The generation of these wastes and disposal at an off-site landfill does not require ANAD to have an environmental permit.

o Hazardous Waste. Hazardous wastes are those wastes generated by operations such as abrasive cleaning, chemical paint stripping, metal plating, painting, laboratories, and munitions storage and disposal. A RCRA permit is required for any facility that treats, stores or disposes of hazardous wastes. ANAD operations that require a RCRA permit are: storage of hazardous wastes from industrial operations; storage of hazardous wastes from conventional munitions storage and maintenance; storage of hazardous wastes from storage, monitoring and disposal of chemical agent munitions; disposal of conventional munitions; and disposal of chemical agent munitions.

o The Alabama Department of Environmental Management (ADEM) is the agency that issues the RCRA permit for ANAD. ANAD currently has a RCRA permit, issued 19 June 1997 (with 16 Modifications) that covers storage of the hazardous wastes (industrial operations, conventional munitions, chemical agent munitions) and the disposal of chemical agent munitions. ANAD currently operates the conventional munitions disposal (referred to as open burn/open detonation, or OB/OD) under interim status – which means we submitted an application for the operation and ADEM allows us to operate per that submission pending their full review of the application and drafting of the permit modification. ANAD is currently working with the U. S. Army Corps of Engineers, Mobile District, to initiate a contract to update the earlier OB/OD submission as a Permit Modification Request.

o Disposal of Chemical Munitions: The Anniston Chemical Agent Disposal Facility (ANCDF) is a tenant activity (Chemical Materials Agency) on ANAD with the mission of Chemical Agent Munition disposal. It was the first operation that was in the RCRA Permit issued by ADEM in June 1997. The facility is currently processing M55 rockets containing agent GB (a.k.a. Sarin) in the Agent Trial Burn phase. Following successful completion of the trial burns; the facility can begin operating at full rate. Processing for munitions of different configuration (mines, projectiles, etc.) and different agents (VX and Mustard) will also require successful demonstration by trial burns prior to routine operations for each munition/agent campaign. Operation of the facility expected to continue for approximately 7-12 years. Wastes generated from ANCDF are shipped off-site for final disposal or are returned to the storage igloos in the Chemical Limited Area (CLA) pending further processing at ANCDF prior to off-site shipment/disposal.

o Storage of Chemical Munitions and related wastes: The munitions processed at the ANCDF are currently stored in the CLA. Monitoring and surveillance of the Chemical Agent munitions is the mission of the Anniston Chemical Activity (ANCA), which is also a tenant under the CMA. The M55 rockets and reconfigured cartridges and their components are considered a Hazardous Waste. Storage of these items requires RCRA permitting and ANAD was operating with many of the CLA igloos under interim status until RCRA Permit Modification 16 was issued on February 20, 2004. Wastes generated from both the Chemical Agent Munition Storage and Disposal Operations that will require further processing at the ANCDF are stored in igloos in the CLA. Modification 16 to the RCRA Permit allows storage of these wastes without a specified time limit until they can be processed at the ANCDF.

o Storage of Hazardous Waste from Industrial Operations: The industrial operations at ANAD, related to the maintenance of military tactical vehicles and equipment, generate approximately 3,500,000 to 4,100,000 pounds of hazardous waste per year, classifying ANAD as a "Large Quantity Generator" under RCRA regulations. The ANAD RCRA Permit (as modified February 20, 2004) includes three storage buildings that can store hazardous waste for up to one year. Our three current Permitted Hazardous Waste Storage Buildings for drummed industrial waste are operating near capacity with workload at existing levels. Most waste is shipped off-site for disposal within 90 days of generation. Additional storage may be either permitted for up to one year storage (requires RCRA permitting for construction and operation) or operated as a "less than 90 day" storage area which would not require inclusion in the RCRA permit (other than identification as an active solid waste management area).

o Storage and Receipt of Conventional Munitions: ANAD RCRA Permit Modification 16 includes 3 igloos in the Ammunition Limited Area for storage of conventional munitions and components that are classified as a hazardous waste. This permit modification also permits ANAD to receive hazardous waste conventional munitions and components from off-site for the purposes of reuse, recycle, recovery or disposal. This will allow receipt of conventional missiles for processing at the Missile Recycling Center operated on ANAD by personnel in the Anniston Munitions Center (ANMC). This will also allow conventional munitions to be received for treatment/disposal at the OB/OD areas operated by ANMC personnel.

o Disposal of Conventional Munitions: The ANMC operates the OB/OD facilities on ANAD. Utilization of these facilities is dependant on local weather conditions that would affect noise levels. The burning ground has 15 pans that can burn up to 2,000 pounds of bulk propellant per tray and a daily burn total not to exceed 50,000 pounds. The detonation grounds can detonate waste munitions at ground level (up to 15 pounds Net Explosive Weight per shot) or buried up to fourteen feet deep (up to 1,000 pounds Net Explosive Weight per shot).

POINT PAPER

AMSTA-AN-RK 26 February 2004

Subject: Anniston Army Depot (ANAD) Resource Conservation and Recovery Act (RCRA) Permit

PURPOSE: To provide information concerning the RCRA Permit.

FACTS: A RCRA permit is required for the treatment, storage or disposal of hazardous wastes. Several operations on ANAD are required to be included in the RCRA Permit. The initial permit application was submitted to the Alabama Department of Environmental Management (ADEM) in January 1985. Several modifications to the original application have been submitted to them since that time.

o The first operation to receive permit status was the Anniston Chemical Agent Disposal Facility (ANCDF) when the permit was issued in June 1997. This facility was constructed and is now in the initial stages of destroying chemical agent munitions that are stored in igloos on ANAD.

o The second operation to receive permit status was the storage of hazardous waste. This portion of the permit was issued on 20 February 2004. The permit allows storage of hazardous wastes for a period of up to one year for three buildings in the Nichols Industrial Complex for storage of industrial generated wastes (Buildings 466, 512 and 527) and three igloos in the Ammunition Limited Area for storage of conventional munitions and components. All 155 igloos in the Chemical Limited Area are permitted for storage of waste chemical agent munitions and wastes generated from the storage and disposal of chemical agent munitions – there is no time limit for storage in these 155 igloos. The permit also allows ANAD to receive waste conventional munitions from off site for reuse, recycle, recovery and disposal – this will allow receipt of munitions to support the Missile Recycling Center or for disposal at the Open Burn/Open Detonation (OB/OD) grounds. Several of these storage sites had been in interim status and allowed to operate as waste storage locations since the original permit application was submitted or as a result of consent orders issued by ADEM.

o The third operation that requires permitting is the OB/OD operation conducted by the Anniston Munitions Center. This operation is currently operating under interim status. A modification request updating the permit application for the OB/OD operation will be prepared and submitted to ADEM this year.

POINT PAPER

AMSTA-AN-RK 15 March 2004

SUBJECT: Clean Air Act and Air Quality Criteria Attainment at Anniston Army Depot (ANAD)

PURPOSE: To provide information on air quality conditions at ANAD and their relationship to production.

FACTS: The Clean Air Act (CAA), as administered by Alabama in the State Implementation Plan (SIP), establishes criteria for the presence of primary pollutants. These pollutants are carbon monoxide (CO), particulate matter (PM), sulfur oxides (SOx), nitrogen oxides (NOx), ozone, and lead.

o Ground level ozone is produced by volatile organic compounds (VOC's) and NOx. ANAD's extensive painting operations must comply with VOC restrictions. Such restrictions present no significant challenge to current or future painting operations. NOx is produced by heat producing processes such as fossil fuel burning steam boilers and engines. ANAD's engine test facility is a significant NOx source. Since all NOx sources in the county impact one another's attainment status, the chemical agent incineration activities, a depot tenant, must be considered in permitting ANAD's production processes. NOx emissions are not expected to impact any current or future production capabilities because they can be controlled with pollution control equipment, if required by regulators.

o The abrasive blast processes used at ANAD to prepare metal surfaces for inspection, repair, plating and painting, as well as other operations, emit PM. Pollution control devices are an integral part of large abrasive blast machines and PM is not expected to present any difficulties in current or expanded production. CO and SOx are products of fossil fuel burning and are not significant factors in current or expanded production. Small amounts of lead are released in obsolete munitions/explosives disposal and but are not expected to be a factor in production planning.

o Air monitoring, under the SIP, provides measurements used to identify areas, usually counties, which do not meet the national ambient air quality standards (NAAQS). Alabama environmental regulations list only two counties as non-attainment areas. These are for marginal ozone attainment in Jefferson and Shelby Counties. ANAD is located in Calhoun County which meets all NAAQS primary criteria. NAAQS attainment status is impacted by mobile sources, such as trucks and automobiles, as well as stationary production equipment. An interstate highway passes near ANAD but neither that traffic nor the incidental travel in the surrounding area is expected to change Calhoun County's NAAQS attainment.

o ANAD has been granted interim status under RCRA to operate an outdoor burning/detonation (OB/OD) facility for obsolete munitions/explosives. We estimate this operation emits about 145 tons of NAAQS pollutants (mostly particulate matter) and 4 tons of HAPs (mostly lead) per year. We expect no problem with these levels given current NAAQS status for Calhoun County.

POINT PAPER

AMSTA-AN-RK 15 March 2004

SUBJECT: Anniston Army depot's (ANAD) Pollution Prevention (P2) Program

PURPOSE: To provide information on ANAD's P2 program.

FACTS:

o ANAD's P2 program was established in 1992. Today's P2 program involves depot and tenant employees as well as community members in identifying and implementing depot-wide P2 strategies. The goals of ANAD's P2 program focus on waste reduction in the areas of hazardous and non-hazardous waste and on reduced consumption of resources. The comprehensive P2 Plan, last updated in August 2002, integrates four related programs: P2, Ozone-Depleting Substances (ODS), Affirmative Procurement (AP), and solid waste management. Significant progress has been made towards the achievement of ANAD's P2 goals:

o The P2 working group, established in 2001, meets monthly and is chaired by the Director of Production. The members of the P2WG include representatives of the depot's environmental, production, contracting, engineering, and legal organizations and tenant activities. Since its inception the P2WG has implemented, or evaluated for implementation, 15 initiatives to reduce hazardous waste; 17 to decrease solid waste; 10 to eliminate restricted chemical usage; 12 to reduce air emissions; 10 to lessen wastewater generation; and 6 to limit hazardous material usage.

o The AP working group, established in 2002, is an important component of ANAD's P2 program. The Federal government mandates that certain products purchased by Federal agencies be manufactured with or include recycled or recovered content. ANAD has developed a model AP program that focuses primarily on buying recycled materials, but features an added objective to purchase environmentally preferable products (EPPs). EPPs have a less or reduced effect on human health and the environment compared with competing products and services. All depot directorates are represented on the APWG, which meets monthly. In FY 2002-03, ANAD made tremendous achievements in the AP program that include:

o Implementation of an internal incentive awards program to recognize individuals, groups, and organizations that demonstrate leadership and a commitment to purchasing recycled content/ EPP and services

o Training more than 300 depot, tenant, and contractor employees in AP requirements

o Issued "Buying Recycled" guidance for employees and vendors, incorporated AP training into Army's "Acquisition and Logistics Excellence Week"

o Implemented local contract clause requiring use of recycled products, or justification for non-use, for all solicitations over $100,000

o Coordinated a contract clause requirement with Corps of Engineers to require use of recycled products, or justification for non-use, in all job-order construction contracts

o Updated local credit card purchasing system to track recycled content purchases

o Renovated the gymnasium using floor matting made from recycled tennis shoes, installed playground equipment and renovated a bathhouse using recycled content items

o ANAD diverted 54.6% of its solid waste from landfills and incineration through the recycling program, exceeding the DoD Measure of Merit goal of 40%. ANAD's Qualified Recycling Program (QRP) collects, segregates, and processes not only traditional recyclables, including metal, glass, paper, scrap wood, plastic, aluminum cans, and wood chips, but also non-traditional items such as petroleum products and batteries. In FY 2002-03, ANAD's QRP recycled or diverted more than 16,500 tons of materials; avoided $382,000 in disposal costs (through 7/03); and generated $1,051,600 in revenue (through 7/03).

o Hazardous Material Minimization (HAZMIN) has a major role in the P2 program. Historically, a large volume of unused hazardous materials was disposed of as hazardous waste. In early FY 2002, an internal remarketing program was developed to identify opportunities for material reuse before useful shelf life had been exceeded. The Remarketing program has reduced procurement and waste disposal costs substantially. Reusable materials are remarketed to the depot, its tenants, and other installations. Since the program's inception, ANAD has avoided more than $50,000 in waste disposal costs and realized a cost savings of nearly $10,000, while generating about $5,000 in recycling revenue.

o Cross-functional P2 Opportunity Assessment Teams have been established and trained to evaluate production shops and operations, provided status updates on P2 projects, and identify and recommended new opportunities, building upon the depot's P2 program goals and to achieve further reduction in hazardous materials, hazardous wastes, and solid waste.

o ANAD's P2 leadership has formed partnerships with local, State, and DoD organizations including the EPA WasteWise Program, the National Pollution Prevention Roundtable, the National Recycling Coalition, and the Alabama/DoD P2 Partnership.

o World events have necessitated a significant increase in production activities greatly increasing our waste streams; however our leadership is committed to the concept that combat readiness and responsible environmental stewardship are compatible, achievable, and necessary.

POINT PAPER

AMSTA-AN-RK 15 March 2004

SUBJECT: Installation Restoration Program at Anniston Army Depot (ANAD).

PURPOSE: To provide information on the evaluation of past ANAD hazardous waste sites and control the migration of hazardous contaminants from these sites.

FACTS: ANAD is participating in the U.S. Department of Defense Installation Restoration Program (IRP), which was established in 1978, to identify and evaluate past US Department of Defense hazardous waste sites and to control the migration of hazardous contaminants from these sites. The Southeast Industrial Area of ANAD was placed on the Environmental Protection Agency's National Priorities List in 1989, because of soil and groundwater contamination caused by onsite legal disposal of industrial chemicals during the 1950 through 1981 time periods.

o Remedial investigation (RI) studies (conducted during the 1980s and 1990s) and recent monitoring data indicate that groundwater quality has degraded in several localized areas within the boundaries of the industrial area. Groundwater quality has degraded primarily with respect to chlorinated hydrocarbons and metals from historic activities and sources. Some monitoring locations near the industrial area boundary show contaminant concentrations that exceed the maximum contaminant levels (MCLs). A comprehensive groundwater RI is being conducted to assess the nature and extent of groundwater contamination in the area of ANAD's southeastern boundary and the migration of contaminants from the depot towards Coldwater Spring. Coldwater Spring is a sole source aquifer that is used by the local community as a water source. It is located approximately 1.6 miles south of the industrial area and is the raw water supply for the Krebs Water Treatment Plant.

o The results of the remedial investigation study will be used to establish the objectives and extent of required groundwater cleanup. In the interim, systems are in place to protect current and potential receptors (onsite and offsite) from exposure to contaminants exceeding MCLs. These measures include cleanup of sites where contamination is present; operation of the interim groundwater treatment system at ANAD; and development of an Emergency Response Plan which will be implemented for use in the event that private or public water supplies exceed applicable drinking water standards.

o The Anniston Water Works Board and the U. S. Army have finalized an agreement making possible the installation of treatment equipment necessary to remove Trichloroethylene (TCE) from the Coldwater Spring. As part of the agreement, the U.S. Army provided $1.568 million for the installation of air-stripping equipment at the Coldwater Spring Treatment Plant. The Anniston Water Works Board will provide the additional funding for the project, estimated at approximately $3.2 million. Construction is scheduled to begin in early 2004, with a projected completion date of nine months.

o The ANAD Restoration Advisory Board (RAB) is an official forum composed of local concerned citizens who are centers of influence in their neighborhoods; churches; civic, educational and fraternal organizations; and members of professional and municipal activities. The current RAB has approximately 20 voting members. Other non-voting participants include Environmental Protection Agency, the Alabama Department of Environmental Management, the Army, and the Department of Defense. A civilian co-chair and an Army co-chair lead the RAB.

POINT PAPER

AMSTA-AN-RK 16 March 2004

SUBJECT: Performance and Planned Improvements of the Groundwater Interception Treatment System (GWIS), Industrial Waste Treatment Plant (IWTP), and the Sewage Treatment Plant (STP)

PURPOSE: To provide information on the performance and planned improvement of Anniston Army Depot's (ANAD) wastewater/groundwater treatment facilities.

FACTS: ANAD operates three water treatment plants: the GWIS which treats groundwater for metals and volatile organics under an interim Record of Decision under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); the IWTP which treats industrial wastewater from depot production processes; and the STP which treats domestic sewage from the depot and the chemical demilitarization plant, along with the treated effluent from the IWTP.

o The GWIS normally operates 5 days per week. The STP operates 24 hours per day, 7 days per week. With current production operations, the IWTP is operating 24 hours per day, 7 days per week. Both the IWTP and STP are operating close to capacity due to expanded production activity. The monthly average treatment capacity of the STP is 620,000 gallons/day.

o The STP and IWTP have maintained a steady record of compliance with our Alabama Department or Environmental Management (ADEM) National Pollutant Discharge Elimination System (NPDES) permit, although both plants are more than 25 years old. Over the past two years the STP and IWTP have treated more than 216 million gallons of wastewater. The STP has not had an excursion since May 2001. The IWTP has not had an excursion since Nov 2002. The GWIS has treated an average of 110,000 gallons of extracted groundwater per day since its construction in 2001. Extracted groundwater has been out of compliance only once within the life of the GWIS.

o ANAD Environmental has worked through the U.S. Army Corps of Engineers (COE), Mobile, to develop and finalize a Capital Improvements Plan (CIP) to extend the life of the STP and IWTP, approximately 5 years, until a Military Construction, Army (MCA), project can be implemented. Projected MCA funds are for FY 2006-2007. As recommendations in the CIP are implemented, we will improve ANAD's ability to comply with more stringent contamination removal limits. We will also increase plant capacities and reduce the volume of chemicals required for treatment, which is essential with our current increase in production operations.

o Improvements to the STP and IWTP are currently being made. A new plate filter press has been installed at the IWTP to increase steam-cleaning sludge dewatering capabilities and an abandoned digester is being converted into a holding tank at the STP. The holding tank will provide an additional 250,000 gallons of storage to alleviate the STP's aeration lagoon overflow during peak rain events. The COE will begin construction in March 2004, and the project is scheduled for completion in April/May 2004.

o ANAD conducted a Groundwater Treatment Plant Effectiveness and Efficiency Study on the GWIS to evaluate and optimize the existing groundwater treatment process and to determine if the existing chemical addition technology can efficiently achieve current effluent discharge limits. The final report will be ready for review in mid-March 2004.

Depot wins environmental awards: AAD only installation in world to receive multiple awards

By Matthew Korade
Star Senior Writer
02-24-2004

The Anniston Army Depot is picking up two awards from the Army for its work in environmental restoration and pollution prevention.

Thelma McCullough, recycling division chief, speaks to the depot's 'mentoring' school students about recycling efforts. Photo: Special to The Star

The Secretary of the Army's office announced the awards Monday, citing a number of the depot's innovative environmental management programs. The depot will go on to compete in the Defense Department's environmental awards later this year.

"I'm ecstatic to win," said Ann Worrell, director of risk management at the depot. "This is because a lot of people both on the depot and in the community have worked together to make this an effective program."

Each year, Army environmental professionals from around the world compete in six environmental award categories. The depot was the only installation this year to win awards in two categories.

The depot won the environmental restoration award for its work managing soil and groundwater contamination resulting from work on combat vehicles, primarily by trichlorethylene, or TCE, which was used to clean metal parts.

Its efforts included building a new wastewater treatment plant, taking recommendations of community groups like the Restoration Advisory Board; forming a partnership with the Anniston Water Works and Sewer Board to expand its water treatment facility, and removing more than 7,000 cubic yards of contaminated soil.

"Partnering with the regulatory agencies and other stakeholders streamlined decision-making and allowed for fast track cleanup to include innovative technologies," said panel member Dennis Druck, an environmental scientist with the Army Center for Health Promotion and Preventive Medicine.

The depot won the pollution prevention award for working to erase a legacy of issues related to its industrial mission.

Its prevention plan included the use of a more environmentally friendly steam-cleaning compound, eliminating the use of 6,400 pounds of toxic chemicals. It installed low-pressure paint guns that will conserve 35,000 gallons of paint and save more than $3.7 million a year. It also recycled traditional materials – scrap wood, glass, and metals – petroleum products and batteries, reducing solid waste by 16,500 tons.

Depot wins environmental awards: AAD only installation in world to receive multiple awards - Continued

"It's a really good thing for the environment, the depot and the community," Worrell said. They use the money saved for ergonomic equipment and quality-of-life improvements. And the pollution prevention keeps pollutants out of the air and soil.

For example, recycling 375,000 gallons of petroleum saved the depot over $700,000 in hazardous waste disposal costs and generated $168,000 in recycling revenue, Worrell said.

In addition, recycling ethylene glycol kept 11,000 pounds of the poisonous chemical out of the waste stream.

Five Army installations, two teams and two individuals were named as 2003 Secretary of the Army Environmental Award winners. They include Newport Chemical Activity, Indiana; Fort Stewart and Hunter Army Airfield, Georgia; Army Garrison, Alaska; Kansas Army National Guard; Hawaii Army National Guard; and U. S. Army Corps of Engineers, Alaska.

The installations were credited with saving the endangered shortnose sturgeon population in Georgia, restoring a World War II defense outpost in Alaska, maintaining a pristine Hawaiian ecosystem, and ensuring the nation's newest combat vehicle – the Stryker.

The group credited with developing the combat vehicle, the Army Brigade Combat Team Project Management Office, had a primary goal of designing a premier combat vehicle system.

However, the team understood the importance of considering the potential environmental impacts during manufacture, testing, operations and disposal of the vehicles, Army officials said in a release.

All the contestants were judged by representatives from a number of military and non-military agencies, including the Environmental Protection Agency, the U.S. Fish and Wildlife Service, the Nature Conservatory, the U.S. Coast Guard, the U.S. Army Corps of Engineers and the Army Environmental Center.

This annual award is the Army's highest honor for environmental stewardship programs. Award winners are leading examples of how the Army invests in environmental stewardship on the 16.7 million acres of land it manages, Army officials said in a news release.

Army award winners will receive their awards at regional ceremonies across the nation in the spring.

Live, breathe, eat recycling

By Matthew Korade
Star Senior Writer
01-29-2004

Thelma McCullough had racked her mind, but a solution to the carbon paper that was piling up at the Anniston Army Depot recycling center would not come. She needed a better way to recycle the stuff.

An Auburn University expert put her on the path to a solution.

McCullough, the division chief of the recycling center, built a wooden box and partially filled it with soil. She added wilted vegetables — and four inches of shredded carbon paper. Then she tucked in a pint of earthworms.

The carbon paper disappeared, the soil multiplied, and so did the worms. "There were so many, you couldn't even reach down in there."

Thelma McCullough stands next to a wood chipper at the Anniston Army Depot's recycling center. Photo: Bill Wilson/The Anniston Star

The worms are tiny recycling engines. They're just one of the ways McCullough, who wears a knit cap to work, has found to harness nature to deal with the depot's river of waste.

Her goal: Total recycling, zero waste to go into a landfill.

"Will we reach that? I don't know," she said. "But we're going to try every day."

In storage lots, heaps of broken shipping pallets are ground into mounds of chips. The shreds are seasoned by sunlight and air before winding up as mulch or compost in garden beds. A truckload costs $5.

Started as a flagship in 1983, the depot's recycling center has become a model for others. Workers at the center are helping Jacksonville State University start its own program.

"Like everything else we do, the leader," said Joan Gustafson, a depot spokeswoman.

The recycling center is necessary. Every tank the U.S. military owns has to come through the depot in some form or fashion. That generates a lot of scrap metal – 541 tons in fiscal 2003. The depot also recycled 499 tons of used office paper, 6,000 tons of scrap wood and 500 tons of plastic – materials that can be reused and that otherwise would have been sent to a landfill.

Much of it finds its way into the hands of local residents.

On the first and third Saturdays of each month, from 8 a.m. to 11:30 a.m., the recycling center opens to the public. It sells two-by-fours, plywood and other scrap wood for $5 a truckload. Old credenzas go for $4 and metal file cabinets for the same or a dollar more. Doors are $1 each, chairs are two.

"We'll really break your pocketbook," McCullough said.

Live, breathe, eat recycling - Continued

There is no limit to what the public can buy, and they can pay by check. All people need to do to get in is show a driver's license and proof of insurance at the depot's gates. They will be escorted the rest of the way.

To do the recycling job, McCullough has a fleet of 35 trucks and trailers and 13 employees, including a mechanic. The trucks drive as far south as Florida, as far north as Tennessee, as far west as Mississippi and as far east as Georgia to take their products to markets.

In a sense, even the building is recycled. It used to be an old mule barn, "and it's turned into what we have today," McCullough said proudly.

Outside, tractor-trailers are filled with cardboard and paper bales ready for delivery. The cargo, which weighs 60,000 pounds, will sell for $2,000 to $3,000, she said.

"The way the depot is operating right now, we can fill one of these a week," McCullough said.

The center's profits cover all of its costs. It has to operate on solid business principles, McCullough said. No federal appropriations are used.

The center does hundreds of thousands of dollars in sales each year. Profit after overhead costs are covered goes to the depot commander, who uses the money for pollution control and for buying such extras as ergonomic chairs.

The center gets "very, very good" command support, McCullough said. "And it's not just because of the money."

McCullough is aggressive in her pursuit of the best prices and newest uses for the recyclable materials.

The depot's gymnasium just got a new floor — made of old tennis shoes. She handed out a little white handbag woven from two-liter bottles. It feels like cotton.

Such practical uses are called "close-the-loop recycling," and while some might think them of lesser quality, "not so," she said.

She's constantly testing her employees on their knowledge of recycling, not just because it's their job, but to make them believers in its importance. Our national resources are shrinking, McCullough said. "You have to live, breathe, eat, sleep recycling."

Recycling Statistics

- ☐ Total solid waste generated and processed for FY 03 was 13,220,789 pounds, or 6,610 tons.
- ☐ Total recyclables was 16,078,509 pounds, or 8,039 tons.
- ☐ Total (JP8) fuel recycled was 845,714 gallons.
- ☐ Total oil recycled was 217,087 gallons.

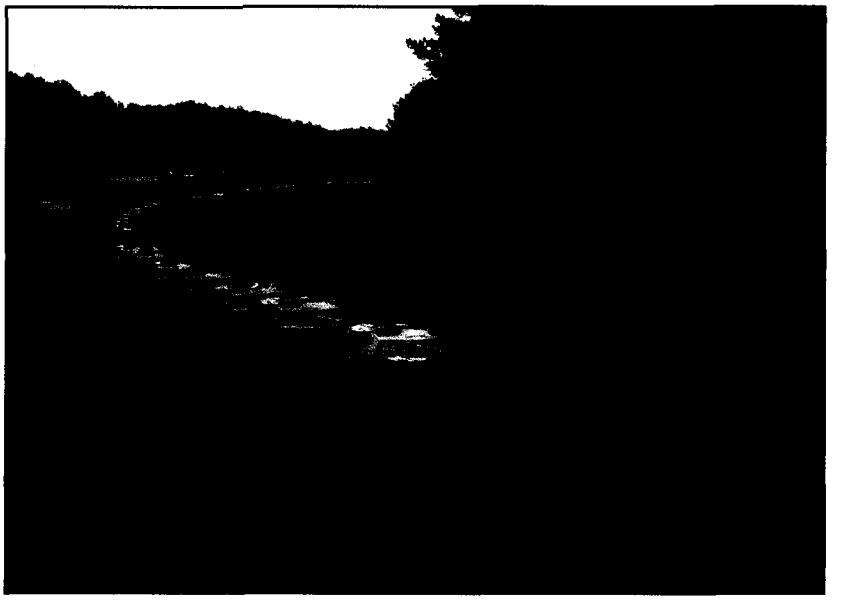
POLLUTION PREVENTION PROGRAM—INDUSTRIAL INSTALLATION

ANNISTON ARMY DEPOT

Through its impressive results, the Anniston Army Depot (ANAD) proves itself to be a good neighbor and a true stakeholder in Alabama's environmental future. The depot has achieved excellence in pollution prevention by implementing innovative and effective programs that protect the environment, increase productivity and enhance the Army's readiness.

INTRODUCTION

Established in 1941 for ammunition storage, the Anniston Army Depot (ANAD) is the Army's leading vehicle and weapon maintenance and repair facility. ANAD is the only Army depot capable of performing maintenance on both heavy- and light-tracked combat vehicles and is designated as the Center of Technical Excellence for the M1 Abrams Tank. In addition, ANAD performs maintenance on individual and crew served weapons as well as land combat missiles and small arms. The depot also stores and maintains conventional ammunition, missiles, seven percent of the nation's chemical munitions stockpile, and is the site of production of the Army's newest combat vehicle— the Stryker.



▲ M1 Abrams Tanks are lined up to be upgraded before being returned to soldiers.

The objectives of ANAD's Pollution Prevention (P2) program are to eliminate or reduce pollution at the source, rather than control it, and to achieve all agency and regulatory P2 requirements and goals. The leadership at the Army's premier depot is committed to the concept that combat readiness and responsible environmental stewardship are compatible, achievable, and necessary.

ANAD is located on 15,279 acres in Calhoun County in northeastern Alabama.

BACKGROUND

ANAD's P2 program was established in 1992. Through the dedication and commitment of leadership and staff, P2 projects implemented since fiscal year 2002 have made significant improvements to on-depot processes while reducing, eliminating, or finding reuse opportunities for waste.

ANAD Profile

- 15,000 acres of woodland
- 10 acres of lakes and streams
- 4 buffalo in protected habitat
- 4,784 total employees
- 2,850 depot employees
- $407.1 million fiscal year (FY) 2002 operating budget

Environmental Challenges

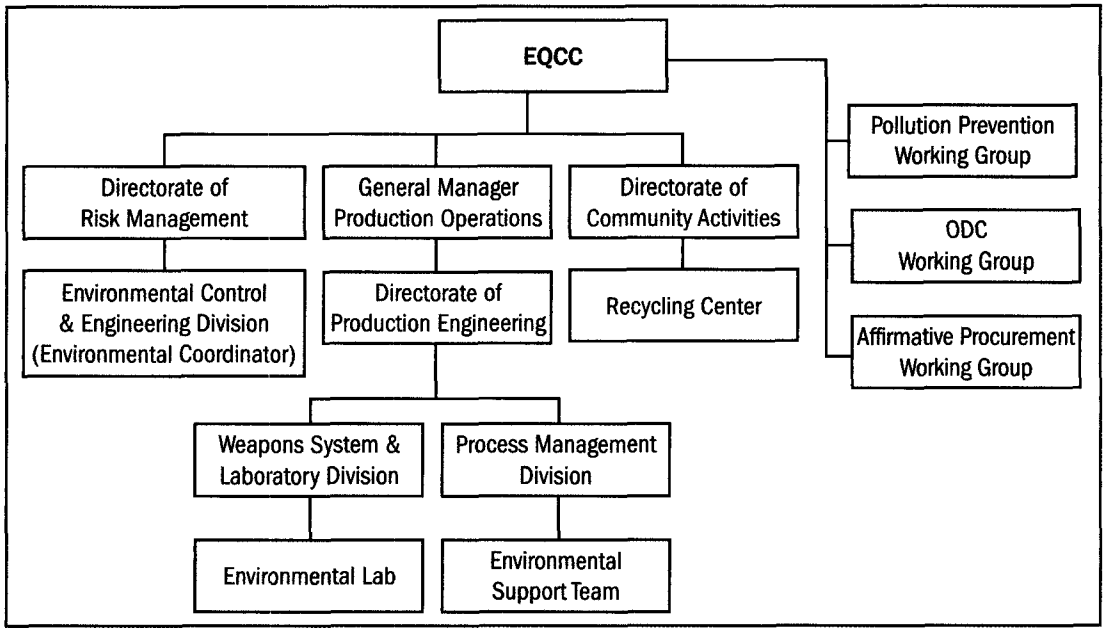
On a daily basis, the depot contends with a legacy of issues related to its industrial mission and role as storage facility for seven percent of the nation's chemical munitions. Due to the national publicity surrounding the beginning of chemical agent incineration in fiscal year 2003, the local community has a heightened awareness of its military neighbor, and, as a result, is especially sensitive to the depot's impact on the community.

ANAD is committed to meeting the metrics outlined in its P2 program and those established by regulatory and other monitoring agencies. Since baseline metrics were established in fiscal year 2000, world events have necessitated a significant increase in production and maintenance operations. Traditionally, industrial facilities find it difficult to strike a balance between production and P2 achievement, but ANAD has not bowed to tradition. Instead, the depot has been able to increase production, leveraging it to support improved P2 initiatives, and to continue effective pollution reductions.

Organization, Staffing, and Management

ANAD manages its environmental program through the Directorate of Risk Management (DRK), although other directorates and divisions play crucial roles in the effective implementation of the

environmental and P2 programs. An organizational chart outlining ANAD's environmental program is shown in Exhibit 1.



▲ **Exhibit 1.** ANAD Environmental Program

Using an effective Environmental Quality Control Committee (EQCC) appointed by the Commander and comprised of representatives of all directorate and tenant organizations, the P2 staff and P2 Working Group (WG) "push the envelope" for technology development and implementation. The EQCC, established to advise the Commander on environmental priorities, policies, strategies and programs, coordinates environmental program activities, including the P2 program.

The P2 Program Manager is assigned to the DRK Environmental Control and Engineering Division, and serves as action officer for three highly-successful P2-related WGs (the P2WG, Affirmative Procurement (AP) WG and Ozone Depleting Chemicals (ODC) WG) and maintains P2 Project Records developed for P2 opportunities. The more than 20 members of the P2WG include representatives from environmental, production, contracting, engineering, legal and tenant activities.

The success of the P2 program lies with the commitment of its senior leadership. Directors (GS-14s) who are strongly committed to environmental stewardship actively chair all WGs. The success of the proactive P2 program results from the involvement and support of the working groups as well as the interaction and partnerships with the community.

Completion of Environmental Management System (EMS) ISO 14001 Focal Point Analysis

An effective Environmental Management System (EMS) enhances P2 programs. Similar to a P2 Opportunity Assessment, an EMS goes beyond compliance-driven evaluations. The depot's EMS encompasses traditional P2 solutions and also focuses on environmental, safety and health impacts. The EMS also integrates these issues into the depot's larger mission, while increasing capacity, productivity and production. Additionally, it provides a robust extension to the P2 program by evaluating and ranking aspects and impacts on a process-by-process basis. The EMS Team works in close coordination with the P2WG to share findings and ideas and create program synergies.

ANAD has completed EMS ISO 14001 Focal Point Analyses for six operations, including machining, welding and several painting operations. These operations are ISO 14001 conformant and are re-audited every 90 days. Goals, objectives, and targets were developed based on the identification of aspects and impacts to reduce the effects of these operations on the environment. The analyses will be completed for the remaining industrial operations by September 2004 and allow for implementation of a mission-focused EMS.

ANAD has also partnered with the Department of Defense (DoD) EMS Alliance under which the EMS program implementation is being mentored by the University of Tennessee. This Alliance will allow ANAD to take its lessons learned to assist other installations in implementing EMS. This partnership not only demonstrates our commitment to implementing an effective EMS program depot-wide, but also to ensuring the success of EMS across DoD. Additionally, ANAD is developing a long-term Sustainable Operations Plan to reduce its impact on the environment and the cost of operations while enhancing mission performance.

▲ An aerial view showing the depot's industrial complex.

PROGRAM SUMMARY

The depot's first P2 Plan was completed in 1992 and last updated in August 2002. The revision of the depot-wide P2 Management Action Plan (MAP) builds upon the P2 program goals and objectives, provides status updates on P2 projects and recommends new initiatives to achieve further waste reduction, cost savings and environmental protection. It is a comprehensive plan that integrates four related programs–P2, ODC Elimination, AP and integrated solid waste management into a single P2 plan.

Program Goals

The goals of the P2 program focus on hazardous and non-hazardous waste reduction and on reduced consumption of resources. Additionally, the P2 Plan includes the goal of training employees in AP. Significant progress has been made in the following areas toward the achievement of the P2 goals:

- Development of a formal method of documenting P2 opportunities by means of the ANAD P2 Project Record. This form allows for electronic submission of recommendations and suggestions to the P2WG. The P2 Project Record provides a background description of the problem or issue, the project description and benefits, an economic analysis and the risks involved. Project Record forms are presented to the P2WG for initial screening. The forms are then further explored for implementation by one of several standing P2WG subcommittees or referred to another organization.
- Training and establishment of cross-functional P2 Opportunity Assessment Teams to evaluate production shops and operations and to identify opportunities to reduce hazardous materials, and hazardous and solid waste.
- Partnerships with local, state, and DoD organizations including the U.S. Environmental Protection Agency (EPA) Waste Wise Program, the National Pollution Prevention Roundtable, the National Recycling Coalition and the Alabama/DoD P2 Partnership.
- P2 awareness for all employees and participation in national events, such as Earth Day.

Pollution Prevention Working Group (P2WG)

Since its inception in 2001, the P2WG, which is chaired by the Director of Production, has implemented or evaluated the following types of initiatives for implementation:

- 15 to reduce hazardous waste
- 17 to decrease solid waste
- 10 to eliminate restricted chemical usage
- 12 to reduce air emissions
- 10 to lessen wastewater generation
- 6 to limit hazardous material usage

PROGRAM ACCOMPLISHMENTS

The P2 program has achieved significant cost savings and sizable reductions in the generation (and need for disposal) of hazardous and non-hazardous waste. These savings and reductions not only protect the environment, they enhance the depot's ability to meet its military mission by increasing productivity and leveraging savings. ANAD frequently uses new technologies and products to assist the depot in achieving its goals under the P2 program.

ANAD has achieved significant P2 milestones through innovative programs implemented by depot and tenant employees. These reductions have been achieved by material substitutions, process modifications and improved hazardous material/waste management. Additional accomplishments were achieved in the areas of process improvement initiatives, material management and continued compliance with Executive Orders.

Material Substitution

Steam Cleaning

In early 2002, the combined efforts of the P2WG and Directorate of Production (DP) personnel identified a replacement steam cleaning compound, which eliminated Toxics Release Inventory (TRI) reportable requirements for glycol ethers and diethanolamine. ANAD reported zero releases of these chemicals for the following reporting year, compared to 12,800 pounds of both chemicals reported for the previous year.

PROCESS IMPROVEMENT INITIATIVES

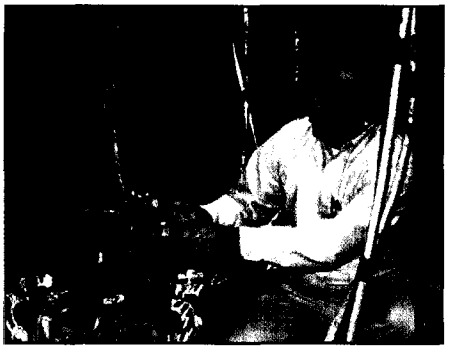
During fiscal year 2002-03, several process improvement initiatives began in painting operations, which resulted in significant reductions in the generation of hazardous waste.

Paint Reduction Program

ANAD generates about 200,000 pounds of paint waste annually. A contributing factor to paint waste generation is excessive air and pot pressures on the paint sprayers. The Paint Reduction Program (PRP) utilized a two-pronged approach to achieve paint use reductions. First, in April 2002, the PRP established institutional controls to reduce paint waste generation and air emissions. PRP activities to date include:

- Revision of process procedures to reduce air and pot pressure requirements.
- Enhanced surveillance of painting operations for conformance with process procedures.
- Paint gun nozzle cleaning and reuse (rather than disposal).
- Air filter replacement (reducing frequency of maintenance and change-out).
- Enhanced employee training.

▶ ANAD personnel demonstrates improved painting techniques implemented under the PRP.



◀ A technician checks the pot pressures on painting equipment.

Second, High Volume Low Pressure (HVLP) paint guns are being installed in all painting operations. Use of the HVLP paint guns will result in a one-third reduction in gallons of paint used and hazardous waste generated, increased production, reduced volatile organic compounds (VOCs) and Hazardous Air Pollutant (HAP) emissions, and enormous overall cost savings. HVLP paint guns will save more than 35,000 gallons of paint per year at a cost savings of more than $3.7 million. Additionally, another $100,000 in hazardous waste disposal costs will be realized.

IMPROVED MATERIAL MANAGEMENT

Remarketing Program

A major emphasis of the P2 program is improvement in the procurement, use, management and disposition of chemicals on the depot. Historically, a large volume of unused hazardous materials was disposed of as hazardous waste. In early fiscal year 2002, an internal re-marketing program was developed to identify opportunities for material reuse before useful shelf-life had been exceeded. The re-marketing program substantially reduced procurement and waste disposal costs. Reusable materials are re-marketed to the depot, its tenants and other installations. Since the program's inception, ANAD has avoided more than $50,000 in waste disposal costs and realized a cost savings of nearly $10,000, while generating about $5,000 in recycling revenue.

COMPLIANCE WITH EXECUTIVE ORDER (EO) 13148 AND EO 13123

ANAD promotes conservation through energy monitoring and energy awareness programs. The program awards recognize employee and tenant contributions toward the attainment of depot and EO 13123 energy goals.

In mid-2002, the depot was awarded the first task order of an Energy Savings Performance Contract (ESPC) to reduce energy consumption. The ESPC encompasses six projects that will conserve 72,800 MMBTU of energy with overall cost savings of the ESPC projected to be $625,800.

RECYCLING PROGRAM

ANAD's recycling program saves money and reduces waste, while generating its own funding resources and covering the budget for staff and equipment. The Qualified Recycling Program (QRP) collects, segregates, and processes not only traditional recyclables, including metal, glass, paper, scrap wood, plastic, aluminum cans and wood chips, but also non-traditional items such as petroleum products and batteries. In fiscal year 2002-03, the QRP recycled or diverted more than 16,500 tons of materials; avoided $382,000 in disposal costs; and generated $1,056,100 in revenue (through August 2003). For fiscal year 2002 and fiscal year 2003, ANAD diverted 59.7 and 54.6 percent respectively, of its solid waste from land-fills and incineration through the recycling program, exceeding the DoD Measure of Merit goal of 40 percent, despite a dramatic increase in production.

▲ Two of the depot's recycling experts feed mounds of paper into the massive shredder. This is just one of the many recycling operations that are not only self-sustaining, but show a significant annual profit that is ultimately used for depot-wide environmental enhancements.

Scrap Wood and Pallet Management

In fiscal year 2002-03, for the second and third consecutive time, ANAD participated in EPA's Waste Wise program, which allows organizations to design their own solid waste reduction programs to eliminate costly municipal solid waste, benefiting their fiscal base and the environment. As part of this program, federal agencies are encouraged to establish five-year goals in waste reduction, recycling and AP. One of the depot's goals is to reduce wood waste by 35 percent in the next five years. ANAD's QRP had an aggressive pallet reuse program in fiscal year 2002, reclaiming 8,766 pallets, saving nearly $104,000 in new pallet procurement costs, and

avoiding $27,000 in waste disposal costs that resulted in the depot meeting this goal early. Another wood waste reduction initiative consisted of using wood chips for on-depot landscaping, avoiding about $50,000 annually in waste disposal costs.

Battery Recycling

The P2 program collects and ships used batteries to an off-depot recycler. All types are collected, including nickel, cadmium, alkaline, magnesium, lithium ion, lead-acid and mercury-bearing batteries. In fiscal year 2002, more than 600 pounds of batteries were recycled at no cost to the depot.

Affirmative Procurement (AP)

AP is an important component of the P2 program. The government mandates that certain products purchased by federal agencies be manufactured with or include recycled or recovered content. ANAD has developed a model AP program that focuses primarily on buying recycled materials, but features an added objective to purchase Environmentally Preferable Products (EPPs). EPPs have a lesser or reduced effect on human health and the environment compared with competing products and services. ANAD leadership recognized the importance of the program in overall operations and environmental stewardship and formed a separate EQCC AP Working Group (APWG) in April 2002 to promote AP. The APWG is chaired by the Director of Contracting and has representatives from all directorates.

In fiscal year 2002-03, ANAD accomplished the following achievements in the AP program:

- Trained more than 300 depot, tenant and contractor employees in AP requirements;
- Issued "Buying Recycled" guidance for employees and vendors;
- Implemented a local contract clause requiring use of recycled products, or justification for non-use, for all solicitations over $100,000;
- Coordinated a contract clause requirement with the Corps of Engineers to require use of recycled products, or justification for non-use, in all job-order construction contracts;
- Updated local credit card purchasing system to track recycled content purchases; and
- Constructed new playground equipment, renovated two bathhouses at the depot's recreational lake using guideline items (shower and restroom partitions), and renovated the gymnasium using floor matting made from recycled tennis shoes.

▲ Carol Mitrisin, marketing officer from the morale, welfare and recreation division, displays a sample of the "new" recycled content (old sneakers) flooring in the renovated Physical Fitness Center.

EDUCATION, OUTREACH, AND PARTNERING

The P2 program is designed to invite and include community involvement. ANAD reaches out to the community by leading or participating in the following public programs:

- ***Bring From Home*** program, in which employees drop off newspapers, magazines, cardboard, plastic, glass and steel and aluminum cans at designated depot locations. This program processed 160,000 pounds of recyclables in fiscal year 2002-03. The drop-off locations are stationed inside ANAD's fence line and manned by recycling personnel during working hours. The collection bins are secured at the Recycling Center at the close of business to eliminate the drop-off of nontraditional items such as batteries and hazardous waste;
- ***Annual Depot Clean-up/Recycle-A-Thons*** to remove excess furniture and other materials from work areas

- ***Saturday Sales*** conducted weekly for employees and local residents to purchase scrap wood, pallets, wood chips, mulch and used furniture;
- ***Adopt-A-School*** programs at two schools to promote environmental stewardship. Participants are taught about recycling and its environmental impacts; and
- Agreement with the Federal Corrections Institute (FCI) Talladega Prison, whereby ANAD processes prison recyclables and provides training to prison staff.

In May 2002, ANAD hosted an Alabama/DoD Partnership meeting to demonstrate innovative recycling methods used to recycle hazardous and non-hazardous waste and secure viable markets for recyclables, while generating revenue.

▲ Thelma McCullough, recycling division chief, speaks to the depot's "mentoring" school students on recycling efforts.

P2 concepts are also incorporated into the annual Hazardous Waste Operations and Emergency Response (HAZWOPER) Technician Level training provided to employees via the Local Access Network (LAN). P2 topics are covered during weekly Morning Show broadcasts and regularly in the biweekly newspaper, ***TRACKS***. National events, such as Earth Day, are also used to emphasize P2 messages. Participation by the entire workforce, including tenant and contractor staff, is highly encouraged. To further promote P2, the P2WG recognizes employees at monthly meetings. Both the P2WG and APWG are finalizing procedures for implementing internal employee incentive awards programs for significant contributions.

▲ Coldwater Elementary School students proudly display their Earth Day Award certificates.

Research, Development, and Technology Demonstration/Validation

Currently, the depot maintains more than 125 solvent parts washer vats. With production increasing, hazardous waste generation from the solvent washers has increased to 400,000 pounds in calendar year 2001—an 11 percent increase over calendar year 2000. The P2WG is currently working with the parts washers service contractor to identify a use for the solvent to make it a recyclable material, thus eliminating ultimate disposal of the solvent as a hazardous waste and potentially avoiding more than $100,000 in disposal costs.

Missile Recycling

In December 2002, the Anniston Munitions Center (ANMC), a major tenant activity, began operation of the Missile Recycling Center (MRC). Historically, Open Burn/Open Detonation (OB/OD) processes were used as the principal methods for demilitarization, releasing pollutants into the surrounding air and groundwater. The MRC technologies provide environmentally friendly recycling alternatives that meet the legislative requirements and EO mandates for environmentally compliant tactical missile conventional munitions demilitarization. Since

▲ An employee at the Missile Recycling Center removes the TOW missile flight motor during the disassembly process.

operations began, ANMC MRC has processed over 3,000 tube-launched, optically-tracked wire-guided missiles. The initial operational data (Table 1) show that the MRC has a total Resource Recovery and Recycling (R3) capability.

Table 1.
Reductions Achieved From MRC Process

Tactical Missile Component	Total Pounds from 5,000 Missiles	Pounds from Projected Workload of 160,000 Tow Missiles over next 10 Years
Aluminum	116,900	3,272,200
Chromium	600	16,800
Beryllium	0.01	0.28
Cadmium	0.014	0.392
Copper	1,550	446,440
Lead	340	9,250
Manganese	215	6,020
Nickel	122	3,416
Nitroglycerin	12,500	350,000
Phosphorus	2,.2	61.6
Zinc	340	9,250

In addition to tactical missile storage, ANAD also has the demilitarization potential of 2,000 tons of gun propellant (Table 2).

Table 2.
Components in One Pound of Gun Propellant

Gun Powder Ingredient	Weight/ Pounds	Pounds Released over 10 year period (2,000 tons)
Dibutylphthalate	0.044	3,176,000
Dinitirotoluene	0.088	352,000
K Nitrate	0.0064	25,600
Diphenylamine	0.0094	37,600
Lead	0.0143	57,200
Nitroglycerin	0.1773	709,200

The demilitarization by the R3 process of these munitions in lieu of OB/OD is environmentally significant in the reduction of HAPs and other TRI chemicals.

Reductions Achieved

Tables 3 and 4 summarize reductions achieved, cost savings realized, and revenues generated for fiscal year 2002-03. Factors used to measure the quantitative P2 reductions achieved include acquisition and disposal records of hazardous chemicals and substances; product consumption records and analysis; and Emergency Planning and Community Right-to- Know Act (EPCRA), P2, and shelf-life management studies and analyses. While the accomplishments achieved through education and outreach are more qualitative, they are equally significant.

Table 3.
P2 Initiative Reductions

P2 Initiative	Reduction Achieved
Steam cleaning	12,800 pounds of TRI chemicals avoided
Paint process improvements	35,000 gallons of paint saved
QRP recycling program	16,500 tons of solid waste avoided
Petroleum product recycling	375,000 gallons of used petroleum products recycled; 11,000 pounds of ethylene glycol eliminated from waste stream

In addition, the P2 program achieved less quantifiable savings, including prolonging the life of solid waste landfills through waste reduction and recycling and improving air quality through

reduced emissions. ANAD used factors to evaluate life-cycle costs including capital, labor, operation and maintenance and energy costs over the life of a given facility. The impacts of a given project on ANAD's mission were also considered.

Table 4.
P2 Initiative Cost Savings/Revenue Generated

P2 Initiative	Cost Savings/Revenue Generated
Paint process improvements	$3.7 million saved
Remarketing	$50,000 waste disposal costs saved; $10,000 additional savings
QRP recycling program	$382,000 disposal costs saved; $1.056 million revenue generated
Scrap wood and pallet recycling	$104,000 procurement costs avoided; $27,000 waste disposal costs avoided; $50,000 additional waste disposal costs avoided through wood chip reuse
Petroleum product recycling	$718,000 waste disposal costs avoided; $168,000 in revenue generated

CONCLUSION

ANAD continues to achieve excellence in P2 by implementing innovative and effective programs that protect the environment, save money, increase productivity and enhance the Army's military readiness. The depot has successfully formed P2 partnerships with federal, state and local agencies and civilian, industrial and business communities. All organizations depot-wide have been actively involved in the management and reduction of potential pollutants. ANAD has become a leader in its community as well as the nation in demonstrating its commitment to environmental quality and pollution prevention.

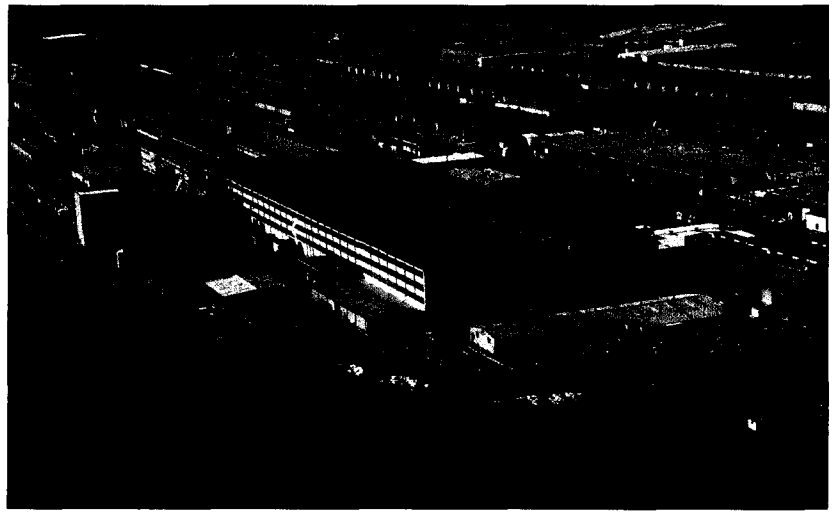
ENVIRONMENTAL RESTORATION—INSTALLATION

ANNISTON ARMY DEPOT

Behind the national spotlight of Anniston, Alabama is an Army depot that in the face of many unique challenges, found inventive solutions to instill trust in an apprehensive community, restore its native environment, shrink the risks to human health and serve as an example for other Department of Defense (DoD) installations in their environmental stewardship. In doing so, Anniston Army Depot (ANAD) incorporated a strong environmental restoration program into its core military missions.

INTRODUCTION

Since 1941, the depot has served the United States in times of war and peace. The initial mission was ammunition storage, but over the decades, it evolved into serving as the Army's premiere vehicle and weapon maintenance and repair facility. ANAD is the only Army depot capable of performing maintenance on both heavy and light tracked combat vehicles and is designated as the Center of Technical Excellence for the M1 Abrams Tank. The depot also performs maintenance on individual and crew-served weapons as well as land combat missiles and small arms. The depot continues to store and maintain conventional ammunition and missiles and also stores seven percent of the nation's chemical munitions stockpile. One of eight stockpile sites in the United States, ANAD began destroying its M55 rockets filled with nerve agent in 2003. The chemical demilitarization program in Anniston gained local as well as national attention because of potential program risks and resulting community concerns.

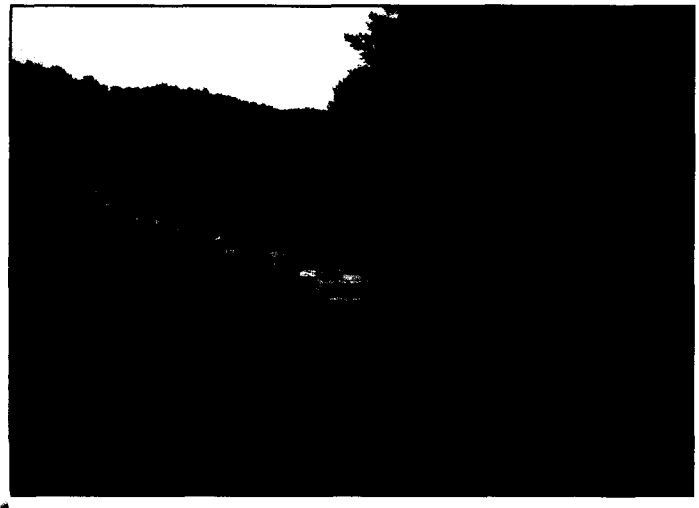


▲ An aerial view showing the depot's industrial complex.

The depot is the largest employer in the city of Anniston, which lies 10 miles to the east. Anniston is an industrial and agricultural area of approximately 26,000 residents. ANAD has more than 5,300 employees including tenants and contractors. The depot is located on 15,279 acres in Calhoun County in northeastern Alabama and is surrounded by small communities clustered primarily along its southern and eastern boundaries. Land use around the base is primarily residential, with approximately 3,900 residents living near the facility.

ANAD Profile

- 110 miles west of Atlanta
- 50 miles east of Birmingham
- 15,279 total acres
- 15,000 acres of woodland
- 10 acres of lakes and streams
- 4,784 total employees
- 2,850 depot employees



▲ M1 Abrams Tanks are lined up to be upgraded before being returned to soldiers.

BACKGROUND

Environmental Restoration Challenges

The historical mission of the depot left its present day leadership challenged to address soil and groundwater contamination that spread beyond installation boundaries, possibly impacting local water sources. Primary contaminants of concern at the depot are trichloroethylene (TCE), a common degreaser used to clean metal, and other dense non-aqueous phase liquids (DNAPLs), which are chemicals in a sludge-like form that exist throughout the environment. In several places, complex geology as well as the nature of the contaminants have led to increased technological hurdles.

ANAD faces these challenges in a community with pre-existing sensitivities due to nationally publicized industrial polychlorinated biphenyl contamination in the area as well as ANAD's chemical demilitarization mission.

As such, ANAD's leadership recognizes that successfully implementing environmental restoration requires the full involvement of a variety of stakeholders, including the local community and state and federal regulators. Through its Installation Action Plan (IAP), the depot takes a vigorous approach to environmental restoration that incorporates strong working partnerships with the Army, regulatory agencies and the public.

Complex Geology and Nature of Contamination
The U.S. Environmental Protection Agency (EPA) placed ANAD's Southeast Industrial Area (SIA) on the National Priorities List in 1989, recognizing it as a top priority hazardous waste site. This area, although only representative of a small percentage of the depot's total land area (about 600 acres), is also one of the Army's top five most complicated areas due to complex geology and the nature of the contamination.

On-site disposal of industrial chemicals from 1950 to 1981 resulted in soil and groundwater contamination from DNAPLs throughout the SIA. The diverse nature of the earth's subsurface and the physical characteristics of DNAPLs make its migration very unpredictable and difficult to model. Because DNAPLs tend to sink below the water table to reach layers of low permeability within fractured bedrock, the dense liquids are difficult to remove.

The industrial area is located close to the installation's southeastern boundary adjacent to private drinking water wells and within one mile of Coldwater Spring, the area's water source. Over the years, monitoring confirmed that plumes of contamination from the facility have migrated beyond the installation boundaries and have impacted (or may eventually impact) groundwater used by the surrounding communities.

Technological Challenges
Contamination within fractured bedrock was detected at depths of 400 feet below ground surface. Because of geological challenges presented by the nature of the bedrock and depth of contamination, current technology may not offer cost-effective solutions. The depot's environmental specialists have taken action to seek out new and developing technologies to help overcome this challenge.

Feasibility studies are underway for *in-situ* chemical flushing technologies. These technologies involve injecting a liquid through the contaminated zone for dissolution, displacement or chemical destruction. *In-situ* chemical oxidation involves an exchange of electrons between chemical species. This exchange of electrons affects the oxidation state of the chemical species involved, by breaking the carbon bonds. The organic compounds are either completely destroyed or converted to smaller and typically less hazardous compounds.

Other technologies such as air-sparging, in-well air stripping, dual phase extraction, thermal treatment and electrokinetics are also being evaluated.

Community Challenges
Community members in Anniston have voiced their concerns about the environmental condition of the area. Faced with a community with pre-existing sensitivities toward contamination as well as the depot's chemical demilitarization mission, ANAD took an aggressive, proactive approach to include community relations in all of its environmental restoration initiatives.

Organization and Management Approach
To address its unique challenges, ANAD took an inventive approach to overall program management that stresses partnership building, coordination and communication.

This approach led to the establishment of a two-tiered *Partnering Team*, comprised of state and federal regulators, scientific experts and Army staff that has a significant role in guiding

the environmental restoration program. It also stresses community outreach and involvement. The local Restoration Advisory Board (RAB) actively serves as a forum for citizens of local communities, representatives of the installation and regulatory agencies to discuss and exchange information about the environmental restoration program.

▲ Anniston Partnering Team.

To ensure that the depot's mission is not jeopardized by environmental contamination issues, ANAD's approach fosters communication within the installation as well. Specifically, the Installation Restoration Program (IRP) manager meets with other directorate representatives to coordinate any excavation or dewatering activities associated with construction projects. The IRP manager provides the guidance needed to facilitate and expedite construction, while ensuring appropriate protection for human health.

The environmental restoration staff routinely works with installation engineers and production staff to support their requirements in mission capability and completion. They also work hand-in-hand with the public works department during construction activities by providing them with support to evaluate hazardous conditions and evaluate and dispose of removed materials.

The depot is an active participant in the DoD IRP, which was established to identify and evaluate past hazardous waste sites and to control the migration of hazardous contaminants from these sites. ANAD's Directorate of Risk Management (DRK) manages the program with oversight provided by the U.S. Army Environmental Center (USAEC).

Agreements and Plans

In June 1991, ANAD entered into a Federal Facility Agreement (FFA) with the Alabama Department of Environmental Management (ADEM) and the EPA. This agreement establishes a procedural framework and schedule for developing, implementing and monitoring appropriate response actions to contamination problems at the SIA and other areas of the depot.

The IAP is updated annually and was last updated in October 2003. ANAD gathers input and insights from many organizations to ensure the most efficient roadmap for the IRP program. The *Partnering Team*, the U.S. Army Corps of Engineers (USACE) Mobile District, the U.S. Geological Survey, and community groups all participated in this coordinated effort to construct the plan. It provides a detailed path for the IRP program by defining the requirements, proposing a comprehensive approach and identifying associated costs to conduct future investigations and remediation at the depot. Additionally, the IAP establishes current project funding to ensure that all remedies are in place by the end of 2007.

ANAD, through the *Partnering Team*, completed draft Records of Decision (RODs) for operable units that comprise several significant sites at the depot. These units include the Ammunition Storage Area, the SIA Soils Operable Unit and the SIA Shallow Groundwater Operable Unit.

PROGRAM SUMMARY

ANAD's IRP mission began in 1978. Remedial Action (RA) completion is scheduled for 2007. All clean-up objectives and operation and maintenance are scheduled to be completed by 2032. Objectives include:

- conducting a remedial investigation/feasibility study for all applicable SWMUs within ANAD;
- developing and implementing Remedial Design (RD) and RA in an approved ROD; and

- completing these activities on schedule in order to protect human health and the environment.

Of the 47 sites registered in the AEDB-R, 25 have completed responses (either remedial strategies chosen and approved or the designation that no further action is required). Fifteen sites have a Remedy in Place with either long-term monitoring or remedial action operation/long-term operation. The depot's fiscal year 2003 IRP budget was $4.74 million.

The depot met, or is on schedule to meet, DoD cleanup objectives listed in the Financial Management Regulation. ANAD will also meet DoD's goal to have remedial systems in place for all high relative risk sites by 2007.

ACCOMPLISHMENTS

ANAD demonstrates its leadership in environmental stewardship in the service of both the community and the depot mission. The Anniston Chemical Demilitarization Facility (ANCDF) has begun destroying its chemical munitions stockpile through incineration, which is a point of contention for various community members and community groups in Anniston. A key focus of the environmental restoration program is community participation, which aligns with the community involvement essential to chemical demilitarization.

Leaders of ANAD's environmental initiatives work closely with the depot's public affairs team to jointly facilitate public meetings. Working together to effectively address community concerns provides a unified presence for the depot and positively impacts the installation's ability to accomplish its mission.

Through its many partnerships, ANAD implemented a program that achieved reasonable cost-effective remediation strategies to support environmental restoration. Both the EPA and ADEM recognized the program for its proactive approach to environmental cleanup.

ANAD is currently not a base realignment and closure installation; therefore, no specific fast track projects took place during the award time period. ANAD makes every effort to expedite cleanup projects to the highest extent possible.

Innovative Technology Demonstration/Validation and Implementation Innovation

State-of-the-Art Groundwater Treatment Facility

ANAD completed construction and began operation of its new Centralized Groundwater Treatment Plant (GWTP) in early fiscal year 2002. The GWTP and associated groundwater extraction wells are designed to treat contaminated groundwater and control plume migration through state-of-the-art treatment technology. The technology combines chemical oxidation and aeration to treat organic and inorganic contaminated groundwater, resulting in treated water that meets drinking water standards.

Using this technology, the depot saved thousands of dollars per year in operation and maintenance costs compared to the previous pump and treat system. Much of the equipment and infrastructure needs of the new GWTP were effectively converted from a former chromium treatment facility, substantially reducing the initial capital costs.

The new GWTP is a success story resulting from the partnering efforts that are a vital part of the IRP. *Partnering Team* efforts ensured the operation of the plant met federal and state regulatory requirements and is supported by the EPA Region IV and ADEM. The RAB actively participated in the design and construction of the GWTP, reviewing the progress and having on-going discussions with the installation risk managers.

Hydrogen Peroxide Injection

During the award period, a report was finalized and published on the first large-scale use pilot study of in-situ chemical oxidation in the Army, which ANAD completed. The report was distributed to other installations to use as a model and at least six installations requested the report. In the pilot study, which began in 2000, ANAD used chemical oxidation with a 50 percent hydrogen peroxide mixture and proprietary catalyst to neutralize contamination from solvent and waste oil sludge

lagoons that were closed in 1978. As part of this project, an emergency removal action of 7,200 cubic yards of soil in the area was undertaken. The objective was to use *in-situ* chemical oxidation on soils to remove waste chemical constituents that were contributing to an increase in health concentration limits in soil and area groundwater.

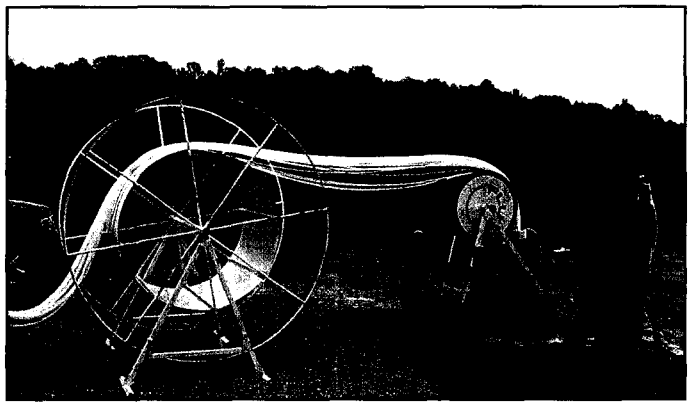
Hydrogen peroxide injection proved to be effective in reducing soil contaminant concentrations to below Site Screening Levels. The cost of the *in-situ* chemical oxidation was approximately one-fourth the cost of the excavation and disposal of the contaminated soil for a savings of almost $3 million. The depot now uses the site for vehicle storage.

Sampling/drilling techniques

The complex geologic features of contamination sites at ANAD required certain drilling technologies to install monitoring wells. These technologies resulted in large quantities of drilling fluids and Investigation Derived Waste (IDW). Disposal of large quantities of this waste were cost-prohibitive.

Subsequently, the depot employed an innovative IDW treatment technology and ambitious sampling plan that allowed direct discharge to surface water. Although treating water contaminated with volatile organic compounds is a common technology, high concentrations of sediment and suspended solids in the drilling fluid required removal prior to discharge to surface water. The IDW treatment technology filters out the sediment before it is discharged. ANAD closely monitored the program by taking frequent samples to ensure that the treated water achieved water-quality discharge standards. This treatment technology will now be used when drilling in contaminated areas. The technology allows significant cost savings in IDW disposal costs while complying with the Clean Water Act.

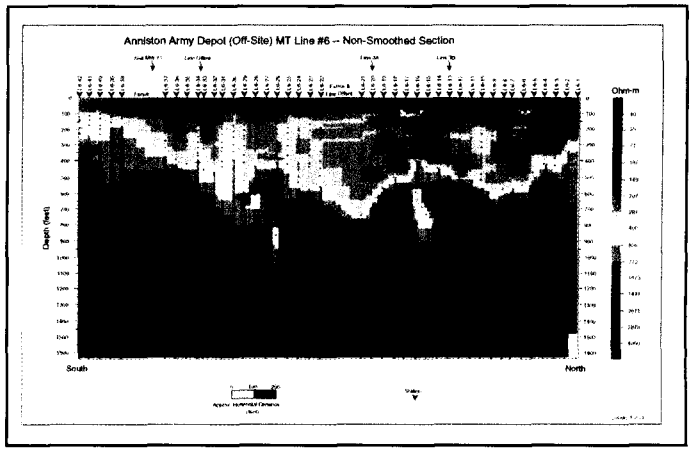
Following the installation of these monitoring wells, ANAD installed Flexible Liner Underground Technology (FLUTe) systems. The FLUTe system seals bore holes with a pressurized flexible liner, but leaves open intervals or ports for future sampling. This new technology increases the number of zones that can be sampled throughout different depths of the monitoring wells. These groundwater depth samples provide key information on the zones that are experiencing contaminant migration.



▲ A FLUTe liner is installed.

In addition, ANAD is using the following state-of-the-art technologies and practices to define the condition and distribution of the DNAPL masses:

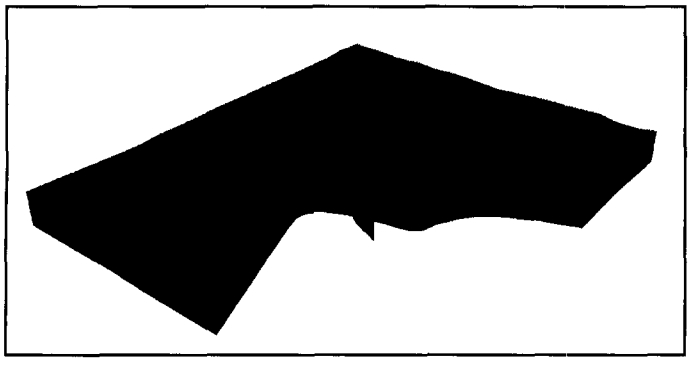
- Seismic refraction for mapping the bedrock surface, locating surficial fractures and establishing their orientation.
- Resistivity and Magneto Tellurics, to locate fractures in the bedrock.
- Hydrophysics on selected boreholes to identify all fractures that produce water.



▲ Results of Magneto Tellurics used to determine potential drilling locations.

The use of hydrophysics is a relatively new approach. The open borehole is filled with deionized water and a probe is inserted to measure conductivity. The conductivity indicates the depth of the location of water flow zones, which is vital information for determining contaminant migration. All of these techniques are approved through the *Partnering Team* process, streamlining implementation.

Optimization of Modeling Techniques
The current phase of the RI focuses on migration pathways to waterways and defining the remaining sources of DNAPL. Because of the complex geology and expensive drilling techniques to install monitoring wells, ANAD agreed to use an advanced modeling and simulation approach. Modeling and simulation supported critical installation restoration decisions that addressed reducing the risks of contamination to acceptable levels at dramatically lower costs. Information from the model provides greater input to the technical impracticality (TI) zone delineation, expands the groundwater contaminant transport prediction parameters and refines the predictions to the TCE plume.



▲ Three-dimensional model depicts geologic units and fractures.

In the past, plume delineation was based on monitoring well installation and sampling, which became cost prohibitive. Using the modeling and simulation approach, ANAD was able to identify processes that significantly reduce risk or decrease uncertainty and reduce RI costs. This information helps the team avoid unnecessary costs and refocus efforts to more beneficial processes. In addition, ANAD expects to reduce the quantity of complex and expensive data collection activities in fractured rock conditions.

The depot also developed a site-wide conceptual model of subsurface geology, hydrogeology and groundwater chemistry. Based on the model, numerical flow and transport simulations were analyzed. The results allowed ANAD to eliminate six deep monitoring wells from the investigation for a total estimated cost savings of $500,000. Future modeling results will assist in identifying the most appropriate wells for long-term monitoring. Prediction of the plume migration allows ANAD to be proactive in protecting potential receptors.

Technical Impracticability Waiver
Although ANAD strives to remediate contamination at all sites, the lack of reasonable, cost-effective technologies that address the depot's site-specific challenges can cause difficulties. In these instances, ANAD focuses on the more practical goal of preventing future migration of contaminants. Therefore, the depot is pursuing a cutting-edge process that will serve as a model for other DoD installations, once complete. The depot is in the process of obtaining a TI waiver as a remedial alternative for the groundwater contamination existing within defined portions of the depot's SIA and other specific sites within the area. If successful, the waiver will be approved by regulators and will declare that the restoration of the area to appropriate standards is unachievable from an engineering perspective. Emphasis on this site will be on preventing migration of contaminants. When a cost-effective, reasonable technology is developed, the depot will then use its resources to pursue restoration the right way the first time, at a reasonable cost. If obtained, the TI waiver will save the Army millions of dollars because ineffective technologies will not have to be implemented.

Partnerships Addressing Environmental Cleanup Issues

Partnering Team

ANAD formed the *Partnering Team* in April 1997 to facilitate and help coordinate the planning and implementation of environmental restoration initiatives among the Army, regulatory agencies and the public. The *Partnering Team's* mission is to restore, to the maximum extent possible, all historically contaminated groundwater and soil sites, both on or off depot, along with the primary goal to reduce risks to levels that are protective of human health and the environment.

The *Partnering Team* was a key player in the many different environmental restoration initiatives undertaken during this award period, including completing draft RODs and updating the IAP. This partnership, while not a legally binding relationship, represents a commitment and an agreement among the parties to work together to achieve mutually beneficial goals.

The *Partnering Team* consists of two levels of stakeholders:

- Tier I consists of depot, EPA and ADEM personnel who actively participate in site-specific decisions on a weekly basis. The Tier I team meets every quarter to reach a consensus on the continued direction of the program on a site-by-site basis.
- Tier II consists of high-level depot, ADEM and EPA personnel who also meet on a quarterly basis to discuss broader restoration issues, such as land use controls and technology applications, and support the Tier I team as needed.

Members of the following organizations make up ANAD's *Partnering Team*

- Installation Restoration Program Manager, ANAD
- U.S. Army Corps of Engineers, Mobile District
- Alabama Department of Environmental Management
- U.S. Environmental Protection Agency
- Gannet Fleming, Inc.
- Science Applications International

Issues raised during Tier I team meetings are discussed through a facilitation process. As a consensus is reached, the decisions are documented. If issues arise that are not able to reach consensus through the Tier I team, the issue is raised to Tier II team members. Since the initiation of the partnering program, ANAD has yet to formally raise any issues to the Tier II level. This displays the *Partnering Team's* ability and dedication to work through issues and achieve mutually agreeable solutions.

Stakeholder Involvement Creates Partner of Opposition Group

The RAB recently joined forces with a former grass-roots opposition group, Community Against Pollution (CAP) to educate local residents about TCE. This unprecedented partnership stems from the commitment of the depot, the *Partnering Team* and the RAB to share information and take responsibility for protecting the health of its neighbors.

CAP helped conduct an opinion survey of community residents in September 2003. Overseen by ANAD, this effort gauged community concerns about groundwater contamination and provided a basis for defining community involvement initiatives to support emergency response planning. The survey covered a 25-mile radius from the Anniston city center, representing a diverse cross-section of the community. In just under one month, CAP helped interview property owners, business owners, elected officials, citizen interest groups, residents, school officials, government representatives and religious leaders. Survey questions touched upon the level of concern regarding community water and TCE, the level of interest in receiving more information on the issue, the preferred methods and frequency of information distribution, specific areas of interest and perceptions of ANAD. In response to the survey results, ANAD placed even more emphasis on its community outreach efforts and is able to better focus on community needs.

RESTORATION ADVISORY BOARD

To achieve greater community and outside agency involvement in the environmental restoration process, ANAD established a Technical Review Committee (TRC) in 1993. The TRC was converted to a RAB in May 1998. The RAB meets quarterly to provide advice on cleanup, discuss key issues, review plans and reports, identify proposed project requirements and recommend priorities.

There are currently 23 voting members representing the diverse makeup of the Anniston community. Membership includes representatives from the affected community, the installation, EPA Region IV, ADEM, other state and federal agencies and interest groups, as well as interested individuals. Co-chairpersons are Colonel Gerald Bates, commander, Anniston Army Depot and Dr. Barry Cox, a Jacksonville State University professor representing the civilian community.

In addition to participating in discussions of ongoing IRP activities, the RAB plays an active role in public meetings and implementing ANAD's community outreach plan. In 2003, the RAB developed fact sheets and brochures with community friendly language designed to educate stakeholders on the health affects of TCE.

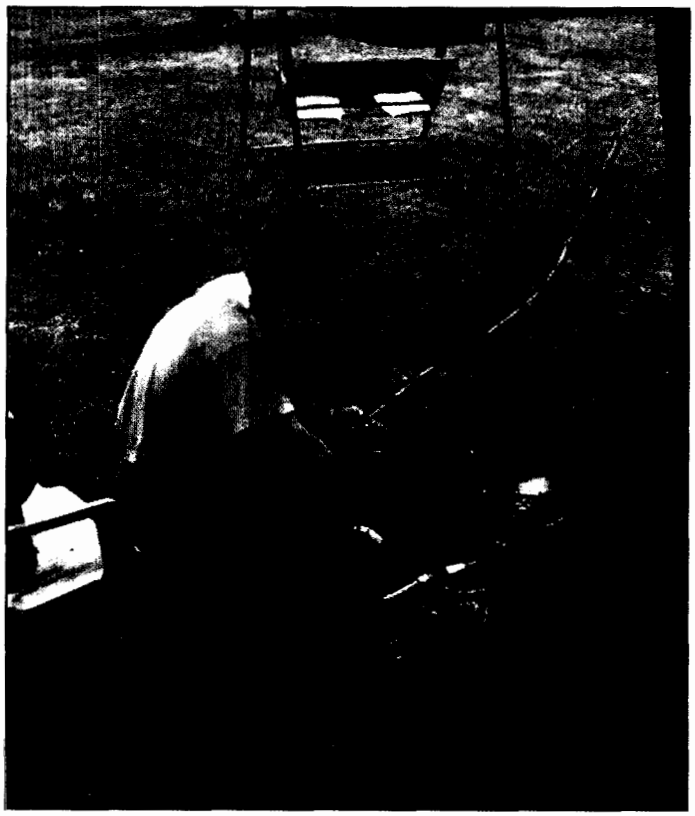
The RAB also contributed key information to ANAD's environmental restoration programs. It provided a private well and spring inventory, which was used for the On-Post Groundwater Operable Unit Plan to treat hot spots and the Combined Groundwater RI.

REDUCING RISKS TO HUMAN HEALTH AND THE ENVIRONMENT

ANAD-Utility Partnership Demonstrates Commitment to Public Health Protection

The depot took a proactive approach to help protect the community's drinking water sources. In 2003, the depot entered into a partnership with the Anniston Water Works and Sewer Board (AWWSB) to expand the Board's water treatment facility. Additionally, ANAD worked with the Department of the Army (DA) during fiscal year 2003 to gain approval for funds to be provided to the AWWSB to treat Coldwater Spring. The funding provides for the installation of air stripping equipment that will remove TCE from the waterway, even though the TCE levels that appear in the spring are well below the maximum contaminant level set by EPA and ADEM.

RI studies conducted by ANAD in the 1990s and recent monitoring data indicate that groundwater quality degraded, as TCE concentration levels in Coldwater Spring steadily rose. While there is no current threat to human health, the predictable increase in contaminant levels led to the conclusion that there will eventually be an unacceptable risk to human health at this site for which the Army is responsible. With funds approved and provided, AWWSB plans to complete installation of the air strippers in fiscal year 2004.



▲ A homeowner's private well water is sampled.

Established Base-Wide Standard Operating Procedure (SOP) for Land Use Controls
ANAD developed an internal Standard Operating Procedure (SOP) for land use controls that became a model for other installations. The depot was able to develop this comprehensive document and gain EPA approval even though a land use control (LUC) dispute remained unresolved between the DoD and EPA. This management tool establishes responsibilities, restrictions on land use and mechanisms for implementation. Developed with input from the DoD LUC working group, ANAD's SOP also details new approaches to control land use.

The IRP program manager is responsible for implementing the SOP with the cooperation of the Directorates of Risk Management, Production Engineering, Public Works and Law Enforcement and Security.

This SOP supports mission readiness while maintaining compliance with applicable federal cleanup regulations. For example, ANAD needed to expand its power train facility to better meet demands, but opportunities for expansion were limited to a known contaminated site. The SOP provided the rigorous guidance needed to facilitate and expedite construction on this site, while providing appropriate protection for human health.

Opportunities for Small and Small Disadvantaged Business in Environmental Restoration

The depot's leadership and decision-makers understand that, as Anniston's largest employer, the installation has a responsibility to support the economic development of the community. For this reason, ANAD consistently exceeded goals for contracting with local small and small disadvantaged businesses. In fiscal years 2002 and 2003, 100 percent of the subcontracts awarded through the IRP program were given to small or small and disadvantaged businesses. In addition, every goal for small and small and disadvantaged business participation was exceeded.

IRP Goals for Small and Small Disadvantaged Business Participation

Business Type	USACE-Mobile Goal	Actual
Small business	69.3%	77.63%
Small disadvantaged business	12%	17.4%
Women-owned business	7%	19.6%

CONCLUSION

Cost-effective, innovative techniques and aggressive management of ANAD's IRP resulted in improved protection for human health and the environment and enhanced the depot's ability to fulfill mission requirements. ANAD took a proactive approach to protecting the community's raw water source through new modeling techniques, state-of-the-art groundwater treatment and innovative technologies for treating drilling water.

The depot's inventive management approach, which includes active participation and collaborative partnerships with key stakeholders, embodies a vision to go beyond mere "rubber stamp" participation. This synergy streamlines implementation, encourages innovation and reduces costs while fully supporting the overall mission of the installation.

Economic Impact

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Local Demographics

Jacksonville State University Economic Impact Study

ANAD's Other Contributions to Community

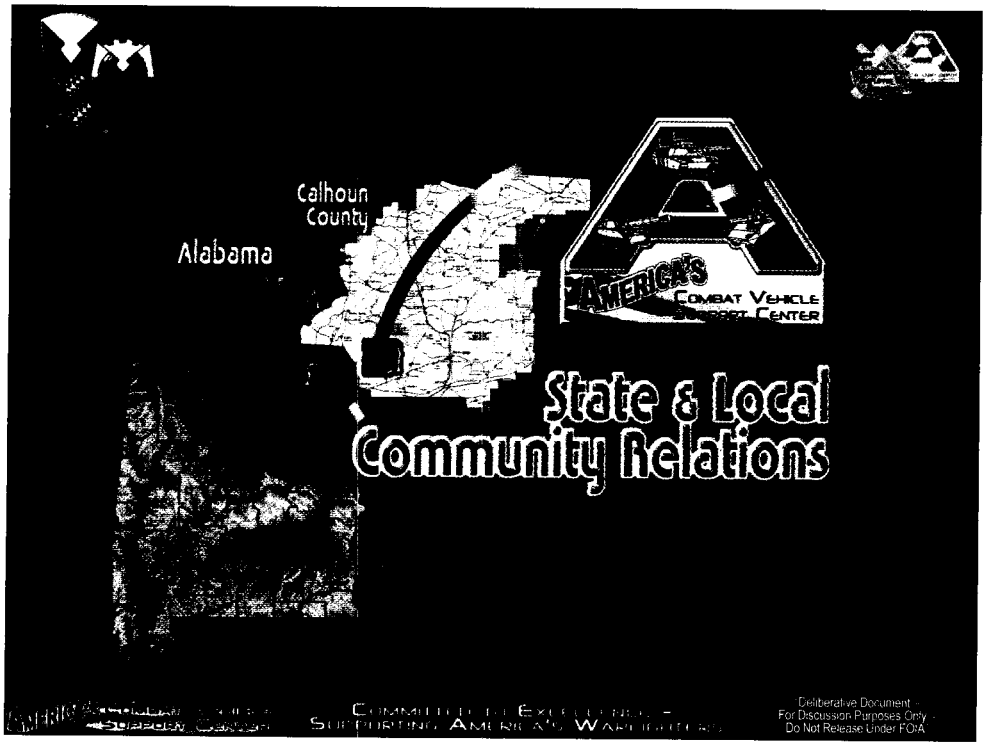
News Articles

Pelham Range

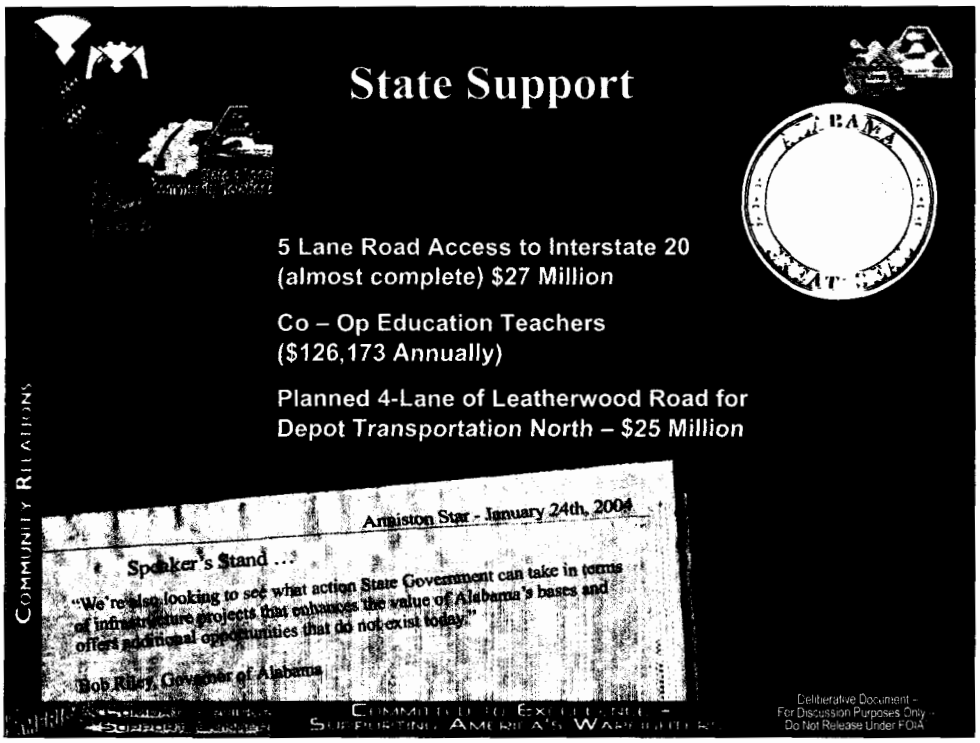
Map (Pelham Range)

Memorandums of Agreement (MOA)

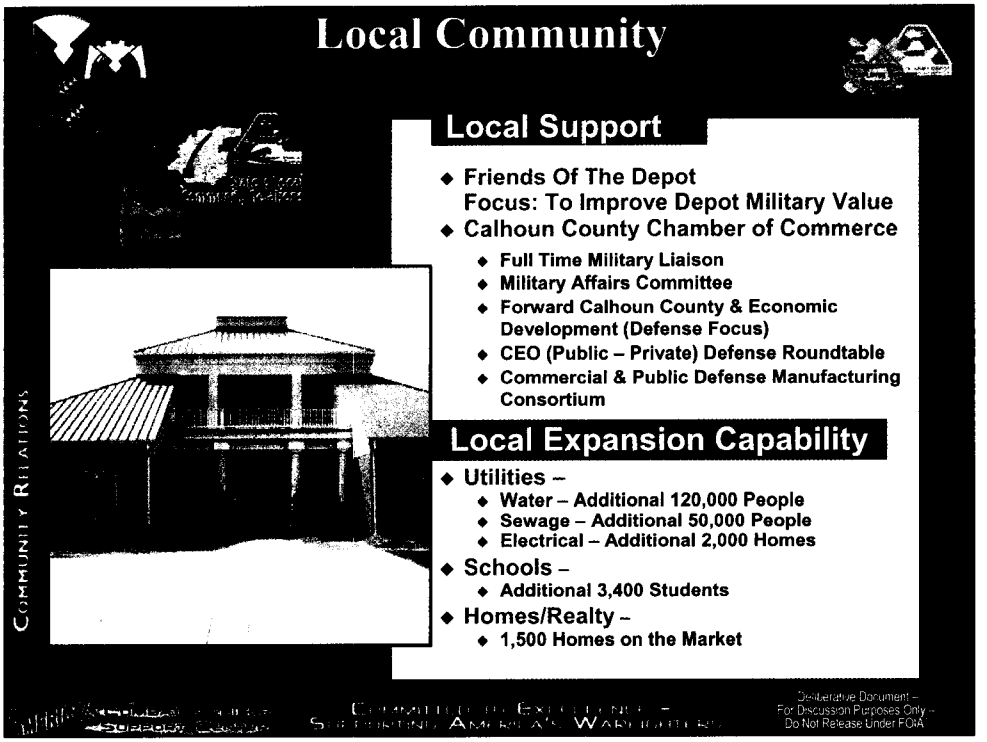
- **MOA - Public Visitation of New Bethel Cemetery**
- **MOA - Range Firing Coordination**



Anniston is tightly woven into the fabric of our state and local communities.



The State of Alabama's support and appreciation for Anniston Army Depot is evidenced by its current construction of a five-lane Strategic Corridor from Interstate 20 to the depot's southern boundary. The State of Alabama also contributes teacher units to support our high school cooperative education program and is planning to 4-lane Hwy 109 along the depot's Eastern Border, linking the depot to northern highway arteries.



The local Chamber of Commerce and Communities are strongly supportive of the depot….sponsoring such organization as "Friends of the Depot" which is focused on increasing the depot's military value, a full time military liaison, a Military Affairs Committee, a CEO Defense Roundtable, and a Public-Private Manufacturing Consortium.

Partially due to population reduction caused by the closure of Ft. McClellan, our local communities have significant expansion capabilities.

Anniston Army Depot
AMC Installation Familiarization Briefing
Calhoun County Demographics

Time Zone: Alabama – Central Standard Time

Population Calhoun County

1990 Census: 116,034
2002: 109,555

Note: Number is reduced primarily due to BRAC 95 closure of Ft. McClellan

2002 Local Population by Age Group

Age	Population	Percent (%) of Total
1-19	29,065	26.53%
20-24	8,041	7.34%
25-34	13,574	12.39%
35-44	15,885	14.50%
45–54	16,203	14.79%
55+	26,786	24.45%

Average Age is 38.1 Years Old

Source: Calhoun County Chamber of Commerce

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Anniston Army Depot
AMC Installation Familiarization Briefing
Calhoun County Demographics

2000 Effective Buying Income

Local Median Household Income ($32,604.00)
Local Per Capita Income ($16,615.00)

State Median Household Income ($34,923.00)
State Per Capita ($18,189.00)

Source: U.S. Census Bureau

2002 Local Household by Income

Income	Percent (%) of Local Population
Under 15k	21.49%
15k – 24,999k	17.13%
25k – 34,999k	14.70%
35k – 49,999k	19.32%
50k – 74,999k	17.29%
75k – Up	10.07%

Source: Calhoun County Chamber of Commerce

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Anniston Army Depot
AMC Installation Familiarization Briefing
Calhoun County Demographics

2004 Educational Institutions

Elementary Schools, Public (Calhoun County)

School Name	Number of Students	School Name	Number of Students
Alexandria	697	Piedmont	481
Ce Hanna	486	Pleasant Valley	583
Cobb	329	Randolph Park	308
Coldwater	457	Saks	649
Constantine	269	Tenth Street	333
Golden Springs	272	Weaver	684
Kitty Stone	918	Welborn	697
Ohatchee	468	White Plains	412
Oxford	971	**TOTAL**	**9,014**

Source: National Center for Education Statistics
Calhoun County Chamber of Commerce

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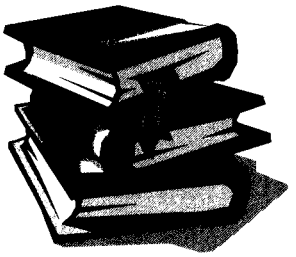
Anniston Army Depot
AMC Installation Familiarization Briefing
Calhoun County Demographics

2004 Educational Institutions

Middle Schools, Public (Calhoun County)



School Name	Number of Students
Anniston	582
De Armanville	309
Oxford	776
Piedmont	237
Saks	413
TOTAL	**2,317**

Source: National Center for Education Statistics
Calhoun County Chamber of Commerce

High Schools, Public (Calhoun County)

School Name	Number of Students	School Name	Number of Students
Alexandria	987	Pleasant Valley	431
Anniston	560	Saks	619
Jacksonville	778	Weaver	468
Ohatchee	425	Welborn	834
Oxford	961	White Plains	351
Piedmont	310	**TOTAL**	**6,724**

Source: National Center for Education Statistics
Calhoun County Chamber of Commerce

Anniston Army Depot
AMC Installation Familiarization Briefing
Calhoun County Demographics

2004 Educational Institutions
Primary and Secondary Summary

Total Capacity of all Schools, Public (Calhoun County)

21,455 Students

Total Number of Current Students, Public (Calhoun County)

18,055 Students (84%)

Total Number of Expansion Capability, Public (Calhoun County)

3,400 Students (16%)

Source: Calhoun County Chamber of Commerce

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AMC Installation Familiarization Briefing
Calhoun County Demographics

2004 Post Secondary Schools (30 Mile Radius)

School	Number of Students
• Jacksonville State University	8,930 Students
• Harry M Ayers State Technical College	1,347 Students
• Gadsden State Community College	5,187 Students
• Gadsden Business College – Anniston	273 Students
• University of Alabama – Distance Learning Branch	Not Available
• Talladega College	417 Students

Source: National Center for Education Statistics
Calhoun County Chamber of Commerce

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Anniston Army Depot
AMC Installation Familiarization Briefing
Calhoun County Demographics

Health Care (Calhoun County)

Hospitals	3 Hospitals - 586 Beds
Doctors	94
Dentist	39
Chiropractors	15
Optometrists	7
Physical & Occup Therapist	6
Outpatient Care Centers	8

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AMC Installation Familiarization Briefing
Calhoun County Demographics

Recreational Facilities (Calhoun County)

Public Parks	41
Churches	292
Movie Theatres	5 Theaters
	33 Screens
Softball/Baseball Fields	16 Complexes
	39 Fields
Country Clubs	3
Public Golf Courses	8
Tennis Courts	9
Bowling Alleys	1
Public Pools	8
Libraries	4
Recreation Centers	5

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Anniston Army Depot
AMC Installation Familiarization Briefing
Calhoun County Demographics

Climate (Calhoun County)

Prevailing Wind Direction	Southwest
Average Relative Humidity	71.5%
Temperature	
Avg. Degree – Annual	60.4 F
Avg. Degree – January	40.6 F
Avg. Degree – July	80.3 F
Precipitation	
Avg. Inches of Rain/Yr.	54.58"

Source: Southeast Regional Climate Center

Mobile Communication (Calhoun County)

100% Coverage County Wide

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ANAD
Economic Contributions

ANAD is the Largest Employer in a Six County Area

Local Unemployment 5.5%
Local Annual Salary $27k

	Contributions	% of Local Economy / Employment
Total Economic Impact	$1.1 Billion	11%
Impact on Local Business Property	$278.6 Million	17%
Impact on Local Employment	18,045	12%
Impact on Local Governments (Net Gain)	$21.4 Million	
Impact on Financial Institutions	$96 Million	

Prepared by: JSU

COMMUNITY RELATIONS

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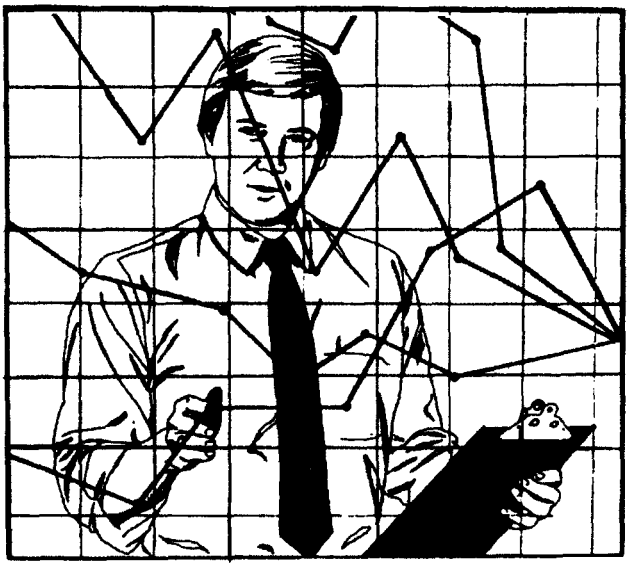
As you can see the positive economic impact of Anniston Army Depot on the local community is approx $1.1 Billion a year or 11% of the local economy. We are the largest employer in a six county area. Local unemployment is 5.5% and the average local salary is only $27,000 per year..... Anniston Army Depot is the heart of the economic system that feeds Calhoun and the surrounding counties.

CENTER FOR ECONOMIC DEVELOPMENT
And Business Research

College of Commerce and Business Administration, Jacksonville State University

The Economic Impact of Anniston Army Depot on Calhoun and Surrounding Counties 2003

JACKSONVILLE STATE UNIVERSITY · JACKSONVILLE, ALABAMA ·



AN OVERVIEW:

Jacksonville State University maintains a strong commitment to economic growth and the continuing development of a business environment that fosters the creation of jobs, investment and expansion of Alabama's industrial base. The Center for Economic Development and Business Research (CED) is dedicated to this commitment.

As an integral part of the University's business outreach program, CED provides a direct link between the academic and business communities. The purpose of CED is to conduct industrial development strategy studies for communities in Alabama and to provide managerial and technical assistance to the business community through research.

Pat W. Shaddix
Director

THE ECONOMIC IMPACT OF ANNISTON ARMY DEPOT ON CALHOUN AND SURROUNDING COUNTIES 2003

Prepared by:

William T. Fielding, Ph.D.
Dean
College of Commerce and Business Administration

Through:

Center for Economic Development and Business Research
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June 2003

Acknowledgments

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Mr. Pat W. Shaddix, Director of the Center for Economic Development and Business Research at Jacksonville State University, for supporting this project with personnel and other resources; Mr. Willard Butterworth, Program Coordinator of the Center for Economic Development and Business Research was responsible for basic data gathering from governmental agencies in the area, state agencies, and from the JSU Business Office;

Gerald Bates, Jr., Colonel U.S. Army, Commander Anniston Army Depot, for resources of the Depot in support of this study; Mr. Ray V. Minter, Chief of Staff, Anniston Army Depot, for providing requested financial data and coordinating questionnaires; Mr. Jesse L. Poor, Deputy to the Depot Commander, Anniston Army Depot, for providing financial data from the Depot and tenants, and coordinating financial questionnaires with appropriate organizations; Ms. Martha Almaroad, Administrative Assistant to Mr. Ray Minter for coordinating surveys, appointments, meetings, and support for this study.

Superintendents of Education and governmental officials in Calhoun, Talladega, Etowah, and St. Clair Counties provided assistance by furnishing requested information; and the management and employees of AAD cooperated by completing the questionnaire and returning them to our office.

William T. Fielding, Ph.D.
Dean
College of Commerce and Business Administration

June 2003

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Introduction

This study addresses the economic effect of Anniston Army Depot on Calhoun and Surrounding Counties. The activities of the AAD affect the local communities in ways that are not immediately obvious or easily measured. This study examines the more quantifiable economic impacts of the Anniston Army Depot.

In order to fully understand the impacts of the Anniston Army Depot on Calhoun and Surrounding Counties, a brief background is necessary. Anniston Army Depot is located near Anniston/Oxford, Alabama, in Calhoun County. The AAD is situated in Northeast Alabama approximately 100 miles west of Atlanta, Georgia, and 75 miles northeast of Birmingham, Alabama.

The impact areas examined in this study includes Calhoun, Etowah, Talladega and St. Clair Counties with a population of 361 thousand.

Objectives

In order to measure the economic impacts of Anniston Army Depot on the Calhoun/ Surrounding area, an empirical study was conducted during the Spring of 2003. Expenditure questionnaires, institutional financial reports, and secondary data were utilized to obtain the information needed to measure the AAD's impact. The results are presented in this report.

There are many different types of economic impacts and a single number cannot measure them adequately. Figure 1 illustrates, in a general manner, the different ways the Anniston Army Depot impacts economically on the Calhoun/Surrounding area.

The purpose of this study is three-fold. First, it should provide the Anniston Army Depot and the local community with a better understanding of the important benefits which accrue to the community as the result of having a depot located within its environs. Second, the study should help the local community make a comparison between the economic costs of the AAD and the economic benefits derived from the institution. Third, the study should emphasize the importance of the mutually beneficial relationship that exists between the AAD and Calhoun/ Etowah/St.Clair and Talladega Counties.

Overview

The 324 million dollar gross annual payroll of Anniston Army Depot has a significant impact on the Calhoun/Surrounding area economy.[1] This is not surprising since AAD is the largest employer in the Calhoun/Surrounding area.[2] Therefore, when the AAD as well as the employees make initial expenditures, these expenditures are in turn respent, causing a substantial ripple or multiplier effect on the four-county economy. This study contains estimates of just how significant these economic impacts are upon the local economies. The primary findings of this study are summarized below.

Impact On the Calhoun/Surrounding Area

The Anniston Army Depot and employees spent an estimated $516 million directly in the Calhoun/Surrounding area in 2002. This initial impact also generated secondary flows of income in the area. The multiplier effect generated an estimated total economic impact on the Calhoun and surrounding areas in 2002 of at least $1.1 billion.

Impact On Local Governments

Revenue received by Calhoun and Surrounding County and city governments as a result

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[1]The gross annual payroll figure is inappropriate to measure local impact since it includes money withheld to pay state and federal income taxes, insurance premiums, retirement, annuities, etc.

[2]Industry listings obtained from local area Chamber of Commerce.

of AAD employees amounted to $33 million. These benefits consisted of real estate and sales tax collection as well as state aid that was attributable to the presence of the AAD.

During the 2002 school year, AAD-related persons received approximately $11.4 million in local government municipal and public school services. Thus, the net impact on local governments due to the AAD was a positive $21.6 million.

Impact On Local Employment

Anniston Army Depot-related expenditures not only created income but also created jobs. The AAD employed 4,969 persons during the FY 2002 year. In addition 13,076 jobs were created in the local area as a result of the Anniston Army Depot and AAD-related expenditures. Therefore, the total employment impact was 18,045 jobs created in the community by the presence of Anniston Army Depot in 2002.

Impact On Local Financial Institutions

Funds from employees and from AAD-related businesses, provide the reserves for expansion of credit by local banks. Employee and related deposits result in an approximate increase of $96 million in the credit base of local financial institutions occurs as a result of the AAD.

Methodology

The equations used in this model provide a method to estimate impacts on the various sectors of the local economy. The original data collected for this study was used to determine values for components of the equations. Primary data for the equations were obtained from three basic sources: (1) an expenditure survey of AAD employees; (2) local government officials (county commissioners, city clerks, tax assessors, and superintendents of education in the counties); and (3) Anniston Army Depot officials. Secondary information was taken from various government publications; documentation is provided in the Appendix.

In order to present the full effect of the presence of the Anniston Army Depot on Calhoun and Surrounding Counties, it is necessary to take into account the multiplier effects that were mentioned in the previous section. The concept of the multiplier is an important element in the equation systems presented in this report. Expenditure multipliers indicate the average number of times that a dollar spent locally is respent in the local economy. These multipliers are "built in" to the expenditure models; that is, it was not necessary to multiply direct expenditures by some separately determined multiplier in order to present expanded spending. The "true" multiplier differs from area to area due to the differences in regional economies (population composition, basic industry, expenditure patterns, etc.). Moreover, the determination of an exact regional multiplier is a study in itself. The multiplier selected for this study is 2.2. It is important to realize that the multiplier is a statistical concept which is difficult to measure directly. The magnitude of the multiplier may vary at any point in time as well as over time.

Impact of Direct Expenditures

Anniston Army Depot impacts directly on the economy of the Calhoun/Surrounding area through its spending for locally provided goods and services, spending by its closely related firms, and through the spending of its employees. This section of the study will provide estimates of the direct local expenditures in fiscal 2002 attributable to the existence of the AAD.

Anniston Army Depot Related Businesses and Employee Expenditures

The direct local expenditure of the Anniston Army Depot and employees is approximately $512 million (see Table 1). This amount is composed of $125 million spent by employees, and $391 million (excluding wages and salaries) spent by the Anniston Army Depot.

The initial $512 million spent by the Anniston Army Depot and AAD-related persons has an impact greater than its initial value due to the fact that it is spent and respent locally thus multiplying the initial expenditure. The respending of these dollars, with successive transactions adding to the cumulative impact in diminishing increments, creates the "multiplier effect." For example, the purchase of a meal by an AAD-related person provides income for the restaurant owner, dishwasher, and waitress, all of whom in turn will spend some of their income in the Calhoun/Surrounding area. The restaurant owner will not only use his portion for personal spending, but also will buy part of his restaurant supplies locally, again creating income for other persons and businesses in the Calhoun/Surrounding area. These multiplied effects must be considered along with direct expenditures to give the overall impact of the AAD.

TABLE 1 Direct Local Expenditures of AAD & AAD-Related Persons (Initial Impact of Spending)	
Anniston Army Depot (excluding wages, salaries & scholarships)	$391,400,000.00
Employees (from B-1.1.1)	124,861,032.00
TOTAL DIRECT IMPACT	$516,261,032.00

The data reported in this study include the direct economic impact of expenditures as well as an estimate of the value of the multiplied spending to arrive at an approximate total impact. In this study a value of 2.2 for the multiplier was determined and the corresponding total impact of $1.1 billion results. This total economic impact can be broken down into direct impact and indirect impact. The $516 million in direct impact results from direct spending by employees and the Depot while the $1.4 billion in indirect impact is a result of the respending of these initial dollars. This $1.1 billion is approximately 11 percent of the total business volume in the study area. Table 2 shows the sources of the total impact.

TABLE 2 Total Impact of AAD on Calhoun/Surrounding Counties	
Expenditures	Impact
Direct Institutional Spending (B-1.1)	$ 391,400,000
Direct Employee Spending (B-1.1)	124,861,032
Indirect Spending (B-1.2 + B-1.3)	619,513,238
TOTAL IMPACT	$1,135,774,270

The impact of total expenditures has several dimensions. For one, the development of private business property valued at $279 million which serves AAD-related needs has occurred as a result of the $1.1 billion AAD-related expenditures. Table 3 shows that approximately $187

million of this amount is composed of real property, and $92 million is in local business inventories. This real property includes apartments, office buildings, and retail and service establishments. The property serves the Anniston Army Depot and employees and would not likely exist in the absence of the AAD, other things being equal.

TABLE 3 Anniston Army Depot Impact on Local Business Property	
Value of local business real property due to AAD (B-2.1)	$186,973,616
Value of local business inventory due to AAD (B-2.2)	91,644,463
TOTAL VALUE OF LOCAL BUSINESS	$278,618,079

Another very important result of Anniston Army Depot-related expenditures is that AAD directly and indirectly, accounts for approximately 12 percent of the total employment in the study area. The Depot employs 4,969 persons in various positions. In addition to these jobs, 13,076 jobs exist because of the direct and indirect AAD-related spending. When the 4,969 positions within the Anniston Army Depot itself is added to the 13,076 jobs created by the AAD indirectly, total employment attributable to the presence of AAD is estimated at 18,045 (see Table 4).

TABLE 4 Anniston Army Depot Impact on Employment	
Direct Employment by AAD	4,969
Indirect Employment Due to AAD	13,076
TOTAL EMPLOYMENT (I-1)	18,045

Tax Expenditures and Receipts

As local citizens, Anniston Army Depot-related persons pay taxes to and receive the

benefit of services from local governments. Employees of AAD account for _____ percent of the total population of Calhoun and surrounding counties, and both the benefits and costs to local governments are significant. As a result of employees, the cost to local governments for providing municipal and public school services is approximately $11.5 million. However, persons living in the study area who are directly or indirectly related to the AAD pay approximately $33 million in taxes to local governments. Therefore, this results in a net gain to the community of $21.6 million.

Financial Sector Impact

Local financial institutions such as banks, savings and loans, and credit unions receive money (funds) from the AAD employees. Each of these institutions can increase its lending when its reserves increase. Thus, AAD-related funds are a potentially important source of local credit creation and economic growth.

Due to deposits by the AAD-related persons, total savings deposits and demand deposits the credit base in the local community is increased by approximately $96 million. This allows potential credit availability in the study area to expand as money is loaned and redeposited. The entire community benefits from this expanded credit base.

Conclusion

The purpose of this study was to obtain an approximate measure of the economic impact of the Anniston Army Depot on Calhoun/Surrounding area. This impact occurs as a result of the expenditures of the Anniston Army Depot, related business, and employees of the AAD.

The conclusion of this study is that Anniston Army Depot makes a significant economic contribution to this locality. The AAD is not only a major economic component in the area, but also, and just as important, it is an integral part of both Calhoun and Surrounding Counties and is one of the contributing forces that serve to shape and define the area.

JSU ECONOMIC UPDATE

Center for Economic Development
College of Commerce and Business Administration
Jacksonville State University
Jacksonville, Alabama 36265
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THE ECONOMIC IMPACT OF ANNISTON ARMY DEPOT

BY WILLIAM T. FIELDING, PhD

OVERVIEW

The Anniston Army Depot (AAD) is a critical economic activity in Calhoun and surrounding counties in Alabama and plays a key role in support of the United States military deployed worldwide. It is the largest employer in Calhoun County and the surrounding area.

Some of a number of the depot's assigned missions is that it is the only Army depot capable of performing maintenance on both heavy and light ground combat vehicles and their components. The depot is also designated as the Center of Technical Excellence for the M1 Abrams Tank and is the designated candidate depot for the repair of the M60, AVLB, M9ACE and M88 comat vehicles. AAD has assumed responsibility for the towed and self-propelled artillery as well as the M113 Family of Vehicles. In addition, the AAD has been designated the Department of Defense Small Arms Repair Facility.

In 2003, the College of Commerce and Business Administration of Jacksonville State University (JSU), through the JSU Center forEconomic Development and Business Research conducted a study on the economic effect of Anniston Army Depot on Calhoun and surrounding Alabama counties. As of April 12, 2005 the study was updated because of an increase in the number of depot employees. The activities of the AAD affect the local communities in ways that are not immediately obvious or easily measured. This study examined the more quantifiable economic impacts of the Anniston Army Depot.

Anniston Army Depot is located near Anniston/Oxford, Alabama, in Calhoun County. The AAD is situated in Northeast Alabama approximately 100 miles west of Atlanta, Georgia, and 75 miles northeast of Birmingham, Alabama.

The impact areas examined in this study include Calhoun, Etowah, Talladega, and St. Clair Counties with a population of 361 thousand.

The 423 million dollar gross annual payroll of Anniston Army Depot has a significant impact on the Calhoun/ Surrounding area economy. This is not surprising since AAD is the largest employer in the Calhoun/ Surrounding area. Therefore, when the AAD as well as the employees make initial expenditures, these expenditures are in turn respent, causing a substantial ripple or multiplier effect on the four-county economy. This study contains estimates of just how significant these economic impacts are upon the local economies. The primary findings of this study are summarized below.

Continued on Page 3

IMPACT ON CALHOUN AREA

The Anniston Army Depot, employees, and related persons spent an estimated $662 million directly in the Calhoun/Surrounding area in 2004. This initial impact also generated secondary flows of income in the area. The multiplier effect generated an estimated total economic impact on the Calhoun and surrounding areas in 2004 of approximately $1.5 billion.

TABLE 1

DIRECT LOCAL EXPENDITURES OF AAD AND AAD RELATED PERSONS

(INITIAL IMPACT OF SPENDING)

ANNISTON ARMY DEPOT*	$508,820,000.00
EMPLOYEES	152,828,496.00
TOTAL DIRECT IMPACT	$661,648,496.00

* Excluding wages & salaries

TABLE 2

TOTAL IMPACT OF AAD ON CALHOUN/SURROUNDING COUNTIES

DIRECT INSTITUTIONAL SPENDING	$508,820,000
DIRECT EMPLOYEE SPENDING	152,828,496
INDIRECT SPENDING	793,928,195
TOTAL IMPACT	$1,455,626,691

LOCAL GOVERNMENT IMPACT

Revenue received by Calhoun and surrounding county and city governments as a result of AAD employees and related persons amounted to $33 million. These benefits consisted of real estate and sales tax collections as well as state aid that was attributable to the presence of the AAD.

During the 2004 school year, AAD-related persons received approximately $11.4 million in local government municipal and public school services. Thus, the net impact on local governments due to AAD was a positive $21.6 million.

IMPACT ON LOCAL EMPLOYMENT

Anniston Army Depot-related expenditures not only created income but also created jobs. The AAD and related business employed 6,082 persons during the FY 2004 year. In addition 17,044 jobs were created in the local area as a result of the Anniston Army Depot and AAD-related expenditures. Therefore, the total employment impact was 23,126 jobs created in the community by the presence of Anniston Army Depot in 2004.

TABLE 3

ANNISTON ARMY DEPOT IMPACT ON EMPLOYMENT

DIRECT EMPLOYMENT BY AAD	6,082
INDIRECT EMPLOYMENT DUE TO AAD	17,044
TOTAL EMPLOYMENT	23,126

Dr. Fielding is the Dean of the College of Commerce and Business Administration, Jacksonville State University

United Defense would be hard hit if Anniston Army Depot were to close

By Matthew Korade
Star Senior Writer
12-29-2003

Represented by white rectangles moved about on a magnetic board, the vehicles at Anniston's United Defense plant are like the pieces of a game.

Marked with serial numbers to keep track, the "game pieces" are shifted as the vehicles themselves move, from the yard to the factory-floor section, and then to the Anniston Army Depot board, as the vehicles take a ride on the depot test track.

Charlie Redmon, operations manager at Anniston's United Defense plant, says sometimes he will spot one of the vehicles possibly refurbished at the plant on CNN. Photo: Bill Wilson/The Anniston Star

As the work on the armored vehicles is completed, the white rectangles are removed from the board. The tanks and personnel carriers get sent to foreign buyers, such as Israel, Egypt or Saudi Arabia, or are stored on U.S. ships somewhere on the deep ocean, ready in case a war breaks out.

Upgrading the aging fleet of Army vehicles for modern warfare is the factory's reason for being, said Charlie Redmon, operations manager. Sometimes he'll spot one of his main products on CNN, a refurbished M113-model personnel carrier weaving down the road, its driver trying to overcome blind spots in the periscope.

"We assume they've come through here," he said.

Given United Defense's partnership with the Depot — not to mention its contract to produce locally all the metal tracks for the Army's entire inventory of vehicles — the company also plays a critical part in the regional economy. Its operations would be severely limited if the depot were to shut down in the 2005 round of base realignment and closure, officials said.

The depot is probably the last organized structure capable of providing United Defense with the work that's currently being done, said Nathan Hill, a military consultant for the Calhoun County Chamber of Commerce.

That work includes overhauling parts in the depot's spacious factories, removing paint in its huge "grit blast" and testing vehicles on its track, which is capable of testing every combat vehicle in the Army.

Furthermore, there is the issue of obtaining environmental permits, providing tight security and having available the allied-trades industry and artisan skills that aren't duplicated anyplace else, all of which the depot can provide, Hill said.

"There's many years of experience there," he said.

United Defense would be hard hit if Anniston Army Depot were to close - Continued

Cindy Garrison, a spokeswoman for United Defense, said the area is looked at as an industrial base for the Army, and the depot, with its ability to make public-private partnerships is part of the attraction for defense industries, as was Fort McClellan.

"If it should go away, it's uncertain what would happen to the other defense industries in the area," she said.

One of the main vehicles United Defense upgrades is the M113. More than 80,000 of the vehicles have been produced since their introduction in 1960 — the largest quantity the United States has ever built of any track vehicle. Nearly 50,000 were bought by more than 50 countries, which means a lot of work for United Defense's upgrades plant.

There are so many of the vehicles that the government has allowed them to be used to create artificial reefs. United Defense has a newspaper clipping on the wall showing a stripped-down transport plunging nose first into the cold Atlantic off Manasquan, N.J.

"But there's perfectly good parts in there," Redmon said.

Most recently, the plant has been fitting the transports with turbo-charged engines, new transmissions and improved driver controls that allow it to pivot. The Army began noticing the need for the upgrades during the first Gulf War, Redmon said. Older models were falling behind, out of radio range.

"It's making it safer for the troops," he said.

And weighing in at about 20 tons, the revamped version is still as light as the Stryker.

United Defense upgrades the massive Howitzer tank for sale to foreign nations. It also converts old Army vehicles into the lookalike Soviet tank that U.S. forces use in war games. It is harmless. The gun shoots lasers, not bullets, and the body is fitted with reflectors that show whether it has been dealt a deadly blow or a mere glance.

Solid rubber track is the newest United Defense creation. It is lighter, quieter and easier on roads than metal track, and it is self-cleaning. The "rubber band" is perforated throughout with little holes; when the vehicle moves, air is forced through, blowing off mud or snow.

"It's not in the Army inventory yet," Redmon said, although it is in the future plan. "Though they're certainly welcome to all our test results."

More work is expected. The depot has United Defense refurbish vehicles and tracks coming back from Iraq, and about $17.4 million has already been appropriated in fiscal 2004 for the M113 conversion program.

"We're optimistic that next year we're going to see an increase," Redmon said.

County receives $10 million for roads, bridges

By Nathan Solheim
Assistant Metro Editor
01-22-2004

Calhoun County has received $10 million from the Chemical Stockpile Emergency Preparedness Program, paving the way for road and bridge projects along routes that might be used for evacuation in case of an accident or incident at the Anniston Army Depot's chemical weapons stockpile.

Each year, Calhoun County receives money from the program to prepare the community's response to an accident. The money brings the county's CSEPP budget this year to $16 million.

As reported in The Star last week, the money will be used on six bridge projects and one road paving project.

"We're going to get some much needed roads and bridges repaired along evacuation routes in the county," said Calhoun County Commission Chairman Robert Downing. "We're thankful to Sen. Shelby for getting us these additional funds and a level of protection the people deserve. It's just going to make us better prepared and give us safe roadways to travel on."

Sen. Richard Shelby, R-Ala., secured the funds on Capitol Hill last year. A representative from the Alabama Emergency Management Agency delivered the money to the Calhoun County Commission Wednesday.

County commissioners had been waiting for the money to come down from the Alabama Emergency Management Agency since last week.

The initial list of projects includes paving on Mudd Street and fixing bridges on Mudd Street, Gate 8 Road, Alexandria-Jacksonville Road, Ball Play Road, Old Downings Mill Road and Wellington Road.

County Engineer Charles Markert recommended the seven projects be done first and chose them from a list of 19 projects totaling more than $18 million. The rest of the projects would be paid for with county money or another CSEPP grant.

The county has until September 2005 to complete the seven projects. Markert said last week he expects to approach the commission with bid documents within a few weeks, though the issue did not appear on the commission's agenda for today.

Downing said the county will send out requests-for-qualifications for project managers in the next few days.

Because of the amount of work to be done, the county does not have the resources to take on the workload and will hire an outside project manager, said County Administrator Ken Joiner.

"We've got some timelines here to get the money obligated, we have employees that are involved with projects with state and local money," Joiner said. "This money has to be spent for specific projects so it's clearly defined when it comes to splitting the workload to get it done."

$1 billion may come to Anniston

By Hannah Bergman
Star Washington Correspondent
02-03-2004

WASHINGTON

Anniston's economy could get another injection from President Bush's new budget. The $2.4 trillion plan includes $50 million for the Center for Domestic Preparedness at McClellan and $957 million for 310 new Stryker vehicles.

That money comes on top of the proposed $23.6 million for a new maintenance plant at the Anniston Army Depot. Alabama is also slated to get $4.9 billion from federal grant programs, up from $4.7 billion in 2004.

The figures are part of the voluminous budget delivered Monday to Congress by the president only weeks after the 2004 fiscal year budget passed Congress.

The president's budget proposes a 7 percent increase in defense spending and a 10 percent increase in homeland security spending.

Sen. Richard Shelby, R-Tuscaloosa, said the budget balanced funding on important measures while scaling back on "irresponsible spending."

"I also share the president's strong commitment to fight and win the global war on terror, and I support the important spending increases he has proposed for national and homeland security," Shelby said.

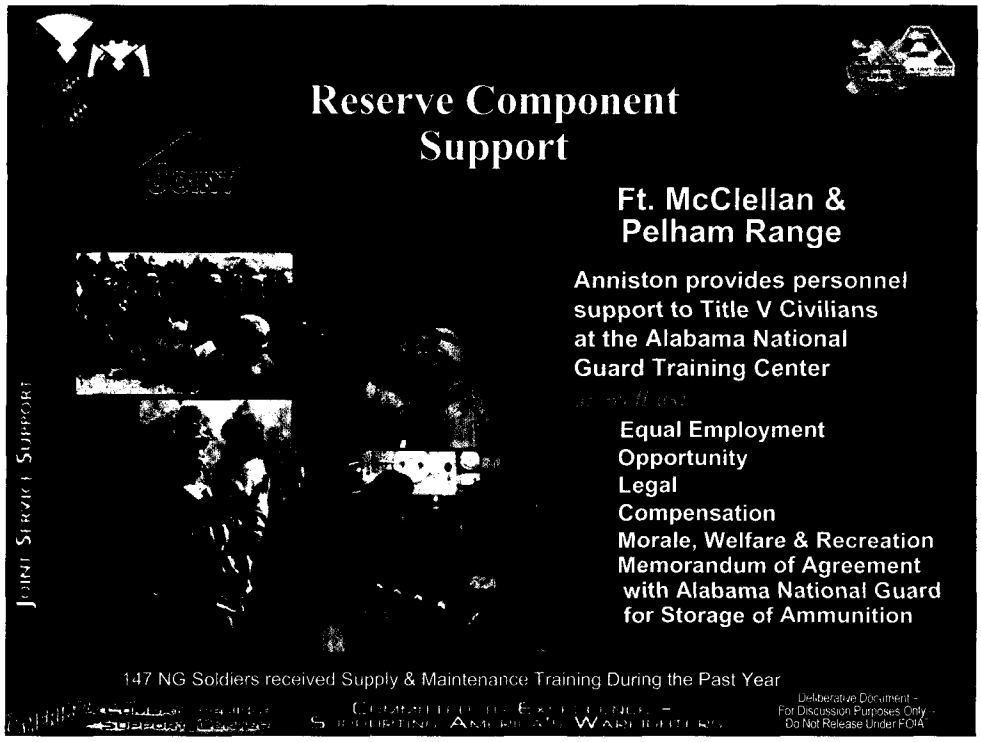
The defense budget also includes a 3.5 percent pay increase for military personnel and the privatization of 90,000 military housing units by the end of 2005.

Defense Department documents released Monday with the president's budget revealed the department planned to purchase another 310 Stryker armored vehicles.

The armored vehicles are made by General Dynamics Land Systems at the Anniston Army Depot.

The Center for Domestic Preparedness requested $50 million for 2005, the same amount it requested in 2004, according to Chris Rizzuto, a spokesman for the Office for Domestic Preparedness. Congress voted to increase the center's budget for 2004 to $54.7 million last year.

The center will continue to fund its current training programs with the money, Rizzuto said.



As can be seen here, Anniston provides Personnel Services and ammunition storage to the Alabama National Guard personnel located across town. Anniston's future plans are to develop a memorandum of understanding with the Alabama National Guard that addresses the utilization of the 20,000 acre Pelham Range which shares the northern border of the depot. Furthermore, Anniston provides a hands on approach to supply & maintenance training by placing the soldiers in our production shops working side by side with depot employees during their annual reserve training.

Pelham Range is adjacent the depot on the northwest side. It consists of approximately 22,245 acres. Pelham range capability:

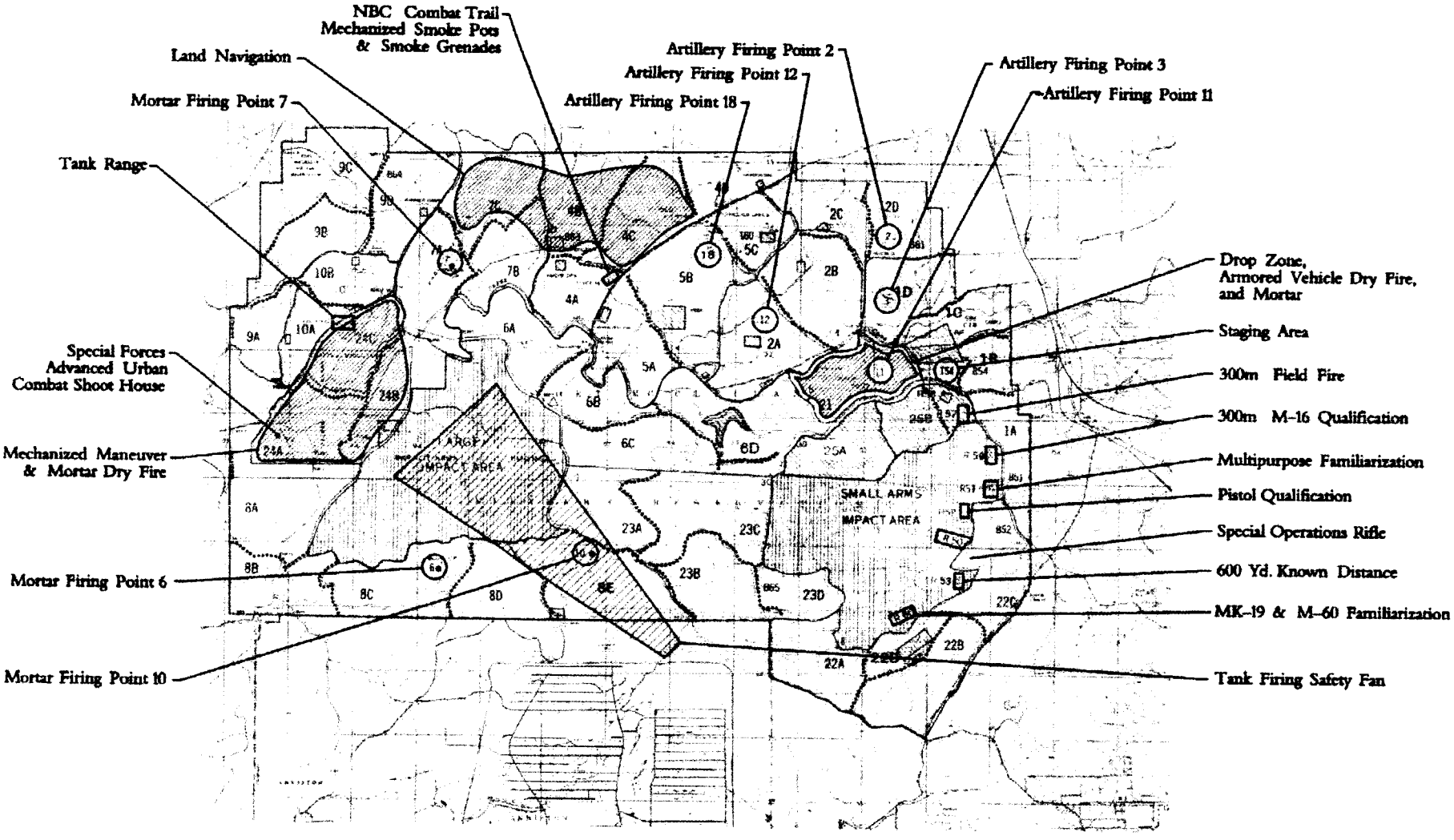
1. Ten live fire ranges with a total of 204 firing points:

- Special Forces Advanced Urban Combat Shoot House
- Special Operations Rifle
- Multipurpose Familiarization,
- Pistol Qualification
- Multipurpose / 600 Yard Known Distance
- Mechanized Smoke Pots and Smoke Grenades
- 300 m Field Fire (RETS)
- 300 m M-16 Qualification (RETS)
- Mk-19 and M-60 Familiarization
- Tank Range
- Five Artillery firing points up to 155 mm
- Three Mortar firing points up to 120 mm

2. Ten training areas:

- One Armored Vehicle Dry Fire, and Mortar
- Three Mechanized Maneuver and Mortar training areas (company)
- One Airborne / Air Assault DZ & LZ
- Three Land Navigation / Terrain Association / Orienteering courses
- One NBC Operations training site
- One Armored Vehicle Staging Area / Dry Fire /Individual Training (Battalion)

3. Six bivouac areas that will accommodate three battalion, and three company size elements.


NBC Combat Trail
Mechanized Smoke Pots
& Smoke Grenades
Land Navigation
Mortar Firing Point 7
Tank Range
Special Forces
Advanced Urban
Combat Shoot House
Mechanized Maneuver
& Mortar Dry Fire
Mortar Firing Point 6
Mortar Firing Point 10
Artillery Firing Point 2
Artillery Firing Point 12
Artillery Firing Point 18
Artillery Firing Point 3
Artillery Firing Point 11
Drop Zone,
Armored Vehicle Dry Fire,
and Mortar
Staging Area
300m Field Fire
300m M-16 Qualification
Multipurpose Familiarization
Pistol Qualification
Special Operations Rifle
600 Yd. Known Distance
MK-19 & M-60 Familiarization
Tank Firing Safety Fan
LARGE
IMPACT AREA
SMALL ARMS
IMPACT AREA

FORT MCCLELLAN ARMY NATIONAL GUARD TRAINING CENTER
ARMY NATIONAL GUARD TRAINING CENTER
P.O. BOX 5280
FORT MCCLELLAN, AL 36205-0280

MEMORANDUM OF AGREEMENT BETWEEN FORT MCCLELLAN ARMY NATIONAL GUARD TRAINING CENTER FORT MCCLELLAN, AL AND ANNISTON ARMY DEPOT ANNISTON, AL

SUBJECT: Procedures for Public Visitation of New Bethel Cemetery

1. Purpose. To document support procedures between Anniston Army Depot (ANAD) and Fort McClellan Army National Guard Training Center (ARNGTC) concerning public visitation to New Bethel Cemetery.

2. Reference. Traditional public visitation dates.

a. Visitation dates for all cemeteries at Pelham Range are permitted on the first Saturday and Sunday in May and on Memorial Day weekend (Saturday, Sunday and Monday).

b. Other visitation dates are permitted consistent with security and safety regulations and requirements in paragraph 6.

3. Problem. To outline coordination procedures for public visitation to New Bethel Cemetery (ANAD property) which adjoins Pelham Range (under the supervision of the ARNGTC).

4. Scope. Support encompasses access to all cemeteries at Pelham Range for visitation purposes.

5. Understandings:

a. ARNGTC will:

(1) Allow public access to cemeteries for visitation purposes (see attached map).

(2) Announce dates and hours for public visitation to cemeteries through newspapers and other media sources at least 10 days prior to beginning of visitation period.

(3) Serve as point of contact (POC) between the public and ANAD concerning visitation privileges.

(4) Notify ANAD POC of any change in ARNGTC POC for coordination of visits and responsibilities and visitation procedures outlined herein.

b. ANAD will:

(1) Maintain the cemetery plot in accordance with AR 200-3, Natural Resources-Land, Forest and Wildlife Management.

(2) Notify ARNGTC POC of any change in ANAD POC for coordination of visits and responsibilities and visitation procedures outlined herein.

(3) Ensure that ANAD personnel and tenants are aware of visitation dates. Ensure that no high risk chemical operations, such as movement of M55 rockets, M55 rocket leaker isolation, and enhanced storage monitoring inspection of M55 rockets, are on-going during visitation periods.

(3) Publish visitation dates in the Anniston Army Depot *Tracks.*

6. Other Visitation Dates

a. ARNGTC POC will:

(1) Coordinate requests for visiting cemeteries on dates other than stated in paragraph 2a with Chief, Personnel and Community Affairs Division by providing date, time, length of visit, and number of visitors.

(2) Obtain clearance, and notify visitors of approval.

(3) Notify visitors when requests for visits are denied due to hazardous range operations.

(4) After obtaining clearance, contact ANAD POC in writing at least 2 duty days in advance of visit, providing date, time, length of visit and number of visitors.

b. ANAD POC will

(1) Contact the Directorate of Public Works; Directorate of Law Enforcement and Security; Directorate of Risk Management; Anniston Chemical Activity; Anniston Munitions Center; and the Anniston Chemical Agent Disposal Facility; and provide them the date, time, length of visit and number of visitors.

(2) After obtaining clearance, notify ARNGTC POC who will, in turn, notify requester of approved date, time and length of visit.

SUBJECT: Procedures for Public Visitation of New Bethel Cemetery

(3) Notify ARNGTC POC when clearance cannot be obtained and suggest an alternate date for visit.

7. POC's:

a. ANAD:

(1) Support Agreements Manager, Directorate of Contracting: 256-235-7257

(2) Forester, Directorate of Risk Management, Environmental Control and Engineering Division: 256-235-4217

(3) Chief, Planning and Resource Office, Directorate of Public Works: 256-235-6415

(4) Public Affairs Officer: 256-235-6281

b. ARNGTC:

(1) Chief, Personnel and Community Affairs Division: 256-847-4105

(2) Administrative Technician: 256-847-4456

8. Effective Date: This agreement becomes effective upon the last signature, will be reviewed at least annually prior to anniversary date, and may be cancelled/revised upon mutual consent by both parties or by either party subject to 180 day notice.

DAVID A. McPHERSON
LTC, EN, AL ARNG
Training Center Manager

1 MAR 02
DATE

WAYNE A. PRATT
COL, NGB
Acting USPFO for Alabama

28 Mar 02
DATE

THEODORE C. CASON, JR.
Secretary
Armory Commission of Alabama

28 MAR 02
DATE

GERALD BATES, JR.
COLONEL, OD
Commanding

12 Apr 02
DATE

FORT MCCLELLAN ARMY NATIONAL GUARD TRAINING CENTER
ALABAMA ARMY NATIONAL GUARD
P.O. BOX 5280
FORT MCCLELLAN, AL 36205-0280

MEMORANDUM OF AGREEMENT
BETWEEN
FORT MCCLELLAN ARMY NATIONAL GUARD TRAINING CENTER
AND
ANNISTON ARMY DEPOT
ANNISTON, AL

SUBJECT: Range Firing Coordination

1. Purpose. The purpose of this memorandum is to document coordination procedures required between the Fort McClellan Army National Guard Training Center (hereinafter referred to as the ARNGTC) and the Anniston Army Depot (hereinafter referred to as the ANAD) during the use of the ANAD's outdoor firing range.

2. Reference.

a. AR 385-63, Policies and Procedures for Firing Ammunition for Training, Target Practice and Combat, 15 October 1983 (with changes).

b. FM-ARNGTC Regulation 350-2, Ranges and Training 1 August 2002.

3. Problem. To clarify range firing coordination procedures between the ARNGTC and the ANAD when ANAD is scheduled for range firing on the ANAD outdoor firing range.

4. Scope. The scope pertains to firing range requirements involving Pelham Range.

5. Understandings:

a. ARNGTC agrees

(1) To provide range safety briefings and issue Range Safety Cards to authorized ANAD personnel.

(2) To provide ANAD personnel clearance to operate the ANAD outdoor firing range which surface danger zone (range fan) extends into Pelham Range.

(3) To provide ANAD an initial annual ARNG training schedule for planning purposes by the beginning of each fiscal year.

(4) To provide support at no cost if Pelham Range is being utilized by ARNG personnel at the same time ANAD requires use of their outdoor range. If, however, there are no ARNG requirements at Pelham Range, a fee of $20.00 per hour will be assessed for operation of the firing desk. Any charges will be submitted quarterly to ANAD, ATTN: AMSTA-AN-RRA, Anniston, AL 36201-4199 against a Military Interdepartmental Purchase Request (MIPR) (DD Form 448).

(5) To provide ANAD written confirmation of approved dates/times.

(6) To notify ANAD POC at least five days prior to scheduled range firing if requirements change, and ARNG personnel will not be available at no cost.

b. ANAD agrees

(1) Depot personnel will possess a valid ARNGTC Range Safety Card. The cards may be picked up from Range Control, following the annual briefing at Building 1120, Fort McClellan or Depot personnel can provide a mailing address at the safety briefing, and the safety cards will be mailed.

(2) To ensure compliance with applicable regulations listed in paragraph 2.

(3) To coordinate and schedule range firing with ARNGTC 90 days in advance and update changes/requirements as soon as possible.

(4) To the maximum extent possible, to schedule range firing when the desk control clerk is available.

(5) To reimburse the ARNGTC $20.00 per hour for firing desk operations when there are no ARNG requirements at Pelham Range. (Forward MIPR to the Fort McClellan Army National Guard Training Center, P.O. Box 5280, ATTN: FM-ARNGTC-RMD, Fort McClellan, AL 36205-0280).

(6) To make arrangements for any emergency medical services which may be required for ANAD personnel during the use of the outdoor firing range.

SUBJECT: Range Firing Coordination

6. Effective Date: This agreement becomes effective upon the last signature, will be reviewed annually prior to anniversary date, and may be canceled/revised upon mutual consent by both parties subject to a 180 day notice.

2 DEC 02 — 20 NOV 02

DAVID A. McPHERSON **Date** — **GERALD BATES** **Date**
COLONEL, EN, AL ARNG — **COLONEL, OD**
Training Center Manager — **Commanding**

13 Jan 03

WAYNE A. PRATT **Date**
COLONEL, NGB
Acting USPFO for Alabama

13 JAN 03

JOHN B. LYDA **Date**
COLONEL, EN, AL ARNG
Assistant USPFO for Alabama

13 JAN 03

THEODORE C. CASON, Jr. **Date**
Secretary
Armory Commission of Alabama