
ENVIRONMENTAL ASSESSMENT:

**CONSTRUCTION AND OPERATION OF A NITRIC
ACID CONCENTRATION/SULFURIC ACID
CONCENTRATION (NAC/SAC) FACILITY**

HOLSTON ARMY AMMUNITION PLANT

Prepared by

Holston Army Ammunition Plant

**4509 West Stone Drive
Kingsport, Tennessee 37660**

Environmental Assessment: Construction and Operation of a
Nitric Acid Concentration/Sulfuric Acid Concentration (NAC/SAC)
Facility

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1.0 PURPOSE OF AND NEED FOR THE PROPOSED ACTION

1.1 INTRODUCTION

Holston Army Ammunition Plant (HSAAP) is located in Kingsport, TN and consists of approximately 6000 acres in Hawkins and Sullivan Counties. Since 1942 HSAAP remains a critical asset of the Department of Defense (DoD) industrial base in meeting our nation's energetic needs. As the only production scale manufacturer of Research Development Explosives (RDX) and High Melt Explosives (HMX) based explosives in the United States, Holston plays a key role as the provider of explosives for almost all conventional munitions for the military services. HSAAP is an Army Government Owned Contractor Operated Facility (GOCO) Facility under the command of Joint Munitions Command, and Army Materiel Command. The modernization of the facility is provided through Program Director Joint Services (PDJS). The initial operating contractor of the facility was Tennessee Eastman Corporation and then its subsidiary Holston Defense Corporation. In 1999 BAE Systems Ordnance Systems Inc. (OSI) became the operating contractor and continues to operate the facility today.



Figure 1- Aerial Photograph of HSAAP

The Army, in cooperation with OSI, developed a new insensitive munition explosive (IMX) product at HSAAP. The IMX product was developed to help improve the safety of U.S. military personnel. Due to multiple accidents with traditional munitions which resulted in loss of life, injury, and equipment damage, Congress passed the 'Insensitive Munitions Law' in 2001 (Section 2389 of Title 10: "the Secretary of Defense shall ensure, to the extent practicable, that munitions under development or procurement are safe throughout development and fielding when subjected to unplanned stimuli"). Subsequently the DoD has worked with multiple agencies and industry partners to develop munitions with reduced sensitivity to unplanned stimuli such as vibration, fire, shock, and enemy attack. To this end, OSI worked with the Army in developing new IMX products using the base formulations of NitroTriazolone (NTO) and Dinitroanisole (DNAN) that could replace traditional munitions. IMX products are used in both Army and Marine Corps munitions and are being evaluated by the Air Force and Navy for potential future use

Production of IMX creates effluent that is contaminated with diluted spent weak nitric acid (WNA) and energetic compounds. The significant volume of WNA and effluent generated by IMX production are disposed of as hazardous waste at an off-site facility. Full rate IMX production at HSAAP is expected to generate approximately 25.4 million pounds of WNA annually.

There is only one permitted off-site disposal facility within the United States that will accept WNA generated by the HSAAP IMX manufacturing process. This facility can dispose of approximately 10 million pounds of WNA per year. Inability to dispose of more than 10 million pounds of WNA annually limits the ability of HSAAP to produce the quantity of IMX required by the DoD for munitions production. Closure of this disposal facility could potentially halt IMX production at HSAAP entirely. In addition, disposal of large quantities of potentially reusable WNA is costly and does not meet Army hazardous waste minimization goals.

The Army proposes to build and operate a Nitric Acid Concentrator/Sulfuric Acid Concentrator (NAC/SAC) facility at HSAAP to process WNA generated by IMX production on site and not rely on an off-site disposal facility. This Environmental Assessment (EA) is being prepared in accordance with the procedural provision of the National Environmental Policy Act (NEPA), Title 42, United States Code (USC) Sections 4321 *et seq.*; Title 40, Code of Federal Regulations (CFR), Parts 1500-1508, Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA)(the Council for Environmental Quality (CEQ) regulations); 32 CFR Part 651, Environmental Analysis of Army Actions; and Army Materiel Command (AMC) Policy for Implementing the National Environmental Policy Act (NEPA) of 1969.

1.2 PURPOSE AND NEED

The Army needs a viable means to minimize or eliminate the requirement to dispose of the spent WNA produced as part of IMX production as a regulated hazardous waste. Building and operating a NAC/SAC facility at HSAAP to process WNA generated by IMX production would provide an effective and efficient means to handle the WNA. A NAC/SAC is an acid treatment facility designed to: (1) recover WNA from the IMX manufacturing process by converting it to strong nitric acid (SNA) and (2) dispose of the energetic contents contained in the WNA effluent. A NAC/SAC facility will recover nearly all of the nitric acid in the WNA effluent and re-constitute it into SNA for re-use in IMX production. In addition, the NAC/SAC would decompose the energetics in the WNA effluent. The decomposed energetics can be safely disposed of as acidic wastewater.

Strong sulfuric acid is used in the process to strip the water out of the WNA and concentrate it into SNA. The spent sulfuric acid is then re-concentrated in the sulfuric acid concentration process (SAC) for reuse in the NAC/SAC process.

Construction of a NAC/SAC at HSAAP would: (1) enable the installation to produce the amount of IMX required by the Army, (2) eliminate the single-point-of-failure associated with disposal of WNA at the off-site facility, and (3) enable HSAAP to reuse significant amounts of WNA, reduce the amount of energetic effluent generated in the IMX production process, and dispose of the remaining effluent in an environmentally responsible manner.

2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED ACTION

The proposed action is the construction of a NAC/SAC facility at HSAAP capable of extracting WNA from the IMX production effluent and reconstituting it into usable SNA for future IMX production; and additionally capable of treating energetics in the IMX effluent such that the resulting effluent can be disposed of as diluted acidic waste water.

The Army contracted with an engineering firm to design the NAC/SAC and supporting functions including WNA and SNA pipelines, a tank farm, cooling towers and chillers, electric and control rooms, and wastewater pretreatment. The Army will review and verify the adequacy of the final design. If the Army decides to proceed with the construction of a NAC/SAC, the Army will determine when the project can be funded and who will receive the construction contract. The estimated time frame for completion of the project is approximately three years, two years for construction and one year for prove out. See Figure 2 for the NAC/SAC drawing.

The building will include two processing lines which will contain the same equipment and may operate independently or simultaneously. The major pieces of equipment in each process line will include a

decomposer, a rectification column, two bleaching columns, an absorber column, a thermal oxidizer, and various associated heat exchangers and other supporting equipment. The design will minimize impact to the environment by including equipment to reduce air emissions, cooling towers and chillers to recycle cooling water, lime pre-treatment for process wastewater, and by following the construction storm-water pollution prevention plan.

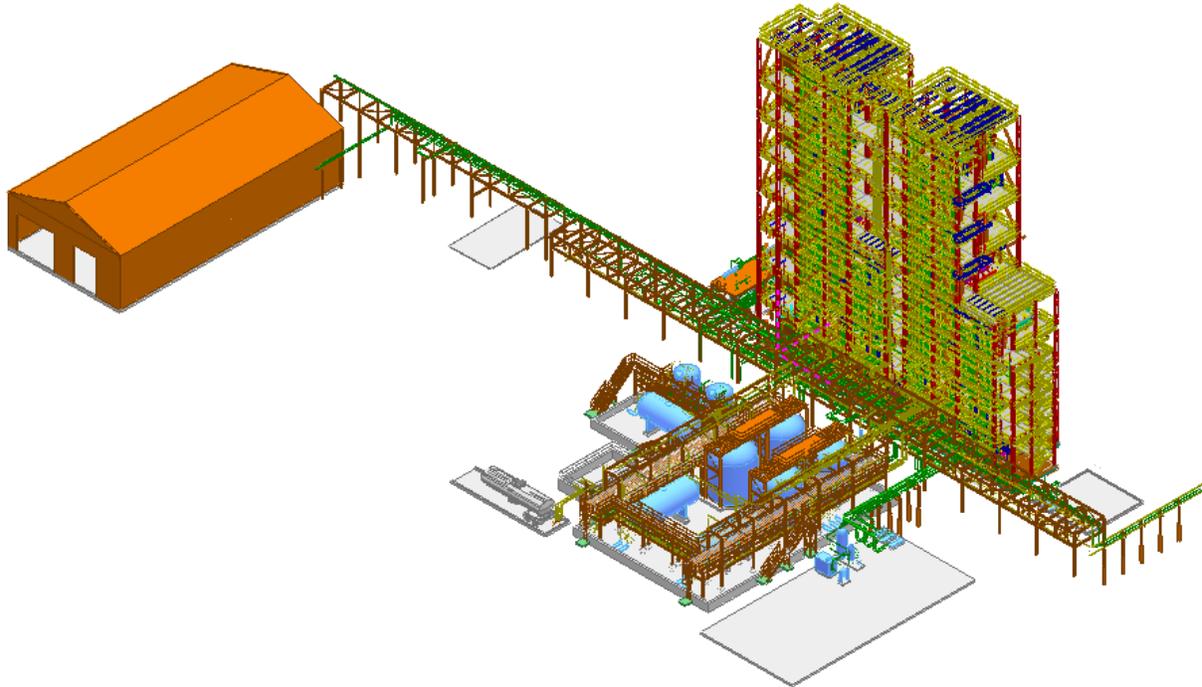


Figure 2 CAD Drawing of NAC/SAC

2.2 SCREENING CRITERION

HSAAP completed a rigorous screening process to determine which installation sites are available to support the implementation of the proposed action. The results of evaluating potential screening criteria resulted in a single critical criterion. For an alternative to be considered viable and carried forward for analysis, it must meet the purpose and need for the proposed action as well as satisfy the following screening criterion:

Explosive Safety Arcs: Explosive safety arcs show the influence of potential explosions from buildings producing, processing, or storing explosives. The explosive safety arc from the NAC/SAC must not impact any building outside of the production area, or any mission critical building.

2.3 ALTERNATIVE ELIMINATED FROM FURTHER CONSIDERATION

The building 302 location was initially considered due to its location within the nitric acid production and storage area. After application of the screening criterion referenced in paragraph 2.2 above, this potential site for the proposed NAC/SAC facility was eliminated from further consideration. The spent WNA still contains explosive constituents, therefore the NAC/SAC has associated explosive safety arcs. At the building 302 location, these safety arcs would impact the HSAAP steam plant, a mission critical building. (See Figure 3 for Project Area Maps).

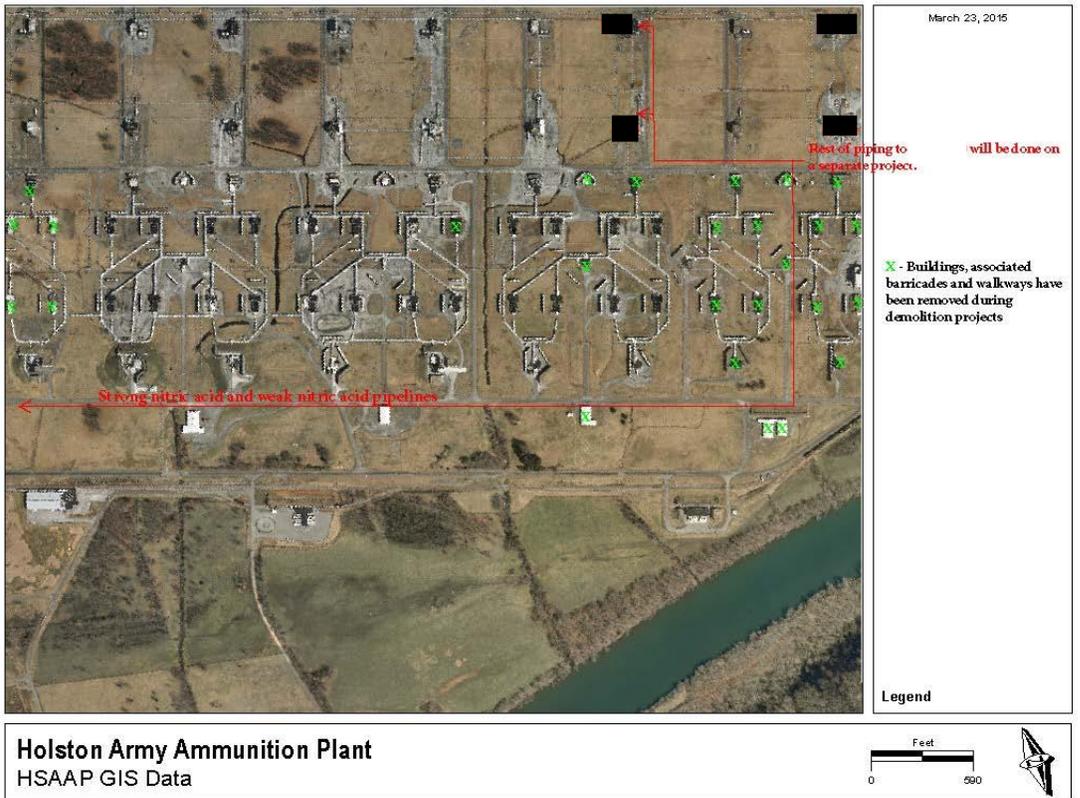
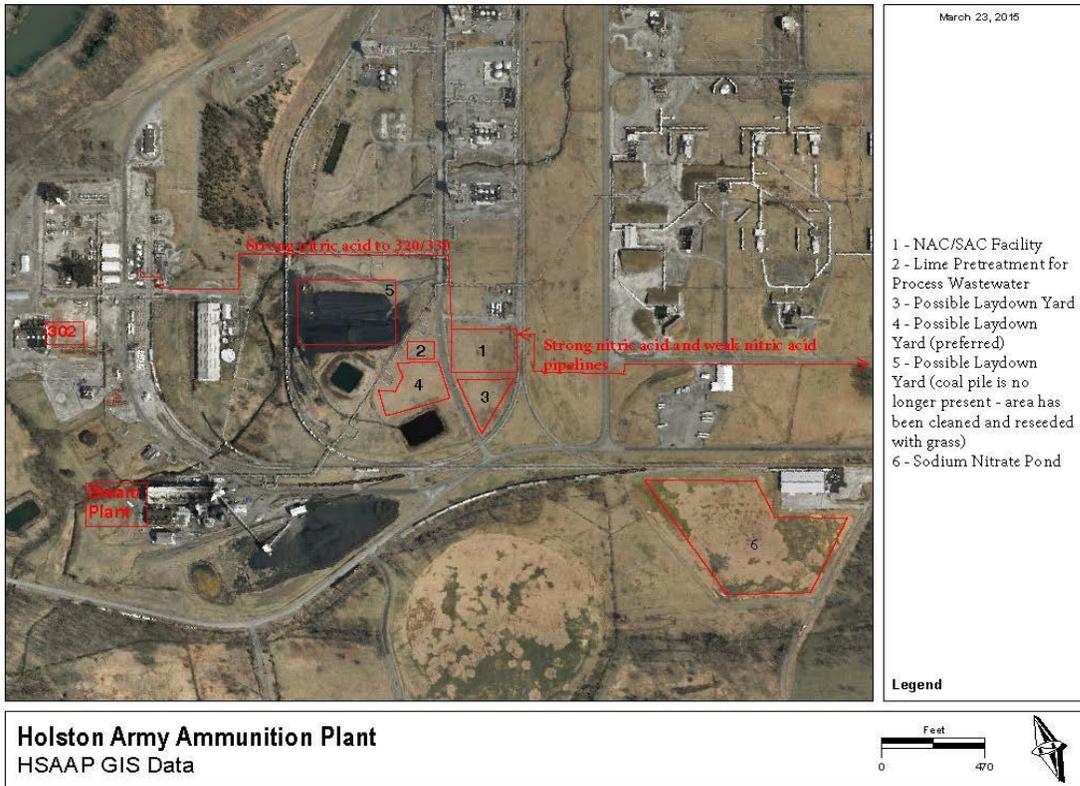


Figure3 Proposed Project Area

2.4 ALTERNATIVES CONSIDERED

2.4.1 Preferred Alternative

Under the Preferred Alternative, the proposed NAC/SAC facility would be located at the south end of B-Line Road inside Area B at HSAAP. (See Figure 3 above.)

This location is within 50 feet of an existing railroad, and the ammonia storage area. It is approximately 2030 feet away from the existing Nitric Acid area, and approximately 5080 feet away from IM production building. The proposed location is only within one existing explosive safety arc. The explosive safety arc from the NAC/SAC at this location does not impact any mission critical buildings. The site plan for the proposed location has been approved by the Department of Defense Explosives Safety Board (DDESB). The storm-water flow from the area flows toward the B-acids spill pond and is approximately 2000 feet away from Arnott Branch (the closest blue-line stream) which reduces the potential for environmental impacts from spills. This proposed location is closest to the existing acids recovery area which allows easy access and quick response from the HSAAP acids maintenance team.

2.4.2 NO ACTION ALTERNATIVE

The CEQ regulations require analysis of a No Action Alternative in order to provide a benchmark, enabling decision makers to compare the magnitude of the potential environmental effects caused by the proposed action and other alternative actions. The No Action Alternative is not required to be reasonable, nor does it need to meet the purpose and need described in section 1.2. The No Action Alternative would maintain the status quo; meaning no NAC/SAC facility will be constructed at HSAAP, WNA effluent from IMX production would continue to be disposed of off-site, additional SNA would have to be procured; and HSAAP IMX production capacity would continue to be limited because there is only one permitted hazardous waste treatment, storage, and disposal facility (TSDF) capable and willing to treat and dispose of the WNA effluent. The no action alternative is costly, environmentally disfavored, and potentially creates a single point failure for IMX production since no other disposal options have been found for the WNA effluent.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 INTRODUCTION

The following discussion describes the affected environment within the HSAAP military installation and the surrounding community and the aspects of the environment that could potentially be affected by the proposed action, and the no action alternative. The discussion is structured using various environmental resource categories with the analysis of impacts associated with each course of action divided into direct and indirect impacts:

- **Direct Impacts** – A direct impact is caused by the proposed action and occurs at the same time and place.
- **Indirect Impacts** – An indirect impact is caused by the proposed action and occurs later in time or is farther removed in distance but is still reasonably foreseeable.
- **Application of Direct versus Indirect Impacts** – For direct impacts to occur, a resource must be present in a particular area. For example, if highly erodible soils were disturbed due to construction, there would be a direct impact to soils from erosion at the construction site. Sediment-laden runoff might indirectly affect water quality in adjacent areas downstream from the construction site.

Significance. The term “significant”, as defined in Section 1508.27 of the CEQ regulations, requires consideration of both the context and intensity of the impact evaluated. Significance can vary in relation to the context of the proposed action, and thus the significance of an action must be evaluated in several contexts and this varies with the setting of the proposed action. For example, context may include consideration of effects on a national, regional, and/or local basis depending upon the action proposed. Both short-term and long-term effects may be relevant.

In accordance with the CEQ regulations and guidance, impacts are also evaluated in terms of their intensity or severity. Factors contributing to the evaluation of the intensity of an impact include, but are not limited to:

1. Because an impact may be both beneficial and adverse, a significant impact may exist even if, on balance, the impact is considered beneficial.
2. The degree to which the action affects public health or safety.
3. Unique characteristics of the geographic area where the action is proposed such as proximity to parklands, historic or cultural resources, wetlands, prime farmlands, wild and scenic rivers, or ecologically critical areas.
4. The degree to which the effects on the quality of the human environment are likely to be controversial.
5. The degree to which the effects of the action on the quality of the human environment are likely to be highly uncertain or involve unique or unknown risks.
6. The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
7. Whether the action is related to other actions with individually insignificant, but cumulatively significant, impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.
8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.
9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.
10. Whether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment.

3.2 AIR QUALITY

3.2.1 Affected Environment

The primary legislation for air quality protection through regulation of air emissions from area, stationary, and mobile sources is the Federal Clean Air Act (CAA). Under the CAA, the US Environmental Protection Agency (USEPA) is authorized to establish National Ambient Air Quality Standards (NAAQS), allowable concentrations for selected pollutants, to protect human health and the environment. The USEPA has developed NAAQS for six criteria pollutants: ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter (PM₁₀ – 10 microns and smaller, PM_{2.5} – 2.5 microns and smaller), and lead. Each state submits recommendations, generally by county, based on monitoring data for designation of attainment or nonattainment with a NAAQS to the USEPA who makes the final determinations. For areas in nonattainment of a NAAQS, a state must develop a State Implementation Plan (SIP) to bring the areas into compliance. In Tennessee, TDEC is the governing agency for environmental issues and is responsible for developing SIPs. Area B of HSAAP is located in an area which is currently designated as an attainment area for all criteria pollutants. A small section of Sullivan County is designated non-attainment for SO₂, and the SIP is expected to include meteorological data monitoring which may show an impact to the non-attainment area by HSAAP's coal-fired boilers. While compliance with the SO₂ NAAQS does not immediately threaten HSAAP's mission, it may lead to program complications or restrictions in the future.

In addition to the criteria pollutants already listed, greenhouse gases (GHG) are also regulated by the USEPA. The most common GHGs emitted by industrial activities include carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). One of the current strategies to minimize the generation of GHGs and other pollutants is the use of natural gas instead of coal for steam and energy production.

The HSAAP facility is a Prevention of Significant Deterioration (PSD) source located in an area of Tennessee designated as a Class II area. Therefore, one of the goals in new project design is to ensure emissions stay below significance levels, meaning at most a significant Title V permit modification would be required. If emissions are above significance levels, a PSD permit application must be submitted which requires modelling the impact to air quality by all sources in the area. This is particularly challenging for the Kingsport area due to the multiple industrial sources and complex geography.

HSAAP currently holds two air emission Title V operating permits with the State of Tennessee, Department of Environment and Conservation (TDEC), Division of Air Pollution Control. Title V permit

numbers 558407 (Area A) and 558406 (Area B) cover all combustion and process air emission sources. Renewal applications were submitted to TDEC in December 2013 in accordance with the permits' schedules. TDEC is in the process of drafting new Title V permits for HSAAP.

3.2.2 Environmental Consequences

No direct or indirect impacts to air quality would occur under the no action alternative since air emissions would continue at current levels.

A construction permit application was submitted to TDEC, who issued a construction permit for the proposed action. This application was completed taking into account other modernization projects to ensure emissions from all contemporaneous projects were below significance thresholds, meaning a PSD permit application would not be necessary. Generating the additional steam required to operate the NAC/SAC by the existing coal-fired steam plant would have triggered PSD review due to the SO₂ emissions. Therefore, OSI elected to voluntarily include the use of natural gas-generated steam as a permit requirement. CO and NO_x emissions will increase due to natural-gas fired steam boilers and the NAC/SAC process. The boilers include low-NO_x boilers and will receive regular tune-ups to minimize CO emissions. The NAC/SAC design has included equipment to minimize CO and NO_x emissions. CO and CO₂ will be generated by the organic contaminants decomposition process. A thermal oxidizer is included for each train of the NAC/SAC to treat the process vent, converting CO to CO₂. Some NO_x emissions also occur but are minimized by the absorber column which converts NO_x to nitric acid that is recovered and returned to the process.

Due to the potential for odor at the IWWTP during break down of the sulfuric acid in the process wastewater stream from the NAC/SAC facility, a pretreatment step has been included as a support activity for the facility. The wastewater will be treated with lime, which will react with the sulfuric acid to make gypsum. The gypsum will be evaluated for repurposing, or it will be taken to the on-site Class II landfill.

Because of the increase in air emissions, the proposed action will result in minor negative direct and indirect impacts to air quality.

3.3 WATER RESOURCES

3.3.1 Affected Environment

There are two major flowing water bodies at Area B: the Holston River and Arnott Branch (a tributary to the Holston River). The Holston River is used as a water resource (approximately 35 million gallons/day) for HSAAP production activities and as a return stream for treated water. A four-acre raw water reservoir at Area B serves as a capacity/demand buffer between the raw water intake pumping system and the production processes. Several stormwater drainage paths enter Arnott Branch which is located on the western end of Area B. There are approximately fifteen surface acres of relatively fast moving, shallow waterways used to return non-contact production cooling water to the Holston River. HSAAP has a facility Multi-Sector Storm Water Permit #TNR053962 cover the discharge of stormwater, cooling water, treated industrial wastewater, and treated domestic wastewater through various outfalls.

Executive Order 11988 (Floodplain Management) requires executive agencies, including military organizations, to determine whether a proposed action would occur in a floodplain. According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps and 500-year flood elevations table, the site of the proposed action is not located within the 100-year or 500-year floodplain.

Wetlands are complex habitats that have characteristics of both upland and open water areas. They are typically defined as those areas inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions. Typical wetland types include swamps, marshes, bogs, and similar areas. The determination of wetlands is based on the presence of hydric soils, vegetation supported by hydric soils, and existing hydrology. The United States Fish and Wildlife Service (USFWS) has completed National Wetlands Inventory (NWI) mapping for all of HSAAP. Results of this inventory are available in the HSAAP Natural Resources Office. There are no jurisdictional wetlands found on any of the proposed project areas which are all upland sites.

3.3.2 Environmental Consequences

Under the no action alternative, there would be no construction activities and current operations would be unaffected, so there would be no direct or indirect impacts to the water resources of HSAAP.

The proposed action has no indirect impacts but has the potential for minor negative direct impacts to surface water due to sediment carried from runoff at the construction sites. These impacts will be minimized by following Best Management Practices as outlined in the Tennessee Erosion and Sediment Control Handbook. A Stormwater Pollution Prevention Plan will be developed and submitted to TDEC for approval and issuance of a Stormwater Construction General Permit. Any disturbed areas will be stabilized at the end of construction activities.

Leaks are not expected to occur from the strong nitric acid or spent nitric acid pipeline. Best management practices, however, will be implemented to prevent and/or mitigate leaks. These practices include optimization of piping material, length, and joint placement. All associated tanks will have secondary containment and will be added to the Installation Spill Contingency Plan (ISCP). An inspection program for the pipelines and tanks will be established as part of the Standard Operating Procedure. The transfer of WNA and SNA through the pipelines will not be a continuous process. It will be transferred in batches. There will be flowmeters located at both ends of the pipelines and level transmitters in the storage tanks for operators to verify the amount received matches the amount pumped. pH monitors are present in the cooling water return channels, which will alarm in the IWWTP control room if the pH falls outside the normal range. Under the proposed action, pH monitors will also be added to stormwater channels along the pipeline route. If a leak occurs, site personnel will follow the ISCP and Site Emergency Response Plan to minimize on- and off-site impacts.

There would be no direct or indirect impacts to wetlands during construction and operation of the NAC/SAC or the associated pipelines.

There would be no direct or indirect impacts to river water usage from the proposed action which minimizes its use of water resources by the inclusion of cooling towers and chillers to supply the NAC/SAC's river water needs.

3.4 WASTEWATER

3.4.1 Affected Environment

HSAAP has a National Pollution Discharge Elimination System (NPDES) permit (TN0003671). A renewal permit application for this permit was submitted in September 2013 in accordance with the permit schedule. HSAAP is currently upgrading its Industrial Wastewater Treatment Plant (IWWTP), to be capable of treating the wastewater generated from the maximum production forecasted for the year 2020. This upgrade includes the expected wastewater from the proposed NAC/SAC.

3.4.2 Environmental Consequences

The no action alternative would have no direct or indirect impacts on the wastewater at the IWWTP or the NPDES outfall.

The proposed action will contribute additional nitrate loading to the IWWTP but HSAAP is upgrading the IWWTP so no direct impacts to the Holston River or other water resources are expected under normal operations. A minor negative indirect impact may occur if the increased nitrate loading causes more biosludge to be generated in the anoxic filters. There are ongoing upgrades to improve the IWWTP's capacity to treat nitrates, and handle the additional biosludge generation. Sulfuric acid will also be present in the process wastewater stream from the NAC/SAC facility. The sulfuric acid will compete with nitrates for treatment at the IWWTP. Due to this and the potential for sulfuric acid related odor at the IWWTP, a pretreatment process will convert the sulfuric acid to gypsum which will be filtered out of the water before it is sent to the IWWTP.

3.5 SOLID AND HAZARDOUS WASTE

3.5.1 Affected Environment

Congress originally passed the Resource Conservation and Recovery Act (RCRA) in 1976 to address the handling and disposal of solid waste which includes a variety of materials ranging from general household garbage to hazardous waste. The USEPA developed regulations, located in 40 CFR Sections 239-282 to implement the standards set forth by RCRA. The USEPA did authorize the state of Tennessee to manage the solid and hazardous waste regulatory requirements within the state. Classification of a solid waste as hazardous waste is typically made using laboratory analysis and/or generator knowledge.

HSAAP operates an on-site Class II Industrial Landfill permitted by the state of Tennessee. The landfill is permitted to accept solid waste in the forms of general trash, construction debris, asbestos, flyash generated by the coal-fired steam plant, and biosludge generated from the IWWTP. On average, the landfill accepts approximately 20,000 – 25,000 cubic yards of solid waste per year with flyash and cinders from the site's coal-fired steam plant making up at least half of the total.

HSAAP operates a burning ground facility which includes two burn cages, two burn pile areas, a RCRA-permitted Burn Pan Unit, and the Burning Ground office. The open burning of explosives-contaminated materials is conducted at the burn cages and the burn piles. These explosives-contaminated materials are composed of items such as boxes, bags, paper, concrete, contaminated soil, and process equipment that may have come in contact with explosives. Thermal decontamination is necessary to reduce the possibility of an unintentional explosion by residual explosives being exposed to an ignition source. U.S. Army policy requires decontamination of materials that may have been in contact with explosives before sale as a recyclable material or before land disposal as a solid waste. Thermal decontamination has proven to be safe and reliable. Waste explosives are thermally treated at the RCRA Subpart X burn pan unit, permit number TNHW-148.

Today it is necessary to send hazardous waste, such as the WNA from the NTO and DNAN processes, to licensed off-site hazardous waste treatment, storage, and disposal facilities (TSDFs). The residual explosives in the WNA limits the number of TSDFs that can accept the WNA and also limits the amount of WNA the TSDF can accept. The current amount of waste WNA disposed of off site is approximately 7-million lbs/year, which severely constrains production of IMX. The expected amount of WNA at full rate production by the year 2020 is 24.5 million lbs/year.

3.5.2 Environmental Consequences

Under the no action alternative, HSAAP would continue with its existing operations, so there would be no direct or indirect impacts to the current solid and hazardous wastes generated on site. HSAAP would continue to send large amounts of waste WNA off-site for disposal. HSAAP would also be limited to the current production rates for IMX.

Under the proposed action, there would be major positive direct and indirect impacts. HSAAP's hazardous waste generation would be reduced by up to 24.5 million lbs/year. This WNA would be recycled through the NAC/SAC providing HSAAP with a closed loop nitric acid system. The recycled acid would then be used on site and eliminating the need for off-site disposal of the WNA. This would help HSAAP meet the Army's hazardous waste reduction goals. Since the NAC/SAC facility, new pipelines, and storage tanks would meet the closed-loop recycling exemption under RCRA, the WNA would no longer be classified as hazardous waste. The WNA does contain some explosive contamination, so events such as cleaning out the spent acid storage tanks may result in waste explosives that must be treated in the Burn Pan Unit. There will be a sulfuric acid hazardous waste stream generated by the NAC/SAC; however, its volume will be much less than the spent nitric acid from the production of just one of the IMX ingredients.

During construction activities for the proposed action, short-term increases in the solid waste sent to the landfill would be expected. If there is no commercial interest in the gypsum generated from treating sulfuric acid waste, then the gypsum will be taken to the landfill. To minimize the impact to landfill space, OSI will ask TDEC for approval to use the gypsum as daily cover.

3.6 THREATENED AND ENDANGERED SPECIES

3.6.1 Affected Environment

The U.S. Fish and Wildlife Service of the Department of the Interior (USFWS) administers the Federal Endangered Species Act of 1973. The Act provides federal protection for plants and animals listed as threatened or endangered (T/E). The following is a list of federally-listed threatened/endangered (T/E) species that the USFWS has previously indicated may occur on HSAAP. There are three terrestrial species on the list and one aquatic species.

Gray Bat (*Myotis grisescens*)

Indiana Bat (*Myotis sodalis*)

Northern Long-eared Bat (*Myotis septentrionalis*)

Spotfin Chub (*Erimonax monachus*)

To date, the only T/E species verified on the installation have been the gray bat and the northern long-eared bat. Even though it has never been identified on the installation, the Indiana bat has the potential to occur on HSAAP because the forested areas on the installation provide suitable summer roosting habitat for the species. However, since there will be no trees removed due to the proposed action, nor are there forested areas adjacent to the proposed project site, there will be no impact to potential summer roosting sites for either the Indiana, or northern long-eared bats. In addition, there are no karst features on the proposed site which could potentially serve as a roost site for gray bats.

HSAAP has a section of the Holston River approximately 4.5 miles in length that flows through the property. The federally endangered Spotfin Chub is known to occur approximately one mile upstream from the installation's northeastern boundary. Although HSAAP funded a survey for the Spotfin Chub on the installation in September, 2015 and failed to identify the species on the installation, USFWS believes there is a potential for a transient to pass through the Holston River at HSAAP. The results of this survey may be found at Appendix H.

A pair of bald eagles (*Haliaeetus leucocephalus*) has nested on the installation since 2005. Although the bald eagle has been removed from the Endangered Species list it is still protected by the Bald and Golden Eagle Protection Act. However, the bald eagle nest is approximately one-half mile from the proposed project area.

3.6.2 Environmental Consequences

There would be no direct or indirect impacts to biological resources under the no action alternative since no new construction would occur at HSAAP.

Due to the nature (no tree removal) and location of the actions associated with this project, there will be no direct or indirect impact, or effect to federally-listed terrestrial T/E species as a result of construction or operation of new facilities or modification of existing ones associated with the proposed action.

There will be no direct or indirect impacts to federally listed aquatic species as a result of construction or operation of new facilities or modification of existing ones associated with the proposed action. With regard to the Spotfin Chub, which is the single aquatic federally-listed species known to occur near the installation, HSAAP will comply with all requirements of its storm water permit during construction associated with this action and so no indirect impacts to water quality are anticipated as a result of storm water runoff. The installation will implement the Best Management Practices discussed in Section 3.3.2 above to minimize/eliminate any impact due to a potential spill. In addition, cooling water will be supplied to the NAC/SAC facility by cooling towers and chillers. This meets the requirements of the new cooling water intake rule, published in the Federal Register on August 15, 2014, which is designed to reduce the potential impact to fish and shellfish by water intake structures as required by Section 316(b) of the Clean Water Act. Due to the fact that the Spotfin Chub was not identified during the survey and would be transient in nature there will be no effect to the Spotfin Chub as a result of the proposed action.

3.7 CULTURAL RESOURCES

Cultural resources are sites, buildings, structures, or objects that may have significant historic, architectural, and archaeological values. Properties may play a significant traditional role in a community's historically rooted beliefs, but customs and practices may also be considered cultural resources. Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to consider the impact of their actions on historic properties (districts, sites, buildings, structures, and objects) and to consult with the State Historic Preservation Officer (SHPO) as required.

3.7.1 Affected Environment

Historical Buildings

The proposed action will occur in HSAAP's production area which was considered potentially eligible for listing as an historic district on the National Register of Historic Places by the Tennessee SHPO. However, in 2006, the Advisory Council for Historic Preservation (ACHP) signed into effect the "Program Comment for World War II and Cold War Era (1939-1974) Army Ammunition Production Facilities and Plants" (see Appendix A). Under this program comment, any structure/real property on HSAAP, as well as several other installations, that was constructed between 1939 and 1974 may be modified/demolished without any additional Section 106 coordination. The Program Comment also allows new construction adjacent to buildings constructed during this time frame, which applies to buildings/facilities adjacent to the proposed site of the NAC/SAC.

Archaeological Resources

In 1997, a Phase I archeological survey of the installation was conducted via a contract with the Mobile District, U. S. Army Corps of Engineers. As a result of this survey, nine archeological sites were found to be potentially eligible for the National Register of Historic Places. The closest archaeological site to the proposed action is located approximately one-half mile from the proposed site of the NAC/SAC facility and associated infrastructure. Per previous coordination with the SHPO, they have concurred that any ground disturbing activities in the production area (which contains all of the proposed project area) will not adversely impact eligible historic properties. A copy of this coordination and list of exemptions may be found in Appendix B.

3.7.2 Environmental Consequences

Historical Buildings

The no action alternative results in no physical changes to HSAAP, so it would result in no direct or indirect impact to cultural resources. The proposed action will involve new construction in a previously unutilized area in the industrialized part of HSAAP. However, any impact to existing buildings or structures in this area would be covered under the Program Comment discussed above.

Archaeological Resources

Since the no action alternative result in no physical changes to HSAAP, there would be no direct or indirect impacts to archaeological resources on the site. The proposed action is located away from the identified archaeological sites and is located within the production area, for which the SHPO has previously indicated there would be no impact to eligible historic properties in this area

3.8 ENVIRONMENTAL JUSTICE

3.8.1 Affected Environment

On February 11, 1994, the President issued Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*. The purpose of this executive order is to avoid the disproportionate placement of adverse environmental, economic, social, or health impacts from federal actions and policies on minority and low-income populations or communities. It is the Army's policy to fully comply with Executive Order 12898 by incorporating environmental justice concerns in decision-making processes supporting Army policies, programs, projects, and activities. In this regard, the Army ensures that it would identify, disclose, and respond to potential adverse social and environmental impacts on minority and/or low-income populations within the area affected by a proposed Army action. HSAAP's industrial area is bounded by Bays Mountain, the Holston River, commercial areas, and subdivisions which do not house low income or minority populations.

3.8.2 Environmental Consequences

Due to the lack of low income or minority populations adjacent to the proposed site, no direct or indirect impacts to environmental justice are expected due to the proposed action or the no-action alternative. Also, OSI applied for and received a construction permit from TDEC/ Air Quality Division for the proposed action. As part of the review process, TDEC is required to evaluate environmental justice concerns.

3.9 ENERGY

3.9.1 Affected Environment

Responsible and efficient energy use is one of the highest priorities at HSAAP. All departments are responsible for ensuring their areas are operated and maintained in a manner that is compliant with applicable legal requirements and Department of the Army requirements. HSAAP and OSI are committed to improving energy performance in all aspects of its operation including the acquisition of energy efficient products and services. Energy performance will be considered in all recommendations made for future purchasing and contracting decisions. OSI has implemented an energy management system per ISO 50001 to assist in the compliance with multiple regulations and other requirements and achieved third party system registration in 2014.

3.9.2 Environmental Consequences

Under the no action alternative, production rates at HSAAP would remain the same, and no demand increases from additional facilities would be projected so energy usage is expected to continue at current levels. Any decreases would be the result of efforts to reduce energy impacts as part of ongoing Army initiatives and Executive Orders unrelated to the proposed action and implementation alternatives.

Under the proposed action, HSAAP's energy needs would increase due to additional operating facilities. The steam required to operate the NAC/SAC will be generated by natural gas which results in fewer air emissions, including greenhouse gas emissions, than coal-generated steam. Use of natural gas also means additional coal combustion residue will not be generated as a result of the proposed action. The design will conserve energy by collecting most of the steam condensate from the NAC/SAC and sending it back to the natural gas boilers for re-use. The impacts to air quality have already been discussed under Section 3.2, so the remaining negative and positive aspects of the proposed action offset each other, resulting in no direct impacts to the energy environmental consequences. The indirect impacts are minor and negative since the proposed action will require the use of more natural gas, a nonrenewable resource used by multiple industries.

3.10 ENVIRONMENTAL ASSESSMENT AREAS ELIMINATED FROM FURTHER DISCUSSION

3.10.1 Land Use

Area B (main plant) of HSAAP, location of the proposed action, encompasses approximately 6,000 acres located in northeastern Tennessee, on the Holston River just outside the city limits of Kingsport in Hawkins County. HSAAP has been an industrial site since 1942 whose primary mission is the production of high explosives used in various weapons systems by the U.S. Department of Defense. It is bordered by two city parks and a nature preserve, residential and commercial properties, U.S. Highway 11W, and the Holston River. Under the no action alternative and the proposed action, the changes would be consistent with the current land uses at HSAAP; therefore, no direct or indirect land use impacts would occur.

3.10.2 Noise

Due to the location of the proposed action in relation to the installation's boundaries, noise from construction and operation of the new facility should not affect anyone off-site. No direct or indirect noise impacts are expected from the no action alternative or the proposed action.

3.10.3 Geology and Soils

Under the no action alternative and the proposed action there would be no direct or indirect impacts to geology and soils. Under the proposed action, a Stormwater Pollution Prevention Plan (SWPPP) will be

developed and submitted to the Tennessee Department of Environment and Conservation for approval and issuance of a Stormwater Construction General Permit. The SWPPP will cover all aspects of the project including the main construction area (NAC/SAC building and tank farm area), lay down yard(s), the field containing the former sodium nitrate holding pond, and the construction areas for the WNA and SNA pipelines. Any disturbed sites will be stabilized at the end of construction activities. Once the new equipment is in operation, no direct or indirect impacts to the site's geology and soils are expected during normal operations.

3.10.4 Socioeconomic Development

Under the no action alternative and the proposed action alternative there will be negligible direct and indirect impacts to socioeconomic development. Although a few jobs would come into the area during the construction phase of the NAC/SAC these jobs would have no measurable impact to the socioeconomic development in the area.

3.11 CUMULATIVE IMPACTS

3.11.1 Introduction and Definitions

Sections 3.2 through 3.10 identify direct and indirect impacts associated with the implementation of the proposed action, or using the no action alternative. The cumulative impact analysis evaluates the direct and the indirect effects of implementing either of these alternatives in association with past, present, and reasonably foreseeable future Army actions at HSAAP and the actions of other parties in the surrounding area (where applicable). While an individual action may not result in a significant impact, the combination of effects from multiple actions may have the potential to create a significant impact. The cumulative impact analysis has been prepared at a level of detail that is reasonable and appropriate to support an informed decision by the U.S. Army in selecting a preferred alternative. The cumulative impact discussion is presented according to each of the implementation alternatives.

Key terms used in this section:

- **Cumulative Effects** – the impact on the environment which results from the incremental impact of the action when added to the other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.
- **Cumulative Impact Analysis Area** – includes the area that has the potential to be affected by implementation of the proposed action at HSAAP.
- **Past Actions** – actions within the cumulative analysis area under consideration that occurred prior to implementation of the proposed action (the environmental baseline for this environmental assessment). These include past actions at HSAAP and past demographic, land use, and development trends in the areas that surround the installation. In most cases, the characteristics and results of these past actions are described in the Affected Environment of this EA.
- **Present Actions** – include:
 1. Current operations at HSAAP;
 2. Funded construction projects at HSAAP ; and
 3. Current resource management programs, land-use activities, and development projects that are being implemented by other governmental agencies and the private sector (where they can be identified) within the cumulative impact analysis areas.
- **Reasonably Foreseeable Future Actions** – actions limited to those that have been approved and can be identified and defined with respect to timeframe and location.

3.11.2 Past Actions

Past activities at Area B, location of the proposed action, include the manufacture of RDX, HMX, IMX, NTO, DNAN, DMDNB, and mixtures containing these explosive formulations; Past activities at Area B also include the recovery of acetic acid; the generation and concentration of nitric acid; the generation of sodium nitrate; industrial wastewater treatment; sanitary wastewater treatment; storage of explosives; steam generation from coal-fired boilers; landfilling of general trash, special waste, and coal combustion residue; remediation of solid waste management units; open burning for thermal decontamination of explosives-contaminated waste; open burning for thermal treatment of explosives waste; research and development activities; and development of an agile manufacturing facility. In support of the Army's Armament Retooling and Manufacturing Support (ARMS) program, HSAAP now has various commercial

tenant leases including Moog Protokraft, Wellmont Health Systems, JTH Engineering, and Appalachian Rail Service. Other recent projects include demolition of excess buildings, removal of Bridge 20 to the magazine area, upgrade of the steam plant environmental controls, addition of a reverse osmosis facility to remove RDX from wastewater, construction of a new weak acetic acid recovery plant, a new acetic acid concentration and acetic anhydride manufacturing facility at Area B, and construction and operation of natural gas-fired boilers.

Eastman Chemical Company is located approximately four miles to the east of Area B and has been in operation since 1920. It is the largest manufacturing employer in Sullivan and Hawkins Counties (approximately 7,000 employees) with operations including plastics manufacturing, chemicals manufacturing, steam and power generation from coal-fired boilers, hazardous waste incineration, and wastewater treatment. The property immediately surrounding HSAAP includes commercial development, residential development, and city parks.

3.11.3 Present Actions

The current activities at HSAAP Area B include the manufacture of RDX, HMX, IMX, DNAN, NTO, DMDNB and mixtures containing these explosive formulations; the recovery of acetic acid; the concentration of nitric acid; the generation of ammonium nitrate solution; industrial wastewater treatment; operation of a reverse osmosis unit to assist in the removal of RDX from the industrial wastewater; sanitary wastewater treatment; storage of explosives; steam generation from coal-fired boilers; steam generation from natural-gas fired boilers, landfilling of general trash, special waste, and coal combustion residue; remediation of solid waste management units; open burning for thermal decontamination of explosives-contaminated waste; open burning for thermal treatment of explosives waste; research and development activities; and commercial tenant leases. Completion of commissioning activities for the acetic anhydride manufacturing facility will continue with the steam used to operate it and the acetic acid concentration facility being generated by natural gas-fired boilers. Modernization of the IWWTP, expansion of the on-site Class II landfill, and conversion of a production building for IMX production are in progress.

Eastman is in the process of replacing 5 coal-fired boilers with natural gas-fired boilers to provide part of the power and steam used within its facility while reducing emissions such as SO₂ and NO_x. East Tennessee Natural Gas, LLC (subsidiary of Spectra Energy) has installed the necessary pipelines and infrastructure to support Eastman's project.

3.11.4 Reasonably Foreseeable Future Actions

The production of defense-related explosive compounds and mixtures will continue at HSAAP. The product mixture is expected to shift as the U.S. Military incorporates the use of more IMX products into their munitions. To ensure the ability to meet the needs of the military, HSAAP must continue to effectively manufacture explosive products as requested. Therefore, constant growth and change to the product lines and operational needs are inevitable at HSAAP. HSAAP and OSI will continue to work together to implement projects that will upgrade the facility and result in more effective, energy efficient operations as funding becomes available. It is also expected that Research and Development activities will continue at the lab, pilot plant, and agile manufacturing facility. Additional natural gas-fired steam generating capacity will be added to meet the installation's needs while maintaining compliance with NAAQS for the area. Opportunities may occur to introduce additional commercial tenants at HSAAP in support of the ARMS program. Once NAC/SAC is commissioned the need for SNA production at the Magnesium Nitrate Facility (Maggie) will be reduced.

3.11.5 Cumulative Effects Resource Analysis

3.11.5.1 Air Quality

Under the no action alternative, emissions from HSAAP would continue at current rates or possibly decrease. HSAAP and OSI would continue to operate in compliance with the conditions of the installation's Title V permit, so no significant cumulative impacts are expected when considered with past, present, and reasonably foreseeable future actions.

While the NAC/SAC and other planned projects will result in some increased emissions, HSAAP and OSI voluntarily included the use of natural gas-generated steam as a permit requirement which eliminates SO₂

emissions that would have been generated by the coal-fired steam plant to make the steam required by the new facilities. There would also be a reduction in emissions from coal fired steam currently required to operate the Maggie due to reduced SNA production at Maggie. Hawkins County is currently in attainment of the NAAQS for all criteria pollutants; however, there is a small piece of Sullivan County centered at Eastman Chemical Company that is not in attainment for SO₂. Eastman Chemical Company's project to replace 5 coal-fired boilers with natural-gas fired boilers will reduce SO₂ emissions for the area, but it is possible HSAAP may be considered a contributor to the Sullivan County non-attainment area and may be required to make changes. In considering the emissions due to the proposed action with past, present, and reasonably foreseeable future actions, no significant cumulative impacts are expected since all actions must be reviewed and permitted through TDEC who is responsible for ensuring an area achieves and maintains compliance with all NAAQS.

3.11.5.2 Water Resources

When considered in combination with HSAAP's past, present, and foreseeable future actions, the no action alternative is not expected to result in significant cumulative impacts to water resources since they are no different from past or present activities.

With any past, present, and future construction projects, HSAAP and OSI minimize impacts to surface water due to sediments in the construction site runoff by following the Best Management Practices as outlined in the Tennessee Erosion and Sediment Control Handbook. Any entity performing construction activities in Tennessee must submit the plans for controlling sediment from construction site stormwater runoff and for stabilizing disturbed areas once construction is complete to TDEC for approval and issuance of a Stormwater Construction General Permit. Because of the oversight provided by TDEC, no cumulative impacts to surface water are expected due to construction activities. For normal operations of past, present, and future facilities located on HSAAP, HSAAP and OSI must maintain compliance with the site's NPDES permit which is designed by TDEC to protect the health of the Holston River. The expansion at the IWWTP will increase the treatment capacity to account for the required treatment of the wastewater from the NAC/SAC, the modernized IMX production building and projected maximum production expected at HSAAP. This expansion will allow HSAAP to remain in compliance with the NPDES permit. The amount of river water from used from the Holston River should not increase significantly. The increase water usage from the A2B area and reactivation of the modernized IMX production building would be offset by the reduction of river water usage at area A and Maggie, and the NAC/SAC usage would be minimal since chillers are used in the process for cooling. Because of the protections in place, significant cumulative impacts to water resources are not expected under the proposed action.

3.11.5.3 Solid and Hazardous Waste

As discussed in Section 3.9, large volumes of spent nitric acid will continue to be disposed of off-site under the no action alternative. With the completion and commissioning of the IMX production building the amount of SNA may increase to maximum amount the current TSDF can receive, approximately 14 million pounds/year. This would result in a moderate negative impact.

The proposed action results in a decrease in the generation of hazardous waste. If a commercial outlet is not available for the gypsum from the wastewater pretreatment step, there would be a slight increase in the volume of material sent to the on-site Class II landfill. There is a project to increase the size of the landfill which was already planned to meet the ongoing needs of HSAAP. When considered with past, present, and reasonably foreseeable future actions, major positive cumulative impacts are expected.

3.11.5.4 Threatened and Endangered Species

When considered in combination with HSAAP's past, present, and foreseeable future actions, the no action alternative is not expected to result in significant cumulative impacts to biological resources since the operations are no different from past or present activities.

Much of HSAAP Area B has been kept in a natural state which provides a variety of habitats for different species of flora and fauna. Present and foreseeable future actions involving the property are expected to occur in the industrialized part of the facility which has experienced previous disturbance and either has buildings or grassy areas which do not provide a diverse habitat and are not suited to the T/E species that

may be present in Sullivan and Hawkins counties. Therefore, the proposed action is not expected to result in significant cumulative impacts to biological resources.

3.11.5.5 Cultural Resources

Due to the Advisory Council for Historic Preservation (ACHP) Program Comment, past coordination with SHPO, and locations of the proposed action and implementation alternatives, significant cumulative impacts to cultural resources are not expected when taken into consideration with past, present, and foreseeable future actions. (See Appendices A, and B)

3.11.5.6 Environmental Justice

Due to the lack of low income or minority populations adjacent to the proposed site, no significant cumulative impacts from the proposed action or implementation alternatives are expected when considered in combination with past, present, and reasonably foreseeable future actions.

3.11.5.7 Energy

Under the no action alternative, energy usage will increase due to the addition of the modernized IMX production building. The energy use at A2B are would be offset by the reduction of energy use at Area A. The energy requirement of the proposed NAC/SAC would be offset by the reduction of energy use at "Maggie", When considering the proposed action and implementation alternatives with the past, present, and reasonably foreseeable future actions, minor negative cumulative impacts are expected. However, no significant impacts are expected.

4.0 CONCLUSIONS

This EA has been prepared to evaluate the potential effects on the natural and human environment from activities associated with the implementation of the proposed action and the No Action Alternative.

As part of this EA, the potential effects on multiple resource areas from the implementation of the proposed action were evaluated as discussed in Section 3.0. Evaluation of the proposed action to construct and operate a NAC/SAC facility at HSAAP under the Army's Preferred Alternative indicates that the physical and socioeconomic environments would not be significantly affected by the proposed action singularly or through any combination of direct, indirect, or cumulative effects. The expected consequences of all evaluated resource areas from implementation of the proposed action under the Preferred Alternative and the No Action Alternative are presented in Table 4.1 below.

Implementing the proposed action would not be expected to result in significant environmental impacts.

**Table 4.1
Summary of Impacts of the Proposed Implementation Alternatives and the No Action Alternative**

RESOURCE	Proposed Action: Construct a NAC/SAC Facility, Tank Farm, and Pipelines	No Action Alternative
Direct Impacts		
Air Quality	Minor(-)	No Impact
Water Resources	Minor (-)	No Impact
Wastewater	No Impact	No Impact
Solid and Hazardous Waste	Major (+)	No Impact
Threatened and Endangered Species	No Impact	No Impact
Cultural Resources	No Impact	No Impact
Environmental Justice	No Impact	No Impact
Energy	No Impact	No Impact
Land Use	No Impact	No Impact
Noise	No Impact	No Impact
Geology and Soils	No Impact	No Impact
Socioeconomic	No Impact	No Impact
Indirect Impacts		
Air Quality	Minor(-)	Minor(-)
Water Resources	No Impact	No Impact
Wastewater	Minor (-)	No Impact
Solid and Hazardous Waste	Major (+)	No Impact
Threatened and Endangered Species	No Impact	No Impact
Cultural Resources	No Impact	No Impact
Environmental Justice	No Impact	No Impact
Energy	Minor (-)	No Impact
Land Use	No Impact	No Impact
Noise	No Impact	No Impact
Geology and Soils	No Impact	No Impact
Socioeconomic	No Impact	No Impact

5.0 LIST OF PREPARERS, AGENCIES, AND PERSONS CONSULTED

The following individuals helped prepare and were consulted during the development of this Environmental Assessment:

Table 5.1 Preparers

Name	Title	Affiliation	Years of experience	Education
Mr. Michael Vestal (PE)	Environmental Engineer	Holston Army Ammunition Plant	23	BS/ Civil Engr MS/ Env. Engr
Mr. Bruce Cole	Natural Resource Specialist /Cultural Resource Manager	Holston Army Ammunition Plant	23	BS/ Wildlife mgt MS/ Forest Resources
Mrs. Amy Crawford	Environmental Affairs Specialist	BAE SYSTEMS, Ordnance Systems Inc.	15	BS/Chemical Engineering
Mrs. Laura Peters	Environmental Engineer	Holston Army Ammunition Plant	11	BS/ Env. Protection and Agriculture

Table 5.2 Persons Consulted

Name	Title	Affiliation
Mr. William Shelton	Environmental Manager	BAE SYSTEMS, Ordnance Systems Inc.
Mr. Skip Proffitt	Environmental Affairs Specialist	BAE SYSTEMS, Ordnance Systems Inc.
Mr. James Ogle	Environmental Affairs Specialist	BAE SYSTEMS, Ordnance Systems Inc.
Mr. Paul Bailey	Environmental Affairs Specialist	BAE SYSTEMS, Ordnance Systems Inc.
Mr. Robert Winstead	Director, EHSS	BAE SYSTEMS, Ordnance Systems Inc.
Mr. Tyrone Simerly	Project Manager/Engineer	BAE SYSTEMS, Ordnance Systems Inc.
Mr. Scott Shelton	Chief, Production Engineering Division and Cultural Resource Manager	Holston Army Ammunition Plant
Mr Terry Armstrong	Safety Manager	BAE SYSTEMS, Ordnance Systems Inc.
Mr. Eugene Faxon	Safety Manager	Holston Army Ammunition Plant

6.0 REFERENCES

- Storm Water Pollution Prevention Plan (SWPP), January, 2016
- Resource Conservation and Recovery Act (RCRA) Subpart X Open Burn Miscellaneous Permit, 2010
- National Pollutant Discharge Elimination System (NPDES) Permit No. TN0003671, 2005
- HSAAP's Installation Spill Contingency Plan (ISCP), 2015
- State of Tennessee Title V Operating Permit Numbers 558406 and 558407, 2009
- Phase I Archeological Survey of Holston Army Ammunition Plant", U.S. Army Corps of Engineers, Mobile District; 1997
- Holston Army Ammunition Plant Historical American Building Survey" issued 1984
- Wetlands Inventory Report for HSAAP. Prepared by U.S. Fish and Wildlife Service, 2002.

APPENDIX A

**PROGRAM COMMENT FOR WORLD WAR II AND
COLD WAR ERA (1939-1974) ARMY
AMMUNITION PRODUCTION FACILITIES AND
PLANTS**



Preserving America's Heritage

**PROGRAM COMMENT FOR
WORLD WAR II AND COLD WAR ERA (1939 – 1974)
ARMY AMMUNITION PRODUCTION FACILITIES AND PLANTS**

I. Introduction

This Program Comment provides the Department of the Army (Army) with an alternative way to comply with its responsibilities under Section 106 of the National Historic Preservation Act with regard to the effect of the following management actions on World War II (WWII) and Cold War Era Army Ammunition Production Facilities and Plants that may be eligible for listing on the National Register of Historic Places (Facilities and Plants): ongoing operations, maintenance and repair, rehabilitation, renovation, mothballing, cessation of maintenance, new construction, demolition, deconstruction and salvage, remediation activities, and transfer, sale, lease, and closure of such facilities. In order to take into account the effects on Facilities and Plants, the Army will conduct documentation in accordance with The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation.

II. Treatment of Properties

A. Army Mitigation

1. The Army has an existing context study, Historic Context for the World War II Ordnance Department's Government-Owned Contractor-Operated (GOCO) Industrial Facilities 1939-1945 as well as documentation of nine World War II GOCO Plants.

2. The Army will prepare a supplemental volume that revises and expands the existing context to include the Cold War Era (1946-1974). The updated context study will:

focus on the changes that the plants underwent to address changing weapons technology and defense needs; and

identify prominent architect-engineer firms that may have designed architecturally significant buildings for Army Ammunition Plants.

3. The Army will prepare documentation that generally comports with the appropriate HABS/HAER standards for documentation for selected architecturally significant Facilities and Plants at two installations. This documentation will be similar to and follow the format of the existing documentation described in section II.A.1, above.

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4. Upon completion of the documentation, the Army will then make the existing documentation of the nine WWII GOCO Army Ammunition Plants and the WWII GOCO context and the new documentation, to the extent possible under security concerns, available in electronic format to Federal and State agencies that request it.

5. In addition, as a result of on-going consultations with stakeholders, the Army will provide a list of properties covered by the Program Comment, by state, to the National Conference of State Historic Preservation Officers and the Advisory Council on Historic Preservation.

6. The Army will also develop additional public information on the Army ammunition process, from production through storage, to include:

a display that can be loaned to one of the Army's museums, such as the Ordnance Museum at Aberdeen Proving Ground, or used at conferences; and

a popular publication on the ammunition process to accompany the display.

Copies of this information will be available electronically, to the extent possible under security concerns, and hard copies will be placed in a permanent repository, such as the Center for Military History.

7. The Army will encourage adaptive reuse of the properties as well as the use of historic tax credits by private developers under lease arrangements. The Army should also incorporate adaptive reuse and preservation principles into master planning documents and activities.

The above actions satisfy the Army's requirement to take into account the effects of the following management actions on Facilities and Plants: ongoing operations, maintenance and repair, rehabilitation, renovation, mothballing, cessation of maintenance activities, new construction, demolition, deconstruction and salvage, remedial activities, and transfer, sale, lease and/or closure of such facilities.

III. Applicability

A. This Program Comment applies solely to Facilities and Plants. The Program Comment does not apply to the following properties that are listed, or eligible for listing, on the National Register of Historic Places: (1) archeological properties, (2) properties of traditional religious and cultural significance to federally recognized Indian tribes or Native Hawaiian organizations, and/or (3) Facilities and Plants listed or eligible National Register of Historic Places districts where the ammunition production facility is a contributing element of the district and the proposed undertaking has a potential to adversely affect such historic district. This third exclusion does not apply to ammunition production related historic districts that are entirely within the boundaries of an ammunition production plant. In those cases the Program Comment would be applicable to such districts.

B. An installation with an existing Section 106 agreement document that addresses Facilities and Plants can choose to:

1. continue to follow the stipulations in the existing agreement document for the remaining period of the agreement; or

2. seek to amend the existing agreement document to incorporate, in whole or in part, the terms of this Program Comment; or

3. terminate the existing agreement document and re-initiate consultation informed by this Program Comment, if necessary.

C. All future Section 106 agreement documents developed by Army installations related to undertakings and properties addressed in this Program Comment shall include appropriate provisions detailing whether and how the terms of the Program Comment apply to such undertakings.

IV. Completion Schedule

On or before 60 days following issuance of the Program Comment, the Army and ACHP will establish a schedule for completion of the treatments outlined above.

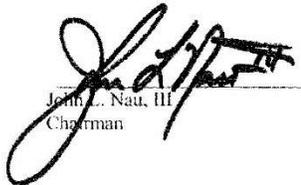
V. Effect of the Program Comment

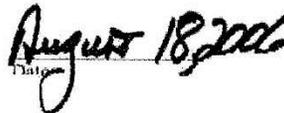
By following this Program Comment, the Army has met its responsibilities for compliance under Section 106 regarding the effect of the following management actions on WWII and Cold War Era Army Ammunition Production Facilities and Plants that may be eligible for listing on the National Register of Historic Places: ongoing operations, maintenance and repair, rehabilitation, renovation, mothballing, cessation of maintenance, new construction, demolition, deconstruction and salvage, remediation activities, and transfer, sale, lease, and closure of such facilities. Accordingly, the Army will no longer be required to follow the case-by-case Section 106 review process for such effects.

VI. Duration and Review of the Program Comment

This Program Comment will remain in effect until such time as Headquarters, Department of the Army determines that such comments are no longer needed and notifies ACHP in writing, or ACHP withdraws the comments in accordance with 36 CFR § 800.14(e)(6). Following such withdrawal, the Army would be required to comply with the requirements of 36 CFR §§ 800.3 through 800.7 regarding the effects under this Program Comments' scope.

Headquarters, Department of the Army and ACHP will review the implementation of the Program Comment seven years after its issuance and determine whether to take action to terminate the Program Comment as detailed in the preceding paragraph.


John L. Nau, III
Chairman


August 18, 2006
Date

APPENDIX B

- **LETTER REGARDING DOD, HAAP/MINOR PROJECTS & MAINTENANCE, KINGSPORT, SULLIVAN COUNTY FROM STATE HISTORIC PRESERVATION OFFICE (SHPO)**
- **MAP OF EXEMPTED AREAS**
- **LIST OF EXEMPTED ACTIVITIES**
- **HSAAP REQUEST LETTER TO SHPO 2006**
- **HSAAP NOTICE TO SHPO 2010 OF USING THE PROGRAM COMMENT IN APPENDIX A AT HSAAP**



TENNESSEE HISTORICAL COMMISSION
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
2941 LEBANON ROAD
NASHVILLE, TN 37243-0442
(615) 532-1550

February 7, 2006

Mr. Eddie Brickey
Holston Army Ammunition Plant
4509 West Stone Drive
Kingsport, Tennessee 37660

RE: DOD, HAAP/MINOR PROJECTS & MAINTENANCE, KINGSPORT, SULLIVAN COUNTY

Dear Mr. Brickey:

The Tennessee State Historic Preservation Office has reviewed the above-referenced undertaking received on Monday, February 6, 2006 for compliance by the participating federal agency or applicant for federal assistance with Section 106 of the National Historic Preservation Act. The Procedures for implementing Section 106 of the Act are codified at 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739).

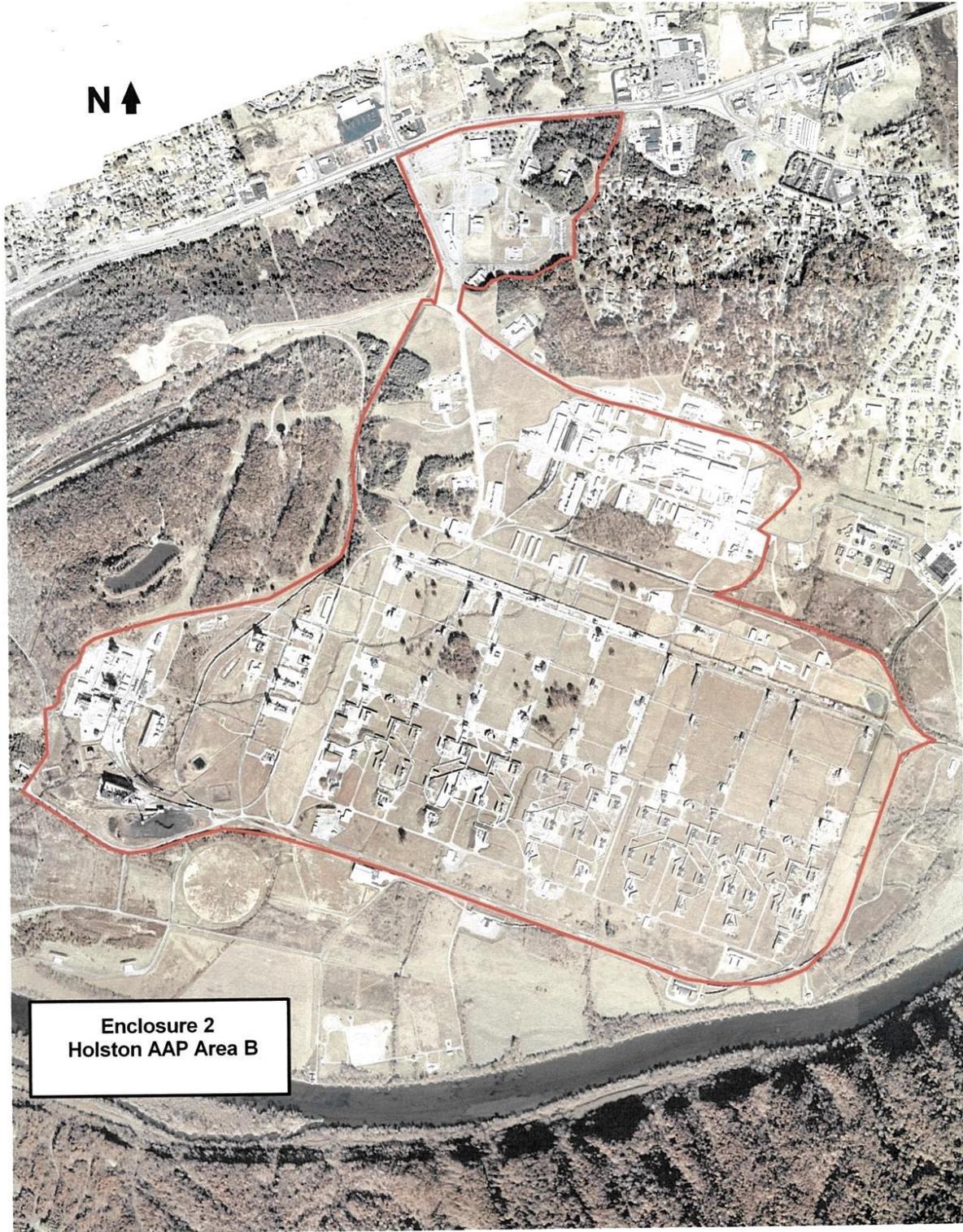
After considering the documentation submitted, it is our opinion that there are no National Register of Historic Places listed or eligible properties affected by the types of undertakings listed in your correspondence, with one qualification. Activity D, "Leasing of agricultural and grazing areas" should be limited to only those agricultural activities that will either; a) take place within areas previous surveyed and determined not to contain any archaeological sites, or b) involve no tilling or other activities that will disturb the ground below the current level of disturbance and/or plow zone.

You may direct questions or comments to Jennifer M. Barnett (615) 741-1588, ext. 17. This office appreciates your cooperation.

Sincerely,

Herbert L. Harper
Executive Director and
Deputy State Historic
Preservation Officer

HLH/jmb



Enclosure 2
Holston AAP Area B

ACTIVITIES THAT NEED NOT BE REVIEWED BY THE SHPO

- A. Ground disturbing activities in Area A in the previously disturbed area shown in Enclosure 1; or within the boundary of the production area, maintenance, and administration areas of Area B in the previously disturbed area shown in Enclosure 2.
- B. Maintenance work on existing features such as roads, fire lanes, disposal areas, ditch lines, fence line right-of-ways, and buried utility lines such as gas or water lines.
- C. Energetics disposal (open burning of waste explosives).
- D. Leasing of agriculture and grazing areas that will either:
 - 1. Take place within areas previously surveyed and determined not to contain any archaeological sites, or
 - 2. Involve no tilling or other activities that will disturb the ground below the current level of disturbance and/or plow zone
- E. Hunting and fishing actions.
- F. Use of land for training exercises, when such training involves no off-road vehicle use or ground disturbance, and when camping occurs in areas previously surveyed for historic properties.
- G. Activity on any ground locations where prior archeological studies have been previously completed indicating no historical findings. New construction activities will need to be coordinated at these locations.
- H. Outgrants and contracting actions when the proposed use involves no disturbance of the ground surface.
- I. Reviews, reports, studies, undertakings for planning purposes and decision making including reports of excess provided that no lands are physically laid away or disposed of by sale, or transfer, without appropriate documentation or coordination.

Note: The above list of activities is a partial list of those activities that, in February 2006, the SHPO indicated would not impact listed or eligible properties when described conditions exist. Exemptions and guidance related to buildings on the installation have been removed from the original list that the SHPO approved because guidance of this nature is no longer applicable to HSAAP. The "*Program Comment for World War II and Cold War ERA (1939-1974) Army Ammunition Production Facilities and Plants*" (PC) eliminates any requirement to coordinate with the SHPO with regard to buildings, bridges, and other real property on the installation that are covered by the PC. HSAAP notified the SHPO in October 2012 that it would utilize the PC for all actions impacting any real property (buildings, etc.) on the installation.



REPLY TO
ATTENTION OF

Production Engineering Division

DEPARTMENT OF THE ARMY

Holston Army Ammunition Plant
4509 West Stone Drive
Kingsport, TN 37660

February 3, 2006

Mr. Joe Garrison
Tennessee Historical Commission
2941 Lebanon Pike
Nashville, TN 37243-0442

Dear Mr. Garrison:

Holston would like to have the State agree that the attached list of items do not need to be coordinated with your office in the future. Justification for this request is that Holston has established precedents for these types of items in the past as not having historical impacts to the installation and that we've identified the Comp B Production Line 2 as a representative line for historical preservation.

Your concurrence is requested.

If additional information is needed, please contact Mike Mills at (423) 578-6244.

Sincerely,

Original Signed By

Eddie C. Brickey
Commander's Representative

Enclosure

CF:
OSI/Todd Hayes, Bob Winstead



REPLY TO
ATTENTION OF

Natural Resources Office

DEPARTMENT OF THE ARMY

Holston Army Ammunition Plant
4509 West Stone Drive
Kingsport, TN 37660

October 14, 2010

Mr. E. Patrick McIntyre, Jr.
Tennessee Historical Commission
2941 Lebanon Road
Nashville, TN 37243-0442

Dear Mr. McIntyre:

At this time we are providing notification that Holston Army Ammunition Plant (HSAAP) wishes to utilize the guidance contained in Enclosure 1, "Program Comment for World War II and Cold War Era (1939-1974) Army Ammunition Production Facilities and Plants" in order to meet our Section 106 requirements for actions affecting real property on the installation. Per Paragraph V of the enclosure, "The Army has met its responsibilities for compliance under section 106." As a result we are no longer required to coordinate with your office and follow the case by case Section 106 review process in order to perform the following activities to real property on the plant: ongoing operations, maintenance and repair, rehabilitation, renovation, mothballing, cessation of maintenance activities, new construction, demolition, deconstruction and salvage, remedial activities, and transfer, sale, lease and/or closure of such facilities.

We do understand that the Program Comment does not address potential impacts to other historic properties such as archaeological sites on the installation. Therefore, in the event that a proposed action has the potential to affect archaeological sites on the installation, we will continue to follow the case-by-case Section 106 review process and coordinate with your office in order to insure that we do not adversely impact these resources.

In the event that you feel we have not interpreted the enclosure correctly, please do not hesitate to provide us with the appropriate guidance on how we should proceed under this Program Comment. The point of contact on my staff is Mr. Bruce Cole at (423) 578-6276 or bruce.cole@us.army.mil.

Sincerely,


JOSEPH R. KENNEDY
Commander's Representative

Enclosure
Program Comment

APPENDIX C

- **SPOTFIN CHUB SURVEY REPORT**

**BIOLOGICAL SURVEY FOR THE SPOTFIN CHUB, *ERIMONAX MONACHUS*,
IN THE HOLSTON RIVER
AT HOLSTON ARMY AMMUNITION PLANT (HSAAP)**

Final Report to: BAE Systems, Ordnance Systems, Inc.
Prepared by: P. L. Rakes, J. R. Shute, C. L. Ruble, and M. A. Petty
Conservation Fisheries, Inc.
October 30, 2015

INTRODUCTION

The Spotfin Chub (SFC), *Erimonax monachus* (formerly *Hybopsis monacha* and *Cyprinella monacha*) is endemic to the Tennessee River drainage in Georgia, Tennessee, North Carolina, and Virginia (Jenkins and Burkhead 1994, 1984). In the Holston River system it is recently known only from the North Fork Holston River (NFHR) in Scott, Washington, and Smyth County and Middle Fork Holston River (MFHR) in Washington County in Virginia and the NFHR and Holston River in Hawkins and Sullivan County in Tennessee (Tennessee Valley Authority and Virginia Natural Heritage and Conservation Fisheries, Inc. data). Recent surveys by Conservation Fisheries Inc. (CFI) have been unable to locate any specimens in the MFHR (Petty et al. 2015).

The Spotfin Chub is federally threatened and currently restricted to only four populations, with the Holston River system population's distribution greatly reduced relative to probable historical extent (USFWS 1983). Seven or more populations have been eradicated by human activities. CFI is currently involved in attempted restoration of three populations, with two (Tellico and Cheoah River) exhibiting early signs of success. The U. S. Fish and Wildlife Service recommended that BAE Systems, Ordnance Systems, Inc. (BAE) employ CFI to efficiently survey for the species in the Holston River at HSAAP, due to CFI's extended experience and expertise with the species.

METHODS

Spotfin Chubs are specialized minnows, usually confined to very specific habitats, particularly clean bedrock substrate in moderate to swiftly flowing shallow water (typically < 1 meter depth). Extensive bedrock substrates, particularly those forming flat "floors" with ledges and/or boulders provide required crevices for spawning substrates and feeding surfaces for specialized benthic predation on blackfly and other aquatic insect larvae. The very young juveniles are often also

found on clean swept sandy and/or bedrock shallows along the stream's edge. CFI work with Spotfin Chubs in several other river systems has shown that, if present, these unique minnows can often be detected efficiently by snorkeling in and near such preferred habitat, visibility conditions permitting.

Suitable habitat was surveyed by snorkeling, with the survey area plotted using GPS, USGS maps and Google Earth. Habitats—both above and below water—were noted and photographed. Records of relative abundance for all species observed were recorded. Fish identifications were made on site and no fish were taken from the stream. Many species were photographed, but flow conditions prevented successfully capturing quality images of most. Total time snorkeling was recorded to potentially generate “observations per unit effort” (OPUE), much like standard “catch per unit effort” (CPUE) for any target fish observed and counted.

RESULTS

A reconnaissance visit to the HSAAP property on 11 August 2015 was provided by Bruce Cole, Natural Resources Manager, and BAE's Amy Crawford, driving to several access points along the Holston River. All but one reach of the river was too deep and/or slow and/or silty for Spotfin Chubs. The reach of islands, shoals, and bedrock riffles and runs below the bridge at Clay Islands (Holston River Mile [HRM] 137.5+) appeared to have excellent habitat and was thus selected for an extensive snorkel survey effort performed on 24 September 2015. CFI returned with a crew of four experienced snorkelers to visually survey the site to determine presence or absence of Spotfin Chubs. Conditions were as close to ideal as can be expected in a larger river, although swift flows made holding stable positions difficult in many areas, particularly when attempting underwater photography. Water temperature was still warm for the season (75°F); discharge was relatively low with only a modest generation release from Fort Patrick Henry Lake. Visibility was more than a meter and sufficient to locate and visually identify all fish encountered. All four snorkelers were highly experienced, having surveyed for Spotfin Chubs in nearly all known portions of their range. Approximately 8.0 person-hours of snorkel effort were spent searching in both adult and juvenile habitats, as well as adjacent areas. Figure 1 (Appendix) illustrates the area covered by snorkelers.

*No Spotfin Chubs were observed despite extensive excellent habitats with bedrock in swift shallow riffles and runs. The diversity of fishes was high (28 species observed). Numbers of most species observed were within expected values. See Table 1 (Appendix) for a list of species and relative numbers. Darters and minnows were well represented, usually indicating good water quality and diverse habitat. Photographs of habitats and some of the species observed are found in the Appendix. A video sampling of many of the fish and habitats observed can be viewed at <https://vimeo.com/143897019> (password: holsfc2015CFI). Several species often seen in association with Spotfin Chubs were present in abundance. However several others, most notably Whitetail Shiners (*Cyprinella galactura*), were far less abundant than expected. Whitetail Shiners are perhaps the species most similar to Spotfin Chubs and the two were once considered closely related. Both species spawn in similar habitats and often overlap in nonbreeding season habitats as well.*

DISCUSSION/CONCLUSIONS

Overall fish diversity and abundance was greater than expected in a tailwater setting, and comparable to those observed in other recent survey studies with differences attributable to the different sampling techniques (i.e., snorkeling versus electrofishing). We observed much larger numbers of many species than did Evans and Beverly (2010) in a survey just above our site, but

snorkeling often reveals far more fish than might be collected by most standard fish sampling techniques. Results reported in their study as well as those in a longer-running and wider range Academy of Natural Sciences report (2012) largely replicated our species diversity observations with the addition of many larger species (sunfish, suckers) susceptible to their electrofishing methods.

The Spotfin Chub is known from the Holston River system upstream of HSAAP, particularly in the lower North Fork Holston River. It has also been collected on a few occasions in the river downstream of the plant [TVA and Natural Heritage data: Cox Island, Surgoinsville, HRM 118 – 1992, 2001, 2009; Phipps Bend, HRM 122 – 2003; Terrill Creek, HRM 119.5 - 2004], but usually only single specimens. It was not collected in the Evans and Beverly (2010) study. Since Spotfin Chubs occur upstream and are at least occasionally collected downstream of the plant, we must assume that they sometimes pass through HSAAP waters. Spotfin Chubs are very mobile fish. For example, at least one juvenile chub that CFI stocked in Shoal Creek in south-central Tennessee as a part of a rare fish restoration project made it downstream to north Alabama in a little more than a year, a distance of more than 10 stream miles!

We know of no other site where Spotfin Chubs persist in a tailwater situation, where water levels and (presumably) temperatures vary with releases from the upstream dam. This is precisely the condition in the Holston River at this site. Our supposition is that the Chubs are highly prone to predation in deeper waters. We rarely encounter them in water as deep as 1m. Typically, they are found in water less than a half meter deep. Spotfin Chubs in our hatchery are affected by subtle temperature changes, even more than most of the species we work with. Our observations suggest that the fish will cease spawning, at least temporarily, if the water temperature drops more than a few degrees.

Our conclusion is that while the occasional Spotfin Chub passes through HSAAP waters, there is no resident population. Spotfin Chub collections from below the plant have only once yielded more than one specimen in the modern era (N=15 at Cox Island in 2001; see above). These all likely represent waifs from the North Fork Holston, where stable populations exist.

LITERATURE CITED

- Academy of Natural Sciences of Drexel University. 2012. 2010 South Fork Holston River environmental monitoring studies. Report No. 10-04F to Eastman Chemical Company. April 2012. 289 pp.
- Evans, J. A. and J. Beverly. 2010. An exploratory survey for the threatened Spotfin Chub (*Cyprinella monacha*) for the proposed demolition of bridge #20 at Holston Army Ammunition Plant, Hawkins County, Tennessee. Report to BAE Systems & Holston Army Ammunition Plant, Kingsport, Tennessee. September 2010. 11 pp.
- Jenkins, R. E. and N. M. Burkhead. 1994. Freshwater fishes of Virginia. American Fisheries Society, Bethesda, Maryland. 1079 p.
- Jenkins, R. E. and N. M. Burkhead. 1984. Description, biology and distribution of the Spotfin Chub, *Hybopsis monacha*, a threatened cyprinid fish of the Tennessee River drainage. Bulletin Alabama Museum of Natural History. 8: 1-30.

Petty, M. A., Rakes, P. L. Shute, J. R. and C. L. Ruble. 2015. Surveys for Spottfin Chubs, *Erimonax monachus*, and their habitat in the North Fork and Middle Fork Holston Rivers, Virginia. Final Report to the Virginia Department of Game and Inland Fisheries (Contract #2012-13706), January 8, 2015. 15 pp.

U.S. Fish and Wildlife Service (USFWS). 1983. Recovery Plan for Spottfin Chub *Hybopsis monacha*. U.S. Fish and Wildlife Service, Atlanta, Georgia. 46 pp.

APPENDIX D
DRAFT FINDING OF NO SIGNIFIGANT IMPACT

**DRAFT
FINDING OF NO SIGNIFICANT IMPACT**

**CONSTRUCTION AND OPERATION OF A
NITRIC ACID CONCENTRATION/SULFURIC ACID CONCENTRATION FACILITY
AT HOLSTON ARMY AMMUNITION PLANT**

1. PROPOSED ACTION: The proposed action and subject of the Environmental Assessment (EA), which is hereby incorporated by reference, is the construction and operation of a Nitric Acid Concentration/Sulfuric Acid Concentration (NAC/SAC) Facility, at Holston Army Ammunition Plant (HSAAP). Implementing the proposed action will: (1) enable HSAAP to recover significant amounts of weak nitric acid (WNA) generated in the production of Insensitive Munitions Explosives (IMX), and reconstitute it into strong nitric acid (SNA) for use in further IMX production, rather than having to dispose of the WNA as a hazardous waste; (2) remove an artificial constraint on the amount of IMX that could be produced by HSAAP by eliminating the single-point-of-failure associated with disposal of WNA at the off-site facility; and, (3) enable HSAAP to reduce the amount of energetic effluent generated in the IMX production process, and dispose of the remaining effluent in an environmentally responsible manner.

2. ALTERNATIVES CONSIDERED: Two Alternatives, including the No Action Alternative, were evaluated for implementing the proposed action. Under the Preferred Alternative, the NAC/SAC facility would be constructed and operated at the south end of B-Line Road inside Area B at HSAAP. The proposed location is within the developed portions of Area B, and the site plan for the proposed location has been approved by the Department of Defense Explosives Safety Board (DDESB). The EA characterizes the socioeconomic and environmental impacts that would likely result from implementing the Preferred Alternative and the No Action Alternative.

3. ENVIRONMENTAL CONSEQUENCES: Based on the nature of the proposed action and the location selected, the Army determined after a detailed analysis that there would be no significant adverse impacts on the following resource areas: land use, air quality, noise, geology and soils, water resources, wastewater, biological resources, cultural resources, solid and hazardous waste, socioeconomic environment, environmental justice, infrastructure, and energy. Implementing the Preferred Alternative would have minor and temporary direct adverse impacts on air quality and water quality, as well as a major positive impact on hazardous waste. It would also generate minor indirect impacts to air quality, wastewater, and energy, as well as a major beneficial impacts to solid and hazardous waste. Implementing the No Action Alternative would have no direct and indirect impacts with the exception of a minor indirect impact to air quality.

4. FACTORS CONSIDERED IN THE FINDING OF NO SIGNIFICANT IMPACT: The EA considered the nature of the proposed action, the environmental and socioeconomic resources at the only site suitable for such a facility, and the likely environmental and socioeconomic impacts, including cumulative impacts, on all relevant resources associated with implementing the proposed action.

5. PUBLIC REVIEW AND COMMENT: The EA and the Draft Finding of No Significant Impact (DFNSI) are available for public review and comment from 3 March 2016 to 1 April 2016. A notice of availability of the documents was published in Kingsport Times-News and the Rogersville Review on 2 March, 2016, and the Holston Army Ammunition Plant Facebook page. Documents are available for review by contacting Kathy Cole, Staff Action Specialist,

423-578-6285, or kathy.o.cole.civ@mail.mil or by accessing the official homepage of the Joint Munitions Command (Holston Army Ammunition Plant) at <http://www.jmc.army.mil/Installations.aspx?id=Holston> . Additionally, a copy of the EA and the DFNSI are available for review at the Kingsport Public Library, 400 Broad Street, Kingsport, Tennessee and the Mt. Carmel Public Library, 100 Main Street E, Mt. Carmel, Tennessee. Interested parties are encouraged and invited to mail comments on the EA and DFNSI to HSAAP, C/O Holston Army Environmental Department Attn Kathy Cole, 4509 West Stone Drive, Kingsport TN 37660. Comments may also be submitted electronically via the web page link provided above. All comments must be submitted on or before 1 April 2016. At the conclusion of the public review and comment period, all public comments submitted will be reviewed and addressed prior to a final determination by the Army as to whether to issue a Final Finding of No Significant Impact, or issue a Notice of Intent to prepare an Environmental Impact Statement.

6. CONCLUSIONS: Based upon my review of the facts and the analysis presented in the EA, I have preliminarily concluded that implementing the proposed action would have no significant direct, indirect, or cumulative impacts on the quality of the natural or human environment; and that consequently the analysis in the EA supports a Finding of No Significant Impact. Preparation of an Environmental Impact Statement is not required. Not implementing the proposed action would eliminate some minor adverse impacts and one major beneficial impact, but would not provide HSAAP with the potential to produce IMX for the Department of Defense in sufficient quantities to support the National Defense mission; reduce the amount of hazardous waste currently generated that requires costly and unnecessary disposal; or otherwise reduce the ability to dispose of the effluent currently generated in the production of IMX in a more environmentally responsible manner.



CHADWICK T. BAULD
COL, CM
Commander



Date

