

Alliant Techsystems, Inc. (Formerly: Thiokol Propulsion and ATK Elkton LLC)

Route 40
Elkton, MD 21921
Congressional District 1
EPA ID #: MDD003067121
Last updated: 6/30/2009

Current Progress at the Site

On August 23, 2005, the State of Maryland Department of the Environment (MDE) renewed and modified the Alliant Techsystems, Inc. formerly ATK Tactical Systems, LLC, Thiokol Corporation and later Thiokol Propulsion (ATK) Controlled Hazardous Substances Storage and Treatment Facility Permit (Permit Number A-052), thus the corrective action permit issued to ATK on October 8, 1989 remains in effect. The permit requires ATK to: 1) conduct sampling investigations of the groundwater and/or soil to verify if releases of hazardous waste/constituents have occurred or are likely to occur from six solid waste management units (SWMUs); 2) conduct a RCRA Facility Investigation (RFI) to characterize the subsurface conditions and nature and extent of releases based on the results of the sampling investigations; 3) implement minor corrective measures at three SWMUs; and 4) submit the results of an initial source identification trichloroethylene (TCE) groundwater investigation resulting from the contamination of two production drinking water wells detected in December 1984.

The initial investigations were conducted over a period of approximately four years at six of the SWMUs. EPA's final approval of five of the SWMU investigations issued in 1997 and 1998 identified the need for performing a site wide investigation of the soil and groundwater.

The approved recommended minor corrective measures required by the permit were previously implemented at the three SWMUs in 1986 and 1987.

The initial TCE source identification groundwater investigation and residential well survey was performed in 1987. The investigation and survey were undertaken as a result of a consent agreement between ATK and the Maryland Department of Health and Mental Hygiene (MDHMH) entered on March 30, 1987. Further TCE groundwater investigations were performed in 1988 and 1995 based on recommendations of each earlier investigation and groundwater monitoring program implemented. The 1995 investigation and the monitoring program results identified the need for further investigation in the southern area of the facility and the potential threat to residential wells not previously connected to public water supply resulting from the earlier residential well survey and sampling in 1988. To address the findings

of the TCE groundwater investigations and monitoring results, ATK implemented two interim measures. ATK installed a groundwater pump and treatment system with a stripping tower in the 1980s and on July 1, 1998 installed additional capture wells and a second stripping tower. The results of the monitoring program revealed that the second well containment system has not adequately captured the plume and the stripping towers are not effectively reducing the contaminant plume. Additional characterization of the groundwater contamination was performed as part of the Supplemental Site-Wide Investigation (SSWI).

Based on the findings of the SSWI investigation it is determined that the Area A Burnfield/TCE/Perchlorate plume Area and Beryllium Area SWMU are fully delineated. In January 2005, ATK began the implementation of the Area A Burnfield TCE/Perchlorate in-situ reactive zone pilot test to evaluate the effectiveness of this technology for remediation measure for this area groundwater contamination. The pilot test was conducted from January 2005 until March 2006. The findings of the pilot study were summarized in an August 21, 2006 report. It is concluded in the report that the technology did not prove efficient for remediating the contaminant plume. Alternative remediation options for this SWMU and the entire facility are currently under evaluation, as referenced below.

Also to address the findings of the SSWI investigation for the Still Bottoms Area SWMU, ATK excavated buried drums and impacted soil in this SWMU area. The removal activity was completed on November 11, 2005.

The SSWI investigation of the Pesticide Area AOC SWMU was completed in early 2005. The shallow groundwater on and off-site in the southern portion of the SWMU and the residential area adjacent to the property line of this area were sampled. The results of these sampling efforts showed non-detections for shallow groundwater contaminants.

The draft long term groundwater monitoring plan was submitted for the facility on August 10, 2006. Preliminary comments were provided. In February 2007, ATK submitted the draft Site-Wide Corrective Measures Study Report for facility. Both documents are under review by EPA.

Site Description

The ATK facility is located on approximately 500 acres in a mixed rural setting in Elkton, Maryland, Cecil County. The ATK facility is bordered on the north by agricultural area; on the south by predominantly commercial area with some rural residential areas; to the west by agricultural and mostly residential areas and to the east by commercial and industrial areas; including the Triumph Industrial Park (also known as the Cecil Industrial Park National Priority List Site). Routes 40 and 279 are south and east of the ATK facility property, respectively. The Little Elk Creek flows through the center of property. Wetlands are located mostly along the creek and predominantly to the east in an undeveloped area..

The Syngenta Corp Protection, Inc., (formerly Geigy Chemical Company and later Novartis

Crop Protection) occupied the facility from 1947 to 1955 before selling it to Olin Mathieson Chemical Corporation (Olin) in 1955. Under Syngenta and Olin's ownership, the facility was used to formulate pesticides (largely DDT). The facility was next sold to Thiokol Propulsion in 1958. In 2000, the facility changed ownership to Alcoa, Inc. (The name remained unchanged with this changed in ownership of the parent company). In April 2001, Alliant Techsystem purchased Thiokol Propulsion from Alcoa, Inc. On August 1, 2001, the name of the facility changed to ATK Tactical Systems Company, Elkton Operations and currently the facility's name is Alliant Techsystems, Inc.

The ATK facility designs, manufactures and conducts research on solid fuel rocket propellant, gas generators, and rocket propulsion units for use in space and defense. The facility also manufactures safe-and-arm devices, semi-conductor bridge detonators and liquid gun propellants.

Site Responsibility

RCRA Corrective Action activities at this facility are being conducted under the direction of EPA Region 3 with assistance from the MDE.

Contaminants

At this multi-component corrective action facility, limited SWMU investigations have identified pesticide, volatile organic, inorganic and contamination in the soil, surface water, and ground water. A groundwater plume migrating from the central portion of the facility towards the southeast is contaminated with predominantly TCE and its degradation products. In response to EPA providing notice of a more sensitive analytical method for detecting perchlorate at 1 parts per billion (ppb), ATK sampled selected on-site wells in October 1998 for the solvent constituents of concern and perchlorate. Perchlorate was detected at 500 ppb in the facility production well. EPA is currently evaluating the human health and ecological risks associated with perchlorate to establish clean up standards. Additional data is needed to correlate the contamination identified by the SWMU investigations and the TCE ground water plume investigation and to calculate the human health and ecological risks.

Community Interaction

The Cecil County Board of Health (CCBH) has had direct communication with local residents that participated in residential well sampling in past. EPA and MDE coordinated with ATK and the CCBH to conduct the residential well sampling as part of the on-going groundwater investigation in the southern portion of the facility during the site-wide supplemental investigation. Further community relation activities will be undertaken when necessary (for example, public meetings, fact sheets, forward analytical results to residents and communicate with residents regarding analytical results from their well sampling). EPA and MDE will

continue to coordinate with ATK and the CCBH on these community relations activities.

Institutional Controls

No institutional controls are currently in place.

Government Contact

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For more information about EPA's corrective action web page, including Environmental Indicators, please visit our site at: www.epa.gov/reg3wcmd/correctiveaction.htm