

Little Elk Creek Area-Wide Pilot

ATK Elkton LLC (Formerly: Thiokol Propulsion)

**Route 40
55 Thiokol Road
Elkton, MD 21921**

Site Description & History

On September 22, 1997, the State of Maryland Department of the Environment (MDE) renewed and modified the ATK Tactical Systems Company LLC; formerly 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.

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.

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Investigation, Cleanup & Next Steps

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 groundwater and soil.

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).

The SSWI was conducted from August 19, 2002 to November 15, 2002. The findings of the SSWI are documented in the SSWI Analytical Data Report (February 28, 2003) (AD Report) and the draft Interim Site-Wide Investigation (ISWI) Technical Report and Work Plan (June 19, 2003). ATK conducted the ISWI in the spring of 2004. This phase of the investigation further characterized and/or delineated the groundwater in the area of the Beryllium Area SWMU, Still Bottoms Area SWMU, Pesticide Area SWMU and Area A Burnfield SWMU/TCE Plume/Residential area. Based on the findings of this investigation it is determined that the Area A Burnfield TCE/Perchlorate plume Area and Beryllium Area SWMU are fully delineated. The findings of the investigation of the Still Bottoms Area SWMU and the bordering property revealed that additional investigation of this area is needed; and will be conducted in findings of the ISWI also identified the need for further delineation of the shallow groundwater in the southern portion of the Pesticide Area SWMU. These investigations will be conducted in 2005.

Lead Agency and Contacts

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