FILE

FINAL DECISION AND RESPONSE TO COMMENTS

UNDER RCRA SECTION 3004(u)

BAE SYSTEMS LAND AND ARMAMENTS L. P.
YORK, PENNSYLVANIA 17405-1512
EPA ID #: PAD003025418

I. INTRODUCTION

The United States Environmental Protection Agency ("EPA") is issuing this Final Decision and Response to Comments ("Final Decision") under the authority of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act ("RCRA") of 1976, and the Hazardous and Solid Waste Amendments ("HSWA") of 1984, 42 U.S.C. §§ 6901 to 6992k, for the BAE Systems Land and Armaments L.P. ("BAE") facility located at 1100 Bairs Road, York, Pennsylvania (the "Facility"). The Facility was previously owned by United Defense, L.P. and was known as the United Defense, L.P. or UDLP Facility. On July 22, 2005, BAE informed EPA that on June 24, 2005, BAE's parent corporation, BAE Systems North America, had purchased United Defense Industries, Inc., the parent corporation to United Defense, L.P. BAE acquired ownership of the Facility; and United Defense, L.P. changed its name to BAE.

The Facility is subject to an EPA program generally known as "Corrective Action." The Corrective Action program is designed to ensure that facilities subject to HSWA have investigated and cleaned up any releases of hazardous waste and/or hazardous constituents at and/or from their property. On September 25, 1991, EPA issued the Facility a HSWA Corrective Action Permit (I.D.# PAD 003025418) which required the Permittee to investigate the extent of environmental contamination at the Facility and evaluate remedy options. That Facility's Corrective Action permit expired on September 25, 2001 and its conditions have been continued under 40 C.F.R. Section 270.51.

On April 15, 2005, EPA issued a Statement of Basis ("SB") which described the Proposed Remedy for the Facility and which is hereby incorporated into this Final Decision by reference as Attachment A, and modified as specified in Section B (PUBLIC COMMENTS), paragraphs 1, 2, 3 and 4, below. The SB described the information gathered during the environmental investigations of the Facility, described the completed clean-up actions at the Facility, and explained EPA's proposed final remedy for the Facility. Consistent with public participation provisions under RCRA, EPA requested comments from the public on the proposed final remedy. The public comment period began April 15, 2005 and ended May 30, 2005. The public comment period was announced in the *York Daily Record* on April 15, 2005.

The purpose of this Final Decision is to describe the Final Remedy selected by EPA to address releases of hazardous waste and/or hazardous constituents at and/or from the Facility. In addition, this Final Decision presents the concerns and issues raised during the public comment

period that followed the issuance of SB for the Facility, and responds to all comments received by EPA regarding the Proposed Remedy.

II. FINAL REMEDY

The selected Final Remedy is groundwater treatment and monitoring with institutional controls, as described below. EPA has determined that the Final Remedy protects human health and the environment and is consistent with EPA's nine criteria for remedy selection, which are discussed in the Corrective Action Advanced Notice of Proposed Rulemaking, 61 Fed. Reg. 19432 (May 1, 1996) and set forth in Section V (Evaluation of Criteria) in the SB. The proposed clean-up standards set forth in the SB for the contaminated groundwater are made final in this Final Decision.

Under the interim measure provisions of its Corrective Action Permit, BAE installed and began operating a groundwater treatment system at the Facility. EPA has selected the BAE's continued operation of that groundwater treatment system as the Final Remedy for the Facility.

On February 1, 2003, the Pennsylvania Department of Environmental Protection ("PADEP") issued an National Pollutant Discharge Elimination System ("NPDES") permit to the Facility. Part C, Section III of that NPDES permit requires BAE to operate the groundwater treatment system and provide monitoring results to PADEP on a quarterly basis, with an annual summary report. To avoid duplication, EPA intends to implement this Final Decision through the issuance of a HWSA permit that references the Facility's NPDES permit, essentially adopting the State requirements as enforceable permit conditions in EPA's Corrective Action permit. EPA intends this approach to simplify the requirements with which the Facility must comply.

A. DESCRIPTION OF FINAL REMEDY

The corrective action for the Facility includes the following components:

1. Remediation of Contaminated Groundwater - The groundwater beneath the Facility is contaminated with volatile organic compounds ("VOCs"), tetrachloroethene ("PCE") and trichloroethene ("TCE"), from past operations. BAE will continue to address the VOC contamination at the Facility with two separate groundwater remediation systems: the West Warehouse Area system and the Eastern Property Boundary Area system. Both systems collect contaminated groundwater, strip the VOCs with Air Stripping Tower technology, and discharge the treated effluent to a storm water channel. BAE operates both systems under the PADEP NPDES permit, which PADEP renewed on January 14, 2003. The NPDES permit sets forth, among other things, limits on the discharge into the Codorus Creek River. The Facility must submit the next renewal application for its NPDES permit by February 2007. The renewed NPDES Permit should be issued by PADEP by September 1, 2007. If BAE fails to submit a renewal application for its NPDES permit, EPA will modify Facility's corrective action permit to include the

monitoring and reporting requirements contained in the Facility's current NPDES permit.

EPA selected the Maximum Contaminant Levels for PCE and TCE, as established by the Safe Drinking Water Act, 42 U.S.C. §§ 300f-300j-26. (See 40 C.F.R. Part 141), as the groundwater standards for the Facility. The MCLs for both PCE and TCE are 5 ug/l.

2. Groundwater Monitoring - The groundwater from the Facility's 10 groundwater monitoring wells and 7 groundwater collection wells will be monitored on a quarterly basis as part of the approved PADEP NPDES permit monitoring program. According to the NPDES Permit, BAE is required to conduct quarterly sampling and analysis for PCE and TCE at all monitoring and recovery wells associated with groundwater remediation systems. EPA will evaluate the effectiveness of BAE's groundwater remediation systems to determine the continued effectiveness of the systems. The total VOC concentrations in the groundwater have steadily declined since the two pump and treat systems began operation.

3. Institutional Controls - While on-site groundwater is not currently used as a drinking water source and BAE has no plans for such future use, to provide additional protection, the final remedy includes institutional controls to prohibit the development of on-site wells for drinking water or other domestic uses at the Facility which will be effective for as long as necessary to prevent exposure while the plume is being remediated. The institutional controls will include a notice of use restriction filed with the deed for the Facility. In addition, in the event of any conveyance, assignment or transfer of the Facility or any interest in the Facility, BAE shall expressly reserve in the deed or other instrument effecting the transfer an easement providing that the untreated groundwater may not be used as a potable water supply until EPA determines that the groundwater is no longer contaminated. BAE shall enforce the terms of any such easement against all subsequent grantees of an assignment or transfer of the Facility or an interest in the Facility. Moreover, in the event of any conveyance, assignment or transfer of the Facility or any interest in the Facility, BAE shall continue to be bound by any requirement to perform the selected remedy set forth in this Final Decision.

BAE estimates that the annual cost of the selected remedy is $100,000 per year. This cost estimate includes the groundwater remediation systems at the West Warehouse and Eastern Property Boundary Areas, all sampling and laboratory work, data compilation, generation of reports, preventive maintenance along with any repairs. EPA will require BAE to provide assurances of financial responsibility for completing the Final Remedy as required by Section 3004(u) of RCRA, 42 U.S.C.§ 6924(u).

B. PUBLIC COMMENTS

The only comments on the Proposed Remedy were submitted by BAE, then known as United Defense, L.P. ("UDLP") as enumerated and discussed below. BAE submitted seven (7) comments, discussed below:

1. Issue - EPA's description of the Facility waste stream (second paragraph of Facility Description) in the SB (page 1 under Section II.).

   BAE Comment - BAE proposes the following change to the Facility Description (beginning with the phrase "The largest waste stream . . . ."):
   "The largest waste stream is waste water containing chromium, zinc and acids from UDLP's metal pre-treatment coating process. The Dip Line process for chromate conversion coating of large aluminum components was discontinued in November 2003. Two Spray Lines for coating small aluminum parts with chromate conversion and for coating small steel parts with zinc phosphate continue to operate, but are slated for removal in 2005. Rinse waters from these processes are treated at an on- site Wastewater Treatment Plant and discharged under a National Pollutant Discharge Elimination System ("NPDES") permit issued by the Pennsylvania Department of Environmental Protection ("PADEP"). All remaining hazardous wastes are disposed via tank truck or stored in 55-gallon drums or other appropriate containers prior to off-site shipment."

   EPA Response - EPA agrees and the Final Decision hereby incorporates this change.

2. Issue - EPA statement from SB, page 3 - There is a reference to two sources of soil and groundwater contamination at the Facility: (1) a former Industrial Wastewater Treatment Plant ("IWTP") and (2) the area associated with SWMUs 20 through 24.

   BAE Comment – The May 1996 RCRA Facility Investigation ("RFI") report identified the two main areas that required remediation to be the West Warehouse Area (SWMU 18) and the Eastern Property Boundary Area (SWMUs 20 and 24). Additionally, the December 1998 Addendum to the RFI report summarized soil sampling activities at the former IWTP (refer to Table 2 in the Addendum). A review of the analytical results from soil sampling at the IWTP does not support EPA's claim on page 4 of the SB that soil at the IWTP "was contaminated with volatile organic compounds including PCE, TCE and cis-1,2-DCE". Therefore, UDLP recommends that the statement in question be modified as follows: "The RFI and RFI addendum revealed two sources of soil and groundwater contamination at the Facility: (1) the West Warehouse area (SWMU 18) and (2) the area associated with SWMUs 20 and 24."

   EPA Response - EPA agrees and the Final Decision hereby incorporates this change.

3. Issue - EPA Statement from SB, page 4: Because of item 2 above, and due to an inaccurate reference, the first three paragraphs of Section III., A., 2. need to be modified.

BAE Comment -Prior to the RFI, BAE discovered that there were two areas of the Facility contaminated with volatile organic compounds ("VOCs") including tetrachloroethene ("PCE"), trichloroethene ("TCE"), and cis-1,2-dichloroethene ("cis-1,2-DCE"). The levels of these contaminants were sufficiently high that BAE had already initiated interim measures to contain and remove these contaminants from the site soil and groundwater prior to the implementation of the RFI.

One location was at the West Warehouse Area (SWMU-18) where groundwater remediation was already underway. BAE successfully conducted soil remediation via an in-situ soil vacuum extraction ("SVE") system from November 1990 to April 1992.

The second location was at the Eastern Property Boundary Area ("EPBA") in SWMUs 20 and 24 where groundwater remediation was also underway prior to the RFI. BAE also operated an SVE system from April 1992 until December 1999. During this time, in-situ soils were remediated using SVE technology. Additionally, approximately 375 cubic yards of soil were excavated in 1996 and placed in ex-situ soil cells in order to expedite remedial efforts. In December 1999, both the in-situ and ex-situ soil vapor extraction systems were permanently shut down based on confirmatory soil sampling indicating that soil contaminant levels were below state- wide human health standards established by the DEP's Land Recycling Program. While the facility is an industrial site, residential cleanup values were used in order to provide a conservative evaluation of the analytical results.

In 1997, BAE also decommissioned its former Industrial Wastewater Treatment Plant, a Sludge Storage Tank, and its Sanitary/Domestic wastewater treatment plant, which were comprised of multiple SWMUs (1 through 6 and 11). Approximately 1,871 tons of non-hazardous debris and soils were disposed of during closure of these systems. Data included in Addendum 1 to the RFI report confirms that the former IWTP was not a source of VOCs.

EPA Response - EPA agrees and the Final Decision hereby incorporates this change.

4. Issue - EPA includes a reference to the number of wells used to monitor the effectiveness of the groundwater treatment systems on Page 5 of the SB, section III., B.

BAE Comment – No residential wells are currently being sampled as part of the monitoring program. A total of 10 groundwater monitoring wells and 7 groundwater collection wells are sampled on a quarterly basis as part of the approved NPDES monitoring program. The text in section III., B. of the SB should be updated to reflect the NPDES monitoring program.

EPA Response - EPA agrees and the Final Decision hereby incorporates this change.

5. Issue - EPA references Facility groundwater cleanup standards as being the drinking water maximum contaminant levels ("MCL") in Section IV of the SB and in the text of the "EPA Tentative Decision" section of the notice.

BAE Comment – BAE's NPDES permit allows the following: The cleanup operation shall continue until a minimum of one year of data of the untreated groundwater at all monitoring wells have documented a concentration that is protective of the environment (Part C, section III., D.). With the planned implementation of institutional controls, and the use of proper risk evaluation techniques, BAE feels that a commitment to MCLs is too stringent. BAE requests that the NPDES permit language related to cleanup standards be incorporated into the final remedy.

EPA Response - In response to BAE's comment, EPA requested additional information from United Defense to support its point of disagreement. Since subsequent to EPA's receipt of this comment, BAE agreed to accept EPA's language as originally stated in the SB, the Final Decision includes the MCLs as the groundwater cleanup levels.

6. Issue - EPA references a facility-lead agreement on page 9 of the SB (section V., B., 4.).

BAE Comment - BAE is not familiar with the term, facility-lead agreement. BAE requests clarification on what is meant by this term and when this agreement will be negotiated.

EPA Response - EPA had intended to incorporate BAE's current Corrective Action Permit requirements into a Facility-Lead Agreement between EPA and BAE and terminate BAE's Corrective Action Permit given that the Facility's NPDES permit includes the monitoring and treatment requirements necessary for completion of the final groundwater remedy. A Facility-Lead Agreement as used in Region III is a generic, non-enforceable agreement that encourages facilities to take the lead in addressing corrective action.

After reviewing BAE's comments to the SB, EPA has decided that a permit modification that incorporates the Facility's NPDES permit

by reference would serve the same purpose as a facility-lead agreement and would be a more straight forward approach. Accordingly, EPA will modify the Facility's existing Corrective Action Permit by deleting completed and obsolete provisions and by adopting the PADEP's NPDES permit requirements as the Facility's Corrective Action requirements. Under this approach, BAE's continued compliance with the Facility's NPDES permit will constitute compliance with the Final Remedy. A draft permit modification is attached.

Also, EPA refers BAE to the EPA's web site with information on a Facility-lead agreement:
www.epa.gov/reg3wcmd/correctiveaction.htm

7. Issue - Pending name change for United Defense, L.P.

BAE Comment - BAE Systems North America is in process of acquiring United Defense Industries, Inc. The anticipated acquisition date is May 2005 and United Defense, L.P. will change its name to "BAE Systems Land and Armaments, L.P."

EPA Response - The acquisition referred to in BAE's comment took place on June 24, 2005. The Final Decision now references BAE where appropriate.

III. DECLARATION

Based on the Administrative Record compiled for this Facility, I have determined that the Final Remedy as set forth in this Final Decision and Response to Comments along with the SB, which has been modified by Section B (PUBLIC COMMENTS), paragraphs 1, 2, 3 and 4, above, and which is incorporated herein by reference, as Attachment B, is appropriate and will be protective of human health and the environment.

Date: 3/6/06

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