BAE SYSTEMS

ORDNANCE SYSTEMS INC.
4050 Peppers Ferry Road, Route 114
Radford, VA 24141
Mail: P.O. Box 1, Radford, VA 24143
Telephone (540) 639-7323

4 December 2013

Mr. Robert Steele
Blue Ridge Regional Office
Virginia Department of Environmental Quality
3019 Peters Creek Road
Roanoke, VA 24019

Subject: Consent Order for BAE Systems OSI/U.S. Army for State Water Control Law Violations
Radford Army Ammunition Plant, Radford, VA (VPDES Permit No. VA0000248)

Dear Mr. Steele:

BAE Systems Ordnance Systems Inc. (OSI), operating contractor for Radford Army Ammunition Plant (RFAAP), respectfully submits two signed and notarized original copies of the Water Consent Order for the violations of State Water Control Law and the applicable permit and regulations.

If you should have any questions or comments, please contact Nichole Herschler at 540-639-8766 or nichole.herschler@baesystems.com.

Respectfully,

Jay Stewart
Environmental Manager

Coordination with RFAAP Staff:

Brad Jennings

Enclosure: Two (2) copies of the referenced Consent Order

cc: RFAAP ACO Staff/ Jennings
File

FedEx: #7972 9332 9252 (VDEQ)

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
Blue Ridge Regional Office
www.deq.virginia.gov

Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

Robert J. Weld
Regional Director

Lynchburg Office
7705 Timberlake Road
Lynchburg, Virginia 24502
(434) 582-5120
Fax (434) 582-5125

Roanoke Office
3019 Peters Creek Road
Roanoke, Virginia 24019
(540) 562-6700
Fax (540) 562-6725

STATE WATER CONTROL BOARD
ENFORCEMENT ACTION - ORDER BY CONSENT
ISSUED TO
UNITED STATES ARMY (OWNER)
AND
BAE SYSTEMS ORDNANCE SYSTEMS, INC. (OPERATOR)
FOR
RADFORD ARMY AMMUNITION PLANT
VPDES Permit No. VA0000248

SECTION A: Purpose

This is a Consent Order issued under the authority of Va. Code § 62.1-44.15, between the State Water Control Board and the United States Army (Owner) and BAE Systems Ordnance Systems, Inc. (Operator), regarding the Radford Army Ammunition Plant, for the purpose of resolving certain violations of State Water Control Law and the applicable permit and regulations.

SECTION B: Definitions

Unless the context clearly indicates otherwise, the following words and terms have the meaning assigned to them below:

1. "305(b) report" means the report required by Section 305(b) of the Clean Water Act (33 United States Code § 1315(b)), and Va. Code § 62.1-44.19:5 for providing Congress and the public an accurate and comprehensive assessment of the quality of State surface waters.

2. "Army" means the United States Army. The Army is a "person" within the meaning of Va. Code § 62.1-44.3.

3. "BAE" means BAE Systems Ordnance Systems, Inc., a corporation authorized to do business in Virginia and its affiliates, partners, and subsidiaries. BAE is a "person" within the meaning of Va. Code § 62.1-44.3.

4. "Board" means the State Water Control Board, a permanent citizens' board of the Commonwealth of Virginia, as described in Va. Code §§ 10.1-1184 and 62.1-44.7.

5. "BRRO-R" means the Blue Ridge Regional Office of DEQ, located in Roanoke, Virginia.

6. "Department" or "DEQ" means the Department of Environmental Quality, an agency of the Commonwealth of Virginia, as described in Va. Code § 10.1-1183.

7. "Director" means the Director of the Department of Environmental Quality, as described in Va. Code § 10.1-1185.

8. "Discharge" means discharge of a pollutant. 9 VAC 25-31-10.

9. "Discharge of a pollutant" when used with reference to the requirements of the VPDES permit program means:

   (a) Any addition of any pollutant or combination of pollutants to surface waters from any point source; or

   (b) Any addition of any pollutant or combination of pollutants to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation.

10. "DMR" means Discharge Monitoring Report.

11. "Effluent" means wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall.

12. "Facility" or "Plant" or "RFAAP" means the Radford Army Ammunition Plant, located at State Route 114 in Montgomery and Pulaski Counties, which treats and discharges treated effluent from its manufacturing processes under VPDES Permit No. VA0000248.

13. "Notice of Violation" or "NOV" means a type of Notice of Alleged Violation under Va. Code § 62.1-44.15.

14. "Order" means this document, also known as a "Consent Order" or "Order by Consent," a type of Special Order under the State Water Control Law.

15. "The Parties" means the United States Army (Owner) and BAE Systems Ordnance Systems, Inc. (Operator).

16. "Permit" means VPDES Permit No. VA0000248, which was issued under the State Water Control Law and the Regulation to the United States Army and Alliant Techsystems, Inc. on June 10, 2010 and was modified on July 1, 2012 to change the owner and operator from "United States Army and Alliant Techsystems, Inc." to "United States Army and BAE Systems Ordnance Systems, Inc.". The Permit expires on June 9, 2015.

17. "Pollutant" means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 USC § 2011 *et seq.*)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water… 9 VAC 25-31-10.

18. "Pollution" means such alteration of the physical, chemical or biological properties of any state waters as will or is likely to create a nuisance or render such waters: (i) harmful or detrimental or injurious to the public health, safety or welfare, or to the health of animals, fish or aquatic life; (ii) unsuitable with reasonable treatment for use as present or possible future sources of public water supply; or (iii) unsuitable for recreational, commercial, industrial, agricultural, or other reasonable uses; provided that (a) an alteration of the physical, chemical, or biological property of state waters, or a discharge or deposit of sewage, industrial wastes or other wastes to state waters by any owner which by itself is not sufficient to cause pollution, but which, in combination with such alteration of or discharge or deposit to state waters by other owners is sufficient to cause pollution; (b) the discharge of untreated sewage by any owner into state waters; and (c) contributing to the contravention of standards of water quality duly established by the board, are "pollution." Va. Code § 62.1-44.3.

19. "Regulation" means the VPDES Permit Regulation, 9 VAC 25-31-10 *et seq.*

20. "State Water Control Law" means Chapter 3.1(§ 62.1-44.2 *et seq.*) of Title 62.1 of the Va. Code.

21. "State waters" means all water, on the surface and under the ground, wholly or partially within or bordering the Commonwealth or within its jurisdiction, including wetlands. Va. Code § 62.1-44.3 and 9 VAC 25-210-10.

22. "Va. Code" means the Code of Virginia (1950), as amended.

23. "VAC" means the Virginia Administrative Code.

24. "VPDES" means Virginia Pollutant Discharge Elimination System.

25. "Warning Letter" or "WL" means a type of Notice of Alleged Violation under Va. Code § 62.1-44.15.

SECTION C: Findings of Fact and Conclusions of Law

1. The Army owns the Plant and BAE operates the Plant. The Permit allows the Parties to discharge treated effluent from the Plant, to the New River, in strict compliance with the terms and conditions of the Permit.

2. The New River is located in the New River Basin. The relevant segment of the New River is listed in DEQ's 305(b) report as impaired for PCBs. The cause of the impairment is unknown.

3. In submitting their DMRs, as required by the Permit, the Parties have indicated that they have exceeded discharge limitations contained in Part I.A.1 of the Permit for pH minimum concentration and pH maximum concentration, for the month of July 2012. In letters dated July 6, 2012 and July 13, 2012, the Parties have indicated that the pH limit exceedances were related to the accidental failure of an aboveground storage tank that released approximately 15,000 gallons of oleum (fuming sulfuric acid) to a concrete containment dike. Unknown to RFAAP personnel on the scene, the containment dike failed to hold the oleum. Subsequently, an estimated 7,500 gallons of the oleum was discharged to the ground/soil and mixed with stormwater from heavy thunderstorms that were in the area at the time of the incident. Because much of the oleum that escaped the containment dike came into contact with grassy areas and bare soil or soaked into the ground, it is impossible to estimate the amount of oleum that actually made it all the way to Outfall 005 of the New River (a distance of approximately 1 mile). Thus, an undetermined amount of the resulting acidified stormwater mixture flowed into Outfall 005 and was discharged to the New River. Soon after the leak in the containment dike was discovered, RFAAP utility department personnel were dispatched to the Outfall 005 lagoons to begin the process of neutralizing the acidified stormwater. After a short period of equilibrium, RFAAP resumed discharge of pH-neutral stormwater (meeting VPDES pH limits) to Outfall 005 of the New River.

4. On September 21, 2012, BRRO-R issued NOV No. W2012-09-W-0001 to the Parties for the pH exceedances.

5. The Parties responded to the September 2012 NOV by meeting at the Facility with DEQ staff on October 10, 2012 and with a letter dated October 31, 2012 describing the incident and BAE's response to the incident.

6. On October 15, 2012 at about 9:23 p.m., a recovered solvents tank at the Plant was overfilled, leading to the release of approximately 300-500 gallons of recovered solvent to a secondary containment structure. The spilled solvent consisted of 73.1% diethyl

ether. Because of a leak in a valve in the secondary containment, part of the released material drained into the collection system for Outfall 005. When the leak in the secondary containment was discovered at about 8:30 a.m. on October 16, 2012, Plant personnel diverted the flow from Outfall 005 into an empty settling basin and attempted to shut off flow through the outfall. An unknown volume of diethyl ether was discharged to the New River during the period between the overfill incident on October 15 and the time the secondary containment leak was discovered on October 16. In letters dated October 19, 2012 and January 31, 2013, the Parties explained that the overfill incident occurred because a manifold valve in a product storage tank that feeds a distillation column failed and allowed excess product to enter the distillation column. Backflow from the distillation column through an "unrecognized" connection to the recovered solvents tank caused the recovered solvents tank to overflow. The release of recovered solvent ended on October 16, 2012.

7. On December 6, 2012, BRRO-R issued NOV No. W2012-12-W-0001 to the Parties for the recovered solvent release.

8. The Parties responded to the December 2012 NOV by meeting at the Facility with DEQ staff on December 20, 2012 and with a letter dated January 31, 2013 describing the incident and BAE's response to the incident. The January 31 letter lists several measures the Parties have taken to prevent recurrence of this type of release.

9. In submitting their DMRs, as required by the Permit, the Parties have indicated that they have exceeded discharge limitations contained in Part I.A.1 of the Permit for di-n-butyl average quantity and toxicity maximum concentration, for the month of December 2012. The toxicity results reported on January 10, 2013 in the DMR for the month of December 2012 were based on quarterly monitoring that was performed in October 2012. The results of that monitoring were initially reported to DEQ by BAE in a letter dated November 8, 2012 and were reported again in the DMR for December 2012. In a phone conversation on March 1, 2013, a BAE representative indicated that the results of toxicity monitoring performed in January 2013 are in compliance with the discharge limitations of the Permit. In a phone conversation on March 5, 2013, a BAE representative explained that the di-n-butyl violation was related to laboratory procedure issues and that, because those issues have been clarified, that violation is not likely to recur.

10. On February 7, 2013, BRRO-R issued Warning Letter No. W2013-02-W-1001 to the Parties for the di-n-butyl and toxicity exceedances.

11. On March 21, 2013, Department staff met with representatives of the Parties to discuss the violations, including the Parties' written responses to the NOVs.

12. The Parties' operating logs indicate that they discharged treated wastewater from the Plant every day from July 1, 2012 through July 31, 2012, every day from October 1, 2012 through October 31, 2012, and every day from December 1, 2012 through December 31, 2012.

13. Va. Code § 62.1-44.5 states that: "[E]xcept in compliance with a certificate issued by the Board, it shall be unlawful for any person to discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances."

14. The Regulation, at 9 VAC 25-31-50, also states that except in compliance with a VPDES permit, or another permit issued by the Board, it is unlawful to discharge into state waters sewage, industrial wastes or other wastes.

15. Va. Code § 62.1-44.15(5a) states that a VPDES permit is a "certificate" under the statute.

16. The Department has issued no permits or certificates to the Parties other than VPDES Permit No. VA0000248.

17. The New River is a surface water located wholly within the Commonwealth and is a "state water" under State Water Control Law.

18. Based on the results of the meetings on October 10, 2012, December 20, 2012, and March 21, 2013, the DMRs submitted by the Parties on August 10, 2012 and January 10, 2013, and documents submitted by BAE on July 6 and 13, October 19 and 31, 2012, and January 31, 2013, the Board concludes that the Parties have violated Va. Code § 62.1-44.5 and 9 VAC 25-31-50, as described in paragraphs C(3), C(6), and C(9), above.

19. The Parties have submitted documentation that verifies that the violations as described in Paragraphs C(3), C(6), and C(9) above have been corrected.

20. By signing this Order, the United States Army does not waive sovereign immunity.

SECTION D: Agreement and Order

Accordingly, by virtue of the authority granted it in Va. Code §§ 62.1-44.15, the Board orders the BAE, and BAE agrees to pay a civil charge of $19,345.00 within 30 days of the effective date of the Order in settlement of the violations cited in this Order.

Payment shall be made by check, certified check, money order or cashier's check payable to the "Treasurer of Virginia," and delivered to:

Receipts Control
Department of Environmental Quality
Post Office Box 1104
Richmond, Virginia 23218

BAE shall include its Federal Employer Identification Number (FEIN) 54-189-2491 with the civil charge payment and shall indicate that the payment is being made in accordance with the requirements of this Order for deposit into the Virginia Environmental Emergency Response Fund (VEERF). If the Department has to refer collection of moneys due under this Order to the

Department of Law, BAE shall be liable for attorneys' fees of 30% of the amount outstanding.

SECTION E: Administrative Provisions

1. The Board may modify, rewrite, or amend this Order with the consent of the Parties for good cause shown by the Parties, or on its own motion pursuant to the Administrative Process Act, Va. Code § 2.2-4000 *et seq.*, after notice and opportunity to be heard.

2. This Order addresses and resolves only those violations specifically identified in Section C of this Order. This Order shall not preclude the Board or the Director from taking any action authorized by law, including but not limited to: (1) taking any action authorized by law regarding any additional, subsequent, or subsequently discovered violations; (2) seeking subsequent remediation of the facility; or (3) taking subsequent action to enforce the Order.

3. For purposes of this Order and subsequent actions with respect to this Order only, the Parties admit the jurisdictional allegations, and agree not to contest, but neither admit nor deny the findings of fact, and conclusions of law in this Order.

4. BAE consents to venue in the Circuit Court of the City of Richmond for any civil action taken to enforce the terms of this Order.

5. The Parties declare they have received fair and due process under the Administrative Process Act and the State Water Control Law and they waive the right to any hearing or other administrative proceeding authorized or required by law or regulation, and to any judicial review of any issue of fact or law contained herein. Nothing herein shall be construed as a waiver of the right to any administrative proceeding for, or to judicial review of, any action taken by the Board to modify, rewrite, amend, or enforce this Order.

6. Failure by the Parties to comply with any of the terms of this Order shall constitute a violation of an order of the Board. Nothing herein shall waive the initiation of appropriate enforcement actions or the issuance of additional orders as appropriate by the Board or the Director as a result of such violations. Nothing herein shall affect appropriate enforcement actions by any other federal, state, or local regulatory authority.

7. If any provision of this Order is found to be unenforceable for any reason, the remainder of the Order shall remain in full force and effect.

8. The Parties shall be responsible for failure to comply with any of the terms and conditions of this Order unless compliance is made impossible by earthquake, flood, other acts of God, war, strike, or such other unforeseeable circumstances beyond its control and not due to a lack of good faith or diligence on their part. The Parties shall demonstrate that such circumstances were beyond their control and not due to a lack of good faith or diligence on their part. The Parties shall notify the DEQ Regional Director verbally within 24 hours and in writing within three business days when circumstances are anticipated to occur, are

occurring, or have occurred that may delay compliance or cause noncompliance with any requirement of the Order. Such notice shall set forth:

a. the reasons for the delay or noncompliance;

b. the projected duration of any such delay or noncompliance;

c. the measures taken and to be taken to prevent or minimize such delay or noncompliance; and

d. the timetable by which such measures will be implemented and the date full compliance will be achieved.

Failure to so notify the Regional Director verbally within 24 hours and in writing within three business days, of learning of any condition above, which the Parties intend to assert will result in the impossibility of compliance, shall constitute a waiver of any claim to inability to comply with a requirement of this Order.

9. This Order is binding on the parties hereto and any successors in interest, designees and assigns, jointly and severally.

10. This Order shall become effective upon execution by both the Director or his designee and the Parties.

11. This Order shall continue in effect until:

a. the Director or his designee terminates the Order after the Parties have completed all of the requirements of the Order;

b. the Parties petition the Director or his designee to terminate the Order after they have completed all of the requirements of the Order and the Director or his designee approves the termination of the Order; or

c. the Director or Board terminates the Order in his or its sole discretion upon 30 days' written notice to the Parties.

Termination of this Order, or any obligation imposed in this Order, shall not operate to relieve the Parties from their obligation to comply with any statute, regulation, permit condition, other order, certificate, certification, standard, or requirement otherwise applicable.

12. In accordance with the Federal Anti-Deficiency Act, the obligations of the Army under this section are expressly conditioned on the availability of Congressional appropriations, which the Army agrees to seek in amounts sufficient to timely accomplish these undertakings. If sufficient appropriations are not available and cannot be obtained, the Army will promptly

inform the DEQ Regional Director. In such case, the Director may terminate the Order and take other action, if so desired, or amend the Order with the Parties' consent or in accordance with the Administrative Process Act.

13. Any plans, reports, schedules or specifications attached hereto or submitted by the Parties and approved by the Department pursuant to this Order are incorporated into this Order. Any non-compliance with such approved documents shall be considered a violation of this Order.

14. The undersigned representatives of the Parties each certify that he or she is a responsible official authorized to enter into the terms and conditions of this Order and to execute and legally bind the Parties to this document. Any documents to be submitted pursuant to this Order shall also be submitted by a responsible official of the Parties.

15. This Order constitutes the entire agreement and understanding of the parties concerning settlement of the violations identified in Section C of this Order, and there are no representations, warranties, covenants, terms or conditions agreed upon between the parties other than those expressed in this Order.

16. By their signatures below, the Parties voluntarily agree to the issuance of this Order.

And it is so ORDERED this _____ day of _____, 2013.

_____
Robert J. Weld, Regional Director
Department of Environmental Quality

The United States Army, RFAAP, voluntarily agrees to the issuance of this Order.

Date: 8 January 2014 By: Luis A. Ortiz (Person), LTC / Commander RAAP Army (Title)

Commonwealth of Virginia

City/County of Montgomery

The foregoing document was signed and acknowledged before me this 8 day of January, 2014, by LTC Luis A. Ortiz who is Commander of the Radford Army Ammunition Plant, on behalf of the Army.

Benjamin M. Grady
Notary Public

7107154
Registration No.

My commission expires: 10/31/15

Date: _____ By: _____ (Person), _____ (Title)

Commonwealth of Virginia

City/County of _____

BENJAMIN M. GRADY
NOTARY PUBLIC
REGISTRATION # 7107154
COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES
OCTOBER 31, 2015

BAE Systems Ordnance Systems, Inc, voluntarily agrees to the issuance of this Order.

Date: 6 December 2013 By: [signature], VP Operations & EHSS Governance
(Person) (Title)
Todd D. Hayes

~~Commonwealth of Virginia~~ State of TENNESSEE
~~City~~/County of Sullivan

The foregoing document was signed and acknowledged before me this 6th day of December, 2013, by Todd D. Hayes who is Vice President - Operations, on behalf of the corporation.

Linda McKamey
Notary Public

N/A
Registration No.

My commission expires: 7/18/17

Notary seal:

LINDA FAYE MCKAMEY
STATE OF TENNESSEE NOTARY PUBLIC
SULLIVAN COUNTY
My Commission Expires 07-18-2017