STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Air Pollution Control
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor
Nashville, TN 37243

Certified Article Number
9414 7266 9904 2154 5160 29
SENDER'S RECORD

January 26, 2021

C T Corporation System
300 Montvue Road
Knoxville, Tennessee 37919-5546

RE: BAE Systems Ordnance Systems Inc.
File ID. 37-0028
Case No. APC20-0114

Dear Sir or Madam:

Enclosed please find an Order issued by Michelle Walker Owenby, Technical Secretary of the Air Pollution Control Board, Tennessee Department of Environment and Conservation, in the above-referenced matter. Please read it carefully and pay special attention to the NOTICE OF RIGHTS section.

If you have any questions regarding this Order, please contact attorney Grant Ruhl at (615) 313-5682 or via e-mail at Grant.Ruhl@tn.gov. For all other questions, please contact the Division at (615) 532-0554 or via e-mail to air.pollution.control@tn.gov.

Sincerely,

Kevin McLain
Section Manager, Enforcement
Division of Air Pollution Control

vom

Enclosure

TENNESSEE AIR POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	**DIVISION OF AIR POLLUTION CONTROL**
BAE SYSTEMS ORDNANCE SYSTEMS INC.	)	
	)	**CASE NO. APC20-0114**
RESPONDENT	)	

TECHNICAL SECRETARY'S ORDER AND ASSESSMENT OF CIVIL PENALTY

Comes now, Michelle Walker Owenby, Technical Secretary of the Air Pollution Control Board, and states that:

PARTIES

I.

Michelle Walker Owenby is the Technical Secretary of the Air Pollution Control Board ("Board") and Director of the Division of Air Pollution Control ("Division"), Tennessee Department of Environment and Conservation ("Department").

II.

BAE Systems Ordnance Systems Inc. ("Respondent") is a foreign corporation formed in Delaware and authorized to do business in the State of Tennessee. Respondent's facility address is 4509 West Stone Drive, Kingsport, Tennessee. Respondent's registered agent for service of process is C T Corporation System, 300 Montvue Road, Knoxville, Tennessee 37919-5546.

AUTHORITY

III.

Pursuant to Tennessee Code Annotated ("Tenn. Code Ann.") § 68-201-116, the Technical Secretary may assess a civil penalty of up to $25,000 per day for each day of violation of the Tennessee Air Quality Act ("Act") or any rules or regulations promulgated thereunder ("Division Rules") against any person who violates said Act or Division Rules, and/or the Technical Secretary may issue an order for correction to the responsible person when provisions of the Act or Division

Rules are violated. In addition, such person may also be liable for any damages to the State resulting therefrom.

IV.

Respondent is a "person" within the meaning of Tenn. Code Ann. § 68-201-102 and has violated the Division Rules as hereinafter stated.

V.

"Air contaminant" means particulate matter, dust, fumes, gas, mist, smoke, vapor, or any combinations thereof, as stated in Tenn. Code Ann. § 68-201-102.

VI.

"Air contaminant source" means any and all sources of emission of air contaminants, whether privately or publicly owned or operated, as stated in Tenn. Code Ann. § 68-201-102.

VII.

Respondent operates an "air contaminant source" within the meaning of Tenn. Code Ann. § 68-201-102.

FACTS

VIII.

On June 26, 2018, the Technical Secretary issued Title V operating permit number 568188 ("Permit 568188"), emission source reference number 37-0028, to Respondent for the manufacturing of explosives. On May 28, 2019, the Technical Secretary issued Significant Modification #1 to Permit 568188.

IX.

Condition E4-4 of Permit 568188 requires Respondent to comply with the applicable provisions of 40 CFR Part 63, Subpart DDDDD (National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters). Subpart DDDDD establishes the following requirements:

- Sections 63.7520(c) and 63.7530(b), and Table 7 to Subpart DDDDD require owners or operators complying with a mercury emission limit using activated carbon injection to establish a site-specific minimum activated carbon injection rate operating limit using data from the activated carbon rate monitors and mercury performance test. Owners or operators must determine the lowest hourly average established during the performance test as the operating limit. When an affected unit operates at lower loads, owners or operators must determine the required injection rate by multiplying the activated carbon injection rate by the load fraction. Section 63.7575 defines the load fraction as the actual heat input of a boiler or process heater divided by heat input during the performance test that established the minimum activated carbon injection rate.
- Section 63.7540(a) and Table 8 to Subpart DDDDD require owners or operators using carbon injection to demonstrate continuous compliance by collecting the carbon injection rate monitoring system data; reducing the data to 30-day rolling averages; and maintaining the 30-day rolling average carbon injection rate at or above the minimum carbon injection rate.

X.

On August 28, 2020, the Division received via e-mail Respondent's 40 CFR Part 63, Subpart DDDDD semiannual report ("MACT SAR") for the reporting period of January 1 through June 30, 2020. The MACT SAR indicated the following violations of condition E4-4 of Permit 568188 where the brominated powdered activated carbon (BPAC) sorbent injection rate continuous monitoring system (CMS) indicated BPAC injection rates below the required minimum values on the dates shown in Tables 1 and 2.

Table 1: Sorbent Injection Rate Deviations, Unit 2

Date	Measured 30-Day Average Sorbent Injection Rate (lb/hr)	Required 30-Day Average Sorbent Injection Rate (lb/hr)
1/1/2020	10.1	15.41
1/2/2020	9.52	15.42
1/3/2020	10.33	15.38
1/4/2020	9.25	15.35
1/5/2020	9.06	15.35

Table 1: Sorbent Injection Rate Deviations, Unit 2		
Date	**Measured 30-Day Average Sorbent Injection Rate (lb/hr)**	**Required 30-Day Average Sorbent Injection Rate (lb/hr)**
1/6/2020	8.47	15.35
1/7/2020	8	15.36
1/8/2020	8.37	15.41
1/9/2020	8.06	15.42
1/10/2020	8.19	15.34
1/11/2020	8.96	15.31
1/12/2020	9.32	15.27
1/13/2020	9.54	15.20
1/14/2020	9.21	15.20
1/15/2020	9.16	15.22
1/16/2020	9.55	15.26
1/17/2020	9.49	15.32
1/18/2020	5.62	15.37
1/19/2020	5.27	15.37
1/20/2020	5.93	15.43
1/21/2020	4.74	15.46
1/22/2020	5.66	15.52
1/23/2020	5.27	15.59
1/24/2020	11.29	15.64
1/25/2020	15.62	15.69
1/26/2020	14.89	15.84
1/27/2020	15.66	16.03
1/28/2020	15.16	16.24
1/29/2020	14.71	16.39
1/30/2020	13.76	16.55
1/31/2020	14.23	16.69
2/1/2020	15.78	16.84
2/2/2020	12.99	17.03
2/3/2020	10.95	17.22
2/4/2020	11.54	17.37
2/5/2020	12.38	17.56
2/6/2020	12.61	17.69
2/7/2020	11.6	17.86
2/8/2020	12.02	18.02

Table 1: Sorbent Injection Rate Deviations, Unit 2		
Date	**Measured 30-Day Average Sorbent Injection Rate (lb/hr)**	**Required 30-Day Average Sorbent Injection Rate (lb/hr)**
2/9/2020	12.8	18.23
2/10/2020	11.33	18.41
2/11/2020	11.25	18.64
2/12/2020	10.79	18.87
2/13/2020	10.62	19.07
2/14/2020	8.59	19.26
2/15/2020	8.2	19.44
2/16/2020	8.79	19.56
2/17/2020	13.92	19.68
2/18/2020	14.9	19.77
2/19/2020	14.1	19.82
2/20/2020	14.49	19.79
2/21/2020	13.52	19.80
2/22/2020	14.3	19.84
2/23/2020	9.71	19.86
2/24/2020	5.21	19.86
2/25/2020	6.44	19.72
2/26/2020	5.08	19.57
2/27/2020	5.16	19.41
2/28/2020	6.13	19.30
2/29/2020	8.52	19.12
3/1/2020	7.87	18.94
3/2/2020	7.03	18.80
3/3/2020	8.95	18.62
3/4/2020	11.43	18.41
3/5/2020	11.31	18.29
3/6/2020	11.68	18.20
3/7/2020	9.55	18.07
3/8/2020	8.78	17.87
3/9/2020	5.31	17.70
3/10/2020	3.53	17.53
3/11/2020	3.67	17.34
3/12/2020	4.86	17.14
3/13/2020	4.72	16.95

Table 1: Sorbent Injection Rate Deviations, Unit 2		
Date	**Measured 30-Day Average Sorbent Injection Rate (lb/hr)**	**Required 30-Day Average Sorbent Injection Rate (lb/hr)**
3/14/2020	3.11	16.75
Total number of 30-day averages: 182 Number of deviations: 74 Deviation percentage: 40.7%		

Table 2: Sorbent Injection Rate Deviations, Unit 4		
Date	**Measured 30-Day Average Sorbent Injection Rate (lb/hr)**	**Required 30-Day Average Sorbent Injection Rate (lb/hr)**
1/1/2020	19.21	23.48
1/2/2020	19.54	23.54
1/3/2020	19.65	23.55
1/4/2020	19.92	23.57
1/5/2020	20.13	23.61
1/6/2020	20.14	23.64
1/7/2020	20.15	23.67
1/8/2020	20.49	23.75
1/9/2020	20.63	23.80
1/10/2020	20.85	23.70
1/11/2020	20.59	23.59
1/12/2020	20.65	23.46
1/13/2020	20.54	23.32
1/14/2020	20.13	23.26
1/15/2020	20.23	23.20
1/16/2020	20.71	23.19
1/17/2020	21.2	23.22
1/18/2020	21.64	23.26
1/19/2020	22.07	23.23
1/20/2020	22.69	23.27
1/21/2020	23.16	23.28
4/1/2020	22.88	23.37
4/2/2020	22.48	23.41
4/3/2020	22.14	23.48
4/4/2020	21.71	23.44

Table 2: Sorbent Injection Rate Deviations, Unit 4		
Date	**Measured 30-Day Average Sorbent Injection Rate (lb/hr)**	**Required 30-Day Average Sorbent Injection Rate (lb/hr)**
4/5/2020	21.37	23.35
4/6/2020	21.23	23.32
4/7/2020	20.99	23.31
4/8/2020	20.78	23.28
4/9/2020	20.57	23.24
4/10/2020	20.2	23.25
4/11/2020	19.59	23.28
4/12/2020	19.87	23.27
4/13/2020	20.5	23.13
4/14/2020	21.18	23.03
4/15/2020	21.44	22.94
4/16/2020	21.75	22.87
4/17/2020	21.77	22.82
4/18/2020	21.42	22.73
4/19/2020	21.28	22.76
4/20/2020	20.84	22.79
4/21/2020	20.48	22.77
4/22/2020	20.07	22.73
4/23/2020	20.13	22.63
4/24/2020	20.88	22.53
4/25/2020	21.62	22.56
4/26/2020	21.62	22.59
4/27/2020	21.82	22.64
4/28/2020	22.61	22.63
5/10/2020	22.29	22.52
5/11/2020	22.15	22.48
5/12/2020	21.62	22.46
5/13/2020	20.86	22.52
5/14/2020	19.77	22.56
5/15/2020	18.88	22.53
5/16/2020	17.75	22.44
5/17/2020	16.86	22.33
5/18/2020	16.05	22.21
5/19/2020	14.91	22.08

Table 2: Sorbent Injection Rate Deviations, Unit 4		
Date	**Measured 30-Day Average Sorbent Injection Rate (lb/hr)**	**Required 30-Day Average Sorbent Injection Rate (lb/hr)**
5/20/2020	14.56	21.98
5/21/2020	13.88	21.86
5/22/2020	13	21.75
5/23/2020	12.26	21.66
5/24/2020	11.5	21.59
5/25/2020	10.76	21.44
5/26/2020	10.76	21.30
5/27/2020	10.57	21.12
5/28/2020	9.8	20.94
5/29/2020	8.95	20.81
5/30/2020	8.09	20.68
5/31/2020	7.31	20.62
6/1/2020	6.45	20.71
6/2/2020	5.61	20.88
6/3/2020	4.75	20.94
6/4/2020	3.87	20.78
6/5/2020	3.13	20.65
6/6/2020	2.64	20.55
6/7/2020	2.22	20.43
6/8/2020	1.82	20.25
6/9/2020	1.48	20.08
6/10/2020	1.35	19.97
6/11/2020	1.5	19.96
6/12/2020	2.13	19.87
6/13/2020	2.92	19.78
6/14/2020	3.65	19.78
6/15/2020	4.34	19.78
6/16/2020	5.05	19.80
6/17/2020	5.81	19.77
6/18/2020	6.57	19.75
6/19/2020	6.85	19.66
6/20/2020	7.44	19.60
6/21/2020	8.26	19.16
Total number of 30-day averages: 173		

Table 2: Sorbent Injection Rate Deviations, Unit 4		
Date	**Measured 30-Day Average Sorbent Injection Rate (lb/hr)**	**Required 30-Day Average Sorbent Injection Rate (lb/hr)**
Number of deviations: 92 Deviation percentage: 53.2%		

Respondent submitted the following information regarding the deviations identified above:

1. Both systems had 30-day averages below the load fraction at the beginning of the reporting period due to carryover from the previous reporting period[1].

2. The monitor fluctuates greatly, and there is interference with the equipment accuracy due to dust buildup on the equipment, pressure blowback from the blower system, and periods of cleaning these areas.

3. A subject matter expert was consulted to determine a corrective action. Recent equipment replacements completed include installation of venturis on both lines which has improved vacuum and educator operation. The venturi has eliminated the need for a blower, which was determined to be the primary cause of backpressure issues.

4. The BPAC readings have stabilized and minimal pressure/vacuum is being measured in the volumetric weigh-hopper.

5. An action plan consisting of additional equipment replacement, including scale vendor pressure compensation kits, upsized supply lines and injection lances, and ultimately a redesigned supply system with new eductors and blowers, has been developed. If interference continues or worsens this action plan will be executed as expeditiously as possible based on equipment supply and boiler shutdown schedules to ensure the sorbent injection monitoring system complies with regulatory requirements.

[1]Deviations for the period of July 1 through December 31, 2019, were addressed in Technical Secretary's Order APC20-0047. The 30-day rolling averages for January 2020 would be affected, in part, by the prior deviations.

XI.

On September 15, 2020, the Division issued a Notice of Violation to Respondent for the violations discussed in paragraph **X**.

VIOLATIONS

XII.

By failing to comply with condition E4-4 of Permit 568188, as discussed herein, Respondent violated Division Rule 1200-03-09-.02(6), which states, in pertinent part:

Operation of each air contaminant source shall be in accordance with the provisions and stipulations set forth in the operating permit, all provisions of these regulations, and all provisions of the Tennessee Air Quality Act.

RELIEF

XIII.

WHEREFORE, PREMISES CONSIDERED, I, Michelle Walker Owenby, Technical Secretary, under the authority vested in me, hereby order as follows:

1. Respondent is assessed a Civil Penalty in the amount of **$12,000** for the violation of Division Rules, as discussed herein.

2. Respondent shall pay the assessed Civil Penalty in full as follows: Payments of the civil penalty and/or damages shall be made payable to the "Treasurer, State of Tennessee" and sent to the Division of Fiscal Services - Consolidated Fees Section, Tennessee Department of Environment and Conservation, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 10th Floor, Nashville, Tennessee 37243. The case number, **APC20-0114**, should be clearly shown on the check or money order to ensure that the payment is properly credited. Payment shall be made on or before the 31st day after receipt of this Order and Assessment.

DEPARTMENT'S RESERVATION OF RIGHTS

In issuing this Order and Assessment, the Department does not implicitly or expressly waive any provision of the Act or the regulations promulgated thereunder or the authority to assess costs, civil penalties, and/or damages incurred by the State against the Respondent. The Department expressly reserves all rights it has at law and in equity to order further corrective action, assess civil penalties and/or damages, and to pursue further enforcement action including, but not limited to, monetary and injunctive relief. Compliance with this order will be considered as a mitigating factor in determining the need for future enforcement action(s).

NOTICE OF RIGHTS

Tenn. Code Ann. §§ 68-201-108(a) and 68-201-116(b), allow Respondent to appeal this Order and Assessment. To do so, a written petition setting forth the grounds (reasons) for

requesting a hearing must be RECEIVED by the Technical Secretary within 30 DAYS of the date Respondent received this Order and Assessment or this Order and Assessment becomes final (not subject to review).

If an appeal is filed, an initial hearing of this appeal will be conducted by an Administrative Law Judge ("ALJ") as a contested case hearing pursuant to the provisions of Tenn. Code Ann. § 68-201-108(a), Tenn. Code Ann. § 4-5-301 *et seq.* (the Uniform Administrative Procedures Act), and Tenn. Comp. R. & Regs. 1360-04-01 *et seq.* (the Department of State's Uniform Rules of Procedure for Hearing Contested Cases Before State Administrative Agencies). Such hearings are legal proceedings in the nature of a trial. Individual respondents may represent themselves or be represented by an attorney licensed to practice law in Tennessee. **Artificial respondents (corporations, limited partnerships, limited liability companies, etc.) cannot engage in the practice of law and therefore may only pursue an appeal through an attorney licensed to practice law in Tennessee.** Low-income individuals may be eligible for representation at reduced or no cost through a local bar association or legal aid organization.

At the conclusion of any initial hearing, the ALJ has the authority to affirm, modify, or deny this Order and Assessment. This includes the authority to modify (decrease or increase) the penalty within the statutory confines of Tenn. Code Ann. § 68-201-116 (up to $25,000 per day per violation). Furthermore, the ALJ on behalf of the Board has the authority to assess additional damages incurred by the Department including, but not limited to, all docketing expenses associated with the setting of the matter for a hearing and the hourly fees incurred due to the presence of the ALJ and a court reporter.

Any petition for review (appeal) must be directed to the Technical Secretary, Tennessee Division of Air Pollution Control, c/o Jenny L. Howard, General Counsel, Department of Environment and Conservation, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 2nd Floor, Nashville, Tennessee 37243. An appeal may also be filed by sending the petition to the following email address: TDEC.Appeals@tn.gov. Payments of the civil penalty and/or damages shall be made payable to the "Treasurer, State of Tennessee" and sent to the Division of Fiscal Services - Consolidated Fees Section, Tennessee Department of Environment and Conservation, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 10th Floor, Nashville, Tennessee 37243. Technical questions and other correspondence involving compliance issues should be sent to Attn: Tammy Gambill, Division of Air Pollution Control, William R.

Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 15th Floor, Nashville, Tennessee 37243 or via e-mail to air.pollution.control@tn.gov. Attorneys should contact the undersigned counsel of record. **The case number, APC20-0114, should be written on all correspondence regarding this matter.**

Issued by the Technical Secretary, Tennessee Air Pollution Control Board, Department of Environment and Conservation, on this 26th day of January, 2021.

Michelle W. Owenby
Technical Secretary
Tennessee Air Pollution Control Board

Reviewed by:

Grant LeMaster Ruhl
BPR # 036182
Assistant General Counsel
Department of Environment & Conservation
312 Rosa L. Parks Avenue, 2nd Floor
Nashville, Tennessee 37243
(615) 313-5682
Grant.Ruhl@tn.gov