



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

PIEDMONT REGIONAL OFFICE

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Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

Michael P. Murphy
Regional Director

November 30, 2015

Mr. Fredrick Harry, Plant Manager
Honeywell Resins and Chemicals, LLC.
905 East Randolph Road
Hopewell, Virginia 23860

NOTICE OF VIOLATION

RE: NOV No. APRO000305-001
Honeywell Resins and Chemicals, LLC.
Registration #: 50232

Dear Mr. Harry:

This letter notifies you of information upon which the Department of Environmental Quality ("Department" or "DEQ") may rely in order to institute an administrative or judicial enforcement action. Based on this information, DEQ has reason to believe that Honeywell Resins and Chemicals, LLC. ("Facility") may be in violation of the Air Pollution Control Law and Regulations.

This letter addresses conditions at the Facility named above, and also cites compliance requirements of the Air Pollution Control Law and Regulations. Pursuant to Va. Code § 10.1-1309 (A) (vi), this letter is not a case decision under the Virginia Administrative Process Act, Va. Code § 2.2-4000 *et seq.* The Department requests that you respond **within 10 days of the date of this letter** to arrange a prompt meeting.

OBSERVATIONS AND LEGAL REQUIREMENTS

Honeywell International, Inc owns and operates a caprolactam manufacturing facility at 905 East Randolph Road in Hopewell Virginia. The caprolactam production facility is subject to a New Source Review Permit (NSR Permit) dated February 19, 2015, a Title V permit dated October 1, 2014, and a Consent Decree that became effective on July 18, 2013. The following observations and legal requirements are organized below by emissions unit and pollutant.

DISULFONATE TOWER TW-18

The sulfur dioxide (SO₂) emissions are limited by the NSR Permit dated February 19, 2015 condition 112 and Title V permit dated October 1, 2014 condition 101. The following describes the staff's factual observations and identifies the applicable legal requirements:

Observation:

Honeywell conducted a stack test on hydroxylamine diammonium sulfonate TW-18 at four different sulfur process rates on May 12, 2015 and May 13, 2015. The test results were submitted to the DEQ on August 6, 2015. The results showed the following sulfur process and SO₂ emissions rates:

At the process rate of 14,500 lbs sulfur/hr the emissions rate was 3.77 lbs/hr SO₂.

At the process rate of 13,000 lbs sulfur/hr the emission rate was 3.54 lbs/hr SO₂.

At the process rate of 11,000 lbs sulfur/hr the emissions rate was 3.01 lbs/hr SO₂.

At the process rate of 9,000 lbs sulfur/hr the emissions rate was 0.72 lbs/hr SO₂.

Disulfonate tower TW-18 is subject to the Phase 3 emissions limit of 2.2 lbs/hr SO₂.

Honeywell also submitted a letter dated September 24, 2015 stating that the SO₂ hourly emission limit was exceeded.

Legal Requirements:

Condition 112 of the NSR Permit and condition 101 of the Title V Permit state,

"Sulfur dioxide emissions from the operation of the hydroxylamine diammonium sulfonate towers shall not exceed the limits specified below. Annual emissions shall be calculated monthly as the sum of each previous consecutive 12 month period. Phases 1-5 shall be defined as specified in Condition #107.

(Annual Omission Chart omitted)

Hourly Emissions (lbs/hr)	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
A: TW-62	9.7	9.7 ¹	9.7 ¹	2.2	2.2
B: TW-9	17.0	17.0 ¹	2.2 ¹	2.2	2.2
C: TW-18	1.7	2.2 ¹	2.2 ¹	2.2	2.2
D: TW-23	1.7	1.7	1.7	1.7	2.2 ²
E: TW-33	2.1	2.1	2.1	2.1	2.1 ²

¹Upon notification of the Director, Piedmont Regional Office, the permittee may elect to swap the order in which SCR systems are installed and emission limits are revised for "A", "B" and "C" trains.

²Upon notification of the Director, Piedmont Regional Office, the permittee may elect to swap the towers on which SCR systems are installed and emission limits are revised between the "D" and "E" train ammonium nitrite and/or hydroxylamine diammonium sulfonate towers.

(9 VAC 5-80-1180 and 9 VAC 5-50-260)"

DISULFONATE TOWER TW-23

The particulate matter (PM), particulate matter 10 (PM10) microns and less, and particulate matter 2.5 (PM2.5) microns and less emissions are limited by the following: (1) NSR permit dated February 19, 2015 conditions 109, 110 and 111; (2) Title V Permit dated October 1, 2014 conditions 98, 99 and 100. The PM and PM10 emissions are also limited by the EPA/DEQ/Honeywell Consent Decree condition 21 that became effective on July 18, 2013. The following describes the staff's factual observations and identifies the applicable legal requirements:

Observation:

Honeywell conducted a stack test on the hydroxylamine diammonium sulfonate tower TW-23 on June 12, 2015. The test results were submitted to the DEQ on September 30, 2015. The results showed the following emission rates:

2.92 lbs/hr PM, 2.99 lbs/hr PM10 and 2.5 lbs/hr PM2.5

Disulfonate tower TW-23 is subject to the Phase 3 limits as follows:

1.2 lbs/hr PM, 1.2 lbs/hr PM10 and 0.6 lbs/hr PM2.5

Honeywell also submitted a letter dated September 24, 2015 stating that the PM, PM10 and PM2.5 hourly emissions limits were exceeded.

Legal Requirements:

Conditions 109, 110 and 111 of the NSR Permit, conditions 98, 99 and 100 of the Title V Permit limit Particulate Matter (PM), Particulate Matter 10 microns and less (PM10) and Particulate Matter 2.5 microns and less (PM2.5). Condition 21 of the July 18, 2013, Consent Decree limits PM and PM10. The limits are stated below:

PARTICULATE MATTER

"Particulate matter emissions from the operation of the ammonium nitrite and hydroxylamine diammonium sulfonate towers shall not exceed the limits specified below. Annual emissions shall be calculated monthly as the sum of each previous consecutive 12 month period. Phases 1-5 shall be defined as specified in Condition #107.

(Annual Emissions chart omitted)

Hourly Emissions (lbs/hr)	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
A: TW-2	11.1	11.1 ¹	11.1 ¹	1.4	1.4
B: TW-8	3.8	3.8 ¹	1.4 ¹	1.4	1.4
C: TW-17	21.2	1.4 ¹	1.4 ¹	1.4	1.4
D: TW-22	3.8	3.8	3.8	3.8	1.4 ²
E: TW-32	1.4	1.4	1.4	1.4	1.4 ²
A: TW-62	1.2	1.2 ¹	1.2 ¹	1.7	1.7
B: TW-9	1.2	1.2 ¹	1.8 ¹	1.8	1.8
C: TW-18	1.2	1.7 ¹	1.7 ¹	1.7	1.7
D: TW-23	1.2	1.2	1.2	1.2	1.7 ²
E: TW-33	1.6	1.6	1.6	1.6	1.6 ²

¹Upon notification of the Director, Piedmont Regional Office, the permittee may elect to swap the order in which SCR systems are installed and emission limits are revised for "A", "B" and "C" trains.

²Upon notification of the Director, Piedmont Regional Office, the permittee may elect to swap the towers on which SCR systems are installed and emission limits are revised between the "D" and "E" train ammonium nitrite and/or hydroxylamine diammonium sulfonate towers.
 (9 VAC 5-80-1180 and 9 VAC 5-50-260)"

PARTICULATE MATTER 10 microns and less

"Particulate matter (PM-10) emissions from the operation of the ammonium nitrite and hydroxylamine diammonium sulfonate towers shall not exceed the limits specified below. Annual emissions shall be calculated monthly as the sum of each previous consecutive 12 month period. Phases 1-5 shall be defined as specified in Condition #107.

(Annual Emissions chart omitted)

Hourly Emissions (lbs/hr)	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
A: TW-2	4.0*	4.0 ¹ *	4.0 ¹ *	2.8	2.8
B: TW-8	1.9*	1.9 ¹ *	2.8 ¹	2.8	2.8
C: TW-17	7.6*	2.8 ¹	2.8 ¹	2.8	2.8
D: TW-22	1.9*	1.9*	1.9*	1.9*	2.8 ²
E: TW-32	0.7*	0.7*	0.7*	0.7*	2.8 ²
A: TW-62	1.2*	1.2 ¹ *	1.2 ¹ *	4.3	4.3
B: TW-9	1.2*	1.2 ¹ *	4.5 ¹	4.5	4.5
C: TW-18	1.2*	4.1 ¹	4.1 ¹	4.1	4.1
D: TW-23	1.2*	1.2*	1.2*	1.2*	3.8 ²
E: TW-33	1.6*	1.6*	1.6*	1.6*	3.7 ²

¹Upon notification of the Director, Piedmont Regional Office, the permittee may elect to swap the order in which SCR systems are installed and emission limits are revised for "A", "B" and "C" trains.

²Upon notification of the Director, Piedmont Regional Office, the permittee may elect to swap the towers on which SCR systems are installed and emission limits are revised between the "D" and "E" train ammonium nitrite and/or hydroxylamine diammonium sulfonate towers.

*These limits include only filterable particulate.

(9 VAC 5-80-1180 and 9 VAC 5-50-260)"

PARTICULATE MATTER 2.5 microns and less

"Particulate matter (PM-2.5) emissions from the operation of the ammonium nitrite and hydroxylamine diammonium sulfonate towers shall not exceed the limits specified below. Annual emissions shall be calculated monthly as the sum of each previous consecutive 12 month period. Phases 1-5 shall be defined as specified in Condition #107.

(Annual Emissions chart omitted)

Hourly Emissions (lbs/hr)	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
A: TW-2	2.0*	2.0 ¹ *	2.0 ¹ *	2.8	2.8
B: TW-8	1.0*	1.0 ¹ *	2.8 ¹	2.8	2.8
C: TW-17	3.8*	2.8 ¹	2.8 ¹	2.8	2.8
D: TW-22	0.4*	0.4*	0.4*	0.4*	2.8
E: TW-32	0.4*	0.4*	0.4*	0.4*	2.8
A: TW-62	0.6*	0.6 ¹ *	0.6 ¹ *	3.7	3.7
B: TW-9	0.6*	0.6 ¹ *	3.8 ¹	3.8	3.8
C: TW-18	0.6*	3.5 ¹	3.5 ¹	3.5	3.5
D: TW-23	0.6*	0.6*	0.6*	0.6*	3.4 ²
E: TW-33	0.8*	0.8*	0.8*	0.8*	3.3 ²

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*These limits include only filterable particulate.

(9 VAC 5-80-1180 and 9 VAC 5-50-260)"

STACK TESTING SUBMISSION REQUIREMENTS

Condition 21 of the July 18, 2013 Consent Decree requires the submission of stack tests within 60 days of completion.

Observation:

Honeywell conducted stack tests on the towers and on the dates provided in the table below. The test result receipt and due date comparison follows:

Tower	Test Date(s)	Due Date	Received Date	Days to Submit
TW-2	06/10/15	08/09/15	09/30/15	112
TW-17	04/21/15	06/20/15	07/06/15	76
TW-22	07/15/15	09/13/15	10/19/15	96
TW-32	07/14/15	09/12/15	10/19/15	97
TW-18	05/13/15	07/12/15	08/06/15	85
TW-23	06/12/15	08/11/15	09/30/15	110
TW-33	06/18/15	08/17/15	10/01/15	105
TW-62	06/17/15	08/16/15	09/25/15	100

Legal Requirements:

Condition 21 of the July 18, 2013 Consent Decree states, "21. Within twenty-four (24) months of the effective date of this Consent Decree, Honeywell shall conduct particulate matter (PM) and opacity performance testing on Towers TW-2, TW-8, TW-17, TW-22, TW-23, TW-62, TW-9, TW-18, TW-32, and TW-33 in accordance with Part 60 Appendix A, Methods 1-5, 9 and 201 to determine compliance with the control efficiency and emission limit requirements established in the Title V Permit and summarized in the table below in this Paragraph, and the opacity requirements established in Article 1 of 9 VAC 5 Chapter 40 of Virginia's regulations. During each performance test, Honeywell shall continuously monitor the scrubber pressure drop and scrubber liquid flow to establish operating parameter ranges to ensure continuous compliance with the control efficiency and emission limit requirements established in the Title V Permit and the opacity limits established in Article 1 of 9 VAC 5 Chapter 40 of Virginia's regulations. Honeywell shall submit, for approval by VADEQ, in consultation with EPA, the PM and Opacity Emission Testing Reports for each tower identified below no later than sixty (60) Days after the completion of the emissions test for that source. In the PM Emissions Testing Report for towers equipped with a particulate matter control device (i.e., TW-8, TW-22, TW-32, TW-62, TW-9, TW-18, TW-23 and TW-33), Honeywell shall (a) calculate the mass PM emission flow rate at the inlet and outlet of the towers associated control device, and (b) propose scrubber pressure drop and scrubber liquid flow values for the associated control device that will ensure that it meets the emissions limits and opacity limits. For the towers not equipped with particulate matter control devices (i.e., TW-2 and TW-17), Honeywell shall (a) calculate the mass PM emission flow rate at the outlet of the tower and (b) propose process operating parameter values that will ensure that the tower meets the emission limits established in the Title V permit. The PM and Opacity Emissions Testing Report shall include, at a minimum, all test results, operating data, calibration data, chains of custody, all equations used, and assumptions made calculating Honeywell proposed parameter...."

*9 VAC 5-170-160(A) – (Conditions on Approvals) of the Commonwealth of Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution states in part: "The board may impose conditions upon permits and other approvals which may be necessary to carry out the policy of the Virginia Air Pollution Control Law, and which are consistent with the regulations of the board. Except as otherwise specified, nothing in this chapter shall be understood to limit the power of the board in this regard. If the owner or other person fails to adhere to the conditions, the board may automatically cancel the permit or approvals. This section shall apply, but not be limited, to approval of variances, approval of control programs, and granting of permits."

*Va. Code § 10.1-1322(A) gives the Department the authority to issue, amend, revoke or terminate and reissue permits, and failure to comply with any condition of a permit is considered a violation of the Air Pollution Control Law.

ENFORCEMENT AUTHORITY

Va. Code § 10.1-1316 of the Air Pollution Control Law provides for an injunction for any violation of the Air Pollution Control Law, the Air Board regulations, an order, or permit condition, and provides for a civil penalty up to \$32,500 per day of each violation of the Air Pollution Control Law, regulation, order, or permit condition. In addition, Va. Code §§ 10.1-1307 and 10.1-1309 authorizes the Air Pollution Control Board to issue orders to any person to comply with the Air Pollution Control Law and regulations, including the imposition of a civil penalty for violations of up to \$100,000. Also, Va.

Mr. Fredrick Harry
Registration #: 50232
NOV No. APRO000305-001
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Code § 10.1-1186 authorizes the Director of DEQ to issue special orders to any person to comply with the Air Pollution Control Law and regulations, and to impose a civil penalty of not more than \$10,000. Va. Code §§ 10.1-1320 and 10.1-1309.1 provide for other additional penalties.

The Court has the inherent authority to enforce its injunction, and is authorized to award the Commonwealth its attorneys' fees and costs.

FUTURE ACTIONS

DEQ staff wishes to discuss all aspects of their observations with you, including any actions needed to ensure compliance with state law and regulations, any relevant or related measures you plan to take or have taken, and a schedule, as needed, for further activities. In addition, please advise us if you dispute any of the observations recited herein or if there is other information of which DEQ should be aware. In order to avoid adversarial enforcement proceedings, Honeywell Resins and Chemicals, LLC., may be asked to enter into a Consent Order with the Department to formalize a plan and schedule of corrective action and to settle any outstanding issues regarding this matter, including the assessment of civil charges.

In the event that discussions with staff do not lead to a satisfactory conclusion concerning the contents of this letter, you may elect to participate in DEQ's Process for Early Dispute Resolution. Also, if informal discussions do not lead to a satisfactory conclusion, you may request in writing that DEQ take all necessary steps to issue a final decision or fact finding under the APA on whether or not a violation has occurred. For further information on the Process for Early Dispute Resolution, please see Agency Policy Statement No. 8-2005 posted on the Department's website under "Programs," "Enforcement," and "Laws, Regulations, & Guidance" (http://www.deq.virginia.gov/Portals/0/DEQ/Enforcement/Guidance/process%20for%20early%20dispute%20resolution%20no8_2005.pdf) or ask the DEQ contact listed below.

Please contact David Robinett at (804) [REDACTED] **within 10** days of the date of this letter to discuss this matter and arrange a meeting.

Sincerely,



Kyle Ivar Winter, P.E.
Deputy Regional Director

Ec: Case File
John Reinhardt (DEQ)
David Robinett (DEQ)



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December 3, 2015

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Registration #: 50232

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At the process rate of 9,000 lbs sulfur/hr the emissions rate was 0.72 lbs/hr SO₂.

Disulfonate tower TW-18 is subject to the Phase 3 emissions limit of 2.2 lbs/hr SO₂.

Honeywell also submitted a letter dated September 24, 2015 stating that the SO₂ hourly emission limit was exceeded.

Legal Requirements:

Condition 112 of the NSR Permit and condition 101 of the Title V Permit state,

"Sulfur dioxide emissions from the operation of the hydroxylamine diammonium sulfonate towers shall not exceed the limits specified below. Annual emissions shall be calculated monthly as the sum of each previous consecutive 12 month period. Phases 1-5 shall be defined as specified in Condition #107.

(Annual Omission Chart omitted)

Hourly Emissions (lbs/hr)	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
A: TW-62	9.7	9.7 ¹	9.7 ¹	2.2	2.2
B: TW-9	17.0	17.0 ¹	2.2 ¹	2.2	2.2
C: TW-18	1.7	2.2 ¹	2.2 ¹	2.2	2.2
D: TW-23	1.7	1.7	1.7	1.7	2.2 ²
E: TW-33	2.1	2.1	2.1	2.1	2.1 ²

¹Upon notification of the Director, Piedmont Regional Office, the permittee may elect to swap the order in which SCR systems are installed and emission limits are revised for "A", "B" and "C" trains.

²Upon notification of the Director, Piedmont Regional Office, the permittee may elect to swap the towers on which SCR systems are installed and emission limits are revised between the "D" and "E" train ammonium nitrite and/or hydroxylamine diammonium sulfonate towers.

(9 VAC 5-80-1180 and 9 VAC 5-50-260)"

DISULFONATE TOWER TW-23

The particulate matter (PM), particulate matter 10 (PM10) microns and less, and particulate matter 2.5 (PM2.5) microns and less emissions are limited by the following: (1) NSR permit dated February 19, 2015 conditions 109, 110 and 111; (2) Title V Permit dated October 1, 2014 conditions 98, 99 and 100. The PM and PM10 emissions are also limited by the EPA/DEQ/Honeywell Consent Decree condition 21 that became effective on July 18, 2013. The following describes the staff's factual observations and identifies the applicable legal requirements:

Observation:

Honeywell conducted a stack test on the hydroxylamine diammonium sulfonate tower TW-23 on June 12, 2015. The test results were submitted to the DEQ on September 30, 2015. The results showed the following emission rates:

2.92 lbs/hr PM, 2.99 lbs/hr PM10 and 2.5 lbs/hr PM2.5

Disulfonate tower TW-23 is subject to the Phase 3 limits as follows:

1.2 lbs/hr PM, 1.2 lbs/hr PM10 and 0.6 lbs/hr PM2.5

Honeywell also submitted a letter dated September 24, 2015 stating that the PM, PM10 and PM2.5 hourly emissions limits were exceeded.

Legal Requirements:

Conditions 109, 110 and 111 of the NSR Permit, conditions 98, 99 and 100 of the Title V Permit limit Particulate Matter (PM), Particulate Matter 10 microns and less (PM10) and Particulate Matter 2.5 microns and less (PM2.5). Condition 21 of the July 18, 2013, Consent Decree limits PM and PM10. The limits are stated below:

PARTICULATE MATTER

"Particulate matter emissions from the operation of the ammonium nitrite and hydroxylamine diammonium sulfonate towers shall not exceed the limits specified below. Annual emissions shall be calculated monthly as the sum of each previous consecutive 12 month period. Phases 1-5 shall be defined as specified in Condition #107.

(Annual Emissions chart omitted)

Hourly Emissions (lbs/hr)	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
A: TW-2	11.1	11.1 ¹	11.1 ¹	1.4	1.4
B: TW-8	3.8	3.8 ¹	1.4 ¹	1.4	1.4
C: TW-17	21.2	1.4 ¹	1.4 ¹	1.4	1.4
D: TW-22	3.8	3.8	3.8	3.8	1.4 ²
E: TW-32	1.4	1.4	1.4	1.4	1.4 ²
A: TW-62	1.2	1.2 ¹	1.2 ¹	1.7	1.7
B: TW-9	1.2	1.2 ¹	1.8 ¹	1.8	1.8
C: TW-18	1.2	1.7 ¹	1.7 ¹	1.7	1.7
D: TW-23	1.2	1.2	1.2	1.2	1.7 ²
E: TW-33	1.6	1.6	1.6	1.6	1.6 ²

¹Upon notification of the Director, Piedmont Regional Office, the permittee may elect to swap the order in which SCR systems are installed and emission limits are revised for "A", "B" and "C" trains.

²Upon notification of the Director, Piedmont Regional Office, the permittee may elect to swap the towers on which SCR systems are installed and emission limits are revised between the "D" and "E" train ammonium nitrite and/or hydroxylamine diammonium sulfonate towers.
 (9 VAC 5-80-1180 and 9 VAC 5-50-260)"

PARTICULATE MATTER 10 microns and less

"Particulate matter (PM-10) emissions from the operation of the ammonium nitrite and hydroxylamine diammonium sulfonate towers shall not exceed the limits specified below. Annual emissions shall be calculated monthly as the sum of each previous consecutive 12 month period. Phases 1-5 shall be defined as specified in Condition #107.

(Annual Emissions chart omitted)

Hourly Emissions (lbs/hr)	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
A: TW-2	4.0*	4.0 ¹ *	4.0 ¹ *	2.8	2.8
B: TW-8	1.9*	1.9 ¹ *	2.8 ¹	2.8	2.8
C: TW-17	7.6*	2.8 ¹	2.8 ¹	2.8	2.8
D: TW-22	1.9*	1.9*	1.9*	1.9*	2.8 ²
E: TW-32	0.7*	0.7*	0.7*	0.7*	2.8 ²
A: TW-62	1.2*	1.2 ¹ *	1.2 ¹ *	4.3	4.3
B: TW-9	1.2*	1.2 ¹ *	4.5 ¹	4.5	4.5
C: TW-18	1.2*	4.1 ¹	4.1 ¹	4.1	4.1
D: TW-23	1.2*	1.2*	1.2*	1.2*	3.8 ²
E: TW-33	1.6*	1.6*	1.6*	1.6*	3.7 ²

¹Upon notification of the Director, Piedmont Regional Office, the permittee may elect to swap the order in which SCR systems are installed and emission limits are revised for "A", "B" and "C" trains.

²Upon notification of the Director, Piedmont Regional Office, the permittee may elect to swap the towers on which SCR systems are installed and emission limits are revised between the "D" and "E" train ammonium nitrite and/or hydroxylamine diammonium sulfonate towers.

*These limits include only filterable particulate.

(9 VAC 5-80-1180 and 9 VAC 5-50-260)"

PARTICULATE MATTER 2.5 microns and less

"Particulate matter (PM-2.5) emissions from the operation of the ammonium nitrite and hydroxylamine diammonium sulfonate towers shall not exceed the limits specified below. Annual emissions shall be calculated monthly as the sum of each previous consecutive 12 month period. Phases 1-5 shall be defined as specified in Condition #107.

(Annual Emissions chart omitted)

Hourly Emissions (lbs/hr)	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
A: TW-2	2.0*	2.0 ¹ *	2.0 ¹ *	2.8	2.8
B: TW-8	1.0*	1.0 ¹ *	2.8 ¹	2.8	2.8
C: TW-17	3.8*	2.8 ¹	2.8 ¹	2.8	2.8
D: TW-22	0.4*	0.4*	0.4*	0.4*	2.8
E: TW-32	0.4*	0.4*	0.4*	0.4*	2.8
A: TW-62	0.6*	0.6 ¹ *	0.6 ¹ *	3.7	3.7
B: TW-9	0.6*	0.6 ¹ *	3.8 ¹	3.8	3.8
C: TW-18	0.6*	3.5 ¹	3.5 ¹	3.5	3.5
D: TW-23	0.6*	0.6*	0.6*	0.6*	3.4 ²
E: TW-33	0.8*	0.8*	0.8*	0.8*	3.3 ²

¹Upon notification of the Director, Piedmont Regional Office, the permittee may elect to swap the order in which SCR systems are installed and emission limits are revised for "A", "B" and "C" trains.

²Upon notification of the Director, Piedmont Regional Office, the permittee may elect to swap the towers on which SCR systems are installed and emission limits are revised between the "D" and "E" train ammonium nitrite and/or hydroxylamine diammonium sulfonate towers.

*These limits include only filterable particulate.
 (9 VAC 5-80-1180 and 9 VAC 5-50-260)"

STACK TESTING SUBMISSION REQUIREMENTS

Condition 21 of the July 18, 2013 Consent Decree requires the submission of stack tests within 60 days of completion.

Observation:

Honeywell conducted stack tests on the towers and on the dates provided in the table below. The test result receipt and due date comparison follows:

Tower	Test Date(s)	Due Date	Received Date	Days to Submit
TW-2	06/10/15	08/09/15	09/30/15	112
TW-17	04/21/15	06/20/15	07/06/15	76
TW-22	07/15/15	09/13/15	10/19/15	96
TW-32	07/14/15	09/12/15	10/19/15	97
TW-18	05/13/15	07/12/15	08/06/15	85
TW-23	06/12/15	08/11/15	09/30/15	110
TW-33	06/18/15	08/17/15	10/01/15	105
TW-62	06/17/15	08/16/15	09/25/15	100

Legal Requirements:

Condition 21 of the July 18, 2013 Consent Decree states, "21. Within twenty-four (24) months of the effective date of this Consent Decree, Honeywell shall conduct particulate matter (PM) and opacity performance testing on Towers TW-2, TW-8, TW-17, TW-22, TW-23, TW-62, TW-9, TW-18, TW-32, and TW-33 in accordance with Part 60 Appendix A, Methods 1-5, 9 and 201 to determine compliance with the control efficiency and emission limit requirements established in the Title V Permit and summarized in the table below in this Paragraph, and the opacity requirements established in Article 1 of 9 VAC 5 Chapter 40 of Virginia's regulations. During each performance test, Honeywell shall continuously monitor the scrubber pressure drop and scrubber liquid flow to establish operating parameter ranges to ensure continuous compliance with the control efficiency and emission limit requirements established in the Title V Permit and the opacity limits established in Article 1 of 9 VAC 5 Chapter 40 of Virginia's regulations. Honeywell shall submit, for approval by VADEQ, in consultation with EPA, the PM and Opacity Emission Testing Reports for each tower identified below no later than sixty (60) Days after the completion of the emissions test for that source. In the PM Emissions Testing Report for towers equipped with a particulate matter control device (i.e., TW-8, TW-22, TW-32, TW-62, TW-9, TW-18, TW-23 and TW-33), Honeywell shall (a) calculate the mass PM emission flow rate at the inlet and outlet of the towers associated control device, and (b) propose scrubber pressure drop and scrubber liquid flow values for the associated control device that will ensure that it meets the emissions limits and opacity limits. For the towers not equipped with particulate matter control devices (i.e., TW-2 and TW-17), Honeywell shall (a) calculate the mass PM emission flow rate at the outlet of the tower and (b) propose process operating parameter values that will ensure that the tower meets the emission limits established in the Title V permit. The PM and Opacity Emissions Testing Report shall include, at a minimum, all test results, operating data, calibration data, chains of custody, all equations used, and assumptions made calculating Honeywell proposed parameter...."

*9 VAC 5-170-160(A) – (Conditions on Approvals) of the Commonwealth of Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution states in part: "The board may impose conditions upon permits and other approvals which may be necessary to carry out the policy of the Virginia Air Pollution Control Law, and which are consistent with the regulations of the board. Except as otherwise specified, nothing in this chapter shall be understood to limit the power of the board in this regard. If the owner or other person fails to adhere to the conditions, the board may automatically cancel the permit or approvals. This section shall apply, but not be limited, to approval of variances, approval of control programs, and granting of permits."

*Va. Code § 10.1-1322(A) gives the Department the authority to issue, amend, revoke or terminate and reissue permits, and failure to comply with any condition of a permit is considered a violation of the Air Pollution Control Law.

ENFORCEMENT AUTHORITY

Va. Code § 10.1-1316 of the Air Pollution Control Law provides for an injunction for any violation of the Air Pollution Control Law, the Air Board regulations, an order, or permit condition, and provides for a civil penalty up to \$32,500 per day of each violation of the Air Pollution Control Law, regulation, order, or permit condition. In addition, Va. Code §§ 10.1-1307 and 10.1-1309 authorizes the Air Pollution Control Board to issue orders to any person to comply with the Air Pollution Control Law and regulations, including the imposition of a civil penalty for violations of up to \$100,000. Also, Va.

Mr. Fredrick Harry
Registration #: 50232
NOV No. APRO000305-001
Page 7 of 7

Code § 10.1-1186 authorizes the Director of DEQ to issue special orders to any person to comply with the Air Pollution Control Law and regulations, and to impose a civil penalty of not more than \$10,000. Va. Code §§ 10.1-1320 and 10.1-1309.1 provide for other additional penalties.

The Court has the inherent authority to enforce its injunction, and is authorized to award the Commonwealth its attorneys' fees and costs.

FUTURE ACTIONS

DEQ staff wishes to discuss all aspects of their observations with you, including any actions needed to ensure compliance with state law and regulations, any relevant or related measures you plan to take or have taken, and a schedule, as needed, for further activities. In addition, please advise us if you dispute any of the observations recited herein or if there is other information of which DEQ should be aware. In order to avoid adversarial enforcement proceedings, Honeywell Resins and Chemicals, LLC., may be asked to enter into a Consent Order with the Department to formalize a plan and schedule of corrective action and to settle any outstanding issues regarding this matter, including the assessment of civil charges.

In the event that discussions with staff do not lead to a satisfactory conclusion concerning the contents of this letter, you may elect to participate in DEQ's Process for Early Dispute Resolution. Also, if informal discussions do not lead to a satisfactory conclusion, you may request in writing that DEQ take all necessary steps to issue a final decision or fact finding under the APA on whether or not a violation has occurred. For further information on the Process for Early Dispute Resolution, please see Agency Policy Statement No. 8-2005 posted on the Department's website under "Programs," "Enforcement," and "Laws, Regulations, & Guidance" (http://www.deq.virginia.gov/Portals/0/DEQ/Enforcement/Guidance/process%20for%20early%20dispute%20resolution%20no8_2005.pdf) or ask the DEQ contact listed below.

Please contact David Robinett at (804) [REDACTED] within 10 days of the date of this letter to discuss this matter and arrange a meeting.

Sincerely,



Kyle Ivar Winter, P.E.
Deputy Regional Director

Ec: Case File
John Reinhardt (DEQ)
David Robinett (DEQ)



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

PIEDMONT REGIONAL OFFICE

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Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

Michael P. Murphy
Regional Director

January 21, 2016

Mr. Fredrick Harry, Plant Manager
Honeywell Resins and Chemicals, LLC.
905 East Randolph Road
Hopewell, Virginia 23860

NOTICE OF VIOLATION

RE: NOV No. APRO-000324
Honeywell Resins and Chemicals, LLC.
Registration #: 50232

Dear Mr. Harry:

This letter notifies you of information upon which the Department of Environmental Quality ("Department" or "DEQ") may rely in order to institute an administrative or judicial enforcement action. Based on this information, DEQ has reason to believe that Honeywell Resins and Chemicals, LLC. ("Honeywell") may be in violation of the Air Pollution Control Law and Regulations at the Honeywell Caprolactam Production Plant (Facility) on 905 East Randolph Road in Hopewell.

This letter addresses conditions at the Facility named above, and also cites compliance requirements of the Air Pollution Control Law and Regulations. Pursuant to Va. Code § 10.1-1309 (A) (vi), this letter is not a case decision under the Virginia Administrative Process Act, Va. Code § 2.2-4000 *et seq.* The Department requests that you respond **within 10 days of the date of this letter** to arrange a prompt meeting.

OBSERVATIONS AND LEGAL REQUIREMENTS

Honeywell owns and operates the Facility which is subject to a New Source Review Permit (NSR Permit) dated February 19, 2015 and Title V permit dated October 1, 2014 and consent decree (decree) that became effective on July 18, 2013. Method 9 testing is required by decree condition 21. Condition 21 requires testing to be conducted within 24 months of the decree effective date of July 18, 2013. Method 9 testing was conducted on September 14, 2015 for the towers as listed: TW-62, TW-8 and TW-9; method 9 testing was conducted 58 days late. Method 9 testing was conducted on September 15, 2015 for the towers as listed: TW-2, TW-22, TW-23, TW-32 and TW-33; method 9 testing was conducted 59 days late.

Legal Requirements:

TESTING REQUIREMENT

Decree condition 21 states in part that within twenty-four (24) months of the effective date of this Consent Decree, Honeywell shall conduct particulate matter (PM) and opacity performance testing on Towers TW-2, TW-8, TW-17, TW-22, TW-23, TW-62, TW-9, TW-18, TW-32, and TW-33 in accordance with Part 60 Appendix A, Methods 1-5, 9 and 201 to determine compliance with the control efficiency and emission limit requirements established in the Title V Permit ...

9 VAC 5-170-160(A) – (Conditions on Approvals) of the Commonwealth of Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution states in part: “The board may impose conditions upon permits and other approvals which may be necessary to carry out the policy of the Virginia Air Pollution Control Law, and which are consistent with the regulations of the board. Except as otherwise specified, nothing in this chapter shall be understood to limit the power of the board in this regard. If the owner or other person fails to adhere to the conditions, the board may automatically cancel the permit or approvals. This section shall apply, but not be limited, to approval of variances, approval of control programs, and granting of permits.”

ENFORCEMENT AUTHORITY

Va. Code § 10.1-1316 of the Air Pollution Control Law provides for an injunction for any violation of the Air Pollution Control Law, the Air Board regulations, an order, or permit condition, and provides for a civil penalty up to \$32,500 per day of each violation of the Air Pollution Control Law, regulation, order, or permit condition. In addition, Va. Code §§ 10.1-1307 and 10.1-1309 authorizes the Air Pollution Control Board to issue orders to any person to comply with the Air Pollution Control Law and regulations, including the imposition of a civil penalty for violations of up to \$100,000. Also, Va. Code § 10.1-1186 authorizes the Director of DEQ to issue special orders to any person to comply with the Air Pollution Control Law and regulations, and to impose a civil penalty of not more than \$10,000. Va. Code §§ 10.1-1320 and 10.1-1309.1 provide for other additional penalties.

The Court has the inherent authority to enforce its injunction, and is authorized to award the Commonwealth its attorneys' fees and costs.

FUTURE ACTIONS

DEQ staff wishes to discuss all aspects of their observations with you, including any actions needed to ensure compliance with state law and regulations, any relevant or related measures you plan to take or have taken, and a schedule, as needed, for further activities. In addition, please advise us if you dispute any of the observations recited herein or if there is other information of which DEQ should be aware. In order to avoid adversarial enforcement proceedings, Honeywell Resins and Chemicals, LLC. may be asked to enter into a Consent Order with the Department to formalize a plan and schedule of corrective action and to settle any outstanding issues regarding this matter, including the assessment of civil charges.

In the event that discussions with staff do not lead to a satisfactory conclusion concerning the contents of this letter, you may elect to participate in DEQ's Process for Early Dispute Resolution. Also, if informal discussions do not lead to a satisfactory conclusion, you may request in writing that DEQ take all necessary steps to issue a final decision or fact finding under the APA on whether or not a violation has occurred. For further information on the Process for Early Dispute Resolution, please see Agency Policy Statement No. 8-2005 posted on the Department's website under "Programs," "Enforcement," and "Laws, Regulations, & Guidance"(<http://www.deq.virginia.gov/Portals/0/DEQ/Enforcement/Guidance/processforearlydisputeresolutionno82005.pdf>) or ask the DEQ contact listed below.

Please contact David Robinett at (804) [REDACTED] **within 10 days** of the date of this letter to discuss this matter and arrange a meeting.

Sincerely,

Kyle Ivar Winter, P.E.
Deputy Regional Director

Ec: Case File
John Reinhardt (DEQ)
To Be Assigned (DEQ)



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

Jeffery A. Steers
Regional Director

December 7, 2017

Mr. Frederick Harry
Site Manager
AdvanSix Resins & Chemicals, LLC
905 East Randolph Street
Hopewell, Virginia 23860

NOTICE OF VIOLATION

RE: NOV No. APRO000757-001
AdvanSix Resins & Chemicals, LLC
Registration No.: 50232

Dear Mr. Harry:

This letter notifies you of information upon which the Department of Environmental Quality ("Department" or "DEQ") may rely on in order to institute an administrative or judicial enforcement action. Based on this information, DEQ has reason to believe that the AdvanSix Chemical & Resins-Hopewell facility ("Facility") may be in violation of the Air Pollution Control Law and Regulations.

This letter addresses conditions at the Facility named above, and also cites compliance requirements of the Air Pollution Control Law and Regulations. Pursuant to Va. Code § 10.1-1309 (A) (vi), this letter is not a case decision under the Virginia Administrative Process Act, Va. Code § 2.2-4000 *et seq.* The Department requests that you respond **within 10 days of the date of this letter** to arrange a prompt meeting.

OBSERVATIONS AND LEGAL REQUIREMENTS

AdvanSix Chemical & Resins owns and operates a Chemical Manufacturing facility at 905 East Randolph Road, Hopewell Virginia 23860. The AdvanSix Chemical & Resin facility includes an Ammonium Production facility. The Facility is subject to a Title V permit last amended on March 30, 2016 (Permit). On November 17, 2017, DEQ reviewed the centrifuges stack test conducted on the outlet of scrubber DC-25 dated August 11, 2017. The following describe DEQ staff's factual observations and identify the applicable legal requirements:

Observation: The August 11, 2017 stack test results showed filterable particulate emission results of 0.85 lbs/hr of PM and PM10 and 0.52 lbs/hr PM2.5.

Legal Requirements: Condition VII.C.225 of the permit states,

“Emissions from the operation of the Area 11 centrifuges, as exhausted through DC-25, shall not exceed the limits specified below:

<i>Particulate Matter</i>	<i>0.35 lbs/hr</i>	<i>1.2 tons/yr</i>
<i>Particulate Matter (PM-10)</i>	<i>0.35 lbs/hr</i>	<i>1.2 tons/yr</i>
<i>Particulate Matter (PM-2.5)</i>	<i>0.1 lbs/hr</i>	<i>0.2 tons/yr</i>
<i>VOC</i>	<i>2.7 lbs/hr</i>	<i>9.0 tons/yr</i>

(Condition #234 of the 2/19/2015 NSR Permit and 9 VAC 5-80-110)

*9 VAC 5-170-160(A) – (Conditions on Approvals) of the Commonwealth of Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution states in part: “The board may impose conditions upon permits and other approvals which may be necessary to carry out the policy of the Virginia Air Pollution Control Law, and which are consistent with the regulations of the board. Except as otherwise specified, nothing in this chapter shall be understood to limit the power of the board in this regard. If the owner or other person fails to adhere to the conditions, the board may automatically cancel the permit or approvals. This section shall apply, but not be limited, to approval of variances, approval of control programs, and granting of permits.”

*Va. Code § 10.1-1322(A) gives the Department the authority to issue, amend, revoke or terminate and reissue permits, and failure to comply with any condition of a permit is considered a violation of the Air Pollution Control Law.

ENFORCEMENT AUTHORITY

Va. Code § 10.1-1316 of the Air Pollution Control Law provides for an injunction for any violation of the Air Pollution Control Law, the Air Board regulations, an order, or permit condition, and provides for a civil penalty up to \$32,500 per day of each violation of the Air Pollution Control Law, regulation, order, or permit condition. In addition, Va. Code §§ 10.1-1307 and 10.1-1309 authorizes the Air Pollution Control Board to issue orders to any person to comply with the Air Pollution Control Law and regulations, including the imposition of a civil penalty for violations of up to \$100,000. Also, Va. Code § 10.1-1186 authorizes the Director of DEQ to issue special orders to any person to comply with the Air Pollution Control Law and regulations, and to impose a civil penalty of not more than \$10,000. Va. Code §§ 10.1-1320 and 10.1-1309.1 provide for other additional penalties.

The Court has the inherent authority to enforce its injunction, and is authorized to award the Commonwealth its attorneys' fees and costs.

Mr. Frederick Harry
AdvanSix Resins & Chemicals, LLC
Registration #: 50232
NOV No.: APRO000757-001
Page 3 of 3

FUTURE ACTIONS

DEQ staff wishes to discuss all aspects of their observations with you, including any actions needed to ensure compliance with state law and regulations, any relevant or related measures you plan to take or have taken, and a schedule, as needed, for further activities. In addition, please advise us if you dispute any of the observations recited herein or if there is other information of which DEQ should be aware. In order to avoid adversarial enforcement proceedings, AdvanSix Resins & Chemicals, LLC may be asked to enter into a Consent Order with the Department to formalize a plan and schedule of corrective action and to settle any outstanding issues regarding this matter, including the assessment of civil charges.

In the event that discussions with staff do not lead to a satisfactory conclusion concerning the contents of this letter, you may elect to participate in DEQ's Process for Early Dispute Resolution. Also, if informal discussions do not lead to a satisfactory conclusion, you may request in writing that DEQ take all necessary steps to issue a final decision or fact finding under the APA on whether or not a violation has occurred. For further information on the [Process for Early Dispute Resolution](#), please see [Agency Policy Statement No. 8-2005](#) posted on the Department's website under "Programs," "Enforcement," and "Laws, Regulations, & Guidance" (http://www.deq.virginia.gov/Portals/0/DEQ/Enforcement/Guidance/process%20for%20early%20dispute%20resolution%20no8_2005.pdf) or ask the DEQ contact listed below.

Please contact Cynthia Akers at (804) [REDACTED] within 10 days of the date of this letter to discuss this matter and arrange a meeting.

Sincerely,



Kyle Ivar Winter, P.E.
Deputy Regional Director

Ec: Case File
Cynthia Akers (DEQ)



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director

James J. Golden
Regional Director

April 26, 2018

Mr. Fred Harry, Plant Manager
AdvanSix Resins and Chemicals, LLC.
905 East Randolph Road
Hopewell, Virginia 23860

NOTICE OF VIOLATION

RE: NOV No. APRO000888-001
AdvanSix Resins and Chemicals, LLC.
Registration #: 50232

Dear Mr. Harry:

This letter notifies you of information upon which the Department of Environmental Quality ("Department" or "DEQ") may rely in order to institute an administrative or judicial enforcement action. Based on this information, DEQ has reason to believe that AdvanSix Chemical & Resins LLC. ("Facility") may be in violation of the Air Pollution Control Law and Regulations.

This letter addresses conditions at the Facility named above, and cites compliance requirements of the Air Pollution Control Law and Regulations. Pursuant to Va. Code § 10.1-1309 (A) (vi), this letter is not a case decision under the Virginia Administrative Process Act, Va. Code § 2.2-4000 *et seq.* The Department requests that you respond **within 10 days of the date of this letter** to arrange a prompt meeting.

OBSERVATIONS AND LEGAL REQUIREMENTS

AdvanSix Chemical & Resins owns and operates a Chemical Manufacturing facility at 905 East Randolph Road, Hopewell Virginia 23860. The Facility is subject to a Title V permit last amended on March 30, 2016 (Permit). On February 26, 2018, DEQ reviewed an excess emissions report, for phenol storage tank number VT-462, dated January 26, 2018. The following describe DEQ staff's factual observations and identify the applicable legal requirements:

1. *Observations:* The annual Volatile Organic Compound emissions from Phenol Tank number VT-462 are listed below:

- The calendar year 2015 emissions were 6.99 tons VOC/year.
- The calendar year 2016 emissions were 6.79 tons VOC/year.
- The highest annual 12-month continuous sum reported was 8.58 tons VOC/year, which occurred in June 2016.

Legal Requirements: CONDITION 42

Emissions from the operation of the crude phenol storage tanks (VT-462, VT-515) shall individually not exceed the limits specified below:

<i>VOC</i>	<i>77.7 lbs/hr</i>	<i>4.2 tons/yr</i>
-------------------	---------------------------	---------------------------

(Condition #65 of the 2/19/2015 NSR Permit and 9 VAC 5-80-110)

*9 VAC 5-170-160(A) – (Conditions on Approvals) of the Commonwealth of Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution states in part: “The board may impose conditions upon permits and other approvals which may be necessary to carry out the policy of the Virginia Air Pollution Control Law, and which are consistent with the regulations of the board. Except as otherwise specified, nothing in this chapter shall be understood to limit the power of the board in this regard. If the owner or other person fails to adhere to the conditions, the board may automatically cancel the permit or approvals. This section shall apply, but not be limited, to approval of variances, approval of control programs, and granting of permits.”

*Va. Code § 10.1-1322(A) gives the Department the authority to issue, amend, revoke or terminate and reissue permits, and failure to comply with any condition of a permit is considered a violation of the Air Pollution Control Law.

ENFORCEMENT AUTHORITY

Va. Code § 10.1-1316 of the Air Pollution Control Law provides for an injunction for any violation of the Air Pollution Control Law, the Air Board regulations, an order, or permit condition, and provides for a civil penalty up to \$32,500 per day of each violation of the Air Pollution Control Law, regulation, order, or permit condition. In addition, Va. Code §§ 10.1-1307 and 10.1-1309 authorizes the Air Pollution Control Board to issue orders to any person to comply with the Air Pollution Control Law and regulations, including the imposition of a civil penalty for violations of up to \$100,000. Also, Va. Code § 10.1-1186 authorizes the Director of DEQ to issue special orders to any person to comply with the Air Pollution Control Law and regulations, and to impose a civil penalty of not more than \$10,000. Va. Code §§ 10.1-1320 and 10.1-1309.1 provide for other additional penalties.

The Court has the inherent authority to enforce its injunction, and is authorized to award the Commonwealth its attorneys' fees and costs.

FUTURE ACTIONS

DEQ staff wishes to discuss all aspects of their observations with you, including any actions needed to ensure compliance with state law and regulations, any relevant or related measures you plan to take or have taken, and a schedule, as needed, for further activities. In addition, please advise us if you dispute any of the observations recited herein or if there is other information of which DEQ should be aware. In order to avoid adversarial enforcement proceedings, AdvanSix Chemical & Resins LLC., may be asked to enter into

Mr. Fred Harry
AdvanSix Chemical & Resins LLC., Registration #: 50232
NOV No.: APRO000888-001
Page 3 of 3

a Consent Order with the Department to formalize a plan and schedule of corrective action and to settle any outstanding issues regarding this matter, including the assessment of civil charges.

In the event that discussions with staff do not lead to a satisfactory conclusion concerning the contents of this letter, you may elect to participate in DEQ's Process for Early Dispute Resolution. Also, if informal discussions do not lead to a satisfactory conclusion, you may request in writing that DEQ take all necessary steps to issue a final decision or fact finding under the APA on whether or not a violation has occurred. For further information on the [Process for Early Dispute Resolution](#), please see [Agency Policy Statement No. 8-2005](#) posted on the Department's website under "Programs," "Enforcement," and "Laws, Regulations, & Guidance" (http://www.deq.virginia.gov/Portals/0/DEQ/Enforcement/Guidance/process%20for%20early%20dispute%20resolution%20no8_2005.pdf) or ask the DEQ contact listed below.

Please contact David Robinett at (804) [REDACTED] **within 10 days** of the date of this letter to discuss this matter and arrange a meeting.

Sincerely,



Kyle Ivar Winter, P.E.
Deputy Regional Director

Cc: John Sheridan (AdvanSix)
Ec: Thomas Varner (AdvanSix)
John Reinhardt (DEQ)
David Robinett (DEQ)

Attached: Review T5 Prompt Deviation Report dated February 26, 2018



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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www.deq.virginia.gov

Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director

James J. Golden
Regional Director

February 4, 2019

CERTIFIED MAIL RETURN RECEIPT REQUESTED

#7009 2820 0003 2299 7071

Mr. Fred Harry, Plant Manager
AdvanSix Resins and Chemicals, LLC.
905 East Randolph Road
Hopewell, Virginia 23860

NOTICE OF VIOLATION

RE: NOV No.: APRO001039-001
AdvanSix Resins and Chemicals, LLC.
Registration #: 50232

Dear Mr. Harry:

This letter notifies you of information upon which the Department of Environmental Quality ("Department" or "DEQ") may rely in order to institute an administrative or judicial enforcement action. Based on this information, DEQ has reason to believe that AdvanSix Chemical & Resins LLC - Hopewell ("Facility") may be in violation of the Air Pollution Control Law and Regulations.

This letter addresses conditions at the Facility named above, and cites compliance requirements of the Air Pollution Control Law and Regulations. Pursuant to Va. Code § 10.1-1309 (A) (vi), this letter is not a case decision under the Virginia Administrative Process Act, Va. Code § 2.2-4000 *et seq.* The Department requests that you respond **within 10 days of the date of this letter** to arrange a prompt meeting.

OBSERVATIONS AND LEGAL REQUIREMENTS

AdvanSix Chemical & Resins owns and operates a chemical manufacturing facility at 905 East Randolph Road, Hopewell Virginia. The Facility is subject to a Title V permit last amended on March 30, 2016 (Permit). On September 10, 2018, DEQ staff reviewed a "Voluntary Disclosure – Air Program Audit

Report”, dated August 1, 2018. The following describe DEQ staff’s factual observations and identify the applicable legal requirements:

1. **Observations:** AdvanSix conducted Relative Accuracy Test Audits (RATA) and Compliance Gas Audits less than 60 days apart on nitrite towers TW-8 and TW-18.

Legal Requirements: Condition 104 from Permit: “The permittee shall operate continuous emission monitoring systems (CEMS) for NO_x monitoring, including continuous emission rate monitoring systems (CERMS), on the inlet and outlet of the SCR systems required by Condition #74. The NO_x CEMS and CERMS shall be installed, calibrated, certified, maintained, audited and operated in accordance with the requirements of 40 CFR 60, including Appendices B and F. ...
(Condition #115 of the 2/19/2015 NSR Permit and 9 VAC 5-80-110)”

Legal Requirements: Condition 105 from Permit: “Unless otherwise allowed by Condition #104, by June 30, 2015, the permittee shall complete installation and commence operation of continuous emission monitoring systems (CEMS) for NO_x monitoring, including continuous emission rate monitoring systems (CERMS), on the inlet and outlet of the SCR systems required by Condition #75. The NO_x CEMS and CERMS shall be installed, calibrated, certified, maintained, audited and operated in accordance with the requirements of 40 CFR 60, including Appendices B and F. ...
(Condition #116 of the 2/19/2015 NSR Permit and 9 VAC 5-80-110)”

Legal Requirements: 40 CFR Part 60, appendix F, Section 5.1: “Auditing Requirements. Each CEMS must be audited at least once each calendar quarter. Successive quarterly audits shall occur no closer than 2 months.”

2. **Observations:** The Area 6 standard operating procedures checklist for the HAZARDOUS ORGANIC NESHAP (HON) startup, shutdown and malfunction (SSM) events were not used. Records were not available documenting that all SSM events were reviewed. The report states that SSM plan changes were not reported in the semi-annual HON report.

Legal Requirements: Condition 59 of the Permit: “The permittee shall develop and implement a written start-up, shutdown and malfunction (SSM) plan as specified in 40 CFR 63.6(e)(3). This plan shall describe, in detail, procedures for operating and maintaining Area 6 during periods of SSM and a program for corrective action for malfunctioning process and air pollution control equipment used to comply with 40 CFR 63 Subparts G and H.
(40 CFR 63.6(e)(3) and 9 VAC 5-80-110)”

3. **Observations:** The Area 6 and 16 Miscellaneous Organic Chemical Manufacturing (MON) standard operating changes were not reported in the August 28, 2012 Notice of Compliance and records did not indicate that all startup, shutdown and malfunction (SSM) events were reviewed promptly.

Legal Requirements: Condition 64 of the Permit: “MON Process Requirements The permittee shall operate any applicable Area 6 equipment in compliance with the requirements of 40 CFR 63 Subparts A and FFFF.
(40 CFR 63 Subparts A and FFFF and 9 VAC 5-80-110)”

Legal Requirements: Condition 140 of the Permit: “Unless an alternative date is approved by the Administrator, the permittee shall operate any applicable Area 8/16 equipment in compliance with the requirements of 40 CFR 63 Subparts A and FFFF. (40 CFR 63 Subparts A and FFFF and 9 VAC 5-80-110)”

Legal Requirements: 40 CFR 63 Subpart A [63.25206(e)(3)(III)]: “When actions taken by the owner or operator during a startup or shutdown (and the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator must keep records for that event which demonstrate that the procedures specified in the plan were followed. These records may take the form of a “checklist,” or other effective form of recordkeeping that confirms conformance with the startup, shutdown, and malfunction plan and describes the actions taken for that event. In addition, the owner or operator must keep records of these events as specified in paragraph 63.10(b), including records of the occurrence and duration of each startup or shutdown (if the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), or malfunction of operation and each malfunction of the air pollution control and monitoring equipment. Furthermore, the owner or operator shall confirm that actions taken during the relevant reporting period during periods of startup, shutdown, and malfunction were consistent with the affected source's startup, shutdown and malfunction plan in the semiannual (or more frequent) startup, shutdown, and malfunction report required in § 63.10(d)(5).

4. **Observations:** The total resource effectiveness (TRE) calculations were not corrected when applicable changes were made to emission units in areas 6 and 7 and the incorrect incinerator calculation was used to calculate the TRE.

Legal Requirements: Condition 50 of the Permit: “The permittee shall recalculate the TRE (as defined in 40 CFR 60 Subparts NNN/RRR) index value for APT-66B and APT-67B (as exhausted through their common recovery device, product recovery condenser C-225), CL-10, CL-25, CL-36, CL-46, CL-64 and CL-65 whenever process changes are made. The TRE (as defined in 40 CFR 60 Subparts NNN/RRR) index value shall be recalculated based on test data or on best engineering estimates of the effects of the change on the recovery system. (40 CFR 60 Subparts NNN and RRR, Condition #73 of the 2/19/2015 NSR Permit and 9 VAC 5-80-110)”

Legal Requirements: Condition 184 of the Permit: “The permittee shall recalculate the TRE index value for the Area 7 barometric condenser affected facility whenever a process change is made to one of the units included in the affected facility (as specified in Condition #160). The TRE index value shall be recalculated based on test data or on best engineering estimates of the effects of the change on the affected facility. (40 CFR 60.664(g), Condition #187 of the 2/19/2015 NSR Permit and 9 VAC 5-80-110)”

5. **Observations:** The New Source Performance Standard (NSPS) semiannual report for 40 CFR 60 subparts NNN and RRR did not report temperature deviations for the thermal oxidizer identified as FU-16.

Legal Requirements: Condition 151 of the Permit: “The permittee shall furnish written notification to the Director, Piedmont Regional Office of any change in equipment or process operation that increases the design flow rate of the Area 8 cyclohexanone oxime rearrangement reactor system above the low flow exemption level in 40 CFR 60.700(c)(3), reported semiannually in accordance with 40 CFR 60.705(l), for the Area 8 cyclohexanone oxime rearrangement reactor system activities. Also, the permittee shall furnish written notification to the Director, Piedmont Regional Office of any temperature exceedences as defined on Condition #148 and any vent stream diversions as defined in Condition #149, reported semiannually in accordance with 40 CFR 60.665(l), for CL-15, CL-81, CL-62 and CL-62New. Copies of written notifications are to be sent to: EPA Region III... These must be reported as soon as possible after the change and no later than 180 days after the change. The source shall perform testing as defined in 40 CFR 60.705(l)(5). (40 CFR 60.665(l) and 60.705(l), Condition #155 of the 2/19/2015 NSR Permit and 9 VAC 5-80-110)”

Legal Requirements: Condition 148 of the Permit: “The thermal oxidation unit (FU-16) shall operate at the minimum temperature determined during the most recent performance testing which demonstrated compliance with Condition #119. (Condition #151 of the 2/19/2015 NSR Permit and 9VAC5-80-110)”

6. **Observations:** The operating hours for the Kellogg emergency generator (GEN-2) were not available prior to February 2016. The Kellogg fire water pump (FP-4) weekly maintenance checklist did not include a notation that the belts and hoses were inspected. The Kellogg Fire Water Pump (FP-4) did not receive maintenance in calendar year 2016.

Legal Requirements: Condition 444 of the Permit: “As specified in 40 CFR 63.10(b)(1), the permittee shall keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The permittee shall keep records on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record according to 40 CFR 63.10(b)(1). The permittee can keep the records offsite for the remaining 3 years. The permittee’s records shall be in a form suitable and readily available for expeditious review as specified in 40 CFR 63.10(b)(1). These records shall include, but are not limited to:

- a. Records of the maintenance conducted on each emergency engine (FP-1, FP-2, FP-3, FP-4, GEN-2, GEN-3) in order to demonstrate that the permittee operated and maintained the units and after-treatment control devices (if any) according to the maintenance plan required by Condition #440.
- b. Records of the hours of operation of each emergency engine (FP-1, FP-2, FP-3, FP-4, GEN-2, GEN-3 and GEN-4) that is recorded through the non-resettable hour meter. The permittee shall document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the emergency engines (FP-1, FP-2, FP-3, FP-4, GEN-2, GEN-3 and GEN-4) are used for demand response operation, the permittee shall keep records of the notification of the emergency situation, and the time each emergency engine (FP-1, FP-2, FP-3, FP-4, GEN-2, GEN-3 and GEN-4) was operated as part of demand response.
(40 CFR 63.6655(e-f) and 9 VAC 5-80-110)”

Legal Requirements: Condition 439 of the Permit: “As stated in 40 CFR 63.6602 and 63.6640, and as excepted in Table 2C of 40 CFR 63 Subpart ZZZZ, the permittee shall comply with the following requirements for emergency engines FP-1, FP-2, FP-3, FP-4, GEN-2 and GEN-3:

- a. Change oil and filter every 500 hours of operation or annually, whichever comes first.
- b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first.
- c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
(40 CFR 63.6602 and Table 2C of 40 CFR 63 Subpart ZZZZ and 9 VAC 5-80-110)”

7. **Observations:** The cooling tower dissolved solids records did not include the name of the company conducting the analyses.

Legal Requirements: Condition 462 of the Permit: “General Conditions -Recordkeeping and Reporting - All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:

- a. The date, place as defined in the permit, and time of sampling or measurements;
- b. The date(s) analyses were performed;
- c. The company or entity that performed the analyses;
- d. The analytical techniques or methods used;
- e. The results of such analyses; and
- f. The operating conditions existing at the time of sampling or measurement.
(9 VAC 5-80-110 F)”

8. **Observations:** The 2016 Title V Annual Compliance designated several permit conditions compliance status incorrectly. These conditions should be designated as not applicable (N/A). Several conditions designated as intermittent compliance did not include the reason for the determination. Title V condition 11 referenced an incorrect deviation date for an intermittent compliance determination. The means of determining compliance was not provided for conditions 425, 428, 431, and 432. The report did not address the CAM appendices or the changes made in the March 30, 2016 Permit.

Legal Requirements: Condition 465 of the Permit: “Annual Compliance Certification - Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than March 1 each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices for the period ending December 31. The compliance certification shall comply with such additional requirements that may be specified pursuant to section 114(a)(3) and section 504(b) of the federal Clean Air Act. The permittee shall maintain a copy of the certification for five (5) years after submittal of the certification. This certification shall be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

- a. The time period included in the certification. The time period to be addressed is January 1 to December 31;
- b. The identification of each term or condition of the permit that is the basis of the certification;
- c. The compliance status;
- d. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance;

- e. Consistent with subsection 9 VAC 5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period;
- f. Such other facts as the permit may require to determine the compliance status of the source; and
- g. One copy of the annual compliance certification shall be submitted to EPA in electronic format only. The certification document should be sent to the following electronic mailing address: R3_APD_Permits@epa.gov
(9 VAC 5-80-110 K.5)”

9. **Observations:** AdvanSix did not track the total sulfur and ammonia input into Area 9.

Legal Requirements: Condition 94 of the Permit: “The annual input of ammonia to Area 9 hydroxylamine monoammonium sulfate production shall not exceed 68,191,200 hydroxylamine sulfate units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #105 of the 2/19/2015 NSR Permit and 9 VAC 5-80-110)”

Legal Requirements: Condition 95 of the Permit: “The annual input of sulfur to Area 9 hydroxylamine monoammonium sulfate production shall not exceed 137,159.6 hydroxylamine diammonium sulfonate units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #106 of the 2/19/2015 NSR Permit and 9 VAC 5-80-110)”

10. **Observations:** AdvanSix did not calculate the total cyclohexanone loaded into rail cars and trucks as 12-month continuous sums.

Legal Requirements: Condition 29 of the Permit: “Total sales cyclohexanone (Nadone) loaded to railcars or tank trucks shall not exceed 14,934,434 Area 6 loading units per year, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #50 of the 2/19/2015 NSR Permit and 9 VAC 5-80-110)”

11. **Observations:** AdvanSix did not calculate the total cobalt catalyst production as 12-month continuous sums.

Legal Requirements: Condition 130 of the Permit: “The annual production of cobalt catalyst from the Area 8/16 Cobalt Catalyst Manufacturing process shall not exceed 10.8 Area 8/16 input units, calculated monthly as the sum of each previous consecutive 12 month period.
(Condition #15 of the 7/6/1979 NSR Permit and 9 VAC 5-80-110)”

12. **Observations:** AdvanSix did not calculate the emissions from the Area-6 Hydro when the cryogenics unit is shutdown.

Legal Requirements: Condition 71.f.iii of the Permit: “For A6-Hydro (APT-2, 4, 6, 81, 82) during carbon bed depressurization and cryogenics malfunction episodes, CT-48, CT-53, CT-55, CL-2 and CL-18 (as exhausted through their common recovery device VE-02ZC), CL-9, CL-17, CL-26, CL-65new and CL-80:

- 1. The total hours and estimated emissions from Area-6 Hydro when the cryogenics unit is shutdown;

2. Records of the design of each flare;
3. Records of all visible emission observations, heat content determinations, flow rate measurements, exit velocity determinations and any other information necessary to determine compliance with Condition #61; and
4. Records of the pilot flame monitoring data required by Condition #62 for each flare; including hourly records of whether the monitor was continuously operating and whether the pilot flame was continuously present during each hour and records of the times and durations of all periods when all pilot flames are absent or the monitors are not operating.
5. A schematic diagram of the affected vent streams, collections systems, fuels systems, flares and any bypass systems.
6. Records of the monitoring required by Condition #70 for each flare.
(40 CFR 63.117(a)(5) and 63.118(a)(1-4))”

13. **Observations:** AdvanSix did not record the inspections conducted of the ammonium sulfate drop shoot prior to each loading event.

Legal Requirements: Condition 247.k. of the Permit: “The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Piedmont Regional Office. These records shall include, but are not limited to:

- k. Records of the each ammonium sulfate handling and loading operation (ship/barge loading) loading event and enclosed drop loading chute (or equivalent) inspections required by Condition #245.

These records shall be available for inspection by the DEQ and shall be current for the most recent five (5) years.

(Condition #250 of the 2/19/2015 NSR Permit and 9 VAC 5-80-110)”

14. **Observations:** AdvanSix did not calibrate the Area 7 CRU caustic scrubber flow monitor at least annually.

Legal Requirements: Condition 188 of the Permit: “During all periods of operation, the Area 7 CRU flaker (FL-6) fume scrubber liquid flow rate shall be continuously monitored and recorded. The caustic/neutralizing agent injection rate shall be continuously monitored and recorded by one or more of the following methods: pump stroke rate, flow measurement or pH. Data from the continuous monitors shall be recorded as fifteen minute readings and reduced to 3-hour averages on a rolling basis. A valid 3-hour average shall consist of no less than 90% valid readings. The continuous monitoring devices shall be maintained and calibrated in accordance with the manufacturer's specifications (at least annually), and the results of the calibrations recorded.

(Condition #193 of the 2/19/2015 NSR Permit and 9 VAC 5-80-110)”

15. **Observations:** The differential monitors located on FL-1, FL-5 and FL-7 were not calibrated as required by the manufacturer.

Legal Requirements: Condition 190 of the Permit: “ The Area 8 flakers shall be equipped with control system monitoring devices to measure the control system operating parameters as specified below:

Area 8 flaker #1 (FL-1):	Differential Pressure
Area 8 flaker #2 (FL-5):	Differential Pressure

Area 8 flaker #3 (FL-7): Differential Pressure and Scrubber Liquid Flow (*)

The monitoring devices shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. The monitoring devices shall be provided with adequate access for inspection and shall be in operation when their respective control systems are operating. (*) If the 2/19/2015 NSR Permit is amended to remove scrubber liquid flow as a required parameter, the scrubber liquid flow requirement of this condition shall be deemed void.

(Condition #195 of the 2/19/2015 NSR Permit and 9 VAC 5-80-110)"

9 VAC 5-170-160(A) – (Conditions on Approvals) of the Commonwealth of Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution states in part: "The board may impose conditions upon permits and other approvals which may be necessary to carry out the policy of the Virginia Air Pollution Control Law, and which are consistent with the regulations of the board. Except as otherwise specified, nothing in this chapter shall be understood to limit the power of the board in this regard. If the owner or other person fails to adhere to the conditions, the board may automatically cancel the permit or approvals. This section shall apply, but not be limited, to approval of variances, approval of control programs, and granting of permits."

Va. Code § 10.1-1322(A) gives the Department the authority to issue, amend, revoke or terminate and reissue permits, and failure to comply with any condition of a permit is considered a violation of the Air Pollution Control Law.

ENFORCEMENT AUTHORITY

Va. Code § 10.1-1316 of the Air Pollution Control Law provides for an injunction for any violation of the Air Pollution Control Law, the Air Board regulations, an order, or permit condition, and provides for a civil penalty up to \$32,500 per day of each violation of the Air Pollution Control Law, regulation, order, or permit condition. In addition, Va. Code §§ 10.1-1307 and 10.1-1309 authorizes the Air Pollution Control Board to issue orders to any person to comply with the Air Pollution Control Law and regulations, including the imposition of a civil penalty for violations of up to \$100,000. Also, Va. Code § 10.1-1186 authorizes the Director of DEQ to issue special orders to any person to comply with the Air Pollution Control Law and regulations. Va. Code §§ 10.1-1320 and 10.1-1309.1 provide for other additional penalties.

FUTURE ACTIONS

DEQ staff wishes to discuss all aspects of their observations with you, including any actions needed to ensure compliance with state law and regulations, any relevant or related measures you plan to take or have taken, and a schedule, as needed, for further activities. In addition, please advise us if you dispute any of the observations recited herein or if there is other information of which DEQ should be aware. In order to avoid adversarial enforcement proceedings, AdvanSix Chemical & Resins LLC., may be asked to enter into a Consent Order with the Department to formalize a plan and schedule of corrective action and to settle any outstanding issues regarding this matter, including the assessment of civil charges.

In the event that discussions with staff do not lead to a satisfactory conclusion concerning the contents of this letter, you may elect to participate in DEQ's Process for Early Dispute Resolution. Also, if informal discussions do not lead to a satisfactory conclusion, you may request in writing that DEQ take

AdvanSix Chemical & Resins LLC.
Registration No.: 50232
NOV No.: APRO001039-001
Page 9 of 9

all necessary steps to issue a final decision or fact finding under the APA on whether or not a violation has occurred. For further information on the [Process for Early Dispute Resolution](#), please see [Agency Policy Statement No. 8-2005](#) posted on the Department's website under "Programs," "Enforcement," and "Laws, Regulations, & Guidance" (http://www.deq.virginia.gov/Portals/0/DEQ/Enforcement/Guidance/process%20for%20early%20dispute%20resolution%20no8_2005.pdf) or ask the DEQ contact listed below.

Please contact David Robinett at (804) [REDACTED] **within 10 days** of the date of this letter to discuss this matter and arrange a meeting.

Sincerely,



Kyle Ivar Winter, P.E.
Deputy Regional Director

Attachment: September 10, 2018, DEQ inspection report

Ec: John Sheridan (AdvanSix)
Thomas Varner (AdvanSix)
John Reinhardt (DEQ)
David Robinett (DEQ)



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

PIEDMONT REGIONAL OFFICE

4949-A Cox Road, Glen Allen, Virginia 23060

(804) 527-5020 Fax (804) 527-5106

www.deq.virginia.gov

Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director

James J. Golden
Regional Director

July 15, 2019

CERTIFIED MAIL RETURN RECEIPT REQUESTED

#7016 3560 0001 0906 1078

Mr. Fred Harry, Plant Manager
AdvanSix Resins and Chemicals, LLC.
905 East Randolph Road
Hopewell, Virginia 23860

NOTICE OF VIOLATION

RE: NOV No.: APRO001232-001
AdvanSix Resins and Chemicals LLC.
Registration #: 50232

Dear Mr. Harry:

This letter notifies you of information upon which the Department of Environmental Quality ("Department" or "DEQ") may rely in order to institute an administrative or judicial enforcement action. Based on this information, DEQ has reason to believe that AdvanSix Resins and Chemicals LLC - Hopewell ("Facility") may be in violation of the Air Pollution Control Law and Regulations.

This letter addresses conditions at the Facility named above, and cites compliance requirements of the Air Pollution Control Law and Regulations. Pursuant to Va. Code § 10.1-1309 (A) (vi), this letter is not a case decision under the Virginia Administrative Process Act, Va. Code § 2.2-4000 *et seq.* The Department requests that you respond **within 10 days of the date of this letter** to arrange a prompt meeting.

OBSERVATIONS AND LEGAL REQUIREMENTS

AdvanSix Resins & Chemicals LLC owns and operates a chemical manufacturing facility at 905 East Randolph Road, Hopewell Virginia. The Facility is subject to a Title V permit last amended on March 30, 2016, and a New Source Review permit dated August 28, 2018 (Permit). On April 26, 2019, DEQ staff reviewed the Flare FLS-61 bypass letter dated March 28, 2019. The following describe DEQ staff's factual observations and identify the applicable legal requirements:

1. **Observations:** AdvanSix reported that when the Area 6 gas compressor GC-5 is off line and the A6-Cryo plant is operating, the return fuel gas, including the regeneration emissions from the carbon beds are not controlled. The emissions bypass flare FLS-61 and vent directly to the ambient air through the cold box vent stack.

Legal Requirements: Permit condition 23 states, “Volatile Organic Compound (VOC) emissions from the Area 6 continuous cyclohexanone hydrogenation reactor system (A6-Hydro) shall be controlled by venting these emissions to the M. W. Kellogg Ammonia Production Plant (Kellogg) for incineration. The emissions vented to the Kellogg facility shall include any A6-Hydro emissions bypassing the cryogenics facility and all A6-Hydro emissions entering the cryogenics facility except for emissions resulting from depressurizing the Area 6 cryogenics carbon beds (F-119, F-120). The TOC reduction efficiency of the Kellogg facility as an incinerator shall be at least 98%. (9 VAC 5-80-1180 and 9 VAC 5-50-260)”

Legal Requirements: Permit condition 24 states, “VOC emissions resulting from the depressurizing of the Area 6 cryogenics carbon beds (F-119, F-120), the venting of Area 6 continuous cyclohexanone hydrogenation reactor system (A6-Hydro) during cryogenic outages and the cyclohexanol batch reactor (APT-1) shall be controlled by a non-assisted flare (FLS-61). The reduction efficiency of the flare shall be at least 98%. (9 VAC 5-80-1180 and 9 VAC 5-50-260)”

9 VAC 5-170-160(A) – (Conditions on Approvals) of the Commonwealth of Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution states in part: “The board may impose conditions upon permits and other approvals which may be necessary to carry out the policy of the Virginia Air Pollution Control Law, and which are consistent with the regulations of the board. Except as otherwise specified, nothing in this chapter shall be understood to limit the power of the board in this regard. If the owner or other person fails to adhere to the conditions, the board may automatically cancel the permit or approvals. This section shall apply, but not be limited, to approval of variances, approval of control programs, and granting of permits.”

Va. Code § 10.1-1322(A) gives the Department the authority to issue, amend, revoke or terminate and reissue permits, and failure to comply with any condition of a permit is considered a violation of the Air Pollution Control Law.

ENFORCEMENT AUTHORITY

Va. Code § 10.1-1316 of the Air Pollution Control Law provides for an injunction for any violation of the Air Pollution Control Law, the Air Board regulations, an order, or permit condition, and provides for a civil penalty up to \$32,500 per day of each violation of the Air Pollution Control Law, regulation, order, or permit condition. In addition, Va. Code §§ 10.1-1307 and 10.1-1309 authorizes the Air Pollution Control Board to issue orders to any person to comply with the Air Pollution Control Law and regulations, including the imposition of a civil penalty for violations of up to \$100,000. Also, Va. Code § 10.1-1186 authorizes the Director of DEQ to issue special orders to any person to comply with the Air Pollution Control Law and regulations. Va. Code §§ 10.1-1320 and 10.1-1309.1 provide for other additional penalties.

FUTURE ACTIONS

DEQ staff wishes to discuss all aspects of their observations with you, including any actions needed to ensure compliance with state law and regulations, any relevant or related measures you plan to take or have taken, and a schedule, as needed, for further activities. In addition, please advise us if you dispute any of the observations recited herein or if there is other information of which DEQ should be aware. In order to avoid adversarial enforcement proceedings, AdvanSix Resins and Chemicals LLC., may be asked to enter into a Consent Order with the Department to formalize a plan and schedule of corrective action and to settle any outstanding issues regarding this matter, including the assessment of civil charges.

In the event that discussions with staff do not lead to a satisfactory conclusion concerning the contents of this letter, you may elect to participate in DEQ's Process for Early Dispute Resolution. Also, if informal discussions do not lead to a satisfactory conclusion, you may request in writing that DEQ take all necessary steps to issue a final decision or fact finding under the APA on whether or not a violation has occurred. For further information on the [Process for Early Dispute Resolution](#), please see [Agency Policy Statement No. 8-2005](#) posted on the Department's website under "Programs," "Enforcement," and "Laws, Regulations, & Guidance" (http://www.deq.virginia.gov/Portals/0/DEQ/Enforcement/Guidance/process%20for%20early%20dispute%20resolution%20no8_2005.pdf) or ask the DEQ contact listed below.

Please contact David Robinett at (804) [REDACTED] **within 10 days** of the date of this letter to discuss this matter and arrange a meeting.

Sincerely,



Kyle Ivar Winter, P.E.
Deputy Regional Director

Attachment: April 26, 2019, DEQ inspection report

Ec: John Sheridan (AdvanSix)
Thomas Varner (AdvanSix)
John Reinhardt (DEQ)
David Robinett (DEQ)



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director

James J. Golden
Regional Director

May 28, 2021

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
#7019 2280 0001 9799 9519

Mr. Andrew Girvin, Plant Manager
AdvanSix Resins and Chemicals, LLC.
905 East Randolph Road
Hopewell, Virginia 23860

NOTICE OF VIOLATION

RE: NOV No.: APRO001824-001
AdvanSix Resins and Chemicals LLC.
Registration #: 50232

Dear Mr. Girvin:

This letter notifies you of information upon which the Department of Environmental Quality ("Department" or "DEQ") may rely in order to institute an administrative or judicial enforcement action. Based on this information, DEQ has reason to believe that AdvanSix Resins and Chemicals LLC - Hopewell ("Facility") may be in violation of the Air Pollution Control Law and Regulations.

This letter addresses conditions at the Facility named above, and cites compliance requirements of the Air Pollution Control Law and Regulations. Pursuant to Va. Code § 10.1-1309 (A) (vi), this letter is not a case decision under the Virginia Administrative Process Act, Va. Code § 2.2-4000 *et seq.* The Department requests that you respond **within 30 days of the date of this letter** to arrange a prompt meeting.

OBSERVATIONS AND LEGAL REQUIREMENTS

AdvanSix Resins & Chemicals LLC owns and operates a chemical manufacturing facility at 905 East Randolph Road, Hopewell Virginia. The Facility is subject to a Title V permit (Permit), last amended on July 30, 2019. On March 16, 2021, DEQ staff reviewed the 14-day malfunction follow-up letter dated March 16, 2021 and CERCAL report dated March 10, 2021. The following describe DEQ staff's factual observations and identify applicable legal requirements:

1. **Observations:** AdvanSix reported an emission release caused by a pressure relief valve (PRV) venting. The venting allowed process gases containing volatile organic compounds (VOC), toluene and benzene to bypass the thermal oxidizer and/or backup carbon beds. The venting resulted in the uncontrolled emissions of these pollutants to the ambient air.

Legal Requirements: Condition 119 of the Permit states, "VOC emissions from VT-221, A-Toluizer (CL-29), B-Toluizer (CL-28), C-Toluizer (CL-29new), CL-81, CL-62new, C-361, CL-15, CL-62, HT-52 and the Area 8 turbogizer separation system (APT-14, APT-26, VT-59, VT-59new, HT-66) shall be controlled by a thermal oxidizer. The TOC reduction efficiency of the oxidizer shall be at least 98% or to a TOC concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen, whichever is less stringent. Upon the written approval of the Piedmont Regional Office, the permittee may choose to use an alternate control technology for the control of VOC emissions from VT-221, HT-52 or the Area 8 turbogizer separation system (APT-14, APT-26, VT-59, VT-59new, HT-66). This approval shall be contingent upon adequate demonstration that the proposed alternate control technology will achieve a VOC reduction efficiency equal to or greater than the thermal oxidizer required by this condition. As of March 1, 2013 (the date of the DEQ approval letter), SC-325 has been approved as an alternate control technology by the Piedmont Regional Office for HT-52 and the Area 8 turbogizer separation system (APT-14, APT-26, VT-59, VT-59new, HT-66). (Condition #E.4 of the 3/26/1997 RACT Agreement, Condition #130 of the 2/19/2015 NSR Permit and 9VAC5-80-110)"

2. **Observations:** AdvanSix reported the annual bypass of VOC emissions and the calendar year bypass hours. The average emissions are listed below:
 - Year 2016, PRV release average emissions rate = 19.00 lbs/hr VOC
 - Year 2017, PRV release average emissions rate = 38.55 lbs/hr VOC
 - Year 2018, PRV release average emissions rate = 35.98 lbs/hr VOC
 - Year 2019, PRV release average emissions rate = 29.37 lbs/hr VOC

Legal Requirements: Condition 134 of the Permit states, "Emissions from the operation of the Area 8/16 thermal oxidizer, inclusive of the emissions from the Area 7 CRU specified in Condition 156 and the emissions specified in condition 132, shall not exceed the limits specified below:

...		
VOC	8.6 lb/hr	6.1 tons/yr

(Condition #142 of the 2/19/2015 NSR Permit and 9VAC5-80-110)"

3. **Observations:** Advansix did not provide timely notification of a permit deviation. AdvanSix initially reported the pressure relief valve VOC bypass emissions in a March 3, 2021 e-mail. In a March 16, 2021 follow-up letter, AdvanSix stated that corrective actions related to the emissions were performed during July and October 2019.

Legal Requirements:

- Condition 460 of the Permit states, "Permit Deviation Reporting - The permittee shall notify the Piedmont Regional Office within four daytime business hours after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the

permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. Owners subject to the requirements of 9VAC5-40-50 C and 9VAC5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9VAC5-40-40 and 9VAC5-50-40.

- Condition 461 of the Permit states, "General Conditions - Failure/Malfunction Reporting - In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall no later than four daytime business hours after the malfunction is discovered, notify the Piedmont Regional Office of such failure or malfunction and shall within 14 days of discovery provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9VAC5-40-50 C and 9VAC5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9VAC5-40-40 and 9VAC5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Piedmont Regional Office. (9VAC5-80-110 and 9VAC5-20-180)"

4. **Observations:** Advansix did not maintain and operate pollution control equipment in a manner that minimizes emissions. AdvanSix stated that the PRV actual pressure setting is less than the alarm setting resulting in the undetected and uncontrolled excess emissions of volatile organic compounds, benzene and toluene.

Legal Requirements: The Regulation at 9 VAC 5-50-20.E. states "At all times, including periods of startup, shutdown, soot blowing and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source."

ENFORCEMENT AUTHORITY

Va. Code § 10.1-1316 of the Air Pollution Control Law provides for an injunction for any violation of the Air Pollution Control Law, the Air Board regulations, an order, or permit condition, and provides for a civil penalty up to \$32,500 per day of each violation of the Air Pollution Control Law, regulation, order, or permit condition. In addition, Va. Code §§ 10.1-1307 and 10.1-1309 authorizes the Air Pollution Control Board to issue orders to any person to comply with the Air Pollution Control Law and regulations, including the imposition of a civil penalty for violations of up to \$100,000. Also, Va. Code § 10.1-1186 authorizes the Director of DEQ to issue special orders to any person to comply with the Air Pollution Control Law and regulations. Va. Code §§ 10.1-1320 and 10.1-1309.1 provide for other additional penalties.

FUTURE ACTIONS

DEQ staff wishes to discuss all aspects of their observations with you, including any actions needed to ensure compliance with state law and regulations, any relevant or related measures you plan to take or have taken, and a schedule, as needed, for further activities. In addition, please advise us if you dispute any of the observations recited herein or if there is other information of which DEQ should be aware. In order to avoid adversarial enforcement proceedings, AdvanSix Resins and Chemicals LLC., may be asked to enter into a Consent Order with the Department to formalize a plan and schedule of corrective action and to settle any outstanding issues regarding this matter, including the assessment of civil charges.

In the event that discussions with staff do not lead to a satisfactory conclusion concerning the contents of this letter, you may elect to participate in DEQ's Process for Early Dispute Resolution. Also, if informal discussions do not lead to a satisfactory conclusion, you may request in writing that DEQ take all necessary steps to issue a final decision or fact finding under the APA on whether or not a violation has occurred. For further information on the Process for Early Dispute Resolution, please visit Virginia's Townhall website:

(https://townhall.virginia.gov/L/GetFile.cfm?File=C:\TownHall\docroot\GuidanceDocs\440\GDoc_DEQ_2672_v1.pdf) or ask the DEQ contact listed below.

Please contact David Robinett at (804) [REDACTED] **within 30 days** of the date of this letter to discuss this matter and arrange a meeting.

Sincerely,



Kyle Ivar Winter, P.E.
Deputy Regional Director

Attachment: March 16, 2021 inspection report

Ec: Case File
Philip Sparks (AdvanSix)
Thomas Varner (AdvanSix)
John Reinhardt (DEQ)



Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

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Ann Jennings
Secretary of Natural and Historic Resources

David K. Paylor
Director
(804) 698-4000

October 1, 2021

Mr. Andrew Girvin, Plant Manager
AdvanSix Resins and Chemicals, LLC.
905 E. Randolph Road
Hopewell, Virginia 23860
email: [REDACTED]

NOTICE OF VIOLATION

RE: NOV No. APRO001965-001, AdvanSix Resins & Chemicals, LLC (50232)

Dear Mr. Girvin:

This letter notifies you of information upon which the Department of Environmental Quality (DEQ) may rely in order to institute an administrative or judicial enforcement action. Based on this information, DEQ has reason to believe that AdvanSix Resins & Chemicals, LLC (AdvanSix) may be in violation of the Air Pollution Control Law, Regulations, and DEQ Air Program Permits at the AdvanSix facility located at 905 E. Randolph Road, Hopewell, Virginia (Facility).

This letter addresses conditions at the Facility named above, and also cites compliance requirements of the Air Pollution Control Law, Regulations, and Permit. Pursuant to Va. Code § 10.1-1309(A)(vi), this letter is not a case decision under the Virginia Administrative Process Act (APA), Va. Code § 2.2-4000 *et seq.* DEQ requests that you respond **within 10 days of the date of this letter** to arrange a meeting.

OBSERVATIONS AND LEGAL REQUIREMENTS

AdvanSix owns and operates a chemical manufacturing facility at 905 East Randolph Road, Hopewell Virginia. The Facility is subject to a Title V permit (Permit), last amended on July 30, 2020, and a New Source Review (NSR) permit, last amended on November 6, 2020. The following describe DEQ staff's factual observations and identify applicable legal requirements:

1. **Observation:** On August 10, 2021, DEQ conducted a Partial Compliance Evaluation (PCE) of a follow-up report, dated June 30, 2021, from the initial exceedance notification, which indicated that Area 11 ammonium sulfate production exceeded the hourly capacity for dryers RD-4, RD-6, and RD-7 for

approximately three hours on June 17, 2021. Emissions during the event are presented in the table below.

	Hour 01:00	Hour 03:00	Hour 04:00	Total Excess Emissions (lbs)
Dryer RD-4				
PM (lbs)	4.3	4.0	4.0	0.9
PM-10	5.9	5.5	5.5	1.3
PM-2.5	3.1	2.9	2.9	0.8
VOC	5.4	5.0	5.1	1.1
Dryer RD-6				
PM	3.2	2.9	2.9	0.6
PM-10	4.3	4.0	4.0	0.9
PM-2.5	2.2	2.1	2.1	0.4
VOC	3.9	3.7	3.7	0.8
Dryer RD-7				
PM	3.2	2.9	2.9	0.6
PM-10	4.3	4.0	4.0	0.9
PM-2.5	2.2	2.1	2.1	0.4
VOC	3.9	3.7	3.7	0.8

Legal Requirements: Condition 269 of the Facility’s NSR Permit states, “Emissions from the operation of the Area 11 ammonium sulfate dryer designated RD-4 shall not exceed the limits specified below:

Particulate Matter (PM) (filterable only)	3.8 lbs/hr
Particulate Matter (PM-10)	5.2 lbs/hr
Particulate Matter (PM-2.5)	2.7 lbs/hr
VOC	4.8 lbs/hr”

Condition 270 of the Facility’s NSR Permit states, “Emissions from the operation of the Area 11 ammonium sulfate dryer designated RD-6 shall not exceed the limits specified below:

Particulate Matter (PM) (filterable only)	2.8 lbs/hr
Particulate Matter (PM-10)	3.8 lbs/hr
Particulate Matter (PM-2.5)	2.0 lbs/hr
VOC	3.5 lbs/hr”

Condition 271 of the Facility's NSR Permit states, "Emissions from the operation of the Area 11 ammonium sulfate dryer designated RD-7 shall not exceed the limits specified below:

Particulate Matter (PM) (filterable only)	2.8 lbs/hr
Particulate Matter (PM-10)	3.8 lbs/hr
Particulate Matter (PM-2.5)	2.0 lbs/hr
VOC	3.5 lbs/hr"

2. **Observations:** On August 10, 2021, DEQ conducted a PCE of a follow up report, dated June 30, 2021, from the initial malfunction notification, which indicated that the SE-149 scrubber circulation water flow dropped below the set point for approximately five hours on June 18, 2021 and approximately three hours on June 23, 2021. Emission rates during the malfunction events were reported as 1.3 lbs/hr of Particulate Matter and 0.8 lbs/hr of Hydrogen Sulfide. Total emissions during the malfunction events were reported at 10 lbs of Particulate Matter and under 6 lbs of Hydrogen Sulfide.

Legal Requirements: Condition 157 of the Permit states, "Particulate and hydrogen sulfide emissions from the Area 7 CRU flaker (FL-6) shall be controlled by venting the emissions to a fume scrubber (SE-149). The fume scrubber shall reduce emissions of particulate matter by at least 90% by weight. The fume scrubber shall reduce emissions of hydrogen sulfide by at least 50% by weight."

Condition 174 of the Permit states, "Emissions from the operation of the Area 7 CRU flaker (FL-6), as exhausted through fume scrubber SE-149, shall not exceed the limits specified below:

Particulate Matter: 0.2 lb/hr...

Hydrogen Sulfide: 0.4 lb/hr..."

3. **Observation:** On August 10, 2021, DEQ conducted a PCE of a follow up report, dated June 30, 2021, from the initial malfunction notification, which indicated that the TW-62 scrubber differential pressure dropped below the 1-hour average set point for four hours on June 21, 2021. The set point range for the TW-62 scrubber was established during the January 25, 2017 stack test at 2 – 20 inches of water column.

Legal Requirement: Condition 114.a.iii. of the Permit states, "The permittee shall install and operate devices to continuously measure and permanently record the control device operating parameters described below. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the specified control device is operating.

a. A-Train

iii. Hydroxylamine diammonium sulfonate tower (TW-62) after the date the SCR system required by Conditions #74-76 commences operation: The total pressure drop across and the scrubber liquid flow

rate for the TW-62 packed bed scrubber and the total pressure drop across the TW-62 mist eliminator (SE-88). ... ”

4. **Observation:** On July 29, 2021, DEQ received the quarterly Excess Emission Report for Area 9 B-Train Disulfonate Tower, TW-9. The inlet NOx monitor downtime was reported as 5.76% during the quarter.

Legal Requirement: Condition 106 of the Permit states, “...The NOx CEMS and CERMS shall be installed, calibrated, certified, maintained, audited and operated in accordance with the requirements of 40 CFR 60, including Appendices B and F...”

40 CFR 60, Subpart 60.13.e. states, “Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under paragraph (d) of this section, all continuous monitoring systems shall be in continuous operation...”

5. **Observation:** On July 29, 2021, DEQ received the quarterly Excess Emission Report for Area 9 C-Train Nitrite Tower, TW-17. The outlet NOx monitor downtime was reported as 6.6% during the quarter.

Legal Requirement: Condition 106 of the Permit states, “...The NOx CEMS and CERMS shall be installed, calibrated, certified, maintained, audited and operated in accordance with the requirements of 40 CFR 60, including Appendices B and F...”

40 CFR 60, Subpart 60.13.e. states, “Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under paragraph (d) of this section, all continuous monitoring systems shall be in continuous operation...”

6. **Observation:** On July 29, 2021, DEQ received the quarterly Excess Emission Report for Area 9 B-Train Ammonium Nitrite Tower, TW-8. The inlet NOx monitor downtime was reported as 8.8% during the quarter.

Legal Requirement: Condition 106 of the Permit states, “...The NOx CEMS and CERMS shall be installed, calibrated, certified, maintained, audited and operated in accordance with the requirements of 40 CFR 60, including Appendices B and F...”

40 CFR 60, Subpart 60.13.e. states, “Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under paragraph (d) of this section, all continuous monitoring systems shall be in continuous operation...”

7. **Observation:** On July 29, 2021, DEQ received the quarterly Excess Emission Report for Area 9 E-Train Disulfonate Tower, TW-33. The inlet NOx monitor downtime was reported as 3.72% during the quarter.

Legal Requirement: Condition 107 of the Permit states, “...The NOx CEMS and CERMS shall be installed, calibrated, certified, maintained, audited and operated in accordance with the requirements of 40 CFR 60, including Appendices B and F...”

40 CFR 60, Subpart 60.13.e. states, "Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under paragraph (d) of this section, all continuous monitoring systems shall be in continuous operation..."

8. **Observation:** On July 29, 2021, DEQ received the semi-annual report required by 40 CFR 60, Subparts NNN and RRR. The Report indicated that the FLS-62 flare pilot flame could not be confirmed via their flare flame indicator and pilot light indication sensor five times during the semi-annual period and that there were approximately 44 minutes of diversions from the FLS-62 flare. AdvanSix had personnel investigate and visually confirm the presence of a pilot flame on four of the five instances that the flare pilot flame was out. The pilot flame could not be confirmed on January 24, 2021 for a duration of 15 minutes. Excess emissions from the January 24, 2021 malfunction are estimated by AdvanSix at 8.9 lbs VOC.

Legal Requirement: Condition 61.b. of the Permit states, "The permittee shall design, maintain, and operate each non-assisted flare in accordance with the following requirements:

b. Each non-assisted flare shall be equipped to maintain the pilot flame during all periods of operation."

9. **Observation:** On July 29, 2021, DEQ received the semi-annual report required by 40 CFR 63, Subpart FFFF. The report indicates that the Area 16 control device FU-16 was bypassed and emissions were vented to atmosphere for 0.3 hours during the semi-annual period.

Legal Requirement: Condition 140 of the Permit states, "Unless an alternative date is approved by the Administrator, the permittee shall operate any applicable Area 8/16 equipment in compliance with the requirements of 40 CFR 63 Subparts A and FFFF."

40 CFR 63 Subpart 63.11b.3 states, "Flares shall be operated at all times when emissions may be vented to them."

10. **Observation:** On September 9, 2021, DEQ conducted a PCE of a follow up report, dated August 27, 2021, from the initial malfunction notification, which indicated that the TW-8 scrubber differential pressure values had drifted in a manner that caused the pressure drop to read a negative value for 1 hour and 46 minutes on August 9, 2021. The required minimum set point for the scrubber is 0.07 inches of water column.

Legal Requirement: Condition 114.b.ii. of the Permit states, "The permittee shall install and operate devices to continuously measure and permanently record the control device operating parameters described below. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the specified control device is operating.

b. B-Train

ii. Ammonium nitrite tower (TW-8) after the date the SCR system required by Conditions #74-76 commences operation: The total pressure drop across and the scrubber liquid flow rate for the TW-8 Venturi scrubber (SE-179). During the performance test required by Condition #112, the permittee shall

establish and maintain the total pressure drop across and the scrubber liquid flow rate for SE-179 necessary to demonstrate compliance with the requirements of Conditions #81 and #98-100... ”

- 11. Observation:** On August 17, 2021, DEQ received a maintenance notification, which indicated that the Area 7 C-323 barometric condenser would be undergoing planned maintenance on August 18, 2021 and that expected emissions would be less than 1 lb/hr. On September 15, 2021, DEQ received a follow up report which indicated that the planned maintenance had taken place on C-323 and that the emissions during the maintenance event were 1.0 lb/hr for 8 hours and that excess emissions of VOC were 5.6 lbs.

Legal Requirement: Condition 171 of the Permit states, “Emissions from the operation of the Area 7 barometric condenser (C-323) shall not exceed the limits specified below:

VOC 0.3 lb/hr...”

- 12. Observation:** On September 13, 2021, DEQ conducted a PCE of a follow up report, dated September 3, 2021, from the initial malfunction notification, which indicated that the caustic pump associated with the SE-149 scrubber shut down for approximately 80 minutes on August 23, 2021. During that time, the SE-149 scrubber was not controlling hydrogen sulfide emissions. Estimated hydrogen sulfide emissions during the event are presented in the table below.

	Hour 17:00	Hour 18:00	Hour 19:00	Hour 20:00	Total excess emissions
Hydrogen Sulfide emissions (lbs/hr)	0.5	1.1	0.5	0.6	1.1 lbs

Legal Requirements: Condition 157 of the Permit states, “Particulate and hydrogen sulfide emissions from the Area 7 CRU flaker (FL-6) shall be controlled by venting the emissions to a fume scrubber (SE-149). The fume scrubber shall reduce emissions of particulate matter by at least 90% by weight. The fume scrubber shall reduce emissions of hydrogen sulfide by at least 50% by weight.”

Condition 174 of the Permit states, “Emissions from the operation of the Area 7 CRU flaker (FL-6), as exhausted through fume scrubber SE-149, shall not exceed the limits specified below:...

Hydrogen Sulfide 0.4 lb/hr”

- 13. Observation:** On September 13, 2021, DEQ conducted a PCE of a follow up report, dated September 7, 2021, from the initial malfunction notification, which indicated that the TW-8 scrubber differential pressure values were below the minimum required set point for two hours on August 24, 2021. The minimum required set point value is 0.07 inches of water column and the hourly readings during the two hour period were -0.2 and -0.02 inches of water column.

Legal Requirement: Condition 114.b.ii. of the Permit states, “The permittee shall install and operate devices to continuously measure and permanently record the control device operating parameters described below. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the specified control device is operating.

b. B-Train

ii. Ammonium nitrite tower (TW-8) after the date the SCR system required by Conditions #74-76 commences operation: The total pressure drop across and the scrubber liquid flow rate for the TW-8 Venturi scrubber (SE-179). During the performance test required by Condition #112, the permittee shall establish and maintain the total pressure drop across and the scrubber liquid flow rate for SE-179 necessary to demonstrate compliance with the requirements of Conditions #81 and #98-100... ”

14. **Observation:** On September 13, 2021, DEQ conducted a PCE of a follow up report, dated September 7, 2021, from the initial exceedance notification, which indicated that the TW-8 scrubber control efficiency for NO_x dropped below 95% for five hours on August 28, 2021. NO_x emissions and control efficiency percentages during the event are presented in the table below. The follow up report is provided as a condition of the EPA and DEQ Consent Decree, effective July 18, 2013.

	Hour 08:00	Hour 09:00	Hour 10:00	Hour 11:00	Hour 12:00	Total Excess Emissions
NO _x Emissions (lbs/hr)	116.1	242.4	317.8	236.3	112.5	770.1 lbs
NO _x Control Efficiency (%)	74	50	37	56	79	

Legal Requirements: Condition 74 of the Permit states, “The permittee shall operate two (one for each tower) selective catalytic reduction systems (SCR) for the control of nitrogen oxide (NO_x) emissions from the ammonium nitrite and hydroxylamine diammonium sulfonate towers of either "A" train (TW-2 and TW-62), "B" train (TW-8 and TW-9) or "C" train (TW-17 and TW-18). Each SCR shall achieve a NO_x removal efficiency of at least 95%.”

Condition 97 of the Permit states, “Nitrogen oxide emissions from the operation of the ammonium nitrite and hydroxylamine diammonium sulfonate towers shall not exceed the limits specified below...

B: TW-8: 51.0 lbs/hr...”

ENFORCEMENT AUTHORITY

Va. Code § 10.1-1316 of the Air Pollution Control Law provides for an injunction for any violation of the Air Pollution Control Law, the Air Board regulations, an order, or permit condition, and provides for a civil penalty up to \$32,500 per day of each violation of the Air Pollution Control Law, regulation, order, or permit condition. In addition, Va. Code §§ 10.1-1307 and 10.1-1309 authorizes the Air Pollution Control Board to issue orders to any person to comply with the Air Pollution Control Law and regulations, including the imposition of a civil penalty for violations of up to \$100,000. Also, Va. Code § 10.1-1186 authorizes the Director of DEQ to issue special orders to any person to comply with the Air Pollution Control Law and regulations, and to impose a civil penalty. Va. Code §§ 10.1-1320 and 10.1-1309.1 provide for other additional penalties.

FUTURE ACTIONS

DEQ staff wishes to discuss all aspects of their observations with you, including any actions needed to ensure compliance with state law and regulations, any relevant or related measures you plan to take or have taken, and a schedule, as needed, for further activities. In addition, please advise us if you dispute any of the observations recited herein or if there is other information of which DEQ should be aware. In order to avoid adversarial enforcement proceedings, AdvanSix may be asked to enter into a Consent Order with DEQ to formalize a plan and schedule of corrective action and to settle any outstanding issues regarding this matter, including the assessment of civil charges.

In the event that discussions with staff do not lead to a satisfactory conclusion concerning the contents of this letter, you may elect to participate in DEQ's Process for Early Dispute Resolution. Also, if informal discussions do not lead to a satisfactory conclusion, you may request in writing that DEQ take all necessary steps to issue a final decision or fact finding under the APA on whether or not a violation has occurred. For further information on the Process for Early Dispute Resolution, please refer to the Virginia Regulatory Town Hall website, <https://townhall.virginia.gov/L/gdocs.cfm?agencynumber=440>, item 2672 at the top of the list at that link, or ask the DEQ contact listed below.

Please contact Kerri Nicholas at 804- [REDACTED] within 10 days to discuss this matter and arrange a meeting.

Sincerely,

Megan Joyce

Digitally signed by: Megan Joyce
DN: CN = Megan Joyce email =
megan.joyce@deq.virginia.gov C =
US O = Virginia DEQ OU = OACC
Date: 2021.10.01 11:49:51 -05'00'

Megan Joyce
Air Compliance Manager

cc: Philip Sparks, AdvanSix, [REDACTED]
Thomas Varner, AdvanSix, [REDACTED] Tom Yates, AdvanSix,
[REDACTED] Kasey Agee, DEQ-VRO Air Compliance Inspector
Kerri Nicholas, DEQ Division of Enforcement



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Travis A. Voyles
Acting Secretary of Natural and Historic Resources

Michael S. Rolband, PE, PWD, PWS Emeritus
Director
(804) 698-4020

May 3, 2022

Mr. Andrew Girvin, Plant Manager
AdvanSix Resins and Chemicals, LLC.
905 E. Randolph Road
Hopewell, Virginia 23860
Email: [REDACTED]

NOTICE OF VIOLATION

RE: NOV No. APRO001965-003, AdvanSix Resins & Chemicals, LLC (50232)

Dear Mr. Girvin:

This letter notifies you of information upon which the Department of Environmental Quality (DEQ) may rely in order to institute an administrative or judicial enforcement action. Based on this information, DEQ has reason to believe that AdvanSix Resins & Chemicals, LLC (AdvanSix) may be in violation of the Air Pollution Control Law, Regulations, and DEQ Air Program Permits at the AdvanSix facility located at 905 E. Randolph Road, Hopewell, Virginia (Facility).

This letter addresses conditions at the Facility named above, and also cites compliance requirements of the Air Pollution Control Law, Regulations, and Permit. Pursuant to Va. Code § 10.1-1309(A)(vi), this letter is not a case decision under the Virginia Administrative Process Act (APA), Va. Code § 2.2-4000 *et seq.* DEQ requests that you respond **within 10 days of the date of this letter** to arrange a meeting.

OBSERVATIONS AND LEGAL REQUIREMENTS

AdvanSix owns and operates a chemical manufacturing facility at 905 East Randolph Road, Hopewell Virginia. The Facility is subject to a Title V Permit (Permit), last amended on July 30, 2020 and a New Source Review Permit (NSR Permit), last amended on November 6, 2020. The following describe DEQ staff's factual observations and identify applicable legal requirements:

1. **Observation:** On October 13, 2021, DEQ conducted a Partial Compliance Evaluation (PCE) of the Semi Annual Monitoring Report (SAMR), dated August 27, 2021, which covered the first half of calendar year 2021. The SAMR reported that the visible emissions conducted for FU-14 and FU-17 for the week of February 22, 2021 were completed but not recorded.

Legal Requirements: Condition 319 of the Permit states, “The permittee shall visually observe the FU-17 boiler at least once each operating week for at least a brief time period to determine compliance with the visible emission standard of Condition #303...”

Condition 320 of the Permit states, “The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Piedmont Regional Office. These records shall include, but are not limited to:

- p. Records of the visible emission observations, visible emission evaluations and corrective actions required by Condition #319.

Condition 394 of the Permit states: “The Trane Thermal Incinerator (FU-14) shall be observed visually at least once each operating week for at least a brief time period to determine which emissions units have normal visible emissions...”

Condition 395 of the Permit states: “The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Piedmont Regional Office. These records shall include, but are not limited to:

- 1. The results of the monthly visible emission surveys required by Condition #394 and details of any corrective action taken as a result of these inspections. ¹
- 2. **Observation:** On October 13, 2021, DEQ conducted a PCE of the Semi Annual Monitoring Report (SAMR), dated August 27, 2021, which covered the first half of calendar year 2021. The SAMR reported that four Open Ended Lines (OELs) were found in LDAR service in Area 6 and Area 14 during the first half of 2021.

Legal Requirements: Condition 428 of the Permit states, “The permittee shall comply with the enhanced leak detection and repair (LDAR) requirements specified in Appendix A of any United States Environmental Protection Agency Consent Decree entered to resolve the Notices of Violation issued to the permittee on March 10, 2009 and August 21, 2010.”

- 3. **Observation:** On September 28, 2021, DEQ conducted a PCE of a malfunction report for scrubber SE-149 which reported a malfunction on September 4, 2021. A follow up report was received by DEQ on September 17, 2021. The SE-149 malfunction resulted in uncontrolled hydrogen sulfide emissions over a 12 hour period. Hydrogen sulfide emissions during the malfunction are presented in the table below.

	H ₂ S Emissions (lbs/hr)	Excess Emissions (lbs)
Date and Hour	Limit: 0.4 lbs/hr	-
9/4/2021, 20:00	1.1	0.7
9/4/2021, 21:00	1.2	0.8
9/4/2021, 22:00	1.2	0.8
9/4/2021, 23:00	1.2	0.8

¹ Condition 395 of the Permit contains a typographical error. “Monthly” should be read as “weekly” as specified in Condition 394 of the Permit.

9/5/2021, 00:00	1.2	0.8
9/5/2021, 01:00	1.2	0.8
9/5/2021, 02:00	1.2	0.8
9/5/2021, 03:00	1.2	0.8
9/5/2021, 04:00	1.2	0.8
9/5/2021, 05:00	1.2	0.8
9/5/2021, 06:00	1.2	0.8
9/5/2021, 07:00	0.7	0.3
Total Excess Emissions	-	9.0 lbs

Legal Requirements: Condition 157 of the Permit states, “Particulate and hydrogen sulfide emissions from the Area 7 CRU flaker (FL-6) shall be controlled by venting the emissions to a fume scrubber (SE-149). The fume scrubber shall reduce emissions of particulate matter by at least 90% by weight. The fume scrubber shall reduce emissions of hydrogen sulfide by at least 50% by weight.”

Condition 174 of the Permit states, “Emissions from the operation of the Area 7 CRU flaker (FL-6), as exhausted through fume scrubber SE-149, shall not exceed the limits specified below:

Hydrogen Sulfide 0.4 lb/hr...”

4. **Observation:** On September 28, 2021, DEQ conducted a PCE of a malfunction report for TW-8 SE-179 scrubber which reported a malfunction on September 13, 2021. A follow up report was received by DEQ on September 27, 2021. The SE-179 malfunction resulted in differential pressure values that were below the minimum required set point of 0.07 inches of water for two block hours with readings of -0.3 and -0.2 inches of water. AdvanSix indicated that all other parameters were within their normal ranges.

Legal Requirements: Condition 114 of the Permit states, “The permittee shall install and operate devices to continuously measure and permanently record the control device operating parameters described below. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the specified control device is operating...”

b. B-Train ...

ii. Ammonium nitrite tower (TW-8) after the date the SCR system required by Conditions #74-76 commences operation: The total pressure drop across and the scrubber liquid flow rate for the TW-8 Venturi scrubber (SE-179). During the performance test required by Condition #112, the permittee shall establish and maintain the total pressure drop across and the scrubber liquid flow rate for SE-179 necessary to demonstrate compliance with the requirements of Conditions #81 and #98-100. The permittee shall submit the proposed operating parameters and ranges to the Piedmont Regional Office for review and approval within 60 days of reporting the results of the performance test.”

5. **Observation:** On September 29, 2021, DEQ conducted a PCE of a malfunction report for TW-62 SE-45 scrubber and SE-88 mist eliminator which reported a malfunction on September 14, 2021. A follow up report was received on September 27, 2021. The malfunction resulted in differential pressure values that were below the minimum required set point of for one hour for both SE-45 and SE-88. AdvanSix

indicated that all other parameters were within their normal ranges and they do not believe any excess emissions were released as a result of the malfunction.

Legal Requirements: Condition 114 of the Permit states, “

The permittee shall install and operate devices to continuously measure and permanently record the control device operating parameters described below. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the specified control device is operating.

a. A-Train

iii. Hydroxylamine diammonium sulfonate tower (TW-62) after the date the SCR system required by Conditions #74-76 commences operation: The total pressure drop across and the scrubber liquid flow rate for the TW-62 packed bed scrubber and the total pressure drop across the TW-62 mist eliminator (SE-88). During the performance tests required by Conditions #112 and #113, the permittee shall establish and maintain the total pressure drop across and the scrubber liquid flow rate for the TW-62 packed bed scrubber and the total pressure drop across SE-88 necessary to demonstrate compliance with the requirements of Conditions #78, #80 and #98-101. The permittee shall submit the proposed operating parameters and ranges to the Piedmont Regional Office for review and approval within 60 days of reporting the results of the performance tests.”

6. **Observation:** On October 12, 2021, DEQ conducted a PCE of a malfunction report for scrubber SE-149 which reported a malfunction on September 23, 2021. A follow up report was received by DEQ on October 7, 2021. The SE-149 malfunction resulted in uncontrolled hydrogen sulfide emissions for a 27 minute period. AdvanSix estimated total hydrogen sulfide emissions for the block hour at 0.6 lbs.

Legal Requirements: Condition 157 of the Permit states, “Particulate and hydrogen sulfide emissions from the Area 7 CRU flaker (FL-6) shall be controlled by venting the emissions to a fume scrubber (SE-149). The fume scrubber shall reduce emissions of particulate matter by at least 90% by weight. The fume scrubber shall reduce emissions of hydrogen sulfide by at least 50% by weight.”

Condition 174 of the Permit states, “Emissions from the operation of the Area 7 CRU flaker (FL-6), as exhausted through fume scrubber SE-149, shall not exceed the limits specified below:

Hydrogen Sulfide 0.4 lb/hr...”

7. **Observation:** On November 30, 2021, DEQ conducted a PCE of the third quarter 2021 Excess Emission Report for Area 9, D-Train, TW-22. The outlet NOx monitor downtime was reported as 5.46% during the quarter.

Legal Requirements: Condition 108 of the Permit states, “...The NOX CEMS and CERMS shall be calibrated, maintained, audited and operated in accordance with the requirements of 40 CFR 60, Appendices B and F...”

40 CFR 60, Subpart 60.13.e. states, “Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under paragraph (d) of this section, all continuous monitoring systems shall be in continuous operation...”

8. **Observation:** On November 30, 2021, DEQ conducted a PCE of the third quarter 2021 Excess Emission Report for Area 9, C-Train, TW-17. The outlet NOx monitor downtime was reported as 4.23% during the quarter.

Legal Requirements: Condition 105 of the Facility's Permit states, "...The NOX CEMS and CERMS shall be installed, calibrated, certified, maintained, audited and operated in accordance with the requirements of 40 CFR 60, including Appendices B and F..."

40 CFR 60, Subpart 60.13.e. states, "Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under paragraph (d) of this section, all continuous monitoring systems shall be in continuous operation..."

9. **Observation:** On January 12, 2022, DEQ conducted a PCE of a report of a potential exceedance that was initially reported to DEQ on December 3, 2021. Follow up information was provided to DEQ on December 17, 2021 and January 7, 2022. The initial report and follow up information indicated that a change in the Area 7 Caprolactam Recovery Unit (CRU) caustic addition rate had caused excess emissions of SO₂ from the FU-16 control device dating back to 2011. Annual and hourly emissions of SO₂ are presented in the table below.

	Maximum Hourly SO ₂ Emissions (lbs/hr)	Annual SO ₂ Emissions (tons/yr)
Year	Limit: 0.1 lbs/hr	Limit: 0.3 tons/yr
2021	16.2	53.7
2020	18.6	59.7
2019	16.6	60.8
2018	16.7	40.4
2017	17.9	37.7
2016	17.9	45.3
2015	16.9	20.9
2014	15.6	20.4
2013	13.5	15.0
2012	15.8	16.3
2011(April – December)	16.9	23.0
Total Excess Emissions	-	393.2 tons

Legal Requirements: Condition 211 of the Permit states, "Emissions from the operation of the Area 7 CRU thin film evaporator (EV-46) and the Area 7 CRU residue recovery tank (VT-966), as exhausted through the Area 8/16 thermal oxidizer or the Area 9 disulfonate towers (sulfur burners), shall not exceed the limits specified below:

Sulfur Dioxide 0.1 lbs/hr 0.3 tons/yr

10. **Observation:** On February 15, 2022, DEQ conducted a PCE of the fourth quarter 2021 Excess Emission Report for Area 9, B-Train, TW-9. The inlet NOx monitor downtime was reported as 3.86% during the quarter.

Legal Requirements: Condition 104 of the Permit states, "...The NOx CEMS and CERMS shall be installed, calibrated, certified, maintained, audited and operated in accordance with the requirements of 40 CFR 60, including Appendices B and F..."

40 CFR 60, Subpart 60.13.e. states, "Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under paragraph (d) of this section, all continuous monitoring systems shall be in continuous operation..."

- 11. Observation:** On February 15, 2022, DEQ conducted a PCE of the fourth quarter 2021 Excess Emission Report for Area 9, D-Train, TW-23. The outlet NOx monitor downtime was reported as 4.78% during the quarter.

Legal Requirements: Condition 108 of the Permit states, "...The NOx CEMS and CERMS shall be calibrated, maintained, audited and operated in accordance with the requirements of 40 CFR 60, Appendices B and F..."

40 CFR 60, Subpart 60.13.e. states, "Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under paragraph (d) of this section, all continuous monitoring systems shall be in continuous operation..."

- 12. Observation:** On February 15, 2022, DEQ conducted a PCE of the fourth quarter 2021 Excess Emission Report for Area 9, E-Train, TW-33. The outlet NOx monitor downtime was reported as 3.54% during the quarter.

Legal Requirements: Condition 107 of the Permit states, "...The NOx CEMS and CERMS shall be installed, calibrated, certified, maintained, audited and operated in accordance with the requirements of 40 CFR 60, including Appendices B and F..."

40 CFR 60, Subpart 60.13.e. states, "Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under paragraph (d) of this section, all continuous monitoring systems shall be in continuous operation..."

- 13. Observation:** On February 17, 2021, DEQ conducted a PCE of a malfunction report for Area 9, B-Train, TW-8 SCR which reported a malfunction on January 24, 2022. Follow up reports were received by DEQ on February 3, 2022 and February 7, 2022. The TW-8 SCR malfunction resulted in excess NOx emissions for a three hour period. NOx emission data are presented in the table below. SCR NOx control efficiency data are included in the table, but SCR NOx control efficiency is not applicable during a malfunction.

	SCR NOx 3-Hour Average Control Efficiency (%)	NOx Hourly Average (lbs/hr)	NOx Excess Emissions (lbs)
Hour	Limit: 95%	Limit: 51.0 lbs/hr	-
02:00	81	335.0	284.0
03:00	58	454.7	403.7
04:00	52	103.0	52.0
05:00	70	0.4	0.0
06:00	94	8.0	0.0

Total Excess Emissions	-	-	739.7
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Legal Requirements: Condition 97 of the Permit states, “Nitrogen oxide emissions from the operation of the ammonium nitrite and hydroxylamine diammonium sulfonate towers shall not exceed the limits specified below...

B: TW-8 51.0 (lb/hr)

- 14. Observation:** On March 3, 2022, DEQ conducted a PCE of the semiannual Consent Decree Report for the second half of calendar year 2021. AdvanSix reported the discovery of six Open Ended Lines on the Semi Annual Monitoring Report for the second half of calendar year 2021, but did not report the non-compliance on the Consent Decree Report.

Legal Requirements: Paragraph 49 of the Consent Decree states, “49. Honeywell shall submit the following reports documenting its progress in complying with the requirements of this Consent Decree:

a. Within thirty (30) Days after the end of the second and fourth calendar quarters after the date of entry of this Consent Decree, until termination of this Decree pursuant to Section XXVI (Termination), below, Honeywell shall submit to EPA and VADEQ by email a written semi-annual report that shall include for the reporting period:

- 1) the status of the compliance measures identified in Sections V - XIII of this Consent Decree;
- 2) a detailed description of any problems encountered or anticipated, together with implemented or proposed solution;
- 3) the status of permit applications or modifications; and
- 4) a description of any change that is not authorized by permit or regulation and would result in a significant increase in emissions from Area 9 of the Facility

b. The semi-annual report shall also include a description of any non-compliance with the requirements of this Consent Decree and an explanation of the likely cause of the noncompliance and of the remedial steps taken, or to be taken, to prevent or minimize such noncompliance. If Honeywell violates, or has reason to believe that it may violate, any requirement of this Consent Decree, Honeywell shall notify the United States and VADEQ of such violation and its likely duration, in writing, within ten (10) Days of the date Honeywell first becomes aware of the violation, with an explanation of the violation’s likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such violation. If the cause of a violation cannot be fully explained at the time the report is due, Honeywell shall so state in the report. Honeywell shall investigate the cause of the violation and shall then submit an amendment to the report, including a full explanation of the cause of the violation, within thirty (30) Days of the day Honeywell becomes aware of the cause of the violation. Nothing in this Paragraph 49.b. or the following Paragraph 51 relieves Honeywell of its obligation to provide the notice required by Section XVII of this Consent Decree (Force Majeure).”

Appendix A of the Consent Decree states, “Because the LDAR regulations applicable to the Facility prohibit OELs, there is no list of components that will receive this periodic monitoring. The Facility shall meet the 4.d. requirement by inspecting periodically for OELs and monitoring them using Method 21 if any are found.”

The Miscellaneous Organic Chemical Manufacturing NESHAP (MON) - 40 CFR 63.2450(e)(6)(v)(B) states, "Open-ended valves or lines that use a cap, blind flange, plug, or second valve and follow the requirements specified in 40 CFR 60.482-6(a)(2), (b), and (c) or follow requirements codified in another regulation that are the same as 40 CFR 60.482-6(a)(2), (b), and (c) are not subject to this paragraph (e)(6)."

40 CFR 60.482-6 states,

"(a)

- (1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in § 60.482-1(c) and paragraphs (d) and (e) of this section.
- (2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.

(b) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

(c) When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (a) at all other times..."

The Hazardous Organic NESHAP (HON) – 40 CFR 63.167 states,

"(a)

- (1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in § 63.162(b) of this subpart and paragraphs (d) and (e) of this section.
- (2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line, or during maintenance or repair.

(b) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

(c) When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (a) of this section at all other times..."

- 15. Observation:** On March 17, 2022, DEQ conducted a PCE of the Semi Annual Monitoring Report (SAMR), dated March 1, 2022, which covered the second half of calendar year 2021. The SAMR reported that six Open Ended Lines (OELs) were found in LDAR service in Area 6, Area 8/16, Area 14, and MPO during the second half of 2021.

Legal Requirements: Condition 428 of the Facility's Permit states, "The permittee shall comply with the enhanced leak detection and repair (LDAR) requirements specified in Appendix A of any United States Environmental Protection Agency Consent Decree entered to resolve the Notices of Violation issued to the permittee on March 10, 2009 and August 21, 2010."

- 16. Observation:** On March 29, 2022, DEQ received a malfunction notification which indicated that there had been a release from the VT-518 oleum storage tank that same day. AdvanSix updated DEQ staff on the status of the oleum release via phone conversation on the afternoon of March 29, 2022. DEQ received written follow up reports on April 4, 2022 and April 12, 2022. Based on the initial notification

and all follow up information, 5,821 gallons (89,813 lbs) of oleum were released while pumping oleum from the Sulfuric Acid Plant to fill the oleum tank VT-518. AdvanSix determined that, as a result of the release, the SO₃ in the oleum reacted with the atmosphere to form 14,345 lbs of H₂SO₄. Additionally, when the saturated insulation surrounding the tank was removed, 98 lbs of SO₃ (120 lbs of H₂SO₄) was released. Hourly and total emissions resulting from the release are presented in the table below.

	H ₂ SO ₄ Emissions	Limit
Maximum Hourly Rate	3,489 lbs/hr	0.10 lbs/hr
Total	7.23 tons	1.2 tons/yr

Legal Requirements: Condition 306 of the NSR Permit states, “Sulfuric acid mist emissions from the oleum storage tanks shall be controlled by acid scrubbers, as follows:

Emission Unit ID	Pollution Control Device ID
VT-518	SE-141

...”

Condition 327 of the NSR Permit states, “Hourly sulfuric acid mist emissions from the operation of the return sulfuric acid storage tanks, sulfuric acid storage tanks, and oleum storage tanks shall not exceed the limits specified below:

VT-518	0.10 lbs/hr
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...”

Condition 328 of the NSR Permit states, “Combined annual emissions from the operation of the return sulfuric acid storage tanks sulfuric acid storage tanks, and oleum storage tanks (VT-437, VT-439, VT-440, VT-518, VT-519, VT-438, VT-746, VT-747, VT-391, and VT-392) shall not exceed the limit specified below:

Sulfuric Acid Mist 1.2 tons/yr”

ENFORCEMENT AUTHORITY

Va. Code § 10.1-1316 of the Air Pollution Control Law provides for an injunction for any violation of the Air Pollution Control Law, the Air Board regulations, an order, or permit condition, and provides for a civil penalty up to \$32,500 per day of each violation of the Air Pollution Control Law, regulation, order, or permit condition. In addition, Va. Code §§ 10.1-1307 and 10.1-1309 authorizes the Air Pollution Control Board to issue orders to any person to comply with the Air Pollution Control Law and regulations, including the imposition of a civil penalty for violations of up to \$100,000. Also, Va. Code § 10.1-1186 authorizes the Director of DEQ to issue special orders to any person to comply with the Air Pollution Control Law and regulations, and to impose a civil penalty. Va. Code §§ 10.1-1320 and 10.1-1309.1 provide for other additional penalties.

FUTURE ACTIONS

DEQ staff wishes to discuss all aspects of their observations with you, including any actions needed to ensure compliance with state law and regulations, any relevant or related measures you plan to take or have taken, and a schedule, as needed, for further activities. In addition, please advise us if you dispute any of the observations recited herein or if there is other information of which DEQ should be aware. In order to avoid

adversarial enforcement proceedings, AdvanSix may be asked to enter into a Consent Order with DEQ to formalize a plan and schedule of corrective action and to settle any outstanding issues regarding this matter, including the assessment of civil charges.

In the event that discussions with staff do not lead to a satisfactory conclusion concerning the contents of this letter, you may elect to participate in DEQ's Process for Early Dispute Resolution. Also, if informal discussions do not lead to a satisfactory conclusion, you may request in writing that DEQ take all necessary steps to issue a final decision or fact finding under the APA on whether or not a violation has occurred. For further information on the Process for Early Dispute Resolution, please refer to the Virginia Regulatory Town Hall website, <https://townhall.virginia.gov/L/gdocs.cfm?agencynumber=440>, item 2672 at the top of the list at that link, or ask the DEQ contact listed below.

Please contact Kerri Nicholas at 804-[REDACTED] within 10 days to discuss this matter and arrange a meeting.

Sincerely,

Megan Joyce
Air Compliance Manager

cc:

Philip Sparks, AdvanSix, [REDACTED]
Thomas Varner, AdvanSix [REDACTED] Tom Yates, AdvanSix,
[REDACTED] Kasey Agee, DEQ-VRO Air Compliance Inspector
Kerri Nicholas, DEQ Division of Enforcement



Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

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Travis A. Voyles
Acting Secretary of Natural and Historic Resources

Michael S. Rolband, PE, PWD, PWS Emeritus
Director
(804) 698-4020

Jerome A. Brooks
Regional Director

January 27, 2023

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
#7010 3090 0000 5410 3887

Andrew M. Girvin
Plant Manager
AdvanSix Resins and Chemicals LLC – Hopewell Plant
905 E Randolph Road
Hopewell, VA 23860

NOTICE OF VIOLATION

RE: NOV No. APRO001965-004
AdvanSix Resins and Chemicals LLC – Hopewell Plant
Registration #: 50232

Dear Mr. Girvin:

This letter notifies you of information upon which the Department of Environmental Quality (Department or DEQ) may rely in order to institute an administrative or judicial enforcement action. Based on this information, DEQ has reason to believe that AdvanSix Resins and Chemicals LLC (Advansix) – Hopewell Plant (Facility) may be in violation of the Air Pollution Control Law and Regulations.

This letter addresses conditions at the Facility named above, and also cites compliance requirements of the Air Pollution Control Law and Regulations. Pursuant to Va. Code § 10.1-1309 (A) (vi), this letter is not a case decision under the Virginia Administrative Process Act, Va. Code § 2.2-4000 *et seq.* The Department requests that you respond **within 10 days of the date of this letter** to arrange a prompt meeting.

OBSERVATIONS AND LEGAL REQUIREMENTS

AdvanSix owns and operates a chemical manufacturing facility located at 905 E. Randolph Road, Hopewell, Virginia. The Facility is subject to a TV Permit (TV) dated July 30, 2020, a minor NSR Permit (NSR-1) dated September 8, 2022, a minor NSR Permit (NSR-2) dated April 23, 2021, and a minor NSR Permit (NSR-3) dated April 24, 2020. DEQ staff conducted a Partial Compliance Evaluation (PCE) following a National Response Center (NRC) Release Report on December 5, 2022 (Report No. 1353745). The following describes staff's factual observations and identifies applicable legal requirements:

1. **Observation:** On November 29, 2022, nitrogen oxides (NOx) were released from product storage tanks VT-363 and VT-368. The release was reported at 21:56 on November 29, 2022. The written report submitted to the Department dated December 5, 2022, states that 1,533 lbs of NOx were released from the product storage tanks from approximately 13:45 to 15:56. The Department does not have a record of product storage tanks VT-363 and VT-368 being included in previous permit applications.

Legal Requirements:

- 9 VAC 5-50-260 (A) states "No owner or other person shall cause or permit to be discharged into the atmosphere from any affected facility any emissions in excess of emissions limitations representing best available control technology, as reflected in any term or condition that may be placed upon the minor NSR permit approval for the facility."
- 9 VAC 5-80-1210 (E) states "Any owner who constructs or operates a source subject to this section not in accordance with the terms and conditions of any permit to construct or operate, or any owner of a source subject to this section who commences construction or operation without receiving a permit hereunder, shall be subject to appropriate enforcement action including, but not limited to, any specified in this section."

ENFORCEMENT AUTHORITY

Va. Code § 10.1-1316 of the Air Pollution Control Law provides for an injunction for any violation of the Air Pollution Control Law, the Air Board regulations, an order, or permit condition, and provides for a civil penalty up to \$32,500 per day of each violation of the Air Pollution Control Law, regulation, order, or permit condition. In addition, Va. Code §§ 10.1-1307 and 10.1-1309 authorizes the Air Pollution Control Board to issue orders to any person to comply with the Air Pollution Control Law and regulations, including the imposition of a civil penalty for violations of up to \$100,000. Also, Va. Code § 10.1-1186 authorizes the Director of DEQ to issue special orders to any person to comply with the Air Pollution Control Law and regulations. Va. Code §§ 10.1-1320 and 10.1-1309.1 provide for other additional penalties.

FUTURE ACTIONS

DEQ staff wishes to discuss all aspects of their observations with you, including any actions needed to ensure compliance with state law and regulations, any relevant or related measures you plan to take or have taken, and a schedule, as needed, for further activities. In addition, please advise us if you dispute any of the observations recited herein or if there is other information of which DEQ should be aware. In order to avoid adversarial enforcement proceedings, AdvanSix may be asked to enter into a Consent Order with the Department to formalize a plan and schedule of corrective action and to settle any outstanding issues regarding this matter, including the assessment of civil charges.

In the event that discussions with staff do not lead to a satisfactory conclusion concerning the contents of this letter, you may elect to participate in DEQ's Process for Early Dispute Resolution. Also, if informal discussions do not lead to a satisfactory conclusion, you may request in writing that DEQ take all necessary steps to issue a final decision or fact finding under the APA on whether or not a violation has occurred. For further information on the Process for Early Dispute Resolution, please visit Virginia's Townhall website:

(https://townhall.virginia.gov/L/GetFile.cfm?File=C:\TownHall\docroot\GuidanceDocs\440\GDoc_DEQ_2672_v1.pdf) or ask the DEQ contact listed below.

Please contact Jeff Reynolds at (804) [REDACTED] **within 10 days** of the date of this letter to discuss this matter and arrange a meeting.

Sincerely,



David Robinett
Air Compliance Manager

Attachment: December 5, 2022, DEQ inspection report

Ec: Case File
Thomas Varner (AdvanSix)
Edward Rinehart (DEQ)
Jeff Reynolds (DEQ)