

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF SOUTH CAROLINA  
CHARLESTON DIVISION

----- x  
UNITED STATES OF AMERICA,

Plaintiff,

v.

Civil No. 2:24-cv-07522-DCN

LANXESS CORPORATION,

Defendant.

----- x

**CONSENT DECREE**

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WHEREAS, Plaintiff United States of America, on behalf of the United States Environmental Protection Agency (“EPA”), has filed a complaint in this action concurrently with this Consent Decree, alleging that Defendant, LANXESS Corporation (“Defendant”), violated Section 112 of the Clean Air Act (“Act”), 42 U.S.C. § 7412, and its implementing regulations at 40 C.F.R. Part 63, Subpart FFFF and Subpart A.

WHEREAS, the Complaint against Defendant alleges that Defendant has violated the Act and its implementing regulations at its chemical manufacturing facility located at 2151 King Street Extension in Charleston, South Carolina (the “Facility”) by, among other things, (1) failing to properly characterize and control wastewater streams, (2) failing to properly monitor and repair equipment with the potential to leak hazardous pollutants, and (3) failing to properly report information required by the Act.

WHEREAS, Defendant does not admit any liability to the United States arising out of the transactions or occurrences alleged in the Complaint.

WHEREAS, the Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and will avoid litigation between the Parties and that this Consent Decree is fair, reasonable, and in the public interest.

NOW, THEREFORE, before the taking of any testimony, without the adjudication or admission of any issue of fact or law except as provided in Section I, with the consent of the Parties, IT IS HEREBY ADJUDGED, ORDERED, AND DECREED as follows:

## **I. JURISDICTION AND VENUE**

1. This Court has jurisdiction over the subject matter of this action, pursuant to 28 U.S.C. §§ 1331, 1345, and 1355, and Section 113(b) of the Act, 42 U.S.C. § 7413(b), and over the Parties. Venue lies in this District pursuant to Section 113(b) of the Act, and 28 U.S.C.

§§ 1391(b) and (c) and 1395(a), because the violations alleged in the Complaint are alleged to have occurred in, and Defendant conducts business in, this judicial district. For purposes of this Decree, or any action to enforce this Decree, Defendant consents to the Court's jurisdiction over this Decree and any such action, and over Defendant, and Defendant consents to venue in this judicial district.

2. For purposes of this Consent Decree, Defendant agrees that the Complaint states claims upon which relief may be granted.

## **II. APPLICABILITY**

3. The obligations of this Consent Decree apply to and are binding upon the United States, and upon Defendant and any successors, assigns, or other entities or persons otherwise bound by law.

4. No transfer of ownership or operation of the Facility, whether in compliance with the procedures of this Paragraph or otherwise, shall relieve Defendant of its obligation to ensure that the terms of the Decree are implemented. At least 30 Days prior to such transfer, Defendant shall provide a copy of this Consent Decree to the proposed transferee and shall simultaneously provide written notice of the prospective transfer, together with a copy of the proposed written agreement, to EPA, DOJ, and the United States Attorney for the District of South Carolina, in accordance with Section XVI (Notices). Any attempt to transfer ownership or operation of the Facility without complying with this Paragraph constitutes a violation of this Decree.

5. Defendant shall provide a copy of this Consent Decree to all officers, employees, and agents whose duties might reasonably include compliance with any provision of this Decree, as well as to any contractor retained to perform work required under this Consent Decree.

Defendant shall condition any such contract upon performance of the work in conformity with the terms of this Consent Decree.

6. In any action to enforce this Consent Decree, Defendant shall not raise as a defense the failure by any of its officers, directors, employees, agents, or contractors to take any actions necessary to comply with the provisions of this Consent Decree.

### **III. DEFINITIONS**

7. Terms used in this Consent Decree, including its appendices, that are defined in the Act or in regulations promulgated pursuant to the Act have the meanings assigned to them in the Act or such regulations, unless otherwise provided in this Decree. Whenever the terms set forth below are used in this Consent Decree, the following definitions apply:

“Appendix” or “Appendices” means an appendix or appendices listed in Section XXVII.

“Complaint” means the complaint filed by the United States in this action.

“Consent Decree” or “Decree” means this Decree and all appendices attached hereto (listed in Section XXVII), but in the event of a conflict between the text of this Consent Decree and any Appendix, the text of this Consent Decree shall control.

“Date of Lodging” means the date this Consent Decree is lodged with the United States District Court for the District of South Carolina pending public comment and Court action.

“Day” means a calendar day unless expressly stated to be a business day. In computing any period of time for a deadline under this Consent Decree, where the last day would fall on a Saturday, Sunday, or federal holiday, the period runs until the close of business of the next business day.

“Defendant” means the entity named in the Complaint, specifically LANXESS Corporation.

“DOJ” means the United States Department of Justice and any of its successor departments or agencies.

“EPA” means the United States Environmental Protection Agency and any of its successor departments or agencies.

“Effective Date” means the definition provided in Section XVII.

“Facility” means Defendant’s chemical manufacturing facility located at 2151 King Street Extension, Charleston, South Carolina.

“Independent Third Party” or “ITP” means any entity, including the entity’s personnel and subcontractors, hired by Defendant pursuant to Appendix A to perform one or more evaluation or audit required by Appendix B, C, or D.

“LDAR” or “Leak Detection and Repair” means the leak detection and repair activities required by any applicable “equipment leak” provisions of 40 C.F.R. Part 63, Subpart FFFF, as well as any applicable state or local equipment leak requirements that require the use of Method 21 to monitor for equipment leaks and require the repair of leaks discovered through such monitoring.

“LDAR Regulations” collectively means the federal, state and local laws, regulations, permits, and other requirements referenced in the preceding sentence.

“LDAR Audit” means an audit conducted pursuant to Paragraph 32 of Appendix B.

“Management of Change Protocol” or “MOC Protocol” means a formal protocol that calls for all modifications to a facility’s existing design, equipment, operations, processes, organizations, or activities—other than those that are an “identical” or “like-kind” replacement—to be reviewed and authorized by site management prior to implementation of the change. The purpose of a Management of Change Protocol is to eliminate uncontrolled changes at a facility. For purposes of this Consent Decree, “identical” shall mean the customary dictionary definition of this term and “like-kind” shall mean equivalent in design and functionality.

“Paragraph” means a portion of this Decree identified by an Arabic numeral.

“Parties” means the United States and Defendant.

“Quarter” or “Quarterly” means a calendar quarter (January through March, April through June, July through September, or October through December), except as otherwise provided in any applicable LDAR Regulations.

“Section” means a portion of this Decree identified by a Roman numeral.

“United States” means the United States of America, acting on behalf of EPA.

#### **IV. CIVIL PENALTY**

8. Within 30 Days after the Effective Date, Defendant shall pay the sum of \$650,000.00 as a civil penalty, together with interest accruing from February 28, 2024, at the rate specified in 28 U.S.C. § 1961 as of February 28, 2024.

9. Defendant shall pay the civil penalty due, together with interest, by FedWire Electronic Funds Transfer (“EFT”) to the DOJ account, in accordance with instructions provided to Defendant by the Financial Litigation Unit (“FLU”) of the United States Attorney’s Office for the District of South Carolina after the Effective Date. The payment instructions provided by the FLU will include a Consolidated Debt Collection System (“CDCS”) number, which Defendant shall use to identify all payments required to be made in accordance with this Consent Decree.

The FLU will provide the payment instructions to:

Glen Bowen  
Head of Sales, Americas  
Head of PLA Americas  
Polymer Additives Business Unit  
Lanxess Corporation  
111 RIDC Parkwest Drive  
Pittsburgh, PA 15275  
+1 (716) 983 4507  
glen.bowen@lanxess.com

on behalf of Defendant. Defendant may change the individual to receive payment instructions on its behalf by providing written notice of such change to DOJ and EPA in accordance with Section XVI (Notices).

10. At the time of payment, Defendant shall send notice that payment has been made: (i) to EPA via email at [cinwd\\_acctsreceivable@epa.gov](mailto:cinwd_acctsreceivable@epa.gov) or via regular mail to EPA Cincinnati Finance Office, 26 W. Martin Luther King Drive, Cincinnati, Ohio 45268; (ii) to DOJ via email or regular mail in accordance with Section XVI (Notices); and (iii) to EPA in accordance with Section XVI (Notices). Such notice shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in *United States v. LANXESS Corporation* and shall reference the civil action number, CDCS Number and DOJ case number 90-5-2-1-12671.

11. Defendant shall not deduct any penalties paid under this Decree pursuant to this Section or Section X (Stipulated Penalties) in calculating its federal income tax.

## **V. COMPLIANCE REQUIREMENTS**

12. Defendant shall perform the measures set forth in Appendices A, B, C, and D at the Facility.

## **VI. SUPPLEMENTAL ENVIRONMENTAL PROJECTS**

13. Defendant shall implement the Supplemental Environmental Projects (“SEPs”) described in Appendix E. The SEPs shall be completed within the time periods set forth in Appendix E for each SEP. The SEPs shall upgrade safety equipment in the Halides Unit, enhance the phosphorus vapor cloud suppression system, install encapsulated sampling systems, and provide air purification units to three nearby community centers.

14. Defendant is responsible for the satisfactory completion of the SEPs in accordance with the requirements of this Decree. “Satisfactory completion” means that each



SEP has been fully implemented in accordance with Appendix E. Defendant may use contractors or consultants in planning and implementing the SEPs.

15. Regarding the SEPs, Defendant certifies the truth and accuracy of each of the following:

- a. that all cost information provided to EPA in connection with EPA's approval of the SEPs is complete and accurate and that Defendant in good faith estimates that the cost to implement the SEPs is at least \$3,545,000.00;
- b. that, as of the date of executing this Decree, Defendant is not required to perform or develop the SEPs by any federal, state, or local law or regulation and is not required to perform or develop the SEPs by agreement, grant, or as injunctive relief awarded in any other action in any forum;
- c. that the SEPs are not projects that Defendant was planning or intending to construct, perform, or implement other than in settlement of the claims resolved in this Decree;
- d. that Defendant has not received and will not receive credit for the SEPs in any other enforcement action;
- e. that Defendant will not receive any reimbursement for any portion of the SEPs from any other person; and
- f. that (1) Defendant is not a party to any open federal financial assistance transaction that is funding or could fund the same activity as the SEPs described in Appendix E; and (2) Defendant has inquired of the Rosemont, Freddie Whaley Community Center; the Union Heights, Gethsemani Community Center; and the Accabee, Perry-Web Community Center ("SEP Recipients") whether any is a party to an

open federal financial assistance transaction that is funding or could fund the same activity as the SEPs and has been informed by SEP Recipients that none is a party to such a transaction. For purposes of these certifications, the term “open federal financial assistance transaction” refers to a grant, cooperative agreement, loan, federally-guaranteed loan guarantee, or other mechanism for providing federal financial assistance whose performance period has not yet expired.

16. **SEP Completion Report.** Defendant shall submit SEP Completion Reports to DOJ and EPA in accordance with Paragraph 29. Each SEP Completion Report shall contain the following information for each SEP completed during the applicable reporting period:

- a. a detailed description of each SEP as implemented;
- b. a description of any problems encountered in completing each SEP and the solutions thereto;
- c. an itemized list of all eligible SEP costs expended for each SEP;
- d. certification that each SEP has been fully implemented pursuant to the provisions of this Decree; and
- e. a description of the environmental and public health benefits resulting from implementation of each SEP (with a quantification of the benefits and pollutant reductions, if feasible).

17. EPA may, in its sole discretion, require information in addition to that described in the preceding Paragraph in order to evaluate Defendant’s SEP Completion Report.

18. After receiving each SEP Completion Report, the United States will notify Defendant if Defendant has satisfactorily completed the SEP or SEPs covered in the Report. If

Defendant has not completed the SEP or SEPs covered in the Report in accordance with this Consent Decree, stipulated penalties may be assessed under Section X.

19. Each submission required under this Section shall be signed by an official with knowledge of the SEP or SEPs and shall bear the certification language set forth in Paragraph 31.

20. Any public statement, oral or written, in print, film, or other media, made by Defendant making reference to any SEP under this Decree shall include the following language: “This project was undertaken in connection with the settlement of an enforcement action, United States v. LANXESS Corporation, taken on behalf of the U.S. Environmental Protection Agency under the Clean Air Act.”

21. For federal income tax purposes, Defendant agrees that it will neither capitalize into inventory or basis nor deduct any costs or expenditures incurred in performing any SEP.

## **VII. APPROVAL OF DELIVERABLES**

22. After review of any plan, report, or other item that is required to be submitted for approval pursuant to this Consent Decree, EPA will in writing: (a) approve the submission; (b) approve the submission upon specified conditions; (c) approve part of the submission and disapprove the remainder; or (d) disapprove the submission.

23. If the submission is approved pursuant to Paragraph 22(a), Defendant shall take all actions required by the plan, report, or other document, in accordance with the schedules and requirements of the plan, report, or other document, as approved. If the submission is conditionally approved or approved only in part pursuant to Paragraph 22(b) or (c), Defendant shall, upon written direction from EPA, take all actions required by the approved plan, report, or other item that EPA determines are technically severable from any disapproved portions.

24. If the submission is disapproved in whole or in part pursuant to Paragraph 22(c) or (d), Defendant shall, within 45 Days or such other time as the Parties agree to in writing, correct all deficiencies and resubmit the plan, report, or other item, or disapproved portion thereof, for approval, in accordance with the preceding Paragraphs. If the resubmission is approved in whole or in part, Defendant shall proceed in accordance with the preceding Paragraph.

25. If a resubmitted plan, report, or other item, or portion thereof, is disapproved in whole or in part, EPA may again require Defendant to correct any deficiencies, in accordance with the preceding Paragraphs, or may itself correct any deficiencies.

26. If Defendant elects to invoke Dispute Resolution as set forth in Section XII (Dispute Resolution) concerning a decision by EPA to disapprove, approve on specified conditions, or modify a deliverable, Defendant shall do so by sending a Notice of Dispute in accordance with Paragraph 58 within 30 Days (or such other time as the Parties agree to in writing) after receipt of the applicable decision.

27. Any stipulated penalties applicable to the original submission, as provided in Section X, accrue during the 45-Day period or other specified period, but shall not be payable unless the resubmission is untimely or is disapproved in whole or in part; provided that, (1) if the resubmission is disapproved in part due to a minor deficiency that Defendant promptly corrects, no stipulated penalty applicable to the original submission shall be due for reason of the corrected, minor deficiency; and (2) if the original submission was so deficient as to constitute a material breach of Defendant's obligations under this Decree, the stipulated penalties applicable to the original submission shall be due and payable notwithstanding any subsequent resubmission.

### **VIII. PERMITS**

28. Where any compliance obligation under this Consent Decree requires Defendant to obtain a federal, state, or local permit or approval, Defendant shall submit timely and complete applications and take all other reasonable actions necessary to obtain all such permits or approvals. Defendant may seek relief under the provisions of Section XI (Force Majeure) for any delay in the performance of any such obligation resulting from a failure to obtain, or a delay in obtaining, any permit or approval required to fulfill such obligation, if Defendant has submitted timely and complete applications and has taken all other reasonable actions necessary to obtain all such permits or approvals. Defendant shall provide notice to EPA pursuant to Section XVI (Notices) that Defendant has submitted an application for the Facility for any permit described in this Paragraph.

### **IX. REPORTING REQUIREMENTS**

29. Defendant shall submit the following reports to EPA and DOJ at the addresses set forth in Section XVI (Notices):

a. By February 28<sup>th</sup> and August 31<sup>st</sup> of each year after the lodging of this Consent Decree, until termination of this Decree pursuant to Section XX, Defendant shall submit a semi-annual report for the preceding six months that includes:

- (1) a description of each requirement of this Consent Decree and its Appendices (or any submission made thereunder) that was completed during the reporting period, including the date such requirement was completed;
- (2) the LDAR, Wastewater, and Batch Process Vent Status Reports required by Appendices B through D of this Consent Decree;

- (3) a description of any problems anticipated with respect to meeting the requirements of Sections V–VIII of this Consent Decree, together with implemented or proposed solutions;
- (4) a list of any notification of noncompliance submitted pursuant to Paragraph 29.b during the semiannual reporting period; and
- (5) A SEP Completion Report, as set forth in Paragraph 16, for any SEP completed within the semi-annual reporting period.

b. If Defendant violates, or has reason to believe that it may violate, any requirement of this Consent Decree, Defendant shall notify DOJ and EPA of such violation and its likely duration, in writing, within ten business days of the Day Defendant 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, Defendant shall so state in the report. Defendant 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 or an update regarding its investigation, within 30 Days of the Day Defendant becomes aware of the cause of the violation. Defendant shall update EPA on a 30-Day basis as to the status of its investigation until the cause of the violation is clarified. Nothing in this Paragraph or the following Paragraph relieves Defendant of its obligation to provide the notice required by Section XI (Force Majeure).

30. Whenever any violation of this Consent Decree or any other event affecting Defendant's performance under this Decree may pose an immediate threat to the public health or welfare or the environment, Defendant shall notify EPA by telephone or by email as provided in

Section XVI (Notices) as soon as possible, but no later than 24 hours after Defendant first knew of the violation or event. This procedure is in addition to the requirements set forth in the preceding Paragraph.

31. Each report submitted by Defendant under this Section shall be signed by an official of the submitting party and include the following certification:

I certify under penalty of perjury that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

32. The certification requirement in Paragraph 31 does not apply to emergency or similar notifications where compliance would be impractical.

33. The reporting requirements of this Consent Decree do not relieve Defendant of any reporting obligations required by the Act or implementing regulations, or by any other federal, state, or local law, regulation, permit, or other requirement.

34. The reporting requirements of this Section are in addition to any other reports, plans, or submissions required by other Sections of, or appendices to, this Consent Decree.

35. Any information provided pursuant to this Consent Decree may be used by the United States in any proceeding to enforce the provisions of this Consent Decree and as otherwise permitted by law.

## **X. STIPULATED PENALTIES**

36. Defendant shall be liable for stipulated penalties to the United States for violations of this Consent Decree as specified below, unless excused under Section XI (Force

Majeure) or waived by the United States pursuant to Paragraph 45. A violation includes failing to perform any obligation required by the terms of this Decree, including any work plan or schedule approved under this Decree, according to all applicable requirements of this Decree and within the specified time schedules established by or approved under this Decree.

37. **Late Payment of Civil Penalty.** If Defendant fails to pay the civil penalty required to be paid under Section IV (Civil Penalty) when due, Defendant shall pay a stipulated penalty of \$6,500 per Day for each Day that the payment is late.

38. **Compliance Requirements.** The following stipulated penalties shall accrue per violation per Day for each violation of the requirements identified in Section V (Compliance Requirements) (including Appendices A, B, C, and D), of this Consent Decree:

a. **Hiring an Independent Third Party (Appendix A).** Defendant shall pay a stipulated penalty of \$330 per violation per Day for failing to comply with Appendix A, Paragraph 2, 3, 5, 6, 9, or 10.

b. **Leak Detection and Repair (Appendix B):**

<b>Leak Detection and Repair (Appendix B)</b> (The paragraphs referenced in this table are paragraphs in Appendix B. Capitalized terms in this table have the definition ascribed to them in Appendix B, unless defined in Section III above.)		
<b>Violation</b>	<b>Stipulated Penalty</b>	
i. <b><u>Paragraph 3 (Facility-Wide LDAR Plan):</u></b> Failure to timely develop and complete a written LDAR plan or failure to timely update the plan after each LDAR Audit.	Period of Noncompliance	Penalty per Day late
	1 – 15 Days	\$390
	16 – 30 Days	\$520
	31 Days or More	\$650
ii. <b><u>Paragraph 4 (LDAR Resource Allocation Plan):</u></b> Failure to timely develop and complete a written LDAR Resource Allocation Plan or failure to timely update the plan after each LDAR Audit.	Period of Noncompliance	Penalty per Day late
	1 – 15 Days	\$390
	16 – 30 Days	\$520
	31 Days or More	\$650



iii. <u>Paragraph 5 (Monitoring Frequency)</u> : Each failure to perform monitoring at the frequencies specified in Paragraph 5.	\$130 per component per missed monitoring event, not to exceed \$32,500 per 30-Day period per Covered Process Unit.	
iv. <u>Paragraph 8 (Method 21)</u> : Each failure to comply with Method 21 and the requirements of Paragraph 8 in performing LDAR monitoring.	Monitoring Frequency for the component	Penalty per monitoring event per Process Unit
	Annual or Biennial	\$26,000
	Quarterly	\$13,000
	Monthly	\$6,500
v. <u>Paragraph 9 (Use of Data Logger)</u> : For each failure to use a monitoring device that is attached to a data logger (or an equivalent instrument or application), and for each failure, during each monitoring event, to directly electronically record the Screening Value, date, time, and identification number of the monitoring instrument, and the identification of the technician.	\$130 per failure per piece of Covered Equipment monitored.	
vi. <u>Paragraph 9 (Monitoring Data Transfer)</u> : Each failure to transfer monitoring data to electronic database on at least a weekly basis.	\$195 per Day for each Day the transfer is late.	
vii. <u>Paragraph 13 (First Attempt at Repair)</u> : Each failure to timely perform a first attempt at repair as required by Paragraph 13. For purposes of these stipulated penalties, the term “repair” includes the required Repair Verification Monitoring in Paragraph 14 after the repair attempt. If stipulated penalties are collected under this subparagraph, the stipulated penalties in Paragraph 38.b.viii do not apply.	\$195 per Day for each late Day, not to exceed \$1,950 per missed repair.	

viii. <u>Paragraph 13 (Final Attempt at Repair)</u> : Each failure to timely perform a final attempt at repair as required by Paragraph 13 unless not required to do so under Paragraph 17 (Delay of Repair). For purposes of these stipulated penalties, the term “repair” includes the required Repair Verification Monitoring in Paragraph 14 after the repair attempt. If stipulated penalties are collected under this subparagraph, the stipulated penalties in Paragraph 38.b.ix do not apply.	Equipment Type	Penalty per component per Day late	Not to exceed
	Valves/Connectors	\$390	\$58,500
	Pumps	\$1,560	\$195,000
ix. <u>Paragraph 14 (Repair Verification Monitoring)</u> : Each failure to timely perform Repair Verification Monitoring as required by Paragraph 14 in circumstances where the first attempt to repair the piece of equipment to eliminate the Leak was made within 5 Days and the final attempt to repair the piece of equipment to eliminate the Leak was made within 15 Days.	Equipment type	Penalty per component per Day late	Not to exceed
	Valves/Connectors	\$195	\$24,375
	Pumps	\$780	\$97,500
x. <u>Paragraph 17 (Delay of Repair)</u> : Each improper placement of a piece of Covered Equipment on the DOR list (e.g., placing a piece of Covered Equipment on the DOR list even though it is feasible to repair it without a Process Unit Shutdown) required by Paragraph 17.	Equipment type	Penalty per component per Day on DOR list	Not to exceed
	Valves/Connectors	\$390	\$97,500
	Pumps	\$1,560	\$390,000
xi. <u>Paragraph 17.a (Supervisor Sign-Off for Delay of Repair)</u> : Each failure to comply with the requirement that a relevant supervisor sign off on placing a piece of Covered Equipment on the DOR list.	\$325 per piece of Covered Equipment.		

xii. <u>Paragraph 17.d (Repair of Devices on Delay of Repair)</u> : Each failure to comply with the requirements of Paragraph 17.d.	\$195 per Day for each late Day, not to exceed \$1,950 per missed repair.
xiii. <u>Paragraph 17.e (Valve / Connector Replacement and Improvement on Delay of Repair)</u> : Each failure to comply with the requirements of Paragraph 17.e.	\$650 per Day per failure, not to exceed \$26,000 per failure, except as provided in Paragraph 38.b.xvi., below.
xiv. <u>Paragraph 20 (Work Practices)</u> : Each failure to comply with the work practice standards in Paragraph 20.	\$65 per violation per valve per Day, not to exceed \$39,000 for all valves in a Covered Process Unit per Quarter.
xv. <u>Paragraph 21 (Installing New Valves)</u> : Each failure to install a Low-E Valve or a valve fitted with Low-E Packing when required to do so under Paragraph 21.	\$26,000 per failure, except as provided in Paragraph 39, below.
xvi. <u>Paragraph 22 (Replacement or Repacking)</u> : Each failure, in violation of Paragraph 22, to timely comply with the requirements to install a Low-E Valve or Low-E Packing if a Process Unit Shutdown is not required.	\$65 per Day per failure, not to exceed \$26,000 per failure, except as provided in Paragraph 39, below.
xvii. <u>Paragraph 27.b (Replacing or Improving Connectors)</u> : Each failure to timely comply with the requirements regarding the replacement, improvement, or repair requirements for connectors under Paragraph 27.b.	\$130 per Day per failure, not to exceed \$6,500 per failure.
xviii. <u>Paragraph 28 (Covered Equipment Addition)</u> : Each failure to add a piece of Covered Equipment to the LDAR Program when required to do so pursuant to	\$390 per piece of Covered Equipment, plus an amount, if any, due under Paragraph 38.b.iii. for any missed monitoring event related to a component that should have been added to the LDAR Program but was not

the evaluation required by Paragraph 28.		
xix. <u>Paragraph 28 (Covered Equipment Deletion)</u> : Each failure to remove a piece of Covered Equipment from the LDAR Program when required to do so pursuant to Paragraph 28.	\$195 per failure per piece of Covered Equipment.	
xx. <u>Paragraph 29 (Training Protocol)</u> : Each failure to timely develop a training protocol as required by Paragraph 29.	\$605 per Day late.	
xxi. <u>Paragraph 29 (LDAR Personnel Training)</u> : Each failure to perform initial, refresher, or new LDAR Personnel training as required by Paragraph 29.	\$1,300 per person per month late.	
xxii. <u>Paragraphs 30–31 (Daily Certification and QA/QC)</u> : Each failure to perform any of the requirements relating to daily certification or QA/QC in Paragraphs 30–31.	\$1,300 per missed requirement per Quarter.	
xxiii. <u>Paragraphs 32 and 32.a (LDAR Audits Schedule)</u> : Each failure to conduct an LDAR Audit at the Facility in accordance with the schedule set forth in Paragraphs 32 and 32.a.	Period of noncompliance	Penalty per Day late
	1 – 15 Days	\$390
	16 – 30 Days	\$520
	31 Days or More	\$650, not to exceed \$130,000 per LDAR Audit
xxiv. <u>Paragraph 32 (LDAR Auditor Selection)</u> : Each failure to use a third-party auditor as required under Paragraph 32 and Appendix A.	\$65,000 per LDAR Audit.	

xxv. <u>Paragraph 32.b (Audit Scope and Content)</u> : Except for the requirement to undertake Comparative Monitoring under Paragraph 33, each failure to comply with the requirements of Paragraph 32.b.	\$130,000 per LDAR Audit.	
xxvi. <u>Paragraph 33 (Comparative Monitoring)</u> : Each failure to comply with the Comparative Monitoring requirements of Paragraph 33.	\$65,000 per LDAR Audit.	
xxvii. <u>Paragraph 35 (Audit Report)</u> : Each failure to timely submit an LDAR Audit Report that meets all requirements of Paragraph 35.	Period of noncompliance	Penalty per Day late
	1 – 15 Days	\$390
	16 – 30 Days	\$520
	31 Days or More	\$650
xxviii. <u>Paragraphs 36.a (Corrective Action Plan Submittal)</u> : Each failure to timely submit a Corrective Action Plan when required under Paragraph 36.a. that meets the requirements of Paragraph 36.c.	Period of noncompliance	Penalty per Day late
	1 – 15 Days	\$130
	16 – 30 Days	\$325
	31 Days or More	\$650, not to exceed \$130,000 per LDAR Audit
xxix. <u>Paragraph 36.b (Corrective Action)</u> : Each failure to timely correct any area of noncompliance or cause of a Comparative Monitoring Leak Ratio that is 3.0 or higher as required by Paragraph 36.b.	Period of noncompliance	Penalty per Day Late
	1 – 15 Days	\$650
	16 – 30 Days	\$975
	31 Days or More	\$1,300 per Day, not to exceed \$260,000 per LDAR Audit
xxx. <u>Paragraph 37 (Recordkeeping Requirements)</u> : Each failure to comply with any recordkeeping, submission, or reporting requirement in Paragraph 37 not specifically identified in this table above.	Period of noncompliance	Penalty per Day late
	1 – 15 Days	\$130
	16 – 30 Days	\$325
	31 Days or More	\$650
xxxi. <u>Paragraph 39 (Certificate of Completion)</u> : Each failure to timely	Period of noncompliance	Penalty per Day late

submit a Certificate of Completion that conforms to the requirements of Paragraph 39.	1 – 15 Days	\$130
	16 – 30 Days	\$260
	31 Days or More	\$650, not to exceed \$97,500

c. Wastewater (Appendix C):

<b>Wastewater (Appendix C)</b>		
(The paragraphs referenced in this table are paragraphs in Appendix C. Capitalized terms in this table have the definition ascribed to them in Appendix C, unless defined in Section III above.)		
<b>Violation</b>	<b>Stipulated Penalty</b>	
i. <u>Paragraph 1 (Wastewater Compliance Evaluation Plan)</u> : Failure to timely develop and submit a Wastewater Compliance Evaluation Plan meeting the requirements of Paragraph 1.	Period of Noncompliance	Penalty per Day late
	1 – 15 Days	\$390
	16 – 30 Days	\$520
	31 Days or More	\$650 per Day
ii. <u>Paragraph 1.a. through 1.b. Wastewater Group Status Evaluation Plan (Scope and Content)</u> : Each failure to meet the requirements of Paragraph 1.a. and 1.b.	\$130,000 per Wastewater Compliance Evaluation Plan.	
iii. <u>Paragraph 3 (Wastewater Group Status Evaluation – Scope and Content)</u> : Each failure to comply with the requirements of Paragraph 3.a through 3.i.	\$130,000 per Wastewater Group Status Evaluation.	
iv. <u>Paragraphs 3 and 4 (Wastewater Group Status Evaluation - Schedule)</u> : Each failure to commence or complete a Wastewater Group Status Evaluation in accordance with the schedule set forth in Paragraphs 3 and 4.	Period of Noncompliance	Penalty per Day late
	1 – 15 Days	\$390
	16 – 30 Days	\$520
	31 Days or More	\$650 per Day
v. <u>Paragraph 4 (Wastewater Group Status Evaluation Report)</u> : Each failure to submit a Wastewater Group Status Evaluation Report in accordance with the schedule set forth in Paragraph 4.	Period of Noncompliance	Penalty per Day late
	1 – 15 Days	\$390
	16 – 30 Days	\$520
	31 Days or More	\$650 per Day
vi. <u>Paragraphs 4 and 5 (Wastewater Group Status Evaluation Report Scope and Content)</u> : Each failure to comply with the requirements of Paragraphs 4.a through 4.d. and Paragraph 5.	\$130,000 per Wastewater Group Status Evaluation Report.	
vii. <u>Paragraph 7 (Wastewater Control Evaluation - Schedule)</u> : Each failure to	Period of Noncompliance	Penalty per Day late

commence or complete a required Wastewater Control Evaluation in accordance with the schedule set forth in Paragraph 7.	1 – 15 Days 16 – 30 Days 31 Days or More	\$390 \$520 \$650 per Day
viii. <u>Paragraph 8 (Wastewater Control Evaluation Report – Scope and Content)</u> : Each failure to comply with the requirements of Paragraph 8.a. through 8.e.	\$130,000 per Wastewater Control Evaluation Report.	
ix. <u>Paragraph 8 (Wastewater Control Evaluation Report)</u> : Each failure to submit a Wastewater Control Evaluation Report in accordance with the schedule set forth in Paragraph 8.	Period of Noncompliance	Penalty per Day late
	1 – 15 Days	\$390
	16 – 30 Days	\$520
	31 Days or More	\$650 per Day
x. <u>Paragraph 9 (Corrective Action Plan Submittal)</u> : Each failure to timely develop and submit a Corrective Action Plan in accordance with the schedule set forth in Paragraph 9.	Period of Noncompliance	Penalty per Day late
	1 – 15 Days	\$130
	16 – 30 Days	\$325
	31 Days or More	\$650
xi. <u>Paragraph 9 (Corrective Action Plan - Scope and Content)</u> : Each failure to comply with the requirements of Paragraph 9.a. through 9.c.	\$130,000 per CAP.	
xii. <u>Paragraph 11 (Corrective Action Plan - Implementation)</u> : Each failure to implement a corrective action in accordance with the schedule outlined in the CAP as required by Paragraph 11.	Period of Noncompliance	Penalty per Day late
	1 – 15 Days	\$650
	16 – 30 Days	\$975
	31 Days or More	\$1,300 per Day
xiii. <u>Paragraph 13 (NOCS Report Updates)</u> : Each failure to submit an updated NOCS Report required by the terms of Paragraph 13 in accordance with the schedule set forth in Paragraph 13.	Period of noncompliance	Penalty per Day late
	1 – 15 Days	\$390
	16 – 30 Days	\$520
	31 Days or More	\$650 per Day
xiv. <u>Paragraph 15 (Management of Change Protocol)</u> : Failure to timely implement a Management of Change Protocol that incorporates the requirements of Paragraphs 15.a through 15.c in accordance with the schedule set forth in 15.	Period of Noncompliance	Penalty per Day late
	1 – 15 Days	\$650
	16 – 30 Days	\$975
	31 Days or More	\$1,300 per Day
xv. <u>Paragraph 15 (Process Change Notifications)</u> : Each failure to comply with the requirements of Paragraph 15.a. through 15.c.	Period of Noncompliance	Penalty per Day late
	1 – 15 Days	\$390
	16 – 30 Days	\$520
	31 Days or More	\$650 per Day

xvi. <u>Paragraphs 16 and 18 (Wastewater Training Protocol – Development and Revision)</u> : Failure to timely develop or revise the training protocol for Wastewater Personnel in accordance with the schedules set forth in Paragraphs 16 and 18.	Period of Noncompliance	Penalty per Day late
	1 – 15 Days	\$390
	16 – 30 Days	\$520
	31 Days or More	\$650 per Day
xvii. <u>Paragraphs 16 and 17 (Wastewater Training Protocol - Implementation)</u> : Each failure to conduct initial and annual training for all Wastewater Personnel on the tasks identified in Paragraph 16 and pursuant to the schedules set forth in Paragraph 17.	Period of Noncompliance	Penalty per Day late
	1 – 15 Days	\$390
	16 – 30 Days	\$520
	31 Days or More	\$650 per Day
xviii. <u>Paragraph 19 (Recordkeeping Requirements)</u> : Each failure to comply with any recordkeeping, submission, or reporting requirement in Paragraph 19 not specifically identified above in this table.	Period of Noncompliance	Penalty per Day late
	1 – 15 Days	\$130
	16 – 30 Days	\$325
	31 Days or More	\$650 per Day

d. Batch Process Vents (Appendix D):

<b>Batch Process Vents (Appendix D)</b>		
(The paragraphs referenced in this table are paragraphs in Appendix D. Capitalized terms in this table have the definition ascribed to them in Appendix D, unless defined in Section III above.)		
<b>Violation</b>	<b>Stipulated Penalty</b>	
i. <u>Paragraph 1 (Batch Process Vent Compliance Evaluation Plan)</u> : Failure to timely develop and submit a Batch Process Vent Evaluation Plan meeting the requirements of Paragraph 1.	Period of Noncompliance	Penalty per Day late
	1 – 15 Days	\$390
	16 – 30 Days	\$520
	31 Days or More	\$650 per Day
ii. <u>Paragraph 1.a. and 1.b. (Batch Process Vent Compliance Evaluation Plan - Scope and Content)</u> : Each failure to meet the requirements of Paragraph 1.a. through 1.b.	\$130,000 per Batch Process Vent Compliance Evaluation Plan.	
iii. <u>Paragraphs 3 (Batch Process Vent Group Status Evaluation - Schedule)</u> : Each failure to commence or complete a Batch Process Vent Group Status Evaluation in accordance with the schedule set forth in Paragraph 3.	Period of Noncompliance	Penalty per Day late
	1 – 15 Days	\$390
	16 – 30 Days	\$520
	31 Days or More	\$650 per Day



iv. <u>Paragraph 3 (Batch Process Vent Group Status Evaluation Report)</u> : Each failure to submit a Wastewater Group Status Evaluation Report in accordance with the schedule set forth in Paragraph 3.	Period of Noncompliance	Penalty per Day late
	1 – 15 Days	\$390
	16 – 30 Days	\$520
	31 Days or More	\$650 per Day
v. <u>Paragraphs 3 and 4 (Batch Process Vent Group Status Evaluation Report – Scope and Content)</u> : Each failure to comply with the requirements of Paragraphs 3.a. through 3.j. and Paragraph 4.	\$130,000 per Batch Process Vent Group Status Evaluation Report.	
vi. <u>Paragraphs 6–7 (Batch Process Vent Control Evaluation – Schedule)</u> : Each failure to commence or complete a required Wastewater Control Evaluation in accordance with the schedule set forth in Paragraphs 6 and 7.	Period of Noncompliance	Penalty per Day late
	1– 15 Days	\$390
	16 – 30 Days	\$520
	31 Days or More	\$650 per Day
vii. <u>Paragraph 7 (Batch Process Vent Control Evaluation Report – Scope and Content)</u> : Each failure to comply with the requirements of Paragraph 7.a. through 7.d.	\$130,000 per Batch Process Vent Control Evaluation Report.	
viii. <u>Paragraph 8 (Corrective Action Plan Submittal)</u> : Each failure to timely develop and submit a Corrective Action Plan in accordance with the schedule set forth in Paragraph 8.	Period of Noncompliance	Penalty per Day late
	1 – 15 Days	\$390
	16 – 30 Days	\$520
	31 Days or More	\$650 per Day
ix. <u>Paragraph 8 (Corrective Action Plan - Scope and Content)</u> : Each failure to comply with the requirements of Paragraph 8.a. through 8.c.	\$130,000 per CAP	
x. <u>Paragraph 10 (Corrective Action Plan - Implementation)</u> : Each failure to implement a corrective action in accordance with the schedule outlined in the CAP as required by Paragraph 10.	Period of Noncompliance	Penalty per Day late
	1 – 15 Days	\$650
	16 – 30 Days	\$975
	31 Days or More	\$1,300 per Day
xi. <u>Paragraph 12 (NOCS Report Updates)</u> : Each failure to submit an updated NOCS Report required by the terms of Paragraph 13 in accordance with the schedule set forth in Paragraph 12.	Period of noncompliance	Penalty per Day late
	1 – 15 Days	\$390
	16 – 30 Days	\$520
	31 Days or More	\$650 per Day
xii. <u>Paragraph 14 (Management of Change Protocol)</u> : Failure to timely implement a Management of Change Protocol that incorporates the requirements of Paragraph 14.a. through 14.c. in accordance with the	Period of Noncompliance	Penalty per Day late
	1 – 15 Days	\$650
	16 – 30 Days	\$975
	31 Days or More	\$1,300 per Day

schedule set forth in 14.		
xiii. <u>Paragraph 14 (Process Change Notifications)</u> : Each failure to comply with the requirements of Paragraph 14.a. through 14.c.	Period of Noncompliance	Penalty per Day late
	1 – 15 Days	\$390
	16 – 30 Days	\$520
xiv. <u>Paragraph 15 (Recordkeeping Requirements)</u> : Each failure to comply with any recordkeeping, submission, or reporting requirement in Paragraph 15 not specifically identified above in this table.	31 Days or More	\$650 per Day
	Period of Noncompliance	Penalty per Day late
	1 – 15 Days	\$130
	16 – 30 Days	\$325
	31 Days or More	\$650 per Day

39. **Stipulated Penalties in Lieu of those in Paragraphs 38.b.xv and xvi.**

a. For purposes of this Paragraph, the term “Non-Compliant Valve” means a valve that is either: (i) not a Low-E Valve; or (ii) not fitted with Low-E Packing. The term “Compliant Valve” means a valve that is either: (i) a Low-E Valve; or (ii) fitted with Low-E Packing.

b. The stipulated penalties in this Paragraph are to be used instead of those in Paragraphs 38.b.xv and xvi when a Non-Compliant Valve is installed instead of a Compliant Valve and all of the following requirements are met:

- (1) Defendant, and not a government agency, discovers the failure involved;
- (2) Defendant promptly reports the failure to EPA;
- (3) In the report, Defendant sets forth a schedule for promptly replacing the Non-Compliant Valve with a Compliant Valve; provided, however, that Defendant shall not be required to undertake an unscheduled shutdown of the affected Covered Process Unit in proposing the schedule unless Defendant so chooses;

- (4) Defendant monitors the Non-Compliant Valve once a month from the time of its discovery until the valve is replaced with a Compliant Valve and no Screening Values above 500 ppm are recorded;
- (5) Defendant replaces the Non-Compliant Valve or Valve Packing with a Compliant Valve or Valve Packing in accordance with the schedule set forth in Paragraph 39.b.3; and
- (6) Defendant demonstrates that in good faith it intended to install a Compliant Valve but inadvertently installed a Non-Compliant Valve.

c. The following stipulated penalties shall apply under the circumstances in Paragraph 39.b:

- (1) In lieu of the penalty in Paragraph 38.b.xv, \$4,000 per failure.
- (2) In lieu of the penalty in Paragraph 38.b.xvi, \$100 per Day per failure, not to exceed \$4,000.

40. **Reporting Requirements.** The following stipulated penalties shall accrue per violation per Day for each violation of the reporting requirements of Section IX (Reporting Requirements) of this Consent Decree, Paragraph 38 of Appendix B, Paragraph 20 of Appendix C, and Paragraph 16 of Appendix D (Status Reports):

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$975 .....	1st through 14th Day
\$1,300 .....	15th through 30th Day
\$1,625 .....	31st Day and beyond

41. **Transfer of Ownership.** If Defendant fails to: (a) provide a copy of this Consent Decree to any proposed transferee; (b) provide written notice to the United States at least 30 Days prior to any transfer of any portion of the Facility; or (c) provide a copy of the proposed written agreement with the transferee as required by Paragraph 4, Defendant shall pay a stipulated penalty of \$130,000 per occurrence.

42. **Any Other Non-Compliance with the Consent Decree.** The following stipulated penalties shall accrue per violation per Day for each violation of any requirement of this Consent Decree, including its appendices, not otherwise enumerated above:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$975	1st through 14th Day
\$1,300	15th through 30th Day
\$1,625	31st Day and beyond

43. Stipulated penalties under this Section shall begin to accrue on the Day after performance is due or on the Day a violation occurs, whichever is applicable, and shall continue to accrue until performance is satisfactorily completed or until the violation ceases. Stipulated penalties shall accrue simultaneously for separate violations of this Consent Decree.

44. Defendant shall pay any stipulated penalty within 30 Days of receiving the United States' written demand.

45. The United States may in the unreviewable exercise of its discretion, reduce or waive stipulated penalties otherwise due it under this Consent Decree.

46. Stipulated penalties shall continue to accrue as provided in Paragraph 43, during any Dispute Resolution, but need not be paid until the following:

- a. If the dispute is resolved by agreement of the Parties or by a decision of

EPA that is not appealed to the Court, Defendant shall pay accrued penalties determined to be owing, together with interest, to the United States within 30 Days of the Effective Date of the agreement or the receipt of EPA's decision or order, unless waived pursuant to Paragraph 45.

b. If the dispute is appealed to the Court and the United States prevails in whole or in part, Defendant shall pay all accrued penalties determined by the Court to be owing, together with interest, within 60 Days of receiving the Court's decision or order, except as provided in subparagraph c, below.

c. If any Party appeals the District Court's decision, Defendant shall pay all accrued penalties determined to be owing, together with interest, within 30 Days of receiving the final appellate court decision.

47. Defendant shall pay stipulated penalties owing to the United States in the manner set forth in Paragraph 9 and with the confirmation notices required by Paragraph 10, except that the transmittal letter shall state that the payment is for stipulated penalties and shall state for which violation(s) the penalties are being paid.

48. If Defendant fails to pay stipulated penalties according to the terms of this Consent Decree, Defendant shall be liable for interest on such penalties, as provided for in 28 U.S.C. § 1961, accruing as of the date payment became due. Nothing in this Paragraph shall be construed to limit the United States from seeking any remedy otherwise provided by law for Defendant's failure to pay any stipulated penalties.

49. The payment of penalties and interest, if any, shall not alter in any way Defendant's obligation to complete the performance of the requirements of this Consent Decree.

50. **Non-Exclusivity of Remedy.** Stipulated penalties are not the United States' exclusive remedy for violations of this Consent Decree. Subject to the provisions of Section XIV (Effect of Settlement/Reservation of Rights), the United States expressly reserves the right to seek any other relief it deems appropriate for Defendant's violation of this Decree or applicable law, including but not limited to an action against Defendant for statutory penalties, additional injunctive relief, mitigation or offset measures, and/or contempt. However, the amount of any statutory penalty assessed for a violation of this Consent Decree shall be reduced by an amount equal to the amount of any stipulated penalty assessed and paid pursuant to this Consent Decree.

#### **XI. FORCE MAJEURE**

51. "Force majeure," for purposes of this Consent Decree, means any event arising from causes beyond the control of Defendant, of any entity controlled by Defendant, or of Defendant's contractors, that delays or prevents the performance of any obligation under this Consent Decree despite Defendant's best efforts to fulfill the obligation. Given the need to protect public health and welfare and the environment, the requirement that Defendant exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential force majeure and best efforts to address the effects of any potential force majeure (a) as it is occurring and (b) following the potential force majeure, such that any delay or non-performance is, and any adverse effects of the delay or non-performance are, minimized to the greatest extent possible. "Force majeure" does not include financial inability to perform any obligation under this Consent Decree.

52. If any event occurs for which Defendant will or may claim a force majeure, Defendant shall provide notice to EPA by telephone or by email as provided in Section XVI

(Notices). The deadline for the initial notice is one Day after Defendant first knew or should have known that the event would likely delay or prevent performance. Defendant shall be deemed to know of any circumstance of which any contractor of, subcontractor of, or entity controlled by Defendant knew or should have known.

53. If Defendant seeks to assert a claim of force majeure concerning the event, within five Days after the notice under Paragraph 52, Defendant shall submit a further notice to EPA that includes (a) an explanation and description of the event and its effect on Defendant's completion of the requirements of the Consent Decree; (b) a description and schedule of all actions taken or to be taken to prevent or minimize the delay and/or other adverse effects of the event; (c) if applicable, the proposed extension of time for Defendant to complete the requirements of the Consent Decree; (d) Defendant's rationale for attributing such delay to a force majeure; (e) a statement as to whether, in the opinion of Defendant, such event may cause or contribute to an endangerment to public health or welfare or the environment; and (f) all available proof supporting the claim that the delay was attributable to a force majeure.

54. Failure to submit a timely or complete notice or claim under Paragraph 52 or 53 regarding an event precludes Defendant from asserting any claim of force majeure regarding that event, provided, however, that EPA may, in its unreviewable discretion, excuse such failure if it is able to assess to its satisfaction whether the event is a force majeure, and whether Defendant has exercised its best efforts, under Paragraph 51.

55. After receipt of any claim of force majeure, EPA will notify Defendant of its determination whether Defendant is entitled to relief under Paragraph 51, and, if so, the excuse of, or the extension of time for, performance of the obligations affected by the force majeure. An

excuse of, or extension of the time for performance of, the obligations affected by the force majeure does not, of itself, excuse or extend the time for performance of any other obligation.

56. If Defendant elects to invoke the dispute resolution procedures set forth in Section XII (Dispute Resolution), it shall do so no later than 10 Days after receipt of EPA's notice. In any such proceeding, Defendant has the burden of proving that it is entitled to relief under Paragraph 51, that its proposed excuse or extension was or will be warranted under the circumstances, and that it complied with the requirements of Paragraphs 52 and 53. If Defendant carries this burden, the delay or non-performance at issue shall be deemed not to be a violation by Defendant of the affected obligation of this Consent Decree identified to EPA and the Court.

## **XII. DISPUTE RESOLUTION**

57. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree. Defendant is precluded from raising an issue as a defense to an action by the United States to enforce any obligation of Defendant arising under this Decree if, prior to the United States' action to enforce the obligation, Defendant (i) had notice of the issue and an opportunity to dispute the issue under this Section and (ii) failed to seek resolution of the issue under this Section.

58. **Informal Dispute Resolution.** Any dispute subject to Dispute Resolution under this Consent Decree shall first be the subject of informal negotiations. The dispute shall be considered to have arisen when Defendant sends DOJ and EPA a written Notice of Dispute. Such Notice of Dispute shall state clearly the matter in dispute. The period of informal negotiations shall not exceed 20 Days from the date the dispute arises, unless that period is modified by written agreement. If the Parties cannot resolve a dispute by informal negotiations,



then the position advanced by the United States shall be considered binding unless, within 20 Days after the conclusion of the informal negotiation period, Defendant invokes formal dispute resolution procedures as set forth below.

59. **Formal Dispute Resolution.** Defendant shall invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by sending DOJ and EPA a written Statement of Position regarding the matter in dispute. The Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting Defendant's position and any supporting documentation relied upon by Defendant.

60. The United States will send Defendant its Statement of Position within 45 Days of receipt of Defendant's Statement of Position. The United States' Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the United States. The United States' Statement of Position is binding on Defendant, unless Defendant files a motion for judicial review of the dispute in accordance with Paragraph 61.

61. **Judicial Dispute Resolution.** Defendant may seek judicial review of the dispute by filing with the Court and serving on the United States a motion requesting judicial resolution of the dispute. The motion (a) must be filed within ten Days of receipt of the United States' Statement of Position pursuant to the preceding Paragraph; (b) may not raise any issue not raised in informal dispute resolution pursuant to Paragraph 58, unless the United States raises a new issue of law or fact in its Statement of Position; (c) shall contain a written statement of Defendant's position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and (d) shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree.

62. The United States shall respond to Defendant's motion within the time period allowed by the Local Rules of this Court. Defendant may file a reply memorandum, to the extent permitted by the Local Rules.

63. **Standard of Review**

a. **Disputes Concerning Matters Accorded Record Review.** Except as otherwise provided in this Consent Decree, in any dispute brought under Paragraph 59 pertaining to the adequacy or appropriateness of plans, procedures to implement plans, schedules or any other items requiring approval by EPA under this Consent Decree; the adequacy of the performance of work undertaken pursuant to this Consent Decree; and all other disputes that are accorded review on the administrative record under applicable principles of administrative law, Defendant shall have the burden of demonstrating, based on the administrative record, that the position of the United States is arbitrary and capricious or otherwise not in accordance with law.

b. **Other Disputes.** Except as otherwise provided in this Consent Decree, in any other dispute brought under Paragraph 59, Defendant shall bear the burden of demonstrating that its position complies with this Consent Decree and better furthers the objectives of the Consent Decree.

64. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of Defendant under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first Day of noncompliance, but payment shall be stayed pending resolution of the dispute as provided in Paragraph 46. If

Defendant does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section X (Stipulated Penalties).

### **XIII. INFORMATION COLLECTION AND RETENTION**

65. The United States and its representatives, including attorneys, contractors, and consultants, shall have the right of entry into any facility covered by this Consent Decree, at all reasonable times, upon presentation of credentials, to:

- a. monitor the progress of activities required under this Consent Decree;
- b. verify any data or information submitted to the United States in accordance with the terms of this Consent Decree;
- c. obtain samples or other monitoring data and, upon request, splits of any samples taken by Defendant or its representatives, contractors, or consultants;
- d. obtain documentary evidence, including photographs and similar data; and
- e. assess Defendant's compliance with this Consent Decree.

66. Upon request, Defendant shall provide EPA or its authorized representatives splits of any samples taken by Defendant. Upon request, EPA shall provide Defendant splits of any samples taken by EPA.

67. Until five years after the termination of this Consent Decree, Defendant shall retain, and shall instruct its contractors and agents to preserve, all non-identical copies of all documents, records, or other information (including documents, records, or other information in electronic form) in its or its contractors' or agents' possession or control, or that come into its or its contractors' or agents' possession or control, and that relate in any manner to Defendant's performance of its obligations under this Consent Decree. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or

procedures. At any time during this information-retention period, upon request by the United States, Defendant shall provide copies, in hard copy or electronically, of any documents, records, or other information required to be maintained under this Paragraph.

68. At the conclusion of the information-retention period provided in the preceding Paragraph, Defendant shall notify the United States at least 90 Days prior to the destruction of any documents, records, or other information subject to the requirements of the preceding Paragraph and, upon request by the United States, Defendant shall deliver any such documents, records, or other information to EPA. Defendant may assert that certain documents, records, or other information is privileged under the attorney-client privilege or any other privilege recognized by federal law. If Defendant asserts such a privilege, it shall provide the following: (a) the title of the document, record, or information; (b) the date of the document, record, or information; (c) the name and title of each author of the document, record, or information; (d) the name and title of each addressee and recipient; (e) a description of the subject of the document, record, or information; and (f) the privilege asserted by Defendant. However, no documents, records, or other information created or generated pursuant to the requirements of this Consent Decree shall be withheld on grounds of privilege.

69. Defendant may also assert that information required to be provided under this Section is protected as Confidential Business Information (“CBI”) under 40 C.F.R. Part 2. As to any information that Defendant seeks to protect as CBI, Defendant shall follow the procedures set forth in 40 C.F.R. Part 2.

70. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States pursuant to applicable federal laws, regulations, or permits, nor does it limit or affect any duty or obligation of Defendant to maintain

documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

#### **XIV. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS**

71. This Consent Decree resolves the civil claims of the United States for the violations alleged in the Complaint filed in this action through the date of lodging of this Consent Decree with the Court. This Consent Decree does not resolve any criminal claims of the United States.

72. The United States reserves all legal and equitable remedies available to enforce the provisions of this Consent Decree. This Consent Decree shall not be construed to limit the rights of the United States to obtain penalties or injunctive relief under the Act or implementing regulations, or under other federal laws, regulations, or permit conditions, except as expressly specified in Paragraph 71. The United States further reserves all legal and equitable remedies to address any conditions if there is or may be an imminent and substantial endangerment to the public health or welfare or the environment arising at, or posed by, Defendant's Facility, whether related to the violations addressed in this Consent Decree or otherwise.

73. In any subsequent administrative or judicial proceeding initiated by the United States for injunctive relief, civil penalties, other appropriate relief relating to the Facility or Defendant's violations, Defendant shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, claim preclusion (*res judicata*), issue preclusion (*collateral estoppel*), claim-splitting, or other defenses based upon any contention that the claims raised by the United States in the subsequent proceeding were or should have been brought in the instant case, except with respect to claims that have been specifically resolved pursuant to Paragraph 71.

74. This Consent Decree is not a permit, or a modification of any permit, under any federal, state, or local laws or regulations. Defendant is responsible for achieving and maintaining complete compliance with all applicable federal, state, and local laws, regulations, and permits; and Defendant's compliance with this Consent Decree shall be no defense to any action commenced pursuant to any such laws, regulations, or permits, except as set forth herein. The United States does not, by its consent to the entry of this Consent Decree, warrant or aver in any manner that Defendant's compliance with any aspect of this Consent Decree will result in compliance with provisions of the Act, 42 U.S.C. § 7401, et seq., or with any other provisions of federal, state, or local laws, regulations, or permits.

75. This Consent Decree does not limit or affect the rights of Defendant or of the United States against any third parties, not a Party to this Consent Decree, nor does it limit the rights of third parties, not a Party to this Consent Decree, against Defendant, except as otherwise provided by law.

76. This Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party not a Party to this Consent Decree.

#### **XV. COSTS**

77. The Parties shall bear their own costs of this action, including attorneys' fees, except that the United States shall be entitled to collect the costs (including attorneys' fees) incurred in any action necessary to collect any portion of the civil penalty or any stipulated penalties due but not paid by Defendant.

**XVI. NOTICES**

78. Unless otherwise specified in this Decree, whenever notifications, submissions, or communications are required by this Consent Decree, they shall be made in writing and sent by mail or email, with a preference for email, addressed as follows:

As to DOJ by email (preferred): eescdcopy.enrd@usdoj.gov  
Re: DJ # 90-5-2-1-12671

As to DOJ by mail: EES Case Management Unit  
Environment and Natural Resources Division  
U.S. Department of Justice  
P.O. Box 7611  
Washington, D.C. 20044-7611  
Re: DJ # 90-5-2-1-12671

As to EPA by email: EPA\_R4\_CAA\_Consent\_Decree\_Reports@epa.gov

As to Defendant: Glen Bowen  
Head of Sales, Americas  
Head of PLA Americas  
Polymer Additives Business Unit  
Lanxess Corporation  
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General Counsel  
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Pittsburgh, PA 15275  
(412) 809-2229  
lee.sjoberg@lanxess.com

79. Any Party may, by written notice to the other Parties, change its designated notice recipient or notice address provided above.

80. Notices submitted pursuant to this Section shall be deemed submitted upon mailing or transmission by email, unless otherwise provided in this Consent Decree or by mutual agreement of the Parties in writing.

#### **XVII. EFFECTIVE DATE**

81. The Effective Date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court or a motion to enter the Consent Decree is granted, whichever occurs first, as recorded on the Court's docket; provided, however, that Defendant hereby agrees that it shall be bound to perform duties scheduled to occur prior to the Effective Date. In the event the United States withdraws or withholds consent to this Consent Decree before entry, or the Court declines to enter the Consent Decree, then the preceding requirement to perform duties scheduled to occur before the Effective Date shall terminate.

#### **XVIII. RETENTION OF JURISDICTION**

82. The Court shall retain jurisdiction over this case until termination of this Consent Decree, for the purpose of resolving disputes arising under this Decree or entering orders modifying this Decree, pursuant to Sections XII (Dispute Resolution) and XIX (Modification), or effectuating or enforcing compliance with the terms of this Decree.

#### **XIX. MODIFICATION**

83. The terms of this Consent Decree, including any attached appendices, may be modified only by a subsequent written agreement signed by all the Parties. Where the modification constitutes a material change to this Decree, it shall be effective only upon approval by the Court.



84. Any disputes concerning modification of this Decree shall be resolved pursuant to Section XII (Dispute Resolution), provided, however, that, instead of the burden of proof provided by Paragraph 63, the Party seeking the modification bears the burden of demonstrating that it is entitled to the requested modification in accordance with Federal Rule of Civil Procedure 60(b).

## **XX. TERMINATION**

85. After Defendant has completed at least three LDAR Audits in accordance with Appendix B and submitted all certificates of completion and/or compliance required by any Appendix, has maintained continuous satisfactory compliance with this Consent Decree for a period of five years, has complied with all other requirements of this Consent Decree, and has paid the civil penalty and any accrued stipulated penalties as required by this Consent Decree, Defendant may serve upon the United States a Request for Termination, stating that Defendant has satisfied those requirements, together with all necessary supporting documentation.

86. Following receipt by the United States of Defendant's Request for Termination, the Parties shall confer informally concerning the Request and any disagreement that the Parties may have as to whether Defendant has satisfactorily complied with the requirements for termination of this Consent Decree. If the United States agrees that the Decree may be terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating the Decree.

87. If the United States does not agree that the Decree may be terminated, Defendant may invoke Dispute Resolution under Section XII. However, Defendant shall not seek Dispute Resolution of any dispute regarding termination until 20 Days after service of its Request for Termination.

## **XXI. PUBLIC PARTICIPATION**

88. This Consent Decree shall be lodged with the Court for a period of not less than 30 Days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations indicating that the Consent Decree is inappropriate, improper, or inadequate. Defendant consents to entry of this Consent Decree without further notice and agrees not to withdraw from or oppose entry of this Consent Decree by the Court or to challenge any provision of the Decree, unless the United States has notified Defendant in writing that it no longer supports entry of the Decree.

## **XXII. SIGNATORIES/SERVICE**

89. Each undersigned representative of Defendant and the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice and the U.S. Attorney for the District of South Carolina identified on the DOJ signature page below, certifies that that she or he is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind the Party that she or he represents to this document.

90. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis. Defendant agrees to accept service of process by mail with respect to all matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rules 4 and 5 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons. Defendant need not file an answer to the complaint in this action unless or until the Court

expressly declines to enter this Consent Decree, in which case Defendant's answer would be due 30 Days following the Court's order.

### **XXIII. INTEGRATION**

91. This Consent Decree, including deliverables that are subsequently approved pursuant to this Decree, constitutes the entire agreement among the Parties regarding the subject matter of the Decree and supersedes all prior representations, agreements and understandings, whether oral or written, concerning the subject matter of the Decree herein.

### **XXIV. 26 U.S.C. SECTION 162(f)(2)(A)(ii) IDENTIFICATION**

92. For purposes of the identification requirement in Section 162(f)(2)(A)(ii) of the Internal Revenue Code, 26 U.S.C. § 162(f)(2)(A)(ii), and 26 C.F.R. § 1.162-21(b)(2), performance of Section II (Applicability), Paragraph 5; Section V (Compliance Requirements), Paragraph 12 and related Appendices A–D; Section VII (Approval of Deliverables), Paragraphs 22 and 23; Section VIII (Permits), Paragraph 28; Section IX (Reporting Requirements), Paragraphs 29, 31, and 32 (for each, except with respect to the SEPs); and Section XIII (Information Collection and Retention), Paragraphs 65–68 is restitution, remediation, or required to come into compliance with law.

### **XXV. HEADINGS**

93. Headings to the Sections and Subsections of this Consent Decree are provided for convenience and do not affect the meaning or interpretation of the provisions of this Consent Decree.

### **XXVI. FINAL JUDGMENT**

94. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court as to the United States and Defendant.

**XXVII. APPENDICES**

95. The following Appendices are attached to and part of this Consent Decree:

Appendix A (Hiring an Independent Third Party)

Appendix B (Leak Detection and Repair Requirements)

Appendix C (Wastewater Requirements)

Appendix D (Batch Process Vent Requirements)

Appendix E (Supplemental Environmental Projects)

Dated and entered this \_\_ day of \_\_\_\_\_, 20\_\_

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UNITED STATES DISTRICT JUDGE

FOR THE UNITED STATES OF AMERICA:

TODD KIM

Assistant Attorney General

Environment and Natural Resources Division

U.S. Department of Justice



STEFAN J. BACHMAN (DSC #12373)

Senior Attorney

THOMAS A. LANDERS (MD Attorney

#1812110216)

Trial Attorney

Environmental Enforcement Section

Environment and Natural Resources Division

U.S. Department of Justice

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Washington, DC 20044-7611

Stefan.Bachman@usdoj.gov

Thomas.Landers@usdoj.gov

Telephone: (202) 616-6536 (Bachman)

Fax: (202) 514-0097

FOR THE UNITED STATES OF AMERICA:

ADAIR FORD BOROUGH  
United States Attorney  
District of South Carolina

LEE  
BERLINSKY

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BERLINSKY  
Date: 2024.12.13 14:50:48  
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LEE BERLINSKY  
Assistant United States Attorney  
District of South Carolina

FOR THE U.S. ENVIRONMENTAL PROTECTION  
AGENCY:

**Leif Palmer**

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Date: 2024.12.03 14:16:03 -05'00'

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LEIF PALMER

Regional Counsel

U.S. Environmental Protection Agency, Region 4

**MARIROSE PRATT**

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Date: 2024.12.03 14:57:58 -05'00'

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MARIROSE J. PRATT

Associate Regional Counsel

U.S. Environmental Protection Agency, Region 4

Office of Regional Counsel

FOR LANXESS CORPORATION:

November 21, 2024

Date

Glen Bowen  
Head of PLA Americas  
Lanxess Corporation

*Glen Bowen*



Appendix A

# APPENDIX A

## Appendix A

**APPENDIX “A” TO CONSENT DECREE****I. HIRING AN INDEPENDENT THIRD PARTY**

1. Defendant shall hire a qualified Independent Third Party (“ITP”) to conduct each environmental compliance evaluation and audit set forth in Appendices B, C, and D to the Consent Decree. A qualified ITP may conduct an evaluation or audit for one or more of the Appendices. Defendant shall bear all costs of retaining each ITP, and Defendant shall use all commercially reasonable efforts to ensure each ITP complies with the requirements set forth in the Consent Decree, as applicable, including meeting all deadlines and adhering to all schedules.

2. **Submissions to EPA.** Within 30 Days of entry of the Consent Decree, for each evaluation or audit required by Appendix B, C, or D, Defendant shall submit to EPA the names, addresses, and qualifications of at least three proposed ITPs that meet the conditions set forth in Paragraph 7 and Attachment 1 of this Appendix A.

a. Defendant’s submission shall include a description of any relationship within the last 10 years between Defendant and each proposed ITP, including, but not limited to, any prior work relationship, financial relationship, or contractual relationship, and shall include a signed and dated conflict of interest statement (Attachment 1 to this Appendix A) from each proposed ITP. The submission shall identify the Appendix or the Appendices for which the proposed ITP is proposed to perform any evaluation or audit.

b. If, despite reasonable best efforts, Defendant cannot identify, for any particular evaluation or audit required by Appendix B, C, or D, three proposed ITPs that meet the conditions set forth in Paragraph 7 and Attachment 1 of this Appendix A, Defendant shall send EPA an explanation, certified in accordance with Paragraph 31 of the Consent Decree, of the efforts it has made to locate three proposed ITPs that meet the

## Appendix A

conditions. With its explanation, Defendant shall submit to EPA a list of at least three proposed ITPs, even if one or more of the proposed ITPs does not meet the conditions of Paragraph 7 and Attachment 1, and a statement of (i) why Defendant believes any proposed ITP that does not meet the conditions can nonetheless competently perform the particular audit or evaluation in an independent and impartial manner and (ii) which conditions of Paragraph 7 and Attachment 1 each proposed ITP meets and which it does not meet.

3. **Selection of an ITP.** EPA shall notify Defendant if it approves a proposed ITP. If EPA does not approve any proposed ITP for a particular evaluation or audit required by Appendix B, C, or D, Defendant shall submit a second, and if needed a third, list of at least three proposed ITPs for that evaluation or audit within 30 Days of receipt of EPA's notice of disapproval. If, after Defendant has submitted a second and third list of proposed ITPs, EPA does not approve an ITP for a particular evaluation or audit, and EPA and Defendant are unable to agree on an ITP for that evaluation or audit, the Parties will resolve selection of the ITP through the process set forth in Consent Decree Section XII (Dispute Resolution).

a. Within 60 Days after receipt of EPA's approval of a proposed ITP or ITPs, Defendant shall select, for each evaluation or audit, an ITP from those approved by EPA and enter into a contract that meets the requirements of Paragraph 11 with the selected ITP to perform all the duties required for the particular evaluation or audit.

b. If, when notified by Defendant of its selection to perform a particular evaluation or audit, an EPA-approved ITP is no longer available or willing to accept the work described in the Consent Decree, Defendant shall, within 60 Days of receiving notice of the ITP's unavailability, select another ITP approved by EPA for that particular

## Appendix A

evaluation or audit and enter into a contract with the ITP to perform the evaluation or audit.

c. If, after retention by Defendant, any selected ITP cannot satisfactorily perform an evaluation or audit, Defendant shall, within 60 Days of learning that the ITP cannot satisfactorily perform the evaluation or audit, follow the procedures in Paragraph 2 of this Appendix A to propose ITPs to replace the selected ITP, and selection of the replacement ITP shall proceed in accordance with this Paragraph.

## **II. GENERAL AUDIT REQUIREMENTS AND REQUIREMENTS OF ITP COMPETENCE, IMPARTIALITY, AND INDEPENDENCE**

4. Defendant shall ensure each ITP performs environmental compliance evaluations and audits, including preparing and submitting all reports and plans and completing all related actions, in accordance with the requirements set forth in this Appendix A, and with the requirements set forth in Appendices B, C, and D, as applicable.

5. Defendant shall cooperate fully with each ITP and provide each ITP with reasonable and timely access to all records, employees, contractors, units, and facilities that the ITP deems necessary to effectively perform the duties described in this Appendix A and in Appendices B, C, and D, as applicable.

6. Defendant shall inform each ITP of all workplace safety and health procedures that are applicable at the Facility.

7. **ITP Expertise and Competence.** An ITP's representative or representatives responsible for overseeing an evaluation or audit must have:

a. A bachelor's degree or higher in a discipline relevant to the evaluation or audit and a license in professional engineering;

## Appendix A

b. Expertise and competence in the federal and state regulatory programs and environmental laws applicable to the evaluation or audit, including at least five years of experience with, and recent training on, the laws and permits relevant to the evaluation or audit;

c. Conducted within the last five years at least one evaluation or audit covering the regulatory program applicable to the particular evaluation or audit the ITP will perform at the Facility.

8. **ITP Independence and Impartiality.**

a. Defendant shall have no financial interest in any ITP.

b. Defendant shall ensure that each ITP meets the conditions set forth in Attachment 1 to this Appendix A.

c. Defendant shall not, during the period of an evaluation or audit and for at least three years following the ITP's submission of its written report, hire as an employee or consultant any of the ITP's personnel or contractors who conducted or otherwise participated in the evaluation or audit without first receiving written consent from EPA.

d. If, between the date of hiring an ITP and when the ITP's term expires, the ITP's financial interests with respect to Defendant or Defendant's financial interests with respect to the ITP change such that the Defendant and ITP become affiliates, related parties, or otherwise one party obtains an equity interest in the other, Defendant shall notify EPA in writing as soon as reasonably possible after becoming aware of the change.

9. **Preparation of Written Report.** Each ITP shall prepare a written report and simultaneously submit a copy of the report to EPA and Defendant, in accordance with the requirements set forth in Appendices B, C, and D, as applicable, after completing each

## Appendix A

evaluation or audit Defendant has contracted the ITP to perform. In addition to specific requirements for each evaluation or audit set forth in Appendices B, C, and D, as applicable, each written report shall include the following:

- a. The date or dates of the evaluation or audit;
- b. A detailed description of the information reviewed and the on-site activities conducted by the ITP to perform the evaluation or audit in accordance with the Consent Decree and the applicable appendix;
- c. Identification and a detailed description of each suspected area of noncompliance (“AON”) found at the Facility during the evaluation or audit, including the suspected Days of noncompliance, if known, and the statutory, regulatory, or Consent Decree requirement triggering the noncompliance;
- d. Supporting data and information documenting each suspected AON, such as analytical data, schematic diagrams and photographs, environmental permits, monitoring data, and invoices of installed equipment;
- e. A recommendation on what corrective measures need to be taken to address each suspected AON;
- f. A description of any problems or difficulties, if any, in performing the evaluation or audit and the measures taken to address the problems or difficulties; and
- g. A certification by the ITP that the evaluation or audit was fully completed in accordance with applicable provisions of the Consent Decree.

10. **Notification of Imminent and Substantial Endangerment.** Upon receipt of written notice from an ITP, Defendant shall immediately notify EPA of any condition the ITP finds during an evaluation or audit that may present an imminent and substantial endangerment

## Appendix A

to public health, welfare, or the environment. Defendant shall cooperate fully with any requests made by EPA in investigating the potential endangerment. Nothing in this Paragraph shall relieve Defendant of any other obligation imposed by any applicable federal, state, tribal, or local law or order requiring notification or response to the potential endangerment. The notification requirement of this Paragraph is in addition to and shall not substitute for any such obligation.

11. **ITP Contract Requirements.** Defendant's contract with each ITP shall include enforceable obligations paralleling the evaluation and audit requirements set forth in Appendices B, C, and D, as applicable, and shall contain remedies, including penalties, for nonperformance or delayed performance by the ITP. In addition, in each contract with an ITP, Defendant shall require the ITP to:

- a. Comply with the requirements set forth in Paragraph 9 of this Appendix A when preparing written reports;
- b. Comply with all conditions set forth in Attachment 1 to this Appendix A;
- c. Comply with all applicable workplace safety and health procedures while at the Facility; and
- d. Cooperate fully with any requests made by Defendant or by EPA in investigating a potential endangerment, as described in Paragraph 10 of this Appendix A.

## Attachment 1 to Appendix A

**ATTACHMENT 1 to Appendix A  
Conflict of Interest Statement****DEFINITIONS**

Whenever the terms below are used in this Attachment 1, they shall have the following definitions:

“Consent Decree” means the consent decree entered by the court in *United States v. LANXESS Corp.*, 2:24-cv-07522-DCN, and its appendices.

“Consult” or “Consulting” for purposes of this Attachment 1 does not include parties performing or participating in other third-party audits or evaluations required by the Consent Decree.

“Defendant” means LANXESS Corporation.

“Facility” means Defendant’s chemical manufacturing facility located at 2151 King Street Extension, Charleston, South Carolina.

“Notify” or “Notification” means communication made by email to EPA\_R4\_CAA\_Consent\_Decree\_Reports@epa.gov.

“Proposed Independent Third Party” or “Proposed ITP” means [*Name of proposed ITP*], and its employees or contractors who would perform one or more evaluation and/or audit described in the Consent Decree.



## Attachment 1 to Appendix A

**CERTIFICATION**

Proposed ITP makes the following certifications and representations in connection with its application to serve as an Independent Third Party to perform environmental compliance evaluations and audits at Defendant's Facility in accordance with the Consent Decree.

1. Proposed ITP:
  - a. Unless otherwise disclosed, has no conflict of interest that will compromise, in any way, the independence of the evaluation or audit Proposed ITP is under consideration to perform;
  - b. Has no financial interest (e.g., financial investment) in Defendant or any of its subsidiaries or affiliates;
  - c. Has not received any financial benefit (e.g., pay off or success fee) connected to the future outcome of the evaluation or audit Proposed ITP is under consideration to perform;
  - d. Is aware that acquiring a financial interest in Defendant (e.g., stock purchase) could disqualify it from commencing or continuing any evaluation or audit;
  - e. Has never worked at the Facility;
  - f. Unless otherwise disclosed, is not a party to any employment, consulting, agency, attorney-client, auditing, or other professional relationship or affiliation with Defendant, or any of Defendant's subsidiaries or affiliates; and
  - g. Unless otherwise disclosed, has conducted no research, development, design, construction services, or consulting for Defendant or for the United States within the three years prior to the signing this certificate.
2. If selected to perform an evaluation or audit, Proposed ITP will:

## Attachment 1 to Appendix A

- a. Not receive any financial benefit from the outcome of the evaluation or audit, apart from payment for performance of services connected to the evaluation or audit;
- b. Act independently and impartially when performing duties under the Consent Decree;
- c. Prepare a written report or reports, as required by the Consent Decree;
- d. Provide no other business or consulting services to Defendant, including advice or assistance to implement the findings or recommendations in written report(s), for a period of three years following Proposed ITP's submission of its written report or reports, unless it first receives written consent from EPA;
- e. Retain copies of any evaluation or audit-related reports and records for five years after completion of Proposed ITP's written report(s), and, if directed by Defendant, produce the report or reports to Defendant and EPA;
- f. Prior to engaging any services of additional personnel who will be utilized in the discharge of Proposed ITP's duties, review the background of all such personnel to determine whether the personnel, or any other entity with which the personnel is affiliated, meets the requirements of Paragraph 1 above, and if not, Proposed ITP will notify the U.S. Environmental Protection Agency to seek a determination whether it is appropriate to engage the personnel to assist in performing environmental evaluations and audits at the Facility;
- g. Notify the U.S. Environmental Protection Agency in writing as soon as reasonably possible after becoming aware of any change in Proposed ITP's financial interests (e.g., stock ownership) with respect to Defendant that occurs

## Attachment 1 to Appendix A

between the date of signing this Attachment and when Proposed ITP's term as an ITP expires; and

- h. Establish policies and procedures to memorialize the above conditions of this Attachment, to ensure Proposed ITP's competence, impartiality, judgment, and operational integrity when performing duties under the Consent Decree.

Date: \_\_\_\_\_

\_\_\_\_\_  
NAME:  
TITLE:  
COMPANY:

Appendix B

# **APPENDIX B**

## Appendix B

**APPENDIX “B” TO CONSENT DECREE  
LEAK DETECTION AND REPAIR REQUIREMENTS****I. DEFINITIONS**

Terms used in this Appendix that are defined in the Act or in regulations promulgated pursuant to the Act or in the Consent Decree shall have the meanings assigned to them in the Act or such regulations or in the Decree, unless otherwise provided in this Appendix. Whenever the terms set forth below are used in this Appendix, the following definitions shall apply:

“Annual” or “Annually” means a calendar year, except as otherwise provided in applicable LDAR provisions.

“Average” means the arithmetic mean.

“Covered Equipment” means pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, instrumentation systems, closed vent systems, and control devices used to meet the requirements of Subpart UU in organic hazardous air pollutant service in the Covered Process Units.

“Covered Process Unit” means any “miscellaneous organic chemical manufacturing process unit” located at the Facility that is subject to 40 C.F.R. Part 63, Subpart FFFF.

“Covered Types of Equipment” means all valves, pumps, or open-ended valves or lines in organic HAP service that are regulated under any “equipment leak” provision of 40 C.F.R. Part 63.

“DOR” means Delay of Repair.

“LDAR Audit Commencement Date” means the first Day of the on-site inspection that accompanies an LDAR audit.

## Appendix B

“LDAR Audit Completion Date” means the last Day that the ITP is at the Facility performing the LDAR Audit or 120 Days after the LDAR Audit Commencement Date, whichever is sooner.

“LDAR Audit Report” means a written report that meets the requirements of Paragraph 9 of Appendix A and Paragraph 35 of this Appendix B.

“LDAR Inspection Campaign” means a Day for each LDAR Personnel where the work assigned requires 75% or more of the shift spent performing LDAR inspections to comply with routine Monthly or Quarterly component inspection requirements.

“LDAR Inspection Task Cycle” means completion of the following tasks as part of a LDAR inspection in compliance with Method 21: finding the component, inspecting the component in accordance with Method 21, and recording the results of the inspection.

“LDAR Personnel” means all Defendant employees and contractors who perform any of the following activities at the Facility: LDAR monitoring; LDAR data input; maintenance of LDAR monitoring devices; leak repairs on equipment subject to LDAR; and/or any other field duties generated by LDAR Regulations or the LDAR Program.

“LDAR Program” means the Leak Detection and Repair Program specified in this Appendix B.

“Low-Emissions Packing” or “Low-E Packing” means either of the following:

- a. A valve packing product, independent of any specific valve, for which the manufacturer has issued a written warranty that the packing will not emit fugitive emissions at a concentration greater than 100 ppm, and that, if it does so emit at any time in the first five years, the manufacturer will replace the product; provided, however, that no packing product shall

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qualify as “Low-E” by reason of written warranty unless the packing first was tested by the manufacturer or a qualified testing firm pursuant to generally-accepted good engineering practices for testing fugitive emissions and the results of the testing reasonably support the warranty; or

- b. A valve-packing product, independent of any specific valve, that has been tested by the manufacturer or a qualified testing firm pursuant to generally accepted good engineering practices for testing fugitive emissions, and that, during the test, at no time leaked at greater than 500 ppm, and on Average, leaked at less than 100 ppm.

“Low-Emissions Valve” or “Low-E Valve” means either of the following:

- a. A valve (including its specific packing assembly or stem sealing component) for which the manufacturer has issued a written warranty that it will not emit fugitive emissions at a concentration greater than 100 ppm, and that, if it does so emit at any time in the first five years, the manufacturer will replace the valve; provided, however, that no valve shall qualify as a “Low-E Valve” by reason of written warranty unless the valve (including its specific packing assembly) either:
  - i. first was tested by the manufacturer or a qualified testing firm pursuant to generally accepted good engineering practices for testing fugitive emissions and the results of the testing reasonably support the warranty; or
  - ii. is an “extension” of another valve that qualified as a Low-E Valve;or

## Appendix B

- b. A valve (including its specific packing assembly) that:
  - i. has been tested by the manufacturer or a qualified testing firm pursuant to generally accepted good engineering practices for testing fugitive emissions and that, during the test, at no time leaked at greater than 500 ppm, and on Average, leaked at less than 100 ppm; or
  - ii. is an “extension” of another valve that qualified as a Low-E Valve.

For purposes of this Appendix, being an “extension of another valve” means that the characteristics of the valve that affect sealing performance (e.g., type of valve, stem motion, tolerances, surface finishes, loading arrangement, and stem and body seal material, design, and construction) are the same or essentially equivalent as between the tested and the untested valve.

“Method 21” means the test method found at 40 C.F.R. Part 60, Appendix A-7, Method 21. To the extent that the Covered Equipment is subject to regulations that modify Method 21, those modifications shall be applicable.

“Month” or “Monthly” means a calendar month, except as otherwise provided in any applicable LDAR provisions.

“Open-Ended Line” or “OEL” means any valve, except pressure relief valves, having one side of the valve seal in contact with process fluid and one side open to atmosphere, either directly or through open piping.

“Repair Verification Monitoring” means the utilization of monitoring (or other method that indicates the relative size of the leak) within 24 hours after each attempt at repair of a leaking piece of equipment to ensure that the leak has been eliminated or is below the applicable leak definition in this LDAR Program.



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“Screening Value” means the highest emission level that is recorded at each piece of Covered Equipment and associated components as it is monitored in compliance with Method 21.

“Subpart UU” means 40 C.F.R. Part 63, Subpart UU (National Emission Standards for Equipment Leaks – Control Level 2 Standards).

“Subpart FFFF” means 40 C.F.R. Part 63, Subpart FFFF (National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing).

## **II. LEAK DETECTION AND REPAIR REQUIREMENTS AT THE FACILITY**

1. Unless otherwise specified, all obligations of this Appendix B shall commence on the Effective Date. This Appendix B constitutes the Leak Detection and Repair Program that Defendant shall apply to all Covered Equipment and all Covered Process Units at the Facility.

2. The requirements of this LDAR Program are in addition to, and not in lieu of, the requirements of any other LDAR regulation that may be applicable to a piece of Covered Equipment. If there is a conflict between an LDAR regulation and this LDAR Program, Defendant shall follow the more stringent of the requirements.

### **A. Leak Detection Program**

3. **Facility-Wide LDAR Plan.** By no later than 180 Days after the Effective Date, Defendant shall develop a Facility-Wide LDAR written document that describes: (i) its LDAR Program for the Covered Process Units (*e.g.*, applicability of regulations to Covered Process Units and/or specific equipment; leak definitions; monitoring frequencies); (ii) a tracking program (*e.g.*, Management of Change in Paragraph 28) that ensures all new equipment added to Covered Process Units is integrated into the LDAR Program and all equipment taken out of service is removed from the LDAR Program, within 30 Days of addition or removal; (iii) the

## Appendix B

roles and responsibilities of all LDAR Personnel at the Facility; (iv) how the resources (*e.g.*, leak detectors, program oversight, LDAR Personnel, etc.) allocated to the LDAR Program are sufficient to satisfy the requirements of this Appendix B; (v) how Defendant plans to implement the LDAR Program; and (vi) a process to document and track the actual number of LDAR inspections for each Quarter in comparison to the anticipated number of inspections per Quarter. Once developed, Defendant shall review this Facility-Wide LDAR written document annually and update it by no later than March 31 of each year.

4. **LDAR Resource Allocation Plan.** In its LDAR Program, Defendant must include, and update, a resource allocation plan that includes the following data: (i) the total number of LDAR inspections planned in a year by type; (ii) the number of Days per calendar year allocated to performing LDAR inspections; (iii) the projected production rates (number of inspected components per Day) for each LDAR Personnel for LDAR inspections; (iv) the projected Average time in seconds by Covered Process Unit to complete one LDAR Inspection Task Cycle during a routine LDAR Inspection Campaign; and (v) the projected Average hours per Day spent monitoring for each LDAR Personnel during a routine LDAR Inspection Campaign.

5. **Monitoring Frequency and Equipment.** Beginning no later than 180 Days after the Effective Date, unless (i) more frequent monitoring is required by federal, state, or local laws or regulations or (ii) the relevant Covered Process Unit has been permanently shut down, Defendant shall monitor all Covered Equipment at the following frequencies:

- a. Valves – Quarterly;
- b. Pressure relief devices – Quarterly;
- c. Connectors – Annually;

## Appendix B

- d. Pumps/Agitators – Monthly; and
- e. OELs – Quarterly.

Monitoring of all OELs will be done at the closure device; if the closure device is a valve, monitoring will be done in the same manner as any other valve, but also shall include monitoring at the end of the valve or line that is open to the atmosphere. For compliance with LDAR Regulations, OEL monitoring results shall not be included in calculating the leak rate for the Covered Process Unit. Compliance with the monitoring frequencies in this Paragraph is not required when a specific, applicable LDAR provision excludes or exempts, fully or partially, monitoring at a periodic frequency (*e.g.*, an exemption for equipment that is designated as unsafe-to-monitor or difficult-to-monitor or an exemption for pumps that have no externally actuated shaft), provided that Defendant satisfies all applicable conditions and requirements for the exclusion or exemption set forth in the regulation.

6. **Valves and Connectors that have been Replaced or Repacked.** Defendant may elect to monitor valves and connectors that have been replaced, repacked, or improved pursuant to Paragraphs 18–24, or 26 and 27 at the most stringent monitoring frequency required by any LDAR regulation that applies to that piece of equipment, rather than the frequency specified in Paragraph 5. If Defendant has made such an election for a valve or connector and a leak above the thresholds defined in Paragraph 10 of this Appendix is subsequently detected from that piece of equipment, that piece of equipment must be repaired per Section B (Leak Repair Program) to this Appendix. In addition, Defendant shall monitor that piece of equipment Monthly until the equipment shows no leaks at the leak definition levels in Paragraph 10 for 12 consecutive months. At that time, Defendant may commence monitoring at the most stringent frequency required by any LDAR regulation that applies to that type of equipment in lieu of the frequencies in Paragraph 5.

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**7. Alternative Monitoring Frequencies for Valves, Connectors, and OELs.**

Defendant may elect to comply with the alternative monitoring requirements set forth in Table 1 below at any time that the Equipment in a Covered Process Unit meets the criteria set forth in Table 1 and the most recent LDAR Audit calculated a Comparative Monitoring Leak Percentage below 0.5% and a Comparative Monitoring Leak Ratio below 3.0. Defendant must notify EPA of each Covered Process Unit where Defendant makes this election no later than three Months prior to implementing this alternative monitoring frequency. Defendant may elect to comply with the monitoring requirements of this Paragraph at one or more Covered Process Units but may not make this election for anything less than all pieces of Covered Equipment of the same type (i.e., valves, connectors, or OELs) in one entire Covered Process Unit. Defendant may not elect to comply with the frequencies in Table 1 without also complying with Paragraphs 7.a and 7.b of this Appendix.

Table 1: Alternative Monitoring Frequencies

Equipment Type	Criteria for Election	Alternative Monitoring Frequency
Valves	No leaks for two consecutive years of monitoring	Annually
Connectors	No leaks for two consecutive years of monitoring	Once every two years
OELs	No leaks for two consecutive years of monitoring	Annually

- a. If any leaks at thresholds above those defined in Paragraph 10 are detected during the alternative monitoring schedule or during an LDAR Audit or a federal, state, or local audit or inspection, Defendant immediately shall

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start monitoring the leaking components in accordance with Paragraph 7.b.

- b. For valves, connectors and open-ended lines that have leaked at any time in the required number of consecutive Months of monitoring listed in Table 1, Defendant shall monitor each piece of equipment Monthly until the piece of equipment shows no leaks above the thresholds in Paragraph 10 for six consecutive Months, at which time Defendant may commence monitoring at the frequency set forth in Table 1 above.

8. **Calibration of Monitoring Instrument.** Before use on each day of a monitoring event required under this Appendix B, or Subpart FFFF, Defendant shall calibrate the monitoring instrument used for Method 21 monitoring conducted pursuant to this Appendix B in accordance with Method 21 and Subpart UU. For all Method 21 monitoring, Defendant shall calibrate the monitoring instrument using the following gases:

- a. A zero gas cylinder measuring less than 10 ppm VOC; and
- b. For any monitoring instrument designed for multiple calibration scales, at least two calibration scales with the lower scale using a calibration gas that is approximately equal to 500 ppm, and the highest scale using a calibration gas that is approximately equal to 10,000 ppm.

9. **Recording Monitoring Data.**

- a. For each monitoring event required under this Appendix B, Defendant shall comply with Method 21 and use a monitoring instrument attached to a data logger which is programed with the identification number of each piece of Covered Equipment, and which electronically records the Screening Value

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detected at each piece of Covered Equipment, the date and time that each Screening Value is taken, and the identification numbers of the monitoring instrument and technician. Defendant shall transfer this monitoring data to an electronic LDAR database within one week following monitoring for recordkeeping purposes.

- b. If, during monitoring in the field, a piece of Covered Equipment is discovered that is not listed in the data logger, Defendant is permitted to monitor the piece of Covered Equipment and record, by any means available, the Screening Value, the date and time of the Screening Value, and the identification numbers of the monitoring instrument and technician. In such an instance, the failure to initially record the information electronically in the data logger does not constitute a violation of the requirement in Paragraph 9.a to record the required information electronically, provided that Defendant, as soon as possible, but no later than 20 Days after discovery of the unlisted equipment, adds the piece of Covered Equipment and information regarding the monitoring event to the electronic LDAR database.

**B. Leak Repair Program**

10. **Leak Repair Action Levels.** Beginning no later than 180 Days after the Effective Date and continuing until termination of the Consent Decree, Defendant shall perform repairs in accordance with Paragraphs 13–17 of this Appendix B for all leaks detected at or above the leak definitions listed in Table 2 for the specific equipment type.

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Table 2: Leak Definitions by Equipment Type

Equipment Type	Leak Definition (ppm)
Valves	250
Connectors	250
Pumps	500
Agitators	1,000
OELs	250
Pressure Relief Devices	500

11. Defendant may elect to adjust the monitoring instrument readings for background pursuant to any provision of applicable LDAR Regulations that addresses background adjustment, provided that Defendant complies with the applicable provision's requirements for background adjustment.

12. If at any time, including outside of periodic monitoring, evidence of a potential leak is detected through audio, visual, or olfactory sensing, Defendant shall comply with all applicable regulations and, if repair is required, shall perform that repair in accordance with Paragraph 13–17 of this Appendix B.

13. **Repairs.** Except as provided in Paragraph 22.c (Actions required pending replacing or repacking), after recording a Screening Value of a piece of Covered Equipment at or above the applicable leak definition in this LDAR Program, Defendant shall perform a first attempt at repair within 5 Days of detecting the leak. If Defendant elects to perform a repair, by no later than 15 Days after detection, Defendant shall perform a final attempt at repair or may place the piece of equipment on the DOR list, provided that Defendant has complied with all

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applicable regulations and with the requirements in Paragraphs 14-17, 18–25 (valve replacement and improvement program), 26 and 27 (connector replacement program) of this Appendix B.

14. **Repair Verification Monitoring.** Except as provided in Paragraph 22.c (Actions required pending replacing or repacking), beginning no later than 180 Days after the Effective Date and continuing until termination of the Consent Decree, Defendant shall perform Repair Verification Monitoring.

15. Except as provided in Paragraph 22.c (Actions required pending replacing or repacking), for each detected leak, Defendant shall record the following information: (i) the date of all repair attempts; (ii) the repair methods used during each repair attempt; (iii) the date, time, and Screening Values for all re-monitoring events; and, if applicable, (iv) documentation of compliance with Paragraphs 16 and 17 for Covered Equipment placed on the DOR list.

16. Defendant may take a leaking piece of Covered Equipment temporarily or permanently out of service; provided, however, that prior to placing the leaking piece of Covered Equipment back in service, Defendant must repair the leak or must comply with the requirements of Paragraph 17 to place the piece of equipment on the DOR list.

17. **Delay of Repair.** Beginning no later than the Effective Date, for all Covered Equipment placed on the DOR list, Defendant shall:

- a. Require sign-off from the Covered Process Unit supervisor or person of similar authority on documentation that shows (i) the piece of equipment is technically infeasible to repair without a process unit shutdown or (ii) emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from DOR;
- b. Maintain a written record of the facts that explain any DOR and why Paragraph 17.a.(i) or (ii) were satisfied;



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- c. Undertake periodic monitoring of the Covered Equipment placed on the DOR list at the frequency specified in Paragraph 5 for that type of Covered Equipment;
- d. Except as provided in Paragraph 17.e, repair the piece of Covered Equipment by the end of the next Covered Process Unit shutdown following the monitoring event that triggered the repair. Defendant shall repair as many leaking pieces of equipment as practicable during this shutdown; provided, however Defendant may carry over repairs from a subsequent process unit shutdown if Defendant documents that insufficient time existed between the monitoring event and the non-operative time to enable Defendant to purchase and install the required valve or valve packing technology. In that case, Defendant shall undertake the replacing or repacking during the next Covered Process Unit shutdown that occurs after Defendant's receipt of the valve or valve packing, including all necessary associated materials;
- e. If applicable under Paragraphs 18–27, replace, repack, or improve the piece of equipment by the timeframes set forth in Paragraphs 18–27.

**C. Valve Replacement and Improvement**

18. **Valve Replacement and Improvement Program.** Commencing no later than 180 Days after the Effective Date, and continuing until termination of the Consent Decree, Defendant shall implement the program set forth in Paragraphs 19–27 to improve the emissions performance of the valves that are Covered Equipment.

19. **Existing Valve List.** In the first LDAR Status Report required under Paragraph 38 of this Appendix B that is part of the first semi-annual report required under Consent Decree

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Section IX (Reporting Requirements), Defendant shall include a list of the tag numbers of all valves subject to this LDAR Program, broken down by Covered Process Unit, that are in existence as of the Effective Date. The valves on this list shall be the “Existing Valves” for purposes of Paragraphs 19–22.

20. **Proactive Initial Valve Tightening Work Practices Relating to each New Valve that is Installed and each Existing Valve that is Repacked.** Defendant shall undertake the work practices specified in this Paragraph with respect to each new valve that is subject to applicable LDAR Regulations that is installed (whether the new valve replaces an Existing Valve or is newly added to a Covered Process Unit) and each Existing Valve that is repacked. Upon installation (or re-installation in the case of repacking), Defendant shall tighten the valve’s packing gland nuts or their equivalent (*e.g.*, pushers) to: (i) the manufacturer’s recommended gland nut or packing torque; or (ii) any appropriate tightness that will minimize the potential for fugitive emission leaks of any magnitude. This practice shall be implemented prior to the valve’s exposure (or re-exposure, in the case of repacking) to process fluids.

21. **Installing New Valves.** Except as provided in Paragraph 21.a, Defendant shall ensure that each new valve it installs in each Covered Process Unit that is regulated under applicable LDAR Regulations, is either a Low-E Valve or is fitted with Low-E Packing. This requirement applies to entirely new valves that are added to a Covered Process Unit and to Existing Valves that are replaced for any reason in a Covered Process Unit.

- a. This Paragraph shall not apply in emergencies or exigent circumstances requiring immediate installation or replacement of a valve where a Low-E Valve or Low-E Packing is not available on a timely basis. Any such instance shall be

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reported in the next LDAR Program LDAR Status Report required under Paragraph 38.

22. **Replacing or Repacking Existing Valves with Low-E Valves or Low-E Packing.**

- a. **Existing Valves Required to Be Replaced or Repacked.** For each Existing Valve that has a Screening Value at or above 250 ppm twice in any four-year period or above 500 ppm at any time Defendant shall either replace or repack the Existing Valve with a Low-E Valve or Low-E Packing.
- b. **Timing.** Defendant shall replace or repack the existing valve no later than 15 Days after the monitoring event that triggers the packing or replacing requirement under Paragraph 22.a, unless Defendant complies with the following prior to the 15 Day deadline:
  - i. Defendant takes all actions necessary to obtain the required valve or valve packing, including all necessary associated materials, as expeditiously as practicable, and retains documentation of the actions taken and the date of each such action;
  - ii. If, despite Defendant's efforts to comply with Paragraph 22.b.i, the required valve or valve packing, including all necessary associated materials, is not available in time to complete the installation within 15 Days, Defendant must take all reasonable actions to minimize emissions from the valve pending completion of the required replacing or repacking. Examples include: repair; more frequent monitoring, with additional repairs as needed; where practical, interim replacing or

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repacking of a valve with a valve that is not a Low-E Valve or with packing that is not Low-E Packing; and

iii. Defendant must promptly perform the required replacing or repacking after its receipt of the valve or valve packing, including all necessarily associated materials.

c. Actions Required Pending Replacing or Repacking Under Paragraph 22.a and b.

i. If Defendant does not complete the replacing or repacking within 15 Days, or if at the time of the leak detection Defendant reasonably can anticipate that it might not be able to complete the replacing and repacking within 15 Days, Defendant shall comply with all applicable requirements of Paragraphs 13-17, above, pending replacing or repacking.

ii. For each existing valve that has a Screening Value at or above 250 ppm but does not meet the criteria in this Paragraph 22.a, Defendant shall comply with all applicable regulatory requirements, including repair and “delay of repair,” pending replacing or repacking pursuant to this Paragraph 22.a and b.

23. **Repairing, Replacing, or Repacking Low-E valves.** If a Low-E Valve or valve using Low-E Packing has a Screening Value at or above 250 ppm, Defendant shall comply with Paragraph 22, and is not required to replace or repack it. If a Low-E Valve or valve using Low-E Packing has a Screening Value at or above 500 ppm, Defendant shall replace or repack it in accordance with Paragraph 22.

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24. **Records of Low-E Valves and Low-E Packing.** Prior to installing any Low-E Valve or Low-E Packing, or if not possible before installation, then as soon as possible after installation, Defendant shall secure from each manufacturer documentation that demonstrates that the proposed valve or packing technology meets the definition of “Low-E Valve” and/or “Low-E Packing.” Defendant shall make the documentation available upon request by EPA.

25. In each LDAR Status Report due under Paragraph 38 of this Appendix B, Defendant shall include a separate section in the Report that: (i) describes the actions it took to comply with Paragraphs 18-24 (Valve Replacement and Improvement Program), including identifying each piece of equipment that triggered a requirement under Paragraphs 18-24, the Screening Value for that piece of equipment, the type of action taken (*i.e.*, replacement, repacking, or improvement, and the date the action was taken); (ii) identifies any required actions that were not taken and explains why; and (iii) identifies the schedule for any known future replacements, re-packings, improvements, or eliminations.

**D. Connector Replacement and Improvement**

26. **Connector Replacement and Improvement Program.**

- a. For purposes of Paragraph 27, for each of the following types of existing connectors (*i.e.*, a connector in use at a Covered Process Unit on the Date of Lodging), the following type of replacement or improvement shall apply:

Connector Type	Replacement or Improvement Description
Flanged	Replacement or improvement of the gasket
Threaded	Replacement of the connector with a like-kind connector or other
Compression	Replacement of the connector with a like-kind connector or other

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CamLock	Replacement or improvement of the gasket or replacement or improvement of the CamLock
Quick Connect	Replacement or improvement of the gasket, if applicable, or replacement of the connector (with either a like-kind connector or other), if there is no gasket
Any type	Elimination ( <i>e.g.</i> , through welding, pipe, etc.)

For purposes of this Paragraph, “gasket” means a sealing element that includes, but is not limited to, an O-ring, gasket, or D-ring.

- b. In cases where a like-kind replacement is utilized as the method for replacing or improving an existing connector, the provisions of this Paragraph 26.b.(i) and (ii) shall apply.

i. If there are types, models or styles of a like-kind connector that are less likely to leak than the existing connector, and one or more of those types, models or styles are technically feasible to use (considering the service, operating conditions, and type of piping or tubing that the connector is in), and would not create a safety, major mechanical, major product quality, regulatory or other issue, Defendant shall select a like-kind connector from among such types, models or styles.

ii. If this Paragraph 26.b.(i) does not apply, Defendant may install a like-kind connector that is the same type, model, or style as the existing connector.

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27. **Replacing or Improving Connectors.**

- a. **Trigger for Replacement or Improvement Requirements.** For each connector that, in any two of three consecutive monitoring periods, has a Screening Value at or above 500 ppm, Defendant shall replace or improve the connector in accordance with the applicable replacement or improvement described in Paragraph 26. Defendant shall use best efforts to install a replacement or improvement that will be the least likely to leak, using good engineering judgment, for the service, operating conditions, and type of piping or tubing to which the connector is connected.
- b. **Timing.** If the replacement or improvement does not require a Covered Process Unit shutdown, Defendant shall undertake the replacement or improvement within 15 Days after the monitoring event that triggers the replacement or improvement requirement. If the replacement or improvement requires a Covered Process Unit shutdown, Defendant shall undertake the replacement or improvement during the first Covered Process Unit shutdown that follows the monitoring event that triggers the requirement to replace or improve the connector, unless Defendant documents that insufficient time existed between the monitoring event and the Covered Process Unit shutdown to enable Defendant to secure and install the replacement or improvement. In that case, Defendant shall undertake the replacement or improvement at the next Covered Process Unit shutdown that follows thereafter.
- c. In each LDAR Status Report due under Paragraph 38 of this Appendix B, Defendant shall include a separate section that: (i) describes the actions it took

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to comply with Paragraphs 26 and 27 (Connector Replacement and Improvement Program), including identifying each piece of equipment that triggered a requirement under Paragraph 27.a, the Screening Value for that piece of equipment, and the type of action taken; (ii) identifies any required actions that were not taken and explains why; and (iii) identifies the schedule for any planned future action to comply with Paragraph 27.

**E. Management of Change and Quality Assurance/Control**

28. **Management of Change.** Beginning no later than 180 Days after the Effective Date, Defendant shall implement an LDAR Management of Change Protocol that shall ensure that each piece of Covered Equipment that is added, for any reason, to a Covered Process Unit is evaluated to determine if it is subject to LDAR requirements. The Management of Change Protocol shall also ensure that each piece of Covered Equipment that was subject to the LDAR Program is eliminated from the LDAR Program if it is physically removed from a Covered Process Unit. The Management of Change Protocol shall require Defendant to add or remove a piece of Covered Equipment from its LDAR Program as soon as possible, but no later than 30 Days after the component is physically added or removed. Piping & Instrumentation Diagrams shall also be updated to reflect the change within the same 30-Day timeframe with schematics finalized as soon as reasonably possible, thereafter. This LDAR Management of Change Protocol shall be a part of Defendant's Facility-wide Management of Change Protocol.

29. **Training.** By no later than 270 Days after the Effective Date, Defendant shall develop a training protocol and shall ensure that all LDAR Personnel have completed training on all aspects of LDAR, including this LDAR Program, Method 21 monitoring, and Defendant's Management of Change Protocol. Once per calendar year starting in the calendar year after completion of initial training, Defendant shall require refresher training for all LDAR Personnel.



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Beginning no later than the Effective Date and continuing until termination of the Consent Decree, Defendant shall require new LDAR Personnel to be trained in Method 21, the LDAR Program, and the Management of Change Protocol no more than 90 Days prior to any field involvement (other than supervised involvement for purposes of training) with LDAR and/or in the LDAR Program. Defendant shall review this training protocol and update it as needed to address any deficiencies identified in the LDAR Audit by no later than 60 Days after submission of each LDAR Audit Report.

30. **Daily Certification by Monitoring Technicians.** On each Day that monitoring pursuant to this Appendix B occurs, at the end of such monitoring, Defendant shall require each monitoring technician to certify that the data collected represents the monitoring performed for that Day by requiring the monitoring technician to sign a form that includes the following certification:

*On [date], I reviewed the monitoring data that I collected today and to the best of my knowledge and belief, the data accurately represents the monitoring I performed today.*

31. **Quality Assurance/Quality Control.** Beginning no later than the first full Quarter after the Effective Date, during each Quarter until termination of the Consent Decree and at times that are not announced to LDAR Personnel, an LDAR-trained employee of Defendant (or an LDAR-trained contractor), who does not serve as an LDAR monitoring technician at the Facility on a routine basis, shall:

- a. Verify that equipment was monitored at the appropriate frequency;
- b. Verify that proper documentation and sign-offs have been recorded for all equipment placed on the DOR list;

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- c. Ensure that repairs have been performed within the required timeframe;
- d. Review monitoring data and equipment counts (*e.g.*, number of pieces of equipment monitored per Day) for feasibility, unusual trends, and apparent inconsistencies;
- e. Observe calibration of monitoring equipment to ensure that it is properly calibrated in accordance with Subpart UU and Paragraph 8, and that proper calibration records and monitoring instrument maintenance information are maintained;
- f. Verify that other LDAR Program records are maintained as required; and
- g. Observe in the field each LDAR monitoring technician who is conducting leak detection monitoring to see that monitoring is being conducted as required.

Defendant shall correct any deficiencies detected or observed as soon as practicable. Defendant shall maintain a log that: (i) records the date and time that the reviews, verifications, and observations required by this Paragraph were undertaken; and (ii) describes the nature and timing of any corrective actions taken.

**F. LDAR Audits, Reports, and Corrective Action Plans**

32. **LDAR Audits: Scope and Schedule.** Defendant shall retain an Independent Third Party (“ITP”), in accordance with this Paragraph and Appendix A to the Consent Decree, to undertake at least three annual LDAR Audits at the Covered Process Units, in accordance with the following schedule: for the first LDAR Audit, the LDAR Audit Commencement Date is set forth below; for each subsequent LDAR Audit, the LDAR Audit Commencement Date shall occur within the same Quarter that the first LDAR Audit Completion Date occurred, until

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termination of this Consent Decree. Defendant shall not undertake more than one audit under this Paragraph annually.

- a. The LDAR Audit Commencement Date shall be no later than 120 Days after EPA's approval of an ITP or ITPs under Appendix A to the Consent Decree.
- b. For each Covered Process Unit, each LDAR Audit shall include: (i) reviewing compliance with all applicable LDAR Regulations; (ii) reviewing and/or verifying the same items that are required to be reviewed and/or verified in Paragraphs 28–31, above; (iii) reviewing whether any pieces of equipment that are required to be in the LDAR Program are not included; and (iv) “comparative monitoring” as described in Paragraph 33 below. Each LDAR Audit after the first LDAR Audit also shall include reviewing the Covered Process Unit's compliance with all other elements of the LDAR Program.

33. **Comparative Monitoring.** Comparative monitoring during LDAR Audits shall be undertaken as follows:

- a. **Calculating a Comparative Monitoring Audit Leak Percentage.** Covered Types of Equipment shall be monitored to calculate a leak percentage for the Covered Process Units. For descriptive purposes under this Paragraph, the monitoring that takes place during an LDAR Audit shall be called “Comparative Monitoring” and the leak percentages derived from the Comparative Monitoring shall be called the “Comparative Monitoring Audit Leak Percentages.” The ITP shall undertake Comparative Monitoring of the Covered Types of Equipment in the Covered Process Units during each LDAR Audit. In undertaking

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Comparative Monitoring, the ITP shall not be required to monitor every component in each Covered Process Unit.

- b. Calculating the Historic, Average Leak Percentage from Prior Periodic Monitoring Events. The Historic, Average Leak Percentage from prior periodic monitoring events, broken down by Covered Type of Equipment, shall be calculated. Four complete monitoring periods immediately preceding the comparative monitoring shall be used for this purpose. The preceding monitoring periods may comprise a mix of the monitoring periods and frequencies specified in Paragraph 5.
- c. Calculating the Comparative Monitoring Leak Ratio. The ITP shall calculate the ratio of the Comparative Monitoring Audit Leak Percentage to the Historic, Average Leak Percentage. This ratio shall be called the “Comparative Monitoring Leak Ratio.” If the denominator in this ratio is “zero,” it shall be assumed that one leaking piece of Covered Equipment was found in the Covered Process Unit through routine monitoring during the 365-Day period before the comparative monitoring.

34. **When More Frequent Periodic Monitoring is Required.** If a Comparative Monitoring Audit Leak Percentage calculated pursuant to Paragraph 33 triggers a more frequent monitoring schedule under any applicable federal regulation or federally enforceable state or local law or regulation than the frequencies listed in Paragraph 5, as applicable for the Covered Type of Equipment in that Covered Process Unit, Defendant shall monitor the Covered Type of Equipment at the greater frequency unless and until less frequent monitoring is again allowed

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under the specific federal regulation or federally enforceable state or local law or regulation. At no time may Defendant monitor at intervals less frequently than those in Paragraph 5–7.

35. **LDAR Audit Reports.** Within 30 Days of an LDAR Audit Completion Date, the LDAR ITP or ITPs shall prepare and simultaneously submit to Defendant and EPA an LDAR Audit Report that describes:

- a. A summary of findings with respect to the topics specified in Paragraph 32.b, including an itemized list of any areas of noncompliance identified in the LDAR Audit;
- b. The raw data with respect to the comparative monitoring described in Paragraph 33;
- c. The Comparative Monitoring Audit Leak Percentage for each Covered Process Unit calculated pursuant to Paragraph 33.b;
- d. The Comparative Monitoring Leak Ratio for each Covered Process Unit calculated pursuant to Paragraph 33.c.

36. **LDAR Corrective Action Plans (“LDAR CAPs”).**

- a. **When an LDAR CAP is Required.** By no later than 60 Days after each LDAR Audit Completion Date, Defendant shall develop, implement, and submit to EPA an LDAR CAP if: (i) the results of an LDAR Audit identify any areas of noncompliance or (ii) a Comparative Monitoring Leak Ratio calculated pursuant to Paragraph 33.c is 3.0 or higher and the Comparative Monitoring Audit Leak Percentage calculated pursuant to Paragraph 33.a is greater than or equal to 0.5 percent.

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- b. Timing of Corrective Actions. Within 90 Days of the applicable LDAR Audit Completion Date, Defendant shall correct any areas of noncompliance identified in the LDAR Audit and any causes of a Comparative Monitoring Leak Ratio calculated pursuant to Paragraph 33.c that is 3.0 or higher.
- c. The LDAR CAP shall include:
- i. A description of corrective actions Defendant has already taken, or will take, to address the areas of noncompliance identified in the LDAR Audit and/or the causes of a Comparative Leak Ratio that is 3.0 or higher;
  - ii. The date Defendant completed each corrective action or, if corrective actions remain incomplete, a schedule for when Defendant will complete the remaining corrective actions within 90 Days of the applicable LDAR Audit Completion Date; and
  - iii. If Defendant expects that any corrective action will not be completed within 90 Days of the applicable LDAR Audit Completion Date, an explanation for the delay, the expected date of completion, and a description of interim measures it will take until the corrective action is completed.
- d. EPA Comment on LDAR CAP. EPA may submit comments on the LDAR CAP. If EPA submits comments, Defendant shall immediately revise and implement the LDAR CAP in accordance with EPA's comments. Disputes arising with respect to any aspect of a LDAR CAP shall be resolved in accordance with Consent Decree Section XII (Dispute Resolution).

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37. **Recordkeeping.** Defendant shall keep all records required by this LDAR Program, including each LDAR Audit Report and QA/QC report, to document compliance with the requirements of this LDAR Program for at least five years after termination of the Consent Decree. Upon request by EPA, Defendant shall make all such documents available to EPA and shall provide, in electronic format if so requested, all LDAR monitoring data generated since the Effective Date.

38. **LDAR Program Status Reports.** With each semi-annual report required under Consent Decree Section IX (Reporting Requirements), Defendant shall submit to EPA an “LDAR Status Report” containing the following information:

- a. The number of days LDAR inspections took place in the reporting period;
- b. The number of LDAR Personnel at the Facility (excluding Personnel whose functions involve the non-monitoring aspects of repairing leaks) and the approximate amount of time (in hours and minutes) each such person spends dedicated to performing his/her LDAR functions, including Average LDAR Inspection Task Cycle time per Covered Process Unit;
- c. An identification of any problems encountered in complying with the requirements of this Appendix B;
- d. Any changes to the list of Existing Valves required by Paragraph 19;
- e. The information required by Paragraph 25;
- f. The information required by Paragraph 27.c;
- g. A copy of the Management of Change Protocol required under Paragraph 28;

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- h. Where any deviations from the Management of Change Protocol required under Paragraph 28 have been identified, the results of a root cause analysis and any corrective actions taken;
- i. A description of the type of trainings done in accordance with this Consent Decree;
- j. Any deviations identified in the QA/QC performed under Paragraph 31, as well as any corrective actions taken under that Paragraph; and
- k. A “Final LDAR CAP Report and Certificate of Completion” as described in Paragraph 39 for any LDAR CAP that was submitted during the reporting period, unless the LDAR CAP was submitted less than 30 Days before the LDAR Status Report due under Paragraph 38 of this Appendix B, in which case the Final LDAR CAP Report and Certificate of Completion will be due with the next semi-annual report due pursuant to the times set forth in Consent Decree Section IX (Reporting Requirements) .

39. **Final LDAR CAP Report and Certificate of Completion.** The Final “LDAR CAP Report and Certificate of Completion” shall certify that, to the signer’s best knowledge and belief formed after reasonable inquiry: (i) except as otherwise identified, the Facility is in compliance with all applicable LDAR Regulations and the LDAR Program; (ii) Defendant has completed all corrective actions, if applicable, within the time required under Paragraph 36.b; and (iii) all equipment at the Facility that is regulated under LDAR has been identified and included in the Facility’s LDAR Program. To the extent that Defendant cannot make the certification in all respects, it shall specifically identify any deviations from items (i)–(iii) above.



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40. If EPA submitted comments on the LDAR CAP, Defendant shall include in the final LDAR CAP Report and Certificate of Completion a response to each of EPA's comments indicating whether it made any changes to the LDAR CAP in response to EPA's comments, and, if so, what those changes were.

41. If Defendant failed to complete any corrective actions within the time required under Paragraph 36.b: (i) the final LDAR CAP Report and Certificate of Completion must include an explanation for the failure, the date when the corrective action was, or will be, completed, and description of interim measures Defendant took, or is taking, until the corrective action was, or is completed, and (ii) Defendant shall submit a supplemental certification of completion by no later than 30 Days after the date of completion of all such corrective action(s).

Appendix C

# APPENDIX C

## Appendix C

**APPENDIX “C” TO CONSENT DECREE  
WASTEWATER REQUIREMENTS****I. DEFINITIONS**

Terms used in this Appendix that are defined in the Act or in regulations promulgated pursuant to the Act or in the Consent Decree shall have the meanings assigned to them in the Act or such regulations or in the Decree, unless otherwise provided in this Appendix. Whenever the terms set forth below are used in this Appendix, the following definitions shall apply:

“Air Strippers” means the Facility’s two air strippers identified as C-673 and C-677 in Facility documentation.

“Group 1 Wastewater Stream” has the meaning set forth in 40 C.F.R. § 63.2550(i).

“Group 2 Wastewater Stream” has the meaning set forth in 40 C.F.R. § 63.2550(i).

“Maintenance Wastewater Stream” means a stream containing maintenance wastewater as defined in 40 C.F.R. § 63.2550(i).

“Miscellaneous Organic Chemical Manufacturing Process Unit” or “MCPU” has the meaning set forth in 40 C.F.R. § 63.2435(b).

“Operating Scenario” has the meaning set forth in 40 C.F.R. § 63.2550(i).

“Point of Determination” has the meaning set forth in 40 C.F.R. § 63.2550(i).

“Process Change” means a change to an existing MCPU or an addition of a new MCPU at the Facility that is not within the scope of an existing Operating Scenario reported by Defendant pursuant to 40 C.F.R. § 63.2520. A Process Change does not include moving within a range of conditions identified in the standard batch, or a nonstandard batch.

“Process Wastewater Stream” means a stream that contains process wastewater as defined in 40 C.F.R. § 63.101.

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“Thermal Oxidizer Unit” means either of the Facility’s Thermal Oxidizer Units (TOUs), identified as B-680 and B686 in Facility documentation.

“Waste Management Unit” or “WMU” has the meaning set forth in 40 C.F.R. § 63.2550(i).

“Wastewater” has the meaning set forth in 40 C.F.R. § 63.2550(i).

“Wastewater Personnel” means all Defendant employees and contractors who perform any of the following activities at the Facility for the purpose of complying with the Wastewater Requirements of Subpart FFFF: determine when and where Wastewater samples should be collected, collect Wastewater samples, analyze Wastewater samples, perform monitoring required by 40 C.F.R. § 63.2485 or Table 7 to Subpart FFFF , or provide inspections required by 40 C.F.R. § 63.2485 or Table 7 to Subpart FFFF.

“Wastewater Requirements of Subpart FFFF” means the requirements set forth in 40 C.F.R. § 63.2485, including all regulations cross-referenced therein.

“Wastewater Stream” has the meaning set forth in 40 C.F.R. § 63.2550(i).

## **II. WASTEWATER EVALUATION AND TREATMENT REQUIREMENTS**

### **A. Wastewater Compliance Evaluation Plan**

1. In accordance with this Paragraph and Appendix A to the Consent Decree, Defendant shall retain an Independent Third Party (“ITP”) to evaluate and ensure its compliance with all applicable Wastewater Requirements of Subpart FFFF. The ITP shall, within 60 Days of being retained by Defendant pursuant to the criteria set forth in Appendix A, prepare and simultaneously submit to EPA and to Defendant a “Wastewater Compliance Evaluation Plan.” The Wastewater Compliance Evaluation Plan shall include:

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- a. A proposed plan and schedule for conducting: (1) a Wastewater Group Status Evaluation as set forth in Paragraphs 3–4 and (2), if required, a Wastewater Control Evaluation as set forth in Paragraphs 7–8; and
- b. A quality assurance plan for collection and analysis of all Wastewater samples that:
  - i. complies with 40 C.F.R. § 63.144(b);
  - ii. includes the procedures to be used to determine the average concentration of Subpart FFFF Table 8 and Table 9 compounds in discontinuously generated Process Wastewater Streams; and
  - iii. identifies the proposed laboratory, or laboratories, to be used to analyze the Wastewater samples, and sufficient documentation to confirm each laboratory meets the requirements of Paragraph 3.e.

2. EPA may, in whole or in part, approve or disapprove the Wastewater Compliance Evaluation Plan within 45 Days of the Day the ITP submits the Plan to EPA. If EPA neither approves nor disapproves the Plan within 45 Days, the ITP and Defendant may assume the Plan is approved in whole for purposes of proceeding under Paragraph 3. If EPA disapproves the Wastewater Compliance Evaluation Plan in whole or in part, the Wastewater Compliance Evaluation Plan shall constitute a submittal that is disapproved in whole or in part pursuant to Paragraph 22(c) or (d) of the Consent Decree, and the Parties shall proceed according to the provisions set forth in Consent Decree Section VII (Approval of Deliverables).

**B. Wastewater Group Status Evaluation**

3. Unless a different date is approved by EPA, the ITP shall commence a “Wastewater Group Status Evaluation” within 60 Days of the Day EPA approves the Wastewater

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Compliance Evaluation Plan or within 60 Days of the end of the 45-Day period described in

Paragraph 2. The Wastewater Group Status Evaluation shall meet the following requirements:

- a. Defendant may designate as a Group 1 Wastewater Stream any Process Wastewater Stream. Defendant is not required to determine the concentration or flow rate for each designated Group 1 Wastewater Stream;
- b. samples shall be collected and analyzed in accordance with the procedures of (i) 40 C.F.R. § 63.144(b)(5) or 40 C.F.R. § 63.2485(h)(1) or (2) and (ii) the Wastewater Compliance Evaluation Plan;
- c. samples shall be representative of the average concentration of Subpart FFFF Table 8 and Table 9 compounds that are discharged; continuously generated Wastewater Streams may be collected at any time that is representative of normal operation of the stream, whereas discontinuous Wastewater Streams (e.g., from batch operations) must be representative of either the highest concentration of Subpart FFFF Table 8 and Table 9 compounds during the discharge or adjustments shall be made to determine the flow-weighted average concentration of Subpart FFFF Table 8 and Table 9 compounds over the entire discontinuous wastewater discharge (e.g., multiple samples collected over the discontinuous wastewater discharge, collection of a composite sample consisting of wastewater collected throughout the discharge);
- d. at least three samples shall be collected and analyzed from each

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Wastewater Stream in accordance with 40 CFR 63.144(b)(5); samples of continuously generated wastewater streams must be collected no more frequently than once every 7 calendar days; samples of discontinuously generated wastewater streams must be collected from separate wastewater discharge events (i.e., separate batches), unless fewer than three batches are produced in the time allowed, in which case a sample shall be collected from each wastewater discharge event that occurs during that time;

- e. all analyses of Wastewater samples shall be performed at a laboratory with a documented quality assurance system that complies with ASQ/ANSI E4:2014 “Quality Management Systems for Environmental Information and Technology Programs – Requirements with Guidance for Use” (American Society for Quality, February 2014) and “EPA Requirements for Quality Management Plans” (QA/R-2 EPA/240/B-01/002 (March 2001, reissued May 2006));
- f. any historic sampling data that meets the requirements of 40 C.F.R. § 63.144(b)(5), and that is still representative of current operations, may be substituted for or combined with collection of new samples if, in the view of the ITP, the historic sampling is representative of current properties of the Wastewater Stream, the historic sampling was collected and analyzed no more than 48 months prior to the date of lodging of this Consent Decree, the results of at least three historic and/or new sampling events are collected, and the laboratory used to

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analyze the historic samples met the requirements of Paragraph 3.e at the time of the analysis;

- g. if a Wastewater Stream is not generated sufficiently to collect three representative samples as described in Paragraph 3.d before submittal of the Wastewater Group Status Evaluation Report, and historic sampling meeting the requirements of Paragraph 3.f. is not identified, then the ITP shall supplement the available data meeting Paragraphs 3.d or 3.f with the most recent historic sampling data representative of current operations such that there are a minimum of three data points to determine the concentration of Subpart FFFF Table 8 and Table 9 compounds in the Wastewater Stream;
- h. if, after utilizing all wastewater stream concentration data available in accordance with paragraph 3.g., a minimum of three data points is not available for each Wastewater Stream, then the ITP shall follow the procedures of 40 C.F.R. § 63.144(b)(3) or 40 C.F.R. § 63.144(b)(4) to determine the concentration of Subpart FFFF Table 8 and Table 9 compounds in the Wastewater Stream; and
- i. the ITP shall determine the annual average flow rate of each Wastewater Stream in accordance with the provisions of 40 C.F.R. § 63.144(c). Wherever feasible, the ITP shall use historic records in accordance with the provisions of 40 C.F.R. § 63.144(c)(2) or direct measurement of the flow rate in accordance with the provisions of 40 C.F.R. § 63.144(c)(3) to determine the flow rate of each Wastewater



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Stream. If neither historic records nor direct measurement of the flow rate of a Wastewater Stream are available, or this data is not representative of current operations of the Wastewater Stream, then the procedures of 40 C.F.R. § 63.144(c)(1) may be utilized.

4. The ITP shall complete the Wastewater Group Status Evaluation and submit a “Wastewater Group Status Evaluation Report” simultaneously to EPA and to Defendant within 120 Days of commencing the Wastewater Group Status Evaluation. The Wastewater Group Status Evaluation Report shall identify the following:

- a. Each Wastewater Stream (including whether it is a Process Wastewater Stream or a Maintenance Wastewater Stream) and liquid stream in an open system within any MCPU, including each Point of Determination for each Wastewater Stream;
- b. The annual average concentrations of the Subpart FFFF Table 8 and Table 9 compounds in each Process Wastewater Stream determined via the provisions of 40 C.F.R. § 63.144(b) and Paragraphs 3.a-3.h;
- c. The annual average flow rates of each Process Wastewater Stream determined via the provisions of 40 C.F.R. § 63.144(b) and Paragraph 3.i; and
- d. The group status of each Process Wastewater Stream, determined in accordance with the criteria set forth in 40 C.F.R. § 63.2485(c).

5. The “Wastewater Group Status Evaluation Report” shall include all supporting sampling and analyses relied upon to address Paragraphs 4.a through 4.d., including all data collected in accordance with Paragraph 3.

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6. EPA may dispute any finding in the Wastewater Group Status Evaluation Report by notifying Defendant of the dispute in accordance with Consent Decree Section XVI (Notices) within 45 Days of the Day EPA receives the Wastewater Group Status Evaluation Report. The Parties shall resolve any such dispute in accordance with Consent Decree Section XII (Dispute Resolution). In addition, if the ITP makes a Group 2 determination based on non-empirical data and the concentration and/or loading rates are within 90 percent or greater of Group 1 criteria, EPA may request that Defendant conduct confirmatory sampling in accordance with 40 C.F.R. § 144(b)(5), in which case Defendant shall do so the next time the wastewater stream is produced, and shall report the results in the next Wastewater Status Report due under Paragraph 20.

**C. Wastewater Control Evaluation**

7. Unless the Wastewater Group Status Evaluation Report determines that all Wastewater Streams at the Facility are Group 2 Wastewater Streams and EPA does not dispute that determination under Paragraph 6, the ITP shall, within 45 Days of submitting the Wastewater Group Status Evaluation Report, commence a “Wastewater Control Evaluation” to assess Defendant’s compliance with all applicable Wastewater Requirements of Subpart FFFF, including the requirements for controlling any Wastewater Streams determined to be Group 1 and the requirements for any waste management units (WMUs) that are used to convey, store, or treat any Group 1 Wastewater Streams. If EPA disputes a determination that any Wastewater Stream is a Group 2 Wastewater Stream, the ITP shall commence the Wastewater Control Evaluation for the disputed Wastewater Stream within 45 Days of being notified of the dispute, unless and until the dispute is resolved with a determination that all Wastewater Streams are Group 2.

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8. The ITP shall complete the Wastewater Control Evaluation and simultaneously submit to EPA and Defendant a “Wastewater Control Evaluation Report,” within 90 Days of commencing the Wastewater Control Evaluation, that includes.

- a. Identification of each Group 1 Wastewater Stream and all WMUs that are used to convey, store, or treat the Group 1 Wastewater Stream; each WMU shall be identified by the Facility’s equipment number, identification within the Facility’s Title V Operating Permit, a brief description of the WMU, and the type of WMU (e.g., wastewater tank, individual drain system, treatment device, etc.);
- b. Identification of each control device used control emissions from each WMU identified in Paragraph 8.a; each control device shall be identified by the Facility’s equipment number, identification within the Facility’s Title V Operating Permit, and the type of control device (e.g., carbon adsorption canister, thermal oxidizer, etc.);
- c. An evaluation of whether each WMU used to convey, store, or treat Group 1 Wastewater Streams, and control device used to control emissions form a WMU, is in compliance with the applicable Wastewater Requirements of Subpart FFFF utilizing the procedures in the MON Inspection Tool. This evaluation shall include identification of all requirements applicable to the WMU or control device (i.e., regulatory citations and description), an itemized list of any areas of noncompliance, the basis for the noncompliance determination, and available options for resolving that noncompliance, including a list of

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applicable control methods that would comply with Subpart FFFF and any required compliance demonstrations for such methods;

- d. For any Group 1 Wastewater Stream determined to be in compliance, an identification of the selected control option and the existing design evaluation or performance test that demonstrates compliance; however, if the selected control option is either the Air Strippers and/or the TOU, Defendant must include and schedule a performance test of the Air Strippers and/or TOU, as applicable, in accordance with 40 C.F.R. § 63.145, as an action item in the Wastewater CAP required by Paragraph 9 to demonstrate compliance; and
- e. All supporting sampling and analysis relied upon to address Paragraphs 8.a through 8.d.

**D. Wastewater Corrective Action Plan (“CAP”)**

9. If the Wastewater Control Evaluation Report identifies any suspected areas of noncompliance or identifies the Air Strippers and/or the TOU as a control option, Defendant shall develop and submit to EPA a Wastewater CAP within 45 Days of submission of the Wastewater Control Evaluation Report.

- a. The Wastewater CAP shall identify with specificity the actions Defendant has taken or will take to address each area of noncompliance identified in the Wastewater Control Evaluation Report and shall include a detailed schedule for conducting and implementing all steps necessary (including completing any compliance demonstrations required by 40 C.F.R. § 63.145) to

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demonstrate the Facility is in compliance with the Wastewater Requirements of Subpart FFFF as soon as practicable.

- b. If Defendant elects to address any identified areas of noncompliance by eliminating a Group 1 Wastewater Stream, it must submit a certified statement by an officer or director of Defendant as part of the Wastewater CAP that states the Facility no longer generates that Group 1 Wastewater Stream, describes the measures it has taken to terminate that Group 1 Stream, and attaches supporting documentation to demonstrate that the Group 1 Stream has been eliminated or is no longer a Group 1 Stream based on sampling and analyses done in accordance with Paragraphs 3 and 4.
- c. For any corrective actions that are not expected to be completed within 90 Days of the submittal of the Wastewater Control Evaluation Report, the Wastewater CAP shall explain why and shall include a schedule for Defendant to complete those actions.

10. EPA may, in whole or in part, approve or disapprove the Wastewater CAP within 45 Days of the Day it receives the CAP. If EPA neither approves nor disapproves the Wastewater CAP within 45 Days, Defendant may proceed as if the CAP is approved in whole for purposes of Paragraph 11.

11. Defendant shall implement the Wastewater CAP in accordance with the schedule outlined in the approved CAP.

12. If EPA disapproves of the Wastewater CAP in whole or in part, the CAP shall constitute a submittal that is disapproved in whole or in part pursuant to Paragraph 22(c) or (d) of

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the Consent Decree and the Parties shall proceed according to the provisions set forth in Consent Decree Section VII (Approval of Deliverables).

**E. Update of Notification of Compliance Status (“NOCS”) Reports**

13. Defendant shall prepare and submit an update to the NOCS Report containing all Wastewater information required by 40 C.F.R. § 63.2520(d)(2) to EPA and South Carolina Department of Health and Environmental Control (“SC DHEC”) within 45 Days of the following applicable milestone:

- a. Submission of a Wastewater Group Status Evaluation Report pursuant to Paragraph 4 that determines all Wastewater Streams are Group 2 Wastewater Streams; or
- b. Completion of all actions identified in a Wastewater CAP following a Wastewater Control Evaluation.

**F. Certification of Compliance**

14. With the next Wastewater Status Report that is due after completing all corrective actions, if any, required pursuant to a Wastewater CAP, and after submission of an updated NOCS Report pursuant to Paragraph 13, Defendant shall submit a certification of compliance to EPA certifying that the Facility is in compliance with the Wastewater Requirements of Subpart FFFF.

**III. MANAGEMENT OF CHANGE, AND TRAINING**

15. **Management of Change Protocol.** Beginning no later than 180 Days after the Effective Date, Defendant shall implement a Wastewater Management of Change Protocol that incorporates the requirements of Paragraphs 15.a through 15.c and ensures that each time a new MCPU is added, a MCPU is discontinued, or any other Process Change occurs, Defendant

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evaluates whether: (1) any new Wastewater Streams are generated and, if so, determines whether any such Wastewater Stream is a Group 1 Process Wastewater Stream, Group 2 Process Wastewater Stream, or a Maintenance Wastewater Stream; (2) any existing Wastewater Streams are discontinued or group status is affected; and (3) any control options for Wastewater or WMUs need adjustment. This protocol shall be a part of Defendant's facility-wide Management of Change Protocol.

- a. Defendant shall notify EPA 60 Days prior to the implementation of any Process Change that includes a new Process Wastewater Stream or Point of Determination or a change to an existing Process Wastewater Stream where group status is affected.
- b. If, during the term of the Consent Decree, Defendant makes a Process Change after an ITP has completed a Wastewater Group Status Evaluation required by Paragraph 3 and, if applicable, a Wastewater Control Evaluation under Paragraph 7, Defendant shall comply with Paragraphs 1 through 13 of this Appendix, as applicable, with regard to that Process Change, except that the Wastewater Compliance Evaluation Plan shall be due within 60 Days of the date of the Process Change.
- c. Within 60 Days of implementing any Process Change, Defendant shall submit to EPA and SC DHEC a notification containing all of the information required by to 40 C.F.R. § 63.2520(e)(10).

16. **Training.** By no later than the date an initial Wastewater Compliance Evaluation Plan is due pursuant to Paragraph 1, Defendant shall develop and implement a training protocol

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for Wastewater Personnel. The training protocol must provide for training for all Wastewater Personnel on the following tasks and procedures:

- a. collection, storage, transport, and analysis of Wastewater samples at the Facility for the purpose of MON compliance; and
- b. the inspections or monitoring required by 40 C.F.R. § 63.2485 or Table 7 to Subpart FFFF.

17. The training protocol must provide for initial training for existing Wastewater Personnel 180 Days of the Effective Date, annual refresher training for existing Wastewater Personnel, and initial training for new Wastewater Personnel prior to undertaking any tasks identified in Paragraph 16. For the purposes of this Paragraph, annual refresher training shall mean that existing Wastewater Personnel must have undergone training at least once in the previous 13 calendar months.

18. The training protocol for Wastewater Personnel shall be revised whenever there are changes to any tasks identified in Paragraph 16. Examples of such changes include, but are not limited to, the addition of new sampling locations or inspections, changes to a sampling or inspection procedure, and changes to the location of sample collection or monitoring.

Wastewater Personnel must provide for supplemental training on these changes prior to undertaking any tasks identified in Paragraph 16 for the purposes of MON compliance.

#### IV. RECORDKEEPING AND REPORTING

19. **Recordkeeping.** Defendant shall keep all records required by this Appendix to document compliance with the Wastewater Requirements of Subpart FFFF for at least five years after termination of the Consent Decree. Upon request by EPA, Defendant shall make all such documents, and documents required by 40 C.F.R. § 63.2525, available to EPA and shall provide,



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in electronic format if so requested, all Process Wastewater Stream sampling results generated since the Effective Date.

20. **Wastewater Status Reports.** On the dates and for the time periods set forth in Consent Decree Section IX (Reporting Requirements), Defendant shall submit to EPA, in the manner set forth in Consent Decree Section XVI (Notices), a Wastewater Status Report containing the following information:

- a. A certification of compliance if the conditions of Paragraph 14 were met during the reporting period;
- b. A summary of the activities completed under Paragraphs 1 through 14 since the last Wastewater Status Report;
- c. A summary of the activities conducted under Paragraph 15 (Management of Change Protocol) since the last Wastewater Status Report; and
- d. A summary of the activities conducted under Paragraph 16 (Training) since the last Wastewater Status Report.

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# APPENDIX D

## Appendix D

**APPENDIX “D” TO CONSENT DECREE  
BATCH PROCESS VENT REQUIREMENTS****I. DEFINITIONS**

Terms used in this Appendix that are defined in the Act or in regulations promulgated pursuant to the Act or in the Consent Decree shall have the meanings assigned to them in the Act or such regulations or in the Decree, unless otherwise provided in this Appendix. Whenever the terms set forth below are used in this Appendix, the following definitions shall apply:

“Batch Process Vent” has the meaning set forth in 40 C.F.R. § 63.2550(i).

“Batch Process Vent Requirements” means the requirements set forth in 40 C.F.R. § 63.2460, including all regulations cross-referenced therein.

“Batch Operation” has the meaning set forth in 40 C.F.R. § 63.2550(i).

“Miscellaneous Organic Chemical Manufacturing Process Unit” or “MCPU” has the meaning set forth in 40 C.F.R. § 63.2435(b).

“Operating Scenario” has the meaning set forth in 40 C.F.R. § 63.2550(i).

“Process Change” means a change to an existing MCPU or an addition of a new MCPU at the Facility that is not within the scope of an existing Operating Scenario reported by Defendant pursuant to 40 C.F.R. § 63.2520. A Process Change does not include moving within a range of conditions identified in the standard batch, or from a standard batch to a nonstandard batch.

**II. BATCH PROCESS VENTS EVALUATION AND TREATMENT REQUIREMENTS****A. Batch Process Vent Compliance Evaluation Plan**

1. In accordance with this Paragraph and Appendix A to the Consent Decree, Defendant shall retain an Independent Third Party (“ITP”) to evaluate and ensure its compliance

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with all applicable Batch Process Vent Requirements. The ITP shall, within 60 Days of being retained by Defendant pursuant to the criteria set forth in Appendix A, prepare and simultaneously submit to EPA and to Defendant a “Batch Process Vent Compliance Evaluation Plan,” which shall include:

- a. A proposed plan and schedule for conducting: (1) a Batch Process Vent Group Status Evaluation as set forth in Paragraph 3; and (2), if required, a Batch Process Vent Control Evaluation as set forth in Paragraphs 6–7;
- b. The proposed plan and schedule for the Batch Process Vent Group Status Evaluation shall include a proposal to conduct emissions testing using EPA-approved test methods to verify the accuracy of organic HAP emissions from venting activities as determined using the calculation procedures specified in 40 C.F.R. § 63.2460(b). If emissions testing using EPA-approved test methods is not physically feasible or if testing of an MCPU is representative of another MCPU’s operation, the ITP shall explain its basis for this determination and propose conducting other empirical approaches to verify the calculations.

2. EPA may, in whole or in part, approve or disapprove of the Batch Process Vent Compliance Evaluation Plan within 45 Days of the Day the ITP submits the Plan to EPA. If EPA neither approves nor disapproves the Plan within 45 Days, the ITP and Defendant may assume the Plan is approved in whole for purposes of proceeding under Paragraph 3. If EPA disapproves the Batch Process Vent Compliance Evaluation Plan in whole or in part, the Batch Process Vent Compliance Evaluation Plan shall constitute a submittal that is disapproved in whole or in part pursuant to Paragraph 22(c) or (d) of the Consent Decree, and the Parties shall

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proceed according to the provisions set forth in Consent Decree Section VII (Approval of Deliverables).

**B. Batch Process Vent Group Status Evaluation**

3. Unless a different date is approved by EPA, the ITP shall commence a “Batch Process Vent Group Status Evaluation” within 60 Days of the Day the ITP submits the Batch Process Vent Compliance Evaluation Plan to EPA or within 60 Days of the end of the 45-Day period described in Paragraph 2. The ITP shall complete the Batch Process Vent Group Status Evaluation and submit a “Batch Process Vent Group Status Evaluation Report” simultaneously to EPA and to Defendant within 180 Days for at least six MCPUs, and within 365 Days for the remaining MCPUs identified in the Batch Process Vent Compliance Evaluation Plan, of commencing the Batch Process Vent Group Status Evaluation. The Batch Process Vent Group Status Evaluation Report shall contain the following:

- a. A list of each MCPU that has any Batch Process Vents, and a list of the associated Batch Process Vents identified by the Facility’s equipment number and as identified within the Facility’s Title V Operating Permit;
- b. The amount of uncontrolled organic HAP emissions from each Batch Process Vent, based on the emission testing and/or calculations from the empirical approach conducted in accordance with the approved the Batch Process Vent Compliance Evaluation Plan, in units of pounds per month, using the procedures specified in 40 C.F.R. § 63.2460(b). These emission calculations shall account for all emissions from both standard batches and nonstandard batches as defined by 40 C.F.R. § 63.2550 and as required by 40 C.F.R. § 63.2525(d) and (e).
- c. The amount of uncontrolled organic HAP emissions from each Batch Process

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Vent in the 48 calendar months preceding the Date of Lodging, in units of pounds per month, using the procedures specified in 40 C.F.R. § 63.2460(b). These emission calculations shall account for all emissions from both standard batches and nonstandard batches as defined by 40 C.F.R. § 63.2550 and as required by 40 C.F.R. § 63.2525(d) and (e).

- d. The 12-month rolling sum of the uncontrolled organic HAP emissions from each of the Batch Process Vents within each MCPU, calculated using the monthly emissions data from Paragraph 3.b, and the associated group status for the Batch Process Vents for each MCPU using the procedures specified in 40 C.F.R. § 63.1257(b);
- e. The amount of uncontrolled hydrogen halide and halogen HAP emissions from each Batch Process Vent, based on the emission testing and/or calculations from the empirical approach conducted in accordance with the approved the Batch Process Vent Compliance Evaluation Plan, in units of pounds per month, using the using the procedures specified in 40 C.F.R. § 63.2465(b). These emission calculations shall account for all emissions from both standard batches and nonstandard batches as defined by 40 C.F.R. § 63.2550;
- f. The amount of uncontrolled hydrogen halide and halogen HAP emissions from each Batch Process Vent in the 48 calendar months preceding the Date of Lodging in units of pounds per month, using the using the procedures specified in 40 C.F.R. § 63.2465(b). These emission calculations shall account for all emissions from both standard batches and nonstandard batches as defined by 40 C.F.R. § 63.2550;

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- g. The 12-month rolling sum of the uncontrolled hydrogen halide and halogen HAP emissions from each of the Batch Process Vents within each MCPU, calculated using the monthly emissions data from Paragraph 3.e;
  - h. The mass emission rate of halogen atoms contained in organic compounds from each Batch Process Vent, based on the emission testing and/or calculations from the empirical approach conducted in accordance with the approved the Batch Process Vent Compliance Evaluation Plan, in units of kilograms per hour, using the procedures specified in 40 C.F.R. § 63.115(d)(2)(v) as reference by 40 C.F.R. 63.2450(b);
  - i. The mass emission rate of halogen atoms contained in organic compounds from each Batch Process Vent in the 48 calendar months preceding the Date of Lodging, in units of kilograms per hour, using the procedures specified in 40 C.F.R. § 63.115(d)(2)(v) as reference by 40 C.F.R. 63.2450(b); and
  - j. A copy of the initial compliance demonstration for any Group 1 Batch Process Vents using the procedures specified in 40 C.F.R. § 63.2460(c)(2).
4. The Batch Process Vent Group Status Evaluation Report shall include all supporting testing and analyses, as well as the calculations relied upon to address Paragraphs 3.a through 3.j.
5. EPA may dispute any finding in the Batch Process Vent Group Status Evaluation Report by notifying Defendant of the dispute in accordance with Consent Decree Section XVI (Notices) within 45 Days of the Day EPA receives the Batch Process Vent Group Status Evaluation Report. The Parties shall resolve any such dispute in accordance with Consent Decree Section XII (Dispute Resolution).

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**C. Batch Process Vent Control Evaluation**

6. Within 45 Days of submitting the Batch Process Vent Group Status Evaluation Report, the ITP shall commence a “Batch Process Vent Control Evaluation” to assess Defendant’s compliance with all applicable Batch Process Vent Requirements, unless (1) the Batch Process Vent Group Status Evaluation Report determines that (a) all Batch Process Vents at the Facility are, and have been for the last 48 calendar months, Group 2 Batch Process Vents, and (b) all collective uncontrolled hydrogen halide and halogen HAP emissions from the process vents in each MCPU are less than 1,000 lb/year, and (c) none are or were halogenated vent streams requiring emission controls in the last 48 months, and (2) EPA does not dispute any of these determinations under Paragraph 5. If EPA disputes a determination that any Batch Process Vent is or was a Group 2 Batch Process Vent in the last 48 months, or that any Batch Process Vent requires or required control for hydrogen halide and halogen HAP or halogenated vent streams in the last 48 calendar months, the ITP shall commence the Batch Process Vent Control Evaluation for the disputed Batch Process Vent within 45 Days of being notified of the dispute, unless and until the dispute is resolved with a determination that the disputed Batch Process Vents do not require controls.

7. The ITP shall complete the Batch Process Vent Control Evaluation and simultaneously submit to EPA and Defendant a “Batch Process Vent Control Evaluation Report,” within 90 Days of commencing the Batch Process Vent Control Evaluation, that includes:

- a. An evaluation of whether each Group 1 Batch Process Vent, halogenated Group 1 Batch Process Vent using a combustion control device to control OHAP, and each Batch Process Vent requiring control of hydrogen halide and halogen HAP are



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controlled in compliance with the applicable Batch Process Vent Requirements utilizing the procedures in Subpart FFFF. This evaluation shall include an itemized list of any areas of noncompliance, the basis for the noncompliance determination, and available options for resolving that noncompliance, including a list of applicable control methods that would comply with Subpart FFFF and any required compliance demonstrations for such methods;

- b. For any Batch Process Vent requiring control and determined to be in compliance, a detailed explanation for how the Batch Process Vents meet the requirements of Subpart FFFF;
- c. All supporting sampling and engineering analysis relied upon to address Paragraphs 7.a through 7.b; and
- d. A narrative explaining any engineering analyses relied upon to address Paragraphs 7.a through 7.b. This analysis shall provide a summary of each step for each standard batch and how the emissions are calculated for each step, and for each nonstandard batch, an explanation of what caused the batch to be nonstandard and how the emissions were estimated.

**D. Batch Process Vent Corrective Action Plan (“CAP”)**

8. If the Batch Process Vent Control Evaluation Report identifies any suspected areas of noncompliance, Defendant shall develop and submit to EPA a Batch Process Vent CAP within 45 Days of submission of the Batch Process Vent Control Evaluation Report.

- a. The Batch Process Vent CAP shall identify with specificity the actions Defendant has taken or will take to address each area of noncompliance identified in the Batch Process Vent Control Evaluation Report and shall include a detailed

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schedule for conducting and implementing all steps necessary (including completing any compliance demonstrations required by Subpart FFFF) to demonstrate the Facility is in compliance with the Batch Process Vent Requirements as soon as practicable.

- b. If Defendant elects to address any identified areas of noncompliance by eliminating a batch process, it must submit a certified statement by an officer or director of Defendant as part of the Batch Process Vent CAP that states the Facility no longer operates that batch process, describes the measures it has taken to terminate that batch process, and attaches supporting documentation to demonstrate that the batch process has been eliminated.
- c. For any corrective actions that are not expected to be completed within 90 Days of the submittal of the Batch Process Vent Control Evaluation Report, the Batch Process Vent CAP shall explain why and shall include a schedule for Defendant to complete those actions.

9. EPA may, in whole or in part, approve or disapprove the Batch Process Vent CAP within 45 Days of the Day it receives the CAP. If EPA neither approves nor disapproves the Batch Process Vent CAP within 45 Days, Defendant may proceed as if the CAP is approved in whole for purposes of Paragraph 10.

10. Defendant shall implement the Batch Process Vent CAP in accordance with the schedule outlined in the approved CAP.

11. If EPA disapproves of the Batch Process Vent CAP in whole or in part, the CAP shall constitute a submittal that is disapproved in whole or in part pursuant to Paragraph 22(c) or

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(d) of the Consent Decree and the Parties shall proceed according to the provisions set forth in Consent Decree Section VII (Approval of Deliverables).

**E. Update of Notification of Compliance Status (“NOCS”) Reports**

12. Defendant shall prepare and submit an updated NOCS Report containing all information required by 40 C.F.R. § 63.2520(d)(2) to EPA and South Carolina Department of Health and Environmental Control (“SC DHEC”) within 45 Days of the following applicable milestone:

- a. Submission of a Batch Process Vent Group Status Evaluation Report pursuant to Paragraph 3 that determines all Batch Process Vents are Group 2 Batch Process Vents and hydrogen halide and halogen HAP emissions do not require control; or
- b. Completion of all actions identified in a Batch Process Vent CAP following a Batch Process Vent Control Evaluation.

**F. Certification of Compliance**

13. With the next Batch Process Vent Status Report that is due after completing all corrective actions, if any, required pursuant to a Batch Process Vent CAP, and after submission of an updated NOCS Report pursuant to Paragraph d.c.12, Defendant shall submit a certification of compliance to EPA certifying that the Facility is in compliance with the Batch Process Vent Requirements.

**III. MANAGEMENT OF CHANGE**

14. **Management of Change Protocol.** Beginning no later than 180 Days after the Effective Date, Defendant shall implement a Batch Process Vent Management of Change Protocol that incorporates the requirements of Paragraphs 14.a through 14.c and ensures that each time a new MCPU is added, a MCPU is discontinued, or any other MCPU change occurs,

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Defendant evaluates whether: (1) any new Batch Process Vents are added and, if so, determines whether any such Batch Process Vents are Group 1 or Group 2 Batch Process Vents; (2) the MCPU contains halogenated vent streams or hydrogen halide and halogen HAP; (3) any existing Batch Process Vents are affected and, if so, determines their updated group status and control requirements; and (4) any controls for Batch Process Vents need adjustment. This protocol shall be a part of Defendant's facility-wide Management of Change Protocol.

- a. Defendant shall notify EPA 60 Days prior to the implementation of any Process Change that includes a new or modified standard batch, or new or modified controls for any existing Batch Process Vents.
- b. If Defendant makes a Process Change after an ITP has completed a Batch Process Vent Group Status Evaluation required by Paragraph 3 and, if applicable, a Batch Process Vent Control Evaluation under Paragraph 6, Defendant shall comply with Paragraphs 1 through 13, as applicable, with regard to that Process Change, except that the Batch Process Vent Compliance Evaluation Plan shall be due within 60 Days of the date of the Process Change.
- c. Within 60 Days of implementing any Process Change, Defendant shall submit to EPA and SC DHEC a notification containing all of the information required by 40 C.F.R. § 63.2520(e)(10).

#### IV. RECORDKEEPING AND REPORTING

15. **Recordkeeping.** Defendant shall keep all records required by this Appendix to document compliance with the Batch Process Vent Requirements for at least five years after termination of the Consent Decree. Upon request by EPA, Defendant shall make all such documents, and documents required under 40 C.F.R. § 63.2525, available to EPA and shall

## Appendix D

provide, in electronic format if so requested, all Batch Process Vent sampling results or engineering analysis generated since the Effective Date.

16. **Batch Process Vent Status Reports.** On the dates and for the time periods set forth in Consent Decree Section IX (Reporting Requirements), Defendant shall submit to EPA, in the manner set forth in Consent Decree Section XVI (Notices), a Batch Process Vent Status Report containing the following information:

- a. A certification of compliance if the conditions of Paragraph 13 were met during the reporting period;
- b. A summary of the activities completed under Paragraphs 1 through 13 since the last Batch Process Status Report;
- c. For each nonstandard batch that occurred in the reporting period, provide an explanation of what caused the batch to be nonstandard, a determination if the cause of the nonstandard batch is representative of either the existing operating scenario or a new operating scenario, and how the emissions are estimated. If a nonstandard batch is determined to be representative of a new operating scenario, submit the information identified in 40 C.F.R. § 63.2520(e)(7) and 40 C.F.R. § 63.2520(e)(10) in the compliance report required by 40 C.F.R. § 63.2520(e); and
- d. A summary of the activities conducted under Paragraph 14 (Management of Change Protocol) since the last Batch Process Vent Status Report.

Appendix E

# APPENDIX E

## Appendix E

**APPENDIX “E” TO CONSENT DECREE  
SUPPLEMENTAL ENVIRONMENTAL PROJECTS**

1. Under Section VI of this Consent Decree, Defendant shall implement the Supplemental Environmental Projects (“SEPs”) in accordance with this Appendix E.

**I. SEP 1: Safety Equipment Upgrades in the Halides Unit**

2. SEP 1 will allow for early detection of potential failures, and improved response time to upset conditions, to prevent releases before they happen and to mitigate the extent of any releases that do happen.

3. For SEP 1, Defendant shall replace the existing Halides Unit’s Distributed Control System (“DCS”) and Safety Instrumented System (“SIS”) with a new DCS and a SIS that meet a Safety Integrity Level (“SIL”) 3, as defined by the International Electrotechnical Commission standard IEC 61508. The Halides Unit encompasses the primary receiving and processing locations for raw elemental phosphorous and specifically includes the Phosphorus Chloride Unit, Phosphorus Oxychloride Unit, Phosphorus Unloading and Storage area, and Chlorine Unloading areas. SIL Level Risk Reduction Factors are defined as follows:

<b>SIL</b>	<b>Risk Reduction Factor</b>
SIL 1	10-100
SIL 2	100-1,000
<b><i>SIL 3 (new system)</i></b>	<b><i>1,000-10,000</i></b>

4. Defendant shall spend at least \$1,880,000 on SEP 1.

5. The new DCS and SIS referenced in Paragraph 3 shall consist of the following makes and models, or equivalents:

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- a. DCS: Emerson Delta V software, Version V15, which provides an enhanced platform for operator view, process control, and alarm response system program logic, and will control sensor interlocks and smart operator response to critical alarms.
  - i. The Emerson DeltaV software shall utilize PK-1500 redundant controllers with M series inputs and outputs, providing an additional safety layer in the event of a single system failure.
  - ii. The Emerson DeltaV software shall have advanced alarm capabilities that provide for alarm classification prioritizing of high impact environmental alarms, alarm flood prevention, and embedded alarm response action.
- b. SIS: HIMA HIMax with redundant X-01 controllers and redundant communication network. Defendant shall test and verify the SIS resident safety functionality annually and verify that it has annual function checks as appropriate.
- c. AMS Device Management software for diagnostic and maintenance of all smart instrumentation and actuators connected to the DeltaV DCS and HIMax SIS. The AMS Device Management software shall monitor instrument health and detect early problems, providing prioritized alerts from instruments, and allow a preemptive response to issues before they result in failures.



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- d. Two new workstations with operator interfaces, which include dual 55” operator stations providing eight independent display screens and two additional 65” wall monitors for video and auxiliary information.
- e. Hard-wired emergency shutdown buttons in the central control room that shall communicate directly with the actuators in the event of a full system HIMA HiMax SIS failure. The hard-wired emergency shutdown buttons shall be wired directly to the HIMA HiMax SIS to provide for a one-step controlled manual shutdown of the Halides Unit.

6. The upgrades to the DCS and SIS shall allow for enhanced monitoring, increased reliability, and predictive maintenance of the existing Highway Addressable Remote Transducer (“HART”) capable smart sensors. HART is a command/response protocol where a host sends commands, and a remote transmitter returns standardized responses. The data received by the commands can communicate device status and diagnostics.

7. SEP 1 shall be deemed complete when all required equipment is installed and fully operational, and startup of production at the Halides Unit utilizes the new DCS and SIS from the central control room with the advanced alarm and device performance monitoring fully active.

8. Defendant shall complete SEP 1 no later than May 31, 2026.

**II. SEP 2: Vapor Cloud Suppression and P4 Deluge**

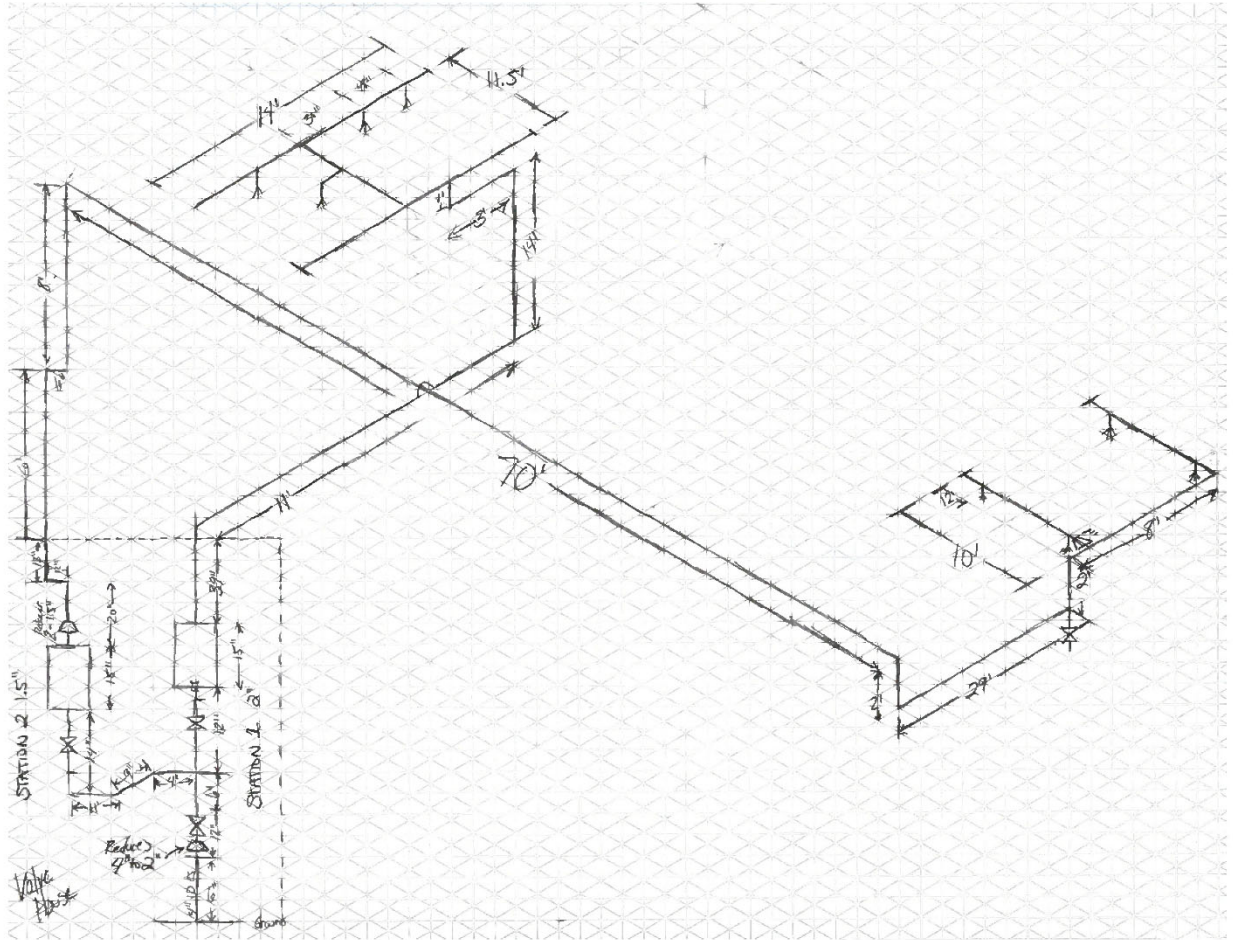
9. SEP 2 involves making modifications to the P4 deluge system, an elemental phosphorus high pressure water suppression sprinkler system. The system consists of a series of components starting in the Fire Water Pump House, which distributes water through 8” – 12” underground piping. This underground piping leads to various valve houses and hydrants

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throughout the facility. Valve house 44 (“VH44”) is dedicated to the P4 (elemental phosphorous) unloading area. Water is distributed from VH44 through 1.5” – 2” piping to the phosphorus unloading stations (Station 1 and Station 2). The piping between the valve house and phosphorus unloading stations creates a bottle neck reducing the effectiveness of the deluge system.

10. For SEP 2, Defendant shall: (1) upgrade the following four localized area fire water monitors with remote control capability to be controlled through the new DCS installed as part of SEP 1: aerial monitor #11, aerial monitor #41, ground monitor #43, and ground monitor #65; (2) install Ultra-Violet Infrared detection technology at phosphorus unloading Station 1 and Station 2 to detect leaks and activate the deluge system automatically during a release of phosphorus; and (3) replace all 1.5” and 2” piping between VH44 and the phosphorus unloading Station 1, and between VH44 and the phosphorus unloading Station 2, with 4” piping. Station 1 is located 33 feet from VH44, and Station 2 is located 122 feet from VH44 (see below).

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11. Defendant shall update its Piping & Instrumentation Diagrams (“P&ID”) in accordance with the management of change requirements contained in Appendix B to the Consent Decree.

12. Defendant shall spend at least \$1,075,000 on SEP 2.

13. SEP 2 shall be deemed complete upon installation of the new equipment, updating the P&ID, and a demonstration that the newly installed equipment is operating as intended.

14. Defendant shall complete SEP 2 by December 31, 2027.

### **III. SEP 3: Encapsulated Sampling System**

15. SEP 3 involves containing sixteen (16) in-process chemical sampling points in vented and sealed enclosures to eliminate any emissions to the environment and operator.

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16. Defendant shall spend at least \$340,000 on SEP 3.

17. Defendant shall install spring-loaded low-e return valves and vents meeting international standards EN 12266-1 and EN 12266-2 on/at each of the following sixteen (16) vented sampler devices/sampling points:

- a. Halides POCL Process Tank (M-0370a)
- b. Halides POCL Shift Tank (M-0370b)
- c. Halides PCU (M-3870)
- d. OSU #3 Reactor (M-4197E)
- e. OSU Hold Tank (M-4197D)
- f. OSU Still Tank (M-4197C)
- g. OSU Stripper (M-4197J)
- h. OSU Stripper Feed Tank (M-4197F)
- i. OSU Train 4 Reactor (M-4099)
- j. BRQ F-944 (M-4570)
- k. BRQ F-9390 (M-5270)
- l. OSU Train 1 Primary (M-4167A)
- m. OSU Train 1 Secondary (M-4167B)
- n. OSU Separator Train 3 (M-4197A)
- o. HTP D-575 (M-581)
- p. HTP D-731 (M-731)

18. SEP 3 shall be deemed complete upon completion of installation and passing Method 21 LDAR leak tests at all modified sample locations.

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19. Defendant shall complete installation and Method 21 LDAR leak tests at the following sampling points according to the following schedule:

<b>Completion Date</b>	<b>Sampling Point</b>
By December 31, 2025	OSU #3 Reactor (M-4197E) OSU Hold Tank (M-4197D)
By December 31, 2026	Halides POCL (M-0370 a and b) Halides PCU (M-3870) OSU Still Tank (M-4197C) OSU Stripper (M-4197J)
By December 31, 2027	OSU Separator Train 3 (M-4197A) OSU Stripper Feed Tank (M-4197F) OSU Train 1 Primary (M-4167A) OSU Train 1 Secondary (M-4167B)
By December 31, 2028	OSU Train 4 Reactor (M-4099) BRQ F-944 (M-4570) BRQ F-9390 (M-5270) HTP D-575 (M-581) HTP D-731 (M-731)

**IV. SEP 4: Community Center Air Filtration**

20. For SEP 4, Defendant shall provide, install, and service, or hire a third-party contractor to service, one air purifier unit at each of the following neighboring community centers for a period of five years:

- a. Rosemont, Freddie Whaley Community Center, at 1810 Doscher Ave, Charleston, SC 29405
- b. Union Heights, Gethsemani Community Center, at 2449 Beacon St, North Charleston, SC 29405
- c. Accabee, Perry-Web Community Center, at 3200 Appleton Ave, North Charleston, SC 29405

21. Defendant shall install air purifying units with activated carbon filtration capable of removing volatile organic compounds and smells.

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22. Each five-year service contract shall cover standard annual heating, ventilation, and air conditioning service, filter replacements, and equipment repairs on each air purifier unit, in accordance with manufacturer recommendations.

23. Defendant shall spend at least \$250,000 on SEP 4.

24. SEP 4 shall be deemed complete after installation of all air purifier units and expiration of all five-year service periods.

25. Defendant shall complete SEP 4 by December 31, 2030.