IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MINNESOTA

THE UNITED STATES OF AMERICA, Plaintiff, v. FILMTEC CORPORATION, Defendant.	)	No. 19-cv-1985

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A. Plaintiff United States of America ("United States"), on behalf of the United States Environmental Protection Agency ("U.S. EPA"), has filed a complaint in this action concurrently with this Consent Decree alleging that FilmTec Corporation ("FilmTec") violated several provisions of the Clean Air Act (the "Act"), 42 U.S.C. §§ 7401-7671(q), and its Title V Operating Permit No. 05301149 ("Title V Permit") issued by the Minnesota Pollution Control Agency ("MPCA") at its water filtration membrane manufacturing facility ("Facility") in Edina, Minnesota.

B. The Complaint alleges that FilmTec violated the Prevention of Significant Deterioration ("PSD") provisions of the Act, 42 U.S.C. §§ 7470-7492, by (i) constructing a new manufacturing line ("Line 600") at the Facility without first obtaining a PSD permit from the MPCA and (ii) failing to install Best Available Control Technology ("BACT") to control volatile organic compound ("VOC") emissions from Line 600. The Complaint also alleges that FilmTec violated emissions limits for VOCs and Hazardous Air Pollutants ("HAPs") and failed to identify deviations in its annual Compliance Certification, violating Section 502 of the Act, 42 U.S.C § 7661a, and its federally enforceable Title V Permit.

C. FilmTec does not admit any liability to the United States arising out of the transactions or occurrences alleged in the Complaint.

D. 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, and 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, 42 U.S.C. § 7413(b), 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 Consent Decree, or any action to enforce this Consent Decree, Defendant consents to the Court's jurisdiction over this Consent Decree and any such action and over Defendant and 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 pursuant to Section 113(b) of the Act, 42 U.S.C. § 7413(b).

II. APPLICABILITY

3. The obligations of this Consent Decree apply to and are binding upon the United States and upon FilmTec 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 FilmTec of its obligation to ensure that the terms of the Consent Decree are implemented. At least 30 Days prior to any such transfer, FilmTec 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 Region 5, the United States Attorney for the District of Minnesota, and the United States Department of Justice, in accordance with Section XIII

(Notices). Any attempt to transfer ownership or operation of the Facility without complying with this Paragraph constitutes a violation of this Consent 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 Consent 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 that are defined in the Act or in federal or Minnesota regulations promulgated pursuant to the Act shall have the meanings assigned to them in the Act or such regulations, unless otherwise provided in this Consent Decree. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

"Carbon Adsorption Unit" shall mean the control device used to control certain VOC and HAP emissions from Lines 400, 500, and 600; it is identified as CE 001 in FilmTec's Title V Permit;

"Complaint" shall mean the complaint filed by the United States in this action;

"Consent Decree" or "Decree" shall mean this Consent Decree and all appendices attached hereto, listed in Section XXII (Appendices);

"Day" shall mean a calendar day unless expressly stated to be a business day. In computing any period of time under this Consent Decree, where the last day would fall on a

Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next business day;

"Defendant" shall mean FilmTec Corporation ("FilmTec");

"Drying Exhausts" shall mean the stack vents used to exhaust emissions from the Facility dryer units on Lines 400, 500, and 600. At the Facility and/or in the Title V Permit, these stack vents are identified as:

- Line 400 – SV 019, SV 020, SV 021, SV 022, SV 045, SV 046;
- Line 500 – SV 026, SV 027, SV 028, SV 029, SV 047, SV 048; and
- Line 600 – SV 036, SV 037, SV 038, SV 039; SV 049, SV 050;

"Forming Exhausts" shall mean the stack vents used to exhaust emissions from the forming section on Lines 400, 500, and 600. At the Facility and/or in the Title V Permit, these stack vents are identified as:

- Line 400 – SV 017;
- Line 500 – SV 025; and
- Line 600 – SV 033;

"EPA" shall mean the United States Environmental Protection Agency and any of its successor departments or agencies;

"Effective Date" shall have the definition provided in Section XIV (Effective Date);

"Emission Factor" shall mean a representative value that relates the quantity of a pollutant released to the atmosphere from a stack vent associated with the release of that pollutant or an Emission Point;

"Emission Point" shall mean a performance test sample location used to measure the quantity of a pollutant routed to either the Carbon Absorption Unit or Thermal Oxidizer;

"Facility" shall mean FilmTec's water filtration membrane manufacturing plant located in Edina, Minnesota;

"Line 200" shall mean the water filtration membrane manufacturing line identified as EU-001 in the Title V Permit;

"Line 300" shall mean the water filtration membrane manufacturing line identified as EU-002 in the Title V Permit;

"Line 400" shall mean the water filtration membrane manufacturing line identified as EU-003 in the Title V Permit;

"Line 500" shall mean the water filtration membrane manufacturing line identified as EU-004 in the Title V Permit;

"Line 600" shall mean the water filtration membrane manufacturing line identified as EU-016 in the Title V Permit;

"MPCA" shall mean the Minnesota Pollution Control Agency and any of its successor departments or agencies;

"Paragraph" shall mean a portion of this Consent Decree identified by an arabic numeral;

"Parties" shall mean the United States and FilmTec;

"Section" shall mean a portion of this Consent Decree identified by a roman numeral;

"Test Report" shall mean a document summarizing test results and the information described in Appendix B;

"Thermal Oxidizer" shall mean the emission control unit used to reduce certain VOC and HAP emissions from Lines 400, 500, and 600; it is identified as CE 003 in FilmTec's Title V Permit;

"Title V Permit" shall mean the Title V Operating Permit Number 05301149-003 issued by the MPCA to the Facility on November 23, 2011, and any subsequent renewal or revision of the Title V Permit; and

"United States" shall mean the United States of America, acting on behalf of EPA.

IV. CIVIL PENALTY

8. Within 45 Days after the Effective Date, Defendant shall pay the sum of $250,000 as a civil penalty, together with interest accruing from the date of lodging, at the rate specified in 28 U.S.C. § 1961 as of the date of lodging.

9. Defendant shall pay the civil penalty due by FedWire Electronic Funds Transfer ("EFT") to the U.S. Department of Justice 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 Minnesota 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:

JENNIFER REHDER
Site Leader
5400 Dewey Hill Rd.
Edina, MN 55439
Jennifer.Rehder@duPont.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 the United States and EPA in accordance with Section XIII (Notices). At the time of payment, Defendant shall send notice that payment has been made: (i) to EPA via email at cinwd_acctsreceivable@epa.gov or via regular mail at EPA Cincinnati Finance Office, 26 W. Martin Luther King Drive, Cincinnati,

Ohio 45268; (ii) to the United States via email or regular mail in accordance with Section XIII; and (iii) to EPA in accordance with Section XIII. Such notice shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in *United States v. FilmTec Corporation* and shall reference the civil action number, CDCS Number, and DOJ case number 90-5-2-1-11723.

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

V. COMPLIANCE REQUIREMENTS

A. Permanent Shut Down of Process Lines 200 and 300

11. As of the date of Effective Date of this Consent Decree, FilmTec has already shut down Lines 200 and 300. FilmTec shall memorialize the permanent decommissioning of Lines 200 and 300 in a renewal or revised Title V Permit, as provided in Paragraph 17.

B. VOC Emissions Monitoring and Reporting Requirements

Measuring, Estimating, and Reporting Emissions using EPA Approved Performance Tests

12. FilmTec shall measure VOC and HAP emissions from its Facility, in accordance with the Test Protocol, attached as Appendix A to this Consent Decree, within 180 Days of the Effective Date of this Consent Decree. To the extent the performance test to measure VOC and HAP emissions from its Facility occurs prior to the Effective Date, it can be used to satisfy the requirements of this Paragraph so long as it satisfies the Test Protocol. As explained in the Test Protocol, this will require the testing of 29 separate stack vents or Emission Points. FilmTec shall provide EPA with a Test Report for each completed performance test within 60 Days of completing the testing.

13. FilmTec shall submit an "Emission Factor Proposal" to EPA for review and approval, pursuant to Paragraphs 19 through 23 (Approval of Deliverables) within 90 Days after it completes all of the performance tests required by Paragraph 12. The Emission Factor Proposal shall include the following information:

a. A proposed VOC Emission Factor for the following:

i. Emissions to the Thermal Oxidizer;

ii. Emissions from the Forming Exhaust stack vents; and

iii. Emissions from the Drying Exhaust stack vents.

b. A proposed HAP Emission Factor for the following:

i. Emissions to the Carbon Adsorption Unit and

ii. Emissions from the Forming Exhaust stack vents.

c. Proposed control efficiencies, based on measured inlet and outlet concentrations, for the following:

i. Carbon Adsorption Unit and

ii. Thermal Oxidizer.

d. The process or operational characteristic that the Emission Factor is related to (e.g. line speed, solvent usage, etc.), and a description of how that parameter is measured and recorded.

e. For each proposed VOC Emission Factor identified in Paragraph 13 (a) above, FilmTec shall measure emissions from each and every stack vent and Emission Point associated with the identified process, regardless of the specific vent numbers identified in the Title V Permit or this Consent Decree.

14. FilmTec shall submit the results of all testing performed pursuant to Paragraph 12, and any Emission Factor Proposal(s) submitted to EPA pursuant to Paragraph 13 to MPCA.

Mass Balance Emission Estimation Alternative

15. Within 365 Days of the Effective Date of this Consent Decree, FilmTec may submit a "Mass Balance Sampling Protocol" to EPA for review and approval in accordance with Paragraphs 19 through 23 (Approval of Deliverables). However, FilmTec must continue to comply with Paragraphs 12 and 13 for each stack vent subject to Paragraphs 12 and 13 until EPA approves FilmTec's Mass Balance Sampling Protocol and associated Mass Balance Emission Factor.

a. The purpose of the Mass Balance Sampling Protocol shall be to demonstrate that mass balance emissions estimation methodologies can consistently and reliably measure emissions at least as accurately as the EPA Test Methods that FilmTec is otherwise required to use to measure emissions, pursuant to Paragraphs 12 and 13 of this Consent Decree and its Title V Permit.

b. FilmTec may seek approval to use mass balance estimation methodologies for one or more stack vents that would otherwise be subject to the testing requirements of Paragraphs 12 and 13.

c. For any stack vent for which FilmTec proposes to use mass balance emission estimation methodologies, FilmTec shall identify the process parameters that it will use to calculate monthly VOC and HAP emission from that unit and how it will measure and report that parameter.

d. The proposed protocol shall also establish:

i. A deadline for conducting the initial mass balance

testing; and

ii. A deadline for submitting a "Mass Balance Emission Factor Proposal" for each stack vent for which FilmTec seeks approval to use an emission factor developed from mass balance emission estimation techniques instead of the performance testing required by Paragraphs 12 and 13.

16. FilmTec shall submit a Mass Balance Emission Factor Proposal by the deadline established in any approved Mass Balance Sampling Protocol. The Mass Balance Emission Factor Proposal shall provide:

a. The proposed Emission Factor;

b. The data supporting the use of the proposed Emission Factor and all information necessary to evaluate the reliability and accuracy of the Emission Factor; and

c. A proposed reoccurring schedule for reevaluating any approved Emission Factor developed using an approved mass balance methodology.

C. Incorporation of Consent Decree Requirements into Federally Enforceable Permits

17. Within 60 Days of the Effective Date of this Consent Decree, FilmTec shall submit all necessary information and a complete application or applications to MPCA for modification of its Title V Permit in the following manner:

a. FilmTec shall permanently decommission Line 200 and Line 300 by removing reference to and authorization to operate those Lines, along with recordkeeping, monitoring, and reporting requirements within the Title V Permit;

b. FilmTec shall periodically conduct a performance test of the following

emission units and related stack vents in accordance with the Test Protocol, attached as Appendix A, or a modified version approved by MPCA:

i) The inlets and outlet of the Carbon Adsorption System once every 60 months.

ii) The inlets and outlet of the Thermal Oxidizer once every 60 months.

iii) The Forming Exhaust vents once every 60 months.

iv) The Dryer Exhaust vents once every 60 months.

c. For the testing identified in Subparagraph (b) above, FilmTec shall measure emissions from each and every stack vent or Emission Point associated with the identified process, regardless of the specific vent numbers identified in the Title V Permit or this Consent Decree.

d. For the testing identified in Subparagraph (b) above, FilmTec shall submit performance Test Reports and updated Emission Factors to EPA and MPCA within 60 Days of any performance test.

e. For the testing identified in Subparagraph (b) above, upon completion of a performance test and approval by EPA and MCPA of the test results, FilmTec shall use the updated VOC and/or HAP emission factor(s) developed during the performance test to calculate rolling monthly emissions for each stack vent at the Facility. FilmTec may also seek MPCA approval to automatically incorporate and allow use of emission factors derived from performance testing into its Title V permit. After the Consent Decree is terminated, approval of performance test results shall only be required by MPCA.

18. The requirements of Paragraph 17 (b), (c), and (d) shall not apply to any stack vents(s) for which FilmTec obtains EPA approval to use a Mass Balance Emission Factor. Instead, for any such stack vent(s), FilmTec shall submit all necessary information and a complete application to MPCA for modification of its Title V Permit to include the following requirements:

a. FilmTec shall modify the monthly VOC and HAP emissions calculation equations, as provided by Equations 1, 1.a, and 1.b and 2, 2.a, and 2.b of Appendix B of the current Title V Permit, to require FilmTec to calculate monthly emissions for each stack vent using the Mass Balance Emission Factor approved by EPA or subsequently recalculated pursuant to the requirement of the Mass Balance Emission Factor Proposal to periodically recalculate the Mass Balance Emission Factor.

b. FilmTec shall recalculate the Mass Balance Emission Factor on a periodic basis, as set forth in the EPA approved Mass Balance Emission Factor Proposal.

c. Any other requirements included in the approved Mass Balance Emission Factor Proposal which are identified as necessitating a modification of the Title V Permit.

D. Approval of Deliverables

19. After review of any plan, report, or other item that is required to be submitted pursuant to this Consent Decree and that requires approval by EPA, EPA shall 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.

20. If a submission is approved pursuant to Paragraph 19, 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 19 (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, subject to Defendant's right to dispute only the specified conditions or the disapproved portions, under Section IIX (Dispute Resolution).

21. If the submission is disapproved in whole or in part pursuant to Paragraph 19 (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.

22. 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 subject to Defendant's right to invoke Dispute Resolution and the right of EPA to seek stipulated penalties as provided in the preceding Paragraphs.

23. Any stipulated penalties applicable to the original submission, as provided in Section VII (Stipulated Penalties), shall 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, if the original submission was so deficient as to constitute a material breach of Defendant's obligations under this Consent Decree, the stipulated penalties applicable to the original submission shall be due and payable notwithstanding any subsequent resubmission.

24. Permits. Where any compliance obligation under this Section requires Defendant to obtain a federal, state, or local permit or approval, Defendant shall submit timely and complete applications and take all other actions necessary to obtain all such permits or approvals. Defendant may seek relief under the provisions of Section VIII (Force Majeure) for any delay in the performance of any such obligation, if Defendant has submitted timely and complete applications and has taken all other actions necessary to obtain all such permits or approvals. With respect to permits that are required to be modified or obtained for any compliance obligation under this Section, Defendant is solely required to submit a complete application consistent with requirements of this Consent Decree to MPCA and/or the United States in order to satisfy Section XVII (Termination) requirements relating to such permits and is not required to be issued the permit by MPCA in order to submit a Request for Termination to the United States under Paragraph 79 of the Consent Decree.

VI. REPORTING REQUIREMENTS

25. Defendant shall submit the following reports:

a. By July 31st and January 31st of each year after the Effective Date of this Consent Decree, until termination of this Consent Decree pursuant to Section XVII (Termination), Defendant shall submit by email a semi-annual report for the preceding six months ending on June 30th and December 31st that shall include a list of all performance tests completed pursuant to the Consent Decree, including the date each performance test was completed, and the schedule for completing any outstanding performance tests. The report shall also provide an account of any problems encountered in completing scheduled performance testing or developing performance test based Emission Factors. Additionally, the report shall include a status update on any required Title V Permit modification applications.

b. The semi-annual reports shall also include a description of any non-compliance with the requirements of this Consent Decree and an explanation of the violation's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such violation.

c. If Defendant violates, or has reason to believe that it may violate, any requirement of this Consent Decree, Defendant shall notify the United States of such violation and its likely duration, in writing, within ten working 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, within 30 Days of the Day Defendant becomes aware of the cause of the violation. Nothing in this Paragraph or the following Paragraph relieves Defendant of its obligation to provide the notice required by Section VIII (Force Majeure).

26. Whenever any violation of this Consent Decree or of any applicable permits or any other event affecting Defendant's performance under this Consent Decree, or the performance of its Facility, may pose an immediate threat to the public health or welfare or the environment, Defendant shall notify EPA orally or by email 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.

27. All reports shall be submitted to the persons designated in Section XIII (Notices).

28. 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 law 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.

29. This certification requirement does not apply to emergency or similar notifications where compliance would be impractical.

30. 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.

31. 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.

VII. STIPULATED PENALTIES

32. Defendant shall be liable for stipulated penalties to the United States for violations of this Consent Decree as specified below, unless excused under Section VIII (Force Majeure). A violation includes failing to perform any obligation required by the terms of this Consent Decree, including any work plan or schedule approved under this Consent Decree, according to all applicable requirements of this Consent Decree and within the specified time schedules established by or approved under this Consent Decree.

33. 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 $ 1,000 per Day for each Day that the payment is late.

34. Shutdown of Lines 200 and 300. The following stipulated penalties shall accrue per violation per Day for each violation of a requirement of Paragraph 11:

Penalty Per Violation Per Day	Period of Noncompliance
$1,500	1st through 14th Day
$2,000	15th through 30th Day
$3,000	31st Day and beyond

35. Completion of Performance Testing. The following stipulated penalties shall accrue per Day for each violation at each stack vent or Emission Point that is subject to the performance testing requirements of Paragraph 12:

Penalty Per Stack Vent or Emission Point Per Day	Period of Noncompliance
$1,000	1st through 14th Day
$2,000	15th through 30th Day
$3,000	31st Day and beyond

36. Submission of Deliverables. The following stipulated penalties shall accrue per violation per Day for each deliverable not submitted by the applicable deadline:

Penalty Per Violation Per Day	Period of Noncompliance
$500	1st through 14th Day
$1,000	15th through 30th Day
$1,500	31st Day and beyond

a. The deliverables subject to these stipulated penalties include any Test Report required pursuant to Paragraph 12, any Emission Factor Proposal required pursuant to Paragraph 13, any Mass Balance Emission Factor Proposal required pursuant to Paragraph 16, or applications to MPCA for modification of FilmTec's Title V Permit pursuant to Paragraph 17.

37. Reporting Requirements. The following stipulated penalties shall accrue per violation per Day for each violation of the reporting requirements of Section VI (Reporting Requirements):

Penalty Per Violation Per Day	Period of Noncompliance
$500	1st through 14th Day
$1,000	15th through 30th Day
$1,500	31st Day and beyond

38. Stipulated Penalties Accrual. 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.

39. Demand for Stipulated Penalties and Due Date. Defendant shall pay any stipulated penalty within 45 Days of receiving the United States' written demand.

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

41. Disputes over Stipulated Penalties. Stipulated penalties shall continue to accrue as provided in Paragraph 38 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.

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 15 Days of receiving the final appellate court decision.

42. Manner of Payment of Stipulated Penalties. Defendant shall pay stipulated penalties owing to the United States in the manner set forth and with the confirmation notices required by Paragraph 9, 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.

43. 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.

44. 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.

45. 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 XI (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 Consent Decree or applicable law, including but not limited to an action against Defendant for statutory penalties, additional injunctive relief, mitigation, or offset measures. 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.

VIII. FORCE MAJEURE

46. "Force majeure," for purposes of this Consent Decree, is defined as 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. The requirement that Defendant exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential force majeure event and best efforts to address the effects of any potential force majeure event (a) as it is occurring and (b) following the potential force majeure, such that the delay and any adverse effects of the delay are minimized. "Force Majeure" does not include Defendant's financial inability to perform any obligation under this Consent Decree.

47. If any event occurs or has occurred that may delay the performance of any obligation under this Consent Decree, whether or not caused by a force majeure event, Defendant shall provide notice orally or by email to the EPA contacts identified in Section XIII (Notices) of this Consent Decree, within 72 hours of when Defendant first knew that the event might cause a delay. Within seven Days thereafter, Defendant shall provide in writing to EPA an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Defendant's rationale for attributing such delay to a force majeure event if it intends to assert such a claim; and a statement as to whether, in the opinion of Defendant, such event may cause or contribute to an endangerment to public health, welfare, or the environment. Defendant shall include with any

notice all available documentation supporting the claim that the delay was attributable to a force majeure. Failure to comply with the above requirements shall preclude Defendant from asserting any claim of force majeure for that event for the period of time of such failure to comply, and for any additional delay caused by such failure. Defendant shall be deemed to know of any circumstance of which Defendant, any entity controlled by Defendant, or Defendant's contractors knew or should have known.

48. If EPA agrees that the delay or anticipated delay is attributable to a force majeure event, the time for performance of the obligations under this Consent Decree that are affected by the force majeure event will be extended by EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the force majeure event shall not, of itself, extend the time for performance of any other obligation. EPA will notify Defendant in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure event.

49. If EPA does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, EPA will notify Defendant in writing of its decision.

50. If Defendant elects to invoke the dispute resolution procedures set forth in Section IIX (Dispute Resolution), it shall do so no later than 15 Days after receipt of EPA's notice. In any such proceeding, Defendant shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Defendant complied with the requirements of Paragraphs 46 and 47.

If Defendant carries this burden, the delay 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.

IX. DISPUTE RESOLUTION

51. 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's failure to seek resolution of a dispute under this Section shall preclude Defendant from raising any such issue as a defense to an action by the United States to enforce any obligation of Defendant arising under this Consent Decree.

52. 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 the United States a written Notice of Dispute. Such Notice of Dispute shall state clearly the matter in dispute. The period of informal negotiations shall not exceed 60 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 30 Days after the conclusion of the informal negotiation period, Defendant invokes formal dispute resolution procedures as set forth below.

53. Formal Dispute Resolution. Defendant shall invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by serving on the United States 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.

54. The United States shall serve 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 shall be binding on Defendant, unless Defendant files a motion for judicial review of the dispute in accordance with the following Paragraph.

55. Defendant may seek judicial review of the dispute by filing with the Court and serving on the United States, in accordance with Section XIII (Notices), a motion requesting judicial resolution of the dispute. The motion must be filed within 45 Days of receipt of the United States' Statement of Position pursuant to the preceding Paragraph. The motion shall contain a written statement of Defendant's position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree.

56. 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.

57. Standard of Review

a. Disputes Concerning Matters Accorded Record Review. Except as otherwise provided in this Consent Decree, in any dispute brought under Paragraph 53, Defendant shall have the burden of demonstrating that it is entitled to relief under applicable principles of law. The United States reserves the right to argue that its position is reviewable only on the administrative record and must be upheld unless 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 53, Defendant shall bear the burden of demonstrating that its position complies with this Consent Decree.

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

X. INFORMATION COLLECTION AND RETENTION

59. 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 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.

60. 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.

61. 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 of any documents, records, or other information required to be maintained under this Paragraph.

62. 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.

63. 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.

64. 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.

XI. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

65. This Consent Decree resolves the civil claims of the United States through the date of lodging for the violations alleged in the Complaint filed in this action, for the violations alleged in the September 4, 2015, Notice and Finding of Violation and April 29, 2016, Finding of Violation issued to Defendant by EPA prior to the date of lodging.

66. The United States reserves all legal and equitable remedies available to enforce the provisions of this Consent Decree, except as expressly specified in Paragraph 65. 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 65. The United States further reserves all legal and equitable remedies to address any 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.

67. In any subsequent administrative or judicial proceeding initiated by the United States for injunctive relief, civil penalties, or 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, res judicata, collateral estoppel, issue preclusion, claim preclusion, 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 65.

68. This Consent Decree is not a permit, nor 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.

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

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

XII. COSTS

71. 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.

XIII. NOTICES

72. Unless otherwise specified in this Consent Decree, whenever notifications, submissions, or communications are required by this Consent Decree, they shall be made in writing and addressed as follows:

As to the United States by email:	eescdcopy.enrd@usdoj.gov Re: DJ # 90-5-2-1-11723
As to the United States 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 # 90-5-2-1-11723

As to EPA:

Attn: Compliance Tracker
Air and Radiation Division
U.S. Environmental Protection Agency
Region 5
77 W. Jackson Blvd. (AE-18J)
Chicago, IL 60604

And

Kathleen Schnieders
Office of the Regional Counsel
U.S. Environmental Protection Agency
Region 5
77 W. Jackson Blvd. (C-14J)
Chicago, IL 60604

As to Defendant:

Jennifer Rehder
Site Leader
5400 Dewey Hill Rd.
Edina, MN 55439

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

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

XIV. EFFECTIVE DATE

75. 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.

XV. RETENTION OF JURISDICTION

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

XVI. MODIFICATION

77. 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 Consent Decree, it shall be effective only upon approval by the Court.

78. Any disputes concerning modification of this Consent Decree shall be resolved pursuant to Section IIX (Dispute Resolution), provided, however, that, instead of the burden of proof provided by Paragraph 57, 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).

XVII. TERMINATION

79. After Defendant has completed the requirements of Section V (Compliance Requirements), 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. Defendant need not wait for any approval by MPCA, including issuance of a permit, to request termination.

80. 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 Consent Decree may be terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating the Consent Decree.

81. If the United States does not agree that the Consent Decree may be terminated, Defendant may invoke Dispute Resolution under Section IIX. However, Defendant shall not seek Dispute Resolution of any dispute regarding termination until 75 Days after service of its Request for Termination.

XVIII. PUBLIC PARTICIPATION

82. 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 Consent Decree, unless the United States has notified Defendant in writing that it no longer supports entry of the Consent Decree.

XIX. SIGNATORIES/SERVICE

83. The undersigned representative of Defendant and the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice, or his or her

designee, each certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind the Party he or she represents to this document.

84. 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.

XX. INTEGRATION

85. This Consent Decree constitutes the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in the Consent Decree and supersedes all prior agreements and understandings, whether oral or written, concerning the settlement embodied herein. Other than deliverables that are subsequently submitted and approved pursuant to this Consent Decree, the Parties acknowledge that there are no representations, agreements, or understandings relating to the settlement other than those expressly contained in this Consent Decree.

XXI. FINAL JUDGMENT

86. 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. The

Court finds that there is no just reason for delay and therefore enters this judgment as a final judgment under Fed. R. Civ. P. 54 and 58.

XXII. APPENDICES

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

"Appendix A" is the Test Protocol; and

"Appendix B" is entitled Test Report Contents and lists the minimum requirements for a test report submitted pursuant to this Consent Decree

Dated and entered this __ day of _____, 20__

_____
UNITED STATES DISTRICT JUDGE

FOR THE UNITED STATES OF AMERICA:

July 18, 2019
Date

Karen Dworkin
Deputy Section Chief
Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice

Samantha M. Ricci
Trial Attorney
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U.S. Environmental Protection Agency, Region 5

Kathleen Kelly Schnieders
Associate Regional Counsel
U.S. Environmental Protection Agency, Region 5
Office of Regional Counsel

FOR FILMTEC CORPORATION:

5-29-2019
Date

Jennifer Rehder
Site Leader
54000 Dewey Hill Rd.
Edina, MN 55439

Appendix A

TEST PROTOCOL

FilmTec Corporation > Edina, MN

Membrane Production Lines Emissions Testing

Prepared By:

Rich Trzupek – Principal Consultant

TRINITY CONSULTANTS
1S660 Midwest Road
Suite 250
Oakbrook Terrace, IL 60181

December 10, 2018
Project 171401.0108

Trinity Consultants

Environmental solutions delivered uncommonly well

CONTAINS CONFIDENTIAL BUSINESS INFORMATION

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INTRODUCTION

An emissions test program will be performed at the FilmTec Corporation (FilmTec) facility located in Edina, Minnesota (the Edina facility). Testing will be conducted to determine emission rates of Volatile Organic Compounds (VOC) from three (3) membrane production lines: Line 400, Line 500 and Line 600.

The identification of individuals associated with the test program is summarized below.

Description	Address	Contact
Facility Lead	FilmTec 5400 Dewey Hill Rd. Edina, MN 55439	Jennifer Rehder Site Leader (952) 897-4224 jrehder@dow.com
Project Lead	Trinity Consultants, Inc. 1S660 Midwest Road Oakbrook Terrace, IL 60181	Mr. Richard Trzupek Principal Consultant (630) 495-1470 rtrzupek@trinityconsultants.com
Testing Firm	Mostardi Platt	Mr. David Ozawa Director, Project Development (630-993-2100

1. IDENTIFICATION AND DESCRIPTION OF THE SOURCE TO BE TESTED

1.1. TYPE OF INDUSTRIAL PROCESS

The overall industrial process is production of membranes used in reverse osmosis (RO) water treatment process. The membranes are produced as a continuous web on each of the three production lines.

1.2. TYPES OF VOC USED IN THE PROCESS

Three VOCs are used in the process:

- Dimethyl Formamide (DMF), which is also a Hazardous Air Pollutant
- Isopar, a blend of aliphatic hydrocarbons in the C11 – C13 range
- Glycerin

DMF is used in the initial, casting stage of production only and is controlled by a carbon adsorption unit. Isopar is used in the latter stages of the process. The majority of Isopar is recovered in liquid form and reused. Isopar emissions are also controlled by a thermal oxidizer with greater than 95% destruction efficiency and the remaining Isopar is emitted to the atmosphere. Glycerin is also used in the latter stages of the process, but in very small quantities compared to Isopar usage rates.

1.3. DESCRIPTION OF INTERMITTENT OR BATCH OPERATIONS

One intermittent condition exists: idle operation a portion of the forming stage as provided for in Section 1.6. Idle mode for the emission units is defined as equipment at operating conditions with no liquid feeds and no product output.

No batch operations are associated with this process.

1.4. SITE SPECIFIC OPERATING PARAMETERS

The following production variable will be monitored during testing of each line:

- Product name and formulation with respect to VOC and HAP usage
- DMF, Isopar input (lbs/hr)

1.5. WORST CASE OPERATIONAL SCENARIO FOR TESTING

Maximum emissions are expected to occur at maximum Isopar usage rates, which is a function of the particular product formulation being produced. Maximum Isopar usage rates are as follows:

- Line 400: 761 lbs/hr
- Line 500: 870 lbs/hr
- Line 600: 979 lbs/hr

1.6. EMISSION POINTS

A total of twenty nine (29) emission points will be tested in stages as set forth in Section 8 of this protocol. These are:

- Line 400, 500 and 600 inlets to the carbon adsorption system, three (3) test points:
  - EU-003- PD-010 to SV-016
  - EU-004- PD-010 to SV-016
  - EU-016- PD-002 to SV-016
- The carbon adsorption system exhaust, one (1) test point:
  - CE-001- SV-016
- Line 400, 500 and 600 inlets to the thermal oxidizer, three (3) test points:
  - EU-003- PD-007 to SV-024
  - EU-004- PD-007 to SV-024
  - EU-016- PD-008 to SV-024
- The thermal oxidizer exhaust, one (1) test point:
  - EU030 - CE-003 – SV-024
- Line 400 Forming exhaust, one (1) test point, production condition and idle condition:
  - EU-003 – PD-001- SV-017
  - EU-003 – PD-002- SV-017 - Idle
- Line 500 Forming exhaust, one (1) test point, production condition and idle condition:
  - EU-004 – PD-003- SV-025
  - EU-004 – PD-004- SV-025 - Idle
- Line 600 Forming exhaust, one (1) test point, production condition and idle condition:
  - EU-016 – PD-010- SV-033
  - EU-016 – PD-011- SV-033 - Idle
- Line 400 Drying exhausts, six (6) test points:
  - EU-003- PD-011- SV-019
  - EU-003- PD-011- SV-020
  - EU-003- PD-011- SV-021
  - EU-003- PD-011- SV-022
  - EU-003- PD-011- SV-045
  - EU-003- PD-011- SV-046
- Line 500 Drying exhausts, six (6) test points:
  - EU-004- PD-011- SV-026
  - EU-004- PD-011- SV-027
  - EU-004- PD-011- SV-028
  - EU-004- PD-011- SV-029
  - EU-004- PD-011- SV-047
  - EU-004- PD-011- SV-048
- Line 600 Drying exhausts, six (6) test points:
  - EU-016- PD-012- SV-036
  - EU-016- PD-012- SV-037
  - EU-016- PD-012- SV-038
  - EU-016- PD-012- SV-039
  - EU-016- PD-012- SV-049
  - EU-016- PD-012- SV-050

2. AIR POLLUTION CONTROL DEVICE DESCRIPTION

Eisenman regenerative thermal oxidizer sized for 9075 scfm (CE-003)

Activated Carbon- Calgon vertical absorbers with steam regeneration sized for 6560 scfm (CE-001)

3. EMISSIONS CONSTITUENTS TO BE SAMPLED

Sampling will be conducted for the following pollutants:

- Total VOC (Forming and Drying stages)
- DMF (Casting and a portion of the Forming stage)

4. DESCRIPTION OF EMISSIONS SAMPLING EQUIPMENT

DISCUSSION OF TEST METHODS

4.1.1. Average Gas Molecular Weight and Flow Rate

EPA Methods 1, 2 and 3 of 40 CFR 60, Appendix A, will be used to measure the average flue gas composition and volumetric flow rate. These methods will determine several characteristics of the flue gas stream: velocity, moisture, flow rate, and concentrations of O_2 and CO_2.

4.1.2. Gas Moisture Content

ASTM Method E337 "Standard Test Method for Measuring Humidity with a Psychrometer" will be used to determine exhaust gas moisture content of any exhaust gas in which the temperature of the gas is determined to be 200 °F or less. If the temperature of the exhaust gas from a source is determined to be greater than 200 °F EPA Method 4 will be used to determine exhaust gas moisture content.

4.1.3. Total Hydrocarbons, Volatile Organic Compounds and Methane/Ethane Emissions

Monitoring of THC emissions at the test locations will be performed using EPA Method 25A.

A gas sample will be continuously extracted from the source and delivered to a series of gas analyzers, which measure the pollutant or diluent concentrations in the gas. The analyzers will be calibrated on-site using certified mixtures of calibration gases.

The system utilizes a heated stainless steel probe for gas withdrawal. The probe tip is equipped with a sintered stainless steel filter for particulate removal. The end of the probe is connected to a heated Teflon sample line that delivers the sample gases from the stack to the CEM system. The heated sample line is designed to maintain the gas temperature above 250°F, in order to prevent condensation of stack gas moisture within the line.

A slip stream from the THC analyzer will be directed into a Tedlar bag. The Tedlar bag will be analyzed per EPA Method 18 procedures for methane and ethane content.

4.1.4. DMF Emissions

Monitoring of DMF emissions at the carbon adsorption system inlet locations and the exhaust location and a portion of the Forming stage will be performed following EPA Method 18.

Table 2 below lists the analyzers to be used to perform the continuous emissions monitoring:

Table 1:
Gas Analyzers (or equivalent)

Gas	Reference Method	Analyzer Manufacturer	Principle of Operation
THC	EPA 25A	J.U.M. Engineering	Flame Ionization Detection (FID)

5. SAMPLING AND ANALYTICAL PROCEDURES

The following US EPA test methods will be performed. Three (3) sixty (60) minute test runs will be performed at the specified stack test location in accordance with these methods. The Exhaust a portion of the Forming stage will be tested in two line conditions: operation and idle. Other sources will be tested in operational mode and may be tested in idle mode as well, at FilmTec's discretion. No variations from the written procedures are proposed. If a test run must be interrupted by a production upset, the test run may be continued when normal production conditions are restored provided that the interruption does not exceed three (3) hours. If an interruption exceeds three (3) hours, the test run will be scrapped and a new test run will be initiated when normal production conditions are restored.

A- Volumetric Airflow Measurement:

- Method 1 Sample Traverse Determination: Test measurement points will be selected in accordance with Method 1, 40 CFR Part 60, Appendix A.
- Method 2: One velocity traverse shall be conducted during each test run, concurrent with operation of the Method 25A sampling train.
- Method 3A: Carbon dioxide (CO_2) and oxygen (O_2) shall be evaluated during each test run in conformance with US EPA Method 3A.
- ASTM Method E337: Moisture content of the gas stream meeting the criteria described in Section 4.1.2 for use of ASTM Method 337 shall be measured once during each test run following this method.
- Method 4: Moisture content of the gas stream meeting the criteria described in Section 4.1.2 for use of Method 4 shall be measured during each test run following this method.
- Method 18: Integrated samples shall be collected during each one-hour test run and retained for off-site Gas Chromatograph/Flame Ionization Detector (GC/FID) analysis for methane and ethane.

B- VOC Concentration:

- Method 25A (Production Operations): Three one-hour test runs will be conducted using an FIA that meets the specifications of the Method. Full four point calibrations (zero, high span, mid span, lo span) shall be conducted prior to the test period. Two point bias checks (zero and mid span) shall be conducted between test runs 1 and 2 and test runs 2 and 3 and at the conclusion of test run 3.
- Method 25A (Idle Operations): One one-hour test run will be conducted using an FIA that meets the specifications of the Method. Full four point calibrations (zero, high span, mid span, lo span) shall be conducted prior to the test period. Two point bias checks (zero and mid span) shall be conducted before and at the conclusion of the test run.

C- Dimethylformamide (DMF) Concentration:

- Method 18: Three one-hour test runs will be conducted using a Method 18 sampling train. Spiking and calibration procedures as prescribed in Method 18 and consistent with the determination of DMF will be employed.

D- Thermal Oxidizer Control Efficiency will be reported as a percentage according to the following formula:

- ((TO Inlet, Lbs/Hr – TO Outlet, Lbs/Hr) / TO Inlet, Lbs/Hr) * 100

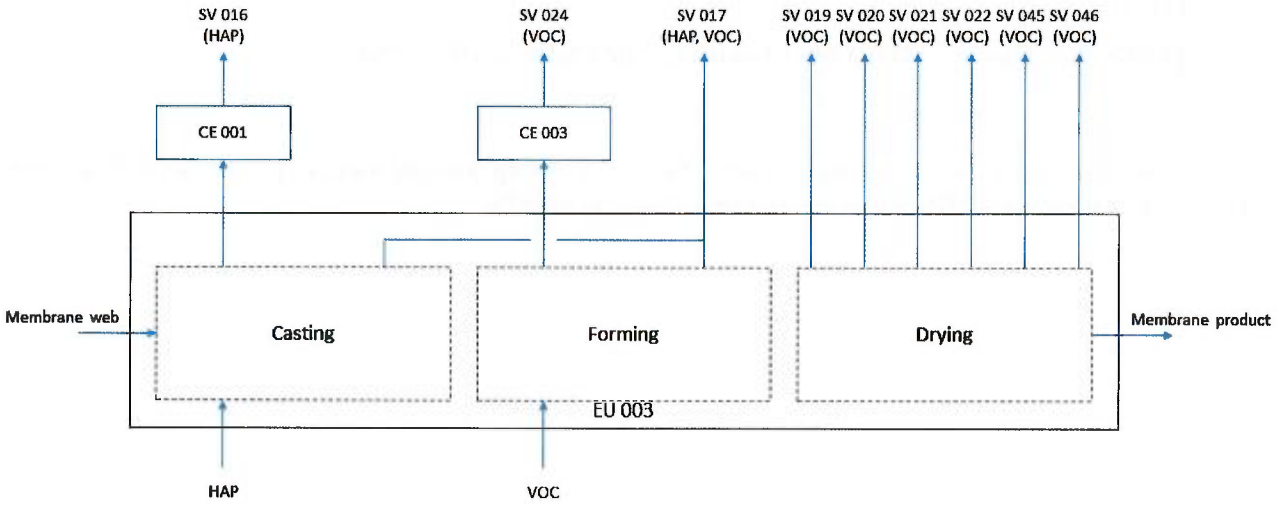
E- Carbon Adsorption Unit Control Efficiency will be reported as a percentage according to the following formula:

- ((THAP Inlet, Lbs/Hr – THAP Outlet, Lbs/Hr) / THAP Inlet, Lbs/Hr) * 100

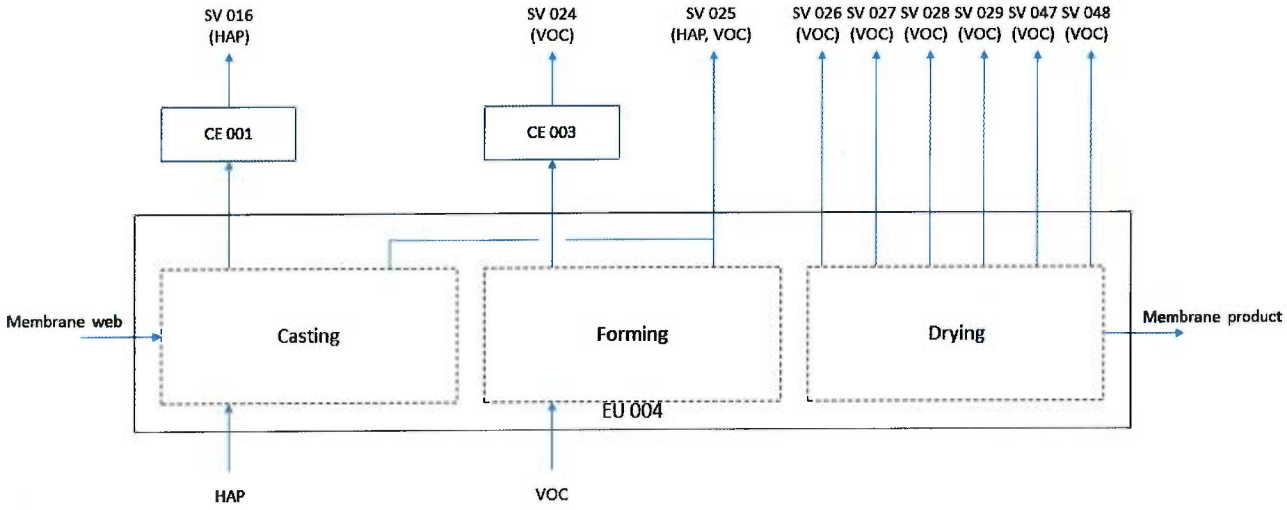
Emissions from mixing tanks will be determined based on vapor displacement using equations found in Section 7.1 of USEPA's *Compilation of Air Pollutant Emissions Factors* (AP-42).

6. PROCESS SKETCHES

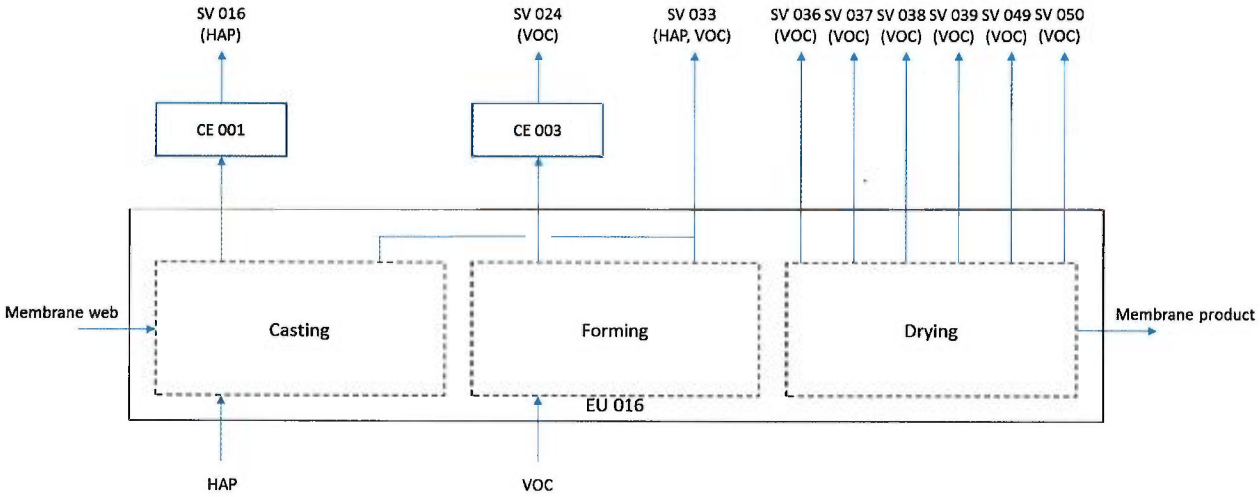
Process Line 400



Process Line 500



Process Line 600



7. PROCESS AND CONTROL EQUIPMENT OPERATING DATA

Line speeds, product identification and VOC-containing material use rates will be measured. This information will be recorded. Thermal oxidizer combustion chamber temperature will also be measured and recorded.

8. TESTING SCHEDULE

Because demand for different membrane products varies, FilmTec cannot guarantee the production of the highest speed/highest emitting products over a several consecutive day timeframe. Consequently, FilmTec will conduct the test program in four stages.

Multiple mobilizations and sampling programs will be conducted – as needed – with the goal of measuring emissions from emissions sources that could, in unison, expected to generate the most airborne emissions from those sources. Given the number of sources involved and the complexity inherent to the issues. The testing program will need to be designed for flexibility.

We envision the four stages of testing to involve the following emission sources and stack vents during each stage as described below:

Stage-1 - All lines running at the worst case scenario simultaneously. Emission unit to be tested:

- Line 400, 500 and 600 inlets to the carbon adsorption system, three (3) test points:
  - EU-003- PD-010 to SV-016
  - EU-004- PD-010 to SV-016
  - EU-016- PD-002 to SV-016
- The carbon adsorption system exhaust, one (1) test point :
  - CE-001- SV-016
- Line 400, 500 and 600 inlets to the thermal oxidizer, three (3) test points:
  - EU-003- PD-007 to SV-024
  - EU-004- PD-007 to SV-024
  - EU-016- PD-008 to SV-024
- The thermal oxidizer exhaust, one (1) test point:
  - EU030 - CE-003 – SV-024

Stage-2, 3 and 4 - Individual Line Emission Tests. All three lines will be tested at the following conditions:

- Worst case scenario and idle mode.
- All the defined emissions units will be tested at the worst case scenario except a portion of the Forming stage that will be tested in both conditions (worst case and idle mode).

Stack Vents to be tested:

- Line 400 Forming exhaust, one (1) test point, production condition and idle condition:
  - EU-003 – PD-001- SV-017 - Worst case scenario
  - EU-003 – PD-002- SV-017 - Idle
- Line 500 Forming exhaust, one (1) test point, production condition and idle condition
  - EU-004 – PD-003- SV-025 - Worst case scenario
  - EU-004 – PD-004- SV-025 - Idle
- Line 600 Forming exhaust, one (1) test point, production condition and idle condition
  - EU-016 – PD-010- SV-033 - Worst case scenario
  - EU-016 – PD-011- SV-033 - Idle
- Line 400 Drying exhausts, six (6) test points
  - EU-003- PD-011- SV-019 - Worst case scenario
  - EU-003- PD-011- SV-020 - Worst case scenario
  - EU-003- PD-011- SV-021 - Worst case scenario
  - EU-003- PD-011- SV-022 - Worst case scenario
  - EU-003- PD-011- SV-045 - Worst case scenario
  - EU-003- PD-011- SV-046 - Worst case scenario

- Line 500 Drying exhausts, six (6) test points
  - EU-004- PD-011- SV-026 - Worst case scenario
  - EU-004- PD-011- SV-027 - Worst case scenario
  - EU-004- PD-011- SV-028 - Worst case scenario
  - EU-004- PD-011- SV-029 - Worst case scenario
  - EU-004- PD-011- SV-047 - Worst case scenario
  - EU-004- PD-011- SV-048 - Worst case scenario
- Line 600 Drying exhausts, six (6) test points:
  - EU-016- PD-012- SV-036 - Worst case scenario
  - EU-016- PD-012- SV-037 - Worst case scenario
  - EU-016- PD-012- SV-038 - Worst case scenario
  - EU-016- PD-012- SV-039 - Worst case scenario
  - EU-016- PD-012- SV-049 - Worst case scenario
  - EU-016- PD-012- SV-050 - Worst case scenario

UNIT	MPCA TAG	Description	Location	Pollutant	EPA Method
400 EU-003	PD010	SV 016 [CE 001] Carbon Adsorption (HAPs)	Carbon Bed	HAP/VOC	1-4, and 18
	PD001	SV 017	Forming	HAP/VOC	1-4, 25A and 18
	PD002	SV 017 idle equipment time	Forming	HAP/VOC	1-4, 25A and 18
	PD007	SV 024 [CE 003] TOX	TOX	VOC	1-4, 25A
	PD011	SV 019	Drying	VOC	1-4, 25A
		SV 020			1-4, 25A
		SV 021			1-4, 25A
		SV 022			1-4, 25A
		SV 045			1-4, 25A
		SV 046			1-4, 25A
500 EU-004	PD010	SV 016 [CE 001] Carbon Adsorption (HAPs)	Carbon Bed	HAP/VOC	1-4, and 18
	PD003	SV 025	Forming	HAP/VOC	1-4, 25A and 18
	PD004	SV 025 idle equipment time	Forming	HAP/VOC	1-4, 25A and 18
	PD007	SV 024 [CE 003] TOX	TOX	VOC	1-4, 25A
	PD011	SV 026	Drying	VOC	1-4, 25A
		SV 027			1-4, 25A
		SV 028			1-4, 25A
		SV 029			1-4, 25A
		SV 047			1-4, 25A
		SV 048			1-4, 25A
600 EU-016	PD002	SV 016 [CE 001] Carbon Adsorption (HAPs)	Carbon Bed	HAP/VOC	1-4, and 18
	PD010	SV 033	Forming	HAP/VOC	1-4, 25A and 18
	PD011	SV 033 - idle equipment time	Forming	HAP/VOC	1-4, 25A and 18
	PD008	SV 024 [CE 003] TOX	TOX	VOC	1-4, 25A
	PD012	SV 036	Drying	VOC	1-4, 25A
		SV 037			1-4, 25A

		SV 038			1-4, 25A
		SV 039			1-4, 25A
		SV 049			1-4, 25A
		SV 050			1-4, 25A
Common		SV 016 [CE 001] Carbon Adsorption (HAPs)	Carbon Bed	HAP/VOC	1-4, 25A and 18
		SV 024 [CE 003]	TOX	VOC	1-4, 25A

A Performance test plan approval request and test protocol will be submitted to the Minnesota Pollution Control Agency (MPCA) for each stage following the Minnesota Administrative Rules.

Our expectation is that all stages of testing would be complete within an approximately 4 month period upon initiating the first stage of testing. This timeframe would allow the facility to sufficiently rotate its production process such products meeting the "worst case scenario" criteria would be tested during each stage.

9. COPIES OF FIELD DATA SHEETS

See the following sample Field Data Sheet that will be used during the test program.

Volumetric Flow Rate Determination Field Data Sheet

Project Number: _____ Date: _____
Client: _____ Test Number: _____
Test Location: _____ Start Time: _____
Source Condition: _____ End Time: _____
Test Engineer: _____ Test Tech: _____

Duct Diameter _____ ft
Flue Area _____ ft^2
Upstream Disturbance, Diameters _____
Downstream Disturbance, Diameters _____
Port Length _____" Port Size_____" Port Type_____ Pitot ID_____ Pitot Coefficient (C_p) _____
P_{bar} _____ "Hg
Static_____ "H_2O
Static_____ "Hg
P_s_____ "Hg
CO_2 % _____
O_2 % _____
N_2 % _____
Meter No._____
Wet Bulb Temp _____
Dry Bulb Temp _____
B_{ws} _____
Fluke # _____
Leak Checks Passed@
Pre _____Inches H_2O
Post _____Inches H_2O
Umbilical ID ___

Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees	Port-Point #	ΔP	Temp. °F	$\sqrt{\Delta P}$	Null Point Angle, Degrees
Average									

44 x CO_2% + .32 x O_2% + .28 x N_2% = _____ (Md)

(_____ Md x _____1-Bws) + (18 x_____Bws) = _____ (Ms)

$$85.49 \times \_\_\_\_ Cp \times \sqrt{\frac{(\_\_\_\_\_)Ts\ ^\circ R}{\_\_\_\_Ms \times \_\_\_\_Ps}} \times \_\_\_\_\sqrt{\Delta P} = \_\_\_\_ ft/sec\ (Vs)$$

_____ Vs x _____ Flue Area x 60 = _____acfm

$$17.647 \times \_\_\_\_acfm \times \frac{Ps}{Ts\ ^\circ R} = \_\_\_\_\_ scfm \times 60 = \_\_\_\_\_ scfh$$

DS-001 Method 2 Pitot Sheet Rev. 1.1 3/15/2018

IMPINGER WEIGHT SHEET

PLANT:_____ Scale ID Number _____

UNIT NO:_____ Scale Calibration Check Date:_____

LOCATION:_____ Scale Calibration Check (see QS-6.05C for procedure)

DATE:_____ 250 grams _____

TEST NO:_____ 500 grams _____

METHOD:_____ 750 grams _____

WEIGHED/MEASURED BY:_____

BALANCE ID:_____

	FINAL WEIGHT		INITIAL WEIGHT		IMPINGER		IMPINGER
Circle One:	MLS / GRAMS		MLS / GRAMS		GAIN		CONTENTS
IMPINGER 1							
IMPINGER 2							
IMPINGER 3							
IMPINGER 4							
IMPINGER 5							
IMPINGER 6							
IMPINGER 7							
IMPINGER 8							

IMPINGERS _____ FINAL TOTAL _____ INITIAL TOTAL _____ TOTAL IMPINGER GAIN

SILICA _____ FINAL TOTAL _____ INITIAL TOTAL _____ TOTAL SILICA GAIN

DS-005A Impinger Weight Sheet Rev. 1.1 9-27-2017

NON-ISOKINETIC MOISTURE FIELD DATA SHEET

Project Name/Number: _____ Date: _____
Test Location: _____ Source Condition: _____
Test Method: _____ Meter ID: _____ Pre-Calibration Date: _____
Meter ΔH: _____ Meter Y: _____ Test Engineer: _____

Test (Run) No. _____ Barometric Pressure (P_{bar}) _____ in. Hg
Static Pressure: _____ Stack Temperature: _____ (From Method _____ Test Data)

Gas Sample Analysis
_____ %CO_2 _____ %O_2

Clock Time 24 hour	Meter Volume (Vm) ft3 or L (Circle One)	Meter Gage Pressure (ΔH) in. H_2O	Meter Inlet Temp. (t_m) °F	Meter Outlet Temp. (t_m) °F	Impinger Outlet Temp °F	Meter Vacuum "Hg
Total Vol. in ft3 (Vm)=		Multiply total volume collected in Liters by 0.035315 to convert to ft^3				

Scale ID Number _____
Scale Calibration Check Date: _____
Scale Calibration Check (see QS-6.05C for procedure)
250 grams _____
500 grams _____
750 grams _____

Condensate	Silica Gel or Train
_____/_____/_____mls (V_f)	_____grams (W_f)
-_____/_____/_____mls (V_i)	-_____grams (W_i)
= _____mls gained	= _____grams gained

Average Meter Temperature: _____
(average of both inlet and outlet if applicable)

Comments:

Pre-Test Leak Check: _____ @ _____ "Hg
Post-Test Leak Check: _____ @ _____ "Hg

Test (Run) No. _____ Barometric Pressure (P_{bar}) _____ in. Hg
Static Pressure: _____ Stack Temperature: _____ (From Method _____ Test Data)

Gas Sample Analysis
_____ %CO_2 _____ %O_2

Clock Time 24 hour	Meter Volume (Vm) ft3 or L (Circle One)	Meter Gage Pressure (ΔH) in. H_2O	Meter Inlet Temp. (t_m) °F	Meter Outlet Temp. (t_m) °F	Impinger Outlet Temp °F	Meter Vacuum "Hg
Total Vol. in ft3 (Vm)=		Multiply total volume collected in Liters by 0.035315 to convert to ft^3				

Condensate	Silica Gel or Train
_____/_____/_____mls (V_f)	_____grams (W_f)
-_____/_____/_____mls (V_i)	-_____grams (W_i)
= _____mls gained	= _____grams gained

Average Meter Temperature: _____
(average of both inlet and outlet if applicable)

Comments:

Pre-Test Leak Check: _____ @ _____ "Hg
Post-Test Leak Check: _____ @ _____ "Hg

DS-016 Non-Isokinetic Moisture Data Sheet Rev. 1.3 8/17/2018

Method 25A Field Data Sheet

Project: _____ Operator: _____
Client: _____ Source: 1. _____
Location: _____ 2. _____
Date: _____ 3. _____

Parameters	Location 1	Location 2	Location 3
Test 1			
Time			
VOC ppmv as			
Air flow, scfm			
VOC lbs/hr as			
Removal Efficiency, %			
Test 2			
Time			
VOC ppmv as			
Air flow, scfm			
VOC lbs/hr as			
Removal Efficiency, %			
Test 3			
Time			
VOC ppmv as			
Air flow, scfm			
VOC lbs/hr as			
Removal Efficiency, %			

DS-019 Method 25A (Total Organic Compounds) Rev. 1.0 3/2/2015

10. NAMES AND TITLES OF TEST PERSONNEL

The exact composition of the test crew will not be known until test dates are scheduled. The test supervisor will be one of the following pool of Managers and Supervisor:

- Stuart Sands - Project Manager
- Jacob Howe - Project Manager
- Sean Dyra - Project Manager
- Rich Sollars - Project Manager
- Tim Mei - Project Manager
- John Nestor - Project Supervisor

11. PROCEDURES TO MAINTAIN SAMPLE INTEGRITY

The test contractor will follow applicable Quality Assurance/Quality Control procedures as documented in USEPA's *Stationary Source QA Handbook, Volume III*.

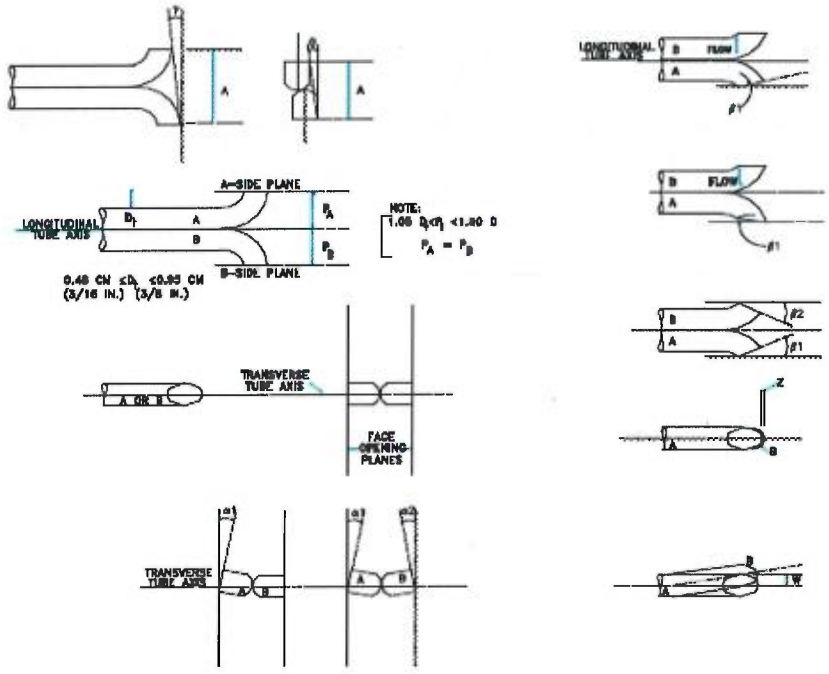
12. CALIBRATION SHEETS

Calibration Sheets will be included in the report for the equipment that will be used onsite. Example Calibration Sheets follow.

S TYPE PITOT TUBE INSPECTION WORKSHEET

Pitot Tube No: 300 Date: 8/9/2018 Inspectors Name: CRR

Type of Probe: (circle one) M2 M5 M17 Probe Length: 7 ft.



Pitot tube assembly level? x yes ____ no

Pitot tube openings damaged? ____ yes (explain below) x no

a_1 = 0 ° (<10°), a_2 = 0.5 ° (<10°) z = A sin g = 0.000 (in.); (<0.125 in.)

b_1 = 2.5 ° (<5°), b_2 = 2.5 ° (<5°) w = A sin q = 0.049 (in.); (<0.03125 in.)

γ = 0 °, θ = 3 °, A = 0.930 (in.) P_A = 0.465 (In.), P_B = 0.465 (In.), D_t = 0.375 (in.)

Calibration required? ____ yes x no

Meter Box Calibration

Dry Gas Meter Calibration Data

Dry Gas Meter No.	*CM1*	*Date:*	*March 22, 2018*
Standard Meter No.	*14159239*	*Calibrated By:*	*JHA*
Standard Meter (Y)	*0.98660*	*Barometric Pressure:*	*29.65*

Run Number		*Orifice Setting in H_2O Chg (H)*	*Standard Meter Gas Volume vr*	*Dry Gas Meter Gas Volume vd*	*Standard Meter Temp. F° tr*	*Dry Gas Meter Inlet Temp. F° tdi*	*Dry Gas Meter Outlet Temp. F° tdo*	*Dry Gas Meter Avg. Temp. F° td*	*Time Min*	*Time Sec*	*Y*	*Chg (H)*
Final			*35.426*	*7.705*	*61*	*66*	*63*					
Initial			*28.769*	*1.135*	*61*	*61*	*60*					
Difference	*1*	*0.20*	*6.657*	*6.570*	*61*	*64*	*62*	*63*	*23*	*24*	*1.002*	*1.417*
Final			*42.677*	*14.900*	*61*	*70*	*66*					
Initial			*35.579*	*7.870*	*62*	*66*	*63*					
Difference	*2*	*0.50*	*7.098*	*7.030*	*62*	*68*	*65*	*66*	*16*	*24*	*1.004*	*1.523*
Final			*50.266*	*22.474*	*61*	*71*	*67*					
Initial			*42.849*	*15.080*	*61*	*68*	*66*					
Difference	*3*	*0.70*	*7.417*	*7.394*	*61*	*70*	*67*	*68*	*14*	*42*	*1.001*	*1.560*
Final			*56.539*	*28.730*	*61*	*73*	*68*					
Initial			*50.525*	*22.730*	*61*	*70*	*68*					
Difference	*4*	*0.90*	*6.014*	*6.000*	*61*	*72*	*68*	*70*	*10*	*42*	*1.003*	*1.611*
Final			*63.454*	*35.650*	*61*	*73*	*69*					
Initial			*56.701*	*28.899*	*61*	*71*	*68*					
Difference	*5*	*1.20*	*6.753*	*6.751*	*61*	*72*	*69*	*70*	*10*	*41*	*1.001*	*1.697*
Final			*28.690*	*101.049*	*61*	*61*	*60*					
Initial			*21.941*	*94.471*	*61*	*59*	*59*					
Difference	*6*	*2.00*	*6.749*	*6.578*	*61*	*60*	*60*	*60*	*8*	*13*	*1.005*	*1.709*
									Average		***1.003***	***1.586***

Method 25A Calibration Summary

Project: _____ Date: _____

Client: _____ Operator: _____

Location: _____ Analyzer ID: _____

Analyzer Range: _____

Cal Run	Cal Level	Test Location	Cylinder ID Serial Number	Cal Gas Type	Cal Time	Expected Cal Value	Actual Response	Difference (% of cal value)	Drift (% of span)	Cylinder Pressure
Pre 1	Zero								N/A	
	Low								N/A	
	Mid								N/A	
	High								N/A	
Post 1/ Pre 2	Zero									
	Low									
	Mid									
	High									
Post 2/ Pre 3	Zero									
	Low									
	Mid									
	High									
Post 3	Zero									
	Low									
	Mid									
	High									
	Zero									
	Low									
	Mid									
	High									
	Zero									
	Low									
	Mid									
	High									

DS-018 Method 25A Calibration Summary Rev. 1.0 3/2/2015

Appendix B

Appendix B - Test Report Contents

Defendant shall submit a complete report of the emissions testing on its facility, including, at a minimum, the following:

a. Summary of Results
   1. Results of the emission test(s) in units of pounds per hour (lbs/hr);
   2. Discussion of response factors, molecular weight corrections, or any other factors used to convert raw data into the reported results (including a definition of any terms such as "response factor" that can be used to describe multiple types of corrections);
   3. Process and control equipment data related to determining compliance;
   4. Discussion of test errors;
   5. Discussion of any deviations from the reference test methods;
   6. Isopar usage during testing (lbs/hr);
   7. Highest isopar usage in the preceding 12 months; and
   8. Production data.

b. Facility Operations
   1. Description of the process and control equipment in operation;
   2. Operating parameters of the process units, air pollution control equipment, and related equipment at the time of the test;
   3. Facility operating parameters that demonstrate that the process units were operated at maximum production rates at the time of the test; and

c. Sampling and Analytical Procedures
   1. Sampling port location(s) and dimensions of cross-section;
   2. Sampling point description, including labeling system;
   3. Brief description of sampling procedures, including equipment and diagram;
   4. Description of sampling procedures (planned and accidental) that deviated from any standard method;
   5. Brief description of analytical procedures, including calibration;
   6. Description of analytical procedures (planned or accidental) that deviated from any standard method; and
   7. Quality control/ quality assurance procedures, tests, and results.

d. Appendix
   1. Complete results with example calculations;
   2. Raw field data (original, not computer printouts);
   3. Laboratory report, with signed chain-of-custody forms;
   4. Calibration procedures and results;
   5. Raw process and control equipment data, signed by plant representative;
   6. Test log;
   7. Project participants and titles; and
   8. Related correspondence.