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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, against Defendant S.H. Bell Company (“S.H. Bell”). The Complaint alleges that emissions of ambient manganese from Defendant’s facility located in East Liverpool, Ohio and Ohioville, Pennsylvania (the “East Liverpool Facility” or “Facility”) present an imminent and substantial endangerment to public health or welfare under Section 303 of the Clean Air Act (“CAA”), 42 U.S.C. § 7603, and Section 106 of the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”), 42 U.S.C. § 9606.

The Agency for Toxic Substances and Disease Registry (“ATSDR”) has identified a minimal risk level (“MRL”) of 0.3 $\mu\text{g}/\text{m}^3$ for chronic-duration (365 days or more) inhalation of airborne respirable manganese. MRL values reflect health-based estimates of exposure to a chemical over a specified duration that is likely to be without an appreciable risk of adverse non-cancer health effects. The United States’ allegations regarding the presence of an imminent and substantial endangerment are based on a range of considerations including, but not limited to, exceedances of the MRL for chronic respirable manganese exposure. The relief embodied in this Consent Decree to abate the potential endangerment reflects the United States’ current understanding of the health risks posed by exposure to airborne manganese.

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

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, CAA Section 113(b), 42 U.S.C. § 7413(b), and CERCLA Sections 113(b) and (e), 42 U.S.C. § 9613(b) and (e), and over the Parties. Venue lies in this District pursuant to CAA Section 113(b), 42 U.S.C. § 7413(b); CERCLA Section 113(b), 42 U.S.C. § 9613(b); and 28 U.S.C. §§ 1391(b) and (c) and 1395(a), because the allegations in the Complaint are alleged to have occurred in, and Defendant conducts business in, this 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 consents to venue in this District.

2. For purposes of this Consent Decree, Defendant shall not contest that the Complaint states claims upon which relief may be granted pursuant to CAA Section 303 and CERCLA Section 106.

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 unless consented to in writing by the United States.

Defendant shall condition any such sale or transfer on agreement by such transferee and/or successor-in-interest to assume the obligations under this Consent Decree and to submit to the jurisdiction of this Court. 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 to EPA Regions 3 and 5, the United States Attorney for the Northern District of Ohio, and the United States Department of Justice, in accordance with Section XII (Notices), together with: (i) a description of the proposed transfer agreement and (ii) the portions of the agreement relevant to the implementation of the requirements of this Consent Decree. 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. This Section does not preclude Defendant from holding any employee, agent, or contractor who is alleged to have not complied with this Consent Decree liable for its actions.

III. DEFINITIONS

7. Terms used in this Consent Decree that are defined in the Clean Air Act or CERCLA or in regulations promulgated pursuant to either Act shall have the meanings assigned

to them in the CAA or CERCLA or such regulations, unless otherwise provided in this Decree. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

“Affected Materials” shall mean ferromanganese materials and other materials with a manganese content (raw material, intermediate, or finished product) that are processed or otherwise handled at the Facility in a manner that could cause the generation of stack or fugitive emissions containing ferromanganese or manganese compounds. Affected Materials shall not include materials that contain manganese, such as steel ingots, where the material is not a potential source of stack or fugitive emissions containing ferromanganese or manganese compounds.

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

“Consent Decree” or “Decree” shall mean this Decree and all appendices attached hereto (listed in Section XXI);

“Date of Lodging” shall mean the date this Consent Decree is filed for lodging with the Clerk of the Court for the United States District Court for the Northern District of Ohio, Eastern Division;

“Day” or “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 S.H. Bell Company;

“DFFO” shall mean the Director’s Final Findings and Orders issued by OEPA to Defendant;

“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 XIII;

“Exceptional Action Level” shall mean a calendar month average manganese concentration of $1.0 \mu\text{g}/\text{m}^3$;

“Facility” shall mean Defendant’s East Liverpool Facility located in East Liverpool, Ohio and Ohioville Borough, Pennsylvania;

“Monthly Manganese Concentration” shall mean the average of all 24-hour filter sample concentrations collected over a calendar month at a single PM_{10} monitor.

“OEPA” shall mean the Ohio Environmental Protection Agency and any of its successor departments or agencies;

“PADEP” shall mean the Pennsylvania Department of Environmental Protection and any of its successor departments or agencies;

“Paragraph” shall mean a portion of this Decree identified by an arabic numeral;

“Parties” shall mean the United States and Defendant;

“Preventative Action Level” shall mean (i) a calendar month average manganese concentration of $0.57 \mu\text{g}/\text{m}^3$ and (ii) a rolling annual average manganese concentration of $0.3 \mu\text{g}/\text{m}^3$;

“Response Action Levels” shall mean the Preventative Action Levels and the Exceptional Action Level;

“Rolling Annual Manganese Concentration” shall mean the 12-month average of the Monthly Manganese Concentrations at a single PM_{10} monitor as determined in accordance with Appendix A, Paragraph 8.d.

“Section” shall mean a portion of this Decree identified by a roman numeral;

“States” shall mean the State of Ohio and the Commonwealth of Pennsylvania;

“United States” shall mean the United States of America, acting on behalf of

EPA.

IV. INJUNCTIVE RELIEF

8. Fenceline Monitoring. Defendant shall comply with the monitoring, analytical, and reporting requirements set forth in Appendix A.

9. Affected Materials Tracking System. Within 30 Days of the Date of Lodging, Defendant shall submit an Affected Materials Tracking System Plan for EPA review and approval. Defendant shall implement the Affected Materials Tracking System Plan within 30 Days of EPA approval. The Affected Materials Tracking System shall be able to produce reports containing the following elements on at least a monthly basis:

a. A process description of each unit handling Affected Materials at the Facility and a list of each type of Affected Materials handled by each unit at the Facility;

b. Date, approximate time, and tonnage of all individual inbound and outbound truck shipments (bulk and packaged) of each type of Affected Material;

c. Date, shift, number of operating hours, and tonnage for rail and barge unloading of each type of Affected Material (bulk and packaged);

d. Date and shift for each processing operation of each type of Affected Material;

e. Monthly and/or order tonnages for each type of Affected Material at each process or unit at the Facility; and

f. Storage building door status logs required by Paragraph 14 below.

10. Within 120 Days of the Date of Lodging, Defendant shall submit to EPA for review and comment an assessment of the feasibility of implementing a tracking system for intra-plant transfers of Affected Materials. Defendant shall implement any feasible intra-plant tracking measures identified as part of this feasibility assessment within 90 Days of submittal to EPA of the assessment.

11. Defendant shall provide Affected Materials Tracking Reports to EPA within 5 Days of a request by EPA. Defendant may identify such reports as Confidential Business Information pursuant to 40 C.F.R. Part 2, to the extent it believes such designation is warranted.

12. Digital Video Recordings.

a. Within 60 Days of the Date of Lodging, Defendant shall submit a Digital Video Recording System Plan to EPA for review and approval that includes high definition video recording of each use of the unloading/transfer/loading operations at the Straight-Side Dock, Railcar Unloading/Loading area, and the River Barge Unloading area. Defendant may include an assessment of the feasibility of high definition video as part of the Plan.

b. Within 90 Days of EPA's approval of the Digital Video Recording System Plan, Defendant shall implement the requirements set forth in the approved Plan.

13. Fugitive Dust Control Measures. Within 30 Days of the Date of Lodging, Defendant shall implement the following fugitive dust control measures at the East Liverpool Facility:

a. Defendant shall sweep the aisles and water the doorways (weather permitting) of indoor storage buildings as necessary to prevent Affected Materials from exiting the building and:

- (1) at least once per shift when an indoor storage building is in use for handling and/or processing Affected Materials; and
- (2) at least once per operating day for indoor storage buildings in use for storing Affected Materials.

b. Defendant shall cease processing Affected Materials at the KUX crusher. Defendant shall only resume processing Affected Materials at the KUX crusher after a baghouse addressing the KUX crusher is installed and operating.

c. At the River Barge Unloading Area for the Crawler Crane at Dock 2, Defendant shall limit the unloading of packaged Affected Materials to 200,000 tons per year. Defendant is currently prohibited by the DFFOs from unloading unpackaged Affected Materials at the River Barge Unloading Area for the Crawler Crane at Dock 2 and shall continue to comply with that restriction at least until termination of this Decree.

d. Defendant shall physically limit access to all unpaved areas until such time as the areas are paved. Defendant shall treat unpaved areas with dust suppression controls for fugitive dust throughout the year (including winter months absent snow or ice), as necessary.

e. Defendant shall require all trucks containing Affected Material to tarp in designated areas adjacent to the truck load-out sheds. Defendant shall prohibit outbound loaded trucks containing Affected Material from leaving the facility untarped.

f. Defendant shall change filters on each vacuum and sweeper truck in accordance with manufacturers' specifications, using only filters with the highest commercially available efficiency for the specific model vacuum and sweeper truck.

14. Within 60 Days of the Date of Lodging, Defendant shall install rolling doors on the northern side of indoor storage buildings identified as MTM1, MTM2, and MTM3. The rolling doors shall generally remain closed and only be opened by terminal foremen as necessary. Dates and times that the doors are open and closed shall be documented as part of the Affected Materials Tracking System required in Paragraph 9 above.

15. Within 90 Days of the Date of Lodging, Defendant shall equip all baghouses at all units that handle Affected Materials at the East Liverpool Facility with a continuous pressure drop monitoring and recording system (and provide a monthly report to EPA identifying any exceedances of the pressure drop range, once such a range has been established or as indicated by Defendant's permit) and continuously operate the baghouses in compliance with all applicable requirements including, but not limited to, good engineering practices and manufacturers' recommendations. Future replacements of baghouse filter bags shall be with PTFE membrane filter bags.

16. Fugitive Dust Plan. Within 90 Days of the Date of Lodging, Defendant shall submit a Fugitive Dust Plan to EPA. The Fugitive Dust Plan shall contain a detailed description of the following:

a. All required fugitive dust control measures that Defendant has implemented at the Facility under the 2008, 2010, and 2016 OEPA DFFOs;

b. All voluntary fugitive dust control measures that Defendant has implemented at the Facility as of the Date of Lodging that are not required by the OEPA DFFOs; and

c. All Fugitive Dust Control Measures described in Paragraphs 13-15.

17. Within 150 Days of the Date of Lodging, Defendant shall amend its Clean Air Act Operating Permit Applications to Ohio and Pennsylvania to incorporate the Fugitive Dust Plan.

18. Root Cause Analyses and Corrective Actions. Defendant shall calculate Monthly Manganese Concentrations and Rolling Annual Manganese Concentrations for each fenceline monitor pursuant to Paragraph 8 and Appendix A.

19. Within 30 Days of calculating a Monthly Manganese Concentration that exceeds $0.57 \mu\text{g}/\text{m}^3$ or a Rolling Annual Manganese Concentration that exceeds $0.3 \mu\text{g}/\text{m}^3$ (the “Preventative Action Levels”), Defendant shall submit a Root Cause Analysis to EPA for review and approval to identify any emission unit(s) at the Facility that caused or significantly contributed to increased manganese emissions above the Preventative Action Levels.

a. The Root Cause Analysis shall take into consideration available information and data from the Affected Materials Tracking System, the Digital Video Recording System, the fenceline monitors and the meteorological station, and other reasonably available relevant sources (including, but not limited to, particle morphology

and composition data, speciated manganese analysis, analysis of other metals and “source fingerprint” species concentrations, source apportionment receptor modeling methods, data from other samplers, historical data, and/or observations of activity levels at other dust emission sources).

b. The Root Cause Analysis shall:

(1) Identify all emission units at the Facility that processed, transferred, or stored Affected Materials during the monitoring period exceeding the Preventative Action Level;

(2) Identify all emission units operating or in use on the top 10 highest ambient manganese concentration days over the month, or the top 10% of the highest ambient manganese concentration days in the last twelve months, as applicable to the exceeded Preventative Action Level;

(3) Provide Affected Materials Tracking System records for the subject monitoring period;

(4) Identify and support appropriate corrective action measures to implement at the identified emission unit(s), if any, and/or any reasonable and feasible additional control(s), if any, that can be implemented at the identified emission unit(s) to further reduce manganese emissions beyond a *de minimis* level; and

(5) Include a schedule for implementation of corrective action measures and/or additional control(s) identified in the preceding subparagraph.

c. EPA may request supplemental information from Defendant regarding the corrective action measures and/or additional controls proposed in the Root Cause Analysis.

d. Upon receipt of approval by EPA of the Root Cause Analysis, Defendant shall implement any corrective action measures and/or additional control(s) identified in the approved Root Cause Analysis in accordance with the approved schedule.

20. Within 24 hours of calculating a Monthly Manganese Concentration that exceeds $1.0 \mu\text{g}/\text{m}^3$ (the “Exceptional Action Level”), Defendant shall suspend processing and barge unloading of all Affected Materials (with the exception of packaging and outbound shipment operations that are conducted in enclosures controlled by baghouses, provided such baghouses are operating normally (*i.e.* pressure drop within range)), unless there have been no daily exceedances of $1.0 \mu\text{g}/\text{m}^3$ PM_{10} manganese during the last 7 Days of data included in that Monthly Manganese Concentration calculation. Except as to emissions unit(s), if any, addressed under Paragraph 22 below, Defendant may recommence operations that may have been suspended in accordance with this Paragraph upon the earlier of (i) the submission of the Root Cause Analysis pursuant to Paragraph 21 or (ii) a showing that there have been no subsequent daily exceedances of $1.0 \mu\text{g}/\text{m}^3$ PM_{10} manganese for a one week period.

21. Within 30 days of calculating an exceedance of the Exceptional Action Level, Defendant shall submit to EPA for review and approval a Root Cause Analysis to identify any

and all emission unit(s) at the Facility that caused or significantly contributed to increased manganese emissions above the Exceptional Action Level.

a. The Root Cause Analysis shall take into consideration available information and data as described in Paragraph 19.a. and contain the elements identified in Paragraph 19.b. above.

b. Upon receipt of EPA approval of the Root Cause Analysis, Defendant shall implement any corrective action measures and/or additional control(s) identified in the approved Root Cause Analysis in accordance with the approved schedule.

22. Defendant shall suspend or not resume operations at the emission unit(s) identified under the Root Cause Analysis that caused or significantly contributed to increased manganese emissions above the Exceptional Action Level unless and until the identified corrective action measures and/or additional control(s) are implemented. With the exception of the identified emission unit(s), Defendant may resume any other operations for Affected Materials that were suspended pursuant to Paragraph 20 upon submission to EPA of the Root Cause Analysis.

23. Approval of Deliverables. After review of any plan, report, or other item that is required to be submitted for review and approval pursuant to this Consent Decree, 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, identifying the reasons for such disapproval.

24. If the submission is approved pursuant to Paragraph 23, 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 23(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 VIII (Dispute Resolution).

25. If the submission is disapproved in whole or in part pursuant to Paragraph 23(c) or (d), Defendant shall, within 30 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.

26. 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.

27. Any stipulated penalties applicable to the original submission, as provided in Section VI, shall accrue during the 30 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 Decree, the stipulated penalties applicable to the original submission shall be due and payable notwithstanding any subsequent resubmission.

28. 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 VII (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 actions necessary to obtain all such permits or approvals.

V. REPORTING REQUIREMENTS

29. Defendant shall submit the following reports:

a. Within 30 Days of the close of each calendar year after the Date of Lodging of the Consent Decree, until termination of this Decree pursuant to Section XVI (Termination), Defendant shall submit to EPA an Annual Report which includes for the immediately preceding calendar year the following information:

- (1) A narrative description of all Consent Decree activities performed by Defendant during the preceding calendar year; and
- (2) Copies of all records required under this Consent Decree that were generated during the preceding calendar year.

b. By January 31 and July 31 of each calendar year after the date of lodging of this Consent Decree, until termination of this Decree pursuant to Section XVI (Termination), Defendant shall submit to EPA semi-annual compliance reports with regard to its compliance with the Fugitive Dust Plan.

30. 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 VII (Force Majeure).

31. Whenever any violation of this Consent Decree or of any applicable permits or any other event affecting Defendant's performance under this 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 electronic or facsimile transmission 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.

32. All reports shall be submitted to the persons designated in Section XII (Notices).

33. 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.

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

35. 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.

36. 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.

VI. STIPULATED PENALTIES

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

38. Injunctive Relief.

a. The following stipulated penalties shall accrue per violation per Day for each violation of the requirements identified in Subparagraph 38.b:

<u>Penalty Per Violation Per day</u>	<u>Period of Noncompliance</u>
\$750.....	1st through 14th day
\$1,500.....	15th through 30th day
\$3,000.....	31st day and beyond

b. Compliance requirements subject to stipulated penalties in Subparagraph a:

- (1) Fenceline monitoring requirements set forth in Paragraph 8 and Appendix A;
- (2) Affected Materials Tracking System requirements set forth in Paragraph 9-11;
- (3) Digital Video Recording System requirements set forth in Paragraph 12;
- (4) Fugitive dust control measures set forth in Paragraphs 13-15;
- (5) Fugitive Dust Plan requirements set forth in Paragraphs 16-17;
- (6) Root Cause Analysis and Corrective Action requirements set forth in Paragraphs 19-20.

39. Reporting Requirements. The following stipulated penalties shall accrue per violation per Day for each violation of the reporting requirements of Sections IV and V and Appendix A:

<u>Penalty Per Violation Per day</u>	<u>Period of Noncompliance</u>
\$500.....	1st through 14th day
\$750.....	15th through 30th day
\$1,000.....	31st day and beyond

40. 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.

41. Defendant shall pay any stipulated penalty within 30 Days of receiving the United States' written demand, unless Defendant invokes the dispute resolution procedures under Section VIII (Dispute Resolution) within the 30-day period.

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

43. Stipulated penalties shall continue to accrue as provided in Paragraph 40, during any Dispute Resolution, but need not be paid until the following:

a. If the dispute is resolved by agreement 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.

44. Obligations Prior to the Effective Date. Upon the Effective Date, the stipulated penalty provisions of this Decree shall be retroactively enforceable with regard to any and all violations of Paragraphs 8-22 that have occurred prior to the Effective Date, provided that stipulated penalties that may have accrued prior to the Effective Date may not be collected unless and until this Consent Decree is entered by the Court.

45. Defendant shall pay the stipulated penalty due at www.pay.gov 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 Northern District of Ohio 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:

Jeff Kreutzer, Chief Financial Officer
S.H. Bell Company
644 Alpha Drive
PO Box 11495
Pittsburgh, PA 15238 – 3190

Scott Dismukes
Eckert Seamans Cherin & Mellott, LLC
600 Grant Street, 44th Floor
Pittsburgh, PA 15219

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 XII (Notices).

46. 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; and (ii) to the United States via email or regular mail in accordance with Section XII; and (iii) to EPA in accordance with Section XII. Such notice shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in *United States v. S.H. Bell Co.* and shall reference the civil action number, CDCS Number, and DOJ case number 90-5-2-1-11688/1.

47. Defendant shall not deduct any penalties paid under this Decree pursuant to this Section in calculating its federal income tax.

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 X (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 additional injunctive relief, mitigation or offset measures, and/or contempt.

VII. FORCE MAJEURE

51. "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.

52. 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 electronic or facsimile transmission to EPA as provided in

Section XII (Notices), 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.

53. 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.

54. 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.

55. If Defendant elects to invoke the dispute resolution procedures set forth in Section VIII (Dispute Resolution), it shall do so no later than 30 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 51 and 52. 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.

56. This Court shall not draw any inferences nor establish any presumption adverse to any Party as a result of Defendant delivering a notice of Force Majeure or the Parties' inability to reach agreement.

VIII. 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'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 Decree.

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 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 30 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 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.

60. The United States shall serve its Statement of Position within 30 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.

61. Defendant may seek judicial review of the dispute by filing with the Court and serving on the United States, in accordance with Section XII (Notices), a motion requesting judicial resolution of the dispute. The motion must be filed within 30 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.

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. In all disputes arising under this Consent Decree, Defendant shall bear the burden of demonstrating that its position complies with this Consent Decree and the CAA and 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, and Defendant reserves the right to argue the contrary.

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

IX. 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 and, upon request, splits of any samples taken by Defendant or its representatives, contractors, or consultants related to activities under this Consent Decree;

d. obtain documentary evidence, including photographs and similar data related to activities under this Consent Decree; 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, unless technically infeasible.

67. Except for data recorded by any video camera that may be required pursuant to Paragraph 12, until 3 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 retention requirement does not apply to voicemail messages or text messages, so long as those forms of communication are not used for substantive discussions concerning compliance with the Decree. Nor does this retention requirement apply to Defendant's outside counsel or consultants retained specifically for purposes of litigation. 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.

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 documents, records, or other information requested by the United States 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.

X. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

71. This Consent Decree resolves the civil claims of the United States set forth in the Complaint filed in this action through the Date of Lodging.

72. The United States reserves all legal and equitable remedies available to enforce the provisions of this Consent Decree, except as expressly stated in Paragraph 71. This Consent Decree shall not be construed to limit the rights of the United States to obtain penalties or injunctive relief under the CAA, CERCLA, or implementing regulations, or under other federal laws, regulations, or permit conditions, except as expressly stated in Paragraph 71.

73. 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 following the Date of Lodging whether related to the matters addressed in this Consent Decree or otherwise. The inclusion of the Preventative Action Levels and the Exceptional Action Level for ambient manganese concentrations in this Consent Decree shall not restrict the United States from asserting following the Date of Lodging that an imminent and substantial endangerment exists where different concentrations of ambient manganese are present.

74. In any subsequent administrative or judicial proceeding initiated by the United States for injunctive relief, civil penalties, other appropriate relief relating to the Facility, 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 71.

75. 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 CAA, 42 U.S.C. § 7401, et seq., or CERCLA, 42 U.S.C. § 9601, et seq., or with any other provisions of federal, State, or local laws, regulations, or permits.

76. 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.

77. 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.

XI. COSTS

78. 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 stipulated penalties due but not paid by Defendant.

XII. NOTICES

79. Unless otherwise specified in this 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 # 90-5-2-1-11688/1

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 # 90-5-2-1-11688/1

As to EPA: R5enforcement@epa.gov
Attn: Compliance Tracker, AE-18J
Air Enforcement and Compliance Assurance
Branch
U.S. Environmental Protection Agency Region 5
77 W. Jackson Boulevard
Chicago, Illinois 60604

Associate Director, Office of Air Enforcement and
Compliance Assistance
EPA Region 3 (3AP20)
1650 Arch Street
Philadelphia, PA 19103

As to Defendant: John Bell – President
Rusty Davis – Vice President of Operations
S.H. Bell Company
644 Alpha Drive
PO Box 11495
Pittsburgh, PA 15238 – 3190

Scott Dismukes
Eckert Seamans Cherin & Mellott, LLC
600 Grant Street, 44th Floor
Pittsburgh, PA 15219

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

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

XIII. EFFECTIVE DATE

82. 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.

XIV. RETENTION OF JURISDICTION

83. 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 VIII and XV, or effectuating or enforcing compliance with the terms of this Decree.

XV. MODIFICATION

84. 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.

85. Any disputes concerning modification of this Decree shall be resolved pursuant to Section VIII (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).

XVI. TERMINATION

86. After Defendant has completed the requirements of Section IV (Injunctive Relief), has thereafter maintained satisfactory compliance with this Consent Decree and Defendant's permit for a period of 5 years, including but not limited to no exceedances of any Response Action Level for the preceding 2 years, and has paid 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.

87. 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.

88. If the United States does not agree that the Decree may be terminated, Defendant may invoke Dispute Resolution under Section VIII. However, Defendant shall not seek Dispute Resolution of any dispute regarding termination until 45 Days after service of its Request for Termination.

XVII. PUBLIC PARTICIPATION

89. 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 CERCLA Section 122(d)(2), 42 U.S.C. § 9622(d)(2), and 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.

XVIII. SIGNATORIES/SERVICE

90. Each undersigned representative of Defendant and the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice 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.

91. 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.

XIX. INTEGRATION

92. This Consent Decree constitutes the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in the 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 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.

XX. FINAL JUDGMENT

93. 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.

XXI. APPENDICES


94. The following Appendices are attached to and part of this Consent Decree:
“Appendix A” is the Fenceline Monitoring Appendix

Dated and entered this 14th day of February, 2018.

/s/ Benita Y. Pearson
UNITED STATES DISTRICT JUDGE


Signature page in *United States v. S.H. Bell Company* (N.D. Ohio)

FOR THE UNITED STATES OF AMERICA:


JOHN C. CRUIKEN
Assistant Attorney General
Environment and Natural Resources Division
U.S. Department of Justice

Jan. 17, 2017

Date


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Signature page in *United States v. S.H. Bell Company* (N.D. Ohio)

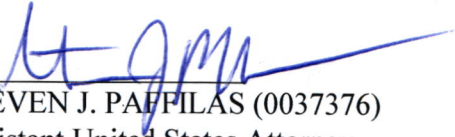
FOR THE UNITED STATES OF AMERICA:

JOHN C. CRUDEN
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Date

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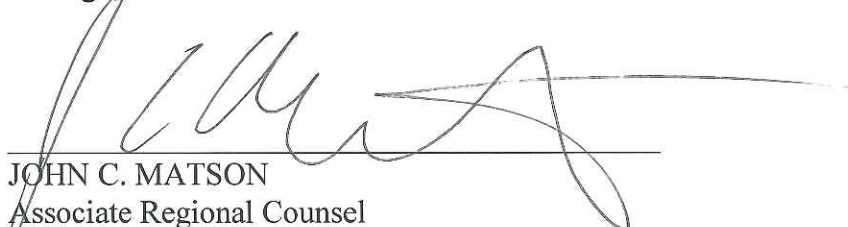
FOR THE U.S. ENVIRONMENTAL PROTECTION
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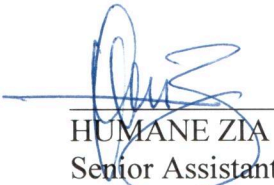
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Signature page in *United States v. S.H. Bell Company* (N.D. Ohio)

FOR S.H. BELL COMPANY:

11 January 2017
Date

John Bell
John Bell, President
S.H. Bell Company

APPENDIX A

Fenceline Monitoring

1. PM₁₀ Monitors.
 - a. Within 45 Days of the Date of Lodging, Defendant shall submit a Fenceline Monitoring Plan to EPA for review and approval that includes proposed site locations at the Facility for Federal Reference Method filter-based PM₁₀ monitors (“East Liverpool Facility Monitors” or “ELF Monitors”) and for a meteorological station. The ELF Monitors shall consist of either:
 - i. Three Hi-Vol monitors sited to capture ambient manganese concentrations at the southern, eastern and western boundaries of the Facility;
 - or
 - ii. Three Low-Vol monitors sited to capture ambient manganese concentrations at the southern, eastern and western boundaries of the Facility and one Hi-Vol monitor co-located with the Low-Vol monitor on the western boundary of the Facility and aligned with the OEPA Water Plant monitor.
 - b. Within 90 days after EPA approves the Fence Line Monitoring Plan, Defendant will procure and install the ELF Monitors and begin operation.
 - c. The PM₁₀ monitoring sites and monitoring equipment shall conform with the following requirements:
 - i. The ELF Monitors shall meet the specifications of FRM monitors identified at www.epa.gov/ttn/amtic/files/ambient/criteria/reference-equivalent-methods-list.pdf
 - ii. Defendant shall, to the extent feasible, follow all monitoring, siting, and quality assurance criteria in 40 CFR Part 58, Appendix A “Quality Assurance Requirements for SLAMS, SPMs, and PSD Air Monitoring”, and Appendix D “Network Design Criteria for Ambient Air Quality Monitoring,” Appendix E, and other associated appendices.
 - iii. SHB shall operate the ELF Monitors in accordance with operating procedures identified in the Quality Assurance Handbook for Air Pollution Measurement Systems “Volume I: A Field Guide to Environmental

Quality Assurance” and “Volume II: Ambient Air Quality Monitoring Program.”

- d. SHB shall archive all filters from the ELF Monitors for at least 3 years following termination of this Consent Decree.
2. Wind Speed and Direction Monitoring. Defendant shall operate a meteorological monitoring station at a location representative of local wind conditions. Defendant may install a new meteorological monitoring station or utilize or update an existing meteorological monitoring station, however the meteorological monitoring station shall meet the following requirements:
 - a. At a minimum, the meteorological monitoring station must continuously measure and record wind speed and wind direction at one-hour intervals throughout the entire ambient monitoring period.
 - b. Defendant shall correlate 24-hr average manganese PM₁₀ measurements with wind speed and wind direction data to determine source direction and the effects of wind speed on manganese PM₁₀ concentrations (*e.g.*, a wind rose that displays wind direction frequency).
 - c. The meteorological monitoring station must also include calibrated ambient temperature and pressure instrumentation for purposes of determining corrected (actual) manganese PM₁₀ concentrations as recorded by the ELF Monitors.
 - d. With respect to the meteorological monitoring station, Defendant shall follow the Quality Assurance Handbook for Air Pollution Measurement Systems Volume IV: Meteorological Measurements Version 2.0 (Final) found at: http://www.epa.gov/ttnamti1/files/ambient/met/Volume%20IV_Meteorological_Measurements.pdf.
3. General Operational Requirements.
 - a. Defendant shall be responsible for all operation, calibration, quality assurance, and maintenance associated with the ELF Monitors and the meteorological station. Defendant shall properly change the PM₁₀ filters in each monitor. Maintenance shall include the replacement of any equipment, cleaning, and all other maintenance activities in accordance with and on the schedules specified in the manufacturer’s maintenance manuals.
 - b. The internal clocks of all PM₁₀ analyzers, data loggers, and the wind speed and wind direction data logger shall be synchronized to within 60 seconds of each other (local time and not adjusted for Daylight Savings Time) and shall be checked against a calibrated reference clock at least once every 30 days.

Instrument clocks that are more or less than 60 seconds from the reference clock shall be reset to within 60 seconds of the reference clock. Each of these inconsistencies and each reset time shall be noted in the study log.

- c. Within 60 days of EPA approval of the monitoring sites for the ELF Monitors and meteorological station, Defendant shall submit a Quality Assurance Project Plan (“QAPP”) to EPA for review and approval. The guidance document for writing a QAPP is “EPA Guidance for Quality Assurance Project Plans,” EPA QA/G-5, EPA/600/R-02/009 - December 2002. The guidance is available at <http://www.epa.gov/QUALITY/qs-docs/g5-final.pdf>.
 - d. Defendant shall provide EPA, OEPA, and PADEP access to the monitor sites and respond to any inquiries regarding monitor siting, operations, documentation, or maintenance. In the event that an inspector or auditor identifies problems, Defendant shall propose appropriate corrective actions and implement the EPA approved corrective actions. Any changes made to monitor siting, operations, or maintenance of the ELF Monitors or the meteorological station shall be approved by EPA prior to the change.
 - e. Defendant shall keep a daily log and monthly reports of the following information:
 - i. Each monitor visit for maintenance, operation, and operator activities;
 - ii. Any monitoring system downtime (date, time, duration, and reason) along with any corrective actions taken;
 - iii. Any possible interferences observed by the operator such as nearby construction or demolition; and
 - iv. Any checks, calibrations, or audits provided by the manufacturer, performed by Defendant or others.
4. Sample Collection Frequency. Defendant will collect filter samples from each ELF Monitor until termination of the Consent Decree. In any period of reduced analysis under Paragraph 5, Defendant will collect filter samples on a schedule correlated to the lower frequency of filter collection.
5. The minimum Response Action Levels for sampling analysis for manganese are: (i) 0.30 $\mu\text{g}/\text{m}^3$ rolling annual average 12-month PM_{10} ; and (ii) 0.57 $\mu\text{g}/\text{m}^3$ calendar monthly average PM_{10} .
- a. For the initial year (“Year 1”), Defendant shall collect daily filter samples from each ELF Monitor on the following schedule:

- i. Daily from three Hi-Vol ELF Monitors; or
 - ii. Daily from three Low-Vol ELF Monitors and on a 1-in-3 day schedule from the Hi-Vol ELF Monitor.
 - b. If results at any of the ELF Monitors exceed a Response Action Level during Year 1, Defendant shall continue collecting filters from each of the ELF Monitor on the initial schedule for the remainder of Year 1 and for Year 2.
 - c. Except as provided for in the preceding Subparagraph, if the results of any ELF Monitor remain below all Response Action Levels for a consecutive 12-month period, Defendant may request that EPA reduce the collection frequency for such monitor(s) from daily to 1-in-3 days or 1-in-3 days to 1-in-6 days, as applicable.
 - d. For any ELF Monitor where the collection frequency has been decreased to 1-in-3 days, if the results remain below all Response Action Levels for an additional consecutive 12-month period, Defendant may request that EPA reduce the collection frequency for such monitor to 1-in-6 days.
 - e. Following Year 1, if the results for any ELF Monitor falls below $0.1 \mu\text{g}/\text{m}^3$ Annual Average, Defendant may request that EPA reduce the collection frequency for such monitor to 1-in-6 days.
 - f. Following Year 1, if the results for any ELF Monitor falls below $0.05 \mu\text{g}/\text{m}^3$ Annual Average, Defendant may seek EPA approval to cease sending filters to the lab for analysis from such monitor, but shall still collect filters every sixth day for archiving.
 - g. For any ELF Monitor where the collection frequency has been reduced to 1-in-3 days or 1-in-6 days, if results from such monitor subsequently exceed a Response Action Level, the collection frequency at every ELF Monitor shall revert to its initial collection frequency (as set in Paragraph 5.a. above) for at least the following 12 months, unless otherwise agreed to in writing by EPA.
 - h. Any reduction in frequency shall occur only after approval by EPA after consideration of monitoring, meteorological data, and production information.
6. Regardless of any reductions in collection frequency pursuant to Paragraph 5, Defendant must continue to collect and analyze filters from a minimum of two monitors at all times until termination of the Consent Decree.

7. Laboratory analysis.

- a. Filters collected from the ELF Monitors shall be analyzed as follows:
 - i. On a weekly basis, Defendant will send collected filters to a certified laboratory, selected subject to EPA approval, for batch, weekly average or daily analysis for each ELF monitor;
 - ii. If the results of a batch, weekly average analysis exceed $0.57 \mu\text{g}/\text{m}^3$ for an ELF Monitor, the individual daily sample filters that had been batched and averaged shall be individually analyzed for that ELF Monitor.
 - iii. PM_{10} manganese concentrations shall be determined via Method IO-3.5, *Determination of Metals in Ambient Particulate Matter Utilizing Inductively Couple Plasma/Mass Spectrometry* for Hi-Vol samples and via Method IO-3.3, *Determination of Metals in Ambient Particulate Matter Using X-Ray Fluorescence (XRF) Spectroscopy* for Low-Vol samples; and
 - iv. Defendant shall require that its laboratory(ies) submit preliminary sampling results to Defendant within 10 business days after filters are received by the laboratory(ies) and final reports of sampling results within 30 business days after filters are received by the laboratory(ies). For any daily samples required pursuant to Paragraph 7.a.ii., the laboratory(ies) shall submit preliminary sampling results to Defendant within 10 business days of calculating the exceedance.

8. Reporting Requirements

- a. Defendant shall provide preliminary sampling results and final reports to EPA, OEPA, and PADEP by email within 2 days of Defendant's receipt of the results from the lab. Preliminary sampling results shall be provided via an electronic data deliverable, such as an excel spreadsheet, with results shown in $\mu\text{g}/\text{m}^3$.
- b. For every sample, Defendant shall report the data as provided by the laboratory(ies), shall report the minimum detection limit (MDL), and shall flag any value that is below the MDL.
- c. Each month, Defendant shall provide to EPA on CD all data from each monitor, lab results and meteorological monitoring site, and 24-hour data from all monitors as ASCII comma-delimited files. The files should have a single "header" row, with all following rows being individual records, and all columns being a single variable according to the header row. All filter analysis data, including any specification data, shall also be provided.

- d. Beginning with the inception of the Fenceline Monitoring Program, Defendant shall determine the Rolling Annual Manganese Concentration for each ELF Monitor in accordance with this subparagraph.
 - i. Calculate the most recent 12-month average (not calendar year) of PM₁₀ manganese at the OEPA Water Plant location.
 - ii. After Month 1 of PM₁₀ manganese monitoring at the Facility, commence using ELF Monitor data by removing Month 1 of the same monitoring from the OEPA Water Plant location and calculate a new 12-month average.
 - iii. Repeat this procedure on a monthly basis until all OEPA Water Plant location PM₁₀ manganese results have been removed from the calculation and replaced by current ELF Monitor data, after Month 12.
 - iv. Thereafter, the Rolling Annual Manganese Concentrations shall be calculated solely from the data collected at the specific ELF Monitor.