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IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF ARIZONA

Midwest Energy Emissions Corp., a Delaware corporation, Plaintiff, v. Tucson Electric Power Co., an Arizona corporation; San Carlos Resources Inc., an Arizona corporation; Salt River Project Agricultural Improvement and Power District, an Arizona agricultural improvement district; Tri-State Generation and Transmission Association Inc., a Colorado cooperative association; Springerville Unit 3 Holding LLC, a Delaware limited liability company; and Springerville Unit 3 Partnership LP, a Delaware limited partnership, Defendants.	Case No. **COMPLAINT** **JURY TRIAL DEMANDED**

Plaintiff Midwest Energy Emissions Corp. ("ME2C") files this Complaint against Defendants Tucson Electric Power Company, San Carlos Resources Inc., Salt River Project Agricultural Improvement and Power District, Tri-State Generation and Transmission Association Inc., Springerville Unit 3 Holding LLC, and Springerville Unit 3 Partnership LP (individually and collectively, "Defendants") for patent infringement

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under 35 U.S.C. § 271. ME2C alleges as follows:

THE PARTIES

1. ME2C is a Delaware corporation with its principal place of business at 1810 Jester Drive, Corsicana, Texas 75109.

2. Defendant Tucson Electric Power Company ("TEP") is an Arizona corporation with a principal place of business at 88 East Broadway Boulevard, HQE910, Tucson, Arizona 85701.

3. Defendant San Carlos Resources Inc. ("San Carlos") is an Arizona corporation with a principal place of business at 88 East Broadway Boulevard, HQE910, Tucson, Arizona 85701.

4. Defendant Salt River Project Agricultural Improvement and Power District ("SRP") is an Arizona agricultural improvement district organized under Ariz. Rev. Stat. Ann. § 48-2302, with a principal place of business at 1500 North Mill Avenue, Tempe, Arizona 85281.

5. Defendant Tri-State Generation and Transmission Association Inc. ("Tri-State") is a Colorado cooperative association with its principal place of business at 1100 West 116th Avenue, Westminster, Colorado 80234. Tri-State is registered to do business in the state of Arizona.

6. Defendant Springerville Unit 3 Holding LLC ("Springerville Holding") is a Delaware limited liability company with its principal place of business at 1100 West 116th Avenue, Westminster, Colorado 80234. Springerville Holding is registered to do business in the state of Arizona.

7. Defendant Springerville Unit 3 Partnership LP ("Springerville Partnership") is a Delaware limited partnership with its principal place of business at 1100 West 116th Avenue, Westminster, Colorado 80234.

JURISDICTION AND VENUE

8. This action includes a claim of patent infringement arising under the patent laws of the United States, 35 U.S.C. §§ 1 *et seq*. This Court has jurisdiction over this action

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pursuant to 28 U.S.C. §§ 1331 and 1338(a).

9. This Court has general personal jurisdiction over Defendants TEP, San Carlos, and SRP because each of their affiliations with the State of Arizona are so systematic and continuous as to render each essentially at home in this state. In particular, each of TEP, San Carlos, and SRP is incorporated in or organized under the laws of Arizona, has an agent for service of process in Arizona, and has a principal place of business in Arizona.

10. This Court has specific personal jurisdiction over Defendants because they have established minimum contacts with this forum such that the exercise of jurisdiction over Defendants would not offend traditional notions of fair play and substantial justice. Specifically, Defendants own and/or operate within this state the coal-fired power plants that commit the acts of infringement alleged below.

11. Venue is proper in this district pursuant to 28 U.S.C. § 1400(b) with respect to TEP, San Carlos, and SRP because they each reside in this district. Additionally, TEP, San Carlos, and SRP each commit the acts of infringement alleged below in this district at least at the Springerville Generating Station and/or the Coronado Generating Station, where, in addition to their principal places of business within this district, TEP, San Carlos, and SRP have a regular and established place of business.

12. Venue is proper in this district pursuant to 28 U.S.C. § 1400(b) with respect to Tri-State, Springerville Holding, and Springerville Partnership because they have committed the acts of infringement alleged below in this district at the Springerville Generating Station, where they have a regular and established place of business.

ASSERTED PATENTS

13. On July 9, 2019, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 10,343,114 (the "'114 patent") entitled "Sorbents for the Oxidation and Removal of Mercury." A copy of the '114 patent is attached as **Exhibit A**.

14. On March 17, 2020, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 10,589,225 (the "'225 patent") entitled "Sorbents for the

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Oxidation and Removal of Mercury." A copy of the '225 patent is attached as **Exhibit B**.

15. On March 24, 2020, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 10,596,517 (the "'517 patent") entitled "Sorbents for the Oxidation and Removal of Mercury." A copy of the '517 patent is attached as **Exhibit C**.

16. On June 2, 2020, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 10,668,430 (the "'430 patent") entitled "Sorbents for the Oxidation and Removal of Mercury." A copy of the '430 patent is attached as **Exhibit D**.

17. On March 3, 2021, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 10,933,370 (the "'370 patent") entitled "Sorbents for the Oxidation and Removal of Mercury." A copy of the '370 patent is attached as **Exhibit E**.

18. ME2C obtained an assignment of the patents-in-suit from the Energy & Environmental Research Center ("EERC") at the University of North Dakota including any rights retained by the EERC to receive past damages. Thus, during the time period of alleged infringement, ME2C held all substantial rights in the patents-in-suit.

FACTUAL ALLEGATIONS

I. The Federal Government Resolves to Regulate Mercury Emissions from Power Plants

19. In 1990, Congress passed the Clean Air Act Amendments of 1990.

20. That law required the U.S. Environmental Protection Agency ("EPA") to study the impact of various air pollutants, including mercury.

21. To assist in the research, in 1992, the EPA established a National Center for Excellence at the EERC referred to as the Center for Air Toxic Metals ("CATM").

22. In 1997 and 1998, the EPA issued two reports to Congress: Mercury Study Report to Congress (issued December 1997) and Study of Hazardous Air Pollutant Emissions from Electric Utility Steam (issued February 1998). As an outcome of these studies, the EPA found a pressing need for regulation of mercury pollution from coal-fired power plants. Unfortunately, it also found that no existing technologies were capable of significantly reducing the mercury pollution from those plants.

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23. In the wake of these reports, various governmental and industry organizations injected millions of dollars into scientific research and experimental studies in the search for new mercury capture technologies.

II. The Inventors of the Patents-in-Suit Develop Mercury Capture Solutions

24. Researchers at the EERC were instrumental in developing new techniques for studying this problem and ultimately solving it.

25. In 2002, the EPA surveyed the state of research in this field and produced a follow-up report: Control of Mercury Emissions from Coal-Fired Electric Utility Boilers: Interim Report. This report identified some promising areas of research and noted that some technologies were available for reducing mercury emissions. However, the EPA recognized that there was no universal solution to this problem and that more work remained to be done.

26. During this time, the inventors of the patents-in-suit were researching the issue of mercury capture at the EERC. Through their work, they uncovered some of the complex chemistry that occurs in a coal-fired boiler.

27. They further discovered a number of methods for improving mercury capture. In particular, they found that applying a halogen additive such as bromine and bromide compounds onto coal or into a combustion chamber, when combined with sorbent injection, could dramatically reduce the mercury content of coal-fired power plant emissions.

28. By 2004, the inventors filed a provisional application that would lead to the patents-in-suit. This application, and the subsequently issued patents, cover some of their discoveries and various applications of their discoveries. In particular, the inventors discovered, and ultimately proved, the benefits of combining halogen treatments (*e.g.*, bromine containing materials) in-flight with backend sorbents (*e.g.*, activated carbon).

29. In 2011, the EPA finalized the first national standards to reduce mercury and other toxic air pollution from coal-fired plants (the Mercury and Air Toxics Standards or "MATS"). Most coal-fired power plants were required to comply with this rule by 2016.

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III. Congress Creates the Section 45 Refined Coal Tax Credit

30. While the EPA was working on addressing the issue of mercury emissions, Congress also took action. In 2004, Congress passed the American Jobs Act, which created a new tax credit related to the production of refined coal (referred to as "Section 45 tax credits").

31. Under this law, a refined coal producer can receive an inflation-adjusted tax credit for each ton of refined coal sold to a power plant that results in a 40% reduction in mercury emissions and a 20% reduction in NOx emissions.

32. Because of this highly lucrative law, companies jumped at the chance to collect the tax credits. Indeed, the refined coal tax credit program resulted in companies receiving hundreds of millions of dollars in tax credits each year.

33. The Section 45 tax credit program expired on December 31, 2021, and was not renewed or extended.

IV. ME2C Attempts to Compete in the Market for Mercury Capture Technologies

34. ME2C is the commercial extension of the patented technology.

35. ME2C develops, markets, and sells products and services that practice the patented technology.

36. ME2C's product development efforts have been led by named inventor and Chief Technology Officer John Pavlish. ME2C has developed both sorbent enhancement additives and activated carbon sorbents for practicing the technology described in the patents-in-suit and for practicing other patented methods owned by ME2C.

37. ME2C has publicized its patent portfolio and explained the scope of the patented technology through its website, its interactions with customers and potential customers, and through presentations at industry events such as the MEGA Symposium, the Energy, Utility & Environment Conference, the Lignite Energy Conference, and the Air Quality Conference.

38. ME2C has attempted to compete in the market for mercury capture technologies. In particular, it attempted to negotiate supply contracts with coal-fired power

plants in anticipation of MATS regulations that became effective in 2015 and 2016, and also periodically afterwards as plants re-evaluate their MATS compliance strategies.

39. However, ME2C was at an unfair disadvantage with respect to the refined coal entities that encouraged power plants to use ME2C's patented technology instead of developing new technologies for refined coal. As proven to the jury in the Delaware trial discussed below, refined coal providers have induced power plant operators to infringe the patents-in-suit by offering the patented technology at no or artificially low costs to the plant operators.

40. In addition, even after the expiration of the refined coal tax credits, power plants connected to a refined coal facility—which were provided to the plants for free or low cost—can now purchase various materials from different suppliers at low prices and employ them in a manner that infringes ME2C's patents.

41. Despite these difficulties, since the patents have issued, ME2C has sold its products and services to various power plants throughout the country.

V. ME2C Receives a Jury Verdict in Its Favor on Refined Coal Producers' Infringement of the Patents-In-Suit

42. In July 2019, ME2C filed a complaint for patent infringement in the United States District Court for the District of Delaware against various entities involved in producing refined coal and coal-fired power plant operators that used ME2C's patented technology, alleging infringement of multiple patents, including four of the patents-in-suit here (the "Delaware Case").

43. In relevant part, ME2C alleged that the coal-fired power plants at issue directly infringed the asserted patents by (1) burning coal with added halide (*e.g.*, calcium bromide), (2) injecting activated carbon into the flue gas downstream of the power plants' boilers, and (3) using electrostatic precipitators ("ESPs") or baghouses to capture particulate matter, including activated carbon bound to pollutants like mercury in the flue or exhaust.

44. ME2C also alleged that the defendant refined coal entities indirectly

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infringed the asserted patents by making and selling refined coal, and by inducing power plants that purchased that refined coal, to practice ME2C's patented methods without permission in the manner described in the previous paragraph.

45. Before trial, all of the accused power plant operators and most of the accused refined coal entities, including refined coal suppliers for the Springerville and Coronado Generating Stations, settled with ME2C and were voluntarily dismissed from the case. The remaining defendants were a group of affiliated refined coal entities, referred to herein as "CERT."[1]

46. On March 1, 2024, following a five-day trial, the jury found CERT liable for contributory and induced infringement of the '517 and '114 patents, and found that CERT's infringement was willful. Implicit in the jury's finding (and, in fact, required by the jury instructions and controlling law) was also a finding that the power plants to which CERT provided refined coal directly infringed the '517 and '114 patents.

VI. Defendants' Accused Power Plants and Acts of Infringement

47. The Springerville Generating Station is a coal-fired power plant in Springerville, Arizona.

48. Defendant TEP owns Unit 1 of the Springerville Generating Station and operates all four of its generating units.

49. Defendant San Carlos is a wholly-owned subsidiary of TEP.

50. San Carlos owns Unit 2 of the Springerville Generating Station.

51. On information and belief, TEP operates San Carlos for the benefit of TEP. Profits made by San Carlos are paid to TEP, and expenses incurred by San Carlos are paid by TEP.

52. Defendant Tri-State owns a 51 percent equity interest, including the 1 percent general partner equity interest, in Defendant Springerville Partnership, which is the 100 percent owner of Defendant Springerville Holding.

[1] The CERT entities include CERT Operations II LLC, CERT Operations IV LLC, CERT Operations V LLC, CERT Operations RCB LLC, Senescence Energy Products LLC, Bascobert (A) Holdings LLC, Buffington Partners LLC, Larkwood Energy LLC, Rutledge Products LLC, Cottbus Associates LLC, Springhill Resources LLC, and Marquis Industrial Company LLC.

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53. Defendant Springerville Holding owns Springville Unit 3, which it leases to Defendant Tri-State, its corporate parent.

54. On information and belief, Tri-State operates Springerville Partnership and Springerville Holding for the benefit of Tri-State. Profits made by Springerville Partnership and Springerville Holding are paid to Tri-State, and expenses incurred by Springerville Partnership and Springerville Holding are paid by Tri-State.

55. Defendant SRP owns Unit 4 of the Springerville Generating Station.

56. On information and belief, Defendants SRP and Tri-State compensate TEP for its operation of the Springerville Generating Station's four units.

57. During operation, the Springerville Generating Station burns coal and added Br_2, HBr, and/or a bromide compound in the combustion chamber.

58. During operation, the Springerville Generating Station injects activated carbon sorbent downstream of the combustion chamber.

59. During operation, the Springerville Generating Station employs baghouses and/or electrostatic precipitators to collect mercury with bromine and activated carbon.

60. The Coronado Generating Station is a coal-fired power plant in St. Johns, Arizona.

61. Defendant SRP owns and operates the Coronado Generating Station.

62. During operation, the Coronado Generating Station burns coal and added Br_2, HBr, and/or a bromide compound in the combustion chamber.

63. During operation, the Coronado Generating Station injects activated carbon sorbent downstream of the combustion chamber.

64. During operation, the Coronado Generating Station employs baghouses and/or electrostatic precipitators to collect mercury with bromine and activated carbon.

65. The "Accused Coal Plants" include at least the Springerville Generating Station, the Coronado Generating Station, and any other coal-fired power plants owned or operated, at least in part, by a Defendant that combusts coal in a combustion chamber with bromine and/or bromide that has been added to the coal and/or that has been provided to

the combustion chamber, and where they inject a sorbent material comprising activated carbon downstream of the combustion chamber and collect mercury bound to activated carbon in a particulate collection device (*e.g.*, baghouse or ESP).

66. In doing so, the Accused Coal Plants perform the methods claimed by the patents-in-suit, and thus directly infringe the patents-in-suit.

67. As the parent and controller of San Carlos, TEP also induces San Carlos to perform the steps of the patented methods.

68. On information and belief, TEP does so by exercising control over San Carlos, providing technical, administrative, logistical and/or financial services to San Carlos, and/or negotiating standard form or bulk agreements for products and services related to mercury control.

69. San Carlos and TEP share the same directors and officers. For example, Susan M. Gray serves as Director and President for both San Carlos and TEP; Frank P. Marino serves as Director and Chief Financial officer of TEP, and Director and Treasurer of San Carlos; and Todd C. Hixon serves as Director and Corporate Secretary of both San Carlos and TEP. These and other common officers and/or employees are responsible for the infringing acts at the coal plants owned and/or operated by San Carlos and TEP.[2]

70. San Carlos and TEP share a principal place of business.

71. TEP touts the fact that San Carlos is a subsidiary of TEP and contributes to the consolidated financials of TEP.[3]

72. Additionally, TEP touts the fact that it makes decisions regarding the operation of coal-fired power plants owned by TEP and San Carlos, including power plants where acts of infringement have occurred. For example, TEP negotiates long-term agreements for the purchase and delivery of coal at Springerville, including a coal

[2] *Compare* Arizona Corporations Commission, Entity Information for San Carlos Resources Inc., (last visited July 15, 2024), https://ecorp.azcc.gov/BusinessSearch/BusinessInfo?entityNumber=05141510, *with* TEP's 2023 Form 10-K at 10, 82, https://www.sec.gov/Archives/edgar/data/100122/000010012224000002/tep-20231231.htm.

[3] TEP's 2023 Form 10-K at 5, 43, https://www.sec.gov/Archives/edgar/data/100122/000010012224000002/tep-20231231.htm.

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transportation agreement for Springerville Unit 1 and Unit 2, which is owned by San Carlos.[4]

73. In light of the above, San Carlos is an agent of TEP.

74. Also in light of the above, because of its complete domination and control over its subsidiaries, TEP is the alter ego of San Carlos.

75. As the parent and controller of Springerville Holding, Tri-State also induces Springerville Holding to perform the steps of the patented methods.

76. On information and belief, Tri-State does so by exercising control over Springerville Holding, providing technical, administrative, logistical and/or financial services to Springerville Holding, and/or negotiating standard form or bulk agreements for products and services related to mercury control.

77. Tri-State touts that it has "the full, exclusive and complete right, power and discretion to operate, manage and control the affairs of the Springerville Partnership and take certain actions necessary to maintain the Springerville Partnership in good standing without the consent of the limited partners."[5]

78. Tri-State further touts that Springerville Holding "has historically not demonstrated an ability to finance its activities without additional financial support," and that "[t]he financial support is provided by [Tri-State's] remittance of lease payments in order to permit [Springerville Holding], the holder of the Springerville Unit 3 assets, to pay the debt obligations and equity returns of the Springerville Partnership." [6]

79. Tri-State has "the primary risk (expense) exposure in operating the Springerville Unit 3 assets and are responsible for 100 percent of the operation, maintenance and capital expenditures of Springerville Unit 3 and the decisions related to those expenditures including budgeting, financing and dispatch of power."[7]

80. In light of the above, Springerville Holding is an agent of Tri-State.

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[4] *Id.* at 60.
[5] Tri-State's 2023 Form 10-K at 84, https://www.sec.gov/Archives/edgar/data/1637880/000163788024000019/tris-20231231.htm.
[6] *Id.* at 85.
[7] *Id.*

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81. Also in light of the above, because of its complete domination and control over its subsidiaries, Tri-State is the alter ego of Springerville Holding.

82. All Defendants are jointly and severally liable for the acts of infringement committed with respect to the jointly owned and operated Springerville Generating Station.

83. Defendants Tri-State, Springerville Partnership, and Springerville Holding are jointly and severally liable for the acts of infringement committed with respect to coal-fired power plants owned or operated by Springerville Holding.

84. Defendants TEP and San Carlos are jointly and severally liable for the acts of infringement committed with respect to coal-fired power plants owned or operated by San Carlos.

85. Questions of fact common to all Defendants will arise in this action, including at least facts related to infringement of the patents at locations where Defendants are jointly and severally liable, facts related to the supply of the same bromine based additives and activated carbon sorbents to power plants at issue in this case, facts related to control of related corporate entities, facts related to ownership and/or operation of jointly owned power plants, and facts related to infringement and validity of the patents.

86. Representatives from ME2C have contacted representatives from Defendants and attempted to negotiate a commercial agreement with respect to Defendants' practicing ME2C's patented processes.

87. Representatives from ME2C contacted representatives from Defendant TEP on November 5, 2021, and attempted to negotiate an agreement with respect to TEP's practicing ME2C's patented processes, including TEP's practicing of all the patents-in-suit. At that time, TEP was unwilling to enter into an agreement with ME2C which would include permission to use ME2C's patented technology, thus leaving ME2C no choice but to file this lawsuit.

88. Representatives from ME2C contacted representatives from Defendant SRP on November 5, 2021, and attempted to negotiate an agreement with respect to SRP's practicing ME2C's patented processes, including SRP's practicing of all the patents-in-

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suit. At that time, SRP was unwilling to enter into an agreement with ME2C which would include permission to use ME2C's patented technology, thus leaving ME2C no choice but to file this lawsuit.

89. At that time, ME2C was involved in patent infringement litigation against other parties, and ME2C sought to resolve that litigation before filing lawsuits against other infringers. As noted above, ME2C had negotiated settlement agreements or obtained a verdict of infringement against those parties by March 2024.

90. ME2C informed Defendants TEP and SRP of its success in that litigation, and reiterated that they continued to infringe ME2C's patents.

91. In addition, ME2C is one of a small number of companies that provides bromine-containing additives and activated carbon sorbents for mercury control at coal-fired power plants. It is reasonable to infer that Defendants have done at least some due diligence on potential suppliers. During that process, it is likely that they would have discovered the patents-in-suit from the U.S. Patent Office, Google Patents, ME2C publications and product literature, and/or ME2C's website.

92. It is also reasonable to infer that Defendants would have reviewed the prosecution history for the ME2C patents known to Defendants and would be generally aware of other patents in the same family.

93. Accordingly, Defendants' infringement of the patents-in-suit is willful. Defendants knew or should have known that their actions constituted infringement.

94. Defendants may not avail themselves of 35 U.S.C. § 287 as a defense because ME2C is under no obligation to mark performance of the patented methods.

95. Defendants' acts of infringement have been willful as of the date they became aware of the patented technology and the patents-in-suit, and in any event no later than the filing of this Complaint and/or the date this Complaint was served upon each Defendant.

COUNT ONE: INFRINGEMENT OF THE '114 PATENT

96. ME2C incorporates by reference the preceding paragraphs as if fully set forth

herein.

97. The ’114 patent, entitled “Sorbents for the Oxidation and Removal of Mercury”, was issued on July 9, 2019, naming Edwin S. Olson, Michael J. Holmes, and John H. Pavlish as the inventors. *See* Exhibit A (the ’114 patent).

98. ME2C owns all rights, title, and interest in the ’114 patent, and holds all substantial rights pertinent to this suit, including the right to sue and recover for all past, current, and future infringement.

99. The ’114 patent is valid and enforceable and directed to patentable subject matter.

100. Defendants infringe at least one of claims 1-30 of the ’114 patent.

101. ME2C provides the following explanation of infringement with regard to an exemplary claim.

102. Claim 25 of the ’114 patent recites: “A method of separating mercury from a mercury-containing gas.” The Accused Coal Plants perform this method in order to comply with federal and/or state mercury regulations.

103. Claim 25 of the ’114 patent recites: “combusting coal in a combustion chamber to provide the mercury-containing gas, wherein the coal comprises added Br_2, HBr, a bromide compound, or a combination thereof, added to the coal upstream of the combustion chamber, or the combustion chamber comprises added Br_2, HBr, a bromide compound, or a combination thereof, or a combination thereof.” The Accused Coal Plants perform this step by burning coal with an added Br_2, HBr, a bromide compound, or a combination thereof and/or by adding Br_2, HBr, a bromide compound, or a combination thereof to the combustion chamber.

104. Claim 25 of the ’114 patent recites: “injecting a sorbent material comprising activated carbon into the mercury containing gas downstream of the combustion chamber.” The Accused Coal Plants perform this step by injecting activated carbon sorbent downstream of the combustion chamber.

105. Claim 25 of the ’114 patent recites: “contacting mercury in the mercury-

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containing gas with the sorbent, to form a mercury/sorbent composition." The Accused Coal Plants perform this step because mercury contained in the gas exiting the combustion chamber contacts the sorbent as all of this material is contained in the same gas.

106. Claim 25 of the '114 patent recites: "separating the mercury/sorbent composition from the mercury-containing gas, to form a cleaned gas." The Accused Coal Plants perform this step using equipment, such as baghouses or electrostatic precipitators, to collect the mercury captured by the sorbent in order to comply with mercury regulations.

107. Defendants have and continue to directly infringe, literally and/or under the doctrine of equivalents, the '114 patent under 35 U.S.C. § 271(a).

108. In addition, Defendants TEP and Tri-State induce their respective subsidiary Defendants to infringe under 35 U.S.C. § 271(b). TEP and Tri-State are each aware of the '114 patent, but on information and belief, nonetheless aid or encourage their subsidiaries to infringe by taking part in the supply contract process for activated carbon and bromine-containing additives at coal-fired power plants that directly infringe and by signing, and/or aiding or encouraging their subsidiaries to sign, contracts with suppliers that provide the activated carbon and bromine-containing additives that lead to infringement.

109. In addition (or in the alternative), Defendants San Carlos, Springerville Holding, Tri-State, and SRP induce the operator of Springerville Generating Station, TEP, to infringe under 35 U.S.C. § 271(b). San Carlos, Springerville Holding, Tri-State, and SRP are each aware of the '114 patent, but on information and belief, nonetheless aid or encourage the operator of Springerville Generating Station, TEP, to infringe by taking part in the supply contract process for activated carbon and bromine-containing additives at coal-fired power plants that directly infringe and by signing, and/or aiding or encouraging TEP to sign, contracts with suppliers that provide the activated carbon and bromine-containing additives that lead to infringement.

110. Defendants' acts of infringement have caused damage to ME2C. ME2C is entitled to recover from Defendants the damages sustained by ME2C as a result of Defendants' wrongful acts in an amount to be proven at trial.

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111. In addition, the infringing acts and practices of Defendants have caused, are causing, and, unless such acts and practices are enjoined by the Court, will continue to cause immediate and irreparable harm to ME2C for which there is no adequate remedy at law, and for which ME2C is entitled to injunctive relief under 35 U.S.C. § 283.

COUNT TWO: INFRINGEMENT OF THE '517 PATENT

112. ME2C incorporates by reference the preceding paragraphs as if fully set forth herein.

113. The '517 patent, entitled "Sorbents for the Oxidation and Removal of Mercury", was issued on March 24, 2020, naming Edwin S. Olson, Michael J. Holmes, and John H. Pavlish as the inventors. *See* Exhibit C (the '517 patent).

114. ME2C owns by assignment all rights, title, and interest in the '517 patent, and holds all substantial rights pertinent to this suit, including the right to sue and recover for all past, current, and future infringement.

115. The '517 patent is valid and enforceable and directed to patentable subject matter.

116. Defendants infringe at least one of claims 1-30 of the '517 patent.

117. ME2C provides the following explanation of infringement with regard to an exemplary claim.

118. Claim 1 of the '517 patent recites: "A method for reducing mercury in a mercury-containing gas." The Accused Coal Plants perform this method in order to comply with federal and/or state mercury regulations.

119. Claim 1 of the '517 patent recites: "combusting coal in a combustion chamber, the coal comprising an additive comprising Br_2, HBr, a bromide compound, or a combination thereof, to form the mercury-containing gas." The Accused Coal Plants perform this step because they combust coal with an additive comprising Br_2, HBr, a bromide compound, or a combination thereof to form mercury-containing gas.

120. Claim 1 of the '517 patent recites: "collecting mercury in the mercury-containing gas with a sorbent added to the mercury-containing gas, the sorbent comprising

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activated carbon." The Accused Coal Plants perform this step by adding sorbent containing activated carbon to the gas that exits the combustion chamber. The mercury in the gas is then collected by equipment, such as baghouses or electrostatic precipitators.

121. Defendants have and continue to directly infringe, literally and/or under the doctrine of equivalents, the '517 patent under 35 U.S.C. § 271(a).

122. In addition, Defendants TEP and Tri-State induce their respective subsidiary Defendants to infringe under 35 U.S.C. § 271(b). TEP and Tri-State are each aware of the '517 patent, but on information and belief, nonetheless aid or encourage their subsidiaries to infringe by taking part in the supply contract process for activated carbon and bromine-containing additives at coal-fired power plants that directly infringe and by signing, and/or aiding or encouraging their subsidiaries to sign, contracts with suppliers that provide the activated carbon and bromine-containing additives that lead to infringement.

123. In addition (or in the alternative), Defendants San Carlos, Springerville Holding, Tri-State, and SRP induce the operator of Springerville Generating Station, TEP, to infringe under 35 U.S.C. § 271(b). San Carlos, Springerville Holding, Tri-State, and SRP are each aware of the '517 patent, but on information and belief, nonetheless aid or encourage the operator of Springerville Generating Station, TEP, to infringe by taking part in the supply contract process for activated carbon and bromine-containing additives at coal-fired power plants that directly infringe and by signing, and/or aiding or encouraging TEP to sign, contracts with suppliers that provide the activated carbon and bromine-containing additives that lead to infringement.

124. Defendants' acts of infringement have caused damage to ME2C. ME2C is entitled to recover from Defendants the damages sustained by ME2C as a result of Defendants' wrongful acts in an amount to be proven at trial.

125. In addition, the infringing acts and practices of Defendants have caused, are causing, and, unless such acts and practices are enjoined by the Court, will continue to cause immediate and irreparable harm to ME2C for which there is no adequate remedy at law, and for which ME2C is entitled to injunctive relief under 35 U.S.C. § 283.

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COUNT THREE: INFRINGEMENT OF THE '225 PATENT

126. ME2C incorporates by reference the preceding paragraphs as if fully set forth herein.

127. The '225 patent, entitled "Sorbents for the Oxidation and Removal of Mercury", was issued on March 17, 2020, naming Edwin S. Olson, Michael J. Holmes, and John H. Pavlish as the inventors. *See* Exhibit B (the '225 patent).

128. ME2C owns by assignment all rights, title, and interest in the '225 patent, and holds all substantial rights pertinent to this suit, including the right to sue and recover for all past, current, and future infringement.

129. The '225 patent is valid and enforceable and directed to patentable subject matter.

130. Defendants infringe at least one of claims 1-29 of the '225 patent.

131. ME2C provides the following explanation of infringement with regard to an exemplary claim.

132. Claim 1 of the '225 patent recites: "A method for treating a mercury-containing gas." The Accused Coal Plants perform this method in order to comply with federal and/or state mercury regulations.

133. Claim 1 of the '225 patent recites: "combusting a mixture comprising coal, pyrolysis char, and an additive comprising HBr, a bromide compound, or a combination thereof, to form the mercury-containing gas." The Accused Coal Plants perform this step because they combust coal, pyrolysis char, and an additive comprising HBr, a bromide compound, or a combination thereof.

134. Claim 1 of the '225 patent recites: "adding a particulate sorbent material comprising activated carbon into the mercury-containing gas." The Accused Coal Plants perform this step by adding sorbent containing activated carbon to the gas that exits the combustion chamber.

135. Defendants have and continue to directly infringe, literally and/or under the doctrine of equivalents, the '225 patent under 35 U.S.C. § 271(a).

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136. In addition, Defendants TEP and Tri-State induce their respective subsidiary Defendants to infringe under 35 U.S.C. § 271(b). TEP and Tri-State are each aware of the '225 patent, but on information and belief, nonetheless aid or encourage their subsidiaries to infringe by taking part in the supply contract process for activated carbon and bromine-containing additives at coal-fired power plants that directly infringe and by signing, and/or aiding or encouraging their subsidiaries to sign, contracts with suppliers that provide the activated carbon and bromine-containing additives that lead to infringement.

137. In addition (or in the alternative), Defendants San Carlos, Springerville Holding, Tri-State, and SRP induce the operator of Springerville Generating Station, TEP, to infringe under 35 U.S.C. § 271(b). San Carlos, Springerville Holding, Tri-State, and SRP are each aware of the '225 patent, but on information and belief, nonetheless aid or encourage the operator of Springerville Generating Station, TEP, to infringe by taking part in the supply contract process for activated carbon and bromine-containing additives at coal-fired power plants that directly infringe and by signing, and/or aiding or encouraging TEP to sign, contracts with suppliers that provide the activated carbon and bromine-containing additives that lead to infringement.

138. Defendants' acts of infringement have caused damage to ME2C. ME2C is entitled to recover from Defendants the damages sustained by ME2C as a result of Defendants' wrongful acts in an amount to be proven at trial.

139. In addition, the infringing acts and practices of Defendants have caused, are causing, and, unless such acts and practices are enjoined by the Court, will continue to cause immediate and irreparable harm to ME2C for which there is no adequate remedy at law, and for which ME2C is entitled to injunctive relief under 35 U.S.C. § 283.

COUNT FOUR: INFRINGEMENT OF THE '430 PATENT

140. ME2C incorporates by reference the preceding paragraphs as if fully set forth herein.

141. The '430 patent, entitled "Sorbents for the Oxidation and Removal of Mercury", was issued on March 24, 2020, naming Edwin S. Olson, Michael J. Holmes,

and John H. Pavlish as the inventors. *See* Exhibit D (the '430 patent).

142. ME2C owns by assignment all rights, title, and interest in the '430 patent, and holds all substantial rights pertinent to this suit, including the right to sue and recover for all past, current, and future infringement.

143. The '430 patent is valid and enforceable and directed to patentable subject matter.

144. Defendants infringe at least one of claims 1-29 of the '430 patent.

145. ME2C provides the following explanation of infringement with regard to an exemplary claim.

146. Claim 1 of the '430 patent recites: "A method of separating mercury from a mercury-containing gas." The Accused Coal Plants perform this method in order to comply with federal and/or state mercury regulations.

147. Claim 1 of the '430 patent recites: "combusting coal in a combustion chamber, to provide the mercury-containing gas, wherein the coal comprises an additive comprising Br_2, HBr, a bromide compound, or a combination thereof, wherein the additive is added to the coal before the coal enters the combustion chamber, or the combustion chamber comprises an additive comprising Br_2, HBr, a bromide compound, or a combination thereof or a combination thereof." The Accused Coal Plants perform this step because they combust coal with an additive comprising Br_2, HBr, a bromide compound, or a combination thereof to form mercury-containing gas.

148. Claim 1 of the '430 patent recites: "injecting a sorbent comprising activated carbon into the mercury-containing gas downstream of the combustion chamber." The Accused Coal Plants perform this step by injecting sorbent containing activated carbon downstream of the combustion chamber.

149. Claim 1 of the '430 patent recites: "contacting mercury in the mercury-containing gas with the sorbent." The Accused Coal Plants perform this step because mercury contained in the gas exiting the combustion chamber contacts the sorbent as all of this material is contained in the same gas.

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150. Claim 1 of the ’430 patent recites: “separating the sorbent contacted with the mercury from the mercury-containing gas.” The Accused Coal Plants perform this step using equipment such as baghouses or electrostatic precipitators to collect the mercury captured by the sorbent in order to comply with mercury regulations.

151. Defendants have and continue to directly infringe, literally and/or under the doctrine of equivalents, the ’430 patent under 35 U.S.C. § 271(a).

152. In addition, Defendants TEP and Tri-State induce their respective subsidiary Defendants to infringe under 35 U.S.C. § 271(b). TEP and Tri-State are each aware of the ’430 patent, but on information and belief, nonetheless aid or encourage their subsidiaries to infringe by taking part in the supply contract process for activated carbon and bromine-containing additives at coal-fired power plants that directly infringe and by signing, and/or aiding or encouraging their subsidiaries to sign, contracts with suppliers that provide the activated carbon and bromine-containing additives that lead to infringement.

153. In addition (or in the alternative), Defendants San Carlos, Springerville Holding, Tri-State, and SRP induce the operator of Springerville Generating Station, TEP, to infringe under 35 U.S.C. § 271(b). San Carlos, Springerville Holding, Tri-State, and SRP are each aware of the ’430 patent, but on information and belief, nonetheless aid or encourage the operator of Springerville Generating Station, TEP, to infringe by taking part in the supply contract process for activated carbon and bromine-containing additives at coal-fired power plants that directly infringe and by signing, and/or aiding or encouraging TEP to sign, contracts with suppliers that provide the activated carbon and bromine-containing additives that lead to infringement.

154. Defendants’ acts of infringement have caused damage to ME2C. ME2C is entitled to recover from Defendants the damages sustained by ME2C as a result of Defendants’ wrongful acts in an amount subject to proof at trial.

155. In addition, the infringing acts and practices of Defendants have caused, are causing, and, unless such acts and practices are enjoined by the Court, will continue to cause immediate and irreparable harm to ME2C for which there is no adequate remedy at

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law, and for which ME2C is entitled to injunctive relief under 35 U.S.C. § 283.

COUNT FIVE: INFRINGEMENT OF THE '370 PATENT

156. ME2C incorporates by reference the preceding paragraphs as if fully set forth herein.

157. The '370 patent, entitled "Sorbents for the Oxidation and Removal of Mercury", was issued on March 3, 2021, naming Edwin S. Olson, Michael J. Holmes, and John H. Pavlish as the inventors. *See* Exhibit E (the '370 patent).

158. ME2C owns by assignment all rights, title, and interest in the '370 patent, and holds all substantial rights pertinent to this suit, including the right to sue and recover for all past, current, and future infringement.

159. The '370 patent is valid and enforceable and directed to patentable subject matter.

160. Defendants infringe at least one of claims 1-29 of the '370 patent.

161. ME2C provides the following explanation of infringement with regard to an exemplary claim.

162. Claim 1 of the '370 patent recites: "A method for separating mercury from a mercury-containing gas." The Accused Coal Plants perform this method in order to comply with federal and/or state mercury regulations.

163. Claim 1 of the '370 patent recites: "combusting a mixture of coal and an additive in a combustion chamber, to form the mercury-containing gas, wherein the additive is chosen from halides, halogens, salts thereof, and combinations thereof." The Accused Coal Plants perform this step because they combust coal with an additive comprising halides, halogens, salts thereof, or combinations thereof.

164. Claim 1 of the '370 patent recites: "adding a particulate sorbent material comprising activated carbon into the mercury-containing gas, wherein a weight ratio of the additive added to the coal, added to the combustion chamber, or a combination thereof, to an amount of the sorbent material added to the mercury-containing gas is from about 1:100 to about 30:100." The Accused Coal Plants perform this step because they add a particulate

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sorbent material comprising activated carbon to the mercury-containing flue gas, and the weight ratio of the additive comprising halides, halogens, salts thereof, or combinations thereof to the amount of sorbent is from about 1:100 to about 30:100.

165. Claim 1 of the '370 patent recites: "contacting mercury in the mercury-containing gas with the sorbent material, to form a mercury-sorbent." The Accused Coal Plants perform this step because mercury contained in the gas exiting the combustion chamber contacts the sorbent as all of this material is contained in the same gas.

166. Claim 1 of the '370 patent recites: "separating the mercury-sorbent from the mercury-containing gas." The Accused Coal Plants perform this step using equipment such as baghouses or electrostatic precipitators to collect the mercury captured by the sorbent in order to comply with mercury regulations.

167. Defendants have and continue to directly infringe, literally and/or under the doctrine of equivalents, the '370 patent under 35 U.S.C. § 271(a).

168. In addition, Defendants TEP and Tri-State induce their respective subsidiary Defendants to infringe under 35 U.S.C. § 271(b). TEP and Tri-State are each aware of the '370 patent, but on information and belief, nonetheless aid or encourage their subsidiaries to infringe by taking part in the supply contract process for activated carbon and bromine-containing additives at coal-fired power plants that directly infringe and by signing, and/or aiding or encouraging their subsidiaries to sign, contracts with suppliers that provide the activated carbon and bromine-containing additives that lead to infringement.

169. In addition (or in the alternative), Defendants San Carlos, Springerville Holding, Tri-State, and SRP induce the operator of Springerville Generating Station, TEP, to infringe under 35 U.S.C. § 271(b). San Carlos, Springerville Holding, Tri-State, and SRP are each aware of the '370 patent, but on information and belief, nonetheless aid or encourage the operator of Springerville Generating Station, TEP, to infringe by taking part in the supply contract process for activated carbon and bromine-containing additives at coal-fired power plants that directly infringe and by signing, and/or aiding or encouraging TEP to sign, contracts with suppliers that provide the activated carbon and bromine-

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containing additives that lead to infringement.

170. Defendants' acts of infringement have caused damage to ME2C. ME2C is entitled to recover from Defendants the damages sustained by ME2C as a result of Defendants' wrongful acts in an amount to be proven at trial.

171. In addition, the infringing acts and practices of Defendants have caused, are causing, and, unless such acts and practices are enjoined by the Court, will continue to cause immediate and irreparable harm to ME2C for which there is no adequate remedy at law, and for which ME2C is entitled to injunctive relief under 35 U.S.C. § 283.

JURY DEMAND

Plaintiff hereby demands a trial by jury on all issues so triable.

PRAYER FOR RELIEF

WHEREFORE Plaintiff Midwest Energy Emissions Corp. asks this Court for an order granting the following relief:

a. A judgment in favor of Plaintiff that Defendants have infringed, either literally and/or under the doctrine of equivalents, the '114, '517, '225, '430, and '370 patents;

b. A judgment and order finding that Defendants' infringement has been willful;

c. A preliminary injunction prohibiting Defendants from further acts of infringement;

d. A permanent injunction prohibiting Defendants from further acts of infringement;

e. A judgment and order requiring Defendants to pay Plaintiff its damages, costs, expenses, and any enhanced damages to which Plaintiff is entitled for Defendants' infringement;

f. A judgment and order requiring Defendants to provide an accounting and to pay supplemental damages to Plaintiff, including without limitation, pre-judgment and post-judgment interest;

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g. A judgment and order finding that this is an exceptional case within the meaning of 35 U.S.C. § 285 and awarding Plaintiff its reasonable attorneys' fees against Defendants; and

h. Any and all other relief as the Court may deem appropriate and just under the circumstances.

DATED this 17th day of July, 2024.

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By: *s/ Geoffrey S. Kercsmar*

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