

UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT TRIAL AND APPEAL BOARD

Berkshire Hathaway Energy Company, and
PacifiCorp,

Petitioners

v.

Birchtech Corp.

Patent Owner

IPR2025-00422
Patent No. 10,668,430

**PETITIONERS' AUTHORIZED RESPONSE TO
PATENT OWNER'S MOTION TO TERMINATE**

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PETITIONERS' EXHIBIT LIST

Exhibit	Description of Exhibits
1001	U.S. Patent No. 10,668,430 to Olson et al. (filed May 8, 2018) ("430 Patent" or "Challenged Patent")
1002	Declaration of Dr. Stephen Niksa in Support of Petition for <i>Inter Partes</i> Review of U.S. Patent No. 10,668,430 ("430 Niksa Decl.")
1003	Curriculum Vitae of Dr. Stephen Niksa
1004	Family Tree of ME2C Patents
1005	U.S. Patent Publication No. 2004/0013589 to Vosteen et al. (filed July 24, 2002) ("Vosteen589")
1006	U.S. Patent Pub. No. 2008/0107579 to Downs et al. (published May 8, 2008) ("Downs-Boiler")
1007	U.S. Patent Prov. App. No. 60/555,353 (filed Mar. 22, 2004) ("Downs-Boiler-Provisional")
1008	Travis Starns, "Full-Scale Test of Mercury Control with Sorbent Injection and an ESP at Wisconsin Electric's Pleasant Prairie Power Plant," Session AE1-C, Paper No. 43249, AIR & WASTE MANAGEMENT'S ASSOCIATION'S 95 TH ANNUAL CONFERENCE (Baltimore, MD: June 23-27, 2002) ("Starns")

Exhibit	Description of Exhibits
1009	Massachusetts Dep. of Environmental Protection, Bureau of Waste Prevention, “Evaluation of the Technological and Economic Feasibility of Controlling and Eliminating Mercury Emissions from the Combustion of Solid Fossil Fuel” (Dec. 2002) (“ Mass-EPA ”), available at https://web.archive.org/web/20030411074158/http://www.state.ma.us/dep/bwp/daqc/files/mercfeas.pdf and at https://www.mass.gov/doc/evaluation-of-technological-economic-feasibility-of-controlling-eliminating-mercury-emissions/download
1010	Sharon Sjostrom, “Full Scale Evaluations of Mercury Control Technologies with PRB Coals,” Track A, Session A3 (Mercury – Control), Presentation A3b, EUEC: 8TH ELECTRIC UTILITIES ENVIRONMENTAL CONFERENCE (Tucson, Arizona: January 25, 2005) (“ Sjostrom ”)
1011	Craig Eckberg et al., “Mercury Control Evaluation of Halogen Injection into a Texas Lignite-Fired Boiler,” Track A, Session A3 (Mercury – Control), Presentation A3c, EUEC: 8TH ELECTRIC UTILITIES ENVIRONMENTAL CONFERENCE (Tucson, Arizona: January 25, 2005) (“ Eckberg ”)
1012	U.S. Patent Pub. No. 2006/0048646 to Olson et al. (published Mar. 9, 2006) (“ Olson-646 ”)
1013	U.S. Patent No. 6,953,494 to Nelson (filed May 6, 2003) (“ Nelson ”)
1014	U.S. Patent No. 7,514,052 to Lissianski et al. (filed Jan. 6, 2004) (“ Lissianski ”)
1015	RESERVED
1016	RESERVED
1017	RESERVED

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1018	U.S. Patent No. 8,652,235 to Olson et al. (issued February 18, 2014) (“Olson-235”)
1019	File History of U.S. Patent Application No. 15/974,343, which ultimately issued as U.S. Patent No. 10,668,430 (“430 Patent File History”).
1020	File History of U.S. Patent Prov. App. No. 60/605,640 (“Provisional”)
1021	File History of U.S. Patent Application No. 11/209,163, which ultimately issued as U.S. Patent No. 7,435,286 (“163 Application File History”)
1022	File History of U.S. Patent Application No. 12/201,595, which ultimately published as 2009/0062119 and was abandoned (“595 Application File History”)
1023	Excerpts of File History of U.S. Patent Application No. 15/951,970, which ultimately issued as U.S. Patent No. 10,933,370 (“370 Patent File History”).
1024	File History of U.S. Patent Application No. 15/997,091, which ultimately issued as U.S. Patent No. 10,596,517 (“517 Patent File History”).
1025	File History of U.S. Patent Application No. 12/419,219, which ultimately issued as U.S. Patent No. 8,168,147 (“147 Patent File History”).
1026	File History of U.S. Patent Application No. 15/978,760 (issued as U.S. Patent No. 10,343,114) (“114 Patent File History”)
1027	Babcock & Wilcox, STEAM: ITS GENERATION AND USE, 40th ed. (The Babcock & Wilcox Company: 1992) (“B&W: Steam”)
1028	J. Bustard, S. Sjostrom, et al., “Full Scale Evaluation of Sorbent Injection for Mercury Control on Coal-Fired Power Plants,”

Exhibit	Description of Exhibits
	International Conference on Air Quality III, Paper No. A5-4 (Sept. 9-12, 2002: Arlington, VA) (“Bustard”)
1029	U.S. Patent No. 1,984,164 to Stock et al. (issued Dec. 11, 1934) (“Stock”)
1030	Electric Utilities Environment Conference 2005 Handout (“EUEC Handout”)
1031	Scan of jacket/cover of CD mailed to conference attendees from EUEC: 8th Electric Utilities Environmental Conference (Tucson, Arizona: January 23-26, 2005) (“EUEC CD Scan”)
1032	Redline comparison between U.S. Patent Pub. No. 2008/0107579 (Downs-Boiler, EX1006) and U.S. Patent Prov. Appl. No. 60/555,353 (Downs-Boiler-Provisional, EX1007), using Downs-Boiler-Provisional as the original version (“Downs-Boiler-Redline”)
1033	U.S. Patent No. 8,512,655
1034	U.S. Patent No. 8,821,819
1035	U.S. Patent No. 9,757,689
1036	CRC Handbook of Chemistry and Physics, 86th Ed.; Lide, D.R., ed. (“CRC Press: March 2005”)
1037	Paul Chu, “Power Plant Evaluation of the Effect of SCR Technology on Mercury,” Paper No. 106, COMBINED POWER PLANT AIR POLLUTANT CONTROL MEGA SYMPOSIUM (MEGA) (Washington, DC: May 19-22, 2003) (“Power Plant Evaluation”)
1038	Evan J. Granite et al., “Sorbents for Mercury Removal from Flue Gas,” DOE/FETC/TR-98-01, U.S. Department of Energy (Jan. 1998) (“Granite”)

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1039	Thomas J. Feeley, et al., “A Review of DOE/NETL’s Mercury Control Technology R&D Program for Coal-Fired Power Plants,” <i>DOE/NETL Hg R&D Program Review</i> (April 2003) (“ Feeley ”)
1040	Oxtoby et al., <i>PRINCIPLES OF MODERN CHEMISTRY</i> , 4 th ed (Saunders College Publishing: 1999) (“ Oxtoby ”)
1041	N.N. Greenwood and A. Earnshaw, <i>CHEMISTRY OF THE ELEMENTS</i> , 2nd ed. (Butterworth-Heinemann: 1997) (“ Greenwood ”)
1042	B.R. Puri, <i>Surface Complexes on Carbons</i> , in <i>CHEMISTRY AND PHYSICS OF CARBON 191</i> (Philip L. Walker, ed.) (Marcel Dekker: 1970) (“ Puri ”)
1043	Frank E. Huggins et al., “XAFS Examination of Mercury Sorption on Three Activated Carbons,” <i>Energy & Fuels</i> 1999(13), p. 114-121 (1999) (“ XAFS ”)
1044	S. Niksa et al., <i>Predicting Complete Hg Speciation Along Coal-Fired Utility Exhaust Systems</i> , MEGA SYMPOSIUM, Paper # 45 (Washington, DC: Aug. 2004) (“ Hg Speciation ”)
1045	D.L. Laudal et al., <i>Evaluation of Mercury Speciation at Power Plants Using SCR and SNCR NOx Control Technologies</i> , Paper No. A5-01, INT’L CONF. ON AIR QUALITY III (Arlington, VA: Sept. 9-12, 2002) (“ Laudal ”)
1046	U.S. Patent No. 4,196,173 to DeJong (“ DeJong ”)
1047	U.S. Patent No. 5,695,726 to Lerner (“ Lerner ”)
1048	Carey, T. R., Jr., O. W. H., Richardson, C. F., Chang, R., & Meserole, F. B. (1998). Factors Affecting Mercury Control in Utility Flue Gas Using Activated Carbon. <i>Journal of the Air & Waste Management Association</i> , 48(12), 1166–1174. https://doi.org/10.1080/10473289.1998.10463753 (“ Carey ”)

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1049	NETL - Mercury Emissions Control, February, 2003, available at https://web.archive.org/web/20030315093905fw_/http://www.netl.doe.gov/coalpower/environment/mercury/control-tech/inactive.html (“U.S. DOE, Completed Mercury Projects, February, 2003”)
1050	Proposed National Emission Standards for Hazardous Air Pollutants; and, in the Alternative, Proposed Standards of Performance for New and Existing Stationary Sources: Electric Utility Steam Generating Units, 69 Fed. Reg. 4652-4752 [Volume 69, No. 20] (Jan. 30, 2004) (“EPA-Proposal”)
1051	U.S. EPA, “Study of Hazardous Air Pollutant Emissions from Electric Utility Steam Generation Units -- Final Report to Congress,” (Vol. 1 1998), available at https://www3.epa.gov/ttn/utox/eurtc1.pdf (“U.S. EPA – Vol. 1 1998”)
1052	U.S. EPA, “Mercury Study Report to Congress Volume 1: Executive Summary,” EPA-452/R-97-003 (Dec. 1997), available at https://www.epa.gov/sites/production/files/2015-09/documents/volume1.pdf (“U.S. EPA – Exec. Summary Vol. 1 Dec. 1997”)
1053	U.S. EPA, AP-42: External Combustion Sources, Chapter 1: Fifth Edition, Volume I (Sep. 1998), available at https://www3.epa.gov/ttn/chief/ap42/ch01/index.html (last visited Nov. 20, 2024) (“Chapter 1 of AP-42”)
1054	U.S. DOE, Mercury Emissions Control - Regulatory Drivers (Jan. 24, 2003), available at https://web.archive.org/web/20030416142937/http://www.netl.doe.gov/coalpower/environment/mercury/regs.html (“Mercury Emissions Control”)
1055	Clean Air Mercury Rule: Basic Information, available at https://web.archive.org/web/20050920005951/http://www.epa.gov/mercuryrule/basic.htm (“Clean Air Mercury Rule”)

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1056	EPA Newsroom, “EPA Announces First-Ever Rule to Reduce Mercury Emissions from Power Plants” (Mar. 15, 2005), available at https://archive.epa.gov/epapages/newsroom_archive/newsreleases/91ab7266e65751b985256fc50067d9b0.html (“ 3/15/2005 EPA Press Release ”)
1057	EPA Newsroom, “Public Comment Period Begins for Proposed Power Plant Regulations” (Jan. 29, 2004), available at https://archive.epa.gov/epapages/newsroom_archive/newsreleases/4daf1d46e8dd755c85257036005511f9.html (“ 1/29/2004 EPA Press Release ”)
1058	EPA Newsroom, “EPA Supplements Proposal to Reduce Power Plant Mercury Emissions,” (Feb. 24, 2004), available at https://archive.epa.gov/epapages/newsroom_archive/newsreleases/5810096dabfc9eba85256e440078905f.html (“ 2/24/2004 EPA Press Release ”)
1059	Sharon Sjostrom et al., “Field Studies of Mercury Control Using Injected Sorbents,” AWWA ANNUAL MEETING, Session Ae-1b (2002) (“ Field Studies of Mercury Control ”)
1060	EPA, “Mercury Study Report to Congress Volume VIII: An Evaluation of Mercury Control Technologies and Costs,” EPA Report No. EPA-452/R-97-010 (Dec. 1997), available at https://www3.epa.gov/airtoxics/112nmerc/volume8.pdf (“ EPA 1997 Mercury Study Report Vol. VIII ”)
1061	EUEC 2005 home page, available at https://web.archive.org/web/20050303090129/http://www.euec.com/
1062	Charlene R. Crocker et al., “Mercury Control with the Advanced Hybrid Particulate Collector Technical Progress Report,” U.S. DOE-NETL (Nov. 2003) (“ Crocker ”)

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1063	Redline Comparison, showing changes from '163 Application (as published at 2006/0048646) to '970 Application (as published at 2018/0229182)
1064	Redline Comparison, showing changes from '558 Application (as published at 2015/0246315) to '970 Application (as published at 2018/0229182)
1065	U.S. Patent No. 8,168,147
1066	U.S. Patent No. 10,933,370
1067	U.S. Patent No. 10,589,225
1068	File History of U.S. Patent Application No. 14/712,558, which ultimately issued as U.S. Patent No. 10,589,225 (" 225 Patent File History ")
1069	U.S. Patent Pub. No. 2018/0257030 to Olson et al. (published Sep. 13, 2018) (" Published '343 Application ")
1070	Roop Chand Bansal, et al., ACTIVE CARBON (Marcel Dekker:1988). (" Bansal ")
1071	<i>Midwest Energy Emissions Corp., et al. v. Arthur J. Gallagher & Co., et al.</i> , No. 1:19-cv-01334-CJB, Dkt. No. 440 (D. Del. June 24, 2022). (" Dkt No. 440 ")
1072	<i>Midwest Energy Emissions Corp., et al. v. Arthur J. Gallagher & Co., et al.</i> , No. 1:19-cv-01334-CJB, Dkt. No. 447 (D. Del. July 12, 2022). (" Dkt No. 447 ")
1073	Welcome Page of CD mailed to conference attendees of the 2002 Air & Waste Management's Association's 95 th Annual Conference & Exhibition (Baltimore, Maryland: June 23-27, 2002) (" AWMA CD Scan ")

Exhibit	Description of Exhibits
1074	Main Menu of CD mailed to conference attendees of the 2002 Air & Waste Management's Association's 95 th Annual Conference & Exhibition (Baltimore, Maryland: June 23-27, 2002) ("AWMA CD Scan, Main Menu")
1075	Author Index of CD mailed to conference attendees of the 2002 Air & Waste Management's Association's 95 th Annual Conference & Exhibition (Baltimore, Maryland: June 23-27, 2002) ("AWMA CD Scan, Author Index")
1076	Papers by Session of CD mailed to conference attendees of the 2002 Air & Waste Management's Association's 95 th Annual Conference & Exhibition (Baltimore, Maryland: June 23-27, 2002) ("AWMA CD Scan, Papers by Session")
1077	Scan of jacket/cover of CD mailed to conference attendees of the 2002 Air & Waste Management's Association's 95 th Annual Conference & Exhibition (Baltimore, Maryland: June 23-27, 2002) ("AWMA CD Photo")
1078	AWMA Website (Internet Archive), available at https://web.archive.org/web/20020613041559/http://www.awma.org/about/overview.htm (AWMA Overview)
1079	AWMA Website (Internet Archive), available at https://web.archive.org/web/20020527005933/http://www.awma.org/ (AWMA Homepage, advertising AWMA 2002 Conference)
1080	AWMA Website (Internet Archive), available at https://web.archive.org/web/20020604012426/http://www.awma.org:80/about/ (AWMA About Page)
1081	AWMA Website (Internet Archive), available at https://web.archive.org/web/20020601173851/http://www.awma.org/ACE2002/tech-program/MondayPM.asp#AE-1c (AWMA Technical Program Schedule for June 24, 2002 for Session AE-1C)

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1082	AWMA Website (Internet Archive), available at https://web.archive.org/web/20020616091740/http://www.awma.org/ACE2002/exhibition/list.asp (AWMA 2002 Conference list of exhibitors)
1083	AWMA Website (Internet Archive), available at https://web.archive.org/web/20020601121532/http://www.awma.org/ACE2002/top10list.asp (AWMA 2002 Conference Top Ten Reasons)
1084	AWMA Website (Internet Archive), available at https://web.archive.org/web/20020610093515/http://www.awma.org/ACE2002/welcome.asp (AWMA 95th Annual Conference and Exhibition Welcome Page)
1085	AWMA Website (Internet Archive), available at https://web.archive.org/web/20020806044928/http://www.awma.org:80/pubs/bookstore/ItemInfo.asp?OrderCode_s=VIP-110-CD (AWMA Bookstore Page, Order form for 2002 AWMA Conference CD)
1086	AWMA Website (Internet Archive), available at https://web.archive.org/web/20020806041256/http://www.awma.org:80/pubs/bookstore/ (AWMA Bookstore Homepage)
1087	State of Massachusetts Mass-EPA (Internet Archive) (dated Jan. 6, 2003), available at https://web.archive.org/web/20030106044457/http://www.state.ma.us/dep/bwp/about.htm (describing mission of Mass Department of Environmental Protection, Bureau of Waste Prevention)
1088	State of Massachusetts Mass-EPA (Internet Archive) (dated Dec. 21, 2002), available at https://web.archive.org/web/20021221040816/http://www.state.ma.us/dep/bwp/bwpprogs.htm (describing the divisions and programs of the Mass Bureau of Waste Prevention)

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1089	State of Massachusetts Mass-EPA (Internet Archive) (dated Jan. 6, 2003), available at https://web.archive.org/web/20030106024342/http://www.state.ma.us/dep/bwp/bwppubs.htm (describing the publications by program of the Mass Bureau of Waste Prevention)
1090	State of Massachusetts Mass-EPA (Internet Archive) (dated Dec. 20, 2002), available at https://web.archive.org/web/20021220143210/http://www.state.ma.us/dep/bwp/daqc/daqcpubs.htm#ecp (describing the Air Program Planning Unit Publications of the Mass Bureau of Waste Prevention)
1091	Internet Archive Standard Affidavit, explaining how to interpret hyperlinks, available at https://archive.org/legal/affidavit.php
1092	Expert Report of Philip J. O’Keefe, PE Regarding Infringement (Oct. 25, 2022) (excerpted), submitted by Patent Owner in <i>Midwest Energy Emissions Corp., et al. v. Arthur J. Gallagher & Co., et al.</i> , No. 1:19-cv-01334-CJB
1093	Deposition Transcript of Phillip O’Keefe Vol. 1 (Mar. 2, 2023), taken in <i>Midwest Energy Emissions Corp., et al. v. Arthur J. Gallagher & Co., et al.</i> , No. 1:19-cv-01334-CJB.
1094	Deposition Transcript of Phillip O’Keefe Vol. 2 (Mar. 3, 2023), taken in <i>Midwest Energy Emissions Corp., et al. v. Arthur J. Gallagher & Co., et al.</i> , No. 1:19-cv-01334-CJB.
1095	Deposition Transcript of Edwin Olson (Aug. 26, 2022) (excerpted), taken in <i>Midwest Energy Emissions Corp., et al. v. Arthur J. Gallagher & Co., et al.</i> , No. 1:19-cv-01334-CJB.
1096	Deposition Transcript of Michael Holmes (Aug. 24, 2022) (excerpted), taken in <i>Midwest Energy Emissions Corp., et al. v. Arthur J. Gallagher & Co., et al.</i> , No. 1:19-cv-01334-CJB.

Exhibit	Description of Exhibits
1097	Deposition Transcript of John Pavlish (Aug. 25, 2022) (excerpted), taken in <i>Midwest Energy Emissions Corp., et al. v. Arthur J. Gallagher & Co., et al.</i> , No. 1:19-cv-01334-CJB.
1098	Affidavit of Tanya Zeif, Custodian of Records for Internet Archive (1/10/2025), sponsoring Exhibits 1078-1086
1099	Affidavit of Tanya Zeif, Custodian of Records for Internet Archive (1/13/2025), sponsoring Exhibits 1009, 1061, 1087-1090
1100	RESERVED
1101	RESERVED
1102	RESERVED
1103	RESERVED
1104	RESERVED
1105	RESERVED
1106	RESERVED
1107	RESERVED
1108	RESERVED
1109	RESERVED
1110	Petitioner PacifiCorp’s Stipulation Regarding District Court Proceedings
1111	Petitioner MEC’s Stipulation Regarding District Court Proceedings
1112	Petitioners WPL and IPL’s Stipulation Regarding District Court Proceedings

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1113	Puget Sound Energy, <i>Colstrip Facts</i> , available at: https://www.colstripfacts.com/faqs#:~:text=Talen%20Energy%20owns%2030%25%20interest,operator%20of%20all%20four%20plants.&text=PacifiCorp%20owns%20a%2010%25%20interest%20in%20units%203%20%26%204
1114	Plaintiff’s Initial Infringement Contentions (March 18, 2025) served in <i>In re: Midwest Energy Emissions Corp. Patent Litig.</i> , No. 4:24-md-03132-SHL-WPK (S.D. Iowa) and filed publicly at ECF 106-3
1115	Exhibit A to Plaintiff’s Initial Infringement Contentions (March 18, 2025) served in <i>In re: Midwest Energy Emissions Corp. Patent Litig.</i> , No. 4:24-md-03132-SHL-WPK (S.D. Iowa) and filed publicly at ECF 106-3
1116	<i>Coal Explained: Use of Coal</i> , U.S. Energy Information Administration (last updated Sept. 14, 2023), available at: https://www.eia.gov/energyexplained/coal/use-of-coal.php#:~:text=In%202022%2C%20coal%20accounted%20for,19.5%25%20of%20U.S
1117	<i>What EPA is Doing to Reduce Mercury Pollution, and Exposures to Mercury</i> , U.S. Env’t Protection Agency (last updated July 11, 2024), available at https://www.epa.gov/mercury/what-epa-doing-reduce-mercurypollution-and-exposures-mercury
1118	Birchtech, <i>Technology Overview</i> , available at https://www.birchtech.com/tech-overview
1119	Exec. Order No. 14261, 90 Fed. Reg. 15517 (April 8, 2025)
1120	Patent Owner’s Response to Petitioners’ Motion to Stay Pending <i>Inter Partes</i> Review <i>In re: Midwest Energy Emissions Corp. Patent Litig.</i> , No. 4:24-md-03132-SHL-WPK, ECF 128 (S.D. Iowa)

Exhibit	Description of Exhibits
1121	Docket Navigator, <i>Time to Trial in the Southern District of Iowa</i> , https://search.docketnavigator.com/patent/binder/0/0 (last accessed June 2, 2025)
1122	<i>Deere & Co. et. al v. Kinze Mfg., Inc. et. al</i> , 4:20-CV-00389 (S.D. Iowa) (Docket Sheet)
1123	<i>Piatz v. State Farm Mut. Auto. Ins. Co.</i> , 3:21-CV-00007 (S.D. Iowa) (Judge Locher) (Docket Sheet and ECF 8)
1124	<i>Probasco et al v. MFA Inc.</i> , 4:22-CV-00117 (S.D. Iowa) (Judge Locher) (Docket Sheet and ECF 7, 9)
1125	<i>Shin v. Winnebago Indus., Inc. et. al</i> , 3:23-CV-00077 (S.D. Iowa) (Judge Locher) (Docket Sheet)
1126	<i>Nuhn Industries Ltd v. Bazooka Farmstar LLC</i> , 3:22-cv-00015 (S.D. Iowa) (Docket Sheet and ECF 286)
1127	<i>G.W. Lisk Company, Inc. v. Gits Manufacturing Company</i> , 4:17-cv-00273 (S.D. Iowa) (Docket Sheet)
1128	<i>In re: Midwest Energy Emissions Corp. Patent Litig.</i> , No. 4:24-md-03132-SHL-WPK, ECF 131 (S.D. Iowa May 22, 2025) (Order Denying Without Prejudice Pre-Institution Stay)
1129	<i>In re: Midwest Energy Emissions Corp. Patent Litig.</i> , No. 4:24-md-03132-SHL-WPK, ECF 111 (S.D. Iowa Apr. 18, 2025) (Order re: Petitioners' Deadline to File Surreply)
1130	<i>In re: Midwest Energy Emissions Corp. Patent Litig.</i> , No. 4:24-md-03132-SHL-WPK, ECF 19 (S.D. Iowa Jan 10, 2025) (Order on Motions to Dismiss and Motion to Sever)
1131	<i>In re: Midwest Energy Emissions Corp. Patent Litig.</i> , No. 4:24-md-03132-SHL-WPK, ECF 1 (S.D. Iowa December 17, 2024) (MDL Transfer Order)

Exhibit	Description of Exhibits
1132	<i>In re: Midwest Energy Emissions Corp. Patent Litig.</i> , No. 4:24-md-03132-SHL-WPK, ECF 129 (S.D. Iowa May 21, 2025) (Petitioners' Reply Brief In Support of Motion to Stay Pending <i>Inter Partes</i> Review)
1133	Email from Justin Nemunaitis to Joe Jacobi (Jan. 16, 2024, 11:01 AM)
1134	<i>In re Midwest Energy Emissions Corp. Patent Litig.</i> , MDL No. 3132 ECF 35 (J.P.M.L. Nov. 14, 2024) (Patent Owner's Reply Brief in Support of Consolidation)
1135	<i>Midwest Energy Emissions Corp. v. Arthur J. Gallagher & Co.</i> , No. 19-1334-RGACJB ECF 1 (D. Del. July 17, 2019) (Complaint for Patent Infringement)
1136	<i>Midwest Energy Emissions Corp. v. Arthur J. Gallagher & Co.</i> , No. 19-1334-RGACJB ECF 130 (D. Del. July 15, 2020) (First Amended Complaint for Patent Infringement)
1137	Exhibit 1137- Confidential Business Information
1138	Exhibit 1138- Confidential Business Information
1139	Exhibit 1139- Confidential Business Information
1140	RESERVED
1141	In re: Midwest Energy Emissions Corp. Patent Litig., No. 4:24-MD-03132-SHL-WPK, (S.D. Iowa Oct. 3, 2025) (Joint Motion to Stay Proceedings Pending Director Review of Inter Partes Review)
1142	In re: Midwest Energy Emissions Corp. Patent Litig., No. 4:24-MD-03132-SHL-WPK, (S.D. Iowa Oct. 13, 2025) (Order Granting Motions to Stay and Denying Without Prejudice or as Moot All Other Pending Motions)
1143	Exhibit 1138- Confidential Business Information

Pursuant to the Board’s January 20 email (EX3005), Petitioners request that the Board deny Patent Owner’s Motion to Terminate. Paper 56 (“Motion”).¹

I. INTRODUCTION

Patent Owner has not identified any authority supporting the Panel terminating a petition on discretionary grounds, let alone four months after institution and one month after Patent Owner Responses. “[D]iscretionary considerations” are the purview of the Director; the Panel addresses “merits and other non-discretionary statutory considerations.” *See Interim Processes* Memo (Mar. 26, 2025).² The only rationale offered by Patent Owner is a Director Review order for other patents (what Patent Owner labels the “Round Two Proceedings”). Paper 56 at 1; *PacifiCorp v. Birchtech Corp.*, IPR2025-00687, Paper 40 (Jan. 12, 2026) (precedential) (“January 12 Order”). But, the January 12 Order does not apply to the ’430 Patent, because the ’430 Patent proceedings are more advanced, involve less grounds, and will not unduly burden the Board.

II. PROCEDURAL HISTORY

Almost one year ago, on February 11, 2025, Petitioners filed two petitions for

¹ Other than updating cites to the relevant papers, Petitioners are filing substantively identical response briefs in IPR2025-00422 and IPR2025-00423.

² *Interim Processes for PTAB Workload Management* (Mar. 26, 2025), available at: <https://www.uspto.gov/sites/default/files/documents/InterimProcesses-PTABWorkloadMgmt-20250326.pdf>.

IPR against the '430 Patent. IPR2025-00422 uses prior art dated before Patent Owner's asserted priority date, and IPR2025-00423 expressly challenges the priority date with intervening prior art, with no overlap in the prior art. *See* Paper 2 (rankings of petitions); *see also* IPR2020-00926 & IPR2020-00928 (instituting two petitions against a parent of the '430 Patent).

Both petitions were referred to the Panel during the bifurcated Discretionary Denial process. Paper 21. The Panel then instituted both petitions. Paper 34.

Both petitions then underwent Director Review. The Director remanded to the Panel solely to address privity and RPI issues. The Director did not apply discretionary considerations or instruct the Panel to limit to one petition per patent. The Director filed the same order in *both* proceedings on the '430 Patent. Paper 47.

III. THE MOTION IS PROCEDURALLY IMPROPER

There are only two mechanisms to ask for review of an institution decision: "A party is limited to requesting Director Review *or* rehearing by the Board, but shall not request both." *Director Review Process* § 2.A (analyzing 37 C.F.R. § 42.75(c)).³ Neither procedure is available for the '430 Patent.

A. Panel Rehearing and Director Review Are Unavailable

Patent Owner cannot request a panel rehearing or Director Review of the

³ <https://www.uspto.gov/patents/ptab/decisions/director-review-process> (Dec. 15, 2025) ("*Director Review Process*").

institution decisions for the '430 Patent for multiple reasons.

First, the deadline for requesting panel rehearing or Director Review is 14 days from institution. 37 C.F.R. §§ 42.71(d)(1), 42.75(c)(1). The institution decisions on the '430 Patent were filed October 6, 2025, over three months ago.

Second, Patent Owner already filed one request for Director Review of the '430 Patent. Paper 39. Patent Owner chose this route, “instead of filing a request for rehearing of that decision.” *See* 37 C.F.R. § 42.75(c); *Director Review Process* § 2.A (“A party is limited to requesting Director Review *or* rehearing by the Board, but shall not request both.”). Further, a patent owner may file only “one request for Director Review of a decision.” 37 C.F.R. § 42.75(c) (emphasis added).⁴

Third, any review or rehearing request must identify “the place where each matter was previously addressed.” 37 C.F.R. § 42.71(d); *see Director Review Process* § 3.E (“The Director will not consider new evidence or new arguments not part of the official record”). As the Board noted, “Patent Owner does not challenge that multiple Petitions are necessary.” IPR2025-00422, Paper 34 at 3 n.4; IPR2025-00423, Paper 35 at 11.

⁴ Patent Owner flouts these requirements by arguing that the “Office may still consider decisions in other proceedings.” Paper 56 at 6 n.3. In the case Patent Owner cites, the parties did not request a second Director Review. Rather, the Director (not the Panel) *sua sponte* initiated the Director Review. *See Sinclair Pharma Ltd. v. Hydrafacial LLC*, IPR2025-00145, Paper 40 (Dec. 22, 2025).

Patent Owner ignores the requirements for panel rehearing or Director Review, instead asserting that the “Board already rejected this argument by authorizing the present motion.” Paper 56 at 4. Just because the Board provides prior “authorization” to *file* a motion, that does not mean that the requested relief is meritorious. *See* 37 C.F.R. § 42.20(b)-(c); *Sony Corp. v. Optimum Imaging Techs., LLC*, IPR2024-00923, Paper 27 (P.T.A.B. Apr. 7, 2025) (authorizing motion to terminate but then denying the motion itself).

B. The Panel Should Not Apply Discretionary Considerations

Now that both petitions for the '430 Patent have been instituted and the periods for panel rehearing and Director Review have passed, discretionary considerations are not within the purview of the Panel. The Acting Director already determined to not exercise discretion to deny the petitions in IPR2025-00422 and IPR2025-00423. Paper 21; *see also* IPR2025-00423, Paper 35 at 3 n.4 (recognizing that the issue of “multiple petitions is best raised and resolved through the process involving a bifurcated procedure for considering discretionary issues”). Patent Owner does not identify any legal basis for the Panel to apply discretionary considerations, particularly to an already instituted proceeding. *See Interim Director Discretionary Process* § I.C. (“The petitioner and the patent owner should not present discretionary considerations in the petition or the Patent Owner Preliminary Response” because the Panel will only consider arguments “on the merits and non-

discretionary considerations”).⁵

C. A Renewed Director Review Is for RPI/Privity Issues

Patent Owner suggests that because the Director remanded IPR2025-00422 and IPR2025-00423 to the Board (Paper 47), the “time for Director Review has not passed,” and Patent Owner gets a redo. Paper 56 at 6. Not so. As Patent Owner states, “the Director’s decision [for the ’430 Patent] was limited to the RPI/privity issue.” Paper 56 at 4. Patent Owner did not seek Director Review of the fact that the Board instituted two petitions per patent. *See* Paper 56 at 2 n.1 (Patent Owner raised RPI/privity for the ’430 Patent, because the “patents at issue in the Round Two Proceedings were not asserted in the earlier Delaware district court litigation” and therefore “could not result in a time bar”).

After the Panel issues a decision to address Patent Owner’s RPI/privity evidence that the Panel previously found “ambiguous and speculative” (Paper 47 at 3), any “renewed request for Director Review” (*id.* at 4) does not give Patent Owner *carte blanche* to address any issue it wishes in piecemeal fashion. Rather, that “renewed” request is limited to the RPI/privity issues from the original Director Review request. *See Director Review Process* § 2.B (“a party may file one request for Director Review”), § 3.E (waiver for arguments “not made within the request”).

⁵ <https://www.uspto.gov/patents/ptab/interim-director-discretionary-process> (last updated Oct. 3, 2025).

And even if the Director were to reconsider the two petitions per patent, the January 12 Order does not have retroactive effect against the '430 Patent proceedings. In determining “whether to exercise discretion to deny institution, the Director will consider existing precedent.” *Interim Director Discretionary Process* § I.A. The January 12 Order was not “existing” precedent when the IPR2025-00422 and -00423 petitions were referred to the Board after the Discretionary Denial process (July 17, 2025), then instituted (October 6, 2025), and then remanded in the previous Director Review order (November 25, 2025).

IV. THE '430 PATENT IS DIFFERENT FROM THE '370/'218 PATENTS

The Director commented that “multiple petitions may be necessary in ‘rare’ cases, such as a ‘priority dispute requiring arguments under multiple prior art references.’” January 12 Order at 3 (citing TPG § II.D.2). The Director then explained that because “Petitioners present ten total grounds challenging the claims of the '370 patent and thirteen total grounds challenging the claims of the '218 patent,” this was not one of those “rare” circumstances that justified multiple petitions. *Id.* at 3. The '430 Patent is different—in terms of the number of grounds asserted and the number of grounds Patent Owner has not disputed.

A. The '430 Patent Petitions Have Far Fewer Grounds

The Director was concerned that, because of the number of grounds in the '370 and '218 Patent petitions, that would place “a substantial and unnecessary

burden on the Board and the patent owner” for the Board to handle two proceedings per patent. *See* January 12 Order at 3. The ’430 Patent is different. The few grounds in the second petition for the ’430 Patent contrasts markedly with the number of grounds in the second petition for the ’218 and ’370 Patents:

Ground	IPR2025-00423 (’430 Patent)	IPR2025-00718 (’218 Patent)	IPR2025-00688 (’370 Patent)
1	Sjostrom + Eckberg	Baldrey (anticipation)	Baldrey (anticipation)
2	Sjostrom + Olson-646	Baldrey + Olson-235	Baldrey + Olson-646
3	Olson-235 (anticipation)	Baldrey + Olson-646	Sjostrom + Olson-646
4		Sjostrom + Olson-235	Sjostrom + Olson-646 + Eckberg
5		Sjostrom + Olson-646	
6		Sjostrom + Olson-235 + Olson-279	
7		Sjostrom + Olson-646 + Olson-279	

B. Patent Owner Does Not Substantively Dispute the Grounds

The Director did not have the benefit of the Patent Owner Responses for the ’370 and ’218 Patents (as they had not been filed), but the Panel does for the ’430 Patent. The first-ranked petition (IPR2025-00422) and the second-ranked petition (IPR2025-00423) will not unduly burden the Board because the same priority-date analysis can dispose of all the ’430 Patent claims across both proceedings.

In Petition 1, Downs-Boiler is charted as an invalidating anticipatory and obviousness reference against every claim of the ’430 Patent. IPR2025-00422, Paper 1 at 11 (Grounds 3-5). Patent Owner does not challenge the substance of the

Downs-Boiler grounds, but instead seeks a swear-behind with an earlier actual reduction to practice. IPR2025-00423, Paper 55 at 25. Absent an earlier priority date, the '430 Patent is a post-AIA patent, and “it is no longer possible to antedate or ‘swear behind’” prior art. *See* M.P.E.P. § 2152.01. Patent Owner has nothing left to dispute about the invalidity of its claims under the Downs-Boiler grounds.

In Petition 2, “Patent Owner does not substantively address Petitioners’ arguments regarding the combined teachings of Sjostrom and Eckberg or Sjostrom and Olson-646.” IPR2025-00423, Paper 35 at 44. Rather, Patent Owner’s sole arguments were that Sjostrom/Eckberg were not publicly accessible, and Olson-646 did not qualify as prior art in view of the priority date issues. *Id.* That remains true in the Patent Owner Response. *See generally* IPR2025-00423, Paper 57.

If the Panel is already analyzing priority date for the higher-ranked petition (IPR2025-00422), that same analysis can be used in the lower-ranked petition (IPR2025-00423). *See* EX3004 (Patent Owner includes the same “priority date arguments and evidence” in its patent owner responses for both proceedings).

C. Petitioners Did Not Expand the Word Count for the '430 Patent

One concern expressed in the January 12 Order was whether Petitioner was “effectively expand[ing] the word count.” That is not the case for the '430 Patent. Word counts for individual sections of the petitions are shown below in brackets.

Section	IPR2025-00422	IPR2025-00423
I	Intro {56}	Intro {56}

II	Mandatory Notices	Mandatory Notices
III	Fees	Fees
IV	42.104 Requirements {171}	42.104 Requirements {152}
V	Overview of '430 Patent {846}	Overview of '430 Patent {983}
VI	Qualification of Prior Art {142}	Priority Date {4,013}
VII	Grounds 1-2 {6,486}	Qualification of Prior Art {488}
VIII	Ground 3 {2,252}	Grounds 1-2 {6,225}
IX	Grounds 4-5 {3,320}	Ground 3 {1,597}
X	Discretionary Denial {307}	Discretionary Denial {388}
XI	Conclusion {22}	Conclusion {18}

Assume for the sake of argument that Petitioners had presented only the pink-shaded sections and eliminated the strikethrough sections above, resulting in only one primary reference per petition and with no anticipation grounds. These limited grounds would have still amounted to 18,756 words, well over the 14,000 word limit for a single petition. Thus, Petitioners split the grounds into multiple petitions, but ensured zero overlap in the prior art. *See* Paper 2.

V. THE PANEL SHOULD NOT TERMINATE OR VACATE ANY PROCEEDINGS

Patent Owner is unclear in its requested remedy. In its briefs in IPR2025-00422 and IPR2025-00423, Patent Owner requests “that the Board terminate this proceeding.” Paper 56 at 1. Patent Owner does not explain why the Board should terminate both proceedings on the '430 Patent. Not even the January 12 Order on the other patents did this; the Director “remand[ed] for the Board to determine which petition challenging each patent to institute.” January 12 Order at 4.

Later in its brief, Patent Owner seems to recognize that at least one petition

for the '430 Patent should remain. Paper 56 at 3 (“which single petition to institute”). Yet, Patent Owner asks the Board to “vacate the institution decisions” (plural) while it decides. Patent Owner ignores the consequences of its request and provides no reasons for why any institution decision (let alone both) should be vacated.

In the proceedings in the January 12 Order (IPR2025-00687, -688, -717, and -718), no depositions have taken place, and Patent Owner has not filed its Patent Owner Responses (Due Date 1). In contrast, IPR2025-00422 and -00423 are far more advanced, and Patent Owner has already filed its Patent Owner Responses (Paper 55). The parties are pursuing additional discovery and supplemental RPI/privity briefing, and Petitioners are preparing their Due Date 2 Petitioners' Replies. Vacating the institution decisions would have the effect of eviscerating the schedule and repeating past deadlines, creating huge inefficiency and making it nearly impossible for the Panel to conduct the July 14, 2026 hearing or issue its final written decision by the statutory deadline.

VI. CONCLUSION

Petitioners respectfully request that the motion to terminate be denied.

Respectfully submitted,

Jan. 30, 2026

Date

/s/ David J. Tobin

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ATTORNEYS FOR PETITIONERS

CERTIFICATE OF SERVICE

Pursuant to 37 CFR § 42.6(e)(4), the undersigned certifies that on January 30, 2026, a complete copy of the foregoing Petitioners' Authorized Response to Patent Owner's Motion to Terminate was served on Lead and Back-up Counsel for Patent Owner at the service address provided in Patent Owner's Mandatory Notices:

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January 30, 2025

Date

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