

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BERKSHIRE HATHAWAY ENERGY COMPANY,
INTERSTATE POWER & LIGHT COMPANY,
MIDAMERICAN ENERGY COMPANY,
PACIFICORP,
WEC ENERGY GROUP, INC., AND
WISCONSIN POWER & LIGHT COMPANY
Petitioners

v.

MIDWEST ENERGY EMISSIONS CORP.
Patent Owner

IPR2025-00278
Patent 10,343,114

**PATENT OWNER BIRCHTECH CORP.'S
BRIEF REGARDING DISCRETIONARY DENIAL**

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Exhibit List	
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2003	Original Complaint for Patent Infringement, <i>Midwest Energy Emissions Corp., et al. v. Vistra Energy Corp., et al.</i> , C.A. 1:19-cv-01334, ECF No. 1 (D. Del. July 17, 2019)
2004	Transcript of Jury Trial, <i>Midwest Energy Emissions Corp., et al. v. Arthur J. Gallagher & Co., et al.</i> , C.A. 1:19-cv-01334 (D. Del.) (Feb. 26, 2024–March 1, 2024)
2005	Non-Final Judgment Following Jury Verdict, <i>Midwest Energy Emissions Corp., et al. v. Arthur J. Gallagher & Co., et al.</i> , C.A. 1:19-cv-01334, ECF No. 697 (D. Del. March 8, 2024)
2006	Case Management Order, <i>In re: Midwest Energy Emissions Corp. Pat. Litig.</i> , No. 4:24-md-03132-SHL-WPK, ECF No. 60 (S.D. Iowa March 7, 2025)
2007	Complaint for Patent Infringement, <i>Midwest Energy Emissions Corp. v. Berkshire Hathaway Energy Company, et al.</i> , 4:24-cv-00243-SHL-WPK, ECF No. 1 (S.D. Iowa July 18, 2024)
2008	PacifiCorp’s First Amended Answer, Affirmative Defenses, and Counterclaims in Response to Plaintiff’s First Amended Complaint for Patent Infringement, <i>In re: Midwest Energy Emissions Corp. Pat. Litig.</i> , No. 4:24-md-03132-SHL-WPK, ECF No. 82 (S.D. Iowa March 21, 2025) (Redacted)
2009	Defendant MidAmerican Energy Company’s First Amended Answer, Affirmative Defenses, and Counterclaims to Plaintiff’s First Amended Complaint, <i>In re: Midwest Energy Emissions Corp. Pat. Litig.</i> , No. 4:24-md-03132-SHL-WPK, ECF No. 83 (S.D. Iowa March 21, 2025) (Redacted)
2010	Defendant Wisconsin Power and Light Company’s First Amended Answer, Affirmative Defenses, and Counterclaims to First Amended Complaint, <i>In re: Midwest Energy Emissions Corp. Pat. Litig.</i> , No. 4:24-md-03132-SHL-WPK, ECF No. 87 (S.D. Iowa March 21, 2025) (Redacted)
2011	RESERVED

2012	Pilot- and Full-Scale Demonstration of Advanced Mercury Control Technologies for Lignite-Fired Power Plants, Quarterly Report (for the Period October 1, 2003 – December 31, 2003), dated February 2004
2013	Pilot- and Full-Scale Demonstration of Advanced Mercury Control Technologies for Lignite-Fired Power Plants, Final Report, dated February 2005
2014	Mercury Control Technologies for Electric Utilities Burning Subbituminous Coals, Final Report (For the period January 1, 2004 through June 30, 2005), dated October 2005
2015	Center for Air Toxic Metals (CATM), 2003 Research Ideas, dated August 30, 2002
2016	Document Metadata for Center for Air Toxic Metals (CATM), 2003 Research Ideas
2017	RESERVED
2018	Declaration of Inventor John Pavlish, dated July 27, 2020
2019	Plaintiff ME2C's Brief in Support of Its Motion for Preliminary Injunction, <i>Midwest Energy Emissions Corp. v. Berkshire Hathaway Energy Company, et al.</i> , 4:24-cv-00243-SHL-WPK, ECF No. 58-1 (S.D. Iowa Oct. 11, 2024)
2020	Defendants' Brief in Support of Their Resistance to Plaintiff's Motion for Preliminary Injunction, <i>Midwest Energy Emissions Corp. v. Berkshire Hathaway Energy Company, et al.</i> , 4:24-cv-00243-SHL-WPK, ECF No. 125 (S.D. Iowa Dec. 16, 2024) (Redacted)
2021	Plaintiff ME2C's Reply Brief in Support of Its Motion for Preliminary Injunction, <i>Midwest Energy Emissions Corp. v. Berkshire Hathaway Energy Company, et al.</i> , 4:24-cv-00243-SHL-WPK, ECF No. 139 (S.D. Iowa Dec. 23, 2024) (Redacted)
2022	DTE Electric Company Affiliates Report, dated December 31, 2023

I. Introduction

The Director should deny institution based on the factors provided in the Director’s March 26, 2025 Memorandum, and based on *Fintiv*. Patent Owner¹ sued several of Petitioners’ suppliers for mercury-capture related products in 2019. Those suppliers ultimately shut down their operations and agreed to pay a license fee for past infringement. Patent Owner then reached out to Petitioners to offer Patent Owner’s own products. Petitioners declined, refusing to do business with Patent Owner and instead choosing to continue using Patent Owner’s technology with support from different suppliers. As a result, in 2024, Patent Owner sued Petitioners (except for WEC, who is a co-owner of accused Wisconsin Power & Light Co. (“WPL”) power plants) for direct infringement and moved for a preliminary injunction.

Overall, Patent Owner has been litigating infringement of the ’114 Patent for over six years against various companies in eight district courts, the Panel on Multi-District Litigation (“MDL”), and the PTAB. During that time, Patent Owner successfully resolved its claims with a number of companies, obtained a jury verdict of infringement, and secured a JMOL of no invalidity. Given this complex

¹ Patent Owner Birchtech Corp. also operates under the names “Midwest Energy Emissions Corp.” and “ME2C.”

history and the inefficiencies of parallel proceedings, the Petition should be discretionarily denied.

II. Relevant Background

Patent Owner supplies products and services used to comply with mercury capture regulations applicable to coal-fired power plants. *See generally* <https://www.birchtech.com/mercury-emission-control>. In 2019, Patent Owner filed a patent infringement lawsuit asserting direct infringement of U.S. Patent No. 10,343,114 by power plant operators Vistra, NRG, Talen, and AEP, and asserting indirect infringement by refined coal suppliers to power plants (the “Delaware Litigation”). Ex. 2003. The refined coal suppliers included a number of entities affiliated with Chem-Mod LLC that supplied refined coal to at least some of the present petitioners. *Id.*; *see generally* Ex. 2019, Plaintiff ME2C’s Motion for Injunction at 4–7.

In 2020, the power plant operator defendants in the Delaware Litigation (Vistra, NRG, AEP, and Talen) petitioned for *Inter Partes* Review of the ’114 Patent (IPR2020-00832, IPR2020-00834, IPR2020-01294, IPR2020-01295, collectively “the 2020 IPRs”). Although the refined coal supplier defendants did not join in those petitions, they were named as real parties in interest. *See, e.g.*, IPR2020-00832, Petition at 2, 4–6. The petitions also named as real parties in interest the co-owners of power plants accused of infringement in the Delaware

Litigation, including current Petitioner PacifiCorp.² See IPR2020-00832, Petition at 3. All of the 2020 IPR Petitioners agreed to settlement terms with Patent Owner by 2021, and the Board dismissed the 2020 IPRs before Patent Owner filed its Patent Owner Preliminary Responses.

The remaining defendants in the Delaware Litigation included refined coal suppliers affiliated with Chem-Mod LLC. Those suppliers shut down their operations at the end of 2021, and most agreed to collectively pay Patent Owner \$27.5M. Ex. 2004, Trial Tr. at 466:19-467:2. Patent Owner proceeded to trial against the remaining refined coal suppliers in 2024. At trial, the Court issued a judgment as a matter of law of no invalidity, and the jury found the patents infringed, the infringement to be willful, and awarded Patent Owner's damages ask of approximately \$57 million. Ex. 2005.

Following that trial, in 2024, Patent Owner filed several additional lawsuits asserting many of the same patents against an additional group of power plant operators (the "2024 Defendants"). These power plant operators are not

² Petitioners identified PacifiCorp as a "potential" real party in interest. Patent Owner objected to this designation as improper and requested that the petitions be denied for failure to clearly identify all real parties in interested as required by 35 U.S.C. § 312(a)(2). IPR2020-00832, POPR at 8–9. The Board overruled that objection. IPR2020-00832, Paper 17 at 9–10 (PTAB Oct. 26, 2020). Nonetheless, the Board specifically ruled that Chem-Mod was a real party in interest, and this background indicates that PacifiCorp is a real party in interest with respect to Talen, a Defendant named in Patent Owner's 2019 Delaware Litigation.

incorporated in Delaware and thus could not have been included in the Delaware Litigation. Patent Owners' claims against the 2024 Defendants were consolidated by the Panel on Multi-District Litigation for pretrial proceedings in the District Court for the Southern District of Iowa (the "MDL Court"). *In re Midwest Energy Emissions Corp. Pat. Litig.*, No. MDL 3132, 2024 WL 5114663, at *3 (J.P.M.L. Dec. 12, 2024). The MDL Court has set a trial ready date for these cases of October 12, 2026. Ex. 2006.

Petitioners are a subset of the 2024 Defendants. They own or operate coal-fired power plants in the United States, and they each have an important connection to the Delaware Litigation. *See* Ex. 2007. For example, PacifiCorp co-owns a power plant that was at issue in the Delaware Litigation, and it contends that its co-owner Talen defended against Patent Owner's infringement assertions and obtained a license on its behalf. Ex. 2008 at 94–100. MidAmerican and WPL own power plants that were at issue in the Delaware Litigation, and they contend that the Chem-Mod-affiliated Defendants defended against Patent Owner's infringement claims and obtained a license on their behalf, at least for some periods of time. Ex. 2009 at 91; Ex. 2010 at 107.

III. The Interim Guidance Factors Support Discretionary Denial.

Consistent with the Director's March 26, 2025 Memorandum on Interim Processes for PTAB Workload Management, the Director may consider the

following factors when determining whether discretionary denial of institution is appropriate:

1. Whether the PTAB or another forum has already adjudicated the validity or patentability of the challenged patent claims;
2. Whether there have been changes in the law or new judicial precedent issued since issuance of the claims that may affect patentability;
3. The strength of the unpatentability challenge;
4. The extent of the petition's reliance on expert testimony;
5. Settled expectations of the parties, such as the length of time the claims have been in force;
6. Compelling economic, public health, or national security interests; and
7. Any other consideration bearing on the Director's discretion.

Overall, these factors support discretionary denial.

**1. Whether the PTAB or Another Forum Has Already
Adjudicated the Validity or Patentability of the Challenged
Patent Claims;**

This factor strongly supports discretionary denial. Petitioners' asserted invalidity theories have already been considered by the Delaware trial court and the Board. In the Delaware Litigation, Defendants asserted that Patent Owner's patents were invalid based on theories nearly identical to those currently asserted against the '114 Patent. Indeed, the current petitions rely on expert testimony from Dr. Stephen Niksa regarding Vosteen, Downs-Boiler, Sjostrom, and other inventor publications that are largely copied and pasted from his Delaware expert report. *Compare* Ex. 1002 *with* Ex. 2011. Patent Owner received a judgment of no invalidity with respect to the '114 Patent. Ex. 2005.

Before that trial, the Board had already rejected invalidity theories based on Vosteen. *See* IPR2020-00834, Paper 18 at 19. Petitioners now propose new secondary references to be combined with Vosteen to provide additional support for activated carbon limitations, but these “new” grounds are entirely redundant of the Vosteen + Nelson ground previously rejected by the Board. *Id.* at 18, 19, 28.

The Board previously instituted review based on Petitioners’ Downs-Boiler grounds, but that decision was based on the conclusion that Patent Owner had presented insufficient explanation of conception and reduction to practice at the institution stage. *See* IPR2020-00834, Paper 18 at 33. However, Patent Owner alleges prior reduction to practice with respect to Downs-Boiler such that evidence of conception and diligence is unnecessary. And in any event, the Board reached its decision before Patent Owner marshalled the evidence of prior reduction to practice presented at trial in Delaware. *See* Ex. 2004, Trial Tr. at 291:21–300:15 (inventor John Pavlish’s explanation of reduction to practice and corroborating evidence).

Finally, the Board previously instituted review to consider the same priority date issue asserted by Petitioners in IPR2025-00278. *See* IPR2020-00832, Paper 17 at 25. However, Petitioners’ priority date theory and the Board’s prior institution decision depend on the assertion that a provisional application cannot be incorporated by reference to sustain a priority date. This is incorrect. *See, e.g.,*

MPEP 608.01(p) (“The limitations on the material which may be incorporated by reference in U.S. patent applications which are to issue as U.S. patents do not apply to applications relied on only to establish an earlier effective filing date under 35 U.S.C. 119 or 35 U.S.C. 120.”); *see also Maquet Cardiovascular LLC v. Abiomed, Inc.*, 627 F. Supp. 3d 72, 78–84 (D. Mass. Sept. 12, 2022) (explaining that a provisional application can be incorporated by reference to preserve a priority date).

Overall, the same grounds previously instituted by the Board were presented more fully at trial in the Delaware Litigation. *See* Ex. 2004, Trial Tr. at 291:21–300:15 (inventor John Pavlish explanation of conception, reduction to practice, and corroborating evidence); Ex. 2004, Trial Tr. at 338:14–339:24 (argument regarding priority date issue). The Defendants ultimately failed to meet their burden on these issues and the Court granted JMOL of no invalidity. Ex. 2004, Trial Tr. at 1119:23–1120:8. There is no compelling reason for the Board to reach a different result now.

2. Whether There Have Been Changes in the Law or New Judicial Precedent Issued Since Issuance of the Claims that May Affect Patentability;

This factor is neutral. Petitioners have not identified any changes in the law that support their assertions of unpatentability.

3. The Strength of the Unpatentability Challenge;

This factor strongly supports discretionary denial. As explained above, Petitioners' challenges are particularly weak as they rely on theories that failed before the Board and/or at trial in Delaware.

Moreover, Petitioners bear the burden of demonstrating compliance with 35 U.S.C. § 312(a)(2) and § 315(b). *See, e.g., Ventex Co., Ltd. v. Columbia Sportswear N. Am., Inc.*, IPR2017-00651, Paper 152 (PTAB Jan. 24, 2019) (precedential) (terminating proceeding where Petition failed to name time-barred RPI and privy). They are unlikely to meet this burden. As noted above, Petitioner PacifiCorp was named as a real party in interest with respect to Talen in Talen's 2020 IPR Petition. *See* IPR2020-00832, Petition at 3. This makes sense as PacifiCorp co-owned a Talen infringing power plant, and PacifiCorp alleges that Talen defended that claim and obtained a license on its behalf. Talen was served with a complaint alleging infringement of the '114 Patent more than one year ago. Ex. 2003.

In addition, Petitioners MidAmerican and WPL received infringing refined coal from Chem-Mod and its affiliates as accused in Patent Owner's 2019 complaint. Ex. 2007 at 14 n.9. For example, MidAmerican's Louisa power plant received refined coal from Chem-Mod affiliate Louisa Refined Coal LLC. *See* Ex. 2003 at 2, 8, 20. Similarly, Petitioner WPL's Columbia power plant received

refined coal from Chem-Mod affiliate Portage Fuels Company, LLC. *See id.* at 2, 9, 20; *see also* Ex. 2022 at 102h. This type of supply relationship can create privity. *Semiconductor Components Indus., LLC v. Greenthread, LLC*, IPR2023-01242, Paper 94, DR Decision at 3 (PTAB Apr. 24, 2025). Moreover, while petitioners have not agreed to provide discovery into the indemnity relationship with their suppliers, Chem-Mod affiliated suppliers have a history of indemnifying power plants with respect to the burning of refined coal. *See, e.g.*, Ex. 2004, Trial Tr. at 633:20–635:5 (explaining that a refined coal supplier agreed to “indemnify, defend, save, and hold harmless the power plant from[/]against any adverse consequences arising out of the infringement or claim of infringement of any patent.”)

These Petitioners have argued that Chem-Mod defended Patent Owner’s infringement claims and negotiated a license on their behalf. *See* Ex. 2009 at 91. Other power plant operators such as Talen, NRG, and Vistra—the 2020 IPR petitioners—recognized that this relationship made Chem-Mod a real party in interest. *See, e.g.*, IPR2020-00832, Petition at 2.³ For the exact same reason, Chem-Mod and its affiliates are real parties in interest with respect to

³ Talen and Vistra identified Chem-Mod as a “potential” real party in interest. NRG identified Chem-Mod as a real party in interest, and the Board agreed with NRG. IPR2020-00832, Paper 17 at 9–10 (PTAB Oct. 26, 2020).

MidAmerican and WPL. Chem-Mod and its affiliates were served with a complaint alleging infringement of the '114 patent more than a year before this petition was filed. *See* Ex. 2003. Thus, the present petition is likely to be time-barred under 35 U.S.C. § 315(b) and for failure to identify at least Chem-Mod LLC, Louisa Refined Coal, LLC, and Portage Fuels Company, LLC in violation of 35 U.S.C. § 312(a)(2).

4. The Extent of the Petition's Reliance on Expert Testimony;

This factor strongly supports discretionary denial. Petitioners rely substantially on expert testimony. They do so for element-by-element mapping including interpretation of data presented in the asserted references, Pet. at 80–81, obviousness justifications, and comparisons of prior art materials to establish prior art dates, *e.g.*, Pet. at 64. This includes factual testimony about attendance at conferences, *e.g.*, Pet. at 18, and practices “routine in the industry,” Pet. at 40. Indeed, Petitioners rely on expert testimony for multiple assertions on nearly every page of the petitions.

5. Settled Expectations of the Parties, Such as the Length of Time the Claims Have Been in Force;

This factor strongly supports discretionary denial. The parties' expectations have been settled for some time, and the '114 patent will be expiring in a matter of months. Patent Owner has been involved in litigation related to the '114 patent from 8 days after it issued until the present. It ultimately prevailed in that litigation

and signed license and/or supply agreements with nearly all of the defendants involved. The Petitioners are a subset of power plant operators that simply could not be included in the Delaware litigation (none are incorporated in Delaware) but nonetheless chose to continue using Patent Owner's technology. Because they include real parties in interest with respect to Defendants in the Delaware Litigation, Petitioners should not have expected that they would be permitted to file IPRs.

6. Compelling Economic, Public Health, or National Security Interests;

This factor is neutral or supports discretionary denial. There are no compelling economic, public health, or national security interests that would support institution. In contrast, there is a compelling reason to not institute where this patent has been involved in six years of litigation that is now nearing completion.

7. Any Other Consideration Bearing on the Director's Discretion.

This factor is neutral.

Overall, none of the relevant factors support institution; they are all neutral or weigh against institution.

IV. The *Fintiv* Factors Support Discretionary Denial.

In addition to the Interim Guidance factors discussed above, Patent Owner and Petitioners are currently involved in parallel district court litigation.

Accordingly, the Director may also consider the following *Fintiv* factors:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court's trial date to the Board's projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board's exercise of discretion, including the merits.

Apple v. Fintiv, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential).

Again, these factors support discretionary denial of institution.

1. Whether the Court Granted a Stay or Evidence Exists That One May Be Granted if a Proceeding Is Instituted;

This factor supports discretionary denial. Patent Owner and Petitioners are currently litigating infringement of the challenged patent in a Multi-District Litigation proceeding pending in the District Court for the Southern District of Iowa. That proceeding involves a total of six patents and nine Defendants, including five Defendants that have not filed IPRs. Accordingly, the Director may reasonably conclude that a stay is unlikely.

First, Petitioners waited over three months after filing this petition to even move for a stay. Even then, only a subset of Defendants joined in the motion. In addition, the MDL Court has already decided a number of complex issues related to motions to dismiss and transfer. Patent Owner has also moved for a preliminary injunction. Thus, the Court and the parties have already invested substantial time and effort in the MDL proceeding. Moreover, when the MDL Panel consolidated the underlying district court actions, it specifically noted that it was doing so to ensure that a single judge would address claim construction for all of these actions:

Centralization is warranted to eliminate duplicative discovery; prevent inconsistent pretrial rulings (particularly with respect to claim construction and issues of patent validity); and conserve the resources of the parties, their counsel, and the judiciary. . . .The efficiencies to be gained, for both the parties and the judicial system, by having a single court oversee claim construction and discovery relating to the patents are substantial.

In re Midwest Energy Emissions Corp. Pat. Litig., No. MDL 3132, 2024 WL 5114663, at *1, *2 (J.P.M.L. Dec. 12, 2024). Under these circumstances, a stay would be inappropriate. *See, e.g., In re Neo Wireless, LLC Pat. Litig.*, No. 2:22-MD-03034-TGB, 2024 WL 688170, at *3 (E.D. Mich. Feb. 20, 2024) (denying motion for stay pending IPRs given the “unique MDL context”).

2. Proximity of the Court's Trial Date to the Board's Projected Statutory Deadline for a Final Written Decision;

This factor supports discretionary denial. The MDL Court has set a trial ready date for Iowa Defendants of October 12, 2026. Ex. 2006 at 3. At that time, non-Iowa Defendants may choose to remain in Iowa or be transferred to various other District Courts for trial in those districts. The statutory deadline for a final written decision in this proceeding is September 7, 2026. While Petitioners have filed petitions related to the other patents-in-suit, they have only recently filed those petitions, and thus the statutory deadlines for most of the patents-in-suit will be very near or after the MDL Court's trial ready date.

3. Investment in the Parallel Proceeding by the Court and the Parties;

This factor strongly supports discretionary denial. As explained above, the parties have already invested substantial resources in the parallel MDL proceeding. This includes briefing and deciding multiple rounds of motions to dismiss, briefing and deciding MDL consolidation, briefing multiple motions to compel, and conducting discovery and briefing Patent Owner's motion for preliminary injunction. That final motion is particularly relevant to this factor as it means that the parties have already engaged in substantial discovery and briefing regarding infringement and validity related to the patents-in-suit. *See* Exs. 2019–2021.

By the statutory deadline for institution, the parties will have exchanged infringement and invalidity contentions, made substantial progress in discovery, and begun the claim construction process.

By the statutory deadline for a final written decision, the parties will have completed fact discovery, claim construction, expert discovery, and will be on the doorstep of trial. Because of the MDL Court's investment in the proceeding, the fact that the present IPR affects only one of the currently asserted patents and only a subset of the Defendants (*e.g.*, other Defendants may argue that they would not be subject to any statutory estoppel), a stay would not promote judicial efficiency.

4. Overlap Between Issues Raised in the Petition and in the Parallel Proceeding;

This factor supports discretionary denial. There is substantial overlap between the parallel proceedings and the present proceeding. Indeed, the asserted references and core invalidity issues of conception, reduction to practice, and priority date have been raised in both proceedings. *See* Ex. 2021 (Patent Owner responding to invalidity theories asserted in preliminary injunction briefing).

Petitioners have filed a *Sotera* stipulation, but as explained below, this stipulation will only apply to a subset of the Defendants in the parallel proceeding. Thus, this factor also strongly supports discretionary denial.

5. Whether the Petitioner and the Defendant in the Parallel Proceeding Are the Same Party;

This factor strongly supports discretionary denial. All of the current Petitioners are Defendants in the MDL proceeding except WEC Energy Group Inc. WEC is named as a petitioner because it is a co-owner of power plants accused in the MDL proceeding. However, not all Defendants in the MDL proceeding have joined the present Petition. This presents the worst-case scenario where the Board's work would be duplicative of the parallel MDL proceeding, and it may be further wasteful because the non-Petitioner Defendants may argue that they are not bound by statutory estoppel or a *Sotera* stipulation.

6. Other circumstances that impact the Board's exercise of discretion, including the merits.

For the reasons explained above, Petitioners' asserted grounds are notably weak, which further supports discretionary denial.

Overall, none of the *Fintiv* factors support institution, and all weigh against institution.

V. Conclusion

For the reasons provided above, the Board can save resources by discretionarily denying this petition.

Dated: May 6, 2025

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), the undersigned certifies that the foregoing Brief Regarding Discretionary Denial, exclusive of the exempted portions as provided in 37 C.F.R. § 42.24, contains 3,475 words and therefore complies with the type-volume limitations of 37 C.F.R. § 42.24. The word count was calculated by starting with Microsoft Word's total document word count and subtracting the words for the Cover Page, Table of Contents, Table of Authorities, Table of Exhibits, Table of Challenged Claims, Mandatory Notices, Certificate of Compliance, and Certificate of Service.

CERTIFICATE OF SERVICE UNDER 37 C.F.R. § 42.6(e)(4)

It is hereby certified that on this 6th day of May, 2025, a copy of the foregoing document was served via electronic mail, as consented to by Petitioner upon the following counsel of record:

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