

No. 17-

IN THE
Supreme Court of the United States

SPECIALTY FERTILIZER PRODUCTS, LLC,

Petitioner,

v.

SHELL OIL COMPANY,

Respondent.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED
STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

PETITION FOR A WRIT OF CERTIORARI

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QUESTIONS PRESENTED

1. Whether the United States Patent and Trademark Office (PTO) can by reexamination lawfully revoke a duly issued U.S. patent based upon written testimonial declarations of biased adverse witnesses having no duty of candor to the PTO, while completely barring all confrontation and cross-examination of those adverse witnesses.

2. Whether the PTO can lawfully “decline to address” a due process confrontation claim, including the specific underlying facts confirming a due process right to confront and cross-examine adverse witnesses, while prohibiting any confrontation and cross-examination of the adverse witnesses.

3. Whether the Court of Appeals for the Federal Circuit can lawfully avoid deciding a due process confrontation claim by resort to a one-word, Rule 36 affirmance of the PTO’s decision wholly refusing to even consider the claim, in violation of 35 U.S.C. § 144 and the common law duty to decide novel and important constitutional issues with articulate reasoning subject to Supreme Court review.

4. Whether *inter partes* reexamination—an adversarial process used by the PTO to adjudicate the validity of existing patents—violates the Constitution by extinguishing private party rights through a non-Article III forum without a jury.

PARTIES TO THE PROCEEDING

The parties to the proceeding include those identified in the caption as well as the Director of the

United States Patent and Trademark Office, who intervened at the Federal Circuit.

RULE 29.6 STATEMENT

The named Petitioner, Specialty Fertilizer Products, LLC, assigned all its rights in the patent-at-issue to JLSMN, LLC after the underlying *inter partes* reexamination was instituted. JLSMN, LLC is thus the real party in interest to the instant proceeding. There is no parent or publicly held company owning 10% or more of JLSMN, LLC's stock.

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JURISDICTION

The Federal Circuit entered its Rule 36 decision on November 8, 2017. On January 25, 2018, the Chief Justice granted Petitioner’s Application No. 17A779, extending the deadline for filing the instant petition until March 8, 2018. This Court has jurisdiction under 28 U.S.C. § 1254(1).

RELEVANT CONSTITUTIONAL AND STATUTORY PROVISIONS

The Due Process Clause of the Fifth Amendment of the United States Constitution provides:

No person shall be . . . deprived of life,
liberty, or property, without due process
of law

35 U.S.C. § 144 sets forth the requirements imposed upon the Federal Circuit in deciding cases from the PTO:

The United States Court of Appeals for the Federal Circuit shall review the decision from which an appeal is taken on the record before the Patent and Trademark Office. Upon its determination the court shall issue to the Director its mandate and opinion, which shall be entered of record in the Patent and Trademark Office and shall govern the further proceedings in the case.

The Seventh Amendment of the United States Constitution Provides:

In suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved, and no fact tried by a jury, shall be otherwise reexamined in any court of the United States, than according to the rules of the common law.

STATEMENT OF THE CASE

This case implicates one of the most fundamental constitutional principles in American jurisprudence, namely the due process right to confront and cross-examine hostile witnesses in adversarial, fact-finding proceedings where the government seeks to deprive one party of important property rights.

During an *inter partes* reexamination of Petitioner Specialty Fertilizer Product's (SFP) patent, the Requestor Shell Oil Company submitted two adversarial testimonial declarations from one of its employees and a third adversarial testimonial

declaration from a long-time, effectively in-house expert. A1870–82, 2893–907, 2909–20.¹ The declarants were biased and hostile witnesses, and their declarations were opaque, non-informative, and so riven with error to the point that SFP was unable to fully respond. SFP twice petitioned the PTO Director, first seeking vacatur of the order granting the reexamination because its reliance on Shell’s first declaration deprived SFP of due process, and later seeking expungement of the second and third declarations because the PTO’s receipt of such testimonial declarations without the ability to confront and cross-examine the witnesses violated SFP’s due process rights. A2043–48, 2986–98. The Director denied the petitions, stating that under *Mathews v. Eldridge*, 424 U.S. 319 (1976), nothing more than notice and opportunity to be heard was required because the reexamination did not contest “patent ownership” and must be conducted with “special dispatch.” A3029–30 (citing *Abbott Laboratories v. Cordis Corp.*, 710 F.3d 1318, 1327–28 (Fed. Cir. 2013)); A3057–58 (same).

When SFP appealed to the PTAB, arguing a due process violation, the PTAB “decline[d] to address” the due process issue, asserting that “[a] lack of ability for direct cross-examination generally does not generate due process violations in *inter partes* reexamination cases.” App. 34a–35a (citing *Abbott*, 710 F.3d at 1328). The PTAB then accepted Shell’s declarants’

¹ For convenience, “A____” citations are provided for material contained in the Joint Appendix filed with the Federal Circuit.

testimony and relied upon it as the principal evidence supporting its decision revoking SFP's Patent, without permitting SFP to depose the witnesses. App. 8a 11a–12a, 21a n.16, 25a. This complete deprivation of SFP's right to confront adverse witnesses is directly contrary to controlling Supreme Court precedent, and the reexamination was therefore unconstitutional.

The PTO's complete avoidance of the due process issue was then adopted by the Federal Circuit, which summarily approved the PTAB decision via a Rule 36 affirmance. App. 2a. The Federal Circuit's approval of the PTAB's conclusion that *Abbott* forevermore forecloses the right to confront and cross-examine adverse witnesses in reexaminations is not only a misapprehension and overextension of *Abbott*, it is an interpretation that cannot be squared with this Court's precedents. Moreover, the Federal Circuit violated 35 U.S.C. § 144—which requires that the Federal Circuit “shall issue . . . [an] opinion”—and ignored its duty of a common law appellate court to decide novel and important constitutional issues before it with articulate reasoning subject to meaningful Supreme Court review.

The present case is another instance of unwarranted patent exceptionalism in the form of spurious doctrines and rules in the patent arena that deviate from those of general applicability in the law. The PTO and the Federal Circuit have erred by arbitrarily exempting reexaminations from the Due Process Clause and the established confrontation and cross-examination principles of general applicability. The Court should therefore grant the writ to correct the constitutional error in the proceedings below, and to end the patent exceptionalism denying the

essential rights of confrontation and cross-examination in PTO reexaminations.

I. The PTO's Reexamination Regime

In 1980, Congress enacted 35 U.S.C. § 302, which authorized the filing of *ex parte* reexaminations in the PTO, whereby, “[a]ny person at any time” may file a request for the reexamination of an issued patent on the basis of prior art. § 302. The request must set forth “the pertinency of and manner of applying cited prior art to every claim for which reexamination is requested.” *Id.* The Director determines if a substantial new question of patentability is raised by the request, and if so the patent is reexamined. 35 U.S.C. § 303.

Although § 302 specifies that only a “statement” be filed with the request for reexamination, the PTO from the outset determined that “statement” could include testimonial affidavits or declarations purportedly explaining the content of the prior art. *See* Manual of Patent Examining Procedure (MPEP) § 2258.I.E (8th Ed. Rev. 9, Aug. 2017).

If the Director concludes that reexamination should be ordered, it is thereafter purportedly conducted in the manner of regular examination. MPEP § 2209. However, the Director is free to consider any affidavits or declarations that were already submitted by a third party. MPEP § 2258.I.E.

In 1999, Congress enacted 35 USC § 311 (pre-AIA), which permitted the filing of *inter partes* reexaminations. As in *ex parte* reexaminations, affidavits or declarations may form a part of the

reexamination request. MPEP § 2617. Moreover, in *inter partes* reexaminations, the requester is entitled to participate during the entire course of the proceeding. For example, each time that the patent owner files a response to an action from the PTO, the requester has an opportunity to file written comments addressing issues raised by the action of the Office or the patent owner's response. 35 USC § 314(b)(2) (pre-AIA). While the statute specified that the requester was permitted to file "comments," the PTO, once again, interpreted this to include the filing of affidavits or declarations. MPEP § 2617.II.

The PTO Rules make no provision for depositions or other discovery during the course of *ex parte* or *inter partes* reexaminations. See 37 C.F.R. § 1.902–906; see also *Abbott*, 710 F.3d at 1327. In 2011, Congress replaced *inter partes* reexaminations with a new proceeding called *inter partes* review (IPR). 35 USC §§ 311–319. One of the "improvements" over *inter partes* reexaminations was to allow the use of depositions. *Abbott*, 710 F.3d at 1326. *Ex parte* reexaminations were not affected by these new statutes and remain in place. Indeed, PTO records confirm that during the years 2011–2016, 2,639 *ex parte* reexamination requests were filed. See United States Patent & Trademark Office, *Ex Parte* Reexamination Filing Data – September 30, 2017, available at https://www.uspto.gov/sites/default/files/documents/ex_parte_historical_stats_roll_up.pdf. And in all such reexaminations, the PTO accepts adverse testimonial affidavits or declarations, while prohibiting the patent owners from confrontation and cross-examination of such adverse witnesses.

During reexaminations, the patent owner and representatives thereof are required to abide by a strict code of conduct. *See* 37 C.F.R. § 1.555(a). Notably, third-party participants—such as Shell and its witnesses in the instant case—are *not* under any such duty of candor. This asymmetry of duty is a significant factor in this case; i.e., Shell was free to engage in advocacy by omission, which helped it obscure the genesis of its experts’ opinions and methodology.

II. The PTO’s Reexaminations of the Patent-at-Issue

A. The Technology

SFP’s U.S. Patent No. 6,210,459 (“the ’459 patent”) claims novel fertilizer granules comprising ammonium sulfate, elemental sulfur, and micronutrient(s). A0055–57. By adjusting the relative quantities of elemental sulfur and ammonium sulfate, the granules, when applied to soil, create localized, low-pH, microenvironments. A0051, Col. 3:16–30. Low pH microenvironments facilitate the uptake of micronutrients by growing plants, without decreasing the pH of the bulk soil, which can otherwise be detrimental. A0050, Col. 1:40–57; A0051, Col. 3:16–30.

Granules in accordance with the ’459 patent have proven to be enormously successful. As of 2013, hundreds of millions, if not billions, of dollars of products covered the by the patent—marketed under the “MicroEssentials” name—have been sold with estimated revenues of between \$1.8 and \$2.1 billion. A2392–93, ¶¶ 24–25. The MicroEssentials

manufacturer has also increased production capacities and has predicted increasing sales and market share for the products in the future. A2393–94, ¶¶ 26–30.

In January 2009, SFP sued the MicroEssentials manufacturer for infringement of the '459 patent. During discovery in that case, the defendants cited a new reference, a Patent Cooperation Treaty published application referred to as the “Bexton PCT.”

B. The First Reexamination

In light of the Bexton PCT, SFP initiated an *ex parte* reexamination of the '459 patent on June 27, 2011. A1800–29. After a series of actions and claim amendments, SFP submitted claims reciting that the granules contained 5–49% ammonium sulfate and from about 2.5–25% elemental sulfur, with the proviso that the amount of ammonium sulfate was greater than the amount of elemental sulfur. A0055–57. The PTO concluded that such amended claims were patentable over Bexton PCT and other references, and a Reexamination Certificate issued. A0055–57.

C. The Second Reexamination

1. Notwithstanding SFP’s favorable outcome in the first reexamination, on September 15, 2012, Shell filed an *inter partes* reexamination request principally relying on the same art considered in the *ex parte* reexamination—Bexton PCT. A73–242. The critical element of Shell’s request, however, was the declaration of its employee, Klaus Hutter (“Hutter I declaration”). A1870–82. In his declaration, Hutter asserted:

When the Bexton PCT fertilizer (aside from elemental sulfur and trace elements) contains from 30% to 92.5% ammonium phosphate (AP), the prior art fertilizer composition is within the [‘459 patent] claimed range of ammonium sulfate (AS). This percent range corresponds to an AP to AS ratio of about 0.43:1 to about 9:1.

A1873–74 ¶ 10. Notably, neither the 30%–92.5% nor the 0.43:1–9:1 ranges are actually disclosed in Bexton PCT. Moreover, Hutter provided no explanation about how he derived these ranges.

Hutter also alleged that the data from a secondary reference (Norton), which was reported in terms of *sulfite ion*, was intended to refer to *ammonium sulfate*, and cited a portion of that reference supposedly to this effect. A1874–78 ¶¶ 11–18. However, Norton’s disclosure said nothing about any such equivalence, and no Shell witness ever provided any evidence substantiating Hutter’s allegation. Hutter provided calculations regarding Norton which depended upon the supposed sulfite ion/ammonium sulfate equivalence. A1875–78 ¶¶ 15–18.

As explained in detail below, the Hutter I declaration was the basis for all rejections of the SFP claims, and hence this declaration is central to this case.

2. The PTO granted Shell’s reexamination request, and on December 11, 2012, before any permitted response by SFP, the three-member reexamination specialist panel issued a first office

action rejecting all claims. A2005–23. The panel principally relied on the Hutter I declaration in rejecting the claims; for example, in Ground 1, the panel stated:

The Hutter Declaration referenced by Requester to explain the content of Bexton PCT, asserts that when both ammonium phosphate and ammonium sulfate are present in the fertilizer composition and the ratio of ammonium phosphate to ammonium sulfate is about 0.43:1 to about 9:1 (*i.e.* the ammonium phosphate is present in the fertilizer in an amount of 30–92.5%), [Bexton PCT] will necessarily contain an amount of ammonium sulfate that falls within the range claimed in claims 4, 8, and 14 – that is, within the range of about 5–49% by weight ammonium sulfate.

A2007. The findings of the December 11, 2012 Office Action thus specifically included the Hutter I declaration’s ranges of 0.43:1–9:1 and 30–92.5%, even though there was no explanation on the record as to how these ranges were derived. And, as explained below, this December 11, 2012 Office Action was the principal basis relied upon by the final decision of the PTAB.

3. On January 15, 2013, SFP issued an Idaho subpoena for the deposition of Hutter under 35 U.S.C. § 24, which permits subpoenas in PTO “contested” proceedings. A2133. Shell moved to quash the subpoena. A2116–27. SFP then filed a motion to stay because the Federal Circuit had *Abbott* pending before

it, in which the question of the availability of § 24 subpoenas in *inter partes* reexamination was in issue. A5788–89. The *Abbott* court ultimately held that *inter partes* reexaminations were not “contested” proceedings, and thus § 24 did not apply. 710 F.3d at 1327. SFP thus withdrew the subpoena. A5791–92. Because the issue of required due process was neither ripe nor properly before the Idaho court, SFP was unable to pursue relief in that forum. However, SFP continued to assert its due process contentions in the ongoing reexamination.

4. For example, on January 25, 2013, SFP filed a Petition to the PTO Director requesting that the November 28, 2011 Order granting the reexamination be vacated because the reliance upon the Hutter I declaration violated SFP’s due process confrontation rights. A2043–48. In this Petition, SFP noted the critical omissions, errors, and ambiguities relative to the Hutter I declaration. A2043–48.

The Director dismissed the Petition, asserting that confrontation by cross-examination was not an indispensable feature of due process. A3029–30. However, in making this decision, the Director refused to consider the omissions, errors, and ambiguities of Hutter’s opinion that demonstrated a need for the ability to confront him:

With regard to the arguments on the merits of the Hutter declaration, including [SFP’s expert’s] declaration filed with the petition, the arguments and declarations have not been considered for purposes of this decision since such are not appropriate for a

petition under [37 C.F.R. §] 1.181 as these relate to appealable matters.

A3030.

5. SFP responded to the December 11, 2012 Office Action by pointing out that the Hutter I declaration failed to provide any backup calculations or explanations regarding his ¶ 10 ranges. A2178–80. Moreover, SFP explained that in light of these omissions, it was placed in an “impossible situation,” because it could not properly respond without knowing the basis of Hutter’s work. A2183–84. To this end, SFP asked that, if the reexamination panel continued to rely on the Hutter I declaration, the reexamination panel explain in detail “the bases and all calculations supporting Hutter’s Paragraph 10 ranges” and how his ¶ 10 plots were generated. A2184. As to the due process issue, SFP stated:

As things now stand, Shell is permitted to file sworn testimonial evidence in the form of the Hutter Declaration, and Patent Owner cannot depose Mr. Hutter. Thus, the Patent Office proposes to deprive Patent Owner of its valuable patent property largely on the basis of the Hutter Declaration, and Patent Owner cannot confront Mr. Hutter by way of a deposition or otherwise. This is the clearest denial of Due Process.

A2183 n.3.

6. In response to SFP’s submission, Shell submitted another declaration by Hutter (“Hutter II

declaration”), and a declaration from its in-house expert, Dr. Blair. A2893–907, 2909–20. Neither the Hutter II declaration nor the Blair declaration explained the basis of the original calculations.

7. On March 26, 2013, SFP submitted another petition to the Director seeking expungement of the Hutter II and Blair declarations on a number of bases including violation of SFP’s due process rights. A2986–98. As a part of that petition, SFP noted that:

The cloak of secrecy maintained by Shell and Hutter would of course have been pierced had Patent Owner been allowed to confront Hutter in a deposition. But as things now stand, Shell and Hutter are not constrained by any obligations of candor whatsoever, and are free to proffer anything they see fit. Of course in a normal litigation situation, the deposition of a declarant will reveal whether the declarant’s testimony is slanted or one-sided. Thus, the safeguard of confrontation by deposition provides assurance that the truth will ultimately come out. The present situation thus presents the worst of both worlds, no duty of candor coupled with no opportunity to cross-examine. This cannot be the law.

A2995.

The Director denied this petition, again refusing to consider the particular deficiencies in the

declarations for the same reasons provided in the initial petition decision. A3058.

8. On January 10, 2014, the reexamination panel issued a Right of Appeal Notice (“RAN”) confirming the patentability of all claims of the ’459 patent. A3139–78. In this RAN, the panel made a careful analysis of Bexton PCT, as well as all other cited art, and concluded that all claims were patentable. *See, e.g.*, A3145–48. In light of this finding, the reexamination panel of course did not respond to SFP’s request that there be an explanation of Hutter’s calculations regarding Bexton PCT.

9. Shell appealed the reexamination panel’s allowance of the claims. On July 25, 2015, the PTAB reversed the reexamination panel, imposing a new ground of rejection that all claims were unpatentable. App. 4a. The PTAB’s new ground rejected “all of the claims of the ’459 patent *in accordance with the findings of the Examiner’s Non-final Office Action mailed December 11, 2012*, and with the additional reasoning discussed herein.” App. 25a (emphasis added). As noted above, the December 11, 2012 Office Action was based entirely and explicitly upon the Hutter I Declaration. *See* Part II.C.2, *supra*. Hence, the principal rejections lodged by the PTAB were grounded exclusively on the Hutter I declaration.

10. Under PTO Rules, SFP was obliged to seek rehearing of the new grounds of rejection. *See* 37 C.F.R. §§ 41.77, 41.79. On June 7, 2016, the PTAB affirmed its original decision, maintaining the principal rejections based upon the Hutter I declaration. App. 29a–38a.

In the second decision, the PTAB for the first time dealt with SFP's due process arguments, which were continually pressed during the reexamination and appeal. The entirety of the PTAB's discussion on the due process issue was:

We decline to address the due process issues raised on appeal in this case and again on requests for hearing. A lack of ability for direct cross-examination generally does not generate due process violations in *inter partes* reexamination cases. *See Abbott*[, 710 F.3d at 1328] (“35 U.S.C. § 24 only empowers a district court to issue subpoenas for use in a proceeding before the PTO if the PTO's regulations authorize parties to take depositions for use in that proceeding. We therefore hold that section 24 subpoenas are not available in *inter partes* reexamination proceedings.”).

App. 34a–35a (citations to SFP's briefs omitted).

III. The Federal Circuit's Decision

On November 8, 2017, the Federal Circuit summarily affirmed the PTAB's decision by resorting to its oft-used Rule 36. *See* App. 2a. Although this summary affirmance provided no reasoning for the decision, the panel's use of Rule 36 apparently shows that the court embraced the PTAB's conclusion that the right to confront and cross-examine adverse witnesses in reexaminations is wholly foreclosed by *Abbott*.

REASONS FOR GRANTING THE PETITION**I. The Federal Circuit's *Abbott* Holding, as Construed by the Panel Below, Conflicts With this Court's Precedents**

The Supreme Court has never sanctioned the total denial of confrontation and cross-examination of biased and hostile witnesses in adversarial, fact-finding proceedings involving substantial rights, where the testimony was relied upon in the revocation of such rights. Instead, this Court has vigorously protected confrontation and cross-examination rights, particularly in the rare cases where biased and adverse testimony was presented and confrontation and cross-examination rights were wholly abrogated.²

In *Greene v. McElroy*, 360 U.S. 474 (1959), this Court reviewed the constitutionality of the Secretary of Defense revoking the security clearance of a contractor's employee without affording the employee an opportunity to confront the adverse witnesses against him. In reversing the Court of Appeals, the Court explained:

While [the ability to show the evidence against a person is untrue] is important in the case of documentary evidence, *it is even more important where the evidence consists of the testimony of individuals*

² The rarity of such cases is itself a testament to the settled law that confrontation and cross-examination in adversarial proceedings is constitutionally mandated.

whose memory might be faulty or who, in fact, might be perjurers or persons motivated by malice, vindictiveness, intolerance, prejudice, or jealousy. We have formalized these protections in the requirements of confrontation and cross-examination. They have ancient roots. They find expression in the Sixth Amendment which provides that in all criminal cases the accused shall enjoy the right “to be confronted with the witnesses against him.” This Court has been zealous to protect these rights from erosion. It has spoken out not only in criminal cases, but also in all types of cases where administrative and regulatory actions were under scrutiny.

360 U.S. at 496–97 (emphasis added) (citations omitted).

Similarly, in *Goldberg v. Kelly*, 397 U.S. 254 (1970), the Court held that a state could not terminate public assistance without affording a claimant the opportunity for a pre-termination evidentiary hearing. The Court there noted the importance of confrontation prior to terminating a person’s property rights, explaining that “[i]n almost every setting where important decisions turn on questions of fact, due process requires an opportunity to confront and cross-examine adverse witnesses.” 397 U.S. at 269.

Six years later, the Court in *Mathews v. Eldridge*, 424 U.S. 319 (1976), summarized the principles from *Greene*, *Goldberg*, and others in the form of a “test” that continues to guide the Court’s due process

jurisprudence. The Court there, recognizing that due process is a flexible concept based upon specific facts, summarized three factors to weigh when considering what procedures are required under the Due Process Clause:

First, the private interest that will be affected by the official action; second, the risk of an erroneous deprivation of such interest through the procedures used, and the probable value, if any, of additional or substitute procedural safeguards; and finally, the Government's interest, including the function involved and the fiscal and administrative burdens that the additional or substitute procedural requirement would entail.

424 U.S. at 335.

In *Mathews* the Court found that there was no due process violation when a social security disability claimant was denied benefits without a hearing, but it did so only *after* weighing these three factors, and then only because the Court determined that the administrative burden in requiring a *pre*-termination hearing would be great in the social-security context, and because, critically, the claimant was provided with a *post*-termination hearing, including the right to confront and cross-examine adverse witnesses. *Id.* at 340–49. Following *Mathews*, the Court has held that there is no due process defect with similar procedures in other non-adversarial, mass-adjudication situations, such as social security,

veterans, and disability benefits. These cases have three consistent hallmarks.

First, they are predicated upon *timing*. In *Mathews*, the issue was procedural due process requirements for disability termination benefits *prior to* final decision, but the claimant could later seek full judicial review. *Id.* at 333, 339. *Mathews* did not involve a total denial of confrontation rights, but only a temporary deprivation.

Second, the evidence in these non-adversarial, mass-adjudication cases turns on “routine, standard, and unbiased medical reports by physician specialists,” where the “specter of questionable credibility and veracity is not present.” *Id.* at 344 (quoting *Richardson v. Perales*, 402 U.S. 389, 404–05, 407 (1971)).

Third, claimants in these non-adversarial, mass-adjudication cases have “full access to all information relied upon by the state agency.” *Id.* at 345–46.

The present case differs fundamentally from these non-adversarial, mass-adjudication cases. Like every patent case, this is a unique, hotly adversarial dispute having nothing akin to social security cases. Moreover, the temporal aspect of *Mathews* is not present here; there is no later final review allowing confrontation of adverse witnesses. The Shell declarations are not routine, standard, and unbiased—indeed, both Hutter and Blair are biased witnesses with no duty of candor, thereby presenting “the specter of questionable credibility and veracity.” *Id.* at 344 (quoting *Richardson*, 402 U.S. at 404). And finally, neither SFP nor the PTO had access to “all

information” relied upon by Shell’s declarants. *Id.* at 345–46.

Here, the PTAB and the Federal Circuit concluded there was no due process violation without resort to *Mathews* or engaging in the three-part balancing inquiry. Instead, the PTAB “decline[d] to address” SFP’s due process arguments, opining:

A lack of ability for direct cross-examination generally does not generate due process violations in *inter partes* reexamination cases. *See Abbott*[, 710 F.3d at 1328] (“35 U.S.C. § 24 only empowers a district court to issue subpoenas for use in a proceeding before the PTO if the PTO’s regulations authorize parties to take depositions for use in that proceeding. We therefore hold that section 24 subpoenas are not available in inter partes reexamination proceedings.”).

App. 34a–35a (citations to SFP’s briefing omitted). And the Federal Circuit, via its summary affirmance, apparently agreed with the PTAB that *Abbott* had settled the issue.

At the outset, the PTAB’s and the Federal Circuit’s reliance on *Abbott* impermissibly extended *Abbott*’s holding well beyond the issue at bar in that case. *Abbott* dealt with the sole question of whether § 24 empowers a district court to issue subpoenas in a reexamination, which the patentee sought in an effort to establish secondary considerations of nonobviousness. 710 F.3d at 1319–21. Although the

Abbott court addressed the patentee’s due process arguments in that context, *Abbott* did not deal with the due process right to confront and cross-examine adverse witnesses. *See id.* at 1327–28. Indeed, the court in *Abbott* was careful to note that the patentee had obtained subpoenas for depositions of its adversaries’ expert witnesses, but that “[t]hose subpoenas are not directly at issue in this appeal.” *Id.* at 1321 n.3 (emphasis added). The Federal Circuit thus erred by agreeing with the PTAB that *Abbott* somehow controlled SFP’s confrontation due process contention.

In reality, *Abbott* only gave lip service to this Court’s due process precedents, generally explaining that “[g]iven that the basic rights of notice and an opportunity to be heard have been afforded, determining what additional procedures are guaranteed by due process requires balancing the various interests at stake,” but then cursorily concluding no additional procedures are need in reexaminations without engaging in a *Mathews*-type analysis:

This balancing must take into account the fact that a reexamination, unlike an interference proceeding, does not involve a contest over patent ownership, as well as the fact that Congress has specifically charged the PTO with conducting reexaminations “with special dispatch.” We do not believe that, under the facts of this case, excluding compulsory production of testimony in inter partes reexamination proceedings raises a “serious constitutional problem[].”

Abbott, 710 F.3d at 1328 (first quoting *Mathews*, 424 U.S. at 334–35; then quoting § 314(c) (pre-AIA); and then quoting *Edward J. DeBartolo Corp. v. Fla. Gulf Coast Bldg. & Constr. Trades Council*, 485 U.S. 568, 575 (1988)). This conclusory statement stands in contrast to the fact-intensive analysis required by *Mathews* and its progeny.

Furthermore, the *Abbott* court’s decision is nonsensical. The *Abbott* court distinguished, for due process purposes, an interference proceeding and an *inter partes* reexamination, noting that the latter does not involve “a contest over patent ownership.” *Id.* But just as a patent owner who loses in an interference, a patent owner who does not prevail in an *inter partes* reexamination is wholly stripped of its important private property rights—its patent. Whether the result of the government’s adjudication is to take ownership of a patent from one and give it to another (an interference), or take ownership from one and give to no one (a reexamination), the government is still depriving a party of its property, and thus can only do so with due process of law. *See* U.S. Const. amend. V.

Moreover, this Court’s precedents make clear that the facts of a particular case *must* be considered in determining the contours of due process, and that the refusal to consider such facts is itself a constitutional violation. One need only review *Mathews* itself to confirm this:

Due process is flexible and calls for such procedural protections as *the particular situation demands*. Accordingly, resolution of the issue whether the administrative procedures provided here

are constitutionally sufficient *requires analysis of the governmental and private interests that are affected*. More precisely, our prior decisions indicate that identification of the specific dictates of due process generally *requires consideration of three distinct factors*.

424 U.S. at 334–35 (brackets, citations, and internal quotation marks omitted); *see also Zinermon v. Burch*, 494 U.S. 113, 127 (1990) (“Due process, as this Court often has said, is a flexible concept that varies with the particular situation. *To determine what procedural protections the Constitution requires in a particular case, we weigh [the Mathews factors].*” (emphasis added)); *Bell v. Burson*, 402 U.S. 535, 540 (1971) (“A procedural rule that may satisfy due process in one context may not necessarily satisfy procedural due process in every case.”).

And had the Federal Circuit engaged in the *Mathews*-type inquiry in the present case, its analysis would have confirmed SFP’s confrontation and cross-examination rights were unconstitutionally denied.

i. The Private Interest Affected by the Official Action.

The private interest of SFP is enormous. The damages resulting from the infringement of the ’459 patent will likely run in the hundreds of millions of dollars or more. A2392–94 ¶¶ 24–30.

ii. The Risk of an Erroneous Deprivation of PO's Interest through the Procedures Used.

The risk of erroneous deprivation of SFP's rights is great. The Federal Circuit has wholly embraced Shell's uncontroverted, biased testimonial declarations, without reservation, even though they are riven with error and lack important detail. As noted above, *every rejection* lodged against SFP's patent claims was based primarily on the Hutter I declaration (the December 11, 2012 Office Action, and the July 25, 2015 and June 7, 2016 PTAB decisions). *See* A2007; App. 25a, 38a. In contrast, the examiner's January 10, 2014 allowance of those claims did not follow the Hutter I declaration. *See* A3145–48. Manifestly, Shell's declarations were the motivating cause of the rejections of SFP's claims.

iii. The Probable Value of Cross-Examination, and the Government's Interest Including the Function Involved and Administrative Burdens that Cross-Examination Would Entail.

Confrontation and cross-examination of Shell's declarants would have been immensely beneficial while placing essentially no burden on the government. If SFP had the opportunity to cross-examine, it would have elicited crucial testimony such as the genesis of Hutter's calculations and the basis of his belief that Norton's disclosure of sulfite ion is somehow equivalent to ammonium sulfate. The PTO could readily have provided for declarant depositions at virtually no cost to the government by, e.g., requiring that any party submitting a testimonial declaration permit cross-examination within, say,

thirty days. This simple process would have ensured fairness and largely prevented erroneous outcomes.

Yet despite this seemingly straightforward application of the *Mathews* factors, the PTAB (and, in turn, the Federal Circuit by its summary affirmance of the PTAB) came to the opposite conclusion—that due process does not require the ability to confront and cross-examine adverse witnesses arrayed against a patent owner in reexaminations. The PTAB did not purport to engage in the fact-specific, *Mathews*-type due process analysis. Instead, its discussion on the issue consisted only of a mere two sentences in its decision on rehearing, citing solely to *Abbott*. App. 34a–35a. The Federal Circuit panel blessed the PTAB’s due process conclusion, so that the right to confront and cross-examine adverse witnesses in reexaminations is forevermore foreclosed in light of *Abbott*. This cannot be squared with the Fifth Amendment or this Court’s precedents. See App. 2a. The Court’s intervention is thus necessary to cure this misapplication of the Court’s due process precedents, and to ensure patent owners are afforded the protections guaranteed by the Due Process Clause before being stripped of their important property rights at the PTO.

II. The Federal Circuit’s *Abbott* Due Process Holding Also Conflicts with the Decisions of the Other Courts of Appeal.

The Federal Circuit’s position that there is no right to confront and cross-examine adverse witnesses at any stage of a reexamination, regardless of the underlying facts, stands in conflict with other Courts of Appeals, which have consistently held that a

complete denial of confrontation and cross-examination of biased and hostile witnesses in adversarial, fact-finding proceedings is a due process violation. For example, the D.C. Circuit found a due process violation when the court below issued a civil protection order against an individual without affording him the opportunity to cross-examine the witness against him, explaining:

Where a witness cannot be cross-examined, the search for truth is severely impaired. Whoever has attended to the examination, the cross-examination, and the re-examination of witnesses, and has observed what a very different shape their story appears to take in each of these stages, will at once see how extremely dangerous it is to act on the “*ex parte*” statement of any witness and still more of a witness brought forward under the influence of a party interested.

The extent of cross-examination [of a witness] with respect to an appropriate subject of inquiry is within the sound discretion of the trial court. The trial judge always may limit cross-examination to prevent inquiry into matters having little relevance or probative value to the issues raised at trial. *A complete denial of the opportunity to cross-examine, however, is impermissible.*

Tyree v. Evans, 728 A.2d 101, 103 (D.C. Cir. 1999) (emphasis added) (internal quotation marks and citations omitted).

The Eighth Circuit found an employee's due process rights had been violated when he was terminated based upon *ex parte* communications with his supervisor, without affording the employee any opportunity to cross-examine. *Nevels v. Hanlon*, 656 F.2d 372, 376 (8th Cir. 1981). The court explained:

It is fundamental to a full and fair review required by the due process clause that a litigant have an opportunity to be confronted with all adverse evidence, and to have the right to cross-examine available witnesses. *Where a party is precluded from exercising this fundamental right, the review procedure is constitutionally defective, and cannot be excused as harmless error.*

Id. (emphasis added) (citation omitted). That Court more recently summarized the fundamental importance of confrontation and cross-examination, noting:

The requirements of confrontation and cross-examination are even more important where the evidence consists of testimony of individuals whose memory might be faulty or who, in fact, might be perjurers or persons motivated by malice, vindictiveness, intolerance, prejudice, or jealousy. *Where, as here, many of the [agency's] reasons for its*

decision depend on the credibility of individual witness testimony, cross-examination must be available to minimize the risk of erroneous deprivation.

Bus. Commc'ns, Inc. v. U.S. Dep't of Educ., 739 F.3d 374, 380–81 (8th Cir. 2013) (emphasis added) (internal quotation marks and citations omitted).

Even when the regional circuits have hinted that in some instances confrontation and cross-examination may not be required, the courts are careful to draw a distinction between adversarial proceedings—in which the right to confront and cross-examine adverse witnesses may not be abridged—and non-adversarial proceedings—where in limited instances some type of less-formal procedure may be appropriate.

In *Cuellar v. Texas Employment Commission*, 825 F.2d 930 (5th Cir. 1987), the Fifth Circuit drew a distinction for due process purposes between a “routine” affidavit—such as medical affidavits in disability cases—and other more adversarial affidavits. In examining whether an unemployment benefits claimant should have been allowed to cross-examine an affiant, the court explained that “[t]he critical question, therefore, is whether the plaintiff is afforded a *viable* opportunity to confront *the witnesses* against him—not just to anticipate or to respond to the substance of their testimony—or has been denied the opportunity to cross-examine such witnesses.” 825 F.2d at 938. The Court continued: “In the case of affidavit testimony, this depends critically upon the nature of the hearing, upon notice that the claimant

has of the witnesses and their testimony, and upon the opportunities for obtaining and availability of witness subpoenas.” *Id.* The court ultimately found that the claimant’s complaint should have survived a Rule 12(b)(6) motion to dismiss, explaining that “the affidavit in question is neither *inherently reliable* nor *a product routinely relied upon by administrative or judicial process*,” and thus the party had pled a viable due process violation in light of his inability to confront and cross-examine the affiants. *Id.* (emphasis added).

Similarly, in *Cooper v. Salazar*, 196 F.3d 809 (7th Cir. 1999), the Seventh Circuit explained that the right to confrontation and cross-examination is more pressing when there is an adjudicative agency action, as opposed to a mere investigatory agency action:

[C]onfrontation and cross-examination are important procedural safeguards, especially where factual determinations are made. Therefore, there are times when due process requires these procedures even during an informal administrative investigation. *This requirement may be triggered when the function of the proceeding is to adjudicate rather than merely investigate claims.* And it may arise when the investigators engage in important credibility determinations where the erroneous dismissal of meritorious claims without adequate review is a serious concern.

196 F.3d at 815 (emphasis added) (citations omitted).

Moreover, the modern tendency among the regional circuits is to require confrontation and cross-examination, *even in non-adversarial contexts*. In *Demenech v. Secretary of the Department of Health and Human Services*, 913 F.2d 882 (11th Cir. 1990), the Eleventh Circuit found a due process violation when a social security disability claimant was not allowed to confront and cross-examine the government's witness, even though the claimant was permitted to submit his own affidavit challenging the government's report. The court noted that "where the ALJ substantially relies upon a post-hearing medical report that directly contradicts the medical evidence that supports the claimant's contentions, cross-examination is of extraordinary utility." 913 F.2d at 885. And when faced with a substantially similar question, the Seventh Circuit in *Lonzollo v. Weinberger*, 534 F.2d 712 (7th Cir. 1976), held that use of a post-hearing physician's report in denying social security disability claimant benefits violated the claimant's due process rights, explaining that "[a] written report by a licensed physician who has examined the claimant may be received as evidence in a disability hearing, but the claimant has a right to subpoena the physician and cross-examine him concerning the report." 534 F.2d at 714. The Tenth Circuit in *Allison v. Heckler*, 711 F.2d 145 (10th Cir. 1983), held that the use of a post-hearing medical report as evidence in denying social security disability claimant benefits violated claimant's due process rights, explaining that "[a]n ALJ's use of a post-hearing medical report constitutes a denial of due process because the applicant is not given the opportunity to cross-examine the physician or to rebut the report." 711 F.2d at 147.

Similarly, in *Townley v. Heckler*, 748 F.2d 109 (2d Cir. 1984), the Second Circuit held that use of a post-hearing vocational report as primary evidence in denying a social security disability claimant benefits violated the claimant’s due process rights because the claimant “has a right to cross examine the author of an adverse report and to present rebuttal evidence.” 748 F.2d at 114; *see also Lidy v. Sullivan*, 911 F.2d 1075, 1077 (5th Cir. 1990) (written interrogatories insufficient because the plaintiff had a right to cross-examine); *Solis v. Schweiker*, 719 F.2d 301, 302 (9th Cir. 1983) (claimant had the right to cross-examine the author of crucial medical reports); *Coffin v. Sullivan*, 895 F.2d 1206, 1212 (8th Cir. 1990) (“Due process requires that a claimant be given the opportunity to cross-examine and subpoena the individuals who submit reports.”).

The jurisprudence of the regional circuits exhaustively demonstrates that a complete denial of confrontation and cross-examination—particularly in instances of adverse, testimonial declarations—violates a party’s due process rights. The Federal Circuit’s decision, effectively holding that confrontation and cross-examination is *never* available in reexaminations, is an outlier.

III. The Complete Abridgement of SFP’s Confrontation and Cross-Examination Rights Is a Particularly Pernicious Instance of Patent Exceptionalism.

Although this Court’s and the regional circuits’ precedents confirm that confrontation and cross-examination rights must be afforded in important adversarial proceedings where the fact finder relies

upon the testimony of biased adverse witnesses, the Federal Circuit denies these rights in reexaminations, regardless of the underlying facts. The Federal Circuit's view, which renders the Due Process Clause a nullity in reexaminations, is yet another attempt by that court to fashion a patent-specific rule at variance with the general law.

Efforts at patent exceptionalism are not new, but have not found favor with this Court. Just last term, this Court in *SCA Hygiene Products Aktiebolag v. First Quality Baby Products, LLC*, 137 S. Ct. 954 (2017), recognized the alarming trend. There, in reversing the Federal Circuit's special patent laches rules, the Court explained that

[t]he Federal Circuit and [the respondents] dismiss the significance of this Court's many reiterations of the general rule because they were not made in patent cases. But as the dissenters below noted, "[p]atent law is governed by the same common-law principles, methods of statutory interpretation, and procedural rules as other areas of civil litigation."

137 S. Ct. at 964 (quoting *SCA Hygiene Prods. Aktiebolag v. First Quality Baby Prods., LLC*, 807 F.3d 1311, 1333 (Fed. Cir. 2015) (Hughes, J., concurring-in-part and dissenting-in-part)).

Professor Lee recently noted that "[t]he Supreme Court has consistently sought to eliminate patent exceptionalism . . . , bringing patent law in conformity with general legal standards." Peter Lee, *The*

Supreme Assimilation of Patent Law, 114 Mich. L. Rev. 1413, 1413 (2016). This is evident from the Court’s opinion in *Teva Pharmaceuticals USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831 (2015), where the Court explained that appellate review of factual findings in patent cases should be no different than review in other civil cases. 135 S. Ct. at 836–40. And from *Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, 134 S. Ct. 1749 (2014), where the Court explained that the burden a litigant must satisfy to be entitled to fees in a patent case should be consistent with the burden placed on litigants to satisfy comparable fee-shifting statutes in other civil litigation contexts. 134 S. Ct. at 1758. And its decision in *eBay, Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006), where the Court reversed the Federal Circuit’s presumptive rule that a patentee was entitled to a permanent injunction upon a showing of infringement, instead explaining that the usual four-factor test used to grant a permanent injunction applied “with equal force to disputes arising under the Patent Act.” 547 U.S. at 391.

As with *SCA*, *Octane Fitness*, and *eBay*, the Federal Circuit has strayed from generally applicable principles, and has created a special, no-confrontation-or-cross-examination rule for reexaminations. The present case is especially troubling because patent exceptionalism is now being used to curtail fundamental constitutional rights of universal applicability.

Indeed, at least one judge from the below panel has opined that in other, *non-patent* contexts, the right to confront and cross-examine adverse witnesses may not be abridged. In *Gambill v. Shinseki*, 576 F.3d 1307 (Fed. Cir. 2009), Judge Moore stated “that due

process *requires* that claimants of veterans' benefits be provided with the opportunity to confront the doctors whose opinions [Department of Veterans Affairs (DVA)] relies upon to decide whether veterans are entitled to benefits," explaining that "[c]onfrontation should be a central part of due process here because it is necessary to help DVA understand the limitations of the opinions before it, and may be the veteran's only route to undermine what could otherwise be unassailable evidence in favor of denying benefits." 576 F.3d at 1324 (Moore, J., concurring) (emphasis added). Judge Moore further explained that, in light of *Greene* and *Goldberg*, "[t]he right to confront adverse witnesses is fundamental to American legal process," and that the Court's recent decision in *Melendez-Diaz v. Massachusetts*, 557 U.S. 305 (2009) "is a poignant and timely reminder of *the central importance of confrontation no matter what form evidence may take*." 576 F.3d at 1325 (Moore, J., concurring) (emphasis added).

Despite Judge Moore's impassioned defense of the right to confrontation in the *veteran's benefits* context—and others, because the opinion speaks broadly and universally—the panel here summarily affirmed the PTAB's decision that no such right is available in the *patent context*. The PTO's action, and the Federal Circuit's approval thereof, means that in the realm of PTO reexaminations, confrontation and cross-examination of adverse witnesses have no place, regardless of the underlying facts. The Court's intervention is thus necessary to bring the Federal Circuit back in line with this Court's precedents and the decisions of the other Courts of Appeals.

IV. The Federal Circuit Has Abdicated its Role as an Appellate Court by its Pervasive Use of Rule 36, and By Doing So Violates 35 U.S.C. § 144.

In light of the weighty due process questions SFP raised on appeal, and the fact-specific nature of the due process inquiry as laid out in *Mathews* and other cases, one would have expected the Federal Circuit to issue a thorough opinion weighing the *Mathews* factors in ultimately concluding what procedures were constitutionally due. Instead, the Court affirmed the PTAB without opinion, citing only its own summary-affirmance rule to support its one-word decision: “Affirmed.” App. 2a. By doing so in this appeal and in many other patent cases, the court not only abdicates its common law duty to decide important decisions squarely before it, but also acts in violation of the statute under which such appeals arise, 35 U.S.C. § 144.

Justice Cardozo explained the importance of an appellate court to actually decide, *and opine*, on the legal issues before it, noting that the appellate court exists “not for the individual litigant, but for the indefinite body of litigants, whose causes are potentially involved in the specific cause at issue.” See Dennis Crouch, *Wrongly Affirmed Without Opinion*, 52 Wake Forest L. Rev. 561, 561 (2017) (quoting Philip Marcus, *Affirmance Without Opinion*, 6 Fordham L. Rev. 212, 227 (1937)). Professor Llewellyn echoed Justice Cardozo, explaining that the appellate court’s *opinion* is an essential document that is designed to tell “any interested person what the cause is and why the decision—under the authorities—is right, and perhaps why it is wise.” See Karl N. Llewellyn, *The*

Common Law Tradition: Deciding Appeals 18 (2d prtg. 2015).

These principles remain true today. As former Judge Aldisert of the Third Circuit more recently explained, the opinion's

purpose is to set forth an explanation for a decision that adjudicates a live case or a controversy that has been presented before a court. This explanatory function of the opinion is paramount. In the common law tradition the court's ability to develop case law finds legitimacy only because the decision is accompanied by a publicly recorded statement of reasons.

Ruggero J. Aldisert, *Opinion Writing* 11 (3d ed. 2012).

Despite this common law tradition and the indispensable importance of appellate opinions, the Federal Circuit has chosen to largely neglect its duty in PTO appeals. Instead, the Federal Circuit routinely uses Rule 36 to quickly dispose of a large portion of PTO appeals, without any articulated bases for its decisions. "The Federal Circuit's use of the Rule has become so prevalent that now over half of PTO appeals are summarily affirmed by simply referencing the Rule." See Jason Rantanen, *Data on Federal Circuit Appeals and Decisions*, PatentlyO (June 2, 2016), <https://patentlyo.com/patent/2016/06/circuit-appeals-decisions.html>. "In fact, most of the [Federal Circuit's] merits decisions are released as so-called judicial orders as permitted by the court's local rule for 'judgment of affirmance without opinion.'" Crouch, *supra* at 561.

Unsurprisingly, the Federal Circuit stands alone in its rampant use of summary affirmances, and this practice is but another form of improper patent exceptionalism. At least five other circuits seemingly allow for judgments without opinion. *See* 1st Cir. R. 36(a); 4th Cir. I.O.P. 36.3; 6th Cir. R. 36; 10th Cir. R. 36.1; D.C. Cir. R. 36. But none uses the procedure as frequently as the Federal Circuit, if at all. *See* Crouch, *supra*, at 561 (explaining that even though “precedential opinions form a mainstay of appellate court activity nationwide,” the Federal Circuit “is quite different from the rest” of the Courts of Appeals because it “issues a substantial number of Rule 36 affirmances without any opinion at all”). One study found that in 2015, the Federal Circuit decided 58% of PTO appeals by Rule 36 affirmances, while only issuing precedential opinions in a mere 17% of PTO appeals. *See* Rantanen, *supra*. A more recent study puts that number even higher, finding that in 2015 63% of appeals from PTAB decisions were decided by Rule 36 affirmances, followed by 51% in 2016 and 44% in 2017. Matthew Bultman, *Has Rule 36 Peaked at the Federal Circuit?*, Law360 (Feb. 20, 2018), <https://www.law360.com/articles/1013664>.

The Federal Circuit’s widespread use of Rule 36 in PTO cases violates the court’s statutory duty to issue opinions supporting its decisions, as required by 35 U.S.C. § 144:

The United States Court of Appeals for the Federal Circuit shall review the decision from which an appeal is taken on the record before the Patent and Trademark Office. Upon its determination the court *shall issue* to the

Director its mandate *and opinion*, which shall be entered of record in the Patent and Trademark Office and shall govern the further proceedings in the case.”

§ 144 (emphasis added).

A one-word summary affirmance is no “opinion” under any reasonable definition of that term. Black’s Law Dictionary defines an opinion as a “court’s written statement *explaining its decision* in a given case, usu. including *the statement of facts, points of law, rationale, and dicta.*” *Opinion*, Black’s Law Dictionary (10th ed. 2014) (emphasis added). Resolving an appeal via a single word in no way “explain[s the court’s] decision” and clearly involves no “statement of facts, points of law, rationale, and dicta.” *See id.* The Federal Circuit has repeatedly emphasized that Rule 36 affirmances contain no opinion. *See, e.g., Phil-Insul Corp. v. Airlite Plastics Co.*, 854 F.3d 1344, 1355 (Fed. Cir. 2017) (explaining that “*because there is no opinion*, ‘a Rule 36 judgment simply confirms that the trial court entered the correct judgment’” (emphasis added) (quoting *Rates Tech., Inc. v. Mediatrix Telecom, Inc.*, 688 F.3d 742, 750 (Fed. Cir. 2012))).

Thus, by the Federal Circuit’s own admission, Rule 36 judgments include *no opinion* and thus stand in conflict with the statutory mandate that the Federal Circuit shall review decisions of the PTO and “*shall issue to the Director its mandate and opinion.*” § 144 (emphasis added). More fundamentally, the Federal Circuit’s routine use of Rule 36 as a docket-clearing tool to dispose of PTO appeals, even in cases such as this one that present a fundamental due

process question, removes those appeals from an Article III tribunal, leaving an administrative body with the last word for many cases in this vital area of the law. The Federal Circuit's widespread use of Rule 36 affirmances thus conflicts with its common law duty to decide the important questions presented to it and violates the mandate of § 144. This Court's intervention is further necessary to curtail this practice.

V. If the Court in *Oil States* Ultimately Concludes that IPRs Are Unconstitutional, the Court Should Grant this Petition and Remand.

Finally, in its forthcoming decision in *Oil States Energy Services, LLC v. Greene's Energy Group LLC*, No. 16-712 (U.S. filed Nov. 23, 2016), the Court will address whether IPRs violate the Seventh Amendment. If the Court concludes that IPRs are unconstitutional, its reasoning should apply with equal force to *inter partes* reexaminations, because just like an IPR, an *inter partes* reexamination is an adversarial process used by the PTO to extinguish private party rights through a non-Article III forum without a jury. *See* U.S. Const. amend. VII.

Thus, Petitioner respectfully requests that the Court, at a minimum, hold this petition until *Oil States* is decided. If the Court in *Oil States* ultimately concludes that IPRs are unconstitutional, the petition should be granted on that basis alone, with the Federal Circuit's decision vacated accordingly and the case remanded for further proceedings. But even if the Court in *Oil States* determines that IPRs are constitutional under the Seventh Amendment, the

Court should still grant certiorari to consider the important Due Process question at issue here.

CONCLUSION

For the foregoing reasons, the petition for a writ of certiorari should be granted.

Respectfully submitted,

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APPENDIX

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**APPENDIX A — JUDGMENT OF THE UNITED
STATES COURT OF APPEALS FOR THE
FEDERAL CIRCUIT, FILED NOVEMBER 8, 2017**

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

2016-2347

SPECIALTY FERTILIZER PRODUCTS, LLC,

Appellant,

v.

SHELL OIL COMPANY,

Appellee,

JOSEPH MATAL, PERFORMING THE
FUNCTIONS AND DUTIES OF THE
UNDER SECRETARY OF COMMERCE FOR
INTELLECTUAL PROPERTY AND DIRECTOR,
U.S. PATENT AND TRADEMARK OFFICE,

Intervenor.

Appeal from the United States Patent and Trademark
Office, Patent Trial and Appeal Board
in No. 95/002,388.

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Appendix A

JUDGMENT

THIS CAUSE having been heard and considered, it is

ORDERED and ADJUDGED:

PER CURIAM (MOORE, CHEN, and STOLL, *Circuit Judges*).

AFFIRMED. See Fed. Cir. R. 36.

ENTERED BY ORDER OF THE COURT

November 8, 2017
Date

/s/ Peter R. Marksteiner
Peter R. Marksteiner
Clerk of Court

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**APPENDIX B — DECISION OF THE UNITED
STATES PATENT AND TRADEMARK OFFICE,
FILED JULY 28, 2015**

UNITED STATES PATENT
AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL
AND APPEAL BOARD

SHELL OIL COMPANY

Requester and Appellant,

v.

SPECIALTY FERTILIZER PRODUCT, LLC

Patent Owner and Respondent.

Appeal 2015-001671
Reexamination Control 95/002,388
Patent 6,210,459 C1¹
Technology Center 3900

Before ROMULO H. DELMENDO, RICHARD M.
LEBOVITZ, and RAE LYNN P. GUEST, *Administrative
Patent Judges.*

1. US Patent 6,210,459 B1, issued April 3, 2001, to John Larry Sanders, was subject to *Ex Parte* Reexamination 90/011,759, for which an *Ex Parte* Reexamination Certificate 6,210,459 C1 was issued on October 4, 2012 (hereinafter the “459 patent”). Claims 2, 4, 6, 8-10, 12, 14-16, and 45-156 of Reexamination Certificate 6,210,459 C1 are subject to *Inter Partes* Reexamination in this proceeding.

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GUEST, *Administrative Patent Judge*.

DECISION ON APPEAL

Third Party Requester, Shell Oil Company (“Requester”), appeals under 35 U.S.C. §§ 134(c) and 315(b) (pre-AIA) the Examiner’s decision not to adopt Requester’s proposed rejections of claims 2, 4, 6, 8-10, 12, 14-16, and 45-156.² We have jurisdiction under 35 U.S.C. §§ 134(c) and 315(b).

We REVERSE and thus enter new grounds of rejection pursuant to 37 C.F.R. § 41.77(b).

STATEMENT OF THE CASE

The ’459 patent relates to a composition that, when applied to soil, forms low pH (acidic) micro-environments that lead to an increased availability and plant uptake of important micronutrients. Col. 1, ll. 8-22. A low pH helps micronutrient uptake by preventing insoluble reaction products (fixation) that form at higher pHs, such as under liming conditions. Having low pH micro-environments avoids decreasing the overall bulk soil pH, which can affect overall crop yield. Col. 1, ll. 40-56; col. 2, ll. 2-6. The microenvironments are formed by applying a granulated mixture comprising ammonium sulfate, elemental sulfur, and micronutrients. Col. 2, ll. 22-32. Alternatively, non-granulated compositions can be used to decrease the overall pH of the bulk soil. *Id.*

2. See Requester’s Appeal Brief 2, filed April 9, 2014 (hereinafter “App. Br.”).

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Claim 4, which is illustrative of the appealed subject matter, reads as follows (with indentations added for clarity):³

4. A soil nutrient composition comprising a mixture of from about 5-49% by weight ammonium sulfate based upon the total weight of the composition taken as 100% by weight, from about 2.5-25% by weight elemental sulfur based upon the total weight of the composition taken as 100% by weight, and

a micronutrient selected from the group consisting of zinc, iron, manganese, copper, boron, cobalt, vanadium, selenium, silicon, nickel and mixtures thereof,

the amount of ammonium sulfate present in said composition being greater than the amount of elemental sulfur therein, on a weight basis,

said composition being granulated using equipment comprising a rotary drum granulator or a rotary pan granulator to form granules having a size of from about 0.1-30 mm, said granules having a moisture content as formed and are thereafter dried,

3. The claims were not amended during the present proceeding. Reexamination Certificate 6,210,459 C1 reflects the current language of the claims as amended from the originally issued Patent 6,210,459 B 1.

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said granules operable when applied to soil
to create lower pH portions within the soil.

App. Br. 45, Claims App'x.

Requester appeals the Examiner's decision not to
adopt the following rejections:

- I. Claims 2, 4, 6, 8, 9, 12, 14-16, 45-59, 72-86, 99-113, 126-131, 137-139, 143,145-148, 150-152, and 154-155 under 35 U.S.C. § 103(a) as obvious over Bexton,⁴ in view of one of Norton,⁵ Sharples,⁶ or Barber⁷ (Grounds 1, 2, and 4; RAN 5-17);
- II. Claims 10, 132-136, 140-142, 144, 149, 153, and 156 under 35 U.S.C. § 103(a) as obvious over Bexton, in view of Norton, Sharples, or Barber, and Jones⁸ (Grounds 5 and 6, RAN 17-18);

4. WO 96/27571, published Sept. 12, 1996, and naming Stewart G. Bexton as inventor.

5. U.S. Patent 4,134,750, issued January 16, 1979, to Melvin M. Norton, et al.

6. U.S. Patent 3,313,614, issued April 11, 1967, to Kenneth Sharples, et al.

7. U.S. Patent 3,738,821, issued June 12, 1973, to Mack A. Barber.

8. Ulysses S. Jones, *Fertilizers And Soil Fertility* 62-64 (1979).

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- III. Claims 60, 61, 87, 88, 114, and 115 under 35 U.S.C. § 103(a) as obvious over Bexton, in view of Norton, Sharples, or Barber, and Vitosh⁹ (Ground 7, RAN 19);
- IV. Claims 64, 65, 91, 92, 118, and 119 under 35 U.S.C. § 103(a) as obvious over Bexton, in view of Norton, Sharples, or Barber, and Walter¹⁰ (Ground 8, RAN 20);
- V. Claims 62, 63, 68-71, 89, 90, 95-98, 116, 117, and 122-125 under 35 U.S.C. § 103(a) as obvious over Bexton, in view of Norton, Sharples, or Barber, Heyl¹¹ and Bannwarth¹² (Ground 9, RAN 21);
- VI. Claims 66, 67, 93, 94, 120, and 121 under 35 U.S.C. § 103(a) as obvious over Bexton, in view of Norton, Sharples, or Barber, and Takashi¹³ (Ground 10, RAN 22); and

9. M. L. Vitosh et al., Michigan State University Extension, Department of Crop and Soil Sciences, Secondary and Micronutrients for Vegetables and Field Crops (rev. ed. 1994).

10. US 5,152,821, issued October 6, 1992, to Karl H. Walter.

11. GB 492,596, published October 21, 1938, and naming George Edward Heyl as inventor.

12. DE 3921805, published January 18, 1990, and naming Horst Bann Warth as inventor.

13. JP 05-339569A, published December 21, 1993, and naming Irikado Takashi as inventor.

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VII. Claims 66, 93, and 120 under 35 U.S.C. § 103(a) as obvious over Bexton, in view of Norton, Sharples, or Barber, and Heyl (Ground 11, RAN 23).

The Requester further relies on the First Declaration of Mr. Klaas Hutter, executed September 14, 2012, and exhibits thereto (hereinafter “First Hutter Decl.”); the Second Declaration of Mr. Klaas Hutter, executed March 7, 2013, and exhibits thereto (hereinafter “Second Hutter Decl.”); and the Declaration of Dr. Graeme Blair, executed March 8, 2013, and exhibits thereto (hereinafter “Blair Decl.”). *See* App. Br. 55, Evidence App’x.

Patent Owner relies on the Declaration of Dr. Dale W. Rush, executed August 26, 2011, and exhibits thereto (hereinafter “First Rush Decl.”); the Second Declaration of Dr. Dale W. Rush, executed February 5, 2013, and the exhibits thereto (hereinafter “Second Rush Decl.”); and the Declaration of Mr. Christopher Bokhart, executed February 6, 2013, and exhibits thereto (hereinafter “Bokhart Decl.”).

GROUND 1

All of the claims on appeal recite a soil nutrient composition comprising “from about 5-49% by weight ammonium sulfate,” “from about 2.5-25% by weight elemental sulfur,” and “a micronutrient,” with “the amount of ammonium sulfate present in said composition being greater than the amount of elemental sulfur therein, on a weight basis.” The claims also recite that when applied to soil, the composition “create[s] lower pH portions within the soil.”

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The Requester's proposed rejections rely on the teachings of Bexton. Bexton is directed to a sulfur-containing fertilizer. Bexton teaches that "sulfur acts in a soil system by being oxidized to sulfate which may then be taken up by plants in the soil system." Bexton, 1: 13-15. Bexton teaches that it would be desirable to incorporate "ammonium sulfate, in a sulfur-containing fertilizer since this would present to the soil system both a short term sulfur dose (i.e. in the form of sulfate) and a long term sulfur dose (i.e. in the form of elemental sulfur which is eventually oxidized to sulfate)." *Id.*, 2: 15-19. Bexton also teaches that it is desirable to incorporate ammonium phosphate "to combine in a single fertilizer two elements/nutrients normally required for enhanced plant growth," namely sulfate and phosphate. *Id.* 2:24-27.

Bexton describes a preferred fertilizer with a granulated matrix that comprises from about 1 to 80%, preferably from about 20 to 60%, by weight elemental sulfur, less than 5% by weight of "trace elements or micronutrients," and "the remaining portion (subject to presence of trace elements) of the fertilizer is made up of ammonium phosphate and ammonium sulfate." *Id.* 5:31-6:16. With respect to these various concentrations, Bexton further teaches that "[a]s is known in the art[,] a practical upper limit to the amount of sulfur which is used in a fertilizer is reached when the fertilizer becomes flammable (i.e. explosive) and thus, becomes dangerous to handle and use." *Id.* 6:1-4. Bexton also states that "[t]he proportion of these components [ammonium sulfate and ammonium phosphate] is not particularly restricted and is usually dictated by the market need for the product." *Id.* 6:6-7.

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Requester contends that Bexton describes a fertilizer having all of the claimed components (i.e., elemental sulfur, ammonium sulfate, and micronutrients) but fails to describe the particular amounts recited in the claims. Patent Owner does not dispute this finding.

Based on the amount of sulfur and micronutrients in Bexton's fertilizer, Requester calculated that the remaining 15-99% bulk portion¹⁴ of the fertilizer of Bexton is either ammonium sulfate or ammonium phosphate. Req. App. Br. 12. Requester stated that “[a]s the bulk portion of AS and/or AP can be up to 99% of the composition, the relative amounts of AS and AP can individually vary from 0% to 99% of the composition.” *Id.* For example, if the remaining bulk is all ammonium sulfate, the concentration of ammonium sulfate would be 15-99% by weight and the concentration of ammonium phosphate would be 0%. If the remaining bulk is entirely ammonium phosphate, the amount of ammonium sulfate would be 0% by weight. For this reason, Requester argues that Bexton fairly suggests an inherent range of ammonium sulfate of 0-99% for any particular fertilizer composition of Bexton. Patent Owner does not dispute this finding. *See generally* PO Res. Br. Requester argues that the overlap in ranges for each component “is itself sufficient to establish a prima facie case of obviousness under *Wertheim/Peterson*” and that “[t]he claimed ranges are necessarily overlapped by the ranges provided in Bexton and with predictable results.”

14. Maximum amounts of both elemental sulfur (80%) and trace micronutrients (5%) would leave 15% bulk material. Minimum amounts of both elemental sulfur (1%) and trace micronutrients (presumably 0%) would leave 99% bulk material.

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Req. App. Br. 16 (citing *In re Wertheim*, 541 F.2d 257 (CCPA 1976) and *In re Peterson*, 315 F.3d 1325 (Fed. Cir. 2003)).

Requester also contends that Bexton's sole example, which does not including ammonium phosphate and has a percentage of ammonium sulfate outside of the claimed range, teaches the use of a greater concentration of ammonium sulfate (60-90% by weight) than elemental sulfur (1-40% by weight). *Id.* at 13 (citing Bexton 14: 1-5 and Second Hutter Decl. ¶ 5.a). Further, Requester contends that the statement in Bexton that a "[s]ufficient ammonium sulfate should be used 'to facilitate keeping the elemental sulfur as distinct particles within the granule matrix'" is evidence that the amount of ammonium sulfate should be greater than the amount of elemental sulfur. *Id.* (quoting Bexton 6:7-9).

Additionally, Requester focuses on the disclosure in Bexton that states "[t]he proportion of these components [ammonium sulfate and ammonium phosphate] is not particularly restricted and is usually dictated by the market need for the product." *Id.* at 13 (quoting Bexton 6:6-7). Accordingly, Bexton argues that "one of skill in the art would look outside of Bexton, to other resources such as the secondary references Norton, Sharples, and Barber to determine an appropriate relative proportion, i.e., ratio of AS and AP in the granule." *Id.*

Each of Norton, Barber, and Sharples describes fertilizer compositions having specific percentages of ammonium sulfate to ammonium phosphate. *Id.* at 17-18.

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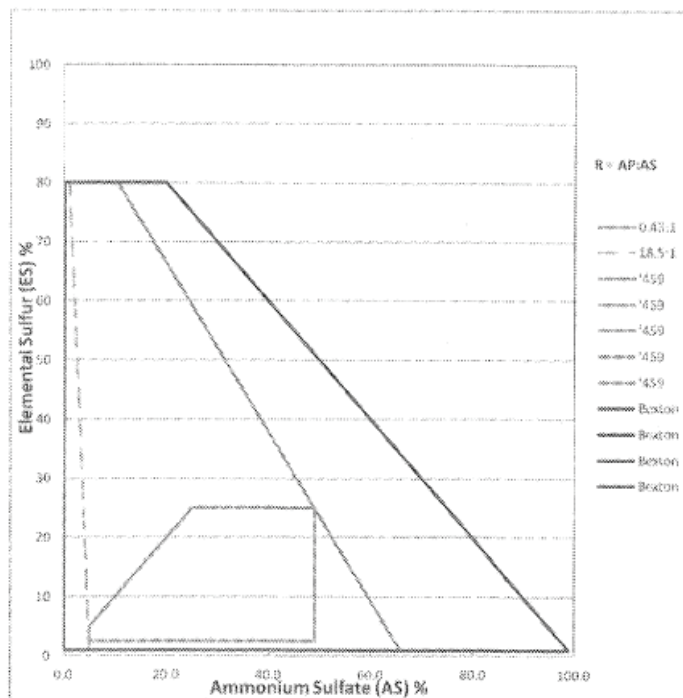
Although the fertilizers of Norton, Barber and Sharples do not contain elemental sulfur, Requester contends that it would have been obvious to one of ordinary skill in the art to select known ratios of ammonium sulfate to ammonium phosphate such that the ratio used in the fertilizer of Bexton would render the amount of ammonium sulfate within the claimed range of 5-49% ammonium sulfate. *Id.* For example, Sharples teaches a ratio of ammonium phosphate to ammonium sulfate of 2:1 (*see* Sharples, Example V; First Hutter Decl. ¶ 24 (citing Sharples 4:23-25)). Using Requester's rationale, we calculate that a 2:1 ratio of ammonium phosphate to ammonium sulfate in Bexton's composition, which comprises only sulfur, trace micronutrients, ammonium sulfate, and ammonium phosphate, would produce an ammonium sulfate range of 5-33%¹⁵ weight percent, which is substantially similar to the recited range of 5-49% weight percent ammonium sulfate in the claims.

The Examiner determined that to arrive at the claimed invention, the skilled practitioner would have chosen a fertilizer composition that included (a) both ammonium sulfate and ammonium phosphate, over one that included only one or the other of these choices, (b) an amount of ammonium sulfate greater than an amount of

15. The amount of elemental sulfur can range from 1-80% and the amount of trace micronutrients can be up to 5%, leaving a remaining bulk of 15-99% of ammonium phosphate and ammonium sulfate. With a 2:1 ratio, one-third of the bulk 15-99% will be ammonium sulfate and two-thirds of the bulk will be ammonium phosphate. We calculated one-third of 15-99% to be 5-33% ammonium sulfate.

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elemental sulfur, (c) a concentration of elemental sulfur of between 2.5-25%, and (d) a ratio of ammonium phosphate to ammonium sulfate so that the ammonium sulfate concentration would fall within the recited range. RAN 7-8. According to the Examiner, “there are innumerable possible ratios of AP:AS encompassed by Bexton PCT, the vast majority of which will never meet the claimed limitation” by either being outside of the AP:AS ratio necessary or because the amount of elemental sulfur is outside of range. *Id.* The Examiner relies on a graph, first presented by the Patent Owner (*see* Second Rush Decl. 9, ¶ 15a), to demonstrate this principle. *Id.* at 8. The graph is reproduced below.



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According to the Examiner,

the area enclosed by the small pentagon in the lower left of the plot represents the relative amounts of sulfur and ammonium sulfate in claimed invention of the '459 patent. The area enclosed by the largest trapezoid and defined by the four bold lines, represents the broadest disclosed ranges of Bexton PCT—that is, about 1-80% sulfur, less than 5% micronutrients, and the bulk made up of a mixture of ammonium sulfate and ammonium phosphate [i.e. 0-99% ammonium sulfate — 0% under conditions in which the entire bulk is ammonium phosphate and 99% under conditions of minimum amounts of sulfur and trace and the entire bulk is ammonium sulfate]. The area enclosed by the third trapezoid and defined by the dashed line on the left and the shaded line on the right, represents the compositions contained within the AP:AS ratios of 0.43:1 to 18.5:1.

RAN 9; *see also* Second Rush Decl. 8-10. The Examiner's explanation does not appear to be disputed by either Requester or Patent Owner. The Examiner explains that "only a small number of possible compositions encompassed by Bexton PCT will ever meet the claimed ranges while a nearly infinite number will not." RAN 10.

The Examiner further concludes that the Norton, Barber and Sharples teachings do not cure the deficiencies of Bexton because the application of these references still

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require an amount of elemental sulfur within the claimed range and less than the amount of ammonium sulfate. RAN 11, 15, and 17. The Examiner further determines that the species of compositions claimed is not obvious over the very large number of possible distinct compositions in the broadly disclosed genus of Bexton. *Id.* at 12, 15, and 17 (citing, *inter alia*, *In re Baird*, 16 F.3d 380, 382 (Fed. Cir. 1994), *In re Jones*, 958 F.2d 347, 350 (Fed. Cir. 1992), and *In re Deuel*, 51 F.3d 1552, 1559 (Fed. Cir. 1995)).

Patent Owner agrees with the Examiner's position. PO Res. Br. 7-8. Patent Owner further provides evidence of commercial success and unexpected results. *Id.* 18-23.

We are not persuaded that the claimed composition would not have been obvious over the compositions described in Bexton having the exact same components, either alone or further in view of any of Norton, Barber and Sharples. Namely, Patent Owner agrees that Bexton describes a composition comprising elemental sulfur, trace micronutrients, ammonium sulfate and ammonium phosphate. Bexton does not disclose the particular amounts of these components as claimed. Thus, the issue before us is: whether one of ordinary skill in the art would have used an amount of each component taught by Bexton, in the ranges recited in the claims, even without an express teaching in the prior art as to those particular amounts? We answer this question in the affirmative.

“The prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not

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criticize, discredit, or otherwise discourage the solution claimed.” *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004). Bexton discloses alternative embodiments which contain either no ammonium sulfate or no ammonium phosphate, but such embodiments do not teach away the equally viable fertilizer described by Bexton comprising both ammonium sulfate and ammonium phosphate and the reasons cited therein for including both in a fertilizer. The Examiner has not adequately explained or presented evidence as to why, if Bexton describes all components of the invention, except for the specific amounts of the components, the issue is more than whether one of ordinary skill in the art would have predictable success in using the amounts recited in the claims.

It would have been predictable that using any amount between 1 and 80% by weight elemental sulfur would have successfully provided a late dose of sulfate when the the elemental sulfur is eventually oxidized to a sulfate since Bexton teaches that this conversion is a purpose of provided elemental sulfur in a fertilizer composition. Bexton 2:15-19. Likewise, any amount of ammonium sulfate successfully and predictably would have provided an early dose of sulfate. Also, any amount of ammonium phosphate successfully and predictably would have provided a dose of phosphate, as another desirable nutrient for plants. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007) (The question to be asked is “whether the improvement is more than the predictable use of prior art elements according to their established functions.”); *see also KSR*, 550 US at 420 (“[A]ny need or problem known in the field of endeavor at the time of invention and addressed by the

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patent can provide a reason for combining the elements in the manner claimed.”).

The case of *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 783 (Fed. Cir. 1985) (emphasis added), explains why claimed ranges that are close to, or in this case undisputedly encompassed by, the prior art make compelling evidence of obviousness in stating that “[t]he proportions are so close that prima facie *one skilled in the art would have expected them to have the same properties.*” See also *KSR*, 550 US at 417 (“If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability.”). Here, because the prior art is directed to the particular benefits of each of the elemental sulfur, ammonium sulfate, and ammonium phosphate, the skilled artisan would have expected any combination of those components to improve the fertilization of plants in the manner described in Bexton. This case is analogous to *Peterson* to the extent that the ranges substantially are encompassed by the teachings of the prior art either expressly or inherently (in the case of the concentration of ammonium sulfate being inherently described as 0-99%). Moreover, this case is analogous to the reasoning purported in *Peterson* and other such cases, namely where predictable results can be expected within or near ranges described in the prior art, the selection of any particular amount would have been obvious. In *Peterson*, the court stated:

Selecting a narrow range from *within* a somewhat broader range disclosed in a prior art reference is no less obvious than identifying

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a range that simply *overlaps* a disclosed range. In fact, when, as here, the claimed ranges are completely encompassed by the prior art, the conclusion is even more compelling than in cases of mere overlap. The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages.

Peterson, 315 F.3d at 1329-1330; *see also In re Aller*, 220 F.2d 454, 456 (CCPA 1955) (“where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.”); *In re Luck*, 476 F.2d 650, 652-53 (CCPA 1973) (use of routine testing to identify optimum amounts of silane to be employed in a lamp coating, without establishing a critical upper limit or demonstrating any unexpected result, lies within the ambit of the ordinary skill in the art).

The Examiner’s and Patent Owner’s reliance on *Baird* and *Jones* are not persuasive because Bexton provides a degree of predictability with respect to the effect of the components. In *Jones*, the conclusion of nonobviousness was based on the idea that the claimed compounds (primary amines with an ether linkage), though members of a broadly described genus of compounds (substituted ammonium salts of dicamba) were not “so ‘closely related in structure’ [to those particular members of the genus specifically disclosed (e.g., secondary amines without an

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ether linkage)] as to render the former *prima facie* obvious in view of the latter.” 958 F.2d at 350.

In *Jones*, all compounds in the broad genus did not have sufficient “structural similarity” for one of ordinary skill in the art to reasonably predict that the compounds would have identical properties. *See id.* (identifying the types of cases in which structural similarity, without more, have given rise to *prima facie* obviousness); *cf. In re Dillon*, 919 F.2d 688, 692 (Fed. Cir. 1990) (obviousness was established because of “an expectation that hydrocarbon fuel compositions containing the tetra-esters would have similar properties, including water scavenging, to like compositions containing the tri-esters,” use in “similar type of chemical reaction,” and “equivalence for a particular practical use.”). *Baird*, like *Jones*, is directed to a broad genus encompassing 100 million diphenols and focuses on specific “more complex diphenols” than recited in the claims, which “indicates a preference leading away from the claimed compounds.” *Baird*, 16 F.3d at 383. Similarly in *Deuel*, “knowledge of a protein does not give one a conception of a particular DNA encoding it” because “the redundancy of the genetic code permits one to hypothesize an enormous number of DNA sequences coding for the protein.” *Deuel*, 51 F.3d at 1558-1559. In other words, the particularly claimed isolated DNA sequence was not predictable from only a known amino acid sequence. *Jones*, *Deuel*, and *Baird* thus follows the reasoning later held in *KSR* and the basis discussed above with respect to *Titanium Metals* and *Peterson*, namely that the prior art in *Jones* did not represent what would have been predictable and expected to one of ordinary skill

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in the art. Such is not the case with the components taught by Bexton, which teaches components that would perform predictably when the concentrations are routinely varied.

We need not even reach the particular ratio of ammonium sulfate to ammonium phosphate taught by Norton, Barber, and Sharples as being particularly known in the art, because the skilled artisan would have been able to determine a composition having optimum amounts of elemental sulfur, ammonium phosphate, ammonium sulfate, and trace micronutrients by routine experimentation. However, Norton, Barber, and Sharples do evince that fertilizers having both ammonium sulfate and ammonium phosphate were known in the art and were viable options from the teachings of Bexton for the skilled artisan. Further, Norton, Barber, and Sharples provide some guidance to the ordinary artisan as to a starting point in the routine optimization of ammonium sulfate and ammonium phosphate concentrations in the fertilizer of Bexton by evincing amounts generally used in known fertilizers. Because all three publications utilize ammonium sulfate and ammonium phosphate, and in varying amounts, this is additional evidence that one of ordinary skill in the art could routinely determine suitable amounts, consistent with Bexton's own statement that "[t]he proportion of these components [ammonium sulfate and ammonium phosphate] is not particularly restricted and is usually dictated by the market need for the product." Bexton 6:6-7.

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A routine variable change may cause an unexpected effect.¹⁶ Claimed subject matter may be unobvious where an applicant presents a credible showing of criticality of the claimed range for unexpected beneficial results. *See In re Boesch*, 617 F.2d 272, 276 (CCPA 1980) (holding that when the difference between a claimed invention and the prior art is a claimed range of a result-effective variable, the applicant must show that the range is critical through unexpected results rather than an optimization of properties); *In re Woodruff*, 919 F.2d 1575, 1578 (Fed. Cir. 1990); *Aller*, 220 F.2d at 456; *see also Peterson*, 315 F.3d at 1330 (“[T]he existence of overlapping or encompassing ranges shifts the burden to the applicant to show that his invention would not have been obvious ...”).

Some differences in results may occur when the concentrations of sulfur, ammonium sulfate, micronutrients, and ammonium phosphate are routinely varied over the extent described in Bexton. Thus, the burden shifts to Patent Owner to demonstrate particularly that the resulting difference is a “superior property or advantage

16. Patent Owner presents no persuasive argument that the fertilizer compositions of Bexton do not create lower pH portions inherently when applied to the soil as granules. *See generally* PO Res. Br. *See also* Examiner’s Non-final Office Action 5-6, mailed December 11, 2012 (finding that these components inherently lower the pH when applied to soil); First Hutter Decl. ¶¶ 16-21 (opining that the presence of any of elemental sulfur, ammonium sulfate, or ammonium phosphate will have a pH lowering effect on soil, since ammonium sulfate and ammonium phosphate have a pH in solution of 2.9 and 3.5, respectively, and elemental sulfur converts to sulfuric acid in soil).

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that a person of ordinary skill in the art would have found surprising or unexpected.” *In re Geisler*, 116 F.3d 1465, 1469 (Fed. Cir. 1997) (quoting *In re Soni*, 54 F.3d 746, 750 (Fed. Cir. 1995)); see also *In re Huang*, 100 F.3d 135, 139 (Fed. Cir. 1996) (“[E]ven though applicant’s modification results in great improvement and utility over the prior art, it may still not be patentable if the modification was within the capabilities of one skilled in the art, unless the claimed ranges ‘produce a new and unexpected result which is different in kind and not merely in degree from the results of the prior art.’”) (quoting *Aller*, 220 F.2d at 456.).

Further, “when unexpected results are used as evidence of nonobviousness, the results must be shown to be unexpected compared with the closest prior art.” *In re Baxter Travenol Labs.*, 952 F.2d 388, 392 (Fed. Cir. 1991) (citing *In re De Blauwe*, 736 F.2d 699, 705 (Fed. Cir. 1984). Accordingly, Patent Owner would have to demonstrate that a product having elemental sulfur in a range of 2.5-25%, ammonium sulfate in a range of 5-49%, and trace micronutrients, and more ammonium sulfate than elemental sulfur, produces results that are unexpectedly superior as compared to amounts described in Bexton, but outside of the scope of the claims. Patent Owner provides no such persuasive evidence.

Patent Owner directs us to evidence that Mosaic’s MicroEssentials products “demonstrate substantial yield improvement.” PO Res. Br. 23; Second Rush Decl. ¶ 20(a)-(g). The MicroEssentials products are fertilizer products that include elemental sulfur, ammonium sulfate,

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and micronutrients in an amount that falls within the range cited in the claims. *See* Second Rush Decl. ¶ 19(a)-(d) and exhibits 9-16. The MicroEssentials products also contain monoammonium phosphate (MAP) and/or diammonium phosphate (DAP). *Id.* at ¶ 20(g). However, the “substantial yield improvement” is only demonstrated over fertilizer products that are only “standard MAP or DAP.” Second Rush Decl. ¶ 20(g). Patent Owner has shown no superior result over fertilizer products that include the same elements, but in amounts outside of the claimed ranges, as taught by Bexton. Accordingly, Patent Owner’s evidence is insufficient to show that the results of the MicroEssentials products are due to the amounts of the components being used in a narrower range than the broader ranges described in Bexton. Because Bexton describes the advantage of having early and late doses of sulfur in addition to a phosphate dosage, improved yields over ammonium phosphate products alone would have been expected based on the teachings of Bexton.

As with evidence of unexpected results, evidence of commercial success also must be due to the merits of the claimed invention beyond what was readily available in the prior art. *Ormco Corp. v. Align Tech., Inc.*, 463 F.3d 1299, 1312 (Fed. Cir. 2006) (“[I]f the feature that creates the commercial success was known in the prior art, the success is not pertinent.”); *J.T. Eaton & Co. v. Atlantic Paste & Glue Co.*, 106 F.3d 1563, 1571 (Fed. Cir. 1997) (“[T]he asserted commercial success of the product must be due to the merits of the claimed invention beyond what was readily available in the prior art.”) (citing *Richdel, Inc. v. Sunspool Corp.*, 714 F.2d 1573, 1580 (Fed. Cir. 1983)

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(Patentee failed to show that “such commercial success as its marketed system enjoyed was due to anything disclosed in the patent in suit which was not readily available in the prior art.”)).

The evidence provided in the Bokhart Declaration is not adequately probative of commercial success of invention beyond what was readily available in the prior art. Bokhart testifies to growth in Mosaic’s market share “of North American phosphate crop nutrient production” and of “Mosaic’s overall phosphate production.” Bokhart Decl. ¶ 31. There is no indication of how much of the “North American phosphate crop nutrient production,” if any, includes products that also include elemental sulfur and ammonium sulfate. In particular, there is no evidence to find that consumers sought the MicroEssentials products because of the particular percentages of the components over the mere presence of the components or that the benefits of the MicroEssentials products sought by consumers are not those benefits taught by Bexton. Patent Owner has not met its burden of demonstrating that the MicroEssentials products’ commercial success did not stem from aspects of the product that were already known in the art, namely, a fertilizer with elemental sulfur, ammonium sulfate, ammonium phosphate, and micronutrients.

The claims further include additional limitations that were not argued by Patent Owner in this appeal, which previously were found by the Examiner to have been met by the additionally cited publications. *See* Examiner’s Non-final Office Action, mailed December 11, 2012; Request

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62-181. We have reviewed the Examiner's findings and conclude they are reasonable and fact-based.

Accordingly, we enter new grounds of rejection, rejecting all of the claims of the '459 patent in accordance with the findings of the Examiner's Non-final Office Action, mailed December 11, 2012, and with the additional reasoning discussed herein.

DECISION

In sum, we reverse the Examiner's decision not to adopt the following rejections and enter new grounds as follows:

- I. Claims 2, 4, 6, 8, 9, 12, 14-16, 45-49, 72-86, 99-113, 126-131, 137-139, 143,145-148, 150-152, and 154-155 under 35 U.S.C. § 103(a) as obvious over Bexton, in view of one of Norton, Sharples, or Barber (Grounds 1, 2, and 4);
- II. Claims 10, 132-136, 140-142, 144, 153, and 156 under 35 U.S.C. § 103(a) as obvious over Bexton, in view of Norton, Sharples, or Barber, and Jones (Grounds 5 and 6);
- III. Claims 60, 61, 87, 88, 114, and 115 under 35 U.S.C. § 103(a) as obvious over Bexton, in view of Norton, Sharples, or Barber, and Vitosh (Ground 7);
- IV. Claims 64, 65, 91, 92, 118, and 119 under 35 U.S.C. § 103(a) as obvious over Bexton, in view of Norton, Sharples, or Barber, and Walter (Ground 8);

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- V. Claims 62, 63, 68-71, 89, 90, 95-98, 116, 117, and 122-125 under 35 U.S.C. § 103(a) as obvious over Bexton, in view of Norton, Sharples, or Barber, Heyl and Bannwarth (Ground 9);
- VI. Claims 66, 67, 93, 94, 120, and 121 under 35 U.S.C. § 103(a) as obvious over Bexton, in view of Norton, Sharples, or Barber, and Takashi (Ground 10); and
- VII. Claims 66, 93, and 120 under 35 U.S.C. § 103(a) as obvious over Bexton, in view of Norton, Sharples, or Barber, and Heyl (Ground 11).

NEW GROUND OF REJECTION

This decision contains new grounds of rejection pursuant to 37 C.F.R. § 41.77(b) which provides that “[a]ny decision which includes a new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.” Correspondingly, no portion of the decision is final for purposes of judicial review. A requester may also request rehearing under 37 C.F.R. § 41.79, if appropriate; however, the Board may elect to defer issuing any decision on such request for rehearing until such time that a final decision on appeal has been issued by the Board.

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For further guidance on new grounds of rejection, *see* 37 C.F.R. § 41.77(b)-(g). The decision may become final after it has returned to the Board. 37 C.F.R. § 41.77(f).

37 C.F.R. § 41.77(b) also provides that the Patent Owner, WITHIN ONE MONTH FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new grounds of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution.* The owner may file a response requesting reopening of prosecution before the examiner. Such a response must be either an amendment of the claims so rejected or new evidence relating to the claims so rejected, or both.

(2) *Request rehearing.* The owner may request that the proceeding be reheard under § 41.79 by the Board upon the same record

Any request to reopen prosecution before the examiner under 37 C.F.R. § 41.77(b)(1) shall be limited in scope to the “claims so rejected.” Accordingly, a request to reopen prosecution is limited to issues raised by the new ground(s) of rejection entered by the Board. A request to reopen prosecution that includes issues other than those raised by the new ground(s) is unlikely to be granted. Furthermore, should the patent owner seek to substitute claims, there is a presumption that only one substitute claim would be needed to replace a cancelled claim.

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A requester may file comments in reply to a patent owner response. 37 C.F.R. § 41.77(c). Requester comments under 37 C.F.R. § 41.77(c) shall be limited in scope to the issues raised by the Board's opinion reflecting its decision to reject the claims and the patent owner's response under paragraph 37 C.F.R. § 41.77(b)(1). A newly proposed rejection is not permitted as a matter of right. A newly proposed rejection may be appropriate if it is presented to address an amendment and/or new evidence properly submitted by the patent owner, and is presented with a brief explanation as to why the newly proposed rejection is now necessary and why it could not have been presented earlier.

Compliance with the page limits pursuant to 37 C.F.R. § 1.943(b), for all patent owner responses and requester comments, is required.

The examiner, after the Board's entry of a patent owner response and requester comments, will issue a determination under 37 C.F.R. § 41.77(d) as to whether the Board's rejection is maintained or has been overcome. The proceeding will then be returned to the Board together with any comments and reply submitted by the owner and/or requester under 37 C.F.R. § 41.77(e) for reconsideration and issuance of a new decision by the Board as provided by 37 C.F.R. § 41.77(f).

REVERSED; NEW GROUND OF REJECTION

**APPENDIX C — DECISION ON REHEARING
OF THE UNITED STATES PATENT AND
TRADEMARK OFFICE, FILED JUNE 7, 2016**

UNITED STATES PATENT
AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL
AND APPEAL BOARD

SHELL OIL COMPANY

Requester and Appellant

v.

SPECIALTY FERTILIZER PRODUCT, LLC

Patent Owner and Respondent

Appeal 2015-001671
Reexamination Control 95/002,388
Patent 6,210,459 C1¹
Technology Center 3900

Before ROMULO H. DELMENDO, RICHARD
M. LEBOVITZ, and RAE LYNN P. GUEST,
Administrative Patent Judges.

1. US Patent 6,210,459 B1, issued April 3, 2001, to John Larry Sanders, was subject to *Ex Parte* Reexamination 90/011,759, for which an *Ex Parte* Reexamination Certificate 6,210,459 C1 was issued on October 4, 2012 (hereinafter the “459 patent”). Claims 2, 4, 6, 8-10, 12, 14-16, and 45-156 of Reexamination Certificate 6,210,459 C1 are subject to *Inter Partes* Reexamination in this proceeding.

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GUEST, *Administrative Patent Judge*.

DECISION ON REHEARING

This decision on rehearing is in response to Third Party Requester's Request for Rehearing Pursuant to 37 C.F.R. §41.79 for Correction of Typographical Errors, filed August 18, 2015, which seeks correction of the claim identified in the new grounds of rejection on page 21 of the original decision, mailed July 28, 2015 ("Decision"). Indeed, the new grounds of rejection of the Decision included a typographical error in that the first rejection inadvertently omitted claims 50-59 and the second rejection inadvertently omitted claim 149. Accordingly, we amend the New Grounds of Rejection I and II from page 21 of the Decision as follows (with brackets showing deletion and underlining showing additions):

- I. Claims 2, 4, 6, 8, 9, 12, 14-16, 45-~~49~~59, 72-86, 99-113, 126-131, 137-139, 143, 145-148, 150-152, and 154-155 under 35 U.S.C. § 103(a) as obvious over Bexton, in view of one of Norton, Sharples, or Barber (Grounds 1, 2, and 4);
- II. Claims 10, 132-136, 140-142, 144, 149, 153, and 156 under 35 U.S.C. § 103(a) as obvious over Bexton, in view of Norton, Sharples, or Barber, and Jones (Grounds 5 and 6);

This decision on rehearing is also in response to Patent Owner's Request for Rehearing Pursuant to 37 C.F.R. § 41.79, filed August 27, 2015 ("Request"). In

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rendering this decision on rehearing, we also considered Requester Comments in Opposition to Patent Owner's Request, filed September 28, 2015 ("Comments").

Patent Owner contends that the Board misapprehended or overlooked the following:

- (1) legal precedent regarding consideration of the breadth of prior art disclosures in obviousness analysis (Request 2-3);
- (2) the reliability of the Hutter Declaration in light of his being an interested party and the errors identified therein (Request 3-9);
- (3) the plot relied upon in our Decision was based on back-calculations made using the Sanders claim limitations as starting points, which is improper hindsight analysis (Request 9-10);
- (4) Patent Owner was denied due process as being unable to directly cross-examine Requester's declarants in this proceeding (Request 10-13);
- (5) the Board's analysis of Patent Owner's evidence of commercial success ignores an aspect of novelty of the invention recited in the claims, namely that the granules produce "lower pH portions within the soil" (Request 18); and
- (6) the Board's commercial success analysis erred by requiring Patent Owner to establish commercial

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success vis-a-vis the closest prior art in an instance where the closest prior art was not a marketed product, in contrast to accepted principles of law that the commercial success is presumed to be due to the patented invention. Request 16-19.

Breadth of Prior Art Disclosure

We find no error in our discussion on pages 13-16 of the Decision discussing why the breadth of the prior art range of ammonium sulfate in Bexton is distinguishable from the cases cited by Patent Owner where the breadth suggests a lack of predictability because Bexton “teaches components that would perform predictably when the concentrations are routinely varied.” Decision 16.

Reliability of Hutter Declaration

Patent Owner has not shown that our Decision relied upon erroneous facts provided in the Hutter Declaration. The Decision cites to the Hutter Declaration twice.² The first noting Requester’s support for finding Bexton’s sole example teaching “the use of a greater concentration of ammonium sulfate (60-90% by weight) than elemental sulfur (1-40% by weight).” Decision 8. Patent Owner has shown no error with respect to this finding, and Rutter’s observation appears to be consistent with the teachings of Bexton. *See* Bexton 14:1-5.

2. The Decision also notes Hutter in footnote 16, particularly contrasting a lack of any evidence on the part of Patent Owner that the fertilizer compositions of Bexton do not create lower pH portions inherently when applied to the soil as granules. Decision 17.

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The second citation to Hutter's Declaration is in support of a finding that Sharples teaches a ratio of ammonium phosphate to ammonium sulfate of 2:1. Decision 9. Again, Hutter's testimony appears to be consistent with the teachings of Sharples. *See* Sharples 4:23-25, Example V. Patent Owner does not dispute this fact, but rather argues that the disclosed ratios are directed to powdered products and not granulated products. Request 8. We find no error because the rejection did not rely on Sharples for describing a granulated product, as a granulated product is described in Bexton. *See* Decision 6 and 8-9. Moreover, the Decision stated that

We need not even reach the particular ratio of ammonium sulfate to ammonium phosphate taught by Norton, Barber, and Sharples as being particularly known in the art, because the skilled artisan would have been able to determine a composition having optimum amounts of elemental sulfur, ammonium phosphate, ammonium sulfate, and trace micronutrients by routine experimentation.

Decision 16. Accordingly, our reliance on the teachings of Sharples was not particularly crucial to our decision.

*Appendix C***Plot presented in the Second Rush Declaration**

The Decision references the plot “first presented by the Patent Owner (see Second Rush Decl. 9, ¶ 15a).” Decision 10. The Decision does not reference the allegedly erroneous plot submitted by the Hutter Declaration. *See* Request 5-7. Patent Owner does not dispute that the plot in the Second Rush Declaration is an accurate representation of the scope of the teaching of amounts of ammonium sulfate and elemental sulfur from Bexton (represented by the largest trapezoid defined by four bold lines) or the scope of the amounts of ammonium sulfate and elemental sulfur recited in the claims (represented by the small pentagon in the lower left of the plot). *See* Decision 10-11, RAN 9, Second Rush Decl. 8-10, and Request 5-7 and 9-10.

We are not persuaded that the Rush plot constitutes hindsight analysis. Rather, the plot is a graphical interpretation of an aspect of the claims in dispute as compared to a graphical interpretation of the teachings of the prior art. Nor is the plot particularly or significantly relied upon in the Decision. Rather, the Decision turns on our determination that a skilled artisan would have had predictable results from using “any amount” of elemental sulfur and ammonium sulfate within the broadest ranges disclosed in Bexton for the purposes described therein. *See* Decision 13.

Due Process

We decline to address the due process issues raised on appeal in this case and again on request for rehearing. *See* Patent Owner’s Respondent Brief (“PO Res. Br.”)

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11, n. 3; Request 10-13. A lack of ability for direct cross-examination generally does not generate due process violations in *inter partes* reexamination cases. *See Abbott Laboratories v. Cordis Corp.*, 710 F.3d 1318, 1328 (Fed. Cir. 2013) (“35 U.S.C. § 24 only empowers a district court to issue subpoenas for use in a proceeding before the PTO if the PTO’s regulations authorize parties to take depositions for use in that proceeding. We therefore hold that section 24 subpoenas are not available in *inter partes* reexamination proceedings.”).

Commercial Success

Patent Owner contends that the Board erred in finding that “nothing rebuts that merely having these elements in any amount would result in the same success.” Request 17. Patent Owner points to precedent presents evidence of commercial success of a product “disclosed and claimed in the patent ... it is presumed that the commercial success is due to the patented invention.” *Id.* (quoting *Ormco Corp. v. Align Tech. Inc.*, 463 F.3d 1299, 1312 (Fed. Cir. 2006)). Moreover, Patent Owner argues that this presumption should be give considerable weight because Patent Owner’s evidence is unrebutted by the Requester. *Id.* Patent Owner further argues that the Board’s reasoning “makes it impossible to establish commercial success in instances where no one has chosen to sell what the Board deems to be the closest prior art.” *Id.* at 18-19.

Patent Owner has the burden of persuasively showing that the novel parts of the invention that are determined *prima facie* obvious over the prior art, i.e., the specific concentrations of elemental sulfur and ammonium sulfate,

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are nonetheless actually not obvious. Any presumption does not attach to the patented invention unless Patent Owner can show both that product asserted to be commercially successful is the claimed invention and that the commercial success is attributable to aspects of the invention not readily available in the prior art. *J. T. Eaton & Co., Inc. v. A. Paste & Glue Co.*, 106 F.3d 1563, 1571 (Fed. Cir. 1997) (“If Eaton can demonstrate that the commercial success of its product derives from the claimed invention and is attributable to something disclosed in the patent that was not readily available in the prior art, it is entitled, on the record in this case, to the presumption that the commercial success of its product is attributable to its patented invention.”); *Ormco*, 463 F.3d at 1312 (“[I]f the commercial success is due to an unclaimed feature of the device, the commercial success is irrelevant. So too if the feature that creates the commercial success was known in the prior art, the success is not pertinent.”) (footnotes omitted); *Richdel, Inc. v. Sunspool Corp.*, 714 F.2d 1573, 1580 (Fed. Cir. 1983) (holding claims obvious despite purported showing of commercial success when patentee failed to show that “such commercial success as its marketed system enjoyed was due to anything disclosed in the patent in suit which was not readily available in the prior art”). *See also Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988) (“When the thing that is commercially successful is not coextensive with the patented invention—for example, if the patented invention is only a component of a commercially successful machine or process—the patentee must show prima facie a legally sufficient relationship between that which is patented and that which is sold.”).

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In this case, as explained in the Decision, the prior art describes fertilizers comprising the claimed salts, elements, and micronutrients. Patent Owner has not persuasively demonstrated that the commercial success is due to the broad ranges of these components in claim 4, rather than just due to the presence of the components themselves, which were known in the cited prior art to be beneficial in a soil nutrient composition. In other words, Patent Owner has not established that the commercial success is a result of a claimed feature which was not “readily available” in the prior art, e.g., through routine optimization.

Requester need not provide additional evidence of obviousness when the rebuttal evidence presented by Patent Owner is not deemed persuasive to overcome the prima facie case of obviousness. Yet, Requester did provide argument and evidence to rebut Patent Owner’s contention. *See* Req. App. Br. 41-42 (citing the “Peacock I” and “Peacock II” patents) and Req. App. Br. 43 (arguing commercial success is due to unclaimed features of the invention, namely the presence of ammonium phosphate as a major component of the invention). In particular, Requester argued, similar to the Board’s determination, that

in view of the strong showing of prima facie obviousness discussed above, even if nexus were shown, it carries no weight. *Tokai Corp v. Easton Enterprises*, 632 F.3d 1358, 1370 (Fed. Cir. 2011) (“Even if [the patentee] could establish the required nexus, a highly

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successful product alone would not overcome the strong showing of obviousness”) *quoting Media Technologies Licensing, LLC v. Upper Deck Co.*, 596 F.3d 1332 (Fed. Cir 2010).

Req. App. Br. 43. Thus, Patent Owner cannot assert that its evidence of commercial success was “unrebutted” by Requester.

Patent Owner further contends that the recited invention included another novel aspect over Bexton, namely “lower pH portions within the soil.” Request 18. Patent Owner has presented no persuasive evidence to support a finding that this aspect of the invention is novel, as discussed in detail in the Decision. *See* Decision 17, n. 16.

Patent Owner has not shown the reasoning provided in the Decision to be untenable or that a change in the Decision is warranted.

Based on the foregoing, we have granted Patent Owner’s request to the extent that we have reconsidered the Decision, but we deny Patent Owner’s request to alter our decision.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

**REQUESTER’S REQUEST IS GRANTED; PATENT
OWNER’S REQUEST IS DENIED**