

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SILENCERCO WEAPONS RESEARCH, LLC,
Petitioner,

v.

HUXWRX SAFETY CO. LLC,
Patent Owner.

IPR2024-01214
Patent 8,286,750 B1

Record of Oral Hearing
Held: October 28, 2025

Before KEN B. BARRETT, SEAN P. O'HANLON, and
ANDREAS BALTATZIS, *Administrative Patent Judges*.

APPEARANCES:

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P R O C E E D I N G S

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JUDGE O'HANLON: You may be seated. Good morning, everyone. I am Judge O'Hanlon, and I'm joined by Judge Barrett and Judge Baltatzis. This is a hearing in Case Number IPR2024-1214, SilencerCo Weapons Research, LLC, versus HUXWRX Safety Company, LLC, and this concerns U.S. Patent Number 8,286,750.

I'd like to have the counsel for the parties introduce yourselves for the records, beginning with Petitioner, please.

MR. GETZOFF: Good morning, Your Honor. Timothy Getzoff of Holland & Hart on behalf of the petitioner, SilencerCo Weapons Research, LLC. With me at the counsel table is my colleague, Phil Harris. And also with us today is in-house IP counsel for the petitioner, David Callis (phonetic).

JUDGE O'HANLON: Thank you.

And for Patent Owner, please.

MR. GRANAGHAN: Good morning, Your Honor. Chris Granaghan with Nelson Bumgardner Conroy for the patent owner, HUXWRX Safety Company. With me today at counsel table is my colleague from Nelson Bumgardner Conroy, Brent Bumgardner.

JUDGE O'HANLON: Well, thank you. Good morning to you all.

A few housekeeping items to cover before we get started today. First of all, please note that recording of any PTAB hearing is prohibited. The court reporter will provide a transcript of the hearing that will become a part of the record in this case.

When referencing your demonstratives, papers, or exhibits, please

1 state the slide or document number so that we can follow along more easily
2 and for clarity of the record. We note that Patent Owner has objected to
3 certain slides and animations in Petitioner's demonstratives. We're not going
4 to exclude anything today, but the demonstratives are just for the
5 presentations today, it's not evidence. We will keep your objections in mind
6 when drafting the final written decision, and that decision will be based on
7 the evidence and arguments of record.

8 Each side will have 60 minutes of total time to argue. Petitioner will
9 argue first, followed by Patent Owner, and each side may reserve time for
10 rebuttal. Please remember that your arguments should be limited to only
11 those arguments previously presented in your briefs. Please make it clear
12 which challenges and claims you're addressing at all times. We ask that the
13 parties hold any objections regarding the opposing party's arguments until
14 the -- it is your time at the podium.

15 Finally, regarding several of the papers and exhibits that Petitioner has
16 filed, were filed as parties and Board only. Throughout the recent email
17 exchanges, I understand that this was probably an accident. Is it true that
18 you -- all these documents should be publicly available; is that correct?

19 MR. GETZOFF: That's correct, Your Honor.

20 JUDGE O'HANLON: Okay. So we will handle that on our end.
21 We'll make them all publicly available after the hearing.

22 MR. GETZOFF: Thank you.

23 JUDGE O'HANLON: With that, does anybody have any questions
24 before we begin the hearing?

25 MR. GETZOFF: Your Honor --

26 JUDGE O'HANLON: So Mr. Getzoff, was it?

1 MR. GETZOFF: Yes. Yes.

2 JUDGE O'HANLON: Would you like to reserve any time for
3 rebuttal?

4 MR. GETZOFF: Ten minutes for rebuttal, please.

5 JUDGE O'HANLON: Okay. I'm going to set the clock for 50
6 minutes, and then if you continue over that, it will just eat into your rebuttal
7 time. So Mr. Getzoff, you may begin when you're ready.

8 MR. GETZOFF: Thank you, Your Honor.

9 May it please the Board. Good morning, Your Honors. The -- this
10 inter partes review challenges all 22 claims of U.S. Patent number
11 8,286,750. And we also ask that the Board deny Patent Owner's Motion to
12 Amend. The Motion to Amend seeks to substitute all of the claims except
13 Claim 18.

14 Now, in today's argument, I plan to discuss three key points. First,
15 that the patent owner's proposed construction of radially serpentine
16 contradicts the express language of the '750 patent specifications, contradicts
17 statements the patent owner made during prosecution, and is otherwise
18 unsupported.

19 The second key point I will cover today, is that there is a century of
20 prior art that renders all of the original claims and the amended claims either
21 anticipated or obvious.

22 And finally, I will address the Motion to Amend in particular and
23 argue that, as a threshold matter, the Motion to Amend fails as to some
24 threshold elements. And that, also, the proposed claims in the Motion to
25 Amend fail as to obviousness as well.

26 Just some quick background on the claimed technology in the '750

1 patent. '750 patent relates to energy suppression devices. Now, firearms
2 make a loud noise, and technology has been around for over 100 years to
3 reduce that noise. The prior art in these suppression devices teach the use of
4 deflectors and walls that direct the gases through pathways and allow the
5 energy emitted from the fired firearm to be absorbed and dissipated,
6 resulting in quieter gunfire. The longer the length of travel through which
7 the gases can be routed, the better the silencing effect. And this concept has
8 been well known for over a century.

9 In the '750 patent, the '750 patent specifications sets forth a very
10 specific definitional structure of three different types of fluid flow. First, it
11 defines a fluid flow that it calls axially serpentine as fluid flow that travels
12 back and forth along a length of the off-axis chambers. That's the express
13 language in Column 4, Lines 27 through 46.

14 Next, that same passage defines radially serpentine, and it defines it
15 two ways. First, it says radially serpentine is a back-and-forth flow around a
16 radius of the off-axis chamber. But then the patent also says that it can also
17 mean back and flow (sic) flow around a radius of the off-axis chamber while
18 also traversing a length of the off-axis chamber. So that's the definition of
19 radially serpentine.

20 And then the third definition put forth in the same passage is helical.
21 And the patent defines a helical fluid flow as a spiral around the central
22 chamber within the off-axis chamber.

23 Now, the '750 patent acted as its own lexicographer for these terms. It
24 defined the direction and shape of these three different fluid flows and did it
25 in very specific language. That same passage does say that, an embodiment
26 can combine different fluid flows. You could have an embodiment that has

1 a fluid flow during one part and changes to something else. But the fluid
2 flows themselves, these three defined fluid flows are non-overlapping, which
3 is to say a fluid flow that is radially serpentine is not the same as a fluid flow
4 that is axially serpentine, which is not the same as a fluid flow that is helical.

5 A device that creates a helical pattern, for example, does not, without
6 more, constitute a radially serpentine flow. This -- in the patent figure 16,
7 the patent expressly calls out as an example of an axially serpentine fluid
8 flow. This is figure 16. And again, in the passage -- at Column 9, Line 55
9 specifically defines figure 16 as being an example of what it just defined of
10 axially serpentine. This is our animation of figure 16. And it simply shows,
11 in animated form, how the fluid flow goes back and forth along the axis as --
12 or back and forth along the length of the chamber as an example of axially
13 serpentine.

14 JUDGE O'HANLON: And Mr. Getzoff, this is slide 7; is that correct?

15 MR. GETZOFF: This is slide 7, yes. This is one of the objected to.
16 All of the animations were objected to. I will state this slide expressly.
17 Thank you, Judge.

18 Another example of axially serpentine, which the parties seem to
19 agree with, comes from the Thurler reference. Thurler has several chambers
20 extending below or eccentric to the main chamber through which gases
21 travel back and forth along the length of the off-axis chamber. So Thurler is
22 another example of an axially serpentine fluid flow. Here is our animation.
23 So that was slide 8, is the depiction of Thurler.

24 And then slide 9 is our animation of fluid flow in Thurler. The gases
25 going into the central chamber being deflected to the lower chambers, and
26 going back and forth in a serpentine fashion.

1 JUDGE O'HANLON: Mr. Getzoff, one question I did have about this
2 animation. It appears that you've only shown fluid flow from the main tube
3 E into the mantle tube, which I believe is tube G, along the first three of the
4 tubular sleeves. But wouldn't the fluid flow from the central tube to the next
5 outer tube E be through more than just those three?

6 MR. GETZOFF: It should. Yes, Your Honor. That depiction of
7 which deflectors actually direct it down was not necessarily the point of the
8 flow, but you're absolutely right. As described with Thurler, the fluid would
9 flow -- and this is maybe a better depiction. Each of the green arrows on
10 slide 8 depicts fluid flow that's flowing down after it hits a deflector into that
11 next lower chamber.

12 JUDGE O'HANLON: Thank you.

13 MR. GETZOFF: Okay. I want to now talk about the helical fluid
14 flow as defined in the '750 patent, that this is a second type of flow pattern.
15 The Barlowatz reference, we're on slide 10, exemplifies a helical flow
16 pattern, which is defined in the pattern. The flow that spirals around the
17 central chamber. Slide 10 depicts the configuration that would cause the
18 gases to spiral around the central chamber. And moving to slide 11, we have
19 an animation of that fluid flow spiraling around that chamber. So that's
20 helical.

21 Now finally, and probably most salient to this argument, is radially
22 serpentine. Now, radially serpentine, again, expressly defined in the patent
23 as a back-and-forth flow around a radius of the off-axis chamber. Now, the
24 word radius is not a vague or ambiguous term. There's no real dispute in this
25 case as to what a radius is or that a radius in the context of this claimed
26 invention would be a line extending perpendicular from the central axis.

1 These depictions that we're looking at on slide 12 are from the party's
2 respective experts.

3 The one on the left is from the patent owner's expert, Dr. Neitzel. The
4 two figures on the right are from our expert, Mr. Nixon. And both experts
5 essentially agree that the definition of radially serpentine, as applied by the
6 Board in its institution decision, is depicted on slide 12. Slightly different
7 versions, but they both show a flow going around a radius that's extending
8 from the central chamber. In the far-right picture on slide 12, that -- that's a
9 top-down view as if you're looking down the radius, and you can see the
10 fluid flow moving around -- back-and-forth around the radius. So again, no
11 real dispute between the parties as to what radially serpentine means or
12 looks like, as applied by the Board in its institution decision.

13 And now, here is a -- slide 13, it is an animation of radially serpentine
14 based on Dr. Neitzel's drawing. So it goes -- in the animation, it goes
15 clockwise on the way up and then counterclockwise on the way down.
16 Again, the clockwise motion is around the radius, which is what's plainly
17 stated in the patent specification. During prosecution history, let's talk about
18 some of the intrinsic evidence on this point. The patent owner faced a prior
19 art rejection and had to add this amendment: "At least one of axially
20 serpentine and radially serpentine" to overcome a prior art rejection based on
21 Latka.

22 Now, when the patent owner did that, it repeated and reinforced the
23 definition stated in the patent to the examiner, but actually went further and
24 clarified that the language back-and-forth actually meant clockwise to
25 counterclockwise, further emphasizing the definition that around means
26 around the radius, clockwise and counterclockwise, which means -- and

1 must mean that the flow travels in a circle around the radius. That's exactly
2 what the patentee told the examiner for purposes of patentability, which
3 tracks exactly the way that the term is defined in the specification.

4 The patent owner, by clarifying these statements, simply confirm.
5 And if there's any doubt as to what the around was in reference to, the
6 clockwise to counterclockwise around the axis as described in Page 7, which
7 was the radius, there's no dispute about that, confirms the proper meaning of
8 radially serpentine. We have more prosecution history that bears on this
9 term. Later in the prosecution, Patent Owner received another objection,
10 also based on Latka, which showed a helical flow. And to distinguish Latka,
11 the patent owner said that "axially helical is substantially different from
12 axially serpentine."

13 In other words, the patent owner was doubling down on the distinct
14 and different definitions set forth in the patent specification and making
15 clear that one particular defined fluid flow does not equal the other. In fact,
16 in this context, Patent Owner was emphasizing that axially helical is
17 substantially different from axially serpentine, and a reference that discloses
18 one does not disclose the other. Again, reinforcing the point that the
19 definitions of the fluid flows are distinct and separate. This is slide 15.

20 Moving to slide 16. We're -- I now want to talk about figure 14.
21 Figure 14 and the accompanied passage, Line 9 -- Column 9, Lines 1
22 through 20, describe another type of fluid flow. In the text accompanying
23 figure 14, it describes this embodiment as having "concentric incomplete
24 cylinders," which cause the gases to flow in a serpentine path through the
25 annular spacers formed between the cylinders that are progressively larger.

26 Now, in the figure 14, you can see items 500 are described as multiple

1 segments with multiple concentric cylinders inside them, and the cylinders
2 are incomplete. So there's gaps in the cylinder. The gaps are offset, and that
3 causes the gases to move in a circumferential way until it hits a gap. And
4 then it expands into the next bigger cylinder. Again, it moves
5 circumferentially, and then it expands when it hits one of the offset gaps into
6 the next larger.

7 When -- this on -- now, on slide 17, this is the passage, Column 9,
8 Lines 1 through 20, that describes figure 14. This is the only passage that
9 discusses figure 14 in the patent. This passage does not label or characterize
10 figure 14 as being axially serpentine, radially serpentine, or helical. So
11 despite having defined these three fluid patterns four or five columns earlier,
12 when it gets to figure 14, it doesn't apply that character -- that
13 characterization to figure 14. That's in contrast that -- with figure 16.

14 So when the patent introduces and describes a figure, as it did for
15 figure 16, that does satisfy one of the three definitions, it expressly said so; it
16 called figure 16 axially serpentine. But when it describes figure 14, it
17 doesn't use any of the three labels.

18 And the reason it doesn't use any of the three labels is because none of
19 those three labels apply. The passage -- the text in -- on Column 9, it does
20 not mention radially serpentine. It does not mention a radius at all. It does
21 not mention a fluid flow going around a radius clockwise or
22 counterclockwise. And instead, as the Board correctly noted in its institution
23 decision, figure 14 describes an altogether different kind of flow, a
24 circumferential flow. A flow that moves around the circumferences of the
25 incomplete cylinders that are progressively larger. That's figure 14. This is
26 an animation of figure 14, and this is showing the gases going into the

1 increasingly larger cylinders through offset gaps. I'll play that again. And
2 so it's moving from one circumference to the next circumference, going
3 around in a circle. That's figure 14. Okay. That was slide 18.

4 Slide 19. During prosecution, the patent owner did cite figure 14
5 when discussing radially serpentine flow. But as we just saw, figure 14 does
6 not, in fact, show a radially serpentine flow. And to be clear, when figure 14
7 was being discussed in the prosecution history, whether figure 14 was an
8 example of radially serpentine fluid flow or not, that was not the issue. That
9 was before the examiner. Whether the patent had sufficient written
10 description to describe or enable radially serpentine fluid flow was not being
11 discussed. It had not been raised in the context of the response to the Office
12 action to the examiner, whether figure 14 was an example of radially
13 serpentine fluid flow or not, with a throwaway comment.

14 In any event, the patent owner citing figure 14 during prosecution
15 history is no more effective than the patent -- than the patent owner now in
16 this proceeding citing figure 14 as an example of radially serpentine. It's
17 still unsupported by the actual figure 14 and by the actual text that
18 accompanies the figure 14. A patentee cannot say something during
19 prosecution history to backflow -- to backfill a written description
20 deficiency. A patent owner also can't say something during prosecution
21 history to broaden a defined term from the specification. A patent owner
22 can narrow a term to distinguish prior art, but I'm not aware of any authority
23 or example where a patent owner can say something during prosecution to
24 broaden a term that was specifically a time -- defined in the specifications.

25 So the fact that the patent owner, in our view, mistakenly referred to
26 figure 14 as an example of radially serpentine is irrelevant and provides no

1 basis or support for whether -- as a matter of fact, looking at figure 14 itself
2 and reading the text accompanying figure 14, whether it does satisfy the
3 radially serpentine fluid flow or not.

4 Okay. In the -- in this proceeding, in the patent owner's first filed
5 paper, we're on slide 20, they initially agreed with the plain language of the
6 specification and said that radially serpentine meant a back and flow --
7 pardon me. A back-and-forth flow around a radius of the off-axis chamber.
8 That's the language straight from the specification, and the patent owner
9 seemed to agree in it and adopt that express language. However, in that
10 same paper, the patent owner then started to depart from that defined
11 definition. Patent Owner later said, well, radially serpentine also can mean
12 crosses over and back of the radius. And then they said even in a later filing
13 that the -- that radially serpentine includes the circumferential flow of figure
14 14. They later said that radially serpentine includes a helical flow that
15 changes direction. And then finally, in their last substance of filing in this
16 proceeding, they submitted a general-purpose dictionary as to the word
17 around, and said that around can mean any of these general dictionary
18 definitions. Which essentially means, which I'll get to in a few moments,
19 that under their definition of radially serpentine, it can mean anything.

20 I'll get to their dictionary evidence in a moment. But these are the
21 shifting definitions of radially serpentine that the patent owner has offered in
22 this proceeding. So why is the patent owner wrong?

23 Well, first, as we saw this differing, shifting, malleable definition of
24 radially serpentine departs from the plain language of the specification. The
25 specification has a very specific definition for radially serpentine. It defines
26 it distinctly and separately from helical, distinctly and separately from

1 axially serpentine. They are not to be conflated as it's described. And that's
2 exactly what the patent owner is doing in this proceeding, is conflating these
3 different definitions into one another.

4 This is the specific passage, slide 22. This passage on Column 4,
5 Lines 27 through 46, which is the patentee being his own lexicographer. It
6 does not define these fluid flows in loose or vague terms. It would be -- it
7 would be one thing. If you saw a patent specification that used definitions
8 that weren't really definitions, but more loose, ambiguous could-mean-
9 different-things, this would perhaps be a different case. This is not that case.
10 We have very specific language defining three different kinds of fluid flow.
11 Each one is different from the other.

12 Another reason why the patent owner cannot be right, is because in
13 the prosecution history, it was facing a rejection based on WerBell. Now,
14 WerBell was a prior art references that showed a helical structure that would
15 cause the gases to flow in a helical manner that would satisfy the definition
16 of helical in the '750 patent.

17 WerBell was cited by the examiner as prior art, the patent owner
18 distinguished WerBell by emphasizing the differences between helical and
19 serpentine. And now, Patent Owner is proffering a definition of radially
20 serpentine that would read on WerBell. If they had done that during the
21 original prosecution, they would've received a rejection based on WerBell.
22 That's just yet another reason why their current definition cannot be the
23 correct one.

24 A third reason is just based on the text. Not simply that they can't
25 conflate, but looking at figure 14 and the accompanying text, that figure in
26 the text, as I mentioned, never uses the word radius and never uses the word

1 radially serpentine, never describes any structure that would cause a fluid
2 flow to move back-and-forth around a radius. So that -- there's just simply
3 no support in the patent for radially serpentine.

4 I will address this issue more when we get to the motion to amend.
5 This -- that wasn't a grounds raised by the Board in its preliminary decision
6 on the -- its preliminary guidance on the motion to amend. Again, nothing
7 in the text that would be consistent with respect to figure 14, that would be
8 consistent with a radially serpentine fluid flow.

9 And then finally, they've submitted a general-purpose dictionary.
10 Their dictionary argument fails for lots of reasons. First, it's not
11 contemporaneous. They submitted a recent dictionary from 2025; that's 15
12 years after the relevant filing date of the '750 patent. That alone is a reason
13 to reject it.

14 Second, the general-purpose dictionary is not specialized; it conflicts
15 with the patent's own lexicography. Case law is clear that specific
16 definitions from specifications control, and you can't use a general-purpose
17 dictionary, which in this case is very much divorced -- that the different
18 definitions of around that come out of this general-purpose dictionary are
19 very much divorced from the specific context of the '750 patent.

20 And finally, the dictionary argument fails because it would essentially
21 render meaningless the defined term radially serpentine. Now, I know in a
22 lot of patent arguments, one side usually argues in the claim construction
23 context that my opponent's argument will render this term superfluous. And
24 we can't have that. And that argument may be overplayed at times, not in
25 this case. This is a deposition excerpt from Dr. Neitzel, who's the patent
26 owner's own expert. And in walking him through the different meanings of

1 around that came out of the general-purpose dictionary and getting him to
2 say, well, yes, it can mean this. And yes, it could mean that they -- we
3 finally got him to say so. Any fluid flow would meet that definition of
4 around, and he said correct.

5 So that really reveals the fundamental problem with the patent owner's
6 argument, which is this dictionary would, in fact, render the defined term
7 "radially serpentine" superfluous or meaningless. Because under the
8 patentees' proposed argument, any fluid flow would be captured. That
9 obviously cannot be the case and just further confirms the reason why their
10 proposed definition is wrong.

11 Okay. In their surreply, the patent owner advanced this argument.
12 They said, well, our argument must be correct, because for the second aspect
13 of radially serpentine fluid flow, if you recall, it's back-and-forth around the
14 radius of the off-axis chamber and can also traverse the length.

15 And their argument is, well, fluid flow, the way we define radially
16 serpentine, you could not have both. You could not have a radially
17 serpentine fluid flow that went around an axis perpendicular -- around a
18 radius perpendicular to the off-axis chamber and also traverse a length of
19 that chamber.

20 Well, first of all, you could. It's conceivable in a couple different
21 embodiments that you could have a radially serpentine fluid flow around the
22 radius. First, as it's going around the radius, it is traversing the length as it
23 goes in a circle upwards up the radius. It's traversing the length back and
24 forth somewhat, so it's satisfying the definition.

25 Second, you could conceive of a set of deflectors and walls where a
26 radially serpentine fluid flow might flow upwards to a wall at the top, move

1 across, and then flow back down, so it's not impossible to conceive of a
2 situation where you could satisfy the -- '750's definition of radially
3 serpentine.

4 But I think the bigger and better answer on this is that this whole
5 argument is a straw man. Under either definition, Patent Owner is really just
6 pointing out the written description problem with its patent. It defined a
7 type of fluid flow but then provided no description or teaching for how to
8 accomplish this fluid flow.

9 That's not an argument for why Patent Owner's proposed claim
10 construction should be adopted. It just reinforces the fact that Patent Owner
11 made definitions that it then did not satisfy or provide sufficient written
12 description to accomplish.

13 So the fact that they proposed a definition that may not be possible is
14 not a reason that they're right on claim construction. It's a reason that their
15 written description issue is fatal. And again, that's relevant to the Motion to
16 Amend.

17 Based on their lack of support by the patent owner, they've relied
18 heavily on their expert, Dr. Ray (sic) Neitzel. The problem with their
19 reliance on Dr. Neitzel is that he is not a person of ordinary skill in the art.
20 The parties agreed as to the standard for what a person of ordinary skill in
21 the art has.

22 It's a relevant degree, mechanical engineering, fluid engineering, or
23 the like, and two to three years of experience researching, designing,
24 manufacturing, or assessing energy suppression devices. There's no dispute
25 as to what the required standards are for a person of ordinary skill.

26 Dr. Neitzel has readily admitted he has zero experience in firearms,

1 silencers, or muffler research design, manufacture, or assessment. Dr.
2 Neitzel himself acknowledged that suppressor experience is required in
3 order to be a person of ordinary skill in the art, but he admitted that he has
4 none.

5 His opinions in this case should be given no weight by the Board
6 simply because he's not a person of ordinary skill in the art given his
7 complete lack of experience in this art field, which is suppression -- which is
8 suppressors.

9 JUDGE O'HANLON: Mr. Getzoff, didn't the parties agree that a level
10 of education greater than this -- I believe a bachelor's degree in engineering -
11 - could make up for a lack of experience?

12 MR. GETZOFF: It could -- it -- it's a balancing test, so yes, we
13 agreed that less education may be sufficient with additional experience or
14 vice versa, but you couldn't have none, right? Like, you could not have a
15 bunch of experience in suppressor design, actual hands-on experience, but
16 no engineering degree whatsoever. That person would also not be a person
17 of ordinary skill.

18 And the other way, which is the problem for Dr. Neitzel, is he has the
19 relevant educational degrees, and if he had more degrees than necessary and
20 light experience, maybe not two to three years, maybe one year, one and a
21 half years, yes. That balancing test might bring him back.

22 The problem here is he has zero. He admittedly has zero, not six
23 months, not a month, not a day. Zero, so that balancing test does not make
24 up for a complete lack of one of the two requirements.

25 JUDGE BALTATZIS: Mr. Getzoff, if I could just follow up on that,
26 does it also depend on what his declaration -- what he's testifying to? If he

1 could on the mechanical/fluid engineering, he has the background for, but
2 maybe on the state of the art of, energy suppression devices, we could
3 balance the credibility there.

4 MR. GETZOFF: You could. I mean, you're right. There are things
5 that a person of ordinary skill when it gets to suppressor-specific technology
6 -- someone in -- someone who just has fluid flow like Dr. Neitzel has,
7 education, is going to understand the fluid flow itself.

8 Things like turbulence, things like vacuum, things -- he -- he'll have
9 no problem understanding that, but how that gets applied specifically in a
10 suppressor context where you're trying to dissipate energy and silence the
11 firearm, he doesn't know because he has zero experience.

12 So I would agree with you that depending on what he says, there
13 might be some opinions that are general fluid flow dynamics type that we
14 wouldn't necessarily have a problem with, but those are -- it's not like his
15 report says, here's my general fluid flow opinions, and then here's the
16 application of that to suppressor devices.

17 It's -- it -- it's all mixed together, so I would, at a minimum, ask the
18 Board to be extremely skeptical of any of Dr. Neitzel's opinions because
19 they are all to some degree embedded in the suppressor technology, and
20 simply having educational experience in fluid flow doesn't make you an
21 expert in suppressors. If you work for a few years, he would get there. He's
22 got the educational basis, but he's never done that.

23 JUDGE BARRETT: And to be clear, you're not moving to exclude?
24 This isn't a Daubert motion?

25 MR. GETZOFF: Correct.

26 JUDGE BARRETT: This -- your argument goes to weight?

1 MR. GETZOFF: Correct. Correct, Your Honor.

2 JUDGE BARRETT: Thank you.

3 MR. GETZOFF: Okay. Back to why we believe the patent owner's
4 definition of radially serpentine is incorrect. They've -- as I noted in a prior
5 slide, they've taken different approaches to the definition of radially
6 serpentine throughout this proceeding. In prior proceedings, they've also
7 taken different approaches to their proposed meaning of radially serpentine.

8 In the district court litigation that's parallel to this case, they said that
9 radially serpentine is a pathway that changes directions from clockwise --
10 from counterclockwise to clockwise. In other litigation, they filed a prior
11 case prior to suing my client, they said that radially serpentine is a pathway
12 in the shape of a helix that travels around the central chamber.

13 And then of course, as we already look at it in this IPR, they've
14 expanded it even further to say that radially serpentine includes
15 circumferential flows of figure 14 and helical flows. These shifting
16 definitions -- patent owner is treating radially serpentine like it's a malleable
17 catchall and can catch whatever type of fluid flow they want to for
18 infringement purposes.

19 Okay. I'm now going to transition to my second main point for today,
20 which is the prior art. Slide 33 just summarizes the grounds from the
21 petition. I'm going to move a little more quickly through this, as I see my
22 time is running a bit -- the patent owner essentially conceded the 102 impact
23 of Thurler as to the independent claims.

24 Rather than argue that Thurler is not a 102 reference, they've sought to
25 amend those claims, and so now, on slide 35, this is just a listing of the
26 claims that they've non-contingently sought to amend and the claims that

1 they contingently sought to amend.

2 And so the original claims at issue are the ones listed on claim -- on
3 slide 35. Slide 36 is just a listing of the relevant prior art, but I want to move
4 -- these next few slides, slide 37, 38, 39, are all about Thurler.

5 Again, given that there seems to be a concession that Thurler is a 102
6 reference to the original independent claims, I -- I'm not going to spend time
7 -- I think this issue has been well-briefed, and of course, the Board in its
8 institution decision agreed that Thurler was an anticipating 102 reference for
9 the independent claims.

10 I do want to move -- Claim 9, if radially -- so Claim 9 is further
11 limited to being radially serpentine only, and we would agree that if the
12 Board adopts the definition of radially serpentine as set forth in the patent
13 and the prosecution history as we have advanced, Claim 9 survives because
14 Claim 9 is limited to radially serpentine, and there is no prior art that
15 discloses radially serpentine.

16 So we would concede that Claim 9 survives, but Patent Owner can't
17 have it both ways, right? They're at the same time arguing that radially
18 serpentine means all these other things, and if they win on that, then Claim 9
19 would be invalidated as well. So my only point there is Claim 9 survives
20 only if we get the proper definition of radially serpentine.

21 Claim 6 is the only other claim of the original claims I want to talk
22 about briefly. This claim simply says that in the deflectors, there's fluid
23 communication or perforations in only the first three -- at the first three
24 deflectors.

25 So Judge O'Hanlon, you've correctly noted that our animation of
26 Thurler essentially looked like Claim 6, that the perforations were only on

1 the first three deflectors. This is obvious. There's nothing in the patent that
2 says putting perforations only at the first three deflectors provides any
3 greater benefit or leads to any sort of unexpected result or benefit. Overall,
4 it's merely a design choice. There's no magic.

5 And actually, Thurler itself teaches the principle of selecting
6 perforations at different extents to achieve different results. And as our
7 expert opined, that -- that's a common -- that's a common design variable
8 that persons in this art field would use to tune the silencer and to optimize its
9 performance. It's not inventive. It's not non-obvious. Okay. I wanted --

10 JUDGE O'HANLON: Excuse me.

11 MR. GETZOFF: Go ahead. Sorry.

12 JUDGE O'HANLON: Mr. Getzoff, did you say that your expert, your
13 witness, said that was -- varying the number of perforations is a variable
14 that's recognized in the art?

15 MR. GETZOFF: Yes. Yes. He -- that was part of his opinion.

16 JUDGE O'HANLON: And did he cite any evidence in support of
17 that?

18 MR. GETZOFF: No. He just -- based on his own experience that --
19 something about how far -- where you put the perforations, how far down,
20 he called that a tuning or optimization that if -- when you're getting into the
21 manufacturing of the device, it would be common to make some variation on
22 there and then test it to optimize the silencing result. That was based on his
23 generalized experience.

24 JUDGE O'HANLON: Thank you.

25 MR. GETZOFF: Okay. I do want to skip now with my remaining
26 time and talk about the Motion to Amend. Slide 58, this is just an overview

1 of the claims being sought to be amended. Slide 59 is the four substantive
2 amendments that they added, but I want to jump into slide 60, Claim 43.

3 They impermissibly broadened the scope. They substituted high-
4 energy device, which was in the original claim, with the word weapon,
5 which is what they substituted, but they didn't show that those two terms are
6 coterminous. They didn't show that there are no weapons that are not high-
7 energy devices, and in fact, the Board questioned that very point.

8 That's applying the *Sisvel* Federal Circuit standard. The standard
9 under *Sisvel* is whether there's any conceivable device or embodiment that
10 would fall outside the original claims, and in this case, there are. We
11 provided examples of certain devices, paintball guns, airsoft pistols,
12 crossbows, that would be considered low-energy weapons but still emit a
13 high-energy device.

14 So weapon is not coterminous with high-energy device, and it -- it's
15 conceivable that it's broadening it, and under *Sisvel*, that's fatal. That's
16 Amended Claim 43. Slide 61 is just rebutting the patent owner's position on
17 that. I think I'll save that for rebuttal.

18 I want to talk about this threshold failure, which is what the Board
19 found in its preliminary guidance, that the term radially serpentine itself is a
20 new matter. We talked about this at some length already, so I'm not going to
21 rehash the entire point, but the bottom line is if figure 14 and the
22 accompanying specification of column 9 does not describe a radially
23 serpentine pathway, then all of the amended claims fail. That was the
24 preliminary conclusion by the Board, and it's the correct one.

25 As we walk through, figure 14 does not get them there, and there is
26 nothing else in the patent describing a radially -- or describing how to

1 implement -- it's one thing to define a fluid pathway. I could have a patent
2 that says time travel. There's a device that I'm going to go from here back to
3 1950 and provide some parameters and definitions as to what that means, but
4 if I don't describe how to accomplish or implement that, it's a written
5 description problem. The patentee is not in possession of that invention.

6 That example I use is maybe extreme, but it's analogous. They
7 defined -- they took the time to define specifically what radially serpentine
8 was, what it looks like, but then they provided no description on how to
9 achieve that. That's a written description problem.

10 They -- the only thing they've been able to point to is figure 14 and the
11 accompanying text in column 9, and as we walk through the figure, neither
12 the figure nor that text mentions radius, mentions the fluid flow around a
13 radius, or has anything to do with how radially serpentine is defined in the
14 patent. That failure is fatal to all of their amended claims.

15 JUDGE O'HANLON: Mr. Getzoff, are -- did you make an argument
16 in the briefs that there was no written description support or anything? I
17 don't recall reading those arguments.

18 MR. GETZOFF: Yes. So -- well -- so I'm echoing back to the Board.
19 No, because -- so -- to be clear, written description is obviously not a
20 grounds that we could raise in the original claim, so I'm responding to the
21 Board's preliminary guidance that the Board is correct that there's no written
22 description.

23 We certainly argued at length the point, which is there's nothing in the
24 patent that teaches or discloses how to accomplish a radially serpentine fluid
25 flow because figure 14 is the only thing that they've pointed to, and that does
26 not do it. So that argument is not -- it -- that argument is in the briefs. The

1 written description is not a grounds that we could raise, so no.

2 JUDGE O'HANLON: In their reply, however, they cited to column 4
3 that you talked about earlier, in which I believe you said that a person of
4 ordinary skill in the art would readily know how to implement that.

5 MR. GETZOFF: I -- I'm sorry, Your Honor. I'm not --

6 JUDGE O'HANLON: In their reply regarding -- to your opposition to
7 the Motion to Amend, in addition to citing the figure 14 discussion, they
8 also cited the column 4 disclosure of radially serpentine, which you spoke
9 about earlier, and I believe that you said an ordinarily skilled artisan would
10 readily know how to implement that.

11 MR. GETZOFF: No, I don't think that's what I said. I think a skilled
12 artisan would know what that means. They would know based on the
13 description and the lexicography in column 4 what those three different fluid
14 flows would mean, and they would recognize them, and they would
15 understand the difference in distinction.

16 I don't think I said a person of ordinary skill in the art would know
17 how to implement radially serpentine. I, sitting here as a lawyer, could see -
18 - could -- can conceive -- well, actually, I can't, and we didn't say this in the
19 brief, so I don't want to -- I don't want to say something we didn't argue, but
20 I -- I'll say simply that I don't know what the structure would look like, and
21 there's nothing in the patent that describes structure that would accomplish a
22 radially serpentine fluid flow.

23 JUDGE O'HANLON: Okay. I --

24 MR. GETZOFF: And I don't think a -- I don't think a person of
25 ordinary skill in the art would know either.

26 JUDGE O'HANLON: Okay. Thank you.

1 MR. GETZOFF: Briefly, in my remaining time, we did -- apart from
2 the failure -- the written description failure on the Motion to Amend for
3 radially serpentine, we did propose four grounds for obviousness.

4 Briefly, this ground, ground 1, would be modifying Thurler. Thurler
5 had eccentric off-axis tubes. The tubes were below the top of the central
6 chamber. And the question is, would there be a motivation to combine
7 Kenney, which taught the benefits of concentric design, with Thurler?

8 We don't even get there, though, because the language that they
9 amended, they did not use the word concentric. They used the word
10 "oriented along a central axis" -- "oriented along a central axis." That's their
11 amended language. They're now saying that means concentric, but it
12 doesn't. "Oriented along" simply suggests alignment along the central axis.
13 Thurler has that. The eccentric tubes of Thurler are oriented along the
14 central axis. They're just not concentric.

15 If they wanted to add concentricity as an expressed claim limitation in
16 the amended claims, they could have, and they should have, said that, but
17 they didn't. They used this different language, along, and along simply does
18 not equate to concentricity, so this claim limitation does not distinguish
19 Thurler.

20 And if the Board finds that I'm correct that "oriented along" does not
21 mean concentric and that Thurler applies with full strength in the issue of
22 whether a skilled artisan would've combined the known benefits taught in
23 Kenney of a -- concentric off-axis tubes to Thurler, which only taught
24 eccentric tubes because back in the turn of the century, that iron sights on the
25 rifle were right above the barrel, and if you had concentric tubes, you
26 couldn't see what you were shooting at.

1 That's no longer an issue, as shown by WerBell, that modern sights
2 are far enough above the gunstock that you don't have that spacing problem.
3 So the only reason for concentric -- pardon me. The only reason for
4 excentric taught by Thurler no longer exists given modern weaponry, and so
5 the increased benefits of Kenney of using concentric designs would've been
6 readily adopted and would have motivated a skilled artisan to combine
7 Kenney or to modify Thurler into a concentric divine (sic).

8 Again, we don't get to that issue if you find that the amendment itself
9 does not equate to concentric. I am out of time, and I'll reserve -- unless
10 there are any more questions of the -- by the Board, I'll reserve the rest of
11 my time for rebuttal.

12 JUDGE O'HANLON: Thank you, Mr. Getzoff.

13 MR. GETZOFF: Thank you.

14 JUDGE O'HANLON: We'll now hear from Patent Owner.

15 Mr. Granaghan, would you like to reserve any time for rebuttal?

16 MR. GRANAGHAN: I will reserve ten minutes for rebuttal, Your
17 Honor.

18 JUDGE O'HANLON: Okay. You may begin when you're ready,
19 Counsel.

20 MR. GRANAGHAN: Thank you, Your Honors. Chris Granaghan
21 for the patent owner, HUXWRX Safety Company. So as Petitioner's
22 counsel noted, we're here today on two different sets of filings: Petitioner's
23 Petition, which challenges all the asserted claims -- or, I'm sorry, all of the
24 claims in the '750 patent, as well as Patent Owner's Motion to Amend, which
25 contingently and non-contingently seeks to amend certain claims.

26 The claims that remain at issue with respect to the petition are only a

1 subset of those. We've sought to cancel some of the claims, including all the
2 independent claims, so the claims that remain at issue with respect to the
3 petition are 2, 3, 6, 9, 12, 13, 14, 18, and 20.

4 All right. So let me start by talking about a few issues that pervade
5 this case across both sets of filing. And I know the Board is well familiar
6 with the '750 patent at this point, so I won't belabor this too much, but let me
7 talk just a little bit about what the inventions of the '750 patent are.

8 So I put up here on slide 2 -- this is figure 1a of the '750 patent, which
9 I think is emblematic with the inventions of the '750 patent. You can see it's
10 a device that has a central chamber running through the center of the device
11 through which a projectile will pass.

12 It has a number of deflectors, which are numbered in figure 1a as 165,
13 170, and 175. These serve to deflect fluids and energy from this central
14 chamber to the off-axis chamber, which is defined by walls, which are
15 denoted in purple with a bunch of different numerals there on the top.

16 This one particularly forms an axially serpentine fluid pathway
17 because the fluids travel down the device away from the operator of the
18 device. They come back, and then they travel back down again, so it
19 changes directions in an axial direction. And then they come out of the
20 device at what's labeled 190 in this figure. That's an outlet that allows the
21 fluids to escape from the off-axis chamber without returning to the central
22 chamber.

23 All of these aspects are claimed in Claim 1, which I have up here on
24 slide 3. Now, I know this is -- we've asked to cancel this claim and replace
25 it with Proposed Substitute Claim 23 as with the other independent claims,
26 but I think it makes sense to look at it just briefly because the proposed

1 substitute claims maintains this structure, and for many of the dependent
2 claims currently existing in the '750 patent, we have defended based on
3 elements that exist in current Claim 1.

4 So Claim 1 requires a central chamber that's oriented along a central
5 axis, as we talked about. I don't think that's a -- an element that is
6 particularly relevant in this case, but it is the first element.

7 The second element, labeled B, that's kind of, I think, where all the
8 action is in this case. It requires a common off-axis chamber within the
9 outer shell. Importantly, it has a fluid outlet. That's an important issue for
10 this case. And it has multiple internal walls that define a serpentine fluid
11 pathway, which is at least one of axially serpentine and radially serpentine.
12 And then finally, element C, it has a plurality of deflectors that deflect those
13 fluids and energy into the off-axis chamber.

14 Okay. So let's talk about some of the disputed issues in this case. The
15 first one that I want to talk about is whether Dr. Neitzel, Patent Owner's
16 expert, is a person of ordinary skill in the art. And I want to make clear, as I
17 think Judge Barrett noted, there's not a motion to exclude Dr. Neitzel's
18 testimony in this case. They've only said that the Board should give less
19 weight to his opinions, so I just want to make clear, there's no pending
20 motion to exclude his testimony. This is solely about the weight to be given
21 his testimony.

22 And so let's look at the level of ordinary skill in the art. I have -- this
23 is the definition from SilencerCo's Petition on slide 4. They proposed, and
24 we agreed to this, that a person of ordinary skill in the art would've had a
25 relevant technical degree in mechanical engineering, fluid engineering, or
26 the like and two to three years of experience researching, designing,

1 manufacturing, or assessing ESDs, energy suppression devices.

2 And this last phrase is very important, "though less education may be
3 sufficient with additional experience and vice versa." I don't think there's
4 anybody that's more qualified from education to provide opinions in this
5 case than Dr. Neitzel.

6 I've put some of his credentials up on slide 5. He has a Ph.D. in fluid
7 mechanics from Johns Hopkins University. He was a professor of
8 mechanical engineering at Georgia Tech for 28 years. Importantly, he
9 worked at the U.S. Army Ballistic Research Laboratories, now known as the
10 Army Research Laboratory, for ten years, working with things like ballistics,
11 fluid flow, things like that. He's a fellow of the Division of Fluid Dynamics
12 of the American Physical Society and American Society of Mechanical
13 Engineers.

14 So he is well-credentialed by his education and I think falls squarely
15 within, flipping back to slide 4, a person of ordinary skill in the art because
16 he has a relevant technical degree, a Ph.D. in fluid mechanics, and as the
17 parties agree, more education may be sufficient with less experience.

18 I also want to note that they haven't really identified any specific
19 opinions of his that I think they have a problem with, and I think if you look
20 at his declarations, he's really providing opinions about how fluid flows
21 within these devices, which is squarely within his expertise.

22 Let me move on to a few claim construction issues. It's unclear to me
23 which of these may still be disputed and which are not disputed, so I'll move
24 some of these -- through some of these relatively quickly. The first one is
25 "at least one of." In their petition, they said that the claim language "at least
26 one of axially serpentine and radially serpentine" requires a fluid pathway

1 that is both axially serpentine and radially serpentine, citing a case from the
2 Federal Circuit called *SuperGuide*.

3 In the institution decision, the Board rejected this reliance on
4 *SuperGuide*, and it found neither courts nor the Board has interpreted
5 *SuperGuide* as setting forth a per se rule that the use of "at least one of"
6 followed by "and" necessarily connotes a conjunctive list, and both courts
7 and the Board have found *SuperGuide* inapplicable when the listed items
8 following "at least one of" are not categories containing many possible
9 values.

10 We think the Board got this exactly correct. Axially serpentine and
11 radially serpentine are not categories, so "at least one of" just means one or
12 more, so to satisfy the claims, you need a fluid pathway that is either axially
13 serpentine or radially serpentine. It doesn't have to be both. I think
14 Petitioner agrees with that at this point, but I'm not 100 percent clear, so I'm
15 just going through it for -- to make sure.

16 The second issue is how to construe a "common off-axis chamber"
17 and "a plurality of deflectors." This is another claim construction issue that
18 they raised in their petition. Basically, they want to require that the plurality
19 of deflectors separately and directly deflect energy to the off-axis chamber.

20 We don't think the Board needs to get into this. I don't think there's
21 been any arguments made in this case based on this claim construction. We
22 certainly haven't distinguished any prior art based on this issue. I believe in
23 their briefing, they said, well, we dispute their construction, so it must be at
24 issue. I -- that doesn't put the claim construction at issue. It's not necessary
25 to resolve this case. I don't think the Board needs to get into it. If the Board
26 is inclined to address the construction of this phrase, it should reject their

1 proposal to insert this separate and direct language.

2 That's not in the specification. It's not in the file history. I think they
3 rely on a portion of the file history where the applicant said a common off-
4 axis chamber is a chamber that spans and is connected to multiple deflectors.
5 Again, this separate and direct language doesn't appear anywhere, so there's
6 no reason to adopt it.

7 All right. So getting into some of the claim construction issues that I
8 think the Board will need to apply in this case. So fluid outlet, I think we're
9 agreed on this, but what we say fluid outlet means is slightly different from
10 what Mr. Nixon, their expert, said in connection with the petition.

11 So we think a fluid outlet is an outlet for fluids to escape from the off-
12 axis chamber and the device without returning to the central chamber. And,
13 I'm sorry, for the record, I'm on slide 8 now. This is slightly different than
14 what Mr. Nixon, Petitioner's expert, said in his first declaration. He said a
15 fluid outlet is an orifice through which gas flows out of the common off-axis
16 chamber.

17 The primary difference here is we think it's an outlet for fluids to
18 escape the off-axis chamber without returning to the central chamber. We
19 think that's evident from the claims, prosecution history, and the
20 specification.

21 So quickly going through that, Claim 1 requires a common off-axis
22 chamber that has a fluid outlet, so there's a direct connection between the
23 common off-axis chamber and the fluid outlet. It's the off-axis chamber, not
24 something else, must have an outlet for the fluids. The specification and the
25 particular figures reinforce this. As I said earlier, what's labeled 190 shows
26 an outlet for fluids to escape, in this case an axially serpentine off-axis

1 chamber, without returning to the central chamber.

2 And then finally, lest there be any doubt, and I'm on slide 11, during
3 prosecution, the applicant told the examiner that a fluid outlet is a separate
4 element from the fluid communication with the central chamber and presents
5 an outlet for fluids to escape the off-axis chamber and the device without
6 returning to the central chamber. So all of this taken together, I think it's
7 clear that a fluid outlet is an outlet for fluids to escape the off-axis chamber
8 without returning to the central chamber.

9 All right. Let's talk about radially serpentine. In the institution
10 decision, the Board construed radially serpentine as a back-and-forth flow
11 around a radius of the off-axis chamber. It rejected the petitioner's argument
12 that this requires a flow that's moving outwardly along a radius or it requires
13 multiple changes of direction. A single direction is enough.

14 We fully agree with that. We think that's supported by the
15 specification and the file history. So so far, so good. Where the dispute lies
16 in this case is whether what is shown in figure 14, which is this flow that
17 moves clockwise and counterclockwise around a longitudinal axis of the
18 device, is radially serpentine. We think it is. Petitioner at least now thinks
19 that it's not.

20 I'm going to get into why we think that, but first, I want to make clear
21 I don't think the Board needs to actually resolve this dispute. I think it's
22 enough to give it the construction it already has, a back-and-forth flow
23 around the radius of the off-axis chamber, and the reason is this: For many
24 of the grounds, our arguments don't implicate the radially serpentine claim
25 term at all.

26 For those that do implicate radially serpentine, so I'm thinking Claim

1 9, which specifically requires a fluid path that is radially serpentine, their --
2 the prior art does not render that term -- or doesn't disclose that term or
3 render it obvious under either party's definition, so I think frankly, our
4 construction or our view of radially serpentine is broader than the way they
5 view it. If the prior art does not disclose radially serpentine under our view,
6 it certainly doesn't disclose it under their view.

7 So I think the Board, if it wanted to, could resolve this case without
8 resolving this dispute. Now, if the Board is going to resolve this dispute, I
9 think it should make clear that this flow back and forth around a longitudinal
10 axis is within the scope of what radially serpentine means, and I'll talk about
11 why.

12 Just to crystallize the dispute -- I think one of these figures was in
13 Petitioner's presentation, but to crystallize the dispute here, I think these
14 figures are helpful. I'm on slide 13. So on the left is how Petitioner is
15 viewing radially serpentine. They think it is restricted to this flow that kind
16 of encircles a radius moving, you know, upwards from the device. And to
17 be clear, radially serpentine would require a change of direction. We didn't
18 show in this figure just because it would be really hard to look at. This is
19 just getting at the idea of what they think radially serpentine means.

20 On the right is a figure from our reply in support of our Motion to
21 Amend, and we think this shows what the fluid flow is like in figure 14 of
22 this patent. You can see it's moving around a radius in the sense that it's
23 moving one way around the top of the radius and then moves the other way.
24 We think that is within the scope of a back-and-forth flow around a radius of
25 the off-axis chamber. It's well-supported by the specification, particularly in
26 figure 14.

1 JUDGE O'HANLON: Mr. Granaghan, you would agree with me, I
2 think, that on the figure here on the right on slide 13, the rotation is around
3 the longitudinal axis, which would be perpendicular to the slide, coming out
4 of the paper, if you will?

5 MR. GRANAGHAN: It is around the longitudinal axis, yes, Your
6 Honor, but I think it is also a round a radius. We don't think "around"
7 requires specifically what's shown on the left, which is this kind of
8 encircling the radius. And I know I'm making hand figures, which are not
9 shown well on the record here, but we think both of these are around a
10 radius. The one on the right is also around a longitudinal axis, but we think
11 it is also around a radius. Does that answer your question, Your Honor?

12 JUDGE O'HANLON: I understand your position. Yes.

13 JUDGE BALTATZIS: Just to follow up, -- looking at the figures
14 again, this slide 13, could you also define it as across the radius in the patent
15 owner's view, as opposed to around?

16 MR. GRANAGHAN: I don't -- I think you could. I mean, that would
17 get at the same idea. I don't think you need to. I think what is on the right is
18 around the radius. To be clear, Petitioner's view, I think, is also around a
19 radius.

20 JUDGE BALTATZIS: Right.

21 MR. GRANAGHAN: So I -- does that answer your question? I think
22 I did.

23 JUDGE BALTATZIS: Yes.

24 MR. GRANAGHAN: Okay.

25 JUDGE O'HANLON: So just to follow up on that, you're assigning
26 different meanings to "around," then, for the figure on the left and the figure

1 on the right; is that correct?

2 MR. GRANAGHAN: No, no, no. I don't think so. So I think the one
3 on the left is just another case of the one on the right. It also has a little bit
4 of axial movement as well, but, you know, if you look at just this kind of
5 lateral movement, it's doing the exact same thing on the right if you ignore
6 the axial translation as well.

7 JUDGE O'HANLON: I think those are doing different things. The --
8 on the figure on the left, the flow is circling 360 degrees around the radius,
9 where that -- it's not doing that in the figure in the right. It's doing -- it's
10 encircling 360 degrees, or 180, then back and forth through the other way
11 180 around the longitudinal axis. So I think those are -- those -- the plane of
12 the revolutions are rotated 90 degrees relative to one another.

13 MR. GRANAGHAN: I don't think so, Your Honor. So if you took
14 the one on the right, and you added some axially -- you're correct. The one
15 on the left goes all the way around 360 degrees, right? And the one on the
16 right is only about 180 degrees. That's right. That is a difference. I don't
17 think going around 360 degrees like it's shown here is required to be radially
18 serpentine.

19 JUDGE O'HANLON: No. I agree with that. I was correcting my -- I
20 said it was going 360 degrees, the figure on the right. The main point is the
21 plane of the rotation is different in the figure on the left and the figure on the
22 right.

23 MR. GRANAGHAN: I don't think so, Your Honor. I mean, you
24 could look at it that way, but I think you can also view these as really
25 equivalent. So the one on the left has this lateral movement back and forth
26 around a longitudinal axis. It also has some axial movement, but it does

1 have this movement clockwise and counterclockwise around the longitudinal
2 axis, just like the one on the right.

3 That's what my point is when I say that these are really kind of two
4 ways of looking at the same thing. There is some extra movement on
5 Petitioner's view in the axial direction, but there is the same longitudinal
6 movement around a longitudinal axis of the chamber in both.

7 JUDGE BALTATZIS: Right. I guess just to follow up, because I
8 want to make sure I understand this correctly. So it -- if it's a longitudinal,
9 it's going along -- it's around the longitudinal axis. Is that not separate from
10 the radial axis from going around? I picture this is if it's going along the
11 longitudinal axis, the -- along the tube -- it's separate from the way the radial
12 axis or the radially serpentine pathway is defined in the spec, a radius of the
13 off-axis chamber. This is a longitudinal axis.

14 MR. GRANAGHAN: Sure. Yeah. I -- 100 percent. I agree.

15 JUDGE BALTATZIS: Okay.

16 MR. GRANAGHAN: The longitudinal axis and the radius are
17 perpendicular to each other. Right. But I think saying you're moving
18 around the longitudinal axis, like on the right, is the same thing as moving
19 around a radius in the off-axis chamber.

20 If you're moving over the top of the radius -- you know, say you're
21 looking down the device, right, and the radius is pointing up at a 90-degree
22 angle from the longitudinal axis. If you were moving back and forth, you
23 know, clockwise to counterclockwise or vice versa over the top of that,
24 you're moving around the longitudinal axis, but you're also moving around
25 the top of this radius that is sticking up from the central chamber.

26 JUDGE BALTATZIS: Okay.

1 MR. GRANAGHAN: That's how we view it.

2 JUDGE BALTATZIS: Got it.

3 MR. GRANAGHAN: Okay. And I do want to make clear that before
4 the Board's institution decision, I think everybody, multiple persons of
5 ordinary skill in the art, viewed it this way.

6 I think the applicant told the Patent Office, starting with the
7 specification -- this is from the specification, but it's identical to what was in
8 the application that led to the '750 patent -- told the Patent Office that "the
9 fluid pathway can be a radially serpentine fluid pathway which causes the
10 fluids received in the off-axis chamber to flow back and forth around a
11 radius of the off-axis chamber.

12 "In another aspect, the fluid pathway can be a radially serpentine
13 pathway which causes the fluids to flow back and forth around a radius of
14 the off-axis chamber while also traversing a length of the off-axis chamber."

15 I -- as we just discussed, I think that this does describe what's in figure
16 14, but if that weren't clear enough, during prosecution history, the applicant
17 explicitly told the examiner that this flow that's shown in figure 14 is
18 radially serpentine.

19 So this is from the response to the Office action. When the phrase
20 "radially serpentine" was added to the claims, the applicant explicitly told
21 the examiner that support for radially serpentine flow can be found at Page
22 7, Lines 21 to 24, and figure 14. Page 7, Lines 21 to 24 are equivalent to
23 what we just looked at from the specification.

24 In the next paragraph of that response to the Office action, the
25 applicant told the examiner that "this axially serpentine flow is different
26 from radially serpentine flow, in which fluid would flow back and forth from

1 clockwise to counterclockwise around the axis, as described in Page 7, Lines
2 20 to 22, and shown in figure 14."

3 Now, in the briefing, I think there was some debate about what the
4 applicant meant by "around the axis" here. Did it mean -- you know, was it
5 a misstatement, and they meant the radius or something like that? Well, if
6 you look at the next response to an Office action, and I'm on slide 16, now,
7 the applicant made this abundantly clear.

8 He said, "The axially serpentine flow is different from radially
9 serpentine flow in which fluid would flow back and forth from clockwise to
10 counterclockwise around the longitudinal axis, as described in Page 7, Lines
11 20 to 22, and shown in figure 14." The applicant is making crystal clear to
12 the examiner that figure 14 in this rotation from clockwise to
13 counterclockwise around the longitudinal axis is radially serpentine flow.

14 JUDGE O'HANLON: Counselor?

15 MR. GRANAGHAN: Yes.

16 JUDGE O'HANLON: I believe -- I may have misheard you, but I
17 believe you started with a statement that prior to the institution decision,
18 persons of ordinary skill in the art understood it the way you're advocating
19 today. Do you have evidence of persons of ordinary skill in the art that back
20 that up?

21 MR. GRANAGHAN: Yes, Your Honor, and that's exactly where I
22 was going next. So I -- what I meant by that was I meant the applicant, you
23 know, the inventor -- I meant our expert, who I think has made clear what he
24 thinks radially serpentine means, and then their expert as well, who is, you
25 know, undisputedly a person of ordinary skill in the art, agreed that radially
26 serpentine included this figure 14 flow.

1 So I'm on slide 18 now. This is from their petition. This is what they
2 are now saying radially serpentine exclusively means, this kind of encircling
3 the radius. But Petitioner and its expert also -- moving to slide 19, also
4 depicted what's shown in figure 14 as radially serpentine.

5 So this is a figure from their petition, and it also appears in their
6 expert's declaration in support of the petition. And you can see in the
7 caption on this figure, it says, "Depiction of radially serpentine in figure 14
8 and prosecution history context." Their own expert, a person of ordinary
9 skill in the art, looked at all these materials, looked at the prosecution
10 history, looked at the patent, and agreed that figure 14, the flow shown in
11 figure 14, is a radially serpentine flow.

12 Moving to slide 20, this is an excerpt from his declaration. He said,
13 "In other words, the radially serpentine fluid pathway illustrated in figure 14
14 is a pathway that serpentine back, i.e., counterclockwise, and forth, i.e.,
15 clockwise, while advancing radially outward through a series of annular
16 spaces that are connected and progressively larger." So prior to the Board's
17 institution decision, I think the persons of ordinary skill in the art on our side
18 -- on all sides, I'm sorry, the inventor, our expert, their expert, agreed that
19 figure 14 was a radially serpentine fluid flow.

20 Let me talk about a few of Petitioner's counterarguments for why
21 radially serpentine is actually restricted to this encircling the radius, as they
22 now say. So they have said that, you know, we shouldn't care about what
23 was said in the prosecution history. That was a misstatement of what was in
24 the specification. We shouldn't care about it. We should ignore it.

25 One, I think, as I made clear, I think it's incorrect that what's shown in
26 figure 14 is not within the definition of radially serpentine, but I think it

1 would also be legally incorrect to ignore what was in the prosecution history.
2 We cited this case in our briefing in our reply in support of the Motion to
3 Amend.

4 This is a Federal Circuit case from just a few years ago where the
5 Federal Circuit gave -- found the prosecution history very important when
6 the claim language on its face was unclear and the specification was a little
7 unclear. Now, and to be clear, I think the specification is clear, but if the
8 Board thinks the specification doesn't make clear that figure 14 is within the
9 scope of radially serpentine, I think you would need to look at the
10 prosecution history.

11 In this case, the Federal Circuit said, "The prosecution history in
12 particular may be critical in interpreting disputed claim terms, and even
13 where prosecution history statements do not rise to the level of unmistakable
14 disavowal, they do inform claim construction. We cannot look at the
15 ordinary meaning of the term in a vacuum. Rather, we must look at the
16 ordinary meaning in the context of the written description and the
17 prosecution history.

18 "We conclude that the claim language is not plain in this respect at
19 issue and that the proper interpretation is determined by the specification and
20 most pointedly by the prosecution history." I think you have to consider
21 what the applicant was repeatedly telling the examiner radially serpentine
22 meant.

23 Let's talk about -- no, not quite there yet. They've also referred to
24 something they call the WerBell trap. Basically, the premise is that if the
25 applicant had told the examiner that radially serpentine means what Patent
26 Owner is now saying radially serpentine means, the claims would've been

1 rejected over WerBell.

2 A few responses to that. And I do -- I want to make clear, I think
3 Petitioner said that there was a rejection over WerBell in the file history.
4 There was not. WerBell was cited in an information disclosure statement. I
5 can't remember if it actually -- if it was cited in an IDS or cited by the
6 examiner, but there was not a rejection over WerBell. WerBell was only
7 cited as art of record.

8 In any event, whether the claims would've been rejected by the
9 examiner over WerBell, one, it's not relevant to this dispute. They knew
10 what we thought radially serpentine meant when we filed this petition. They
11 could have included it as an assertive ground. They did not.

12 Second, their premise is wrong. Their premise is that if the applicant
13 had told the examiner what he thought radially serpentine meant, then the
14 examiner would've rejected the claims. The problem with that is the
15 applicant did tell the examiner what radially serpentine meant. He made
16 clear that figure 14 was within the scope of what radially serpentine means.

17 In that very same Office action -- actually, this is on Page 95 of
18 Exhibit 1004, which is cited in our papers. I don't have a page, but I can get
19 it. It is cited in there. The applicant distinguished this Latka reference,
20 saying, well, that -- the chambers in that are helical. It's not radially
21 serpentine because it doesn't change directions from clockwise to
22 counterclockwise, which I think is the exact same argument that we're
23 making here. The -- if the path changes from clockwise to counterclockwise
24 around the longitudinal axis, that is radially serpentine. The applicant made
25 very clear to the examiner what radially serpentine means.

26 They've also criticized us for purportedly changing our definition of

1 what radially serpentine means. I don't think we've done that. We've agreed
2 that radially serpentine means a back-and-forth flow around a radius of an
3 off -- off-axis chamber, but I think we've just been very clear throughout this
4 proceeding that that includes the flow as shown in figure 14. If anyone has
5 changed their position, I think it's Petitioner, who originally agreed with us
6 and changed their mind after the institution decision.

7 All right. Let's move -- unless there are any further questions on
8 radially serpentine, I'll move to the arguments on patentability. Okay. All
9 right. So there were eight grounds in their petition. As the Board knows,
10 there's only a subset of the claims remaining at issue, all of which are the
11 dependent claims.

12 Now, I want to make clear that while it's only dependent claims that
13 remain at issue with respect to the petition, many of the failings that
14 Petitioner is showing do relate to limitations that are in the independent
15 claim that we are seeking to cancel. So even though we're only talking
16 about dependent claims, I will be talking about some of the limitations at
17 issue in the independent claims.

18 So their first two grounds are related. This is based on Thurler alone.
19 Claims 6 and 9 are at issue. Claim 9 is at issue in both ground 1 and ground
20 2. Claim 6 is only at issue in ground 2. And I -- for the record, I'm on slide
21 23. Let's talk about Claim 9 first because this is the one that cuts across both
22 grounds 1 and 2.

23 Claim 9 essentially requires a radially serpentine flow path. So Claim
24 1 leaves the option open. It could be radially serpentine, axially serpentine,
25 or both. Claim 9 restricts it to a radially serpentine fluid pathway. The
26 problem is that Thurler does not disclose a radially serpentine fluid pathway.

1 You know, it discloses -- it does admittedly disclose an axially
2 serpentine pathway, so the fluids, you know, start on the left side of this
3 figure here on slide 24. They move downward into that chamber. The --
4 thurler calls it a mantle. Travels down away from the operator of the device.
5 That second tube is perforated at the end. The fluids enter this bottom
6 chamber or mantle, which is filled with metal shavings. The fluids travel
7 back towards the operator and then out the bottom of the device. This is an
8 axially serpentine fluid pathway.

9 In their petition, they've made some argument that Thurler discloses a
10 radially serpentine fluid pathway. I don't see any way in which it discloses a
11 radially serpentine fluid pathway. Even the animation that they put up that
12 is supposed to be an animation of Thurler I don't think shows any kind of
13 radially serpentine fluid pathway. It certainly no -- shows no radial change
14 in direction under either party's view of what radially serpentine means.

15 So for that reason, I don't think Thurler can anticipate or render
16 obvious Claim 9, and to be clear, their expert agrees with this. When he was
17 asked in his deposition within the context of what we were discussing as far
18 as radially at -- serpentine or axially serpentine or both, how would you
19 describe the pathway that the gases flow in Thurler? He said, "That would
20 be axially serpentine." So I think that kills the argument that Claim 9 is
21 invalid or -- I'm sorry, anticipated or obvious over Thurler.

22 All right. Claim 6 -- and I'm on slide 26 now. Claim 6 requires "fluid
23 communication between the common off-axis chamber and the central
24 chamber occurs only at the primary deflector, the secondary deflector, and a
25 first tertiary deflector." Now, I think they concede that Thurler does not
26 show Claim 6. They claim it would be obvious over Thurler because

1 Thurler purportedly discloses that you can change the length of the
2 perforations, and it would just be a design choice to make this fluid
3 communication only happen at the primary deflector, the secondary
4 deflector, and a first tertiary deflector.

5 I think they haven't met their burden to show that a person of ordinary
6 skill in the art would modify Thurler in this way for two reasons: one,
7 Thurler doesn't disclose changing the length of the perforations in this inner
8 tube. The -- to be sure, it does disclose that the other tubes have different
9 lengths of perforations, but that is only in service of getting their axially
10 serpentine fluid pathway. It doesn't ever suggest that you change how far
11 down the inner tube those perforations extend.

12 Second, even if it did provide some motivation to change the length of
13 the perforations, it doesn't suggest any connection between what Thurler
14 calls the sleeves that they've mapped on the deflectors' limitation and the
15 fluid communication with the other chamber, what's mapped as the off-axis
16 chamber. They say it would simply be a design choice, but the problem is
17 you still have to show some reason that a person of ordinary skill in the yard
18 would actually land on this configuration, and they haven't done that.

19 Let me move to ground 3, which is the combination of Thurler and
20 Bouton. Only Claim 18 is at issue here. I'm on slide 27, for the record.
21 Claim 18 requires "the device of Claim 1, wherein the outer shell includes an
22 end cap assembly at an outlet end of the central chamber and which allows
23 fluid to escape from the common off-axis chamber through the fluid outlet,
24 the fluid outlet being only accessible to the fluid in the common off-axis
25 chamber."

26 So Thurler, going back to slide 24, does not disclose what's in Claim

1 18. It doesn't disclose a fluid outlet that's at the outlet end of the device. It
2 sends the fluids out the bottom, close to the operator of the device. So
3 Petitioner proposes to modify Thurler in view of Bouton. I don't have a
4 figure up here, but Bouton is basically a muffler that sends all the fluids out
5 of what's been mapped as an off-axis chamber.

6 They say it would've been obvious to modify Thurler to basically add
7 another tube on the bottom of Thurler's that the fluids are blowing away
8 from the operating device, and then instead of sending them out the bottom
9 of the device, sending them out the front.

10 We don't think they've met their burden to show that a person of
11 ordinary skill in the art would modify Thurler in that way. I mean, Thurler
12 discloses how it wants to increase path length, and that's adding more
13 chambers of the same design, which are alternately perforated at their ends,
14 so if you were going to add another tube on the bottom of Thurler, you
15 would do exactly what Petitioner showed in another one of their arguments,
16 which is this bottom figure on slide 28, adding another tube that sends the
17 fluids out the bottom of the device.

18 All right. Let me -- I don't think Petitioner got into Barlowatz at all
19 for grounds 4 through 8, so in the interest of time, I think we'll rest on our
20 briefs right now for that, unless there's any questions about those grounds.
21 Otherwise, I'll move to the Motion to Amend in the little bit I have left.

22 JUDGE O'HANLON: I don't think we have any questions about those
23 grounds. Thank you.

24 MR. GRANAGHAN: All right. So let's move to our Motion to
25 Amend. And for the record, I've jumped forward to slide 36. So as the
26 Board knows, our Motion to Amend is contingent in part and non-contingent

1 in part. So it is contingent as to the Board's finding on patentability as to
2 claims 2, 3, 6, 9, 12 to 14, and 20. These are the claims that we have
3 defended with respect to the petition, so we are only seeking to substitute
4 new claims for those if the Board finds those claims unpatentable.

5 Our Motion to Amend is non-contingent as to claims 1, 4, 5, 7, 8, 10,
6 11, 15 to 17, 19, 21, and 22. As Petitioner noted, we're not seeking to amend
7 Claim 18. As to that long list of claims, we've asked the Board to cancel
8 those existing claims and substitute new claims in their place.

9 Let's look real briefly at the amendments that we proposed to make.
10 So I think there's three primary kinds of amendments that we've proposed to
11 make. One is we've limited the claims to be for use with a weapon. You
12 can see that in the preamble in Proposed Substitute Claim 23, which is
13 proposed as substitute for Claim 1. I'm on slide 37. In the preamble, we've
14 inserted the phrase "for use with a weapon," and then limitation A, we've
15 limited the high-energy material to what has to comprise a projectile and
16 gases, and it comes out of a high-energy outlet of the weapon.

17 The second primary amendment we've made is that the outer shell be
18 oriented along the central axis. I know there's some dispute about what
19 exactly that means. I'll get into that in just a second, but at a high level,
20 that's the second, kind of, type of amendment we've made.

21 And then third, what I'll call the fluid outlet limitation, we've added a
22 wherein clause in Proposed Substitute Claim 23. It's in limitation B. It
23 requires that the fluid outlet is located at an opposite end of the energy-
24 capturing control device as the inlet, so it can't be, for example, back
25 towards the fluid outlet. It can't be, for example, back towards the operator
26 of the device, like in Thurler. The fluids can't come out of the off-axis

1 chamber on the bottom. They've got to come out on the opposite end of the
2 device as the inlet to the device.

3 All right. So as the Board knows, the burdens with respect to motions
4 to amend vary depending on the issue. We have the burden to show, for
5 example, that there's no new matter, we have an enlarged claim scope, we
6 proposed a reasonable number of claims. Petitioner has the burden of
7 showing unpatentability.

8 I think there's no dispute that we have proposed a reasonable number
9 of substitute claims. We set out our position on that in our Motion to
10 Amend. They didn't dispute that we proposed a reasonable number of
11 substitute claims in their opposition. I don't think the Board identified any
12 issue with that in its preliminary guidance. I think there's a presumption that
13 you get one proposed substitute claim per existing claim. We're actually
14 slightly under that, so I think we proposed a reasonable number of substitute
15 claims.

16 I think it's also undisputed that our amendments respond to the
17 grounds of unpatentability. In particular, I think the fluid outlet limitation
18 distinguishes a significant prior art. And I don't think there's a dispute as to
19 that.

20 So where the dispute remains is on three issues. One is whether
21 Proposed Substitute Claim 43 enlarges the scope of the claims. Two is
22 whether the term "radially serpentine" adds new subject matter. And three is
23 whether the proposed substitute claims are patentable. So in my brief time
24 remaining, let me address those.

25 Let me start with whether Proposed Substitute Claim 43 enlarges
26 claim scope. And I want to be clear: this is an issue that is only with respect

1 to Proposed Substitute Claim 43. I don't think there's any other -- any
2 similar issue with respect to the other proposed substitute claims. So the
3 issue that the Board raised in its preliminary guidance is replacing the term
4 "high-energy device" with "weapon". And the concern that the Board raised
5 is that, well, "weapon" may be broader than "high-energy device". I think if
6 you consider the claim as a whole, it's clear to a person of ordinary skill in
7 the art that the "weapon" recited in Proposed Substitute Claim 43 has to be a
8 high-energy weapon. So it would actually be narrowed in the term --
9 narrower than the term "high-energy device."

10 You get that primarily from this Limitation A. So this weapon has to
11 discharge a high-energy material that comprises a projectile and gases.
12 Also, a few lines down, there's a requirement that the device receives "a
13 high-energy material from a high-energy outlet of the weapon." So this is a
14 weapon that discharges a high-energy material comprising a projectile and
15 gases, and it has a high-energy outlet. I think it's clear from the claim
16 language that a weapon within the scope of Proposed Claim 43 has to be a
17 high-energy weapon, so it is actually narrower than original Claim 22 that it
18 is proposed to replace.

19 JUDGE BARRETT: Counsel, is --

20 MR. GRANAGHAN: Yes, sir?

21 JUDGE BARRETT: -- is -- high-energy, does that have a well-known
22 meaning in the art? Because people then will be disputing, is my weapon a
23 high-energy weapon or not?

24 MR. GRANAGHAN: So Your Honor, that's not an issue that's been
25 briefed. I think to a person of ordinary skill in the art, looking at the patent,
26 I think what it means would be clear. You know, the specification is all

1 written in terms of a firearm. I think it's clear that a firearm that shoots a
2 projectile and has high-energy gases behind it and needs to be silenced,
3 would be a high-energy weapon.

4 But to be clear, there's not any expert testimony on this issue about the
5 exact scope of that term. I think they've made some arguments that, you
6 know, there may be some close cases about whether something is a high-
7 energy weapon or not. I think the fact that there may be close cases doesn't
8 mean that this isn't a term that you can give meaning to, but they're just --
9 that has -- is not an issue that's been litigated in this proceeding.

10 JUDGE BARRETT: Okay. Thank you.

11 JUDGE O'HANLON: And Mr. Granaghan.

12 MR. GRANAGHAN: Yes, sir?

13 JUDGE O'HANLON: So from what you've said today and what I've
14 read in your briefs, you seem to be defining "weapon" as "high-energy
15 weapon" based on its use as required by Claim 43; is that correct?

16 MR. GRANAGHAN: That's correct, Your Honor.

17 JUDGE O'HANLON: So isn't that broadening then? If you take a
18 low-energy weapon, which I think would not be covered by Claim 22, but
19 then use it in the way specified in Claim 43, by your arguments that becomes
20 a high-energy weapon and then it is covered by Claim 43. So to me, that
21 seems like it's broadening a bit.

22 MR. GRANAGHAN: I think where I differ from you, Your Honor, is
23 I don't think you could take a low-energy weapon and discharge a high-
24 energy material through it and it still be a low-energy weapon. If you're
25 going to discharge a high-energy material through it, I think it definitionally
26 has to be a high-energy weapon. That's our position, Your Honor.

1 But I do want to make clear, this only affects Proposed Claim 43.
2 This does not affect the other independent claims. So it's a limited issue, I
3 think, in the grand scope of the Motion to Amend.

4 JUDGE O'HANLON: I understand it only applies to Proposed
5 Substitute Claim 43.

6 MR. GRANAGHAN: Right.

7 JUDGE O'HANLON: Okay.

8 MR. GRANAGHAN: Thank you. Let me move briefly to radially
9 serpentine. So the issue here is whether the recitation of the term radially
10 serpentine in the proposed substitute claims introduces new subject matter.
11 This is an issue that Petitioner didn't raise in its opposition to the Motion to
12 Amend, but it's an issue that the Board flagged in its preliminary guidance.

13 I don't think radially serpentine -- the recitation of a fluid pathway as
14 radially serpentine in the proposed substitute claims introduces new subject
15 matter, for the simple reason that the issued claims require a serpentine fluid
16 pathway, that is one of axially serpentine or radially serpentine. We didn't
17 touch that limitation in our proposed substitute claims, so I don't see how
18 reciting a claim term that is already in the claims could possibly add new
19 subject matter.

20 In addition, the construction of radially serpentine that the parties
21 have agreed to, you know, "back-and-forth flow around the radius of the off-
22 axis chamber", that the Board, you know, applied at the institution decision
23 everyone's agreed to, is disclosed nearly verbatim in the application. So
24 moving to slide 41, this is from the application. This is identical to the spec
25 support that we looked at earlier. But it says, "The fluid pathway can be a
26 radially serpentine fluid pathway which causes the fluids received in the off-

1 axis chamber to flow back-and-forth around a radius of the off-axis
2 chamber." So it's disclosed plain as day, right there, in the specification. So
3 once again, I don't see how reciting radially serpentine in the proposed
4 substitute claims could add new subject matter.

5 And then finally, you know, to the extent this dispute does hinge on
6 whether what's shown in figure 14 is within the scope of radially serpentine,
7 I think we've talked about that at length today. I won't rehash it all, but, you
8 know, for all the reasons I discussed earlier, the flow path that is shown as
9 figure 14 is within the scope of radially serpentine.

10 All right. So moving to patentability of the proposed substitute
11 claims. Unlike the other issues, this is an issue on which the petitioner bears
12 the burden. They asserted four different grounds of unpatentability. Ground
13 1 is the one that applies to all of the independent proposed substitute claims,
14 and they propose to modify Thurler in view of Kenney and WerBell.

15 All right. So there's -- in our view, there's two reasons that Petitioner
16 has not met its burden to show that the proposed substitute claims are
17 obvious over Thurler in view of Kenney and WerBell. One, we think a
18 person of ordinary skill in the art wouldn't combine Thurler, Kenney, and
19 WerBell to achieve a central chamber oriented along a central axis within an
20 outer shell oriented along the central axis. Now, I know there's a dispute
21 about the meaning of this term, whether this requires a concentric device or
22 not. It's our position that the language "oriented along the central axis" does
23 require, you know, a concentric configuration and the reason is because of
24 the phrase "central axis". So if it's not in the center, if you have an eccentric
25 device, then it wouldn't be a central axis.

26 I think, also, it needs to be interpreted as requiring concentricity,

1 because if you don't interpret it that way, you're basically leaving out the
2 "oriented along the central axis" language that we are adding by
3 amendments. So to give that meaning and -- it needs to be construed as
4 requiring concentricity

5 JUDGE O'HANLON: To be clear, the amendments don't use the
6 word "concentric"; is that correct?

7 MR. GRANAGHAN: I agree, Your Honor. They do not. They do
8 not explicitly require concentricity, but we believe this claim language does
9 require concentricity.

10 JUDGE O'HANLON: If we were to read the central axis as being
11 central to the central chamber, would we have to also say, well, that central
12 axis must be central to the outer shell? Because I think that's the problem.
13 The central axis can be central to the central chamber, but perhaps there's not
14 a requirement that it is to the central -- or I'm sorry, to the outer shell. So
15 "along" does not, in that view, necessarily mean concentric.

16 MR. GRANAGHAN: Yeah. I understand, Your Honor. I think that's
17 their position. What I would say there is, if you do read it that way, it's
18 basically giving no effects to our amendment. That's basically what the
19 claims mean.

20 JUDGE O'HANLON: Well, how is that? Can you explain that for
21 me?

22 MR. GRANAGHAN: Sure. So what we added -- let me go back to
23 the claim here. So I -- I'm back on slide 37. So the relevant amendment is --
24 the claim as it originally read is, "A central chamber oriented along a central
25 axis within an outer shell." So, you know, we can see that that can cover an
26 eccentric configuration, right? So we added the phrase "oriented along the

1 central axis".

2 Well, to give that meaning, you have to require that -- you would have
3 to interpret this phrase as requiring concentricity. If you're not going to
4 interpret it as requiring concentricity, then there's no purpose for adding that
5 "oriented along the central axis" language. That's why we believe you need
6 to view this amendment as requiring concentricity.

7 I'm sorry, were you still looking at that, Your Honor? Okay.

8 JUDGE O'HANLON: No. That's fine, thank you.

9 MR. GRANAGHAN: So let's assume for a second that we are correct
10 that it requires concentricity. A person of ordinary skill in the art would not
11 combine Thurler with Kenney and WerBell to achieve concentricity. As the
12 Board knows, Thurler's design is to quickly strip gases from the central
13 chamber, leading them through an axially serpentine path to exit out the
14 side.

15 Kenney is concentric, but the reason it's concentric is, Kenney
16 discloses that it wants to form a jacket of gases around the bullet's path as
17 the bullet proceeds through the device and out the front, to prevent rapid
18 destruction of the vacuum. So Kenney purposefully wants to keep gases
19 around the bullet.

20 Thurler is the opposite. It wants to divert gases away from the bullet
21 and through these other chambers. And for that reason, we think they
22 haven't shown that a person of ordinary skill in the art would combine
23 Thurler with Kenney.

24 The other argument relates to the fluid outlet. So this is an
25 independent argument from the concentricity argument that we just talked
26 about. So the other primary minute here is that the fluid outlet is located at

1 an opposite end of the energy capture and control device as the inlet.
2 Thurler does not disclose a fluid outlet that's at an opposite end of the energy
3 capture and control device as the inlet. It sends the gases out at the bottom
4 of the device. Kenney also does not disclose a fluid outlet. A fluid outlet is
5 an outlet for fluids to escape the off-axis chamber in the device without
6 returning to the central chamber, but Kenney doesn't disclose directing fluids
7 to an off-axis chamber, it actually wants to keep those gases as a jacket
8 around the bullet. It doesn't separate them from the central chamber apart
9 from the bullet.

10 Also, Thurler and Kenney are just incompatible. So Thurler employs
11 this circuitous, axially serpentine flow path. It wants the gases to take a
12 really long path so that their energy can be reduced before it exits the device.
13 Kenney explicitly discloses that "the gases are at no time blocked or trapped
14 within the housing, but are traveling constantly toward the discharge
15 openings in the muzzle end of said silencer". We think, for that reason, that
16 fundamental incompatibility, a person of ordinary skill in the art would not
17 combine Thurler and Kenney to achieve this fluid outlet limitation.

18 So I see I'm into my rebuttal time. Unless the Board has any further
19 questions, I'll reserve the remainder of my time for rebuttal.

20 JUDGE O'HANLON: Thank you, Mr. Granaghan.

21 MR. GRANAGHAN: Thank you, Your Honors.

22 JUDGE O'HANLON: We'll now hear from Petitioner on rebuttal.

23 Mr. Getzoff, you may begin when you're ready. So the timer's going
24 to count up to --

25 MR. GETZOFF: Got it. So I was 24 seconds into my rebuttal.

26 JUDGE O'HANLON: Yes. That's right.

1 MR. GETZOFF: That sounds right. Thank you, Your Honors. Let
2 me start where the -- my counterpart left off on motion to amend. Just
3 quickly on the oriented along. The patent owner added the word "oriented
4 along," but did not specify or limit how that orientation was. So oriented
5 along is the language, whether that did anything is not a reason to imply
6 words that don't exist. What the patent owner meant to do is say, "Oriented
7 along concentrically," and that would have added the limitation over Thurler
8 that they intended to. But they didn't.

9 They simply said, oriented along. That could mean eccentrically, as
10 Thurler is, or concentrically; they didn't specify. So it includes both. So the
11 proposed limitation that they added in the Motion to Amend, it didn't get
12 them where they want to be in terms of getting over Thurler. That's their
13 problem. That's not something the Board should take into account and say,
14 well, they added something, so we should give them credit for what they
15 meant to say as opposed to what they said.

16 I want to spend most of my time, though, talking about radially
17 serpentine. The main point I want to make is that there is no way that you
18 can adopt the patent owner's proposed construction of radially serpentine
19 without doing serious violence to the words radius and around. So this is
20 slide 13 -- it should be slide 13 from the patent owner's slide. I want to pull
21 it back up and it's showing my desktop and not the slide.

22 JUDGE BARRETT: If you're having too much trouble, we can pull it
23 up on our own screens.

24 MR. GETZOFF: Okay.

25 JUDGE O'HANLON: Yeah.

26 MR. GETZOFF: Yeah, I apologize. It -- I thought what I was seeing

1 is what you would be seeing, but it's showing my desktop.

2 So slide 13 shows the figure of what they claim radially serpentine
3 means, which is, you see it going over the top of the radius. So we saw that
4 figure. The word around in the context of this patent, particularly where, in
5 the prosecution history, they said around means clockwise and
6 counterclockwise. They mean around in the way we all think of around,
7 which is around the radius. Around in a circle, clockwise and
8 counterclockwise. They want to change the word around to mean across.
9 They want to change the word around to mean over. And that's not what the
10 word around means in this context.

11 In fact, contrary to my colleague's argument on Thurler, if radially
12 serpentine meant simply over or across a radius, then Thurler would
13 anticipate, because if you take a radius from the central chamber and extend
14 it downward through the additional chambers underneath, Thurler, as it
15 serpentine's back and forth, it's crossing that radius. So under their
16 definition, if crossing the radius means around the radius, then Thurler
17 would anticipate. And in fact, when you think about expanding the
18 definition of around to mean across, to mean over, to mean all those
19 dictionary definitions, you land where their own expert landed, which --
20 where he concluded it would cover any fluid flow. That cannot be the result.

21 The other way that they're wrong and the other word that they're
22 ignoring is the word radially. You heard my counterpart argue that radially
23 should be substituted with the word longitudinally. He flat-out said radially
24 and longitudinally are interchangeable for purposes of this definition as he
25 said, radially serpentine includes a serpentine flow around the longitude,
26 regardless of what it's doing with respect to the radius. As Judge O'Hanlon

1 pointed out, a radius and the longitudinal axis are two very -- completely
2 different things. They are 90 degrees apart. They are perpendicular. And
3 you cannot say that something that is -- that -- encircling the longitudinal
4 axis, or circumferential flow, is the same thing or equal to circling the
5 radius, which is what the patent said.

6 Our expert did -- in our opening petition, he did follow what Patent
7 Owner had said in their -- in the prosecution history. But it was wrong.
8 There was no independent analysis in our expert's adoption of their version
9 of radially serpentine as they put it in their -- the prosecution history. But as
10 we had seen, their statements in their own prosecution history were simply
11 wrong. In fact, their own expert has now come to agree that the patentee
12 made what he called inappropriate statements in terms of this terminology,
13 because they were saying all kinds of things in terms of what this meant.

14 It doesn't change the fact -- regardless of what they told the examiner -
15 - and we don't need to decide whether those were just inadvertent, careless
16 misstatements of those words, we don't need to say they -- that they were
17 trying to mislead the examiner in any way. But the bottom line is, they were
18 wrong. When you look at the intrinsic evidence, the patent itself, when you
19 look at the original statements to the examiner in the first Office action
20 response where they clarified the clockwise and counterclockwise, they
21 made it very clear that "around a radius" means just what it means: around a
22 radius. That's not across the radius. That's not around a longitudinal axis.
23 It's around the radius.

24 And there is simply no way that the Board can adopt their
25 interpretation of radially serpentine without throwing the word radius out the
26 window. Because as you saw, if radially serpentine means over or across or

1 any other preposition with respect to radius, then you don't care where or
2 what the radius is. Because any fluid flow is eventually going to go across
3 the radius or it's going to go over the radius no matter what happens. So that
4 does, in fact, cover all fluid flows.

5 JUDGE BALTATZIS: Mr. Getzoff?

6 MR. GETZOFF: Yes, sir?

7 JUDGE BALTATZIS: Just off of that, can we look at it from the
8 other side to say that -- you know, that it's really the word "around the
9 radius" in the spec that's kind of causing this -- the trouble? Where we do
10 have figure 14, which does show it, you know, around the longitudinal axis,
11 across the radius, but that's really what they were going for here and that's
12 what the prosecution history also seems to show. And that really, it's --
13 rather than holding it to the strict language of the specifications, it's that
14 "around" that really -- you know, looking at it in the entire context of spec,
15 the figure 14, and the prosecution history, it really seems that it's -- it can go
16 across the radius. It's really around the longitudinal axis that they're trying
17 to define.

18 MR. GETZOFF: If that's -- first of all, if that's what they meant, they
19 would've said that in the spec. So under *Phillips*, the specification is the
20 single most important guide for claim construction. Prosecution history is
21 necessary to look at. It can shed light, but you can't use the prosecution
22 history to either backfill written description or change the plain meaning in a
23 broadening sense. Because that's effectively what you're asking, Judge, is,
24 can't they use the prosecution history to broaden a defined term? And I
25 think, no, they can't. Especially when, in that context of their discussion,
26 that was not the issue before the examiner.

1 So no, I think the language of the specification is the starting point.
2 That controls -- they made some confusing statements in the prosecution
3 history. That doesn't help them. And figure 14 is clearly not radially
4 serpentine. I mean, you cited figure 14, the accompanying passage.
5 Certainly, that's on equal ground with Column 4, but figure 14 is not radially
6 serpentine.

7 It's not just the word "around" that we're talking about. It's the word
8 "radius" and the definition is radially serpentine, right? So the word radius
9 is built into the term of art that they're defining. Why? Because it's around
10 the radius. It's not around something else. It's not around the longitudinal
11 axis. It's not around anything but the radius.

12 I see my time is expired. Happy to answer any questions if the Board
13 wishes, otherwise I will sit down. Thank you very much.

14 JUDGE O'HANLON: Thank you.

15 Mr. Granaghan, you have just over six minutes. You may begin when
16 you're ready.

17 MR. GRANAGHAN: Okay. Thank you, Your Honors. Let me start
18 with the concentricity issue with respect to the proposed substitute claim. So
19 Petitioner said that there's no reason to say that our proposed amendment,
20 "oriented along the central axis", requires concentricity. If it doesn't -- if it
21 doesn't mean anything, then that's fine, it doesn't mean anything. I think
22 that's contrary to the law. I think the law is -- I don't have a case off the top
23 of my head, but I think the law is that you try to give meaning to every claim
24 term. And if we're going to give meaning to the "oriented along the central
25 axis" claim term, I think the only meaning it can have is that the device has
26 to be concentric.

1 Moving on to the radially serpentine issue. I don't want to lose sight
2 of the fact that claim construction is done from the perspective of a person of
3 ordinary skill in the art. There are at least three people of ordinary skill in
4 the art who, at least at one point, thought that figure 14 was within the scope
5 of radially serpentine. The inventor thought so. He told that to the
6 examiner. Our expert, Dr. Neitzel, thinks so, and their expert clearly thought
7 so in connection with the petition. In his sworn declaration, which he wrote
8 after reviewing the intrinsic record, which is the most important thing in
9 claim construction, he thought that figure 14 was within the scope of radially
10 serpentine. That's how we do claim construction, from the perspective of a
11 person of ordinary skill in the art. He, as a person of ordinary skill in the art,
12 thought that figure 14 was within the scope of radially serpentine.

13 I think Petitioner also said that, you know, everybody views the word
14 around as requiring some, you know, encircling or something like that. I
15 think that's just not true, as the dictionary definitions that we provided show.
16 As an example, if I say, I walked around my house, I don't literally mean
17 that I went to the outside of my house and walked in circles around my
18 house. I walked, you know, back-and-forth within my house. That is --
19 that's the ordinary meaning of around. Around does not necessarily imply
20 this, kind of, circular motion around a radius.

21 JUDGE O'HANLON: Does that also apply to if we're talking about a
22 cylinder, Mr. Granaghan?

23 MR. GRANAGHAN: Yeah. So -- and that -- that's sort of where I
24 was going next, Your Honor. I think -- they say that we've basically
25 expanded "around" to mean basically anything. I don't think that's the case.
26 When I say, just back-and-forth within my house, I don't think that's an

1 apples to apples comparison. My only point there was that "around" doesn't
2 require this strict encircling around the radius.

3 I do think that, you know, figure 14 is within that common, you know,
4 encircling motion, around. It does -- you know, when you have a cylinder,
5 this rotation back-and-forth around a longitudinal axis is at least in a
6 semicircle. So there is some rotation there. I just wanted to make clear that
7 the word around doesn't necessarily encompass doing, like, a 360-degree
8 rotation around the radius.

9 Let's see. They also made the point that, you know, axial translation
10 also goes, you know -- at least if you view radially serpentine under our
11 view, also goes back-and-forth around the radius. I think that's not true. As
12 Dr. Neitzel said in his declaration, unrebutted, the way to look at cylinders is
13 using cylindrical coordinates. There's three coordinates. There's R, which is
14 the radius. You have the angle that it makes with respect to the axis. And
15 then you have where it is on the Z-axis, so moving down the length of the
16 device. So the radius is the same, no matter where you are on the Z-axis. So
17 just moving down that, that's not crossing over the radius, it's actually one
18 constant radius.

19 Let's see. Petitioner also said that our expert conceded that "around"
20 would cover any fluid flow. That's not actually what he said. If you look at
21 the testimony, this is in Exhibit 1040. They were questioning him about the
22 definitions of "around" in the dictionary and what those could all mean. But
23 he made clear -- this is on Page 35 of his deposition, he made clear, starting
24 at Lines 14, "But none of those, in my opinion, is what a person of ordinary
25 skill in the art would interpret 'around' to mean in the context of around a
26 fixed radius."

1 So, you know, he was testifying that, you know, the word "around" in
2 everyday parlance can be very broad and, you know, we were making the
3 point that "around" doesn't require this strict encircling like they say. But he
4 was not saying that "around," in the context of this patent, could just mean
5 anything.

6 He also didn't say that the applicant made inappropriate statements in
7 the prosecution history. I don't think that word appears in his deposition.
8 He did say maybe he would've called it something else other than radially
9 serpentine, but he didn't say it was an incorrect term.

10 And then, finally, I think, you know, Your Honor was exactly right. If
11 there's any lack of clarity, it may be the word "around" in the specification.
12 You know, to be clear, I think that figure 14 is plainly within the scope of
13 back-and-forth around a radius of the off-axis chamber. But if there is any,
14 you know, lack of clarity, it is maybe with respect to that word "around,"
15 and so the natural thing is to look at the rest of the intrinsic record. Look at
16 figure 14, look at the file history in which the applicant made clear what he
17 thinks radially serpentine means.

18 I see that I'm out of time, unless the Board has any further questions?

19 JUDGE O'HANLON: No. Thank you both for your presentations
20 today. The written -- final written decision will be issued in due course.
21 The hearing is now adjourned. Thank you.

22 (Whereupon, the above-entitled matter went off the record at 11:06
23 a.m.)

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