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UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

Before the Honorable Doris Johnson Hines
Administrative Law Judge

In the Matter of CERTAIN VAPORIZER DEVICES, CARTRIDGES USED THEREWITH, AND COMPONENTS THEREOF	Investigation No. 337-TA-1372

JUUL LABS, INC. PREHEARING BRIEF

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TABLE OF ABBREVIATIONS

Abbreviation	Meaning
’881 patent	U.S. Patent No. 10,334,881
’864 patent	U.S. Patent No. 11,497,864
Asserted Patents	’881 and ’864 patents
Asserted Claims	’881 patent, claims 1 (DI only), 19 (infringement only) and 26 (infringement only) and ’864 patent, claims 2, 9, 10, 12, 13, 15, 16, 20, 26
JLI or Respondent	JUUL Labs, Inc.
NJOY or Complainant	NJOY, LLC
RJR	R.J. Reynolds Vapor Company
Accused Products or Accused JLI Products	JLI’s JUUL1 System, [redacted], and JUUL2 System
NJOY DI Systems	NJOY’s ACE System and [redacted]
Vuse Solo Systems	RJR’s Vuse Solo G1 and G2 Systems
DI Systems	the NJOY DI Systems, RJR’s Vuse Alto System, and the Vuse Solo Systems
POSITA	personal of ordinary skill in the art

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[redacted]

INTRODUCTION

When JLI sought to bring an end to NJOY's unauthorized use of JLI's patent portfolio, NJOY and its parent company, Altria, set about on a mission to acquire patents that could be used in a lawsuit against JLI. Ultimately, NJOY and Altria turned to Fuma International LLC, a failed operating business that re-tooled into a non-practicing entity. At the time of the acquisition, Fuma had just wrapped up its enforcement program against R.J. Reynolds in the U.S. District Court for the Middle District of North Carolina, and initiated its next wave of lawsuits against Logic Technology Development, NJOY, and its parent company, Altria. Fuma sold the Asserted Patents to NJOY for [redacted]. Eleven days after this acquisition, NJOY filed this lawsuit against JLI.

The Asserted Patents are directed toward so-called "cig-a-like" form factor devices – cylindrical e-cigarettes that are intended to mimic the look and feel of a traditional combustible cigarette as much as possible. The only purported invention disclosed in the Asserted Patents is to split a "conventional" e-cigarette into two separable portions: (1) a power source portion 102; and (2) a cartridge portion 104.

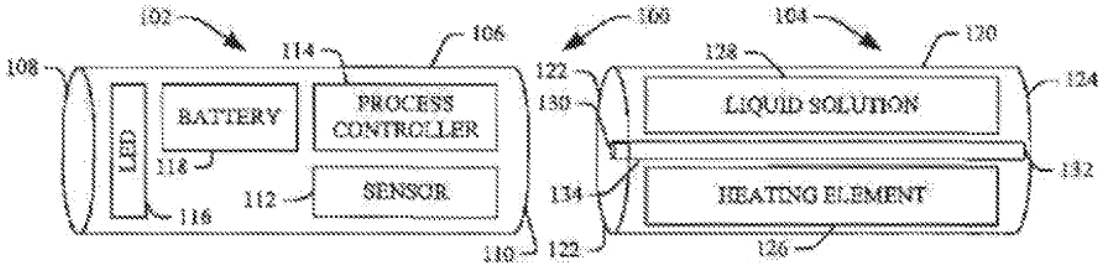


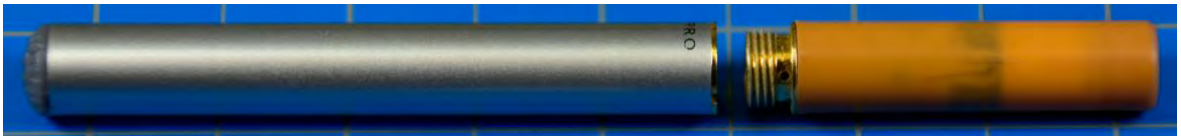
FIG. 1

JX-0001 ('881 Patent) at Fig. 1.

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[redacted]

However, Fuma did not invent e-cigarettes, the cig-a-like form factor, the concept of splitting e-cigarettes into a separable power source and cartridge, or any of the other commonplace, well-known components recited in the asserted claims. Fuma's principal activity around the time of the July 2009 conception date centered around rebranding devices that they acquired from China, and selling those devices into the U.S. market. Indeed, neither of the purported inventors of the Asserted Patents had any technical background whatsoever. According to Fuma's general counsel, Mr. Steiger, the company's IP strategy was to file patent applications on the devices that Messrs. Conley and Hillenbrandt purchased out of China. Thus, it comes as no surprise that when Fuma tried to file a patent application covering the generic e-cigarettes disclosed in their application, the USPTO wasted no time rejecting the claims as invalid over the already crowded universe of prior art. In fact, the concept of a cig-a-like form factor and separable cartridge was invented many years prior by Chinese pharmacist Dr. Hon Lik. As shown below, NJOY itself sold cig-a-like devices having separable cartridges well before July 2009, such as the NJOY NPRO prior art device shown below.



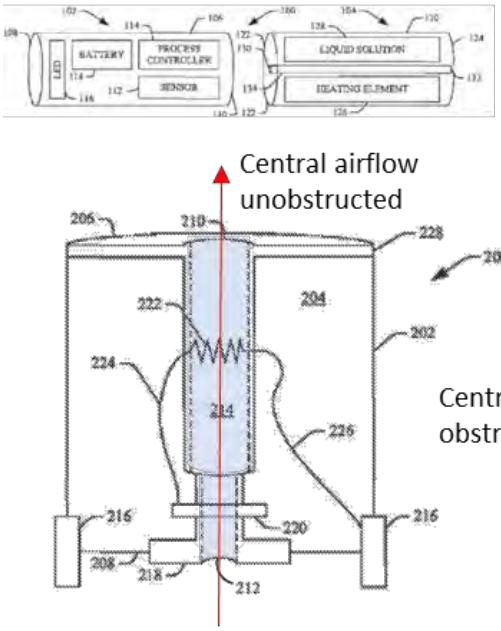
See RX-0082 (Photos of NJOY NPRO) at RX-0082.59.

To overcome the USPTO's prior art rejections, Fuma's patent prosecution counsel amended the claims to require a central airflow passageway that extends all the way from one end of the e-cigarette cartridge to the other end, free from any obstructions along the central longitudinal axis. The applicant then argued that, unlike the cited prior art passageways, which contained obstructions that forced the airflow path to divert around them before converging back to the center, the airflow passageway 214 depicted in Fig. 2 of the '881 Patent contains no

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[redacted]

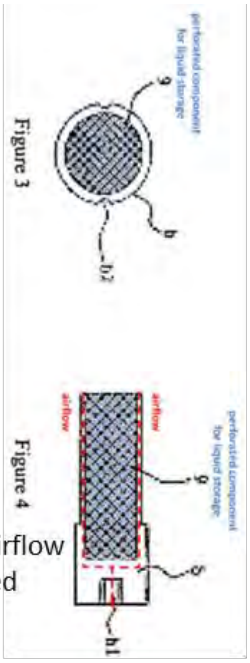
obstructions to central airflow and therefore could be considered a "central" passageway. For example, in response to RX0527 (Thorens), the applicant argued that the airflow passageway in Thorens was not a central passageway because it contained a non-permeable wick in the center airflow that forced air to divert away from the central longitudinal axis. Similarly, in response to JX-0544 (Han), the applicant argued that the airflow passageway in Han was not a central passageway because it contained a non-permeable solution holding medium in the center airflow that forced air to divert away from the central longitudinal axis.



JX-0001 ('881 Patent) at Figs. 1 and 2 (annotated)



RX-0527.3 (Thorens) at Fig. 3 (annotated)



JX-0544 (Han) at Figs. 3 and 4 (annotated)

Unlike conventional cig-a-like devices described in this Asserted Patents, JLI developed a completely new type of e-cigarette geometry – called a "pod" – that is designed to look nothing like a traditional combustible cigarette and function nothing like conventional cig-a-like devices.

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[redacted]

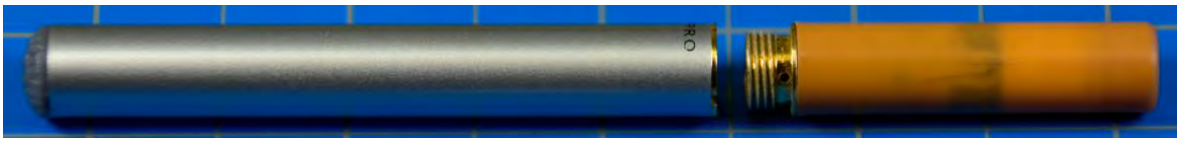


JLI's pod design was incredibly successful, making it the gold-standard across the industry. As a result, since JLI introduced its pod design to the world in 2015, most companies, including NJOY, have followed suit with their own non-cig-a-like pod design.



[redacted]

Because of the unique pod-based design, the inventors of the JUUL system were able to make design choices that were simply not possible in the cig-a-like form factor. Unlike the cylindrical cig-a-like geometry shown below, for example, where the power source housing (left) mechanically and electrically couples to the end of the cartridge housing (right) using mating threaded fastener structures, the end of the JUUL pod's housing is made out of plastic, and does not electrically couple to anything.



See RX-0082 (Photos of NJOY NPRO) at RX-0082.59.

Instead, as shown below, the JUUL1 pod cartridge and the power source (labelled as receptacle) mechanically couple to each other using non-conductive, mechanical, snaps built into the plastic housing of the power source (i.e. receptacle) and plastic sidewalls of the cartridge housing. Thus, while relevant to cig-a-like devices, the Asserted Patent claim limitations specifically requiring the end of the cartridge housing to electrically couple to the power source, or for the cartridge housing to electrically and mechanically couple to a power source, have no applicability to the JUUL1 pod.

[redacted]

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[redacted]

Also relevant to this litigation is that unlike the stated goal during prosecution of the Asserted Patents of having a central, unobstructed passageway, the JUUL1 pod exploits non-central airflow passageways built into the mouthpiece portion of the cartridge, which uses central obstructions that were designed for the specific purpose of creating sufficient turbulence to deliver aerosolized nicotine solution, instead of a vaporized solution, to the end-user.



As a result, NJOY does not even try to accuse the JUUL1 pod in the configuration in which it is imported and sold by JLI, including the mouthpiece portion of the cartridge. Instead, NJOY's expert used tools to pry off the mouthpiece, and only accuses its modified JUUL1 pod, without the mouthpiece, of infringing. But this modified JUUL1 pod is irrelevant because JLI does not import or sell this modified version. Indeed, it would be illegal under FDA regulations for JLI to sell in the United States a version of the JUUL1 pod that does not include the mouthpiece. And the JUUL1 pod cannot infringe the claims as sold and imported—with the

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[redacted]

mouthpiece as part of its housing—because with that mouthpiece, the JUUL1 pod admittedly does not have the central and axial airflow passageway or path required by all of the claims. Indeed, NJOY and its expert, Dr. Vallee do not even assert infringement if this necessary mouthpiece is considered part of the claimed cartridge's "housing," as it must under NJOY's and Dr. Vallee's own definitions of 'housing."

Similarly, because the rectangular pod design is not constrained by the geometry of a cig-a-like device, [redacted]. Instead of trying to fit the heating element in an airflow passageway extending from a central aperture as suggested by the Asserted Patents, [redacted]. There is no passageway extending from the central aperture at all. Instead, the JUUL1 pod uses [redacted] is used to carry any resulting vaporized solution to the mouthpiece, where any remaining vaporized solution is converted into an aerosol, which is then delivered to the end-user.

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[redacted]



The complete lack of any passageway that "extends" from the alleged first aperture, either in the JLI pods or NJOY's own DI products, [redacted]

The existence of these obstructions and non-central passageways in the JUUL1 pod and the DI Products poses an insurmountable impairment to NJOY's ability to prove infringement and domestic industry technical prong. Initially, NJOY's principal strategy was to try to run away from the representations that Fuma made to the USPTO about its central passageway,

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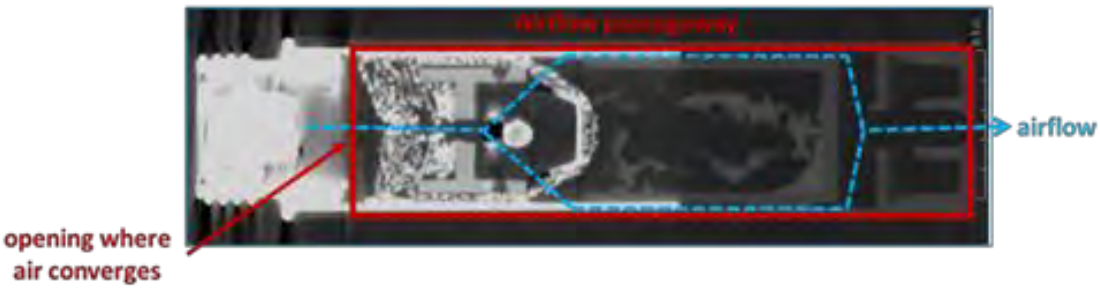
[redacted]

claiming that the temporary diversion of airflow around such obstacles does not matter so long as there is a centrally defined airflow passageway structure.

The problem with this approach, however, is that it causes NJOY to run right into the prior art. Applying its overbroad definition of central passageway as allowing airflow to divert around obstacles in the airflow path between the first and second ends, for example, NJOY's own prior art device – the NJOY NPRO – would anticipate the claimed central airflow passageway element even through the airflow path diverts around the solution holding medium and wick, as shown below.

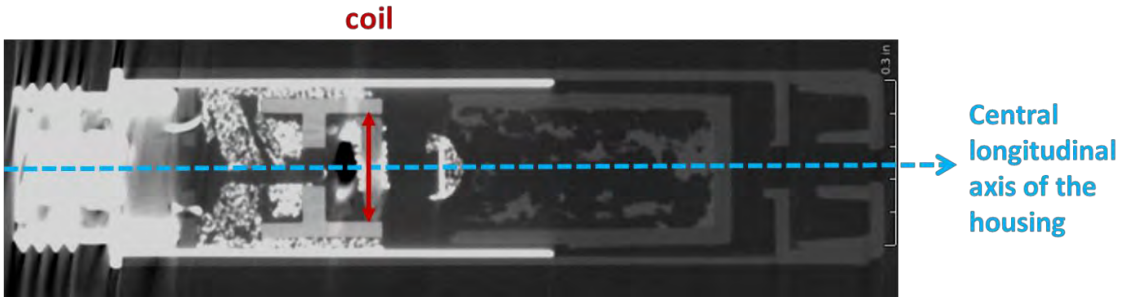


See RX-0082 (Photos of NJOY NPRO) at RX-0082.59.



JX-0404 (CT Scans of NJOY NPRO) at JX-0404.11 (annotated in red and blue). Nor can NJOY argue that Fuma's invention was to use a horizontal or "transversely" oriented heating coil in the airflow passageway because, as shown in the CT scan image below, NJOY's NPRO device, like many other prior art devices at the time, had a "transversely" oriented heating coil in the airflow passageway.

[redacted]



See JLI-ITC1372_00979997 (annotated in red and blue).

NJOY cannot have it both ways. Either there is no central airflow passageway in the Accused Products and DI Products due to the obstacles in the airflow path that obstruct center airflow, and therefore no infringement and domestic industry technical prong, or the existence of obstructions that cause airflow to divert away from the center in the prior art devices do not negate the existence of a central passageway, and the Asserted Patents are invalid.

At the hearing, NJOY is also not expected to be able to show that a domestic industry exists or is in the process of being established. NJOY's own investments, for the period of eleven days between the time that it purchased the Asserted Patents to the time that it asserted them against JLI, are nowhere near sufficient to carry its burden. NJOY's attempt to use the domestic activities and investments of third-party licensee R.J. Reynolds as a hedge also fails because R.J. Reynolds is an involuntary participant in this proceeding, and has refused to provide discovery in response to the ITC subpoenas that is necessary for NJOY to perform a proper allocation and to determine the value-add of R.J. Reynolds U.S. activities.

Due to any one of these reasons alone, NJOY has failed to meet its burden of showing a violation of Section 337. However, even if there is a finding of a violation, the ALJ should grant JLI's request for a reasonable delay in the institution of the remedial orders to allow sufficient time for JLI to obtain any necessary regulatory authorization to sell its design-around device (called the "[redacted]") or the JUUL2 products in the United States. JLI has been working diligently

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[redacted]

on the [redacted] and JUUL2 products for which it is affirmatively seeking a finding of non-infringement. [redacted] For the JUUL2, JLI has already submitted a Premarket Tobacco Application to the FDA, which is pending approval. If the ALJ adjudicates the [redacted] devices or the JUUL2 product as non-infringing, and the JUUL1 pod as infringing, the public interest factors weigh in favor of allowing JLI to continue to import the JUUL1 until the JUUL2 or [redacted] products are approved for sale in the United States.

I. SUMMARY OF ARGUMENTS

1. None of the Accused Products Infringe Any of the Asserted Claims

Even if the Asserted Patents are valid and enforceable, NJOY will not be able to show that any of the Accused JLI Products infringe any of the Asserted Claims. This is in large part because those products have little in common with the conventional "cig-a-like" electronic vaping devices described in the Asserted Patents. As explained above, the Asserted Patents generally disclose multi-piece cig-a-like devices, the cartridge and power source portions of which have electrically-conductive, threaded ends that screw together to form a single vaping device. The cartridge portions also have a single, centrally located aperture at or near each of their ends, and a straight, unobstructed airflow passageway or airflow path extending through their center that delivers a nicotine vapor to the user. This design is similar to the designs of a number of cig-a-like products that were widely available to consumers overseas and in the U.S. in the 2009-2010 time period, when the inventors claim they conceived of the purported inventions disclosed in the Asserted Patents.

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[redacted]

The accused JUUL1 System, [redacted], and JUUL2 System (the "Accused JLI Products"), in contrast, look and function nothing like the cig-a-like devices described in the Asserted Patents. For example, [redacted]

Not surprisingly, because the designs of the Accused JLI Products are so different from the embodiments described in the Asserted Patents, the features of the Accused JLI Products do not resemble many of the features disclosed in the Asserted Claims. This mismatch between the Asserted Claims and the Accused JLI Products is a problem for NJOY and has forced NJOY to take a number of nonsensical and incorrect infringement positions with respect to the JUUL1 System, the [redacted], and the JUUL2 System. For example, some of NJOY's infringement arguments conveniently ignore entire portions of the Accused Products, such as the mouthpiece of the JUUL1 and [redacted]. Others treat two separate components as a single component or *vice versa*, or claim that airflow through the Accused Products will ignore basic laws of fluid dynamics. At the end of the day, because the Asserted Patents disclose a class of vaping devices that are

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[redacted]

fundamentally different than the JUUL1 System, [redacted], and JUUL2 System, NJOY will be unable to demonstrate that those products infringe even a single Asserted Claim.

Below is a summary of a few of the reasons why NJOY cannot shoehorn the features of the Accused JLI Products into the limitations of the Asserted Claims, all of which will be discussed in much more detail (along with other non-infringement arguments) later in this brief:

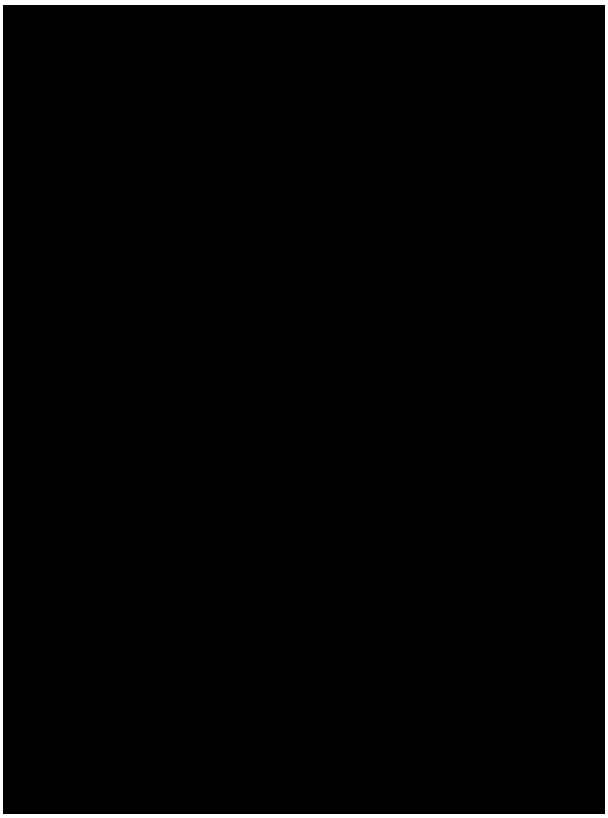
i. NJOY's Non-Sensical and Incorrect Identification of the End of the Accused Products' Housing

Each claimed cartridge in the Asserted Claims requires a "housing" and a central/axial second aperture at or proximate the second end of that housing. In their attempt to argue that the Accused Products meet these limitations, NJOY and its expert, Dr. Vallee, have identified housings for the JUUL1, [redacted], and JUUL2 cartridges that defy common sense and conflict with their own definitions of what a housing is.

[redacted]

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[redacted]



RX-1081C (Vallee Ex. 3).

However, noticeably absent from what NJOY will identify as the housing on these products is their ***mouthpiece***. The reason why NJOY has excluded the mouthpiece as part of the housing—and included internal components, such as the [redacted] and the [redacted]—is simple: if NJOY were to include the mouthpiece as part of the housing (and exclude the [redacted] and [redacted]), the JUUL1 and [redacted] cartridges could not possibly infringe any of the Asserted Claims.

But the "housing" of the JUUL1 and [redacted] cartridges must include their mouthpiece—and cannot include internal components such as the [redacted] and [redacted]—because NJOY and its expert Dr. Vallee assert and agree that the Asserted Patents' specification "makes clear that the [claimed] 'housing' is an ***outside structure containing the device internals***." *See* JX-0025.11

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[redacted]

(Patent Owner's Preliminary Response (IPR2024-00160)); RX-1014C (Vallee 4/11/24 Tr.) at 165:23-167:1; *see also infra* § IV.B.1 (proper construction of housing is "the outside structure of the cartridge that contains and protects the cartridge's internal structures").[1] The mouthpiece of the JUUL1 and [redacted] cartridges indisputably meets this definition, *i.e.*, that the mouthpiece is part of the cartridge's outside structure and protects the cartridge's internal components. For example, NJOY and Dr. Vallee admit that [redacted]

[redacted]

See RX-0314C.4 (JUUL1 PMTA (July 2020), [redacted]). As imported and used, [redacted]

[1] Dr. Vallee alternately referenced and relied on a second "housing" definition at his deposition, asserting and agreeing that "anything connected to the exterior of the housing should be part of the housing." *E.g.*, RX-1014C (Vallee 4/11/24 Tr.) at 216:18-21, 215:4-7, 226:4-8. Even under this alternate definition, [redacted]

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[redacted]

Dr. Vallee's testimony and annotations confirm that the cartridge mouthpiece forms (along with the tank) a part of the cartridge's outside structure and contains internal components, such as the [redacted] and the [redacted]. In other words, the mouthpiece is in fact indisputably a part of the cartridge's housing, even applying NJOY's and Dr. Vallee's own "housing" definition of the "outside structure containing the device internals." *See* JX-0025.11 (Patent Owner's Preliminary Response (IPR2024-00160)); RX-1014C (Vallee 4/11/24 Tr.) at 165:23-167:1. [redacted]

Again, the only reason why NJOY excludes the mouthpiece as part of the alleged housing is because if the mouthpiece were included as part of the housing, the JUUL1 and [redacted] cannot possibly infringe any of the Asserted Claims. Indeed, if the mouthpiece were correctly included as part of the housing, [redacted]

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[redacted]

Accordingly, the opening in the [redacted]—which is the only opening that NJOY has accused of being the second aperture required by all of the Asserted Claims—cannot be the second aperture because the opening is not part of the housing but internal to the housing. Similarly, if the mouthpiece is part of the housing, then the two off-center openings on the end of the mouthpiece could not possibly infringe the single, central and axial second aperture limitation in the Asserted Claims. Moreover, with respect to independent claims that require a central and axial airflow passageway (which is all of the asserted independent claims except for claim 9 of the '864 Patent), the airflow passageway in the JUUL1 and [redacted] cannot be central and axial as required because the [redacted] And with respect to the independent claim that requires a second portion of the airflow path to be substantially central and axial (which is claim 9 of the '864 Patent), even Dr. Vallee admits that the [redacted] NJOY's identification of the alleged housing in the JUUL1

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[redacted]

and [redacted] is also incorrect because it improperly includes the [redacted]. NJOY plans to include these [redacted] as part of the alleged housing because all of the asserted independent claims require that the first end or a portion of the first end of the housing must be adapted to electrically couple to the power source. The only components of the JUUL1 and [redacted] that are adapted to electrically couple to the power source are the [redacted]. Thus, NJOY knows that if the [redacted]s are not included as part of the housing, there will be no infringement. But the [redacted] are not an "***outside structure containing the device internals***," nor are they "connected to the exterior of the housing." *See, e.g.*, JX-0025.11; RX-1014C (Vallee 4/11/24 Tr.) at 165:23-167:1, 216:18-21, 215:4-7, 226:4-8. Instead, they are simply portions of [redacted] And it is undisputed that [redacted] Thus, the correct JUUL1 and [redacted] housing, [redacted], is ***not*** adapted to electrically couple to the power source, as the Asserted Claims require.

NJOY and Dr. Vallee plan to repeat their same, incorrect "housing" arguments with the JUUL2 Pod; specifically, they will claim that the heater component of the JUUL2 Pod is part of its housing. [redacted] Thus, if the heater is not part of the JUUL2 Pod's housing, the JUUL2 Pod cannot infringe the limitation in the asserted independent claims that requires that the first end or a portion of the

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[redacted]

first end of the housing be adapted to electrically couple to the power source. But as shown in the below figure, much like [redacted] in the JUUL1 and [redacted], the [redacted].

[redacted]

See RX-0883 ([redacted]). Even NJOY's own expert, Dr. Vallee, agrees with JLI that [redacted] *See, e.g.*, RX-1014C (Vallee 4/11/24 Tr.) at 262:24-263:14, 265:11-19, 266:4-267:26; RX-1094C (Vallee Ex. 17). Therefore, the correct JUUL2 housing is not adapted to electrically couple to the power source and, much like the JUUL1 and [redacted] housing, it does not infringe any of the asserted independent claims. *See id.*

ii. The Accused Products Do Not Contain a Central and Axial Airflow Passageway

Just as NJOY will incorrectly identify the housing of the Accused Products (and ignore the JUUL1 and [redacted] mouthpiece), NJOY will also incorrectly identify a claimed central and axial airflow passageway in each of the Accused Products [redacted].

For example, NJOY will assert that [redacted]

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[redacted] However, NJOY's theory is predicated entirely on its incorrect allegation that the claimed "heating element" in all of the Accused Products includes their wicks, arguing that because the Asserted Patents disclose a heating element in the claimed airflow passageway, NJOY's alleged heating element ([redacted]) can also be in the alleged airflow passageway.

But the "heating element" disclosed and claimed in the Asserted Patents ***cannot*** include a separate wick. Applicant expressly disclaimed such an interpretation of the claims in the prosecution history of a parent application to overcome a *Thorens* prior art reference. Further, unlike a heating coil, air cannot flow through a wick. [redacted]

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[redacted]

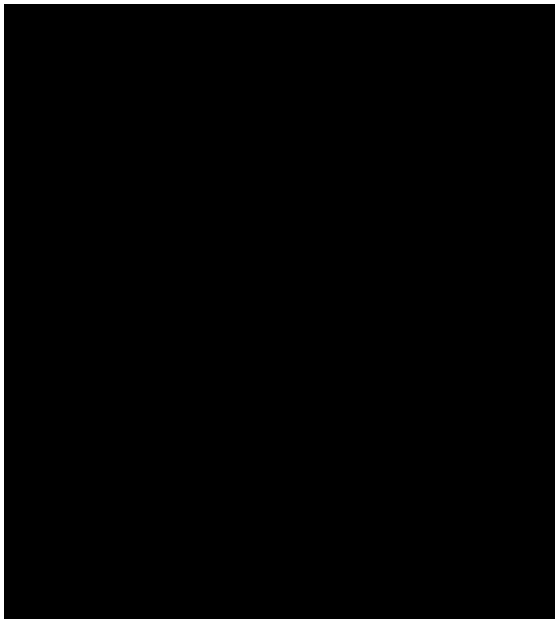


Left: JUUL1 Pod, CX-2157C (Vallee Opening Rpt.) at ¶ 749 (annotated in yellow); Right: JUUL2 Pod, *id.* at ¶ 1019 (annotated in yellow).

Moreover, as shown in the below figure, [redacted]

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[redacted]



JX-0518C (JUUL2 Steam Pod: EVT Design Release) at JX-0518C.36 (showing the [redacted]). [redacted]. Thus, much like the wick, the [redacted] in JUUL2 is not a mere "obstacle," but instead is [redacted] that do not infringe the central and axial airflow passageway limitations in the Asserted Claims.

iii. The Accused Products Do Not Contain Central and Axial Airflow Path Portions

In an attempt to match the features of the Accused Products with a limitation in claim 9 of the '864 Patent, NJOY will also incorrectly identify what it claims are substantially central and axial airflow path "portions" in the Accused Products. NJOY and Dr. Vallee will identify these claimed airflow path portions without showing, or offering any proof whatsoever about, the actual airflow path in these portions. Instead, they will rely on the grossly over-simplified arrows in the below figures, which they claim show how air travels through the JUUL1, [redacted], and JUUL2 Pods.

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[redacted]



CX-2157C (Vallee Opening Rpt.) at ¶ 823.



CX-2157C (Vallee Opening Rpt.) at ¶ 1019.

But the arrows that NJOY and Dr. Vallee intend to rely on ignore how air actually flows past and through the geometry of the Accused Products' cartridges, including, [redacted] JLI's expert, Dr. Werner Dahm,

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[redacted]

will explain that all of these features have a significant effect on the flow path through the Accused Products' cartridges, [redacted].

Aside from this lack of evidence, NJOY will also be unable to meet its burden with respect to claim 9 of the '864 patent because, as it has admitted, there are regions in the first and second portions of the airflow paths proximate their respective ends where the airflow paths are not central and axial. Applying the ALJ's construction of the term "proximate," each "portion" of the airflow path referred to in claim 9 would be the portion of the airflow path that is closest to its respective aperture, *i.e.*, the half of the airflow path closest to that aperture. As shown in the below figures, the airflow path in the first portion of the JUUL1 and [redacted] is not substantially central and axial because [redacted] Even looking at the incorrect first "portion" of the JUUL1 and [redacted] airflow pathways that NJOY's expert Dr. Vallee identifies in the below figures (which conflicts with the ALJ's construction of "proximate"), Dr. Vallee presents no evidence whatsoever of how the air travels through the region between the alleged first aperture and the [redacted]—let alone whether that path is substantially central and axial. *See* CX-2157C (Vallee Opening Rpt.) at ¶¶821-824 (addressing '864 patent, claim 9). Likewise, the airflow path in the second portion of the JUUL1 and [redacted] is not substantially central and axial because, as Dr. Vallee admits, [redacted]

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[redacted]



CX-2157C (Vallee Opening Rpt.), ¶ 823 (red, green, blue, and purple annotations in original; orange annotations added).

NJOY likewise will be unable to show that the JUUL2 Pod has two airflow pathway "portions" that are substantially central and axial, even using the incorrect "portions" that Dr. Vallee identifies (which, again, conflict with the ALJ's construction of "proximate"). For example, as shown in the below figure, [redacted] Dr. Vallee presents no evidence whatsoever of how the air travels through the region between the alleged first aperture and the integrated airflow tube, let alone whether that path is substantially central and axial. *See* CX-2157C (Vallee Opening Rpt.) at ¶¶ 1016-1020.

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[redacted]



RX-1093C (Vallee Ex. 15) (annotated in orange and red).

iv. The Accused Products Do Not Contain a Heating Element that Extends Transversely Across an Airflow Passageway or Transversely to the Longitudinal Axis of the Housing

NJOY will also be unable to show that the claimed heating elements in the Accused Products— [redacted] —either ***extends across*** the claimed airflow passageway of the Accused JLI Products, or ***extends to*** the central longitudinal axis of the cartridge housing in those products. To begin, in order for the claimed heating elements to "extend" transversely, they must extend ***from*** something, whether it be the alleged airflow passageway or the housing. However, [redacted]

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[redacted]



RX-0883C ([redacted]). Similarly, as shown in the figure below, [redacted] it does not extend from either the alleged airflow passageway or the alleged housing.



JX-0188C ([redacted]).

For similar reasons, the [redacted] in the JUUL1 and [redacted] does not extend transversely ***across*** the claimed airflow passageway, which means extending "***from one end to the other of the airflow passageway***." *See* Order No. 36 at 17. Instead, as can be seen in the above figure of the JUUL1 and [redacted], [redacted]

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[redacted]

2. None of the Domestic Industry Products Practice Any of the Asserted Claims

In addition to being unable to show that the Accused Products infringe any of the Asserted Claims, NJOY will also be unable to show that any of the domestic industry products it relies on practice any of those claims. Specifically, NJOY relies on four different products as its protected articles: NJOY's ACE System and [redacted] (the "NJOY DI Systems"); RJR's Vuse Alto System; and RJR's Vuse Solo G1 and G2 Systems (the "Vuse Solo Systems"). NJOY asserts that all of the domestic industry products practice claims 9, 10, 12, 13, 15, and 20 of the '864 Patent, while the Vuse Solo System additionally practices claims 2, 16, 26 of the '864 Patent and claim 1 of the '881 Patent.

The NJOY DI Systems and RJR Vuse Alto System are newer generation, two-piece pod products that, much like the JUUL1 and JUUL2, have little in common with the traditional cig-a-like devices disclosed in the '864 Patent. It is therefore not surprising that they do not practice the asserted claims of the '864 Patent for many of the same reasons that JUUL1, [redacted], and JUUL2 Systems do not infringe those claims. For instance, the housings of the NJOY DI Systems and RJR Vuse Alto System pods, much like the housings of the JUUL1, [redacted], and JUUL1 Pods, are made entirely of non-conductive plastic. Thus, there are not electrically conductive portions of those housings that are adapted to electrically couple to electrically conductive portions of their power sources. The airflow paths in the NJOY DI Systems and RJR Vuse Alto System Pods are also winding, divided, turbulent, and off-center, much like the airflow paths in the Accused JLI Products. No "portions" of those airflow paths proximate to their claimed first and second apertures (both the correct "portions" according to the ALJ's construction of "proximate," and the incorrect "portions" that Dr. Vallee identifies) are substantially central and axial, as required by claim 9 of the '864 Patent.

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[redacted]

As for the Vuse Solo System, while the Solo G1 and G2 Cartridges have a cylindrical housing that looks far more similar to a conventional cig-a-like, their interiors are nothing like the cartridge described in the Asserted Patents. [redacted] Therefore, unlike the straight, central and axial airflow passageway and airflow path disclosed in the Asserted Patents, [redacted]



Left: CX-2157C (Vallee Opening Rpt.) at ¶ 1870 (Vuse Solo G1 Cartridge) (annotated in green; blue and red annotations in original); Right: *id.* (Vuse Solo G2 Cartridge) (wick annotated in green; PCB not annotated due to low resolution of the figure).

These are just a few of the reasons why the Vuse Solo System does not practice claim 1 of the '881 Patent and claims 9, 10, 12, 15, 16, 20, and 26 of the '864 Patent, and why the NJOY DI Systems and Vuse Alto System do not practice claims 9, 10, 12, 13, 15, and 20 of the '864 Patent. A number of additional reasons are all discussed in detail later in this brief.

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[redacted]

3. Invalidity

The asserted patents were nothing new at the time of the alleged conception in July 2009. The named inventors, Gregory Conley and Daniel Hillenbrandt, distributed e-cigarettes in 2009, including the Smoke 51 device. They analyzed the devices they sold and other devices they learned about and merely filed for United States patents with claims that cover those devices, at best with incredibly obvious variations as to nuanced aspects that have no real-world impact. Their devices never enjoyed success in the marketplace, certainly nothing attributable to any alleged innovation in their patent claims.

During two full days of deposition, in which this was the main topic of discussion, Mr. Conley could never identify what his invention was, or what any single inventive thing in his claims was. All he could say is that a POSITA would know what it was:

> Q So I'll ask you again. What's -- what's the invention in the '864 or '881 patent?
>
> THE WITNESS: Again, I go back to if you look at the artwork and you look at the embodiment and you look at the whole patent and read it, it would be very obvious to you if you were of ordinary skill."

RX-1117C (Conley 03/01/24 Dep. Tr.) at 320:4-11

The closest he ever claim to stating what was innovative was that his claimed e-cigarette was a "balanced system." RX-1116C (Conley 02/29/24 Dep. Tr.) at 119:23-25 ("The invention is a balanced system."); *see also* Hillenbrandt Tr. at 234:10-21 ("Our invention was a balanced system"). But he could never answer what that meant, only that a POSITA would know it when he saw it in his patents:

> Q And what was it you came up with that wasn't in prior designs that allowed you to design a e-cigarette that had a balanced system?
>
> THE WITNESS: There were many things that we came up with in the process of this. And, again, it's clearly outlined in the embodiment and the artwork of the patent.

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[redacted]

RX-1117C (Conley 03/01/24 Dep. Tr.) at 321:11-19.

As Mr. Conley admitted, the specifications and claims do not discuss a balanced system, either as a goal or in the embodiments or claims, but a POSITA would simply know some unclaimed, indescribable thing that makes the claims innovative. RX-1117C (Conley 03/01/24 Dep. Tr.). at 312:10 – 315:24, 317:16-321:19. At various points in time he stated air ratio and heating element size were what created a balanced system. Conley 02/29/24 Dep. Tr. at 110:14 – 119:25. But as he agreed, the specification and his claims do not discuss or recite those concepts. RX-1117C (Conley 03/01/24 Dep. Tr.) at 315:25-317:15.

Mr. Conley could not identify a single feature of the claims that was not present in the prior art. For example, in order to avoid having to identify what aspects of the claims represent anything new, including versus the device he personally analyzed before filing for his patents, Mr. Conley testified that he does not know what any of the words of the claims in his own patent mean:

> Q. What, if anything, in the '881 Claim 1 was not present within that Smoke 51 Duo e-cigarette?
>
> THE WITNESS: I can't answer that question until a judge defines what it says.

RX-1117C (Conley 03/01/24 Dep. Tr.) at 256:4-10

> Q. So let's go to Claim 1 of the '864 patent, please. What, if anything, in Claim 1 of the '864 patent was not in the Smoke 51 Duo device that you took the cap off of?
>
> THE WITNESS: As previously stated in the last patent as well as this one, until a judge defines the claims, I can't answer the question.

That is despite the fact that – without any claim construction ruling from any judge, just his own knowledge – he signed a sworn declaration in order to obtain his patents stating that he invented the claims in his application before a certain date, as evidence by the fact that a prototype device he had made, he testified, embodies each word of the asserted claims, in fact specifically identifying what portions of such devices map to precisely what words of the claim. *See* RX-1353;

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[redacted]

RX-1356. When asked how he was able to attest that his prototype embodied each of his claims without a claim construction, but now he cannot provide any testimony about what was innovative in his claims without a claim construction, Mr. Conley claimed privilege and would not answer. RX-1117C (Conley 03/01/24 Dep. Tr.) at 286:15-25. Indeed, Mr. Conley could not even explain why the Fuma Prototype was an "apparatus," which is recited in the asserted claims, stating only "my legal counsel drafted this document and I cannot answer that based on counsel's advice." He could not in fact identify how *any* of the limitations of the claims are shown in the Fuma Prototype, despite signing a sworn declaration stating that *all* elements are show, and specifically showing one by one how they are shown:

> Q. Can you answer a question about how Exhibit A [of his declaration] shows the existence and embodiment of any of the elements that are listed in paragraph 5?
>
> A. Again, at legal counsel advice, I cannot answer that question.

RX-1117C (Conley 03/01/24 Dep. Tr.) at 292:24-293:3.

He would not even answer what he knows about his claims *other than from communications from his lawyers*, because somehow that information is privileged:

> Q. And I'm asking you other than the fact that counsel prepared your declaration and you trust your counsel, do you have any other basis for believing that the statements you make in paragraph 5 of your declaration are accurate?
>
> A. Again, at the advice of counsel, I cannot answer that question.

Conley 03/01/24 Dep. Tr. at 297:3-9. He simply claimed not to know what any words of his claims mean:

> Q. Why do you need a judge to define the claim limitations in '864 Claim 1 for you in order to determine whether any of those limitations are met by the Fuma cigarette starter kit?
>
> A. Because I need the judge's proper definitions of the claims.
>
> Q. You don't have any understanding of what those claim limitations mean absent a judge telling you what they mean?

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[redacted]

A. No

RX-1117C (Conley 03/01/24 Dep. Tr.) at 302:13-22.

Clearly Mr. Conley knows what his claim terms mean, or he would have committed a fraud on the patent office by signing a false declaration attesting that the Fuma Prototype meets each and every limitation of the asserted claims (and more), and specifically mapping each word of the claims to the device. The truth is that there is no innovation in the claims of the asserted patents, and Mr. Conley did not want to address that issue face-on in his deposition.

A review of the prior art makes clear that the asserted patents contain no inventions. The field of electronic cigarettes largely started to develop in 2003, when Chinese pharmacist Hon Lik began producing and selling early e-cigarette devices. Some early e-cigarettes attempted to appeal to cigarette smokers by mimicking the form factor of cigarettes in general size and shape, as well as coloring, and became known in the industry as cig-a-like devices. Mr. Conley admitted he purchased and inspected e-cigarette devices in 2008.

The Asserted Patents are generally directed to a well-known design that existed well before the alleged conception date of the alleged inventions, or, at a minimum, an obvious combination of known features of electronic cigarettes. The Asserted Patents generally disclose cig-a-like devices containing a separable cartridge and power source, each of which have electrically-conductive, threaded ends that screw together to form a single vaping device. The cartridge portion can be integrated into a single assembly, or can consist of multiple components that can be unassembled by the end user. The cartridge portions of these devices also have a single, centrally located aperture at or near each of their ends, and a straight, unobstructed airflow passageway or airflow path extending through their center that delivers a nicotine vapor to the user. This design is similar to the designs of a number of cig-a-like products that were widely available to consumers

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overseas and in the U.S. prior to the 2009-2010 time period, when the inventors claim they conceived of the purported inventions disclosed in the Asserted Patents.

This makes logical sense, as the named inventors had little design or engineering experience, but were familiar with existing e-cigarettes of the time. For example, Mr. Conley, the first named inventor of the Asserted patents, became familiar with e-cigarettes in 2008 after being introduced to a three-piece product. *See, e.g.,* Conley 2024-02-29 Tr. at 57:16-58:6. He then researched existing e-cigarette devices, and became familiar with the Smoke Fifty-One Duo, among other existing e-cigarettes. *Id.* at 61:10-63:9. The inventors of the asserted patents worked together as distributors of e-cigarettes, including the Smoke Fifty One Duo, in early 2009. Conley 2024-02-29 Tr. at 34:15-22. They then formed Fuma to design and manufacture e-cigarettes and later filed the patent application to which the Asserted Patents claim priority. *Id.* at 34:4-7; 35:20-23. Mr. Conley based his designs on perceived issues with the Smoke Fifty-One Duo product. *Id.* at 101:19-106:11.

It is largely undisputed that the prior art contained all elements of the asserted claims. For example, both Complainant's expert Dr. Vallee and first-named inventor Mr. Conley have each admitted that the prior art included e-cigarettes with each of the main features claimed in the asserted claims, such as housings, heating elements, mediums to hold nicotine solution, central and axial airflow passageways, and more. Moreover, because NJOY needs to unnaturally and improperly stretch the breadth of the claims for its infringement allegations, the claims read on the prior art, rendering them invalid.

Thus, Complainant is left making inconsistent claim interpretations for infringement and invalidity – first broad, then narrow – and defending validity by asserting that the combination of these well-known components was novel or non-obvious. But the design of cig-a-like e-cigarettes

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[redacted]

was not a particularly complicated endeavor, and there are no unexpected results stemming from the claimed combination of components. Rather, as Mr. Leinsing will explain, the entire design as claimed was well-known in the art, and further, each of the claimed features was well-known, including in various combinations, and each feature had known benefits that would be immediately apparent to a POSITA; to the extent it is found that the claims are not anticipated, Mr. Leinsing will explain that any limitations not shown are mere obvious variations well-known throughout the industry in other products and references.

i. E-Cigarette and Separable Power Source and Cartridge

The background section of the Asserted Patents describes "[c]onventional electronic cigarette designs" as "generally includ[ing] a battery, a heating element, and a mouthpiece." '881 Patent at 1:21-23. "The mouthpiece includes a liquid solution that comprises nicotine, and the battery provides power to the heating element, which in turn operates to vaporize the solution." '881 Patent at 1:23-26. This admittedly "conventional" E-cigarette existed well before July 2009, and is what the industry referred to as a "one-piece" design. One-piece e-cigarettes included within a single casing: (1) a battery that powers the device (2) an absorbent material and/or other solution holding means that holds the e-liquid; (3) a means for heating the e-liquid, and (4) a means for vaporizing the e-liquid by fluid/heat transfer.

One-piece designs suffered from being inconvenient to users and wasteful because the battery was disposed of and needed to be replaced when the liquid was consumed. Openable one-piece designs required the users to open the device, access the device internals, and refill the device with free e-liquid, which often resulted in messy spillage during refilling. Additionally, repeated re-use of the device meant that components such as those that heat and vaporize solution could become burned over time or clogged with residue.

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[redacted]

The only purported invention disclosed in the Asserted Patents was to modify conventional "one-piece" E-cigarettes to allow the "power source" to be separable from a cartridge containing a heating element and the mouthpiece (containing the solution holding medium). "The cartridge can be manufactured as a single assembly or can be designed so that the cartridge can be manufactured as a multi-piece assembly."

The fundamental problem with the patent is that the inventors did not invent single-piece or multi-piece E-cigarette cartridges either. Well before July 2009, E-cigarette devices were sold with separable power sources and cartridges. These devices often used conductive threaded connections between the battery portions and the so-called cartridge portion. To address problems associated with consumer filling of free e-liquid, the cartridges often came pre-filled with solution. Multi-piece E-cigarette devices were mainly sold in two configurations; two-piece and three piece devices.

So-called "two-piece" E-cigarette devices had a separable power source and single-piece disposable cartridge containing a heating element and the solution holding means (i.e. mouthpiece). In the two-piece design, every new cartridge came with a fresh heating element, which would be discarded once the solution in the cartridge had been consumed. This helped address problems with re-use of heating elements such the heating component in e-cigarettes becoming burned out and/or starting to take on a charred flavor over time, or becoming clogged or coated in e-liquid residue.

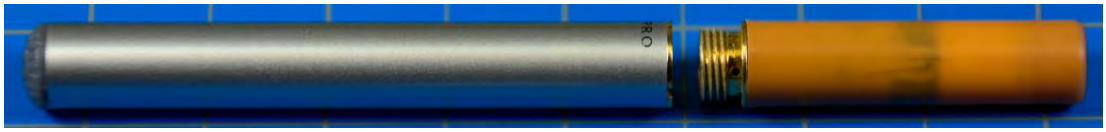
Three piece E-cigarette devices had a separable power source and a multi-piece disposable cartridge comprising a separable solution holding means (i.e. mouthpiece) and heating element that could be separated from and reused with fresh solution holding means (i.e. mouthpieces). As the solution in the solution holding means was typically consumed faster than the heating element

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[redacted]

needed to be replaced, companies in the industry sold replacement "cartridges" containing the pre-filled solution holding means, and an empty cavity for the end-user to insert an existing heating element to form a fully assembled cartridge. This helped reduce the waste associated with discarding the heating element with each refill, but did not address the issues with burning or clogging of heating elements with repeated use. Additionally, three-piece designs meant the users were in closer contact with the absorbent material and the e-liquid during assembly of the devices than with two-piece designs, and therefore there was more spillage and mess.

For example, the NPRO E-Cig is an e-cigarette including a cartridge (the orange piece shown below) and a power source (the silver portion shown below). *See* RX-0110C (NJOY NPRO User Guide Tri-Fold).



See RX-0082 (Photos of NJOY NPRO) at RX-0082.59.

For example, Xia '610 illustrates an example design, using cross-sectional images, for example in figures 1 and 2, which demonstrate that Xia '610 discloses a two-piece cylindrical electronic cigarette:

NJOY Exhibit 2008.0087
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[redacted]

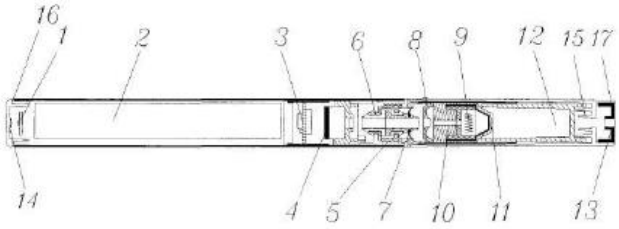


Fig. 1

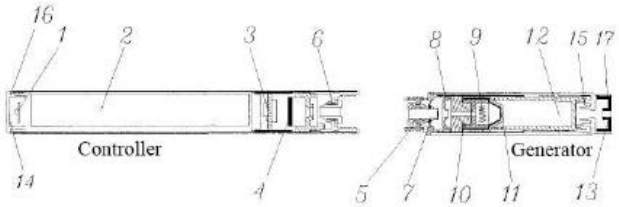


Fig. 2

See JX-0596 (Xia '610) at FIGs. 1, 2.

Fang '044 illustrates its e-cigarette design in figure 1:

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[redacted]

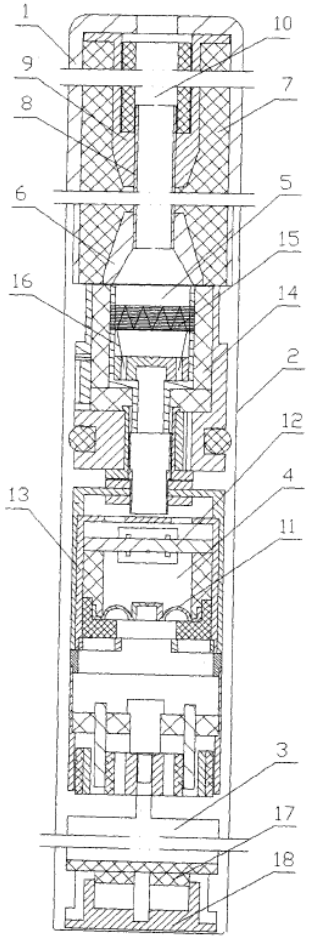
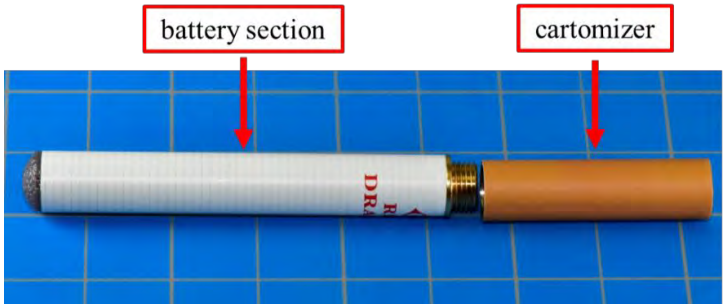


图 1

See JX-0595 (Fang '044) at FIG. 1.

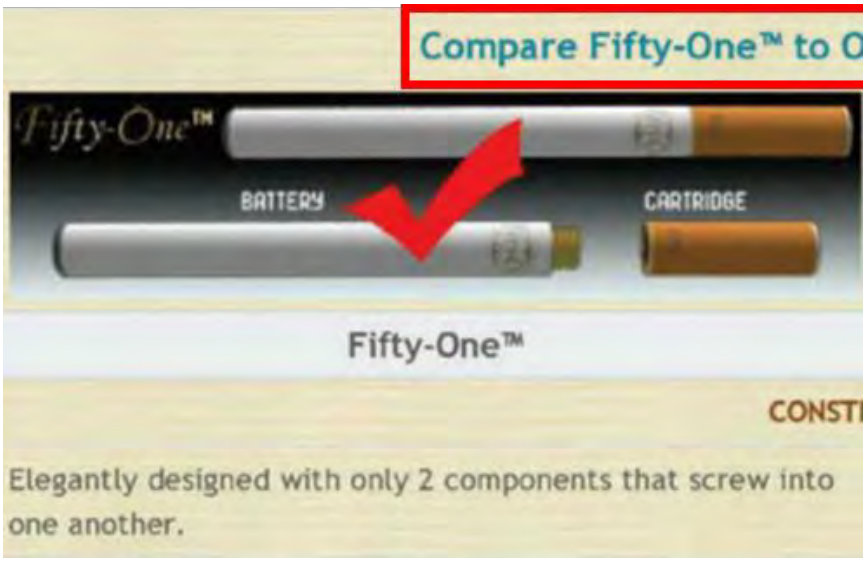
The Red Dragon includes two sections: (1) a battery section and (2) a cartomizer.



See RX-0074 (Photos of Red Dragon Kit #1) at RX-0074.43 (annotated in red). *See also* RX-1126C (Evans Tr.) at 8:24-9:9.

[redacted]

And the Smoke Fifty-One Duo illustrates its two-piece design:



See RX-0151C (Collins Expert Report) at RX-0151C.130 (annotated in red)).

ii. Apertures and Airflow Passageway

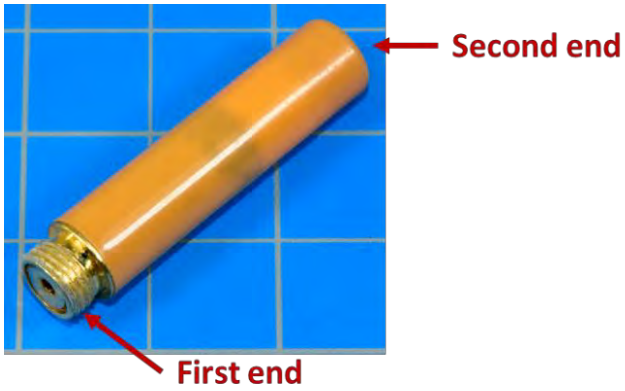
It was well-known in the art that a cartridge needs apertures on two opposite ends for the air to go through it. Many prior art systems have an aperture in the center on the mouthpiece end, and on the end of the cartridge that gets connected to the battery.

It was also well-known—and common sense—that the cartridges would include one or more airflow passageways to allow air to flow through the cartridge from one end to the other end.

The NPRO E-Cig includes first and second apertures and first and second ends. For example, as shown below, the NPRO E-Cig has a first end and a second end.

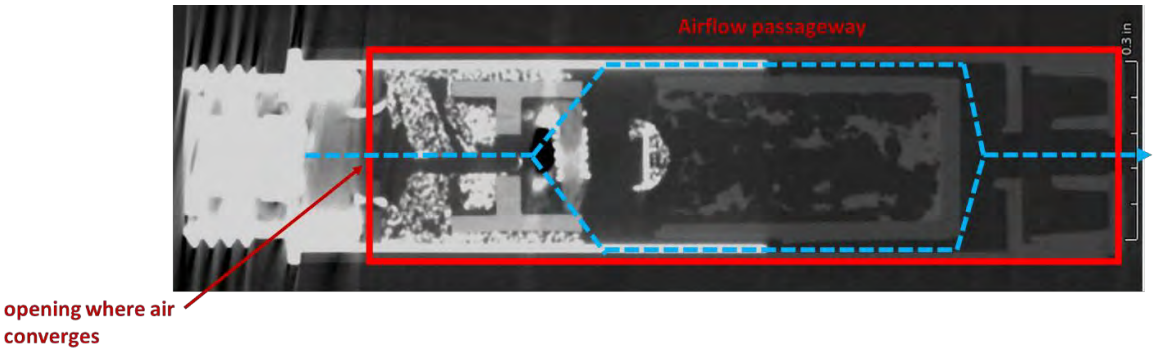
NJOY Exhibit 2008.0090
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[redacted]



See RX-0082 (Photos of NJOY NPRO) at RX-0082.60 (annotated in red).

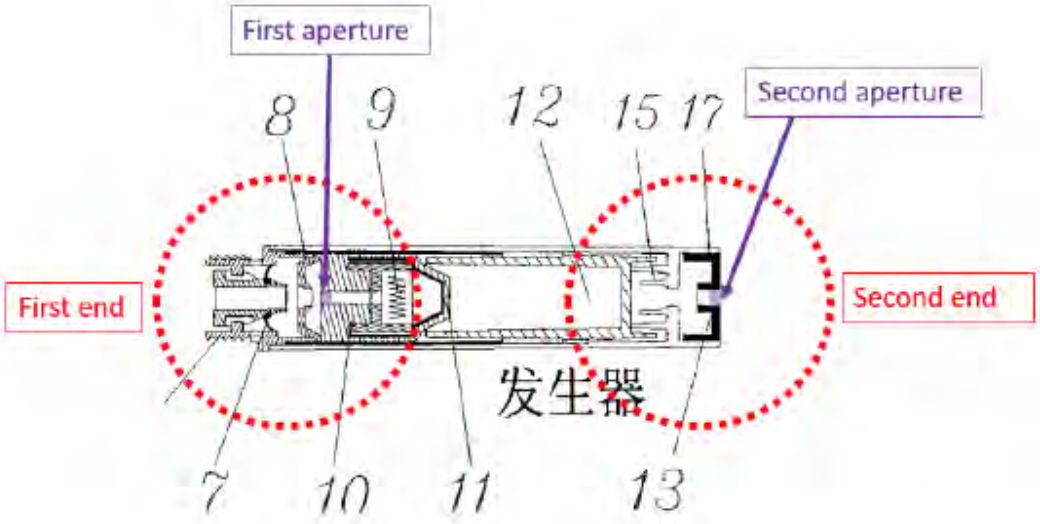
These airflow passageways extend centrally and axially with respect to the housing from the first aperture of the housing to the second aperture of the housing.



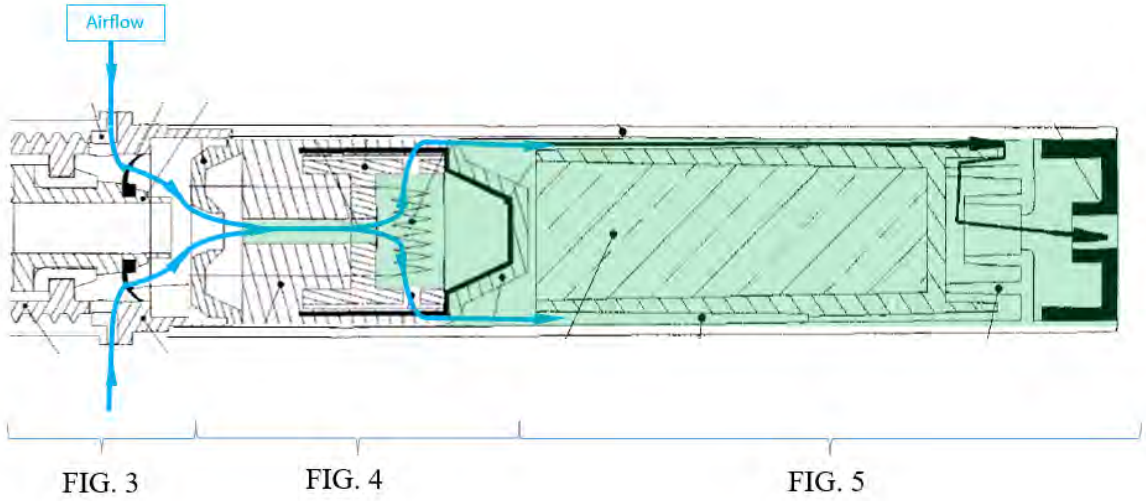
See JX-0404 (NPRO Photos) at JX-0404.16 (annotated in red and blue).

For example, Xia '610 illustrates the "generator" portion as including first and second ends, and first and second apertures. An annotated version of Xia '610's figure 2 demonstrates this:

[redacted]



See JX-0596 (Xia '610) at FIG. 2 (annotated).

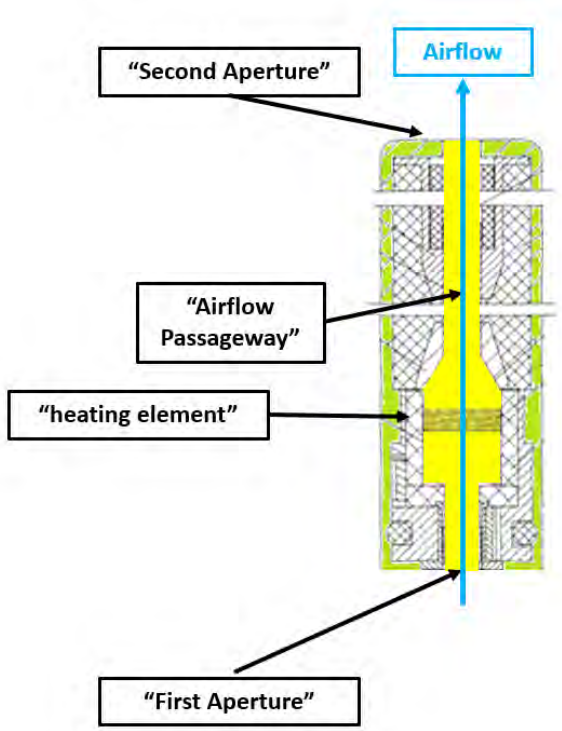


See JX-0596 (Xia '610) at FIGs 3-5 (annotated).

Fang '044 illustrates its airflow passageway through passageway 10 and pipe 8 in figure 1:

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[redacted]

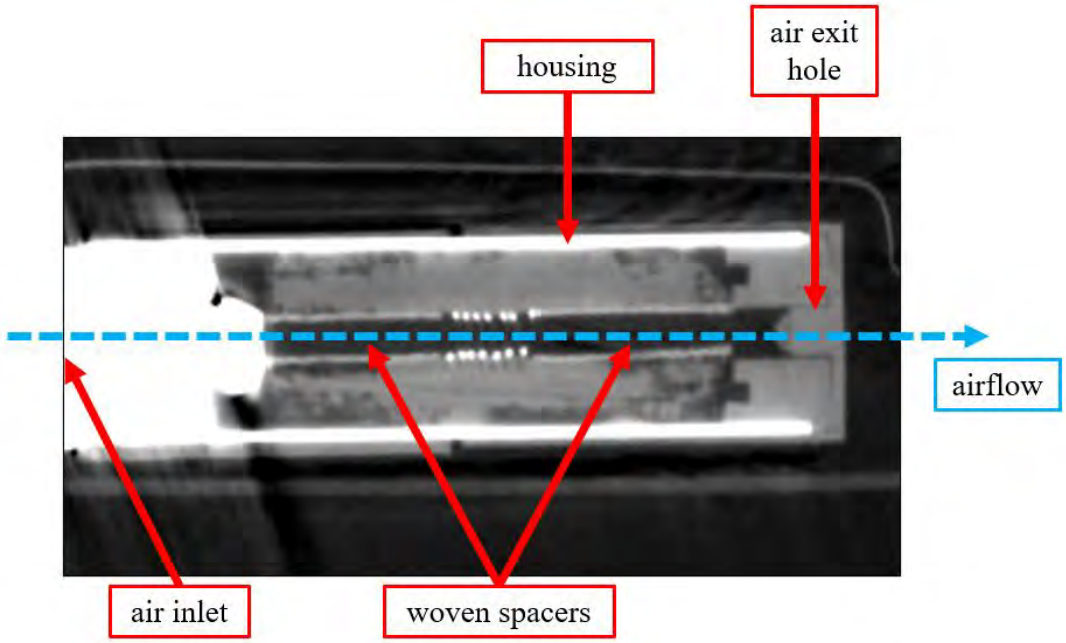


See JX-0595 (Fang '044) at FIG. 1.

Red Dragon includes a passageway allowing air to flow through the center of the housing in a straight path from the air inlet all the way to the air exit hole.

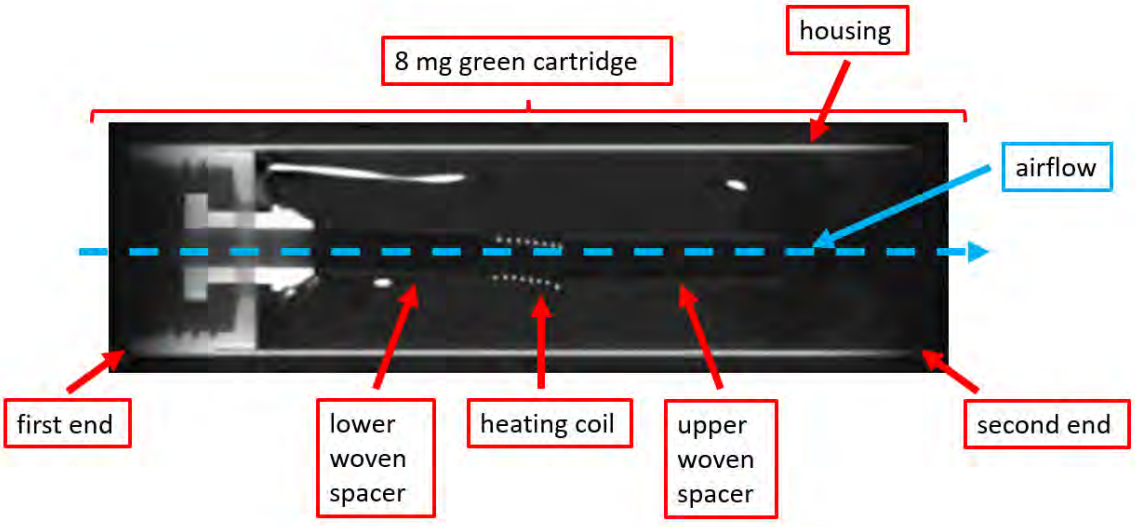
NJOY Exhibit 2008.0093
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[redacted]



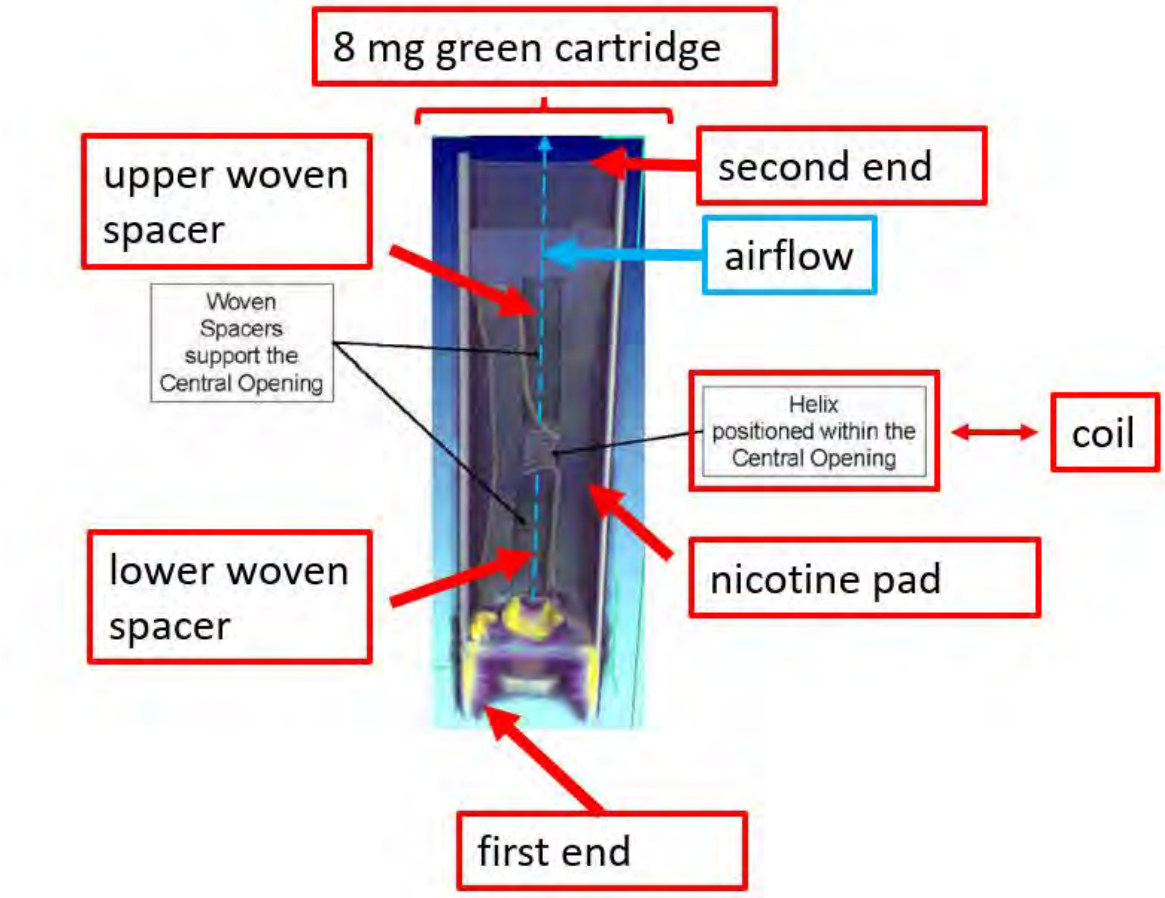
See RX-0077 (CT Scans of Red Dragon Kit #2) at RX-0077.22 (annotated in red).

And Smoke Fifty-One included a similar passageway allowing air to flow through the center of the housing in a straight path from the air inlet all the way to the air exit hole.



See RX-0130C (Yardimici Declaration) at RX-0130C.38 (annotated in red).

[redacted]



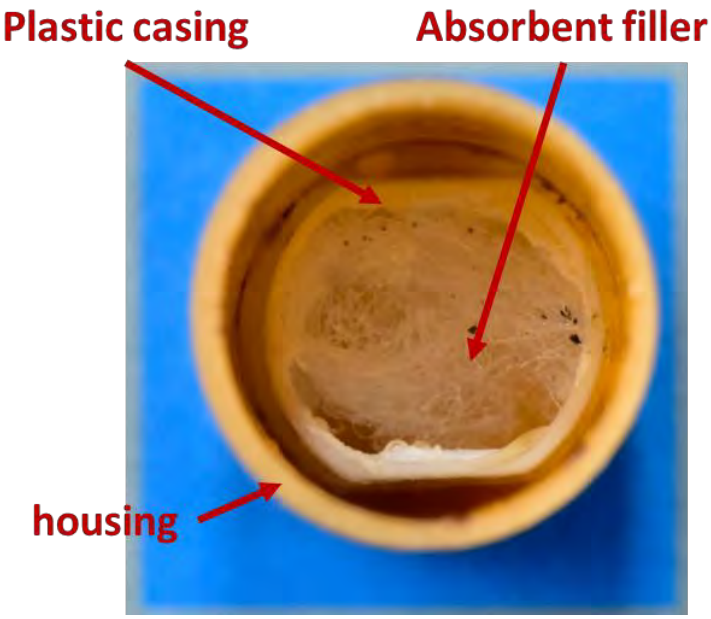
See RX-0130C (Yardimici Declaration) at RX-0130C.29 (annotated in red and blue). *See also* 2024-02-29 Conley Depo. Tr. at 136:3-17; 141:11-14.

iii. Solution Holding Medium

It was well-known in the art for cartridges to include an absorbent material and/or other liquid holding means to hold the e-liquid in the e-cigarette. For example, most cig-a-like prior art devices used a batting material to hold e-liquid.

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[redacted]



See RX-0082 (Photos of NJOY NPRO) at RX-0082.83 (annotated in red) (showing the NJOY NPRO batting material).

Xia '610 explains that "liquid storage chamber 12 is a cylindrical object with one end open, medicinal cotton fibers are placed in the middle, and then the raw chemical liquid is charged in. Through a capillary action of the liquid-guiding mechanism 11, the chemical liquid stored in the liquid storage chamber 12 is guided into the secondary liquid storage chamber 10." Xia '610 at 1377.

Xia '610 illustrates an example solution holding medium on the right part of figure 2:

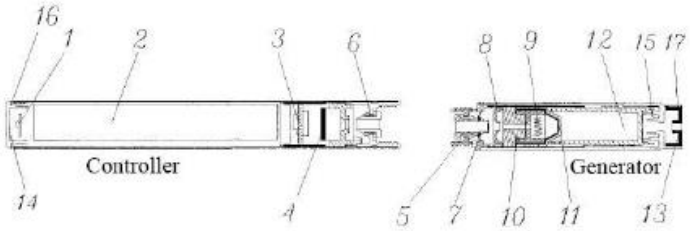


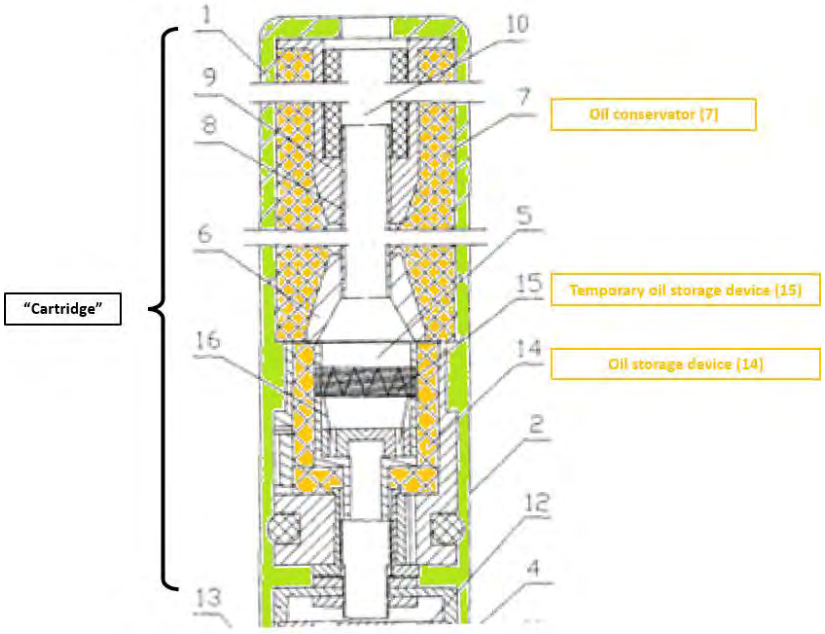
Fig. 2

NJOY Exhibit 2008.0096
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[redacted]

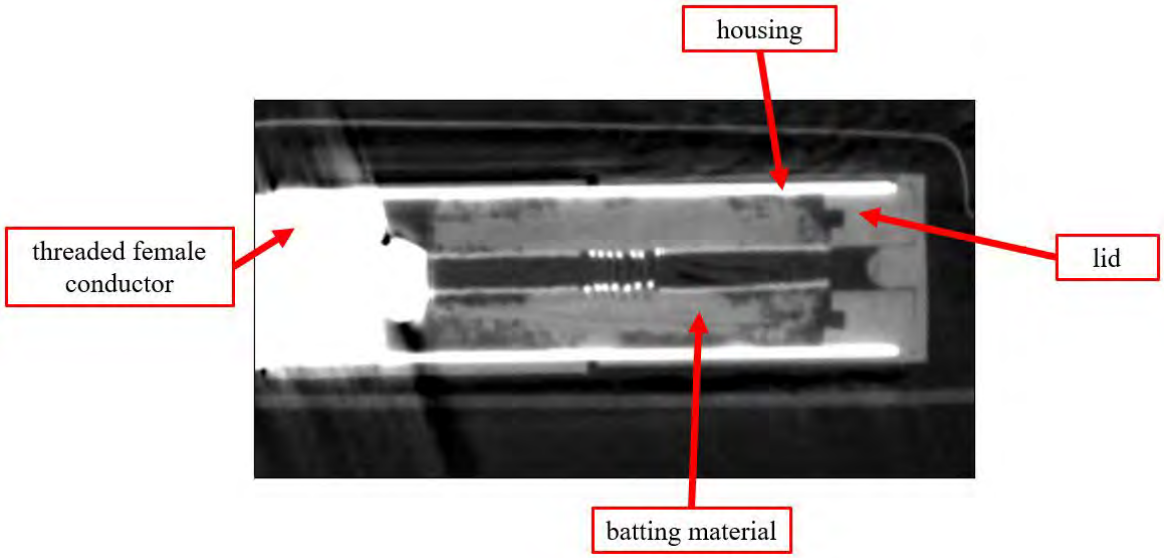
See JX-0596 (Xia '610) at Fig. 2.

Fang states that the disclosed device "includes an oil storage device 14" and "a temporary oil storage device 15" as well as oil conservator 7. JX-0595 (Fang '044) at JX-0595.5.



See JX-0595 (Fang '044) at FIG. 1.

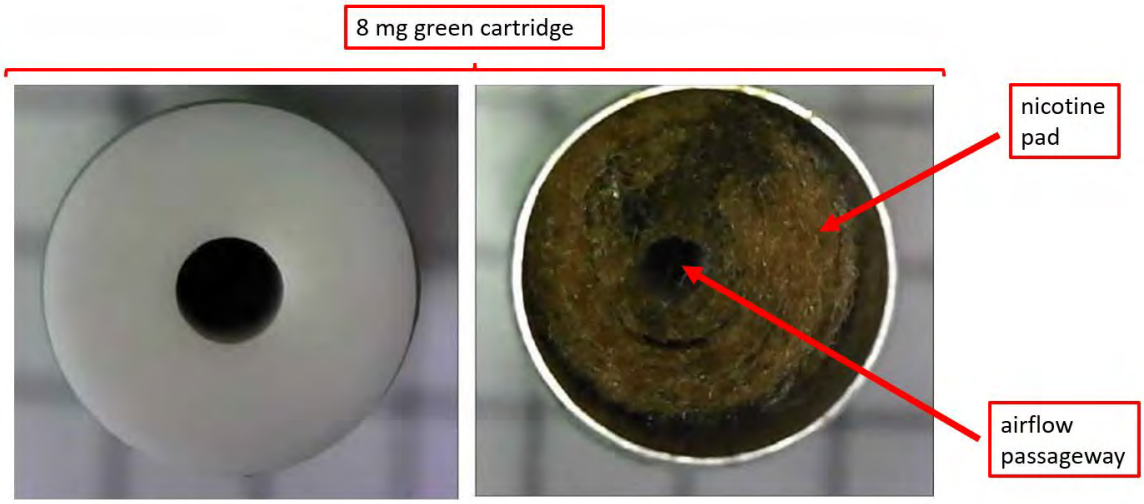
The Red Dragon includes a batting material that holds e-liquid solution.



[redacted]

See RX-0077 (CT Scans of Red Dragon Kit #2) at RX-0077.22 (annotated in red). *See also* RX-0074 (Photos of Red Dragon Kit #1) at RX-0074.55; RX-1126C (Evans Tr.) at 86:25-88:25.

The Smoke Fifty-One Duo includes a nicotine pad that holds e-liquid. *See, e.g.,* JX-0624 at JX-0624.2. The nicotine pad is also referred to as a batting material and is contained within the housing of the cartridge, wrapped around the airflow passageway and heating coil:



See RX-0130C (Yardimici Declaration) at RX-0130C.30 (annotated in red). *See also* 2024-02-29 Conley Depo. Tr. Vol. I at 76:4-6 and 78:19-20.

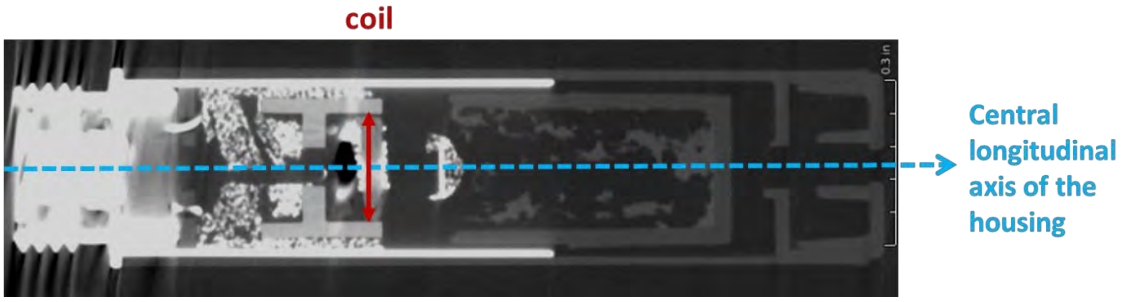
iv. Heating Element

It was well-known in the art that the cartridge included a heating element (which is also called an atomizer), whether separable or integrated with the cartridge, that included a means to heat the e-liquid. When the heating means was made using a heating coil or wire, the heating coil or wire either typically extended in the same direction as the length of the cartridge or extended in a horizontal direction.

In the NPRO, the heating coil extends across the ceramic base, to the central longitudinal axis of the housing.

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[redacted]



See JX-0404 (NPRO Photos) at JX-0404.16 (annotated in red and blue).



See RX-0082 (Photos of NJOY NPRO) at RX-0082.67; (annotated in red); *see also* Bonet Depo. Tr. at 259:14-16.

Xia '610 illustrates the heater 901 for example in Figure 4:

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[redacted]

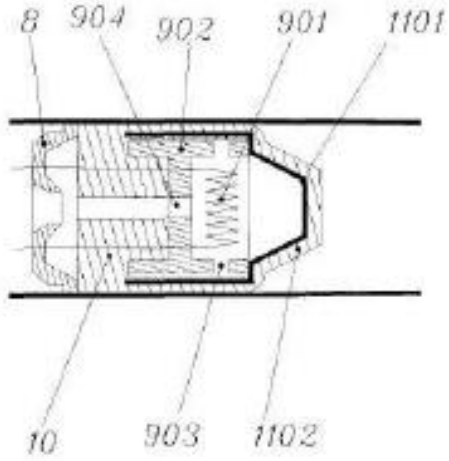


Fig. 4

See JX-0596 (Xia '610) at FIG. 4.

Fang '044 illustrates the heating wire in figures 1 and 2:

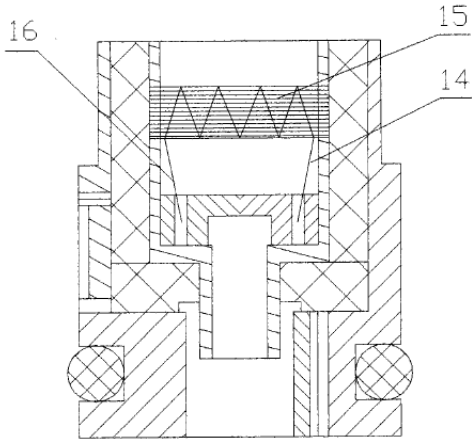


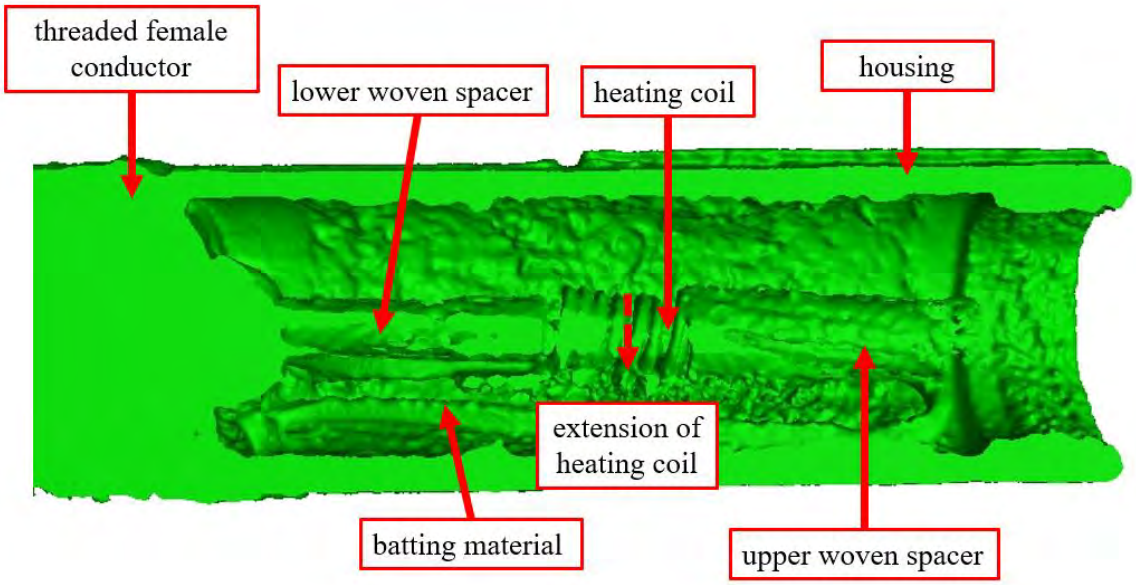
图 2

See JX-0595 (Fang '044) at FIG. 2.

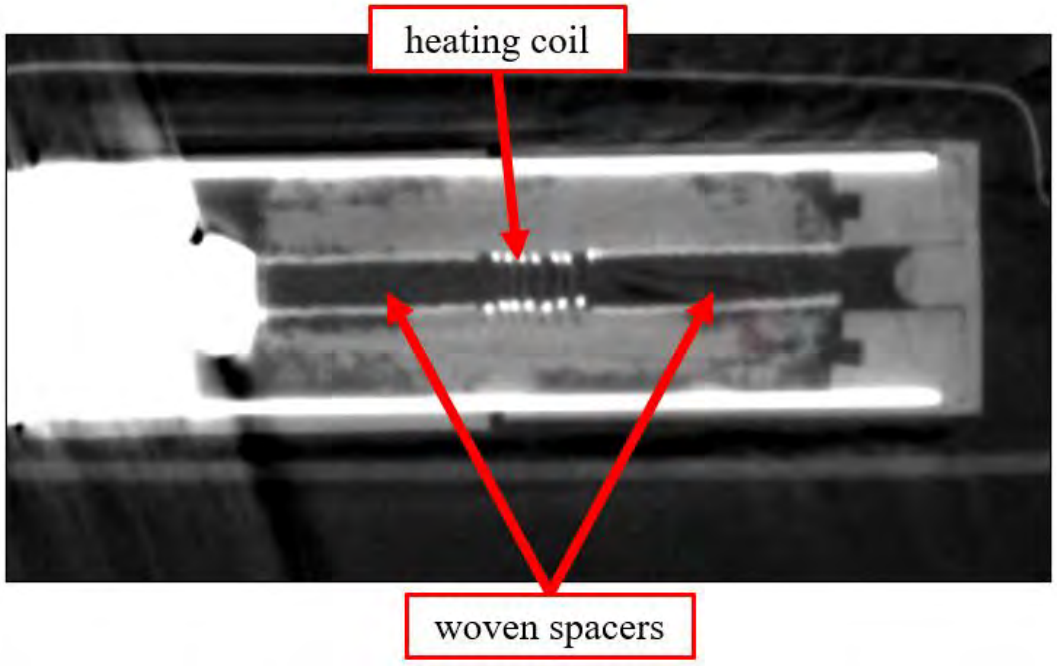
The Red Dragon includes a heating coil, which is a helical-shaped resistive wire, in the housing.

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[redacted]



See RX-0077 (CT Scans of Red Dragon Kit #2) at RX-0077.38. *See also* RX-1126C (Evans Tr.) at 86:25-88:25.

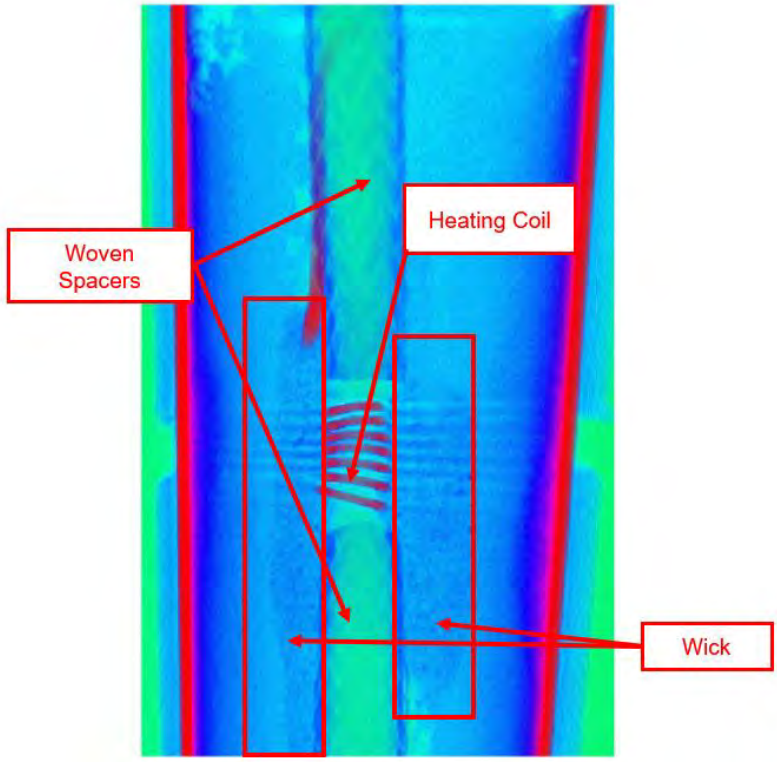


See RX-0077 (CT Scans of Red Dragon Kit #2) at RX-0077.22 (annotated in red). *See also* RX-1126C (Evans Tr.) at 87:15-18.

NJOY Exhibit 2008.0101
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[redacted]

The Smoke Fifty-One Duo includes a heating coil, which is a helical-shaped resistive wire, in the housing.



See RX-0130C (Declaration of Yardimici) at RX-0130C.68; *see also* RX-0130C (Declaration of Yardimici) at RX-0130C.38; RX-0129C (Wang Declaration) at RX-0129C.40.

4. Domestic Industry – Economic Prong

NJOY has failed to satisfy the economic prong of the domestic industry requirement on any of its alleged bases. NJOY alleges that it satisfies the economic prong of the domestic industry requirement (1) for its own investments in its ACE or [redacted] products, (2) for expenses incurred in the process of establishing its [redacted] product, (3) for expenditures of its contract manufacturer, [redacted], and (4) for expenses incurred by its unwilling domestic licensee, RJR. As further detailed below, for each and every of these bases, NJOY has failed to provide critical evidence specific to

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[redacted]

the products alleged to be protected by the Asserted Patents in order to support a finding of domestic industry.

NJOY failed to present any meaningful basis for evaluating the alleged domestic industry with respect to the articles it alleges are protected by the Asserted Patents.

NJOY alone has full access to its own business records but inexcusably fails to meet its burden of proof. Having rushed to file its retaliatory Complaint less than two weeks after buying the Asserted Patents, NJOY irrevocably, and by its own election, capped the relevant domestic industry expenditures to the *eleven days* from acquisition to assertion of the Asserted Patents. RX-1212C.27-28 [redacted] NJOY fails to substantiate any relevant domestic industry expenditures for the ACE or [redacted] during this eleven-day period and even failed to allege product specific investitures.

To create the impression of eligible expenditures, NJOY improperly alleges in millions in ineligible expenses—outside the relevant time period, without any substantiation of relationship to either the ACE or [redacted] products. NJOY even includes numerous expenditures it has admitted are incurred or result from activities taking place ***outside*** of the United States. *See* Section V.A.2. Further, NJOY's expert, Dr. Vander Veen, provides flawed and unreliable allocations. Vander Veen's faulty allocation methodologies do not even attempt to provide product specific allocations. *See* Sections V.A.1 and V.A.3.

NJOY fails to provide any adequate support for its claim of a domestic industry in the process of being established. NJOY has not established that it has a functional prototype for its alleged [redacted] product, let alone one that is available for consumers on the market today. It has not even filed a PMTA for this alleged product and does not even have a prospective launch date, instead saying it has no plans to release the product prior to [redacted] after the

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[redacted]

conclusion of the hearing in this Investigation. *See, e.g.*, RX-1132C (Leistra Tr.) at 151:3-153:3, 156:14-157:1; Section V.A.5.

Furthermore, NJOY's claimed investments are insignificant and dwarfed by the reality of NJOY's own operations, the marketplace, and the industry. [redacted]

Finally, NJOY has failed to provide sufficient evidence that its unwitting licensee, RJR, has any investments specific to products which NJOY claims practice the Asserted Patents. [redacted]. RX-1012C (Vander Veen Tr.) at 24:14-23; CX-2327C (Vander Veen Rpt.) at ¶¶ 6, 121. NJOY attempts to claim alleged RJR investments related to its Vuse Solo products, yet the *expenditures all precede RJR's license to the Asserted Patents*. [redacted]. CX-0019C (Compl. Ex. 22C, Confidential Settlement and License Agreement). Even NJOY's

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[redacted]

expert, Dr. Vander Veen, admitted, his opinion merely regurgitates data from another investigation. Dr. Vander Veen has no basis upon which to conclude that the data from the other, unrelated investigation, are specific to the Vuse Solo products. The 1199 Investigation expenditures are all before [redacted], when RJR first became licensed to the Asserted Patents. CX-0019C (Compl. Ex. 22C, Confidential Settlement and License Agreement). The only other RJR expenses presented are aggregate expenses encompassing the full period of 2019 to 2022 and across four different RJR products (including RJR products not alleged to practice the Asserted Patents in this Investigation), which NJOY itself admits are "at such a high level that it is impossible to tell what the expenditures are for." Complainant's Motion to Certify a Request for Judicial Enforcement of a Subpoena ("NJOY's Motion to Enforce"), EDIS Doc. ID 816376 at 7 (Mar. 19, 2024); *see also* Section V.B. NJOY therefore fails to even quantify RJR's domestic investments, in Vuse Alto or Vuse Solo products respectively, as of the filing of the Complaint in August 2023, let alone providing any plausible basis to evaluate the significance and/or substantiality of an RJR-based domestic industry.

NJOY bears the burden of establishing, by preponderance of evidence, that the domestic industry requirement economic prong is satisfied. *See, e.g*., *Certain Electronic Candle Products and Components Thereof* ("*Electronic Candle*"), Inv. No. 337-TA-1195, Comm'n Op. at 11 (Oct. 4, 2022). NJOY has not done so here. The evidence will show that NJOY has failed to meet its burden to establish that an industry in the United States, relating to the articles allegedly protected by the Asserted Patents, exists or is in the process of being established through (A) significant investment in plant and equipment, (B) significant employment of labor or capital, or (C) substantial investment in the exploitation of the asserted patents, including through engineering, research and development, or licensing, by NJOY or RJR. *See* 19 U.S.C. § 1337(a)(3).

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[redacted]

5. Remedy and Bonding

The evidence will establish that no remedy should be issued in this Investigation. Neither a limited exclusion order ("LEO") nor a cease and desist order ("CDO") is proper, as there is no violation of Section 337 at least because—as discussed above and as evidence will show—JLI does not directly or indirectly infringe the Asserted Patents, the Asserted Patents are invalid and/or unenforceable, no domestic industry exists, and NJOY cannot establish that any of the alleged Domestic Industry Products practice any claim of the Asserted Patents.

Furthermore, no remedy should issue because any remedial orders directed to the Accused Products will have an adverse impact on the public interest, as discussed in detail in Section **Error! R eference source not found.** below and as the evidence will demonstrate. NJOY has not shown and cannot show otherwise.

To the extent the Commission shall find there to be a violation of Section 337 and to issue remedial orders, any LEO should contain a certification provision that would allow JLI to certify that imported products are not subject to the LEO and include an exception for service, repair, and replacement, which will permit JLI to continue servicing its customers' products. Any CDO should similarly include an exception for service, repair, and replacement for JLI products imported and/or purchased prior to the expiration of the period of presidential review, *i.e.*, prior to the effective date of any CDO. In addition, any CDO should also include an exception for compliance verification testing necessary for sales of JLI's products overseas, such as the testing of JUUL2 for sales in the U.K. *See, e.g.*, *Certain Magnetic Data Storage Tapes and Cartridges Containing the Same* ("*Magnetic Data Storage Tapes*"), Inv. No. 337-TA-1012, Comm'n Op. at 132 (Apr. 2, 2018) (finding that denial of an exemption for compliance verification testing, which is necessary even for foreign sales of respondent's products, would amount to a "world-wide" prohibition)

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[redacted]

Moreover, any remedial orders should further be delayed for at least 12 to 18 months (and potentially as much as 24 to 36 months), for the reasons discussed in Section VII below. Such a limited delay is appropriate in order to account for at least the time needed for the JUUL2 System (for which JLI has submitted a PMTA application to the FDA in July 2023), the JUUL [redacted], and/or other effective alternatives to the Accused Products to enter the market. As Dr. Seth will further opine, such a delay is also critical to mitigate the adverse impact that any remedial orders will have on public interest. *See* RX-0157C (Seth Rpt.) at ¶¶ 118-122.

6. Public Interest

It is in the public interest to have JUUL's ENDS products—with the highest effectiveness and switching rates on the market today—available to the millions of U.S. adult smokers who are trying to completely switch off of combustible cigarettes.

Combustible cigarette use is the leading preventable cause of death in the U.S., with more than ***480,000 deaths annually***, and contributes to about 90% of all lung cancer deaths. *See* JX-0650C.11, Expert Report of Dr. Amy K. Madl (Mar. 19, 2024) ("Madl Report"); JX-0243.1 (Tobacco-Related Mortality); JX-0381.4 (How Tobacco Causes Disease); JX-0244.1 (CDC, Health Effects of Cigarette Smoking (2020)). [redacted] JX-0650C.81-94 (Madl Rpt.).

[redacted] RX-1019C (Madl Tr.) at 102:5-104:10.

[redacted] *See* RX-1121C (Murillo Tr.) at 98:5-17 ([redacted]

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[redacted]). [redacted]

[redacted] JX-0035C (Circana IRI and Nielsen IQ Data).

The evidence will also show, and Dr. Seth will opine, that NJOY's arguments that the NJOY Ace can replace the excluded JUUL products are unavailing. For one thing, the NJOY Ace's consistently low market share demonstrates its lack of consumer adoption and acceptance, underscoring its lack of effectiveness as an alternative product to JUUL. *See, e.g.*, RX-1020C (Seth Tr.) at 49:4-24 (explaining connection between market share and consumer acceptance), 115:5-116:8, 183:17-22, 202:16-204:8 (noting NJOY's low market share). For another, NJOY has not shown it has the production capacity to produce enough articles to replace JUUL, even if NJOY were as effective as the JUUL System. If JUUL were taken off the U.S. market, consumers would be deprived of this product with high consumer acceptance, and would be deprived of the ENDS device with the highest proven complete switching rates on the U.S. market.

Simply put, because of the significantly adverse impacts that would result upon exclusion of the JUUL products from the U.S. market, the evidence and expert testimony will show that each of the four public interest factors weigh against issuance of the requested relief in this investigation should the ALJ find a violation of section 337.

Alternatively, due to these public interest concerns as set forth herein, any relief should be delayed in its enforcement for at least 12-18 months, or as many as 24-36 months, to allow for alternatives that are as effective as JUUL to gain regulatory approval and come onto the U.S.

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market, such as JUUL 2, the JUUL [redacted] products, or other alternatives. Such a tailoring of the remedial orders would minimize the adverse effects on the public interest, and mitigate harm to public health. *See, e.g.*, RX-1019 (Madl Tr.) at 59:1-19, 62:5-64:1; JX-0650C.106-107 (Madl Rpt.) (opining the ALJ should delay enforcement of any remedy for at least 12-18 months and as much as 24-36 months to enable additional JUUL products to gain regulatory approval); JX-0647C.61-62 (Seth Rpt.) at ¶¶ 118-122 (opining that delaying the requested remedial orders would mitigate hard to the public interest allowing alternative JUUL products to come onto the market); *Certain Personal Data & Mobile Comm'n Devices*, No. 337-TA-710, Comm'n Op. at 81 (Dec. 29, 2011) (fashioning remedy to include a transition time for consumers to transition from HTC phones to other products, in light of public interest concerns including regulatory issues).

A. Procedural History

On August 22, 2023, NJOY filed a Complaint alleging infringement by JLI of the '881 patent (JX-0004) and the '864 patent (JX-0001).

On September 23, 2023, the Commission instituted an Investigation based on NJOY's Complaint. 88 Fed. Reg. 66050 (Sept. 26, 2023). The Commission delegated the issue of public interest to the ALJ. *Id.* Respondent JLI responded to the complaint on October 30, 2023. EDIS Doc. ID 807308.

A claim construction hearing was held on January 9, 2024. The ALJ issued a claim construction order on April 5, 2024 (Order No. 36).

On April 5, 2024, JLI filed a Motion for Summary Determination of Non-Infringement (Motion No. 1372-031). NJOY opposes the Motion. EDIS Doc. ID 818851. Staff believes that the Motion should be granted with respect to two of the three grounds of non-infringement presented in the Motion, which would result in a determination that the accused JUUL1 and [redacted] products

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do not infringe any asserted claims. EDIS Doc. ID 819706, Attachment A. This motion is currently pending.

On April 26, 2024, NJOY filed a motion for partial termination with respect to certain asserted claims (Motion No. 1372-036). Following the motion, the following patents and claims remain at-issue ("the Asserted Claims"):

Asserted Patent	Asserted Claims
10,334,881	**1** (DI only), 19 (infringement only), 26 (infringement only) [2]
11,497,864	2, **9**, 10, 12, 13, 15, 16, 20, 26[3]

An evidentiary hearing is scheduled for June 5-11, 2024. The Target Date for completion of the Investigation is January 2, 2025.

B. The Private Parties

1. Complainant NJOY

Complainant NJOY, LLC is a corporation organized and existing under the laws of Delaware and has a principal place of business at 9977 N. 90th Street, Suite 160, Scottsdale, AZ 85258. NJOY is an e-cigarette company founded in 2006. NJOY currently offers two commercial product lines: (1) NJOY ACE, a pod vaporizer device that comprises a reusable and rechargeable electronic device and a disposable pod ("ACE POD"); and (2) NJOY Daily, a disposable electronic cigarette that has the same form factor as a traditional cigarette. *See* Complaint at ¶ 7. NJOY is a wholly-owned subsidiary of Altria Group, Inc. ("Altria"), which is a tobacco company and the

[2] Claim 19 of the '881 patent depends from claim 18, which depends from independent claim **16**, neither of which are asserted in this Investigation. Claim 26 also depends from independent claim **16**.

[3] Claim 2 of the '864 patent depends from independent claim **1**, which is not asserted in this Investigation. Claim 26 depends from independent claim **25**, which is also not asserted in this Investigation.

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parent of Philip Morris USA, the leading manufacturer of cigarettes in the United States, which sells products under the brand names Marlboro and Phillip Morris, among others. RX-0179.1-3 (Altria Press Release). Altria acquired NJOY in 2023. *Id*.

Altria and NJOY have both offered "cig-a-like" ENDS products such as the MarkTen and NJOY King products, which they admit were not competitive or successful. *See* CX-0095 (FTC Findings of Fact and Conclusions of Law) at ¶¶ 251-52.



MarkTen "Cig-a-Like"



NJOY King "Cig-a-Like"

Many at Altria recognized that "there was no path for Altria's cig-a-like products to become profitable, because cig-a-likes were 'falling off a cliff' in terms of market share among e-vapor products" after JLI introduced the JUUL System. CX-0095 (FTC Findings of Fact and Conclusions of Law) at ¶ 567.

In the face of this, in May 2017, Altria's Strategy & Business Development group surveyed the market and recommended that Altria pursue an acquisition of JLI. *Id.* at ¶ 305. Altria considered JLI to be the "[t]op performer among adult smokers and vapers" and acknowledged that "'Juul offers key benefits of a hybrid-evapor system,' providing cig-a-like users 'better performance without sacrificing convenience' and open-system users 'convenience in a non cigarette form.'" *Id.* at ¶ 307.

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Altria conducted due diligence—including diligence on JLI's intellectual property portfolio—and subsequently invested $12.8 billion JLI in exchange for a 35% stake in the company. *Id.* at ¶¶ 214-36, 1126. However, Altria ended its relationship with JLI in early 2023, RX-0208.1 (Altria Press Release), and shortly thereafter finalized its purchase of NJOY in March 2023. RX-0179.1-3 (Altria Press Release).

While JLI is a U.S.-based company with extensive domestic presence, [redacted]. RX-1120C (Bonet Tr.) at 10:10-12:6; *see also* RX-1187C.55-56 (NJOY's First Supplemental Response to Interrogatory No. 18).

2. Respondent JLI

JLI is a privately-held corporation organized and existing under the laws of the State of Delaware, with its principal place of business at 1000 F Street NW, Washington D.C. 20004.

JLI is a mission-driven business. In 2007, James Monsees and Adam Bowen founded JLI to design a less harmful alternative to combustible cigarettes for current adult smokers. Existing alternatives—primarily electronic nicotine delivery systems ("ENDS")—were overly complex to use and/or failed to provide a satisfactory user experience. Accordingly, Messrs. Monsees and Bowen set out to design a new ENDS device that would be acceptable to adult smokers and lead to more rapid adoption. After years of effort across product design, engineering, and scientific research, JLI accomplished that goal by developing technology in the United States that revolutionized the ENDS product category.

In 2015, they introduced the JUUL System, which found success in the marketplace due to numerous innovations introduced by JLI. JLI is now a global leader in the ENDS industry, where it is known for numerous, meaningful technological advancements—many of which have been heavily lauded by Altria, the parent company of NJOY. Today, JLI still works on advancing the

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ENDS market with continued innovation and development of novel features, many of which have been incorporated in the JUUL2 System.

C. Overview of the Technology

As JLI's expert witness Karl Leinsing, MSME, PE,[4] will explain, the technology at issue in this Investigation generally relates to electronic vaporizers, or electronic cigarettes (e-cigarettes), which are generally battery powered devices that simulate smoking by vaporizing liquid solution. *See* JX-0632C (Leinsing Opening Rpt.) at ¶¶ 44-70. Modern e-cigarettes were developed by Chinese pharmacist Hon Lik and entered into the market in 2003. *See* RX-0311C.61. By 2009, when NJOY alleges the inventions of the asserted claims were conceived, common components of e-cigarettes included:

- a battery that could either be the same casing as the rest of the components of the e-cigarette (a "one-piece design") or in a separate component from a "cartridge" that includes e-liquid and an "atomizer" for vaporizing the e-liquid (a "two-piece design" where the cartomizer and atomizer are in a non-separable "cartomizer" component or a "three-piece design" where the cartridge and atomizer are also separable), s*ee* JX-0632C (Leinsing Opening Rpt.) at ¶¶ 47-56;
- an absorbent material and/or other solution holding means that holds the e-liquid, s*ee id.* at ¶¶ 63-64;
- a means for heating the e-liquid, s*ee id.* at ¶¶ 65-66;
- a means for vaporizing the e-liquid by fluid/heat transfer;

[4] Mr. Leinsing has significant experience in the field of mechanical engineering, including having worked on many types of e-cigarettes and vaping devices and other devices that use vaporization technology since at least 2001, and is well-qualified as an expert in the technology of the Asserted Patents. *See* JX-0632C (Leinsing Opening Rpt.) at ¶¶ 11-14, 42; JX-0645 (Leinsing Opening Rpt. App'x R (CV)).

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- at least one air inlet and outlet on opposite ends of the e-cigarette, and a pathway in the e-cigarette to allow the airflow to pass through, s*ee id.* at ¶¶ 57-62.

Id. at ¶ 45; *see also* RX-1117C (Conley 3/1/2024 Tr.) at 328:9-331:20 (named inventor admitting that the elements of the "invention" described and identified in the '881 and '864 Patents were well known in the prior art); JX-0001 ('864 patent[5] admitting that most of its claim elements were known in the art).

D. The Asserted Patents

The '881 and '864 Patents are entitled "Electronic Vaporizer" and name Gregory D. Conley and Daniel C. Hillenbrandt as inventors. They have substantively identical specifications and claim an electronic cigarette that was generally well-known years before their alleged priority date.

1. Prosecution History

The '864 Patent issued on November 15, 2022, based on U.S. Patent Application No. 16/451,483, which was filed on June 25, 2019 (JX-0008, '483 File History). The '483 application is a continuation of U.S. Patent Application No. 15/377,522, which was filed on December 13, 2016 (JX-0010, '552 File History), and which issued on July 2, 2019 as the '881 patent. During the prosecution of the '552 application, an amendment was made adding labels for aperture 212 in Figures 2 and 3 on February 27, 2019. *See* JX-0486.455-456, .459-461 ('552 File History). The '552 application is a continuation of U.S. Patent Application No. 14/510,955, which was filed on October 9, 2014 (JX-0521, '955 File History).[6] The '955 application is a continuation of U.S. Patent Application No. 13/594,813, which was filed on August 25, 2012 (JX-0565, '813

[5] Because the specifications are substantively identical, JLI provides exemplary cites to the '864 Patent.

[6] U.S. Patent No. 9,532,604 issued from the '955 application and was asserted, along with the '881 patent, by Fuma in *Fuma International LLC v. R.J. Reynolds Vapor Co.*, No. 1:19-cv-260 (M.D.N.C.).

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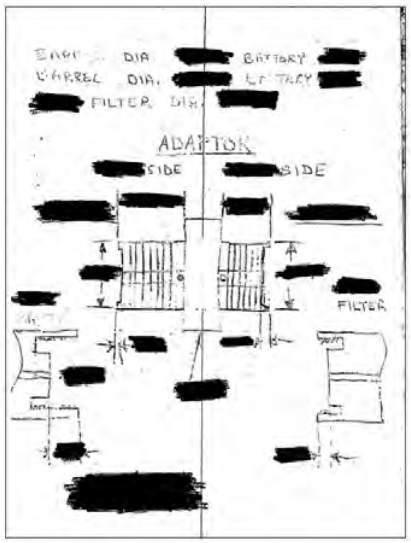
File History). The ’813 application is a continuation-in-part of U.S. Patent Application No. 12/843,917, which was filed on July 27, 2010 (JX-0520, ’917 File History). The ’917 application claims priority to U.S. Provisional Patent Application No. 61/273,097, which was filed on July 31, 2009 (JX-0556, ’097 File History), and U.S. Provisional Patent Application No. 61/527,434 (RX-0851, ’434 File History). *See* JX-0632C (Leinsing Opening Rpt.) at ¶¶ 86-94.

In this Investigation, NJOY asserts that the asserted Patents and claims are entitled to the priority date of the ’917 application, to which they claim priority through a continuation-in-part. NJOY does not claim priority to any earlier applications, including the ’097 or ’434 provisional applications. As discussed further in Section IV.C below, NJOY has failed to meet its burden of proving that the Asserted Patents and claims are entitled to priority date of the ’917 application because that ’917 application does not include a written description that supports every limitation of any asserted claim.

The ’819 provisional application includes just one figure (reproduced below) and page of written description, which describes the invention as allowing for “various [] power sources to connect [] various cartridges and end devices to provider for inter operability.” RX-0039C.5-6; *see also* JX-0632C (Leinsing Opening Rpt.) at ¶ 86. NJOY does not assert its asserted claims are entitled to the priority date of this provisional application.

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The '097 provisional application includes three pages of written description. JX-0556.5-7. It acknowledges that the concept of a 3-part electronic vaporizer and a 2-part electronic vaporizer were known in the art. *Id.* at .5. It describes, at a high level, features that enable interoperability of batteries and cartridges, including electrical contacts on the "cartridge" and "battery" portions of the device, and air inlets on either side of the cartridge to allow air to pass through. *Id.* at .5-6; *see also* JX-0632C (Leinsing Opening Rpt.) at ¶ 87. Again, NJOY does not assert its asserted claims are entitled to the priority date of this provisional application.

The '813 application, which was a continuation-in-part from earlier applications in the family, added a significant amount of material to the disclosure. *See* JX-0632C (Leinsing Opening Rpt.) at ¶¶ 88-89. For example, Applicant amended the specification to include additional embodiments relating to medication delivery and other embodiments and uses for the invention, recite exemplary materials for the heating element to be comprised, disclose examples of the solution used in the vaporizer (including medication and other non-nicotine substances), recite additional exemplary structures for the solution holding medium (*e.g.*, pellets and capsules), and recite a heating element "located in the center airflow." JX-0565.09 (¶ 35), .26-35 (¶¶ 52-78); *see*

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[redacted]

also JX-0632C (Leinsing Opening Rpt.) at ¶ 89. NJOY claims priority to this CIP application but, as discussed below, NJOY has not proven that the '917 application includes the required written description for each limitation of any asserted claim.

2. Disclosure

As JLI's expert witnesses Mr. Leinsing and Werner J.A. Dahm, Ph.D.,[7] will explain, *see* JX-0632C (Leinsing Opening Rpt.) at ¶¶ 72-83; JX-0653C (Dahm Rebuttal Rpt.) at ¶¶ 63-96, the Asserted Patents generally concern battery powered electronic cigarettes, also known as "e-cigarettes." JX-0001 at 1:20-24. The Asserted Patents purport to disclose three inventive modifications to conventional e-cigarettes designs. *See, e.g.*, *id.* at 1:44-2:38. The asserted claims are directed to the first purported invention: separating an electronic vaporizer into at least two coupled parts, one that contains the battery/power source and another—a "cartridge"—that "may include a heating element" and "a solution that is positioned proximate to the heating element." *Id.* at 1:39-59.

But dividing an "e-cigarette" like this was already well known in the art. *See* JX-0632C (Leinsing Opening Rpt.) at ¶ 82. Indeed, NJOY itself recently asserted to the ITC that this approach was "well known and common" at the time. RX-0511.12 (NJOY's Initial Invalidity Contentions, Inv. No. 337-TA-1368). Accordingly, the supposed invention of the asserted patents and claims is unknown. The patents identify no purported invention and, to date, neither has NJOY.

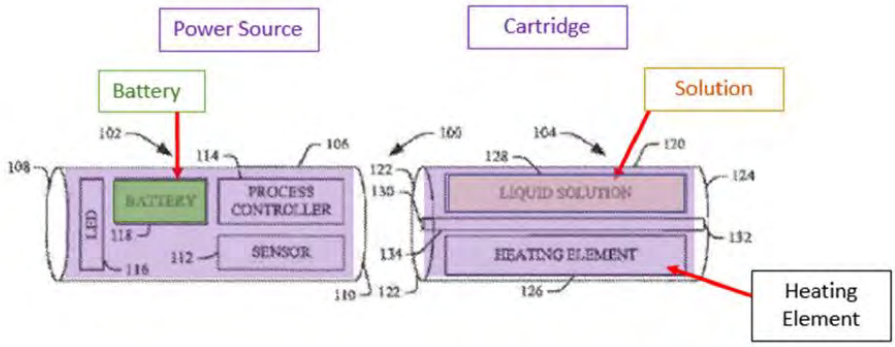
Nonetheless, the patents describe as their invention an e-cigarette "cartridge" that is coupled to a "power source" and comprises a "housing," a "heating element" (powered by the

[7] Dr. Dahm has significant experience in the field of mechanical engineering, including working in the fields of fluid dynamics, thermodynamics, combustion, heat transfer, thermal sciences, and related technical subjects for more than 44 years, and is well-qualified as an expert in the technology of the Asserted Patents. *See* JX-0653C (Dahm Rebuttal Rpt.) at ¶¶ 8-23, 27; JX-0654, App'x A (CV).

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coupled power source and its battery), and a "solution." JX-0001 at 1:39-63. The annotated version of Figure 1 below identifies these features:



Id. at Fig. 1 (annotated); *see also* JX-0632C (Leinsing Opening Rpt.) at ¶ 72; JX-0653C (Dahm Rebuttal Rpt.) at ¶ 63.

With respect to Figure 1, the Asserted Patents describe that the cartridge "housing 120 … has an interior," "a first end 122," and "a second end 124."[8] JX-0001 at 3:46-49, Fig. 1. "The first end 122 of the cartridge 104 comprises a first aperture 130 that is located at approximately the center of the first end 122" and "[t]he second end 124 comprises a second aperture 132 that is located at approximately the center of the second end 124." *Id.* at 4:30-34. Similarly, with respect to Figure 2, the Asserted Patents describe that the cartridge can include first end 206 (the claimed "second end") and second end 208 (the claimed "first end"). *See id.* at 5:65-6:42. The first end 206 comprises a first aperture 210 (the claimed "second aperture"), and the second end 208 comprises a second aperture 212 (the claimed "first aperture"). *Id.*; *see also* JX-0632C (Leinsing Opening Rpt.) at ¶¶ 73-74; JX-0653C (Dahm Rebuttal Rpt.) at ¶¶ 65-68.

[8] Confusingly, the patents switch, in one embodiment another, which ends (and which apertures thereon) are designated first and second. For clarity, this brief applies the claimed approach, where the first end is the end adapted to couple with the power source, and the second end is the opposite end from which a user inhales vapor.

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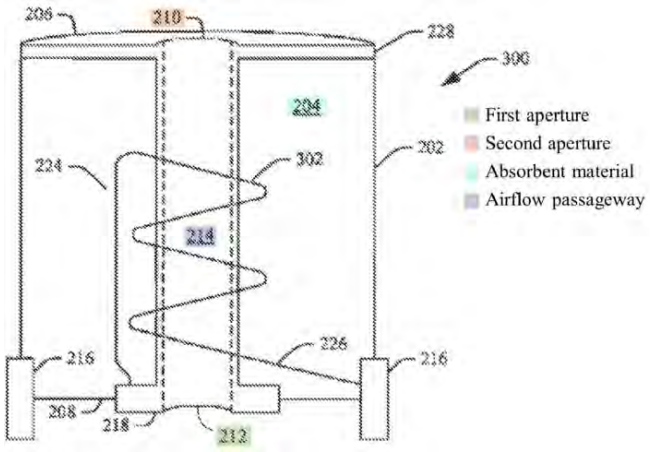
The Asserted Patents describe that an airflow passageway extends along a central axis from the first opening on the first end to a second opening on the opposite end. *See* JX-0653C (Dahm Rebuttal Rpt.) at ¶¶ 70-80. For example, with respect to Figure 1, the specification describes that "[a]n airflow passageway 134 extends between the first aperture 130 and the second aperture 132 axially proximate to the center of the housing 120" and is configured to provide for airflow from the first to the second aperture. JX-0001 at 4:35-37, 17:39-43. The patents similarly describe in connection with Figures 2 and 3 an airflow passageway as defined by a physical structure that extends in a straight, central line from the first to the second aperture. *Id.* at 6:21-26.[9] And named co-inventor Daniel Hillenbrandt testified in previous litigation proceedings that making sure that "[t]he central air tube, the central axial air passageway" "was open" was the innovation provided by the Asserted Patents over the prior art. *See* JX-0549 (Hillenbrandt 12/5/2019 Tr.) at 92:8-94:25.

As shown in Figure 3 (an annotated version of which is reproduced below), a solution holding medium 204, depicted as "an absorbent material," stores the solution that is ultimately vaporized. JX-0001 at 6:3-5.

[9] The prosecution history of the Asserted Patents is also consistent with these disclosures that an airflow passageway is a physical structure that extends centrally along the entire distance from the first aperture to the second aperture. JX-0653C (Dahm Rebuttal Rpt.) at ¶¶ 73-77; JX-0520.94, .99-100 ('917 File History, distinguishing US 2009/027379 to Thorens (RX-0527)); JX-0521.15-16 ('955 File History); JX-0008.9009-9010 ('864 Patent File History, distinguishing US2009/00953111 to Han (RX-0001)).

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Id. at Fig. 3 (annotated). This absorbent material of the solution holding medium can be, for example, a batting, pellets, or capsules. *Id.* at 4:7-11; JX-0653C (Dahm Rebuttal Rpt.) at ¶¶ 94-96. Solution holding medium 204 surrounds the central airflow passageway 214. JX-0001 at 7:57-61.

The Asserted Patents describe that the heating element must be able to output heat. JX-0001 at 3:65-67. They also disclose several ways in which a heating element can both heat and vaporize solution held in the absorbent material/solution holding medium. *See, e.g.*, *id.* at 3:65-4:6, 4:53-64, 6:43-7:21, 8:56-9:4, 11:4-37. For example, in connection with Figure 2, the Asserted Patents describe a generic heating element that is made of a wicking material to draw solution from the absorbent material so that the heating element can both heat and vaporize it:

> The ***heating element 222 can comprise wicking material that draws the liquid solution from the absorbent material 204*** towards the heating element 222. … When a user draws a breath by way of airflow passageway 214, a circuit is closed, thereby providing current to the heating element 222. The heating element 222 ***acts to vaporize the liquid solution in the absorbent material 204, and the resulting vapor is received by the user***.

Id. at 6:43-58.

The Asserted Patents also describe that the heating element can be a center post (*e.g.*, 218 in Figure 3) made of a conductive material. *Id.* at 6:32-36, 7:52-67. The patents further describe

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that the configuration, position, and material of this heating element embodiment allow it to both heat and vaporize solution:

> In this exemplary cartridge 300, the center post 218 may be of a conductive material, such as a conductive ceramic or metallic material, and may act as a heating element. Thus, walls of the airflow passageway 214 may become heated when a user draws on the cartridge, thereby altering the state of the liquid solution in the absorbent material 204 to a vapor for provision to the user.

Id. at 7:52-67.

The Asserted Patents also describe that the heating element may be an integrated material as part of the airflow passageway that heats the solution holding medium, *see id.* at 6:32-36, 7:52-67; or it can be a helical coil (*e.g.*, 302 in Figure 3) wrapped around a passageway (*e.g.*, 214 in Figure 3), *see id.* at 7:7-14, 8:1-22. JX-0632C (Leinsing Opening Rpt.) at ¶¶ 75-77; JX-0653C (Dahm Rebuttal Rpt.) at ¶¶ 85-86, 89. The specification describe that this structure and position allow the heating element to heat and vaporize liquid solution. For example:

> In yet another example, as will be show in in greater detail below, the ***heating element 222 can be helical in nature and may wrap around the airflow passageway 214***, which may be constructed of ceramic. In such a design, the wall of airflow passageway 214 may have apertures, permeable, or conductive to heat ***such that the vaporized liquid solution may be provided to the user***.

Id. at 7:7-14.

E. The Products at Issue

The products at issue include vaporizer devices, such as electronic nicotine delivery systems ("ENDS"), cartridges or pods used therewith, and components thereof (cartridge housings, atomizers, subassemblies, device subassemblies, chargers).

1. Accused Products

NJOY accuses JLI's JUUL System (hereinafter, the "JUUL1 System") and the JUUL2 System of infringement. *See* RX-1079C (Vallee Opening Rpt.) at ¶¶ 14-17. Also at issue are the

[redacted]

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[redacted] which NJOY alleges to also infringe the Asserted Patents. *Id.* at ¶¶ 1065, 1312. The accused JUUL1 System, JUUL2 System, and [redacted] will be collectively referred to as the "Accused JLI Products."

i. The JUUL1 System

Unlike conventional ENDS products that looked and felt like cigarettes, a category of products known as "cig-a-likes," the JUUL1 System revolutionized the stagnant ENDS industry, creating a brand-new category of pod-based products. *See, e.g.*, JX-0081.28-29 (PMTA, § B.1 Executive Summary); RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (Disassembled JUUL Pod). It employed a unique form factor that represented a stark departure from prior conventional thinking about ENDS product design and from contemporary industry norms, abandoning traditional cigarette designs altogether, including the cylindrical shape and threaded screw-on components. Its innovative design distinguished it from the "round white stick" iconography found in both traditional combustible cigarettes and previous alternative e-cigarettes.



JX-0609.1 (SuperSmoker) (showing a conventional cig-a-like ENDS product).

[redacted]

[redacted]

Cf. JX-0519C.9, .11 (JUUL1 PMTA (July 2020), § G.1 Product Design and Properties); JX-0484C.18 (Wingle Rpt. on JUUL Rev. 4 (Model: JJP001)).

The JUUL1 System (as shown above) comprises the JUUL Device (hereinafter, the "JUUL1 Device") and the JUULpod (hereinafter, the "JUUL1 Pod"). *Id.* It is "[redacted]." *See, e.g.*, JX-0519C.8 (JUUL1 PMTA (July 2020), § G.1 Product Design and Properties); RX-0937.2 (Website, About JUUL – Shop); JX-0653C (Dahm Rebuttal Rpt.) at ¶¶ 121-152; JX-0658C (App'x F to Dahm Rebuttal Rpt.). The JUUL1 System is intended for "delivering a satisfying nicotine experience designed for adult smokers looking to move away from traditional cigarettes." RX-0937.2 (Website, About JUUL - Shop); JX-0653C (Dahm Rebuttal Rpt.) at ¶ 121. The JUUL1 System was designed to contribute to JLI's "core mission to eliminate combustible cigarettes." RX-0937.4 (Website, About JUUL - Shop); JX-0653C (Dahm Rebuttal Rpt.) at ¶ 121; *see also* RX-1118C (Monsees Tr.) at 60:20-61:10.

a. The JUUL1 Device

The JUUL1 Device includes a rechargeable battery and electronic circuitry that controls device functionality. JX-0519C.11, .13 ([redacted]); JX-0653C (Dahm Rebuttal Rpt.) at ¶¶ 126-127. It is designed to hold and deliver power to the heating coil in a JUUL1 Pod in order to heat e-liquid delivered through a separate wick, creating an aerosol of the e-liquid. JX-0519C.11 ([redacted]); JX-0653C (Dahm Rebuttal Rpt.) at ¶ 126. The JUUL1 Device is inhalation-activated [redacted]. JX-0519C.11 (JUUL1 PMTA (July 2020), § G.1 Product Design and Properties); JX-0653C (Dahm Rebuttal Rpt.) at ¶ 126. When this happens, a JUUL1 Device delivers power to the heating coil contained within a JUUL1 Pod. JX-

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0519C.11 ([redacted]); JX-0653C (Dahm Rebuttal Rpt.) at ¶ 126. [redacted] JX-0653C (Dahm Rebuttal Rpt.) at ¶ 126.

b. The JUUL1 Pods

The JUUL1 Pod is comprised of a tank, [redacted], and a mouthpiece. *See, e.g.*, JX-0519C.23-25 (JUUL1 PMTA (July 2020), § G.1 Product Design and Properties); JX-0515C.4-7 (N-2-1-1-Pod Description); JX-0497C (JUUL1 Pod Assembly); JX-0513C (JUUL1 Tank); JX-0495C (JUUL1 [redacted]); JX-0512C (JUUL1 [redacted]); JX-0155C (JUUL1 Mouthpiece); JX-0188C (CAD for JUUL1 Pod); JX-0496C (JUUL1 [redacted]); JX-0156C (JUUL1 [redacted]); JX-0487C (JUUL1 [redacted]); JX-0143C (JUUL1 [redacted]); RX-0883C (JUUL1 Pod CAD); JX-0653C (Dahm Rebuttal Rpt.) at ¶ 128.

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[redacted]



JX-0519C.4 (JUUL1 PMTA (July 2020), § G.1 Product Design and Properties).

The JUUL1 Pod is assembled as a whole with each of the aforementioned components, as each component is necessary for proper functionality of the JUUL1 Pod (and therefore for the proper functionality of any e-cigarettes comprised of JUUL1 System components). JX-0653C (Dahm Rebuttal Rpt.) at ¶¶ 130-152; JX-0658C (App'x F to Dahm Rebuttal Rpt.). For example, as described in several documents, the JUUL1 Pod "i[redacted]" that is not "[redacted]." JX-0519C.23, .55 (JUUL1 PMTA (July 2020), § G.1 Product Design and Properties); JX-0653C (Dahm Rebuttal Rpt.) at ¶¶ 130-134, 139-141. Further, when imported and sold, the JUUL1 Pod includes all of the aforementioned components. JX-0519C.23-24, .53-54 ([redacted]).

ii. [redacted]

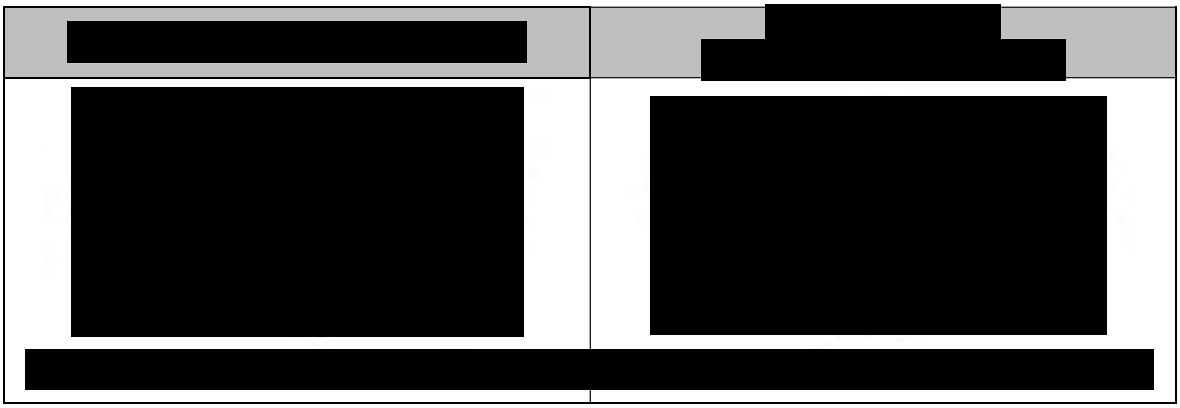
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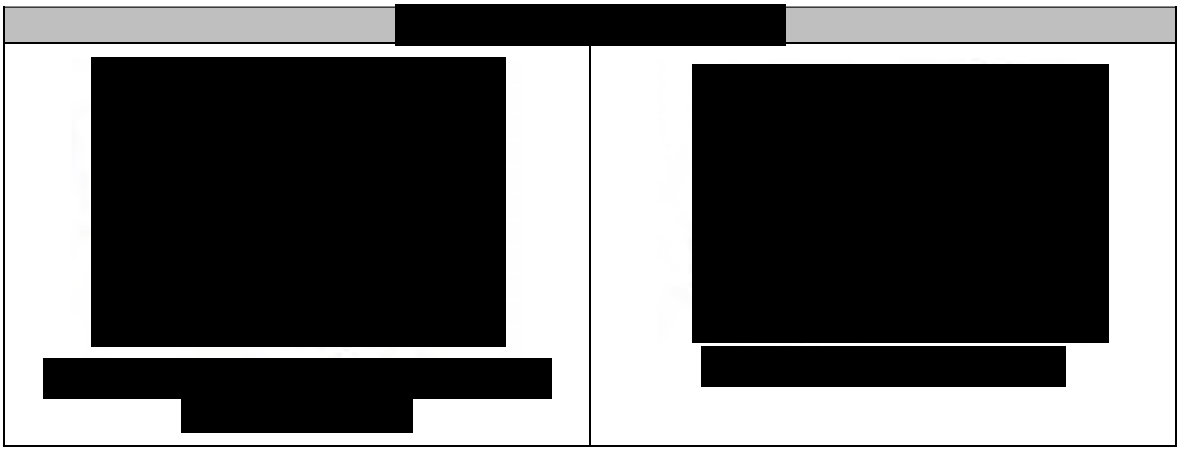
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[redacted]



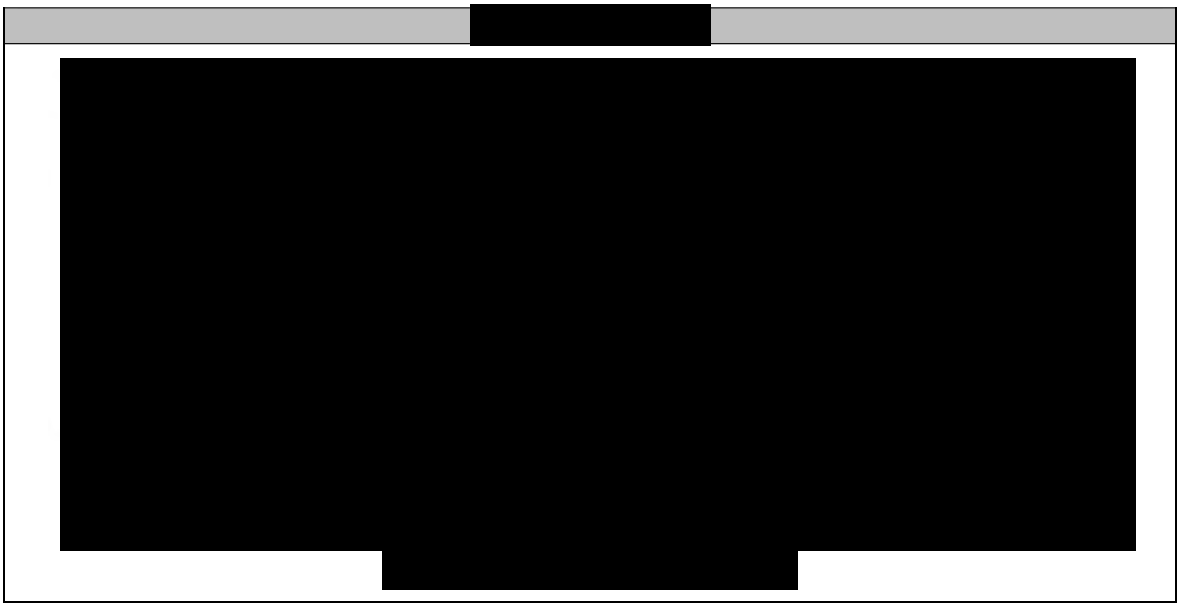
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[redacted]

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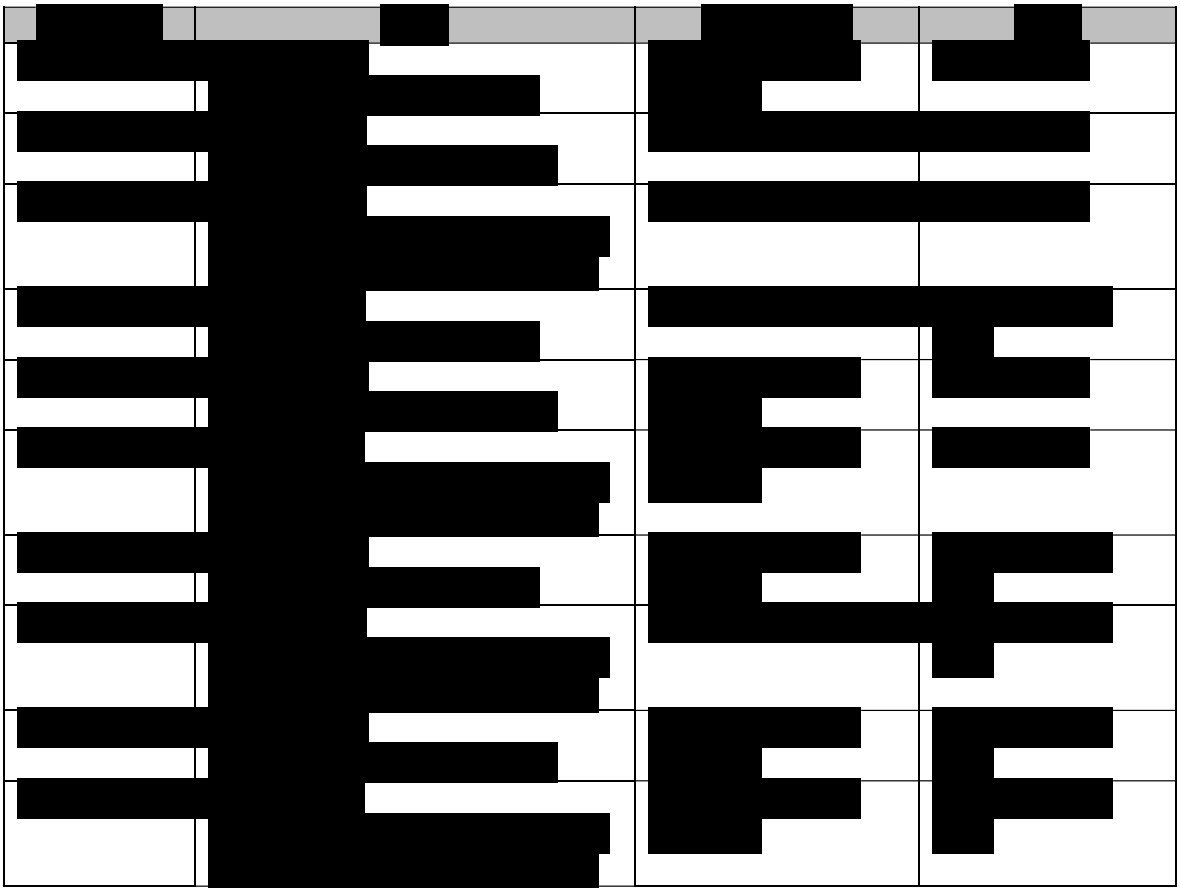
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[redacted]

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[redacted]

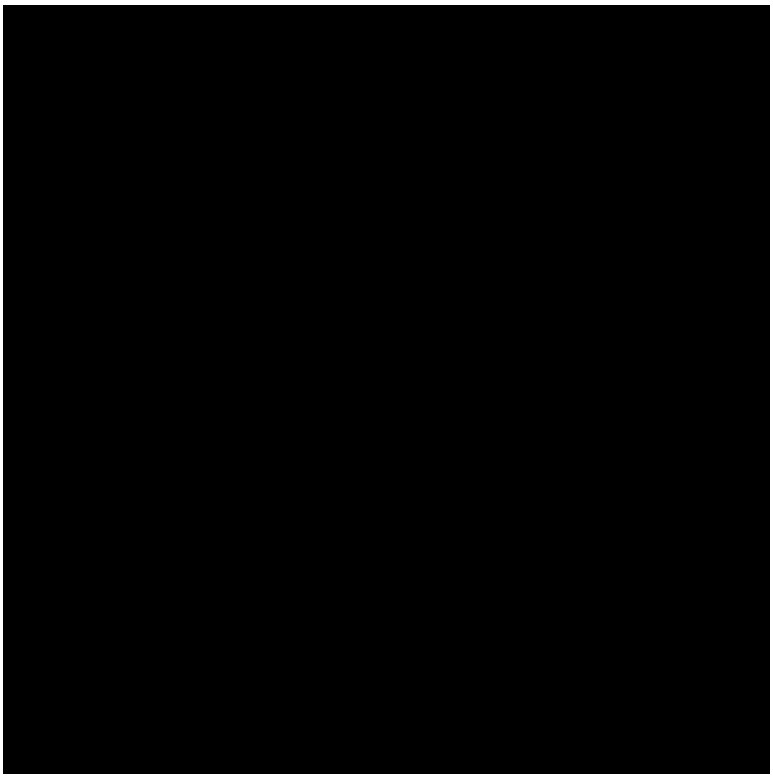


iii. The JUUL2 System

The JUUL2 System comprises the JUUL2 Device and the JUUL2 Pod. RX-0930C.10-31 ([redacted]. It is designed to "[redacted]." *Id.* at .10. The JUUL2 System "[redacted]." RX-0318C.2 (JUUL2 PMTA transmittal); JX-0653C (Dahm Rebuttal Rpt.) at ¶ 168; *see also* JX-0653C (Dahm Rebuttal Rpt.) at ¶¶ 166-182; JX-0659C (App'x G to Dahm Rebuttal Rpt.).

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[redacted]



RX-0930C.11 (JUUL2 PMTA, § 2.2 Product Design and Formulations).

a. The JUUL2 Device

[redacted] RX-0930C.12 (JUUL2 PMTA, § 2.2 Product Design and Formulations); JX-0653C (Dahm Rebuttal Rpt.) at ¶¶ 172-173. [redacted] *Id.* [redacted] RX-0930C.12 (JUUL2 PMTA, § 2.2 Product Design and Formulations); JX-0653C (Dahm Rebuttal Rpt.) at ¶ 172.

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[redacted]

b. The JUUL2 Pods

As acknowledged by NJOY, the JUUL2 Pod "[redacted]." RX-1447C.14 (JUUL 2 UK Competitor Product Evaluation). The JUUL2 Pod is comprised of a JUUL2 tank with an [redacted]. *See* RX-0930C.26 (JUUL2 PMTA, § 2.2 Product Design and Formulations); JX-0180C (JUUL2 Pod assembly); JX-0183C (JUUL2 [redacted]); JX-0185C (JUUL2 [redacted]); JX-0186C (JUUL2 [redacted]); JX-0181C (JUUL2 [redacted]); JX-0182C (JUUL2 [redacted]); JX-0179C (JUUL2 [redacted]); JX-0187C (JUUL2 [redacted]); JX-0188 (JUUL2 Pod CAD); JX-0653C (Dahm Rebuttal Rpt.) at ¶ 174. [redacted] JX-0483C.20-22 (Technical Product Analysis, Object: "Juul 2 pod System"); RX-1447C.11-12, .14-15 (JUUL 2 UK Competitor Product Evaluation); JX-0518C (EVT Design Release); RX-0930C.26-30 (JUUL2 PMTA, § 2.2 Product Design and Formulations); JX-0542C.15-21 (JUUL2 Product Overview). [redacted] *Id.*

2. Domestic Industry Products

NJOY bases its domestic industry contentions on four products: (1) the NJOY ACE System that NJOY currently sells; (2) the NJOY [redacted] System that is currently under development; and two RJR products—(3) the Vuse Alto System and (4) the Vuse Solo System. RX-1079C (Vallee Opening Rpt.) at ¶ 19. None of these products were developed by the inventors and the original owner of the Asserted Patents. *Id.* at ¶ 20. Indeed, the NJOY ACE and [redacted] products were not even licensed to the Asserted Patents until NJOY acquired the patents just eleven (11) days before it filed its Complaint. JX-0002; JX-0004; JX-0005; RX-1212C.

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[redacted]

i. The NJOY ACE and [redacted] Systems

The NJOY ACE System and [redacted] System (collectively, the "NJOY DI Systems") are pod-based ENDS systems sold by NJOY. RPX-0012 (ACE Device); RPX-0013 (ACE Pod); RPX-0014 [redacted] Device); RPX-0015 ([redacted] Pod). NJOY had no involved in the design, development, or manufacture of the ACE System at all. JX-0567; RX-1120C (Bonet Tr.) at 10:22-25, 11:1-19; RX-1115C (Hawes) at 84:18-25 [redacted] Instead, it simply [redacted]. RX-1115C (Hawes Tr.) at 79:5-10, 82:22-83:8. [redacted]. *See, e.g.*, *id.* at 83:4-8, 83:10-17; RX-1123C (Unangst Tr.) at 39:5-17, 40:4, 43:4-14, 62:15-21; RX-1079C (Vallee Opening Rpt.) at ¶ 1405; JX-0653C (Dahm Rebuttal Rpt.) at ¶¶ 183-202; JX-0661C (App'x I to Dahm Rebuttal Rpt.). [redacted]. *See, e.g.*, RX-1115C (Hawes Tr.) at 83:10-17; RX-1132C (Leistra Tr.) at 150:13-153:14.

The ACE System includes the ACE Device (*i.e.*, a reusable and rechargeable electronic device containing a battery and electrical components) and the ACE Pods (*i.e.*, replaceable e-liquid pods made for use with the ACE Device), and the [redacted]. *See, e.g.*, JX-0567; CX-0001C (Compl.) at ¶ 7; *see also* JX-0653C (Dahm Rebuttal Rpt.) at ¶¶ 183-202; JX-0660C (App'x H to Dahm Rebuttal Rpt.); JX-0498C ([redacted]); JX-0558C (NJOY ACE PMTA, Sec 2.3.1); JX-0557C [redacted]; RPX-0012 (ACE Device); RPX-0013 (ACE Pod); JX-0562C (ACE CAD); RX-0934C [redacted] CAD).

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[redacted]



The NJOY DI Systems include materially similar pods, with the main exception being that the ACE Pod includes contacts that are flush with the bottom of the pod while the [redacted]. *See, e.g.*, RX-1115C (Hawes) at 27:2-28:3, 78:17-79:10; JX-0557C.18 ([redacted]); CX-0017C (Silverman Decl.) at ¶ 6; *see also* JX-0653C (Dahm Rebuttal Rpt.) at ¶ 184; RX-1079C (Vallee Opening Rpt.) at ¶¶ 1405-1406; RPX-0012 (ACE Device); RPX-0013 (ACE Pod); RPX-0013 (ACE Pod); JX-0562C (ACE CAD); RX-0934C ([redacted]).

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[redacted]



The ACE Pod and [redacted] (collectively, the "NJOY DI Pods") are inserted into the ACE Device and [redacted] (collective, the "NJOY DI Devices") and retained magnetically. JX-0558C.10 (NJOY ACE PMTA, § 2.3.1); JX-0498C.39 ([redacted] JX-0558C.7 (NJOY ACE PMTA, § 2.3.1); JX-0498C.13 ([redacted] MIP App. A). The section view of the ACE Pod identifies the main components, including the tank with integrated air path, tank seal, atomizer (including the ceramic wick and S-shaped heating trace), atomizer cover, atomizer seal, and bottom cover.

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[redacted]

[redacted]

ii. The Vuse Alto System

The Vuse Alto System is a pod-based ENDS system sold by RJR. *See, e.g.*, JX-0580C.18-24, .30-36, .61 (Vuse Alto PMTA, § H); JX-0653C (Dahm Rebuttal Rpt.) at ¶¶ 203-207. It consists of a power unit that works in combination with closed e-liquid cartridges. JX-0580C.15-38 (Vuse Alto PMTA, § H).

[redacted]

Id. at .15 (Vuse Alto PMTA § H).

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[redacted]



Id. at .16 (Vuse Alto PMTA § H).

The Vuse Alto power unit and cartridge are [redacted] *Id.* at .18-24 (Vuse Alto PMTA § H); JX-0653C (Dahm Rebuttal Rpt.) at ¶ 204. When activated, the heater in the Vuse Alto cartridge [redacted] JX-0580C.61 (Vuse Alto PMTA § H). The exploded view of the Vuse Alto cartridge identifies the main component, [redacted]

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[redacted]



Id. at .16-30 (Vuse Alto PMTA § H) (annotated in red).

iii. The Vuse Solo System

The Vuse Solo System is a pod-based ENDS system sold by RJR. *See, e.g.*, JX-0577C.12-46 (Vuse Solo PMTA, § H); JX-0653C (Dahm Rebuttal Rpt.) at ¶¶ 208-215. It consists of a power unit (the Vuse Solo Power Unit) that works in combination with closed e-liquid cartridges (the Vuse Solo Cartridges). *Id*.



JX-0577C.12 (Vuse Solo PMTA, § H).

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[redacted]

The Vuse Solo Cartridge is attached to the Vuse Solo Power Unit using [redacted] *Id.* at .12, 14-19 (Vuse Solo PMTA, § H); JX-0653C (Dahm Rebuttal Rpt.) at ¶ 209. [redacted] JX-0577C.42 (Vuse Solo PMTA, § H).

The Vuse Solo cartridges have two designs: G1 (or Generation 1) and G2 (or Generation 2). JX-0577C.25 (Vuse Solo PMTA, § H); JX-0653C (Dahm Rebuttal Rpt.) at ¶ 211. The G1 Vuse Solo Cartridges and G2 Vuse Solo Cartridges can be used interchangeably with the Vuse Solo Power Unit [redacted] JX-0577C.25-45 (Vuse Solo PMTA, § H); JX-0653C (Dahm Rebuttal Rpt.) at ¶ 211.

[redacted]

II. LEGAL STANDARDS

To establish a violation of Section 337(a)(1)(B), a complainant must prove: (A) the importation of goods into the United States, the sale for importation, or the sale within the United States after importation; (B) infringement of a valid and enforceable United States patent; and

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[redacted]

(C) the existence of a domestic industry in the United States. *See* 19 U.S.C. §§ 1337(a)(1)(B), 1337(a)(2); *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1365 (Fed. Cir. 2003).

A. Infringement

Determining infringement generally requires two steps. "First, the claim must be properly construed to determine its scope and meaning. Second, the claim as properly construed must be compared to the accused device or process." *Absolute Software, Inc. v. Stealth Signal, Inc.*, 659 F.3d 1121, 1129 (Fed. Cir. 2011). "A claim for patent infringement must be proven by a preponderance of the evidence, which [] requires proving that infringement was more likely than not to have occurred." *Warner-Lambert Co. v. Teva Pharm. USA, Inc.*, 418 F.3d 1326, 1341 n.15 (Fed. Cir. 2005); *see also Certain Mobile Devices with Multifunction Emulators*, Inv. No. 337-TA-1170 ("*Mobile Devices*"), Comm'n Op. at 17 (July 27, 2021) (EDIS Doc. ID 748039).

1. Claim Construction

The starting point for claim construction is the ordinary and customary meaning of terms as understood by a POSITA in the context of the intrinsic evidence, *i.e.*, the language used in the claims as a whole, the patent's specification, and the file history. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-17 (Fed. Cir. 2005) (*en banc*). There are "only two exceptions to this general rule: (1) when a patentee sets out a definition and acts as his own lexicographer, or (2) when the patentee disavows the full scope of the claim term either in the specification or during prosecution." *Golden Bridge Tech., Inc. v. Apple Inc.*, 758 F.3d 1362, 1365 (Fed. Cir. 2014) (citation omitted). The Federal Circuit has repeatedly warned courts "not to import" extraneous limitations from the specification into the claims. *See, e.g.*, *Playtex Prods., Inc. v. Procter & Gamble Co.*, 400 F.3d 901, 906 (Fed. Cir. 2005).

Courts may consider "extrinsic evidence," "including expert and inventor testimony, dictionaries, and learned treatises." *Phillips*, 415 F.3d at 1317. Extrinsic evidence is "less

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significant than the intrinsic record in determining the legally operative meaning of claim language." *Id*. (quotations omitted). It is "less reliable" than the intrinsic evidence "in determining how to read claim terms" and "may not be used to vary, contradict, expand, or limit the claim language" from how it is used in the patent. *SkinMedica, Inc. v. Histogen, Inc.*, 727 F.3d 1187, 1195, 1210 (Fed. Cir. 2013) (citations omitted).

The Supreme Court has explained that "a patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014). Because claims are presumed valid and definite, patent challengers bear the burden to prove indefiniteness by clear and convincing evidence. *See Aero Prods. Int'l, Inc. v. Intex Recreation Corp.*, 466 F.3d 1000, 1015 (Fed. Cir. 2006).

2. Direct Infringement

"Infringement may only be found where the accused product or process contains each limitation of the claim, either literally or under the doctrine of equivalents." *Warner-Lambert Co. v. Teva Pharm. USA, Inc.*, 418 F.3d 1326, 1340 (Fed. Cir. 2005).

i. Literal Infringement

Literal infringement of a claim occurs when every limitation recited in the claim appears in the accused device, *i.e.*, when the properly construed claim reads on the accused device exactly. *Riles v. Shell Exploration & Production Co*., 298 F.3d 1302, 1308 (Fed. Cir. 2003); *Allen Eng'g Corp. v. Bartell Indus.*, 299 F.3d 1336, 1345 (Fed. Cir. 2002); *Amhil Enters., Ltd. v. Wawa, Inc.*, 81 F.3d 1554, 1562 (Fed. Cir. 1996). If "even one claim limitation is missing or not met, there is no literal infringement." *MicroStrategy Inc. v. Bus. Objects, S.A.*, 429 F.3d 1344, 1352 (Fed. Cir. 2005); *Cephalon, Inc. v. Watson Pharms., Inc.*, 707 F.3d 1330, 1340 (Fed. Cir. 2013) ("If any

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claim limitation is absent from the accused device, there is no literal infringement as a matter of law.").

ii. Doctrine of Equivalents

"'To prove infringement, a [Complainant] must prove the [literal] presence of each and every claim element or its equivalent' in the accused product." *Tomita Techs. USA, LLC v. Nintendo Co.*, 681 F. App'x 967, 970 (Fed. Cir. 2017) (quoting *Star Sci., Inc. v. R.J. Reynolds Tobacco Co.*, 655 F.3d 1364, 1378 (Fed. Cir. 2011)); *see also Texas Instruments, Inc. v. Cypress Semiconductor Corp.*, 90 F.3d 1558, 1566 (Fed. Cir. 1996). The Supreme Court has set forth two tests evaluating equivalence: the insubstantial differences test and the function-way-result test. *UCB, Inc. v. Watson Labs, Inc.*, 927 F.3d 1272, 1284 (Fed. Cir. 2019); *see also Voda v. Cordis Corp.*, 536 F.3d 1311, 1326 (Fed. Cir. 2008).

An accused product may be deemed to infringe a claim if the accused product is shown, by a preponderance of the evidence, to contain elements or perform steps that are equivalent to every requirement of the claim. *Optical Disc Corp.*, 208 F.3d at 1335. An element or step is equivalent to a requirement of a claim that is not met literally if a person having ordinary skill in the art would have considered the differences between them to be insubstantial, or would have found that the structure or action performed by the accused product: (1) performs substantially the same function, (2) works in substantially the same way, and (3) achieves substantially the same result as the requirement of the claim. *Id*. For the structure or action of the accused product to be considered interchangeable under the doctrine of equivalents, the structure or action must have been known at the time of the alleged infringement to a person having ordinary skill in the field of technology of the patent. *Warner-Jenkinson*, 520 U.S. at 38.

"Each element contained in a patent claim is deemed material to defining the scope of the patented invention, and thus the doctrine of equivalents must be applied to individual elements of

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the claim, not to the invention as a whole." *Warner-Jenkinson*, 520 U.S. at 29. The well-settled "all elements rule" requires that the doctrine of equivalents must be applied to any finding of infringement under the doctrine of equivalents. *See, e.g.*, *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 938-939, 949 (Fed. Cir. 1987); *King Instruments Corp. v. Perego*, 72 F.3d 855 (Fed. Cir. 1995), *cert. denied*, 517 U.S. 1188 (1996); *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1347 (Fed. Cir. 2001). Further, if a theory of equivalence would eviscerate the claim taken as a whole, there is no infringement under the doctrine of equivalence. *Warner-Jenkins*, 520 U.S. at 39 n.8.

Proof of equivalence cannot be conclusory, but rather must be shown with "particularized testimony and linking argument." *Texas Instruments*, 90 F.3d at 1566. "These evidentiary requirements assure that the fact-finder does not, 'under the guise of applying the doctrine of equivalents, erase a plethora of meaningful structure and functional limitations of the claim on which the public is entitled to rely in avoiding infringement.'" *Id*. at 1567 (quoting *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 935 (Fed. Cir. 1987) (en banc)).

a. Prosecution History Estoppel

Prosecution history estoppel "arises when an applicant during prosecution either makes an argument evincing a 'clear and unmistakable surrender' of subject matter, *Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 979 (Fed. Cir. 1999), or narrows a claim 'to avoid prior art, or otherwise to address a specific concern … that arguably would have rendered the claimed subject matter unpatentable.'" *Spectrum Pharms., Inc. v. Sandoz Inc.*, 802 F.3d 1326, 1337 (Fed. Cir. 2015) (quoting *Warner-Jenkins Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 n.8 (1997)). "The applicant is then estopped from later invoking the doctrine of equivalents to recapture the surrendered subject matter." *Spectrum Pharms.*, 802 F.3d at 1337 (citing *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 734 (2002)). "The patentee bears the burden of

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rebutting the application of prosecution history estoppel." *Spectrum Pharms.*, 802 F.3d at 1337 (citing *Festo Corp.*, 535 U.S. at 740-41).

3. Indirect Infringement

A complainant may also assert indirect infringement under 35 U.S.C. § 271(b) (*i.e.*, induced infringement) and 35 U.S.C. § 271(c) (*i.e.*, contributory infringement). *See Certain Home Vacuum Packaging Machines*, Inv. No. 337-TA-496, Order No. 44 at 2 n.2 (Mar. 3, 2004) (EDIS Doc. ID 202088) ("It is true that the scope of Section 337 reaches all forms of infringement, including direct, contributory and induced infringement.") (citing *Certain Hardware Logic Emulation Systems & Components Thereof*, Inv. No. 337-TA-383, Comm'n Op. at 18-19 (Apr. 1, 1998) (EDIS Doc. ID 46684)). Both theories of indirect infringement require an underlying act of direct infringement. *See Carborundum Co. v. Molten Metal Equip. Innovations, Inc.*, 72 F.3d 872, 876 n.4 (Fed. Cir. 1995).

i. Induced Infringement

To prove induced infringement under 35 U.S.C. § 271(b), a complainant "must show direct infringement, and that the alleged infringer 'knowingly induced infringement and possessed specific intent to encourage another's infringement.'" *Toshiba Corp. v. Imation Corp.*, 681 F.3d 1358, 1363 (Fed. Cir. 2012) (quoting *i4i Ltd. P'Ship v. Microsoft Corp.*, 598 F.3d 831, 851 (Fed. Cir. 2010)). "Direct infringement is a required element to establish induced infringement." *Id*. at 1364. "To satisfy the direct infringement requirement, the [complainant] 'must either point to specific instances of direct infringement or show that the accused device necessarily infringes the patent in suit.'" *Id*. (quoting *ACCO Brands, Inc. v. ABA Locks Mfr. Co.*, 501 F.3d 1304, 1313 (Fed. Cir. 2007)).

"The accused infringer must have knowingly aided and abetted direct infringement and [took] active steps to encourage, recommend, or promote infringement." *A/S v. Lupin Ltd*, 87 4th

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1361, 1370 (Fed. Cir. 2023) (citation omitted). Further, "[t]he intent element requires knowledge that the induced acts constitute patent infringement[.]" *Roche Diagnostics Corp. v. Meso Scale Diagnostics, LLC*, 30 F.4th 1109, 1118-1119 (Fed. Cir. 2022) (citations omitted). "Examples of active steps include 'advertising an infringing use or instructing how to engage in an infringing use.'" *Id*. (quoting *Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913, 936 (2005)). In order to prove inducement liability, "instructions may not merely describe an infringing mode; they must 'evidence intent to encourage infringement.'" *Id*. (quoting *Takeda*, 785 F.3d at 631(citations omitted)).

ii. Contributory Infringement

To prove contributory infringement under 35 U.S.C. § 271(c), a complainant must show, with respect to a particular component of a device that practices an asserted claim, that "the alleged contributory infringer knew that the combination for which [its] component was especially designed was both patented and infringing.'" *Koninklijke Philips N.V. v. Zoll Med. Corp.*, 656 F. App'x 504, 522 (Fed. Cir. 2016) (quoting *Aro Mfg. Co. Convertible Top Replacement Co.*, 377 U.S. 467, 488 (1964)). "A party is liable for contributory infringement under 35 U.S.C. § 271(c) if: (1) 'there is direct infringement,' (2) 'the accused infringer had knowledge of the patent,' (3) 'the component has no substantial noninfringing uses,' and (4) 'the component is a material part of the invention.'" *Id*. (quoting *Aro Mfg. Co. Convertible Top Replacement Co.*, 377 U.S. 467, 488 (1964)). "Under 35 U.S.C. § 271(c) there is no liability for contributory infringement for selling an article that is 'suitable for non-infringing use.'" *A/S v. Lupin Ltx.*, 87 F.4th 1361, 1373 (Fed. Cir. 2023) (quoting 35 U.S.C. § 271(c)).

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B. Invalidity and Other Defenses

1. Burdens of Proof

The respondent has the burden of establishing invalidity of any patent or any claim thereof by clear and convincing evidence. *Microsoft Corp. v. i4i Ltd. Partnership*, 564 U.S. 91, 95 (2011). "'While the ultimate question of patent validity is one of law,' the same factual questions underlying the PTO's original examination of a patent application will also bear on an invalidity defense in an infringement action." *Id*. at 96-97 (quoting *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17 (1966)); *see also id*. at 96 (explaining that to receive patent protection, a claimed invention must fall within one of the express categories of patentable subject matter under § 101, and be novel under § 102 and nonobvious under § 103). "[T]he party asserting invalidity[] must [] show by clear and convincing evidence that the asserted patent is invalid. Once it has established a *prima facie* case of invalidity and its burden is met, 'the party relying on validity is then obligated to come forward with evidence to the contrary.'" *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1305 (Fed. Cir. 2008) (quoting *Raltson Purina Co. v. Far-Mar-Co., Inc.*, 772 F.2d 1570, 1573 (Fed. Cir. 1985)).

The patentee has the burden to prove it is entitled to the alleged priority date where neither the PTO nor the Board have made an affirmative determination. *See PowerOasis Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1305 (Fed. Cir. 2008) ("When neither the PTO nor the Board has previously considered priority, there is simply no reason to presume that claims in a CIP application are entitled to the effective filing date of an earlier filed application. Since the PTO did not make a determination regarding priority, there is no finding for the district court to defer to.").

2. Anticipation

"For a prior art reference to anticipate in terms of 35 U.S.C. § 102, every element of the claimed invention must be identically shown in a single reference." *Diversitech Corp. v. Century*

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Steps, Inc., 850 F.2d 675, 677 (Fed. Cir. 1988). The elements shown in the prior art reference must be "arranged as in the claim." *Lindemann Maschinenfabrik GMBH v. Am. Hoist & Derrick Co.*, 730 F.2d 1452, 1458-59 (Fed. Cir. 1984); *Net MoneyIN, Inc. v. VeriSign, Inc*., 545 F.3d 1359, 1369 (Fed. Cir. 2008). And "the identical invention must be shown in as complete detail as contained in the patent claim." *Tf3 Ltd. v. Tre Milano, LLC*, 894 F.3d 1366, 1374 (Fed. Cir. 2018).

3. Obviousness

A patent claim is invalid "if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. § 103. The ultimate determination of whether an invention would have been obvious is a legal question that it is based on "underlying factual inquiries including: (1) the scope and content of the prior art; (2) the level of ordinary skill in the art; (3) the differences between the claimed invention and the prior art; and (4) objective evidence of nonobviousness." *Eli Lilly and Co. v. Teva Pharms. USA, Inc.*, 619 F.3d 1329, 1336 (Fed. Cir. 2010).

In assessing the prior art, courts "consider whether a PHOSITA would have been motivated to combine the prior art to achieve the claimed invention." *In re NuVasive, Inc*., 842 F.3d 1372, 1381 (2016) (alteration omitted) (quoting *In re Warsaw Orthopedic, Inc.*, 832 F.3d 1327, 1333 (Fed. Cir. 2016)). "Obviousness requires, *inter alia*, a finding that a skilled artisan would have been motivated to combine the teachings of prior art in such a way that the combination discloses the claimed limitations." *Elekta Ltd. v. Zap Surgical Sys., Inc.*, 81 F.4th 1368, 1374 (Fed. Cir. 2023) (citing *OSI Pharms., LLC v. Apotex Inc.*, 939 F.3d 1375, 1382 (Fed. Cir. 2019)). "The inquiry into the existence of a motivation to combine assumes that a skilled artisan is a person of ordinary creativity with common sense, common wisdom, and common knowledge." *Id*. (citing *Fleming v. Cirrus Design Corp.*, 28 F.4th 1214, 1223 (Fed. Cir. 2022)). "Thus, an obviousness determination

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does not always require prior art to expressly state a motivation for every obviousness combination." *Id*. "Nor does an obviousness showing 'require that a particular combination must be the preferred, or the most desirable, combination described in the prior art to provide motivation for the current invention.'" *Id*. (*Novartis Pharms. Corp. v. West-Ward Pharms. Int'l Ltd.*, 923 F.3d 1051, 1059 (Fed. Cir.)).

i. Objective Indicia of Nonobviousness

Analysis of objective indicia of nonobviousness, also known as "secondary considerations," is one of four factors considered in the obviousness analysis under Section 103. *Eli Lilly and Co. v. Teva Pharms. USA, Inc.*, 619 F.3d 1329, 1336 (Fed. Cir. 2010); *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966); *see also Dystar Textilfarben GmbH v. C.H. Patrick Co*., 464 F.3d 1356, 1361 (Fed. Cir. 2006). Objective indicia of nonobviousness "can include copying, long felt but unresolve need, failure of others, commercial success, unexpected results created by the claimed invention, unexpected properties of the claimed invention, licenses showing industry respect for the invention, awards or other industry praise for the invention, and skepticism of skilled artisans before the invention." *Power Integrations, Inc. v. Fairchild Semiconductor Int'l Inc.*, 711 F.3d 1348, 1368 (Fed. Cir. 2013).

a. Nexus

"To be relevant, such a secondary consideration must have a 'legally and factually sufficient connection' (nexus) to the claimed invention." *Yita LLC v. MacNeil IP LLC*, 69 F.4th 1356, 1363 (Fed. Cir. 2023) (quoting *Fox Factory, Inc. v. SRAM LLC*, 944 F.3d 1366, 1373 (2019)); *see also Fox Factory*, 944 F.3d at 1373 (quoting *Henny Penny Corp. v. Frymaster LLC*, 936 F.3d 1324, 1332 (Fed. Cir. 2019)) ("In order to accord substantial weight to secondary considerations in an obviousness analysis, 'the evidence of secondary considerations must have a "nexus" to the claims, *i.e.*, there must be a legally and factually sufficient connection between the evidence and

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the patented invention.'"). "A nexus between the merits of the claimed invention and evidence of secondary considerations is required in order for the evidence to be given substantial weight in an obviousness decision." *Ruiz v. A.B. Chance Co.*, 234 F.3d 654, 668 (Fed. Cir. 2000).

A nexus between the objective indicia and the claimed invention may be presumed to exist but *only* if the objective evidence is tied to a product that is exactly *coextensive* with the claimed features. *Polaris Indus., Inc. v. Arctic Cat, Inc.*, 882 F.3d 1056, 1072 (Fed. Cir. 2018) (citing *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1130 (Fed. Cir. 2000)). Coextensive in the obviousness inquiry means that "objective evidence of non-obviousness must be commensurate in scope with the claims which the evidence is offered to support." *MeadWestVaco Corp. v. Rexam Beauty & Closures, Inc.*, 731 F.3d 1258 (Fed. Cir. 2013); *see also Bayer Pharma AG v. Watson Labs., Inc.*, 183 F. Supp. 3d 579, 589 (D. Del. 2016) ("In other words, the secondary considerations, must be commensurate in scope—'coextensive'—with the claimed features of the invention." (citation omitted)). Allegations of infringement or practicing of the asserted claims are insufficient—if a product might include unclaimed features that impact the product's functionality, there is no presumed nexus, regardless of whether the product would infringe or practice the claims. *See Fox Factory, Inc.,* 944 F.3d 1366 at 1375.

If the Patent Owner cannot be afforded a presumption of nexus, *e.g.*, because the products are not shown to be exactly coextensive with the claimed features, a nexus must be shown by proving "that the evidence of secondary considerations is the 'direct result of the unique characteristics of the claimed invention.'" *Fox Factory, Inc.,* 944 F.3d at 1373-74 (quoting *In re Huang*, 100 F.3d 135, 140 (Fed. Cir. 1996)). That is, there must be a nexus between the evidence of secondary considerations and aspects of the claim that are novel and not already in the prior art. *In re Haui-Hung Kao,* 639 F.3d 1057, 1068-69 (Fed. Cir. 2011) ("Where the offered secondary

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consideration actually results from something other than what is both claimed and *novel* in the claim, there is no nexus to the merits of the claimed invention." (emphasis in original)).

Moreover, even if a nexus exists, secondary considerations of nonobviousness "simply cannot overcome [a] strong prima facie showing of obviousness." *Sundance, Inc. v. DeMonte Fabricating Ltd.*, 550 F.3d 1356, 1368 (Fed. Cir. 2008). "Although secondary considerations must be taken into account, they do not necessarily control the obviousness conclusion." *Bayer Pharma AG v. Watson Labs., Inc.*, 183 F. Supp. 3d 579, 589 (D. Del. 2016). "The patentee bears the burden of showing that a nexus exists." *Fox Factory*, 944 F.3d at 1373 (quoting *WMS Gaming Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1359 (Fed. Cir. 1999)). Similarly, the patentee bears the burden "to present evidence of secondary considerations of nonobviousness to overcome" the patent challenger's prima facie showing of obviousness. *See Sealy Tech., LLC v. SSB Mfg. Co.*, 825 F. App'x 801 807 (Fed. Cir. 2020); *Bayer Pharma AG v. Watson Labs., Inc.*, 183 F. Supp. 3d 579, 589 (D. Del. 2016); *Hitkansut LLC v. United States*, 127 F. Cl. 101, 113 (2016).

4. Invalidity Under Section 112

i. Indefiniteness

The claims of a patent must "particularly point out and distinctly claim the subject matter which the applicant regards as [its] invention." 35 U.S.C. § 112. Specifically, "a patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 891, 901 (2014).

ii. Written Description

To comply with the written description requirement of 35 U.S.C. § 112, the patent specification must "contain a written description … of the manner and process of making and using [the invention] is such full, clear, concise and exact terms as to enable any person skilled in

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the art which it pertains, or with which it is most nearly connected, to make and use the same." 35 U.S.C. § 112(a); *see also Regents of the Univ. of Cal. v. Eli Lilly & Co.*, 119 F.3d 1559, 1566 (Fed. Cir. 1997). A patent's written description "must clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed." *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (*en banc*); *see also Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991) (noting that the disclosure of a patent must "convey with reasonable clarity to those skilled in the art, as of the filing date sought, [the inventor] was in possession of the invention").

"An applicant demonstrates that [it] was in possession of the invention by describing the claimed invention with all of its limitations using such descriptive means as words, structures, figures, diagrams, and formulas that fully set forth the invention." *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997). "[T]he written description inquiry looks to the four corners of the specification to discern the extent to which the inventor(s) had possession of the invention as broadly claimed. The knowledge of ordinary artisans may be used to inform what is actually in the specification, but not to teach limitations that are not in the specification, even if those limitations would be rendered obvious by the disclosure in the specification." *Rivera v. Int'l Trade Comm'n*, 857 F.3d 1315, 1322-23 (Fed. Cir. 2017) (citations omitted).

iii. Enablement

Section 112(a)[10] "requires a specification to include 'a written description of the invention, and of the manner of and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art … to make and use the same.'" *Amgen Inc. v. Sanofi*,

[10] The Supreme Court has acknowledged that "[e]ven as Congress has revised the patent laws over time, it has left this 'enablement' obligation largely intact." *Amgen Inc. v. Sanofi*, 143 S. Ct. 1243, 1251 (2023) (citing 35 U.S.C. §§ 111, 112).

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143 S. Ct. 1243, 1251 (2023). "[T]he specification must enable the full scope of the invention as defined by its claims. The more one claims, the more one must enable." *Id*.; *see also Continental Paper Bag Co.* v. *Eastern Paper Bag Co.*, 210 U. S. 405, 419 (1908) ("[T]he claims measure the invention."). "[T]he 'enablement inquiry necessarily depends on an interpretation of the claims.'" *McRO, Inc. v. Bandai Namco Games Am., Inc.*, 959 F.3d 1091, 1100 (Fed. Cir. 2020) (quoting *Liquid Dynamics Corp. v. Vaughan Co.*, 449 F.3d 1209, 1224 & n.2 (Fed. Cir. 2006)).

"Once the precise scope of the claimed invention is defined, the question is whether undue experimentation is required to make and use the full scope of embodiments of the invention claimed." *Id*. "Whether undue experimentation is required 'is not a single, simple factual determination, but rather is a conclusion reached by weighing many factual considerations.'" *Id*. (quoting *ALZA Corp. v. Andrx Pharm. LLC*, 603 F.3d 935, 940 (Fed. Cir. 2010)); *see also In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988). "Enablement is not precluded by the necessity for some experimentation such as routine screening. However, experimentation needed to practice the invention must not be undue experimentation." *In re Wands*, 858 F.2d at 737. In analyzing undue experimentation, [courts] consider the facts first enumerated in *In re Wands*." *Idenix Pharms. LLC v. Gilead Scis. Inc.*, 941 F.3d 1149, 1156 (Fed. Cir. 2019). Those factors are:

(1) the quantity of experimentation necessary;
(2) how routine any necessary experimentation is in the relevant field;
(3) whether the patent discloses specific working examples of the claimed invention;
(4) the amount of guidance presented in the patent;
(5) the nature and predictability in the field;
(6) the level of ordinary skill in the art; and
(7) the scope of the claimed invention.

Id. (citing *In re Wands*, 858 F.2d at 737).

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"Conducting the *Wands* analysis has routinely involved concrete identification of at least some embodiment or embodiments asserted not to be enabled—including what particular products or processes are or may be within the claim, so that breadth is shown concretely and not just as an abstract possibility, and how much experimentation a skilled artisan would have to undertake to make and use those products or processes." *McRo, Inc.*, 959 F.3d at 1100 (citing *ALZA*, 603 F.3d at 939-43). While "what is reasonable [experimentation] in any case will depend on the nature of the invention and the underlying art," however, "in allowing that much tolerance, courts cannot detract from the basic statutory requirement that a patent's specification describe the invention 'in such full clear, concise, and exact terms as to enable any person skilled in the art ' to 'make and use' the invention."

C. Domestic Industry

In patent proceedings under Section 337, a complainant must establish that an industry "relating to the articles protected by the patent … exists or is in the process of being established" in the United States. 19 U.S.C. § 1337(a)(2). Commission precedent establishes that this domestic industry requirement consists of an "economic prong" and a "technical prong." *See, e.g.*, *Alloy, Inc. v. ITC*, 342 F.3d 1361, 1375 (Fed. Cir. 2003); *see also Certain Video Game Systems & Controllers*, Inv. No. 337-TA-743, Comm'n Op. at 6-7 (Apr. 14, 2011) (EDIS Doc. ID 448596).

i. Technical Prong

The technical prong of the domestic industry requirement is satisfied in patent proceedings when it is determined that the complainant practices at least one claim of each of the patents at issue. *Certain Microlithographic Machines & Components Thereof*, Inv. No. 337-TA-468, ID at 63 (Jan. 29, 2003) (EDIS Doc. ID 180059), *unreviewed*, Notice at 2 (Mar. 17, 2003) (EDIS Doc. ID 179239). The test for determining whether a complainant is practicing a claim of a patent at

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issue is essentially the same as that for infringement, *i.e.*, it requires that a complainant's domestic industry product practice at least one claim of the asserted patent. *Alloc*, 342 F.3d at 1375.

ii. Economic Prong

"When a section 337 investigation is based on allegations of patent infringement, the complainant must show 'an industry in the United States, relating to the articles protected by the patent … exists or is in the process of being established.'" *Certain Replacement Automotive Lamps (II)*, Inv. No. 337-TA-1292, Comm'n Op. at 12 (Mar. 22, 2024) (public version) ("*Replacement Automotive Lamps II*") (quoting 19 U.S.C. § 1337(a)(2)). An industry is considered to exist in the United States with respect to the articles protected by the patent where a complainant demonstrates one or more of the following:

> (A) significant investment in plant and equipment;
>
> (B) significant employment of labor or capital; or
>
> (3) substantial investment in its exploitation, including engineering, research and development, or licensing.

19 U.S.C. § 1337(a)(3); *Replacement Automotive Lamps II*, No. 337-TA-1292, Comm'n Op. at 12. "A complainant has the burden to show by a preponderance of the evidence every element of a violation of section 337, including that the economic prong of the domestic industry requirement is satisfied." *Id*. at 12-13 (citing *Certain Electronic Candle Products and Components Thereof*, Inv No. 337-TA-1195, Comm'n Op. at 11 (Oct. 4, 2022)). The Commission typically assesses a complainant's domestic industry as of the time of the complaint is filed. *See Motiva, LLC v. Int'l Trade Comm'n*, 716 F.3d 596, 600-01 (Fed Cir. 2013).

"Section 337 requires that a complainant prove that a domestic industry exists for each patent asserted in an investigation based on patent infringement. Where one domestic industry product practices only one patent, without overlapping protection of other patents, a complainant

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must show significant or substantial investments in each product separately." *Replacement Automotive Lamps II*, Inv. No. 337-TA-1292, Comm'n Op. at 13 (citing *John Mezzalingua Assoc., Inc. v. Int'l Trade Comm'n*, 660 U.S. F.3d 1322, 1330-31 (Fed. Cir. 2011)). The language of Section 337 explicitly requires that the domestic industry "relat[e] to the articles protected by the patent." 19 U.S.C. § 1337(a)(3). "By contrast, nothing in the statute suggests that a complainant can pad its domestic industry numbers in articles protected by one patent with investments in articles protected by an entirely different patent." *Replacement Automotive Lamps II*, Inv. No. 337-TA-1292, Comm'n Op. at 14.

To show "significance" under Sections 337(a)(3)(A)-(B), a complainant must demonstrate investments in the United States specific to the articles protected by the asserted patents. To show "substantiality" under Sectionz337(a)(3)(C), a complainant must demonstrate that the investments in the United States have a nexus to the asserted patents. *See Certain Integrated Circuit Chips and Products Containing the Same*, Inv. No. 337-TA-859, Comm'n Op. at 42-43 (Aug. 22, 2014) (public version) ("[T]here may be circumstances in which the domestic investment is so unrelated to the asserted patent that no nexus can be imputed."). "[A] complainant must demonstrate a sufficiently focused and concentrated effort to lend support to a finding of a 'substantial investment.'" *Certain Electronic Devices, Including Mobile Phones, Portable Music Players and Computers*, Inv. No. 337-TA-701, Init. Det. at 5 (unreviewed). Such an analysis is conducted on a "case-by-case basis in light of all the relevant facts." *Certain Printing and Imaging Devices and Components Thereof*, Inv. No. 337-TA-690, Comm'n Op. at 33 n.11 (Feb. 17, 2011) (public version) ("*Printing and Imaging Devices*"). As the Federal Circuit noted, "[a]ll of the foregoing requires a quantitative analysis in order to determine whether there is a 'significant' increase or attribution by virtue of the claimant's asserted commercial activity in the United States." *Certain*

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Sleep-Disordered Breathing Treatment Systems and Components Thereof, Inv. No. 337-TA-890 (Remand), Final Init. Det., at 6-7 (Nov. 10, 2016) (unreviewed in relevant part) ("*Sleep-Disordered Breathing Treatment*") (quoting *Lelo Inc. v. Int'l Trade Comm'n*, 786 F.3d 879, 883 (Fed. Cir. 2015)). It is well-settled that "[q]ualitative factors cannot compensate for quantitative data that indicate insignificant investment and employment." *Lelo*, F.3d at 885.

A complainant must provide sufficient detail to demonstrate that its investments are specifically tied to the products asserted to practice the patents. *See Certain Stringed Musical Instruments and Components Thereof*, Inv. No. 337-TA-586, Comm'n Op. at 26 (May 16, 2008) (public version) ("*Stringed Musical Instruments*"); *Certain Polyimide Films, Products Containing Same, and Related Methods*, Inv. No. 337-TA-722, Init Det. at 277-80 (May 10, 2012) (unreviewed in relevant part). Further, where a complainant relies on components purchased from domestic third-parties, "[t]here must be some evidence of investment made in capital or labor as a result of the purchased components; for example, the magnitude of labor expended to produce the components, or the amount the suppliers invested in their equipment to fulfil the complainant's orders." *Sleep-Disordered Breathing*, Inv. No. 337-TA-890 (Remand), Final Init. Det., at 7 (quoting *Lelo*, F.3d at 884). "The purchase of so-called 'crucial' components from third-party U.S. suppliers are insignificant to satisfy the 'significant investment' or 'significant employment of labor or capital' criteria of § 337 where there is an absence of evidence that connects the costs of the components to an increase of investment or employment in the United States." *Sleep-Disordered Breathing*, Inv. No. 337-TA-890 (Remand), Final Init. Det., at 7 (quoting *Lelo*, F.3d at 885).

D. Remedy

The Commission has "broad discretion in selecting the form, scope, and extent of the remedy" in a Section 337 proceeding. *Viscofan, S.A. v. ITC*, 787 F.2d 544, 548 (Fed. Cir. 1986).

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Upon finding a violation of Section 337, "the Commission … shall direct that the articles concerned … be excluded from entry into the United States" unless the public interest warrants exemption from such exclusion. 19 U.S.C. § 1337(d)(1). The Commission also is authorized to issue cease and desist orders in addition to an exclusion order, instructing those who are found to be in violation of Section 337 "to cease and desist from engaging in the unfair methods or acts involved." 19 U.S.C. § 1337(f). "Cease and desist orders are generally issued when, with respect to the imported infringing products, respondents maintain commercially significant inventories in the United States or have significant domestic operations that could undercut the remedy provided by an exclusion order." *Certain Arrowheads with Deploying Blades & Components Thereof & Packaging Therefor*, Inv. No. 337-TA-977 ("*Arrowheads*"), Comm'n Op. at 16-17 (Apr. 6, 2017) (EDIS Doc. ID 610060); *see also Certain Electric Skin Care Devices, Brushes & Chargers Therefor, & Kits Containing the Same*, Inv. No. 337-TA-959, Comm'n Op. at 16-17 (Feb. 13, 2017) (EDIS Doc. ID 603444).

E. Bond

Pursuant to Section 337(j)(3), the ALJ must determine the amount of bond to be required of a respondent during the 60-day Presidential review period ("PRP") following the issuance of permanent relief. 19 U.S.C. § 1337(j)(3). The purpose of the bond is to protect the complainant from any injury. 19 C.F.R. §§ 210.42(a)(1)(ii), 210.50(a)(3).

When reliable price information is available, the Commission has often set the bond by eliminating the differential between the domestic product and the imported, infringing product. *See Certain Microsphere Adhesives, Processes for Making Same, & Products Containing Same, Including Self-Stick Repositionable Notes*, Inv. No. 337-TA-366, USITC Pub. 2949, Comm'n Op. at 24 (Jan. 1996) (EDIS Doc. ID 162915). In other cases, the Commission has turned to alternative approaches, especially when the level of a reasonable royalty rate could be ascertained. *See, e.g.*,

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Certain Integrated Circuit Telecommunication Chips & Products Containing Same, Including Dialing Apparatus, Inv. No. 337-TA-337 ("*Telecommunication Chips*"), USITC Pub. 2670, Comm'n Op. at 41 (Aug. 1993) (EDIS Doc. ID 217024).

F. Public Interest

"In determining whether to issue a[n] [] exclusion order under Section 337(d)(2), the Commission must consider several factors affecting the public interest. Specifically, the Commission must consider: the effect of such exclusion upon the public health and welfare, competitive conditions in the United States economy, [] production of like or directly competitive articles in the United States and United States consumers." *Certain Energy Drink Products*, Inv. No. 337-TA-678, Comm'n Op., 2011 ITC LEXIS 2811, at *31-32 (Nov. 2011) (quoting 19 U.S.C. § 1337(d)(1)). "The public interest analysis does not consider whether there is a public interest in issuing a remedial order, but whether the issuance of such an order will adversely affect the public interest." *Id*. at *32 (citing *Certain Agricultural Vehicles and Components Thereof*, Inv. No. 337-TA-487, Comm'n Op. at 17 (Dec. 2004)). Where the Commission determines the adverse effect on the public interest outweighs the interest in protecting the patent holder, it may deny the requested relief. *See Certain Battery-Powered Ride-On Toy Vehicles*, Inv. No. 337-TA-314, Comm'n Op. at 11 (Apr. 1991). Because the Commission has broad discretion to fashion a reasonable remedy, it may use such discretion to delay or narrow the scope of a remedial order to mitigate the adverse impact on the public interest. *See, e.g.*, *Certain Television Sets, Television Receivers, Television Tuners, and Components Thereof*, Inv. No. 337-TA-910, ID at 224-25 (finding "[t]he effect of exclusion orders on such a large segment of the television market … in the United States could be significant in the short term[,]" recommending 12 month delay of remedial orders due to disruption of supply of flat screen television).

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III. JURISDICTION AND IMPORTATION

A. Subject Matter Jurisdiction

JLI does not contest that the Commission has subject matter jurisdiction under section 337 of the Tariff Act of 1930.

B. Personal Jurisdiction

JLI does not contest personal jurisdiction as to JLI because JLI has answered the Complaint and participated in the Investigations. *See Certain Subsea Telecommunication Systems and Components Thereof*, Inv. No. 337-TA-1098, Init. Det. at 10 (Apr. 26, 2019).

C. *In Rem* Jurisdiction and Importation

JLI does not contest that the Commission has *in rem* jurisdiction over the Accused Products and certain components thereof (including JUUL Devices, JUULpods (unfilled), JUUL2 Devices, certain components of the JUUL2 pods, and the JUUL [redacted]), which have been imported into the United States. *See* JX-0012C (Joint Stipulation Regarding Importation and Inventory); JX-0420C ([redacted]); JX-0421C ([redacted]); JX-0422C ([redacted]).

D. Standing

JLI does not contest that NJOY has standing to bring suit for infringement of the Asserted Patents based on the assignment history produced by NJOY. *See* JX-0003 (certified USPTO assignment records for '864 patent); JX-0006 (certified USPTO assignment records for '881 patent); JX-0007 (Patent Assignment from Fuma International LLC to NJOY).

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IV. THE ASSERTED PATENTS

A. Level of Ordinary Skill in the Art

The level of ordinary skill int the art is uncontested. *See* Order No. 36 at 4 (explaining NJOY and Staff applied JLI's proposed level of skill in the art during claim construction). During claim construction, JLI proposed that a POSITA at the time of the inventions of each of the Asserted Patents "would have had a B.S. in mechanical engineering, electrical engineering, or an equivalent degree, and either at least two years of experience with relevant electro-mechanical technologies or an advanced degree in mechanical engineering, electrical engineering, or an equivalent field, and at least one year of similar experience." *Id*. at 4 (quoting JLI's Opening Claim Construction Brief at 1 n.2). In Order No. 36, the ALJ adopted JLI's proposed level of skill in the art for the purposes of claim construction. *Id*. Each of the parties' experts applied this definition in connection with their analysis. *See* CX-2157C (Vallee Opening Rpt.) at ¶¶ 38-41 (stating that he applied JLI's proposed level of skill in the art and noting that his opinions would not differ under similar definitions proposed in related contexts); CX-2726 (Vallee Rebuttal Rpt.) at ¶¶ 56-64 (same); JX-0632C (Leinsing Opening Rpt.) at ¶¶ 40-43 (opining that the proper definition of the level of skill in the art is the definition proposed by JLI above and nothing that his opinions would not differ under a similar definition previously proposed by NJOY); JX-0653C (Dahm Rebuttal Rpt.) at ¶¶ 24-28 (same).

B. Claim Construction

The ALJ entered an order construing certain terms of the Asserted Patents on April 5, 2024, as listed below. *See* Order No 36.[11]

[11] JLI reserves its rights to seek Commission review of and/or appeal the claim constructions entered by Order No. 36.

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[redacted]

Term	Construction
proximate ’864 patent, claims 1, 9, 25	“at, near, or close to,” which in the context of the ’864 patent claims identifies relative positioning
transversely ’881 patent, claims 1, 16 ’864 patent, claims 1, 9, 25	plain and ordinary meaning, that is, crosswise
both transverse sides of the [heating] element ’881 patent, claims 1, 16 ’864 patent, claim 25	plain and ordinary meaning, which is the claim language itself
the portion of the solution ’864 patent, claim 25	plain and ordinary meaning, that is, the words of the claims
electrically configured to vaporize at least a portion of the solution to be contained in the solution holding medium [reservoir] for oral provision to an individual in an airflow from the second aperture ’881 patent, claims 1, 16	plain and ordinary meaning, that is, the language of the claims
configured to vaporize at least [a/the] portion of the solution [drawn to the heating element] for oral provision to an individual in the airflow ’864 patent, claims 1, 9, 25	

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[redacted]

Term	Construction
heating element [is/being] electrically configured to vaporize at least a portion of the solution to be contained in the solution holding medium [reservoir] for oral provision to an individual in an airflow from the second aperture '881 patent, claims 1, 16	not subject to § 112, ¶ 6 will be addressed later if necessary after it is addressed by the parties
heating element being configured to vaporize at least [a/the] portion of the solution [drawn to the heating element] for oral provision to an individual in the airflow '864 patent, claims 1, 9, 25	
solution holding medium adapted to hold a solution '881 patent, claims 1, 16 '864 patent, claims 1, 9, 25	not subject to § 112(6) plain and ordinary meaning, that is, a location, container, or mechanism to hold the solution
an airflow passageway that extends centrally and axially with respect to the housing intermediate of the first aperture on the first end of the housing and the second aperture on the second end of the housing; wherein the airflow passageway is configured to allow an airflow through the cartridge to the second aperture of the housing '881 patent, claim 1	the airflow passageway extends in a straight path through the center of the housing from a first opening on the first end to a second opening on the opposite end of the housing
an airflow passageway in the interior of the housing, the airflow passageway having a length extending centrally and axially with respect to the housing intermediate of the first aperture on the first end of the housing and the second aperture on the second end of the housing, the airflow passageway being configured to allow an airflow through the cartridge from the first aperture to the second aperture of the housing '881 patent, claim 16	

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[redacted]

Term	Construction
electrically conductive portion '881 patent, claims 1, 16	a portion that is electrically conductive

1. Housing

In each of the asserted claims, the claimed cartridge comprises a "housing." *See* '881 patent at claims 1, 16 (from which asserted claims 19 and 26 depend); '864 patent at claims 1 (from which asserted claim 2 depends), 9, 25 (from which asserted claim 26 depends). For example, claim 1 of the '881 Patent recites "a cartridge having a housing that comprises and interior," and claim 9 of the '864 Patent recites "a cartridge comprising[] a housing having an interior."

NJOY never sought construction of "housing," but its infringement and DI contentions rely on some unidentified and unsupported construction that is not only contrary to the ordinary meaning of the term, but is also contrary to NJOY's and its expert's admissions and assertions regarding the claimed meaning of "housing." *See, e.g.*, Staff's Response to JLI's Motion for Summary Determination of Non-Infringement, EDIS Doc. ID 819706, Attachment A at 8-9 (describing NJOY's infringement theory as "ignoring the plain and ordinary meaning of 'housing' proposed by JLI and the definition of 'housing' proposed by NJOY").

For example, where NJOY and its expert previously asserted that the specification of the Asserted Patents "makes clear that the [claimed] 'housing' is an outside structure containing the device internals," JX-0025.11 (IPR2024-00160, Patent Owner's Preliminary Response); *see also* RX-1014C (Vallee 4/11/2024 Tr.) at 165:23-167:1, their infringement and DI contentions take the opposite position, arguing that the admitted ***outside*** structure of the cartridge is ***not*** the claimed housing, and that the claimed housing is instead an ***internal*** structure that does ***not*** contain the device cartridge internals. In particular, as discussed in more detail in the non-infringement section

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below, when identifying what portions of the JUUL1 Pod correspond to the claimed "housing" of the cartridge, Dr. Vallee admitted that the exterior of the cartridge (outlined by Dr. Vallee in yellow in the figure below) includes the mouthpiece of the device, *see, e.g.*, RX-1014C (Vallee 4/11/24 Tr.) at 62:12-63:5; RX-1081C (Vallee Ex. 3), but NJOY and Dr. Vallee exclude the mouthpiece from their identification of the "housing" and instead (via the blue outlining added by Dr. Vallee in the figure below) the internal [redacted] as the proximate end of the housing. *See, e.g.*, CX-2157C (Vallee Opening Rpt.) at ¶ 737; RX-1014C (Vallee 4/11/24 Tr.) at 64:3-23; RX-1081C (Vallee Ex. 3), even though the mouthpiece protects not only the [redacted] (which is an ***internal*** component of the cartridge from the mouthpiece, but also [redacted] that are external to the [redacted] but internal to the mouthpiece. RX-1014C (Vallee 4/11/24 Tr.) at 49:3-7 (admitting that the [redacted] rare "additional components of the JUUL 1 pod cartridge"), 51:18-52:24 (admitting that the [redacted] are "in the mouthpiece" and "not within the [redacted]").

[redacted]

RX-1081C (Vallee Ex. 3)

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[redacted]

Similarly, where NJOY and its expert previously admitted and argued that the claimed "housing" is the housing of the cartridge, *see, e.g.*, RX-1015C (Vallee 4/12/2024 Tr.) at 347:1-7 ("It is the housing of the cartridge."), 339:21-340:15 ("So that claim specifically talks about a two piece device with a single cartridge which is the housing."), they now argue that the claimed housing is somehow ***not*** the cartridge's housing, *see, e.g.*, NJOY's Opposition to JLI's Motion for Summary Determination of Noninfringement, EDIS Doc. ID 818851 at 10 (asserting that "JLI erroneously argues that the 'housing' must be the entire exterior structure of the 'cartridge'"). This contradicts their prior admissions, including NJOY and its expert's admissions that the claimed housing "***is the housing of the cartridge***" and the claims require "***a single cartridge which is the housing***." *See, e.g.*, RX-1015C (Vallee 4/12/2024 Tr.) at 347:1-7, 339:21-340:15.

Likewise, NJOY and its expert earlier admitted and asserted an "***internal*** structure" of the cartridge "***can't*** be part of the housing," their contentions now take the opposite stance, excluding the exterior of the cartridge from the housing and instead relying on components that are wholly internal and do not encompass or protect all of the cartridge's internals. *See, e.g.*, CX-2726C.408 (Vallee Rebuttal Rpt.) at App'x A-1, ¶ 28; RX-1014C (Vallee 4/11/2024 Tr.) at 154:25-155:10, 157:1-4.

For these and the following reasons, NJOY's attempt to manufacture infringement and DI positions by evading and ignoring the ordinary and admitted meaning of "housing" should be rejected. Instead, consistent with the claims, the specification, and the admitted ordinary meaning and correct construction of "housing," the claimed "housing" should be construed as the outside structure of the cartridge that contains and protects the cartridge's internal structures. Conversely, the claimed housing is not satisfied by internal cartridge structures or cartridge structures that do not contain and protect all the cartridge's internal components.

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[redacted]

i. The Claimed "housing" is an Outside Structure Containing the Device Internals

NJOY and its expert, Dr. Vallee, assert and agree that the specification "makes clear that the [claimed] 'housing' is an outside structure containing the device internals." JX-0025.11 (IPR2024-00160, Patent Owner's Preliminary Response); RX-1014C (Vallee 4/11/2024 Tr.) at 165:23-167:1.

Consistent with their admissions that the claimed housing must be the cartridge's "***outside*** structure containing the device [cartridge] internals," NJOY and Dr. Vallee further contended and admitted that an "***internal*** structure" of the cartridge "***can't*** be part of the housing." *See, e.g.*, CX-2726C.408 (Vallee Rebuttal Report) at App'x A-1, ¶ 28; RX-1014C (Vallee 4/11/2024 Tr.) at 154:25-155:10, 157:1-9. As Dr. Vallee testified:

- "But the question is can the housing be internal to the cartridge. I've seen nothing to indicate that the housing can be internal to the cartridge." RX-1015C (Vallee 4/12/2024 Tr.) at 353:4-9.
- "[A]n internal structure of the device is not the housing. The housing protects what is inside." RX-1014C (Vallee 4/11/2024 Tr.) at 154:25-155:10, 157:1-4; CX-2726C.408 (Vallee Rebuttal Report) at App'x A-1, ¶ 28.

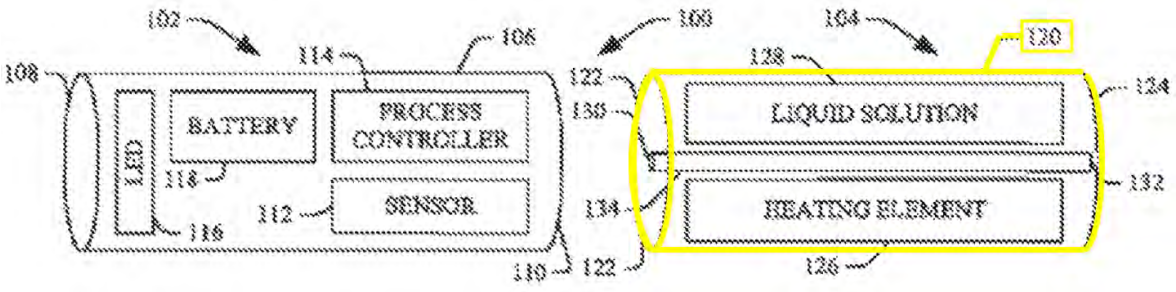
Consistent with NJOY and Dr. Vallee's contentions and admissions that the claimed "housing" must contain the cartridge's internal components, they also previously asserted and testified that one way to know whether a cartridge component is an "internal structure" and "not part of the housing" is if there are other components between it and the end of the cartridge device. *See, e.g.*, CX-2726C.408 (Vallee Rebuttal Report) at App'x A-1, ¶ 28; RX-1014C (Vallee 4/11/2024 Tr.) at 154:25-155:10, 157:1-9.

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[redacted]

That the plain and ordinary meaning of the claimed housing is the outside structure of the cartridge containing the internal structures of the cartridge also is consistent with extrinsic evidence, such as dictionaries and expert testimony demonstrating the ordinary meaning of "housing." For example, one relevant dictionary definition of "housing" is "something that covers or protects: such as a case or enclosure (as for a mechanical part or an instrument)." *See, e.g.*, JX-0024 (Merriam-Webster definition for "housing"); *see also* JX-0023 (Cambridge English definition for "housing"); JX-0022 (Britannica definition for "housing").

This plain and ordinary meaning also is consistent with the intrinsic evidence, including how the specification of the Asserted Patents uses "housing." In each instance, the specification uses "housing" to describe the outside structure of the cartridge, and never identifies an internal structure as part of the housing. For example, in Figure 1, the specification identifies that "cartridge 104 comprises a housing 120 that has an interior." JX-0004 ('881 Patent) at Fig. 1, 3:44-45. As described and shown in Figure 1, housing 120 (outlined in yellow) is the outside structure of the cartridge that contains the cartridge's interna structures; no internal structures are identified as part of the housing:



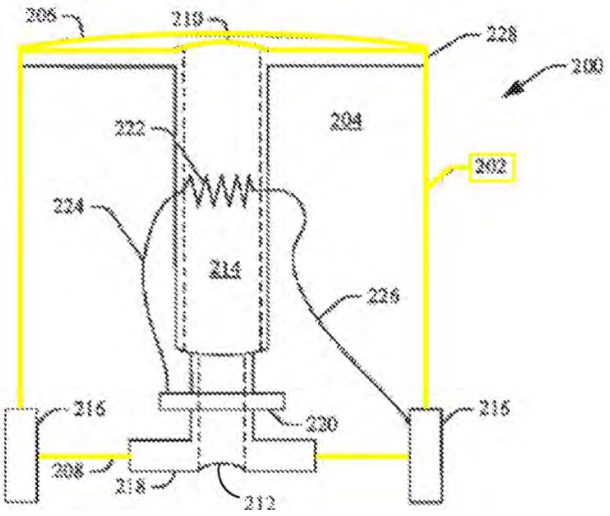
E.g., *id.* at Fig. 1, 3:44-62.

Similarly, for the embodiment of Figure 2, the specification describes that "cartridge 200 comprises a housing 202." *Id.* at Fig. 2, 5:65-66. Again, described and shown in Figure 2, housing

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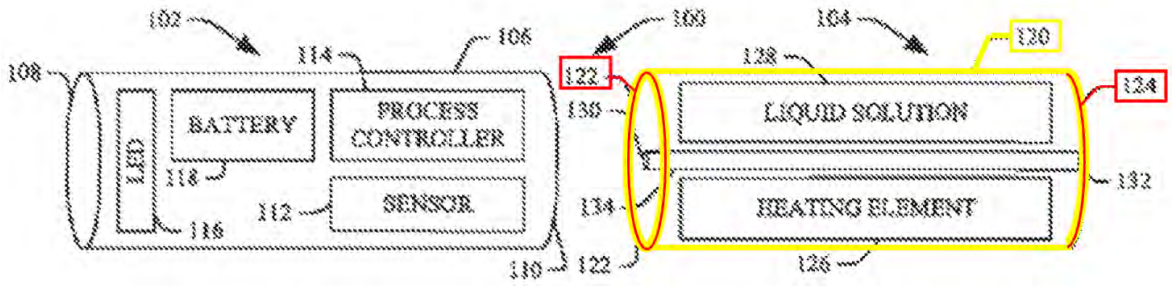
[redacted]

202 (outlined in yellow) is the outside structure of the cartridge that contains the cartridge's interna structures; no internal structures are identified as part of the housing:



E.g., *id.* at Fig. 2, 5:65-6:9.

The patents further describe that that cartridge and housing may have ends. The specification states that in some instances, the housing "may comprise only a cartridge wall" and not its ends. *E.g.*, *id.* at 3:53-55. In others, the housing "may comprise the [cartridge] cylindrical wall and two end caps." *E.g.*, *id.* at 3:55-56. For example, "the cartridge 104 also comprises a first end 122 and a second end 124, which may be considered a portion of the housing 120 or apart from the housing 120." *E.g.*, *id.* at 3:45-47. These ends are annotated below in red:



[redacted]

E.g., *id.* at Fig. 1, 3:45-47. Each asserted claim explicitly requires that these ends be part of the claimed housing; for example, '864 Patent claim 1 requires "***the housing having*** a first end and a second end that is opposite the first end." *See* '864 Patent at claims 1 (from which asserted claim 2 depends), 9, 25 (from which asserted claim 26 depends); '881 Patent at claims 1, 16 (from which asserted claims 19 and 26 depend). The patents do not disclose any housing ends that are not an external end of the cartridge and its housing. Likewise, the patents do not disclose any housing ends that are an internal structure of the cartridge.

The specification further describes that a "tip" may be provided at the end of the housing "to be received orally by the user." *E.g.*, JX-0004 ('881 Patent) at 5:37-48. The specification makes clear that this "tip" is considered the end of the disclosed housing, describing, for example: "the second end 124 may include a tip comprised of a soft, malleable and/or flexible polymer"; "the tip of the second end"; and "the end user may then provide a suction on the tip of the cartridge with his/her mouth." *E.g.*, *id.* at 5:37-48, 7:35-40.

For all of these reasons, the claimed "housing" should be construed as the outside structure of the cartridge that contains and protects the cartridge's internal structures, and not as internal cartridge structures or cartridge structures that do not contain and protect all the cartridge's internal components.

ii. The Claimed "housing" is the Housing of the Cartridge

In NJOY's recent opposition to JLI's motion for summary determination, it argued for the first time that the claimed housing is somehow ***not*** the cartridge's housing. But this new position is inconsistent with all the intrinsic and extrinsic evidence discussed above, including NJOY's and Dr. Vallee's own contentions and admissions.

Indeed, NJOY and Dr. Vallee repeatedly have asserted and argued that that the claimed "housing" is the housing for the "cartridge." *See, e.g.*, CX-2157C (Vallee Opening Rpt.) at ¶¶ 1413,

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1418 (including the "Mouth End Cap" of the Vuse Solo G1 and G2 Cartridge as part of the claimed "housing"); CX-2726C.408-409 (Vallee Rebuttal Rpt.) at App'x A-1, ¶¶ 27-28 (annotating the "exterior of cartridge" as the "housing"); CX-2726C.1751-1753 (Vallee Rebuttal Rpt.) at Appx' F, ¶ 40 (outlining the exterior surface of the entire cartridge as the "housing"); RX-1014C (Vallee 4/11/2024 Tr.) at 154:25-155:10, 157:1-4, 165:23-167:1.

Indeed, at his deposition, Dr. Vallee repeatedly confirmed that he and NJOY are explicitly requiring that the housing must be the ***cartridge*** housing. For example, Dr. Vallee specifically testified that the claimed housing "is ***the housing of the cartridge***." RX-1015C (Vallee 4/12/2024 Tr.) at 347:1-7. He likewise testified that the claims require "a single cartridge ***which is the housing***." *Id.* at 339:21-340:15. Dr. Vallee also emphatically confirmed that the housing cannot be just some structure internal to the cartridge:

> But the question is can the housing be internal to the cartridge. ***I've seen nothing to indicate that the housing can be internal to the cartridge***.

Id. at 353:4-9.

2. The Claimed Airflow Passageway That "extends … from the first aperture" Must Be A Physical Structure

Except for claim 9 of the '864 patent and its asserted dependent claims, all asserted claims require an airflow passageway that, among other things, extends from the first aperture.

For example, in claim 1 of the '864 Patent (from which asserted claim 2 depends), the claimed "airflow passageway ***extends*** centrally and axially ***from the first aperture*** to the second aperture." Similarly, in claim 25 of the '864 patent (from which asserted claim 26 depends), the claimed "airflow passageway *extends* in a straight path ***from the first aperture*** to the second aperture."

All asserted claims of the '881 patent include a similar requirement. Claims 1 and 16 of the '881 patent include the "airflow passageway" terms identified in full in the table above. For

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example, claim 1 recites "an airflow passageway that extends centrally and axially with respect to the housing intermediate of the first aperture on the first end of the housing and the second aperture on the second end of the housing; wherein the airflow passageway is configured to allow an airflow through the cartridge to the second aperture of the housing." During claim construction the parties agreed, and the ALJ ordered, that these terms are properly construed to require that "the airflow passageway ***extends*** in a straight path through the center of the housing ***from a first opening on the first end*** to a second opening on the opposite end of the housing." *See* Revised Joint Claim Construction Chart (EDIS Doc. ID 812427 Jan. 23, 2024) at 8-10; Order No. 36 at 5.

But the parties now dispute what is required for an airflow passageway to extend from the first aperture. Specifically, as Staff recognized in its response to JLI's motion for summary determination, the parties apparently dispute whether the airflow passageway must be a ***physical*** structure that extends from the claimed first aperture. *See* Staff's Response (EDIS Doc. ID 819706) at 13-15 (recognizing existence of dispute regarding whether "airflow passageway" terms "impose a specific structure"). The extrinsic and extrinsic evidence will establish that it does, that there must be a physical airflow passageway extending from the first aperture.

As Dr. Dahm will explain, the specification of the Asserted Patents consistently teaches that the airflow passageway is a physical structure extending along the central axis (*i.e.*, in a straight path) from a first opening on the first end to a second opening on the opposite end of the cartridge housing. *See* JX-0653C (Dahm Rebuttal Rpt.) at ¶¶ 70-73. For example, in connection with Figure 1 (an annotated version of which is reproduced below), the specification describes the airflow passageway as a defined structure that extends all the way between centrally located first and second apertures:

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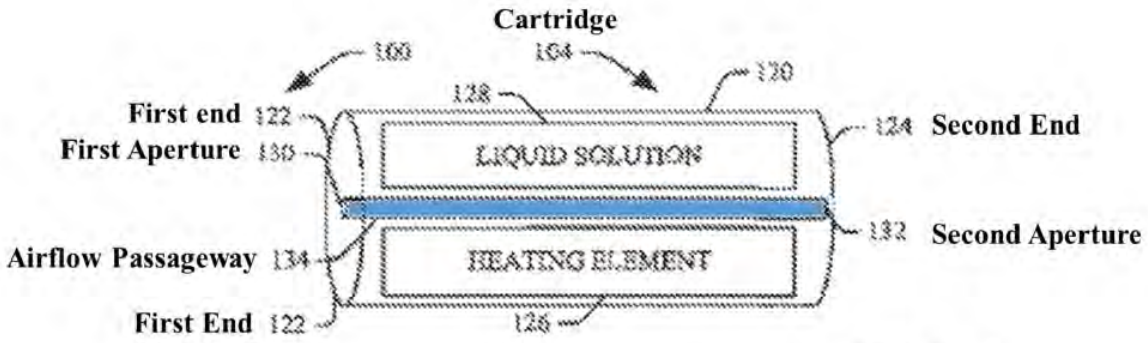


FIG. 1

> The first end 122 of the cartridge 104 comprises a first aperture 130 that is located at approximately the center of the first end 122 of the cartridge 104. The second end 124 comprises a second aperture 132 that is located at approximately the center of the second end 124 of the cartridge 104. An airflow passageway 134 extends between the first aperture 130 and the second aperture 132 axially proximate to the center of the housing 120.

JX-0001 ('864 Patent) at Fig. 1 (annotated), 4:30-37.

Similarly, in connection with the embodiments described in Figures 2 and 3, the Asserted Patents disclose the airflow passageway as a defined physical structure that extends axially in a straight line, and the entire length in between, centrally located first and second apertures:

> An air passageway 214 begins at the first aperture 210 and extends to the second aperture 212 approximately along the central axis of the cartridge 200. For example, the wall of the air passageway 214 may be constructed from a polymer or other suitable material.

Id. at 6:21-26.

The plain language of each of claims 1 and 16 of the '881 patent and claims 1 and 25 of the '864 patent requires a physical structure. In contrast to '864 Patent claim 1, which merely claims an airflow ***path***, these claims explicitly require a physical structure, an airflow ***passageway***. And in prior testimony, NJOY's Dr. Vallee conceded that an airflow ***passageway***, unlike an airflow ***path***, must have a definitive structure. *See* RX-1530C.71 (Vallee Reply Rpt. on Infringement,

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criticizing another expert for "exclusively focus[ing] on the path of air taken rather than identifying the ***structure*** of [a device's] airflow passageway").

Moreover, deposition testimony from NJOY's own technical witness, Mr. Jose Bonet,[12] in this Investigation and from NJOY's technical expert, Dr. Vallee, in a previous case, also support JLI's interpretation of the "airflow passageway" terms as requiring an actual physical structure. For example, when asked at his deposition "what's the difference between … a 'passageway' and a 'pathway,'" Mr. Bonet answered:

> A. So I believe, in my opinion, "passageway" is more … ***there's structure to it***.
>
> You know, it's a tube. It's — it's — yeah, ***there's a physical structure associated with it***, of some kind.
>
> And then a "pathway" is a little less defined.

RX-1120C (Bonet Tr.) at 119:17-120:2 (ellipses in original).

3. The Claimed Airflow Passageway Must Extend "centrally and axially" and in a "straight path" from the First Aperture To The Second Aperture, and Thus That Passageway Cannot Be Blocked At The Central Axis by An Intervening Structures

Except for claim 9 of the '864 patent and its asserted dependent claims, all asserted claims require an airflow passageway that, among other things, extends centrally and axially, *i.e.*, in a straight path through the center of the housing, from the first aperture to the second aperture.

For example, in claim 1 of the '864 patent (from which asserted claim 2 depends), the claimed "airflow passageway extends ***centrally and axially*** from the first aperture to the second aperture." Similarly, in claim 25 of the '864 patent (from which asserted claim 26 depends), the

[12] Mr. Bonet is NJOY's Senior Director of Vapor Design, RX-1120C (Bonet Tr.) at 10:1-6, and meets the parties' definitions of a POSITA, *id.* at 106:23-113:21.

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claimed "airflow passageway extends ***in a straight path*** from the first aperture to the second aperture."

All asserted claims of the '881 patent include a similar requirement. Claims 1 and 16 of the '881 patent include the "airflow passageway" terms identified in full in the table above. For example, claim 1 recites "an airflow passageway that extends ***centrally and axially*** with respect to the housing intermediate of the first aperture on the first end of the housing and the second aperture on the second end of the housing; wherein the airflow passageway is configured to allow an airflow through the cartridge to the second aperture of the housing." During claim construction the parties agreed, and the ALJ ordered, that these terms are properly construed to require that "the airflow passageway extends ***in a straight path through the center of the housing*** from a first opening on the first end to a second opening on the opposite end of the housing." *See* Revised Joint Claim Construction Chart (EDIS Doc. ID 812427 Jan. 23, 2024) at 8-10; Order No. 36 at 5.

But the parties now dispute what is required for an airflow passageway to extend centrally and axially/in a straight path from the first aperture to the second aperture. Specifically, as Staff recognized in its response to JLI's motion for summary determination, the parties apparently dispute whether the central and axial nature of the airflow passageway requires that there be no obstructions blocking the passageway at the central axis. S*ee* Staff's Response (EDIS Doc. ID 819706) at 16-17 (recognizing existence of dispute regarding whether the claimed "airflow passageway" must "have no obstruction from the first aperture to the second aperture").[13] As Dr. Dahm will explain, a POSITA would understand based on the claims, specification, prosecution

[13] Staff's response also suggests that JLI's interpretation of the "airflow passageway" terms would require the claimed airflow passageway "to have a uniform cross-section (area) between the first aperture and the second aperture." However, except in the case of certain claims that require a "substantially uniform" cross-section (*e.g.*, '881 patent, claim 16 and '864 patent, claim 16), JLI does not interpret "airflow passageway" to include such a limitation.

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history, and extrinsic evidence that in order for the claimed "airflow passageway" to extend centrally and axially from a first aperture at one end of the cartridge housing to a second aperture at a second end of the cartridge housing, there cannot be a structure or obstacle blocking the central axis of the airflow passageway. *See* JX-0653C (Dahm Rebuttal Rpt.) at ¶¶ 74-80.

The originally filed application to which the Asserted Patents claim priority disclosed only airflow passageways that were completely unobstructed. *See* JX-0520.8-11, .40-41 ('917 Application) at ¶¶ 29, 31-32, 34-35, Figs. 2-3; JX-0653C (Dahm Rebuttal Report) at ¶ 79. It was only in the '813 CIP Application that any disclosure of an element in an airflow passageway was added. *See* JX-0565.34 ('813 Application) ("[I]t should be appreciated that that one or more example embodiments may correspond to a cartridge that comprises of a housing, heating element located in the center airflow"); JX-0653C (Dahm Rebuttal Rpt.) at ¶¶ 79-80. And in that disclosure, which carried forward into the specifications of the Asserted Patents, the only element that was disclosed as being permitted in the airflow passageway was a "heating element." *Id.*

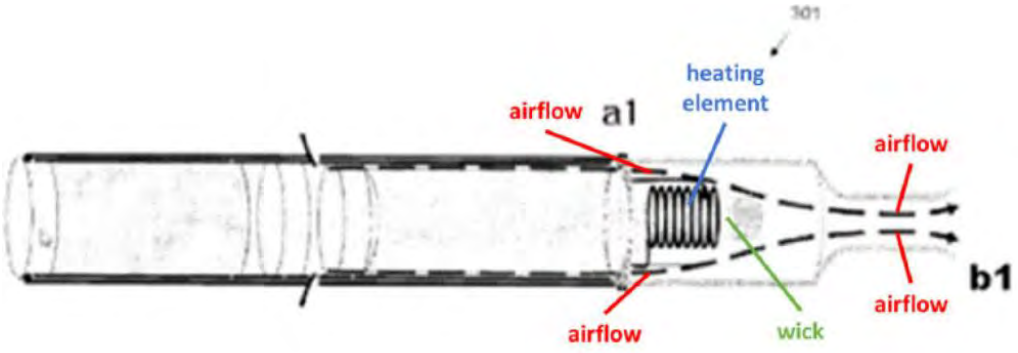
But although the amended specification described a heating element in the airflow passageway, it did not describe that heating element as block the central axis of that airflow passageway. Indeed, according to NJOY and the ALJ's claim construction order, the specific heating element structure disclosed as positioned within the airflow passageway is a helical coil. A POSITA would understand that such a heating element would not block the central axis of the airflow passageway, and the Patents do not describe otherwise.

The prosecution histories of the Asserted Patents also support JLI's interpretation of the "airflow passageway" terms as not permitting the inclusion of an obstacle that blocks the central axis of the airflow passageway. For example, as discussed above during prosecution the '917 Application to which the Asserted Patents claim priority, applicant argued that there could be no

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central and axial passageway where a heating element and wick actually blocked the central axis. RX-0532.94 ('917 File History). As shown in Figure 3 of Thorens (which is reproduced below), Thorens has a wick and a heating element that together (or in the case of the wick, individually) block the central axis, forcing air to flow laterally around them as shown by the dashed lines in the figure.



RX-0527.3 (Thorens) at Fig. 3 (annotated). Because the wick and heating element block the central axis of the passageway to the edges, the applicant argued that Thorens has no "ability to accommodate a center airflow passageway as both the wick and heating element would block such a passageway":

> In addition, Thorens lacks any apparent reason to include a central airflow passageway in place of hits lateral passageway for the input of air, and adding such a central passageway would destroy the method in which Thorens carries out vaporization. For example, Thorens teaches a wick (207) with a centrally located end (207b) that extends into the heating coil (209). Thorens specially teaches that such a design produces a "pumping action" in which vaporized liquid is replaced by further liquid moving toward the second end (207b) of the wick by capillary action. ***This design does not include any ability to accommodate a central airflow passageway as both the wick and the heater coil would block such a passageway.***
> …

RX-0532.99-100 ('917 File History). The applicant similarly argued that "Thorens lacked a "housing having a centrally and axially extending airflow passageway" during prosecution of the '955 patent to which the Asserted Patents claim priority. JX-0521C.120.

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And during the prosecution of the '864 patent itself, the applicant similarly distinguished the cited Han prior art reference on the grounds that Han "does not include a central airflow passageway" because Han similarly had a structure blocking the central axis of the passageway. Applicant argued that Han has no central axial passageway because it "places [a] perforated component for liquid storage (9) in the middle of shell (b), thereby forcing the airflow around the peripheral surface of the perforated component for liquid storage (9)." JX-0008.9008-9009 ('864 Patent File History).

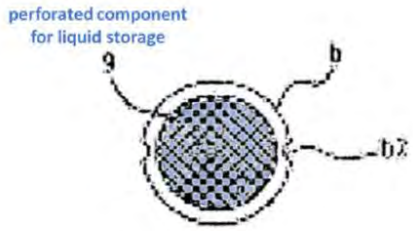


Figure 3

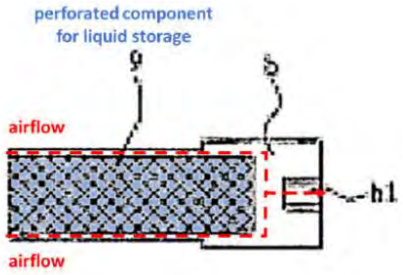


Figure 4

JX-0544 (U.S. Publication No. US2009/0095311 (Han)) at Figs. 3 and 4 (annotated).

A POSITA would understand from these statements and characterizations made by the applicant during prosecution that the central axis of the claimed airflow passageways cannot be blocked. JX-0653C (Dahm Rebuttal Rpt.) at ¶¶ 73-77.

That the claimed airflow passageway cannot include an obstacle blocking its center was also confirmed by the testimony of Daniel Hillenbrandt, one of the two named inventors of the Asserted Patents. *See* JX-0653C (Dahm Rebuttal Rpt.) at ¶ 78. In particular, Mr. Hillenbrandt previously testified that the invention of the Asserted Patents was to have a central axial air passageway by "ma[king] sure it was open":

> Q. Okay. And how did you change your device to — let's go in order. Okay. In what way did you change the airflow from the Smoke 51 to your invention?

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[redacted]

A. I'm not sure the exact way that it was done. It was increased airflow, if that's what you mean. …

Q. Okay. Did you do anything else?

A. For airflow?

Q. Yes.

A. The central air tube, the central axial air passageway.

Q. What did you do to that?

A. ***Made sure it was open.***

Q. And in — was the central air passageway not open in the Smoke 51?

A. ***It seemed obstructed with the cotton material*** from what I saw when the cap was off, like I explained earlier. …

Q. Okay. You added a tube of woven material, correct?

A. ***The tube of woven material was there to define a space.***

Q Okay. ***And by defining the space, you kind of mean framing out the air passageway?***

A. ***Defining the space, yes.***

JX-0549 (Hillenbrandt 12/5/2019 Tr.) at 92:8-94:25. This would further confirm to a POSITA that the central axis of the claimed airflow passageway cannot be blocked. *See* JX-0653C (Dahm Rebuttal Rpt.) at ¶ 78.

4. Heating Element Terms

All of the asserted claims recite a "heating element." In the claim construction order, the ALJ indicated that she believed the "parties ha[d] not fully explained their disagreement (if any) with respect to how [the "heating element" terms] should be construed outside of § 112, ¶ 6" and that she "w[ould] address that issue later if necessary after it is addressed by the parties." Order No. 36 at 48.

i. JLI's "heating element" Construction Outside § 112, ¶ 6

In light of the ALJ's claim construction order, JLI contends that if "heating element" is not construed as a means-plus-function term, then it is defined by a number of requirements, including

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the configurations set forth in the claims and the further requirements identified in the ALJ's claim construction order.

First, each claimed heating element must, by definition, output heat. Not only is the limitation specifically claimed as a "***heating*** element," but the shared specification expressly identifies "outputting heat" as a defining characteristic of the disclosed heating element. *E.g.*, JX-0004 ('881 Patent) at 3:63-66. The parties do not dispute this requirement.

Second, another requirement of the heating element is its particular vaporization configuration recited in each asserted claim. For example, in the asserted claims of the '881 patent, the heating element must be "electrically configured to vaporize at least a portion of the solution to be contained in the solution holding medium for oral provision to an individual in an airflow from the second aperture." The heating element's required vaporization configuration is different in the asserted claims of the '864 patent. In claims 1 and 9 of the '864 patent, the heating element must be "configured to vaporize at least a portion of the solution for oral provision to an individual in the airflow." In claim 25 of the '864 patent, the heating element must be "configured to vaporize at least the portion of the solution drawn to the heating element for oral provision to an individual in the airflow."

Third, the ALJ's claim construction order identified further restrictions on each claimed "heating element," including their claimed location, orientation, and electrical connections allowing the heating element to form part of a circuit. Order No. 36 at 38-43. For example, the ALJ found that:

- The heating element of claim 1 of the '881 patent must (among other things) be located within the interior of the housing and extending transversely across the airflow passageway, have airflow passing on both of its transverse sides, and be

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electrically connected to the battery through the electrically conductive portions of the cartridge and the power source. *Id.* at 38-39.

- The heating element of claim 16 of the ’881 patent must (among other things) be located within the interior of the housing and within the airflow passageway, extend transversely across the airflow passageway, and be electrically connected to the power source through the electrically conductive portion of the cartridge. *Id.* at 39-40.
- The heating element of claim 1 of the ’864 patent must (among other things) be located within the interior of the housing, extend transversely to a central longitudinal axis of the housing, be at least partially exposed to the airflow, and receive electrical power from the claimed power source. *Id.* at 40.
- The heating element of claim 9 of the ’864 patent must (among other things) be located within the interior of the housing, extend transversely to a central longitudinal axis of the housing, be at least partially exposed to the airflow, and receive electrical power from the claimed power source. *Id.* at 40-41.
- The heating element of claim 25 of the ’864 patent must (among other things) be located within the interior of the housing, include a coil extending transversely to a central longitudinal axis of the housing and transversely to a direction of the airflow such that airflow passes on both of its transverse sides, be at least partially exposed to the airflow. *Id.* at 38. And although not specifically addressed by the ALJ, the claim 25 heating element must, consistent with the other claims, receive electrical power from the claimed power source. JX-0004 (’864 Patent) at claim 25.

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For at least the foregoing reasons, under the ALJ's claim construction analysis and order, each claimed heating elements must (1) output heat; (2) meet its foregoing corresponding vaporization configuration requirement; and (3) meet each of its additional foregoing corresponding requirements from the ALJ's claim construction order.

ii. NJOY's and Staff's Proposed Constructions

NJOY and Staff have not proposed alternative "heating element" constructions addressing the ALJ's claim construction order, and JLI reserves the right to further address any such alternative constructions.

NJOY: Presently, NJOY's proposed construction for "heating element" outside of § 112, ¶ 6 is "element that heats via resistive heating." This is wrong for several reasons.

First, although NJOY's construction acknowledges that the heating element must output heat, it wrongly ignores the explicit language of each claim further requiring that the heating element have a specific vaporization configuration. Contrary to NJOY's proposal, each heating element must not only output heat, it must also be configured to vaporize.

Second, NJOY's proposal ignores each of the additional "heating element" requirements that the ALJ identified in the claim construction order. For example, NJOY's proposal includes no position or orientation requirements, and it likewise wrongly omits the required electrical connections allowing the heating element to form part of a circuit.

Staff: JLI is not presently aware of Staff's proposed "heating element" construction in response to the ALJ's claim construction order. However, to the extent Staff's proposal omits the vaporization configuration requirements and/or omits the additional corresponding requirements identified in the ALJ's claim construction order, JLI respectfully submits that construction is incorrect for the foregoing reasons.

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C. Conception and Reduction to Practice and Effective Filing Date

The application that led to the '881 patent was filed on December 13, 2016. JX-0004 ('881 Patent) at 1. The application that led to the '864 patent was filed on June 25, 2019. JX-0001 ('864 Patent) at 1. The issues of effective filing date and alleged conception and reduction to practice dates are relevant for two reasons.

First, pre-AIA 35 U.S.C. 102(b) precludes patenting of inventions if they were "in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States." Thus, irrespective of conception and reduction to practice, Fuma's public use and sale in the United States of the original Fuma device is a bar to the validity of the patents under pre-AIA 35 U.S.C. 102(b) if NJOY cannot prove the asserted claims are entited to an effective filing date within 1 year after those critical dates. NJOY alleges, and the inventors have testified under oath, and Dr. Vallee agree, that the Fuma device that the inventors demonstrated at the Tri-State Tobacco and Candy Convention in August 2009 and sold in the U.S. at least by September 2009, allegedly embodies all elements of the asserted claims. *See e.g.*, CX-2157C (Vallee Opening Report) at ¶¶ 620-621. Thus, if the asserted claims are not owed an effective filing date prior to August 2009 and/or September 2009 (the "bar date"), then the public use and sale in this country would invalidate all asserted claims. Because JLI has set forth sufficient evidence to put at issue whether there is prior art that invalidates the asserted claims, within one year of the critical dates, it is now NJOY's burden to establish that the asserted claims are entitled to an effective filing date earlier than the actual filing dates of the applications that led to the asserted patents as NJOY is the party seeking the benefit of an earlier effective filing date. *See Poweroasis v. T-Mobile*, 522 F.3d 1299, 1305-6 (Fed. Cir. 2008) ("The district court therefore correctly placed the burden on PowerOasis to come forward with evidence to prove entitlement to claim priority to an earlier filing date."). As explained below, NJOY cannot meet its burden because mulitple limitations in

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all asserted claims lack specification support prior to the bar date, and indeed lack support before 2011 altogether.

Second, irrespective of filing date, if NJOY cannot establish conception and reduction to practice prior to the publication of Korean Patent Publication No. KR0004364U (Han '364) on October 20, 2010, then Han '364 is prior art and it invalidates the claims as discussed more fully below. NJOY's earliest alleged effective filing date is July 27, 2010, the filing date of U.S. Patent Application No. 12/843,917 ("'917 Application"), which is after Han '364's publication date. *See* RX-1388C (2024-03-05 NJOY's 15th Supplemental Responses to Juul's First Set of Interrogatories Nos. 3, 6, 7, 10, 15-17, 19, 23) at RX-1388C.16, .23; *see* CX-2157C (Vallee Opening Report) at ¶¶ 60, 69-70. NJOY does not rely on the filing of the provisional patent applications as evidence of priority date (*see* CX-2157C (Vallee Opening Report) at ¶¶ 69-70; *see also* RX-1388C (2024-03-05 NJOY's 15th Supplemental Responses to Juul's First Set of Interrogatories Nos. 3, 6, 7, 10, 15-17, 19, 23) at RX-1388C.16, .23. Thus, if the parties are incorrect that the Fuma prototype / device embodies all elements of all asserted claims, NJOY must prove conception and reduction to practice via another method to get behind Han '364. This issue is NJOY's burden. *See Poweroasis v. T-Mobile*, 522 F.3d 1299, 1305-6 (Fed. Cir. 2008) ("Once T-Mobile established by clear and convincing evidence that the MobileStar Network was § 102(b) prior art to the asserted claims of the `658 and `400 patents, the burden was on PowerOasis to come forward with evidence to the contrary. The district court therefore correctly placed the burden on PowerOasis to come forward with evidence to prove entitlement to claim priority to an earlier filing date."); *see also Mahurkar v. C.R. Bard, Inc.,* 79 F.3d 1572, 1576–78 (Fed. Cir. 1996) (explaining that a party attempting to overcome anticipatory prior art has the burden to prove an earlier date of invention). NJOY and its expert, Dr. Vallee, assert that the Asserted Patents are entitled to a conception date

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of July 28, 2009 based on drawings and diagrams, and that the claims were reduced to practice in the form of the 2009 Fuma prototype/device. As explained below, NJOY and Dr. Vallee have failed to meet their burden, at least because the evidence as to when the drawings and diagrams were created is unreliable and uncorroborated, and are not connected to the version and configuration of the Fuma device allegedly shown at the conference and sold in 2009. Moreover, assuming that the physical Fuma devices allegeldly shown at the conference and sold in 2009 do not correspond to the teardown images provided by NJOY or do not embody all asserted claims, NJOY cannot rely on those devices as reduction to practice. So NJOY would need to rely on constructive reduction to practice via effective filing date, which it has not alleged, and in any event NJOY has not alleged any facts regarding diligence in reducing to practice, a fact that NJOY must prove, and so its arguments must fail. Therefore, NJOY has failed to demonstrate that the asserted claims are entitled any conception date prior to their respective filing dates.

1. Effective Filing Date

NJOY and its expert, Dr. Vallee, will be unable to prove that any of the asserted claims are entitled to a claim of priority to the July 27, 2010 filing date of the '917 Application, as NJOY alleges, because the '917 Application does not provide full written description support for all claim limitations of the asserted patents. *See* RX-1031C (Leinsing Rebuttal Report) at ¶¶ 45-222. Nor are the asserted claims entitled to a claim of priority to the July 27, 2009 filing date of U.S. Provisional Patent Application No. 61/271,819 (the "'819 Provisional") or the July 31, 2009 filing date of U.S. Application No. 61/273,097 (the "'097 Provisional"), which NJOY does not even allege. *Id.*; *see also* RX-1388C (2024-03-05 NJOY's 15th Supplemental Responses to Juul's First Set of Interrogatories Nos. 3, 6, 7, 10, 15-17, 19, 23) at RX-1388C.16, .23; *see also* CX-2157C (Vallee Opening Report) at ¶ 67 ("It is my understanding that NJOY is not relying on the

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provisional patent applications filed by Mr. Conley and Mr. Hillenbrandt on July 27 and 31, 2009 to establish a date of invention.").

Instead, the proper effective filing dates for both the '881 Patent and the '864 Patent are much later. For the '881 patent, the effective filing date is no earlier than February 26, 2019, when the label for second aperture 212 was added to Figure 2 during prosecution of the of the '881 Patent. *See* JX-0486 (File History of '522 Application ('881 Patent)) at JX-0486.455-456, .459-461. For the '864 Patent, the effective filing date is no earlier than February 26, 2019, and, for claims reciting "airflow path," the effective filing date is even later (*i.e.*, December 23, 2020). *See* JX-0486 (File History of '522 Application ('881 Patent)) at JX-0486.455-456, .459-461; *see* JX-0008 (File History of the '483 Application ('864 Patent)) at JX-0008.4382-4385 (claims reciting "airflow path" in amendment dated December 23, 2020); *see also* RX-2726C (Vallee Rebuttal Report) at ¶¶ 102, 127. These effective filing dates will be explained further detail below.

i. Aperture / Airflow Path "Proximate" Ends of Housing

As Mr. Leinsing will explain, the '917 Application does not provide written description support for any of the below claim limitations relating to apertures and airflow paths "proximate" the ends of the housing of the cartridge and, thus, the claims incorporating these limitations are not entitled to the benefit of the July 27, 2010 filing date of the '917 Application:

Patent	Claim	Claim Language
11,497,864	1	the housing having a first end and a second end that is opposite the first end, the housing having a first aperture ***proximate*** the first end and a second aperture ***proximate*** the second end,
11,497,864	9	the housing having a first end and a second end that is opposite the first end, the housing having a first aperture ***proximate*** the first end and a second aperture ***proximate*** the second end, … a first portion of the airflow path ***proximate*** the first aperture being defined substantially centrally and axially with respect to the central longitudinal axis of the housing, and a second portion of the airflow path

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Patent	Claim	Claim Language
		proximate to the second aperture being defined substantially centrally and axially with respect to the central longitudinal axis of the housing.
11,497,864	25	the housing having a first end and a second end that is opposite the first end and a central longitudinal axis extending from the first end to the second end, the housing having a first aperture ***proximate*** the first end and a second aperture ***proximate*** the second end,

See RX-1031C (Leinsing Rebuttal Report) at ¶¶ 99-100; *see also* CX-2157C (Vallee Opening Report) at ¶¶ 659-668 (asserting that these claim limitations are supported by the '917 Application).[14]

In contrast with the '864 patent as issued, which the Court found has support for the above claim language, the abandoned '917 application does not.

During claim construction, JLI argued that the term "proximate" was indefinite, because there was no explanation as to what distance from the end sufficed. In particular, JLI argued that the specification never describes nor depicts an aperture as "proximate" an end: it only ever describes and depicts an aperture *on* the end. *See, e.g.*, CX-0242 (JLI Opening Claim Construction Brief) at CX-0242.11-15. The Court disagreed, finding that Figure 2 of the '864 and '881 patents specifically depicted the second aperture (which is claimed as the first aperture) **proximate** the second end (which is claimed as the first end). Order No. 36 at 6-13. The Court's rationale was that on the first end of figure 2 (claimed as the second end) the first aperture (claimed as the second aperture) was depicted as **at** the first end but that—by contrast, and providing support for the word "**proximate**"—"the second aperture 212 is located **near (but not at)** the second end 208." *Id*. at

[14] While it does not appear that NJOY or Dr. Vallee contend that these limitations are supported by the '819 Provisional or the '097 Provisional, *see* RX-1031C (Leinsing Rebuttal Report) at ¶ 103; CX-2157C (Vallee Opening Report) at ¶ 645, to the extent NJOY advances such an argument, Mr. Leinsing will explain that the '819 and '097 Provisionals do not, in fact, provide support for these limitations. RX-1031C (Leinsing Rebuttal Report) at ¶¶ 104-105.

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8. Thus, as depicted below, the precise location of second aperture 212 was critical to the Court's finding that a POSITA would be able to understand what "proximate" meant and that it was disclosed in the specification.

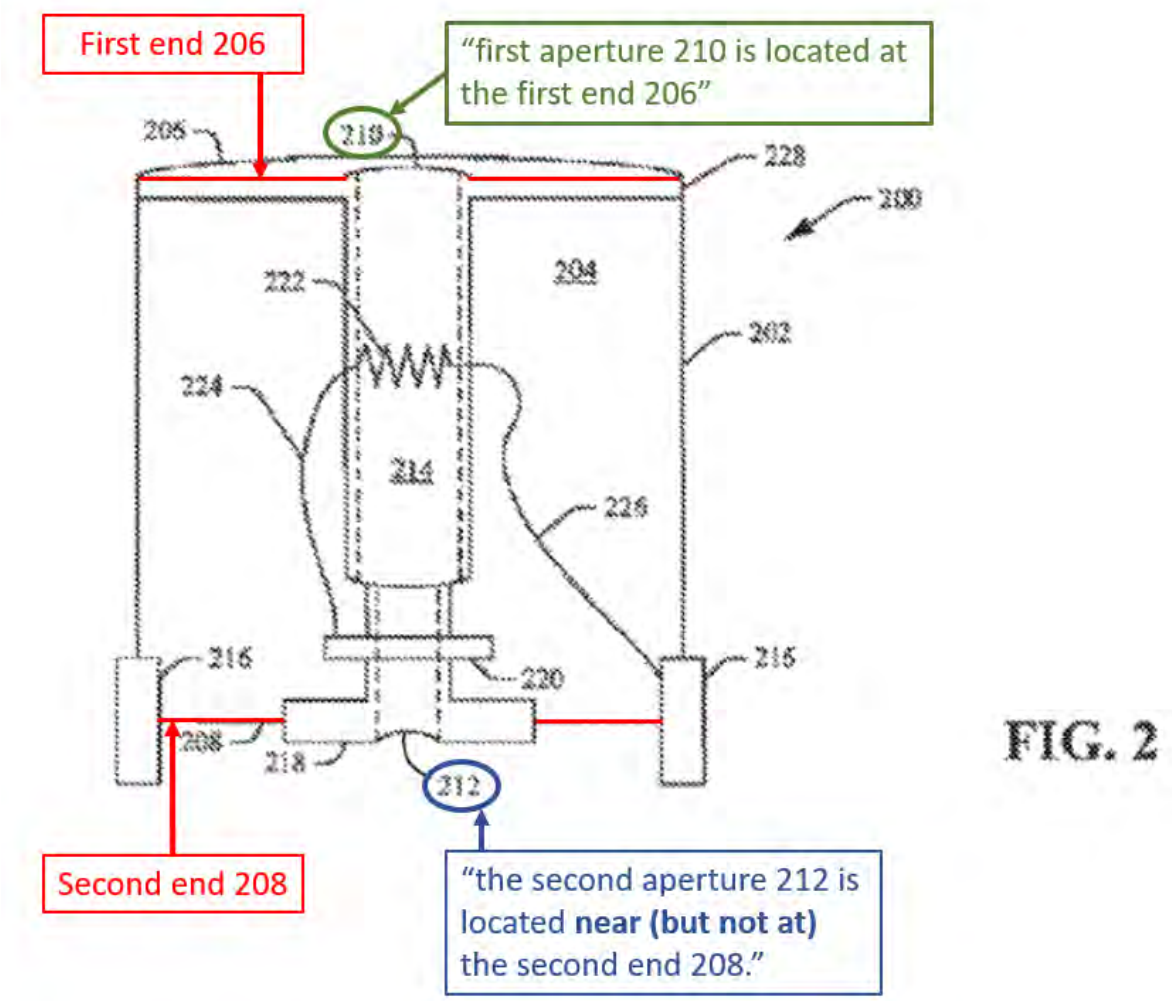


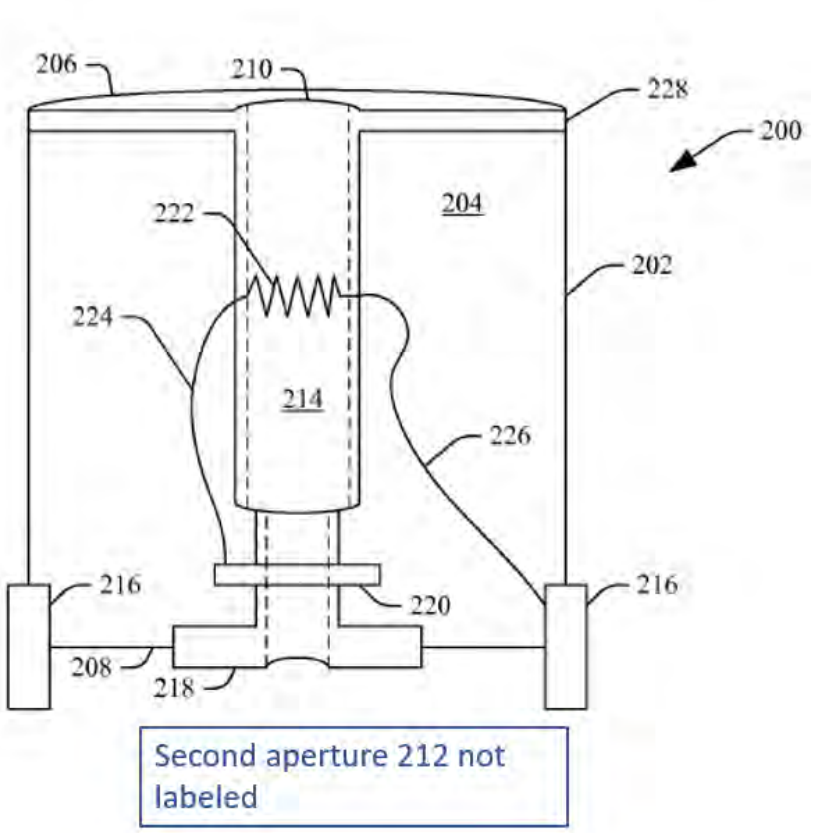
FIG. 2

JX-0001 ('864 patent) at Fig. 2 (annotated).

As Mr. Leinsing will explain, and as seen below, the '917 Application, in contrast to the above, does not identify the location of second aperture 212, and thus lacks the critical disclosure that the Court determined provides support for the claim terms above. RX-1031C (Leinsing Rebuttal Report) at ¶ 107.

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JX-0520 (File History of '917 Application) at JX-0520.40 ('917 Application, Fig. 2). Instead, the label for second aperture 212 in Figure 2 was added on February 26, 2019, during prosecution of the '881 Patent. *See* JX-0486 (File History of '522 Application ('881 Patent), NJOYITC1_00203619) at JX-0486.455-456, .459-461; RX-1031C (Leinsing Rebuttal Report) at ¶ 115-116. A POSITA would not have been able to determine prior to this labeling that inventors intended that the second aperture 212—which in the claims is part of the housing—to be an aperture in the center post 218. *See* JX-0520 (File History of '917 Application) at JX-0520.27 ('917 Application, ¶ 30). As Mr. Leinsing testified and drew below (in red) during his deposition, it would have been more natural to read the specification and figures, without the label 212 in Figure 2, to be describing that second aperture 212 was flush with the housing and second end 208, given the claim language:

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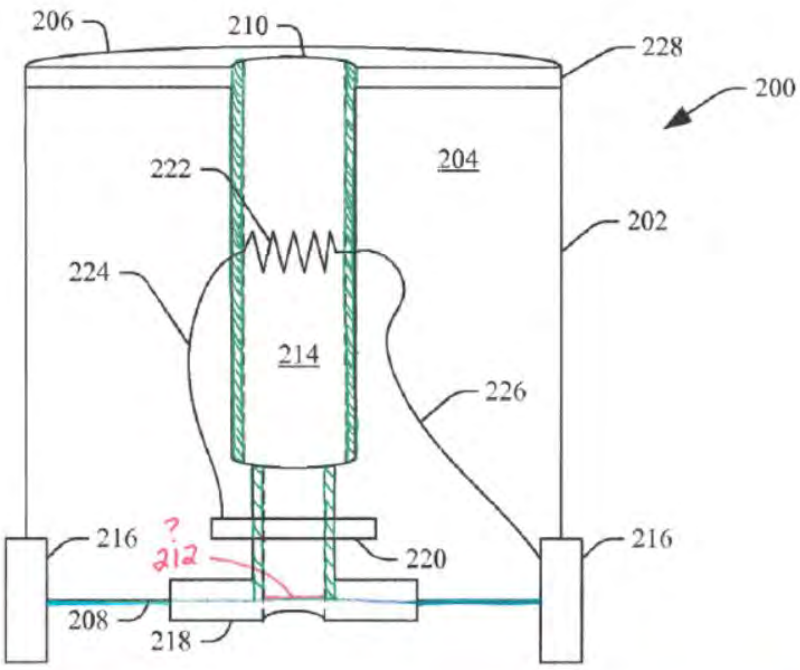


FIG. 2

917 Application , Figure 2



CX-0324 (Leinsing Dep. Ex. 9); *see* CX-0321 (2024-04-07 Leinsing Depo. Tr.) at 42:2-43:22; 52:3-10; 55:1-15. Such an aperture does not provide disclosure for an aperture "proximate" the end, as the Court's claim construction ruling distinguishing aperture 210 from aperture 212 makes clear. Order 36 at 8. Further, in addition to the claim language, the specification states that "[t]he first end 206 comprises a first aperture 210, and the second end 208 comprises a second aperture 212." JX-0520 (File History of '917 Application) at JX-0520.27 ('917 Application, ¶ 29). This establishes both that the unlabeled second aperture 212 should be considered positioned with respect to the second end the same way the first aperture 210 is positioned with respect to the first end, *i.e.*, at or on the very end, and also establishes that the "second end 208 comprises" the second aperture 212, rather than the center post 218 comprising the second aperture. RX-1031C (Leinsing Rebuttal Report) at ¶ 116. All of the evidence thus points to the second aperture 212 *not* being

[redacted]

"near (but not at)" the second end, but only being exactly at or on the second end, thus not providing support for "proximate," until February 26, 2019 when the unexpected location of second aperture 212 was finally labeled and disclosed.

Indeed, NJOY's witness, Dr. Thomas Tomsik, who worked on the Fuma devices for about 4 years, testified that the '917 specification and Figure 2 did not sufficiently explain where the second aperture 212 is located for him to understand. *See* RX-1134C (2024-02-06 Tomsik Depo. Tr.) at 43:6-16, 20:20-21:2 ("Q When did you start working with Fuma? A Approximately I think it was 2009 I believe I started working for Fuma as a consultant."), 25:7-18 ("… Q When did that relationship or consultancy end? A It ended in 2013, I believe."); RX-1031C (Leinsing Rebuttal Report) at ¶ 115. Dr. Tomsik is a POSITA as he has a master's degree in chemical engineering, has 35 years' experience as a NASA aerospace engineer, and he worked on research and development aspects of the e-liquid and other components of the e-cigarette for Fuma for at least 4 years, and his testimony confirms Mr. Leinsing's views. *See* RX-1134C (2024-02-06 Tomsik Depo. Tr.) at 14:22-21:2, 24:11-25:18.

Thus, the above claims are entitled to a priority date no early than February 26, 2019, when a description of an aperture near but not at an end was first added. *See* JX-0486 (File History of '522 Application ('881 Patent), NJOYITC1_00203619) at JX-0486.455-456, .459-461.

ii. Airflow Path

NJOY and Dr. Vallee appear to be taking the view that the claimed "airflow path" is separate from the claimed airflow passageway, as is the claimed "airflow chamber." *See* CX-2157C (Vallee Opening Report) at ¶¶ 669-673, 767-770; RX-1531C (*Fuma International LLC v. R.J. Reynolds Vapor Company*, 19-cv-00260, 120_04 - Ex. D - 2020 07 23 Vallee Expert Report on Infringement of 604 and 881 Patents) at 55-56; RX-1529C (*Fuma International LLC v. R.J. Reynolds Vapor Company*, 19-cv-00260, Dkt. 120-9 ('881 chart versus Vuse Ciro)) at RX-

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1529C.0006-07; RX-1530C (*Fuma International LLC v. R.J. Reynolds Vapor Company*, 19-cv-00260, 120_07 - Ex. G - 2020 09 04 G. Vallee Reply Expert Report on Infringement) at ¶¶ 60, 64, 78.

As Mr. Leinsing will explain, the '917 Application does not provide written description support for any of the below claim limitations relating to an "airflow path" as separate from an airflow passageway, and, thus, the claims incorporating these limitations are not entitled to the benefit of the July 27, 2010 filing date of the '917 Application, if NJOY is correct about claim scope:

Patent	Claim	Claim Language
11,497,864	9	wherein the airflow through the housing follows an ***airflow path***, a first portion of the ***airflow path*** proximate the first aperture being defined substantially centrally and axially with respect to the central longitudinal axis of the housing, and a second portion of the ***airflow path*** proximate to the second aperture being defined substantially centrally and axially with respect to the central longitudinal axis of the housing.

See RX-1031C (Leinsing Rebuttal Report) at ¶¶ 120-135; *see also* CX-2157C (Vallee Opening Report) at ¶¶ 669-673 (asserting that these claim limitations are supported by the '917 Application).[15]

As Mr. Leinsing will explain, the '917 Application does not provide written description support for an "airflow path" separate or distinct from an airflow passageway, portions of the airflow path and where each portion resides. The term "path" does not appear anywhere in the '917 Application in relation to airflow. At best, these limitations would be afforded the date when the

[15] While it does not appear that NJOY or Dr. Vallee contend that these limitations are supported by the '819 Provisional or the '097 Provisional, *see* RX-1031C (Leinsing Rebuttal Report) at ¶¶ 123, 130; CX-2157C (Vallee Opening Report) at ¶ 645, to the extent NJOY advances such an argument, Mr. Leinsing will explain that the '819 and '097 Provisionals do not, in fact, provide support for these limitations. RX-1031C (Leinsing Rebuttal Report) at ¶¶ 124-125, 131-132.

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term "airflow path" first appeared in the '864 Patent claims, which is December 23, 2020. *See* JX-0008 (File History of the '483 Application ('864 Patent)) at JX-0008.4382-4385 (claims reciting "airflow path" in amendment dated December 23, 2020).

Dr. Vallee may opine that the '917 Application provides written description support for an airflow path that is separate or distinct from the airflow passageway or airflow generally due to the disclosure of (a) gap 228 used to mix air and vaporized liquid, (b) apertures within the airflow passageway 214, (c) multiple passageways described in [0038], and (d) Figure 4 not depicting a specific passageway. *See* CX-2157C (Vallee Opening Report) at ¶ 671. However, as Mr. Leinsing will explain, the claimed airflow path requires the airflow to be centrally and axially defined with respect to the central longitudinal axis of the housing. *See* JX-0001 ('864 Patent) at 19:4-10 (claim 9 reciting "a first portion of the airflow path proximate the first aperture being defined substantially centrally and axially with respect to the central longitudinal axis of the housing, and a second portion of the airflow path proximate to the second aperture being defined substantially centrally and axially with respect to the central longitudinal axis of the housing"). Gap 228 extends radially outward from the airflow passageway 214 and, thus, is not central or axially defined with respect to the central longitudinal axis of the housing. JX-0520 (File History of '917 Application) at JX-0520.40 ('917 Application, Fig. 2). Regarding the alleged apertures within the airflow passageway 214, these apertures "allow for vaporized solution to mix with air in the airflow passageway." JX-0520 (File History of '917 Application) at JX-0520.29 ('917 Application, ¶ 34). To the extent air is able to pass through the apertures in the airflow passageway, the air would be extending radially and not substantially centrally and axially with respect to the central longitudinal axis of the housing. As to the multiple passageways described in paragraph 38 of the '917 application, these are described as "airflow passageways" and, thus, fails to describe an airflow path that is separate

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and distinct from the airflow passageway. As to Figure 4 not depicting a specific passageway, it also does not show an airflow path, much less an airflow path that is separate and distinct from the airflow passageway.

iii. Airflow Passageway

NJOY and Dr. Vallee appear to argue that the claimed "airflow passageway" may be part of the claimed housing and/or the solution-holding medium, and that it need not be a separate structure. As Mr. Leinsing will explain, the '917 Application does not provide written description for such an interpretation; the only support is for an airflow passageway that is a separate structure from the housing and the solution-holding medium. Thus, the claims incorporating these limitations, under NJOY's and Dr. Vallee's interpretations, are not entitled to the benefit of the July 27, 2010 filing date of the '917 Application.

Patent	Claim	Claim Language
10,334,881	1	wherein the housing includes ***an airflow passageway*** that extends ***centrally and axially*** with respect to the housing intermediate of the ***first aperture*** on the first end of the housing and the ***second aperture*** on the second end of the housing,
10,334,881	16	an ***airflow passageway*** in the interior of the housing, the airflow passageway having a length extending ***centrally and axially*** with respect to the housing intermediate of the ***first aperture*** on the first end of the housing and the ***second aperture*** on the second end of the housing, the airflow passageway being configured to allow an airflow through the cartridge from the first aperture to the second aperture of the housing,
11,497,864	1	an ***airflow passageway*** in the housing, at least a portion of the airflow passageway extending ***centrally and axially*** with respect to the housing, wherein the ***airflow passageway*** extends ***centrally and axially*** from the ***first aperture*** to the ***second aperture***.
11,497,864	25	an ***airflow passageway*** in the housing, at least a portion of the airflow passageway extending ***centrally and axially*** with respect to the housing, wherein the ***airflow passageway*** extends in a straight path from the ***first aperture*** to the ***second aperture*** with only the heating element obstructing a portion of the airflow through the

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Patent	Claim	Claim Language
		airflow passageway along the central longitudinal axis of the housing.

See RX-1031C (Leinsing Rebuttal Report) at ¶¶ 136-144; *see also* CX-2157C (Vallee Opening Report) at ¶¶ 674-682 (asserting that these claim limitations are supported by the '917 Application).[16]

As Mr. Leinsing will explain, the term "airflow passageway extending that extends centrally and axially with respect to the housing" was first introduced in an amendment on October 16, 2013, during prosecution of the '917 Application and is the first support for the claim language. *See* RX-0532 (File History of '917 Application) at RX-0532.86 (Amendment filed October 16, 2013, at 2).

The ALJ has adopted the parties' agreed construction for the "an airflow passageway …" terms, *i.e.*, "the airflow passageway extends in a straight path through the center of the housing from a first opening on the first end to a second opening on the opposite end of the housing." *See* Order No. 36 at 5.

As Mr. Leinsing will explain, the '917 Application does not provide written description support for an airflow passageway, to the extent NJOY alleges that they cover an airflow passageway that is not a separate physical structure from the other elements such as a housing, the solution holding medium, etc., and in that case the claims would only be owed priority as of their filing. The '917 Application only describes the passageway as a physical structure, separate from the housing, which begins at the centrally located first aperture and extends all the way to the

[16] While it does not appear that NJOY or Dr. Vallee contend that these limitations are supported by the '819 Provisional or the '097 Provisional, *see* RX-1031C (Leinsing Rebuttal Report) at ¶ 140; CX-2157C (Vallee Opening Report) at ¶ 645, to the extent NJOY advances such an argument, Mr. Leinsing will explain that the '819 and '097 Provisionals do not, in fact, provide support for these limitations. RX-1031C (Leinsing Rebuttal Report) at ¶¶ 141-142.

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centrally located second aperture, forming a passageway for airflow between those two apertures. *See* JX-0520 (File History of '917 Application) at JX-0520.40 ('917 Application, Fig. 1) (depicting airflow passageway 134 as its own distinct structure); JX-0520.40-41 ('917 Application, Figs. 2-3) (depicting airflow passageway using a dotted line to show its own distinct structure); JX-0520.27 ('917 Application, ¶ 29) (describing that the airflow passageway 214 has a wall); JX-0520.28-29 ('917 Application, ¶ 32) (describing that the airflow passageway has a wall, the heating element can wrap around the airflow passageway, the airflow passageway can have apertures).

To the extent NJOY alleges that airflow can be crooked in the claimed airflow passageway, a crooked airflow within a straight airflow passageway is never described or depicted in the '917 Application.

iv. Plane Perpendicular to the Central Longitudinal Axis of the Housing

As Mr. Leinsing will explain, the '917 Application does not provide written description support for the independent claim 16 feature of "a plane perpendicular to the central longitudinal axis of the housing passing through the heating element and the solution holding medium" and, thus, claim 16 (and claims depending therefrom) are not entitled to the benefit of the July 27, 2010 filing date of the '917 Application. *See* RX-1031C (Leinsing Rebuttal Report) at ¶¶ 53-54, 86-98; *see also* CX-2157C (Vallee Opening Report) at ¶¶ 649-658 (asserting that these claim limitations are supported by the '917 Application).[17] As Mr. Leinsing will explain, the '917 Application does not disclose a plane perpendicular to the central longitudinal axis of the housing passing through the heating element and the solution holding medium. RX-1031C (Leinsing Rebuttal Report) at ¶

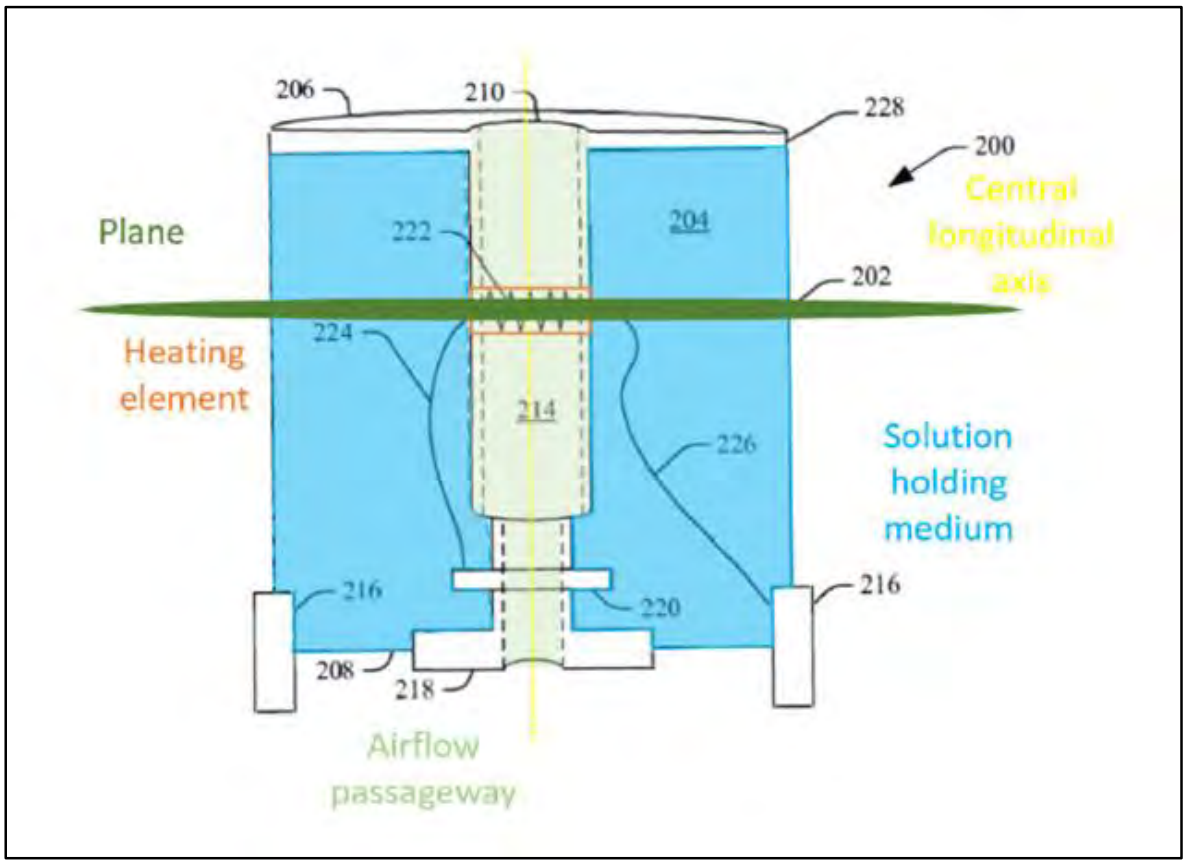
[17] While it does not appear that NJOY or Dr. Vallee contend that these limitations are supported by the '819 Provisional or the '097 Provisional, *see* RX-1031C (Leinsing Rebuttal Report) at ¶ 88; CX-2157C (Vallee Opening Report) at ¶ 645, to the extent NJOY advances such an argument, Mr. Leinsing will explain that the '819 and '097 Provisionals do not, in fact, provide support for these limitations. RX-1031C (Leinsing Rebuttal Report) at ¶¶ 89-90.

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91. Particularly, no plane passing through the heating element and being perpendicular to a central longitudinal axis of the housing is ever disclosed in the '917 Application.

Dr. Vallee may provide the following annotated drawing of Figure 2 of the '917 Application to show support for the plane passing through the heating element and being perpendicular to a central longitudinal axis of the housing.



See CX-2157C (Vallee Opening Report) at ¶ 574 (annotating Figure 2 of the '917 Application).

The drawing includes a dark green annotation depicting the alleged plane perpendicular to the central longitudinal axis of the housing passing through the heating element and the solution holding medium. However, Mr. Leinsing will explain that this is simply an annotation that Dr. Vallee added. It does not appear, nor does any description of it appear, in any of the priority documents.

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As Mr. Leinsing will explain, the phrase "a plane perpendicular to the central longitudinal axis of the housing passing through the heating element and the solution holding medium" was first introduced in an amendment filed on November 2, 2018. *See* JX-0486 (File History of the '881 Patent) at JX-0486.0299 (Amendment dated November 2, 2018, at 6).

v. In [an/the] Airflow: vaporization and oral provisioning

As Mr. Leinsing will explain, the '917 Application does not provide written description for claim features listed below and, thus, the claims incorporating these limitations are not entitled to the benefit of the July 27, 2010 filing date of the '917 Application.

Each independent claim of the '881 and '864 Patents requires that something occurs or is located "in" a claimed airflow, although the particular claimed airflow varies from claim to claim:

> "electrically configured to vaporize at least ***a portion of the solution*** to be contained in the solution holding medium for ***oral provision to an individual in an airflow from the second aperture***" in claims 1 and 16 of the '881 Patent (JX-0004 at 17:50-54, 19:64-67);
>
> "an airflow through the housing from the first aperture to the second aperture … the heating element configured to vaporize at least ***a portion of the solution*** for ***oral provision to an individual in the airflow"*** in claims 1 and 9 of the '864 Patent (JX-0001 at 17:29-30, 17:35-37, 18:60-61, 18:66-19:1); and
>
> "an airflow through the housing … the heating element being configured to vaporize at least ***the portion of the solution*** drawn to the heating element for ***oral provision to an individual in the airflow"*** in claim 25 of the '864 Patent (JX-0001 at 20:56-58, 20:65-21:1).

See JX-0632C (Leinsing Opening Report) at ¶¶ 103, 147, 158-159, 682-683; *see also* RX-1031C (Leinsing Rebuttal Report) at ¶¶ 145-156; *see also* CX-2157C (Vallee Opening Report) at ¶¶ 381-384, 413, 461, 529-530, 576-577 (asserting that these claim limitations are supported by the '917 Application).[18]

[18] While it does not appear that NJOY or Dr. Vallee contend that these limitations are supported by the '819 Provisional or the '097 Provisional, *see* RX-1031C (Leinsing Rebuttal Report) at ¶ 150; CX-2157C (Vallee Opening Report) at ¶ 645, to the extent NJOY advances such an

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As Mr. Leinsing will explain, the term "in an/the airflow from the second aperture" was first introduced July 11, 2016 and the term "in the airflow" where airflow is specified as being "through the cartridge from the first aperture to the second aperture of the housing" was first introduced in December 23, 2020. *See* JX-0521 (File History of '955 Application ('604 Patent)) at JX-0521.108; *see also* JX-0008 (File History of the '483 Application ('864 Patent)) at JX-0008.4380-4387.

Importantly, Dr. Vallee testified that the plain and ordinary meaning of these claim terms require (1) a portion of the solution to be present in the airflow, (2) vaporization in the airflow, and (3) oral provision to an individual in the airflow. *See* RX-1013 (2023-12-21 Vallee Depo. Tr.) at 136:16-138:5, 150:23-154:3.

As Mr. Leinsing will explain, the '917 Application fails to disclose "in the airflow" from second aperture or in the airflow between first and second apertures claim features. These features were never explicitly described in the specification. Nor were claim elements claimed as occurring or present in those airflows ever described in the specification as occurring or present in those airflows. This concept is never described until the claims of the '881 Patent so there is insufficient written description until at least then.

The '917 Application has no actual mention of "airflow from the second aperture." Nor does it have any actual mention of airflow between the first and second aperture. And even if those things were described, there is no description at all of the elements that are claimed to be in the airflow (both airflows) according to Dr. Vallee: (1) a portion of the solution to be present in the airflow, (2) vaporization in the airflow, and (3) oral provision to an individual in the airflow. *See*

argument, Mr. Leinsing will explain that the '819 and '097 Provisionals do not, in fact, provide support for these limitations. RX-1031C (Leinsing Rebuttal Report) at ¶¶ 151-152.

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RX-1013 (2023-12-21 Vallee Depo. Tr.) at 136:16-138:5, 150:23-154:3. The '917 Application does not describe that all three of these elements are present in the airflow. As to the airflow from the second aperture, the only thing that is happening is the oral provisioning to the individual because this airflow is outside of the housing. The portion of the solution is not in the airflow from the second aperture, and vaporization is not occurring in the airflow from the second aperture because they occur inside the housing. As for the airflow between the first and second aperture, there is no oral provision to the individual because this airflow is inside of the housing. As a result, the claims cannot have support until the language first appeared, on July 11, 2016 in an amendment in U.S. Appl. No. 14/510,955 ("'955 Application"). *See* JX-0521 (File History of '955 Application ('604 Patent)) at JX-0521.108

Dr. Vallee opines that the Asserted Claims recite that vaporization happens in the airflow. *See* CX-2157C (Vallee Opening Report) at ¶ 680. However, the '917 Application does not even label a second aperture, which is part of the definition of the airflow, and so the claim language does not have support as of the '917 application date. *See e.g.*, JX-0520 (File History of '917 Application) at JX-0520.0040-41 ('917 Application, Figs. 1-3); JX-0001 ('864 patent), 17:29-30 (claim 1 reciting "an airflow through the housing from the first aperture to the second aperture"), 18:60-61 (claim 9 reciting "an airflow through the housing from the first aperture to the second aperture"), 20:57-58 (claim 25 reciting "an airflow through the housing"). Further, there is no disclosure in the '917 Application that suggests that vaporized solution is provided orally to an individual between the first and second apertures that would lead a POSITA to conclude that the inventors were in possession of such a device.

Dr. Vallee may opine that "a POSITA would have understood that the aperture at the bottom of Figure 2 would correspond to aperture 212 based on the description of Figure 2 of the

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specification of the ’917 Application.” *See* CX-2157C (Vallee Opening Report) at ¶ 681. However, as discussed above, the ’917 Application describes the end 208 as “compris[ing]” aperture 212. *See* JX-0520 (File History of ’917 Application) at JX-0520.27 (’917 Application, ¶ 29). That is, aperture 212 is part of or included in end 208. The placement of aperture 212 some distance away from end 208 on center post 218 is unclear from the specification. thus, to the extent NJOY is relying on the second aperture 212 (*i.e.*, the claimed “first aperture”) in Figs. 2 and 3 of the Asserted Patents to help demonstrate disclosure of an airflow from the second aperture or an airflow between the first and second apertures, there is no disclosure of such a feature until the labels for the second aperture 212 in Figs. 2 and 3 were added on February 26, 2019. *See* JX-0486 (File History of ’522 Application (’881 Patent)) at JX-0486.455-456, .459-461.

vi. Heating Element Obstructing Airflow / In the Center Airflow

As Mr. Leinsing will explain, the ’917 Application does not provide written description support for NJOY’s interpretation of “wherein the airflow passageway extends in a straight path from the first aperture to the second aperture with only the heating element obstructing a portion of the airflow through the airflow passageway along the central longitudinal axis of the housing” as recited in claim 25 of the ’864 Patent, as purportedly allowing the heating element to block central airflow through the claimed passageway. Thus, under NJOY’s interpretation, claims incorporating this limitation is not entitled to the benefit of the July 27, 2010 filing date of the ’917 Application. *See* RX-1031C (Leinsing Rebuttal Report) at ¶¶ 136-137, 157-159. Furthermore, the evidence will show that NJOY’s interpretation of claim 25 of the ’864 Patent is incorrect. Claim 25 only requires the heating element to obstruct “a portion” of the airflow through the airflow passageway. NJOY’s interpretation of claim 25 impermissibly limits the obstructed portion of the airflow through the airflow passageway to the “central” portion of airflow. NJOY’s improper attempt to import this limitation of the heating element obstructing the central portion of the

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airflow is not only unsupported by the plain language of the claim itself, but it is completely orthogonal to the Asserted Patent disclosure and applicant's statements that were made during prosecution that the central airflow passageway is unobstructed and open.

As Mr. Leinsing will explain, NJOY' s interpretation of the above-quoted claim feature as allowing the heating element to be in the center airflow (*i.e.*, the heating element in the "airflow through the airflow passageway along the central longitudinal axis of the housing") is not entitled to a priority date prior to August 25, 2012 – the filing date of the later continuation-in-part Application Serial No. 13/594,813 ("'813 Application") (now U.S. Patent No. 8,897,628, "'628 Patent"). The '813 Application for the first time discloses, via an addition the specification, "it should be appreciated that that one or more example embodiments may correspond to a cartridge that comprises of a housing, heating element located in the center airflow and a storage mechanism for holding the active and inert ingredients." *See* JX-0565 (File history of '813 Application) at JX-0565.34 ('813 Application, ¶ 78). Prior to this disclosure, there was no support for the heating element being located in the center airflow at all, much less obstructing it. However, even if Figure 2 of the Asserted Patent is deemed to contain inherent support for a heating element in the center airflow, and it does not, NJOY will have still failed to meet its burden because the presence of a heating element in a center airflow does not necessarily require the heating element to be also "obstructing" the center airflow. The '819 Provisional, the '097 Provisional, and the '917 Application do not include such disclosure.

2. Lack of Demonstration of Earlier Conception and Reduction to Practice Date

NJOY and Dr. Vallee assert that (1) declarations submitted to the USPTO on November 2, 2018 and February 16, 2021 by inventor Gregory Conley under [RULE 1.131] to establish conception prior to a January 2010 reference (RX-1353C; RX-1356); (2) a sketch allegedly made by Mr. Conley in 2009 (RX-1348C (Fuma notebook sketches) at RX-1348C.3); and (3) tolerance

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diagrams (RX-1182C (Fuma tolerance diagrams) at RX-1182C.11) disclose all of the features of the asserted claims, and were later embodied in a prototype and device of Fuma, and thus the inventors had conceived of all claim limitations by July 28, 2009. *See* CX-2157C (Vallee Opening Report) at ¶¶ 61-66.

However, as Dr. Dahm will explain, there is no corroborating evidence the device photographed in the declarations is the same as the device allegedly created and sold by Fuma in 2009, and there is evidence to the contrary. Further, the alleged conception materials are unreliable, in particular because the date was added several years later and not contemporaneously. Moreover, even if the evidence were reliable and connected to the alleged reduction to practice product, it lacks key limitations of the asserted claims and thus do not prove conception of each element of the asserted claims as required by law. *See* RX-0841C (Dahm Rebuttal Report) at ¶¶ 216-236; *Slip Track Sys., Inc. v. Metal-Lite, Inc.*, 304 F.3d 1256, 1263 (Fed. Cir. 2002) ("Conception must include every feature or limitation of the claimed invention.").

NJOY and Dr. Vallee also will be unable to show that the inventors were diligent in the alleged reduction to practice of the claimed invention. *See* RX-0841C (Dahm Rebuttal Report) at ¶ 218. For example, Dr. Vallee did not provide *any* analysis as to the express steps taken by the named inventors to diligently reduce to practice the conceived invention, the timeline of conception and diligent reduction to practice, or any other such analysis. *Id.* Diligence between conception and reduction practice is a necessary element that NJOY has the burden of proving in order to be entitled to its date of alleged conception. *ATI Techs. ULC v. Iancu*, 920 F.3d 1362, 1369 (Fed. Cir. 2019) ("Accordingly, pursuant to Rule 131(b), the applicant bears the burden of proof to establish either: (1) prior reduction to practice; or (2) prior conception "coupled with due

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diligence."). Given the complete failure of proof on that issue, NJOY's contentions on these issues must fail.

Moreover, the alleged Fuma Prototype and the device allegedly sold in 2009 cannot serve as evidence of conception (which Fuma has not alleged), regardless, because there is no evidence regarding details of that device. NJOY has not proven that the images in Mr. Conley's 1.131 declaration, nor the device NJOY made available during discovery, reflect the same device as allegedly prototyped and sold in 2009. In fact, there is substantial evidence that the former is distinct from the latter, as explained below.

NJOY is thus unable to prove the inventors conceived and reduced to practice their alleged inventions as of the alleged date of of July 28, 2009, or any other date prior to the effective filing date of the asserted patents, a separate question that is discussed in the prior section. The proper effective filing dates for both the '881 Patent and the '864 Patent are much later. For the '881 patent, the effective filing date is no earlier than February 26, 2019 when the label for second aperture 212 was added to Figure 2 during prosecution of the of the '881 Patent. *See* JX-0486 (File History of '522 Application ('881 Patent)) at JX-0486.455-456, .459-461. For the '864 Patent, the effective filing date is no earlier than February 26, 2019, and, for claims reciting "airflow path" or "airflow chamber," the effective filing date is even later (*i.e.*, December 23, 2020). *See* JX-0486 (File History of '522 Application ('881 Patent)) at JX-0486.455-456, .459-461; *see* JX-0008 (File History of the '483 Application ('864 Patent)) at JX-0008.4382-4385 (claims reciting "airflow path" in amendment dated December 23, 2020); *see also* RX-2726C (Vallee Rebuttal Report) at ¶¶ 102, 127. These effective filing dates will be explained further detail below.

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i. Rule 1.131 Declarations

NJOY's contentions that the November 2, 2018 and February 16, 2021 Rule 1.131 Declarations from Mr. Conley that Fuma provided to the USPTO to antedate a January 13, 2010 reference demonstrate conception in July 2009 fails because NJOY and Dr. Vallee cannot demonstrate that the device photographed for the declarations has any relationship, much less is the exact same, as what it allegedly sold in 2009. *See* RX-0841C (Dahm Rebuttal Report) at ¶ 219. For example, while Dr. Vallee opined that "the device [depicted in Mr. Conely's Rule 1.131 Declarations] includes every element of each of the patent claims asserted in this case," CX-2157C (Vallee Opening Report) at ¶ 66, he provided no opinion as to whether the depicted device has anything to do with the alleged 2009 devices NJOY relies on for reduction to practice. *See also* RX-1353C (Declaration of Gregory D. Conley under 37 C.F.R. § 131) at RX-1353C.13. The Rule 1.131 Declarations and Dr. Vallee's opinions based on them are thus irrelevant because they have no relation to the alleged 2009 devices that NJOY contends evidence the inventors' reduction to practice of the claimed invention.

And there is evidence that the devices in the photographs of the 1.131 declaration are *not* the ones shown and offered for sale in 2009. Mr. Steiger, a former Fuma employee, testified to his belief that the packaging displayed in Mr. Conley's declaration are from 2011 or later, based on the stylized "F" in "Fuma," which Mr. Steiger believes happened as part of a redesign of the packaging around 2011-12. *See* RX-1135C (2024-03-05 Steiger Depo. Tr.) at 67:8-70:7.

Moreover, Mr. Conley testified that he could not independently corroborate the information provided in his Rule 1.131 Declarations, as counsel had prepared the document for him. RX-1117C (2024-03-01 Conley Depo. Tr.) at 269:3-9; *see also generally id.* at 265:15-304:8; RX-1353C (Declaration for '881 Patent); RX-1356 (Declaration for '864 Patent). Specifically, Mr. Conley repeatedly testified that "[m]y attorney prepared this" (RX-1116C (2024-03-01 Conley Depo. Tr.)

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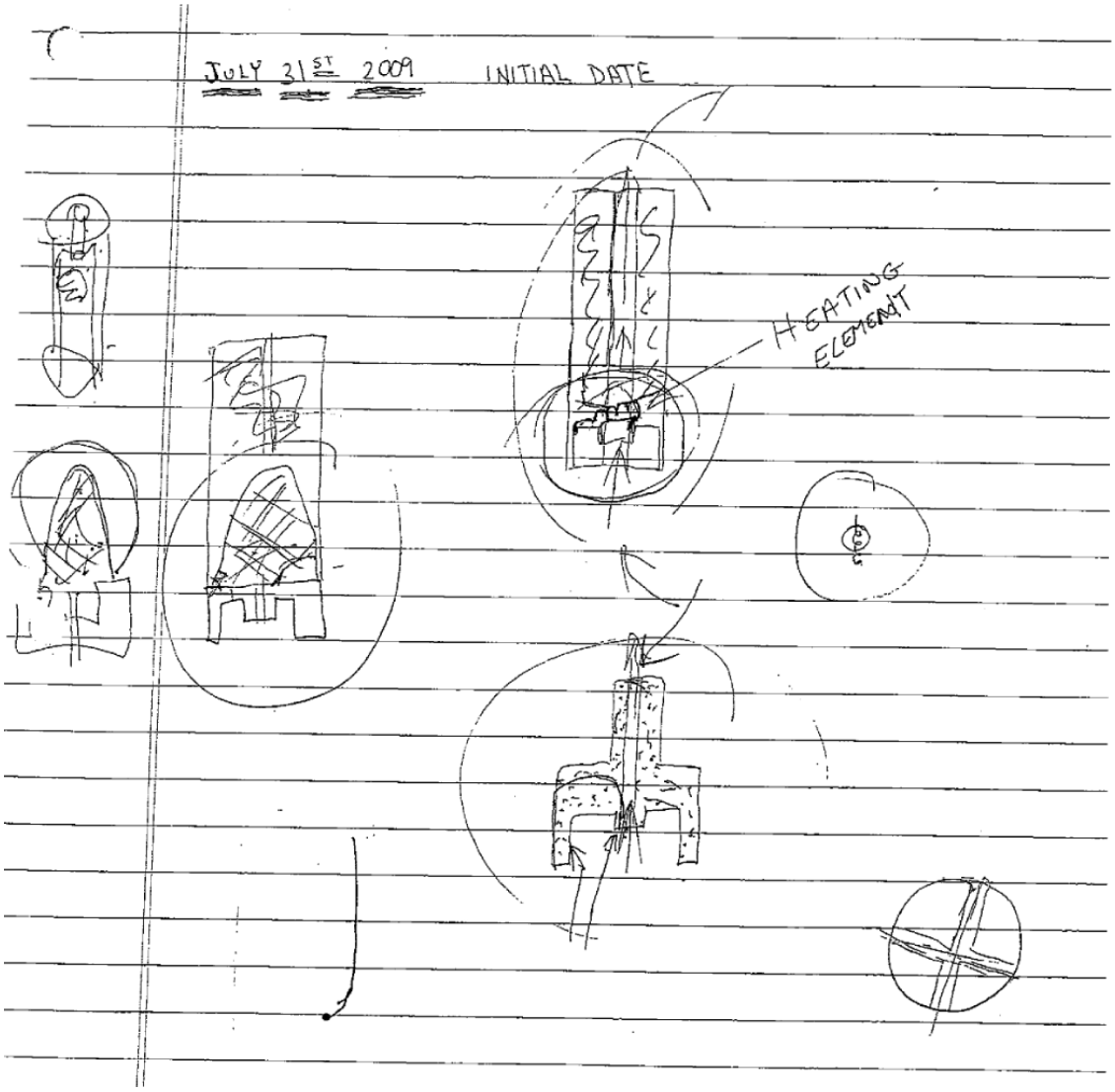
at 235:16 237:17-19, 239:9-10, 241:1) and "I trusted my legal counsel and I believe it to be true, so I signed it" (RX-1117C (2024-03-01 Conley Depo. Tr.) at 269:8-9; *see also id.* 269:1-2, 269:8-9). Mr. Conley solely relied on the attorney who prepared the declaration and did not do *any* independent analysis. RX-1116C (2024-03-01 Conley Depo. Tr.) at 242:5-10 ("Q Other than conversations with Mr. Martin, did you do anything to confirm that the statements you made in your declaration about the presence of claim elements within the Fuma device that those statements were accurate? A No."). Despite his declaration including claim analysis without a claim construction order, Mr. Conley, during his deposition, repeatedly refused to (1) provide *any* basis or reasoning for the allegations and analysis in his sworn declaration and (2) provide any meaningful testimony or analysis during his deposition. *Id.* at 239:12-21, 241:6-12; *see also* RX-1117C (2024-03-01 Conley Depo. Tr.) at 279:25-280:9, 281:21-282:1, 282:18-283:14, 288:2-8, 292:6-293:22, 298:13-301:19, 373:14-374:10. Accordingly, the Rule 1.131 Declarations cannot be relied on as proof of anything. *See* RX-0841C (Dahm Rebuttal Report) at ¶¶ 220.

ii. Notebook Sketch

The "inventor drawing" as NJOY calls it (reproduced below), taken from a Fuma notebook, also fails to demonstrate that the named inventors conceived of the asserted claims in 2009. *See* RX-0841C (Dahm Rebuttal Report) at ¶¶ 221-230.

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See RX-1348C (Fuma notebook sketches) at RX-1348C.3; *see also* CX-2157C (Vallee Opening Report) at ¶ 61 (annotating RX-1348C.3).

First, as Dr. Dahm will explain, the alleged conception story based on the inventor drawing is both questionable as to its accuracy and illogical. *See* RX-0841C (Dahm Rebuttal Report) at ¶ 233. For example, Mr. Steiger, a former Fuma employee, testified that Fuma was formed to simply resell pre-existing e-cigarettes. *See* RX-1135C (2024-03-05 Steiger Depo. Tr.) at 57:12-22, 53:20-57:5. Neither NJOY, Mr. Steiger, nor Mr. Conley offer any explanation for why a company

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formed for such a purpose was involved in creating new designs such as the one purportedly shown on the inventor drawing. Moreover, while the drawing includes the annotation "July 31st 2009 Initial Date," RX-1348C (Fuma notebook sketches) at RX-1348C.3, Mr. Steiger also testified that the date was not added contemporaneously. *See* RX-1136C (2024-03-29 Steiger Depo. Tr.) at 11:21-15:10 ("Q Okay. Do you know when that date was added to the document? A. I'm going to guess the following year probably late – late the following year, maybe a year later. He – when I saw this document there was not date on it at all."); 26:15-27:3 ("Q. … It's your testimony that the text at the top of that page, 'July 31st, 2009; Initial Date,' was not always there. Right? A. That's correct. … Q. When was the last time you saw the allegedly unedited version of this document? A. It would have been August of – I'm pretty sure about the date being in August. It could have been in 2010 or 2011."); *see also* RX-1135C (2024-03-05 Steiger Depo. Tr.) at 115:5-117:18. Indeed, as Dr. Dahm will explain, it is unusual for a date of a technical design document to be boldly underlined or to include the phrase "initial date" upon its initial drafting. *See* RX-0841C (Dahm Rebuttal Report) at ¶ 222. These further suggests that the date was added after the fact and cannot be relied on as evidence of the date of the drawing. The veracity of the date label is further called into question by testimony from co-inventor Daniel Hillenbrandt that Mr. Conley transmitted the prototype design to the manufacturer and placed an order on July 27, 2009, which is *before* the notebook sketch was allegedly created and when the invention was conceived. RX-1114C (2024-02-13 Hillenbrandt Depo. Tr.) at 275:22-276:2, 255:17-23; *see also* RX-0841C (Dahm Rebuttal Report) at ¶ 223. Mr. Steiger testified that the "July 31st 2009 Initial Date" was added after the fact in 2010 or 2011. *See* RX-1136C (2024-03-29 Steiger Depo. Tr.) at 13:8-15:10; 26:8-27:3; 35:3-9.

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Second, the sketch does not evidence conception of the asserted claims because it does not clearly identify at least the following claimed features of the asserted claims:

> the power source;
>
> the location of the first and second apertures;
>
> the solution-holding medium surrounding the airflow passageway and the heating element;
>
> the structure and material for the solution holding medium;
>
> the portion of the first end electrically and mechanically coupled to the power source;
>
> how and where the heating element is configured to vaporize solution for oral provision;
>
> how airflow passes through the device;
>
> any wicking material; and
>
> the relative dimensions of the diameter of the heating element, the airflow passageway cross-section, the first aperture, and the second aperture.

RX-0841C (Dahm Rebuttal Report) at ¶¶ 226-227.

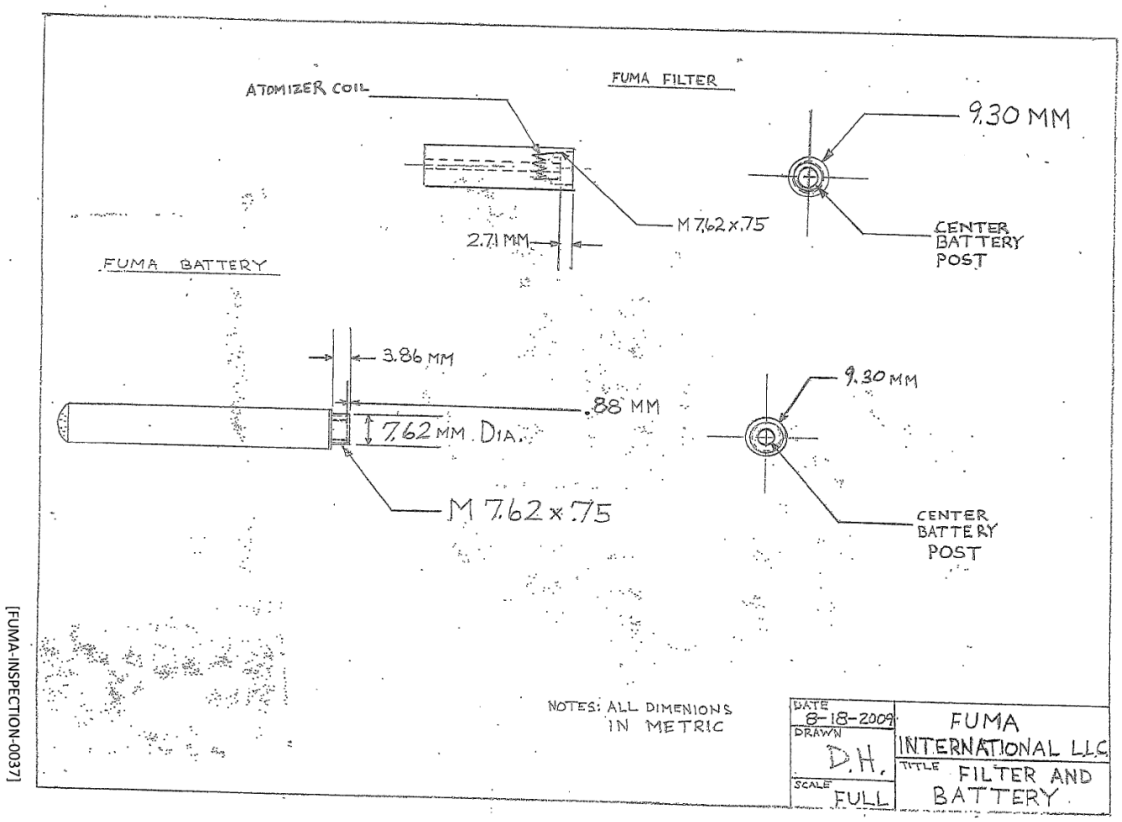
Third, the notebook in fact includes a number of designs, many of which appear to be incompatible with or otherwise unrelated to each other, without any indication that any of the design were preferred or had been chosen as the ultimate design for the Fuma device. *See, e.g.*, RX-1348C (Fuma notebook sketches) at RX-1348C.3. The notebook therefore does not evidence that the named inventors had fully conceived of a particular design at the time of the alleged sketch. *See* RX-0841C (Dahm Rebuttal Report) at ¶¶ 228-230.

iii. Tolerance Drawings

The tolerance drawings (one of which is reproduced below) also do not demonstrate that the named inventors conceived and reduced to practice the asserted claims in 2009. *See* RX-0841C (Dahm Rebuttal Report) at ¶¶ 231-236.

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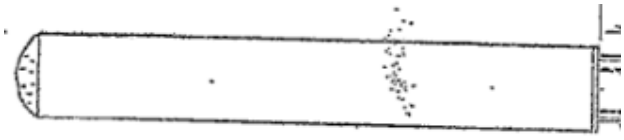
[redacted]



See RX-1182C (Fuma tolerance diagrams) at RX-1182C.11; *see also* CX-2157C (Vallee Opening Report) at ¶ 64 (annotating RX-1182C.11).

As in initial matter, there is no corroborating evidence that the device depicted in the tolerance drawings is the same as the 2009 Fuma prototype or device. They therefore are not relevant because NJOY will not be able to show that they have any relation to the alleged 2009 devices that NJOY contends evidence the inventors' reduction to practice of the claimed invention. *See* RX-0841C (Dahm Rebuttal Report) at ¶ 231. Indeed, they look to be a totally different design with an electrical light at the end of the battery portion, which was a common design at the time, but which is not present in any physical Fuma device that has been put forth by NJOY in this litigation:

[redacted]



RX-1182C (Fuma tolerance diagrams) at RX-1182C.11.

Importantly, the tolerance drawings cannot depict the structure of the 2009 Fuma device because they are dated August 18, 2009, which is ***at the same time or after*** the Fuma prototype had already been manufactured (ahead of the Tri-State Candy and Tobacco Convention held on August 2009). *See, e.g.*, RX-1182C (Fuma tolerance diagrams) at RX-1182C.5; *see also* CX-2157C (Vallee Opening Report) at ¶ 63; RX-0841C (Dahm Rebuttal Report) at ¶ 232. Drawings such as the above are generally created, as Dr. Dahm will explain, before a prototype is manufactured, not after, so this must be some other device.

And also like the notebook sketch, the tolerance drawings also do not evidence conception of the asserted claims because they do not clearly depict the full internal structure of the device as well as many features of the asserted claims, including at least the following claimed features:

the location of the first and second apertures;

the structure for the airflow passageway and where the airflow passageway extends from;

the airflow passageway surrounding the airflow passageway and the heating element;

the structure and material for the solution holding medium (reservoir);

how and where the heating element is configured to vaporize solution for oral provision;

how airflow passes through the device and the heating element; and

the wicking material.

See RX-0841C (Dahm Rebuttal Report) at ¶¶ 235-236; RX-1182C (Fuma tolerance diagrams) at RX-1182C.5-11 (depicting a battery); RX-1182C (Fuma tolerance diagrams) at RX-

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[redacted]

1182C.11 (allegedly depicting an atomizer coil, but not how it fits in the cartridge relative to other claimed components).

D. No Direct Infringement

1. The '881 Patent

i. The JUUL1 System

NJOY asserts that the Accused JUUL1 System infringes claims 19 and 26[19] of the '881 Patent. The evidence will show that the Accused JUUL1 System does not directly infringe any of the asserted claims of the '881 Patent, at least because NJOY fails to meet its burden of proof showing the JUUL1 Pod satisfies the following limitations:

- "a housing having an interior";
- "the housing having a first aperture on the first end and a second aperture on the second end";
- "a solution holding medium adapted to hold a solution";
- "the first end of the housing having an electrically conductive portion adapted to mechanically and electrically couple to an electrically conductive portion of the power source";
- "the heating element being electrically configured to vaporize at least a portion of the solution to be contained in the solution holding medium for oral provision to an individual in an airflow from the second aperture";
- "the airflow passageway having a length extending centrally and axially with respect to the housing intermediate of the first aperture on the first end of the housing and the second aperture on the second end of the housing";
- "the airflow through the passageway passing on both transverse sides of the heating element"; and

[19] While NJOY only asserts claims 19 and 26, claim 19 depends from claim 18, which in turn depends from independent claim 16; claim 26 also depends from independent claim 16. Accordingly, although not expressly asserted, limitations of independent claim 16 are included in the following discussion. To the extent that the Accused Products do not infringe claim 16, they *a priori* also fail to infringe any claims depending therefrom.

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[redacted]

- "a heating element … extending transversely across the airflow passageway."

a. NJOY's argument that the JUUL1 Pods infringe the claimed "housing" limitation incorrectly identifies the JUUL1 Pod's housing

Claim 16 of the '881 Patent requires "a housing having an interior." *See, e.g.*, JX-0004 ('881 Patent), Claim 16[a] ("a housing having an interior and a solution holding medium adapted to hold a solution in the interior of the housing"). Rather than identifying the entire exterior structure of the JUUL1 Pod (which is what Dr. Vallee will identify as the recited "cartridge"), NJOY's expert Dr. Vallee will contend that the housing of the JUUL1 Pod includes [redacted] *See, e.g.*, CX-2157C (Vallee Opening Rpt.) at ¶ 737. Indeed, NJOY does not even assert that the JUUL1 Pod with its mouthpiece infringes any of the Asserted Claims. However, the evidence at the Hearing, including the testimony of JLI's expert Dr. Dahm and NJOY's expert Dr. Vallee, will show that NJOY has identified the incorrect "housing" of the JUUL1 Pod for at least the following reasons. *See e.g.,* RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 243-260. First, Dr. Vallee's interpretation of the term "housing" as including internal components is inconsistent with plain and ordinary meaning of that term and his own definition of a "housing," which is "the outside structure of the cartridge that contains and protects the cartridge's internal structures," *see supra* § IV.B.1. Second, the mouthpiece is an integral and necessary part of the JUUL1 Pod that houses device internals and must be part of the claimed "housing." Third, the [redacted] and thus cannot be part of the housing.

1. The claimed "housing" must be the housing of the cartridge

At the Hearing, JLI expects NJOY to present an entirely new argument about the claimed housing of the JUUL1 Pod which contradicts its previous contentions, assertions, and admissions

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[redacted]

of it and its expert. Specifically, NJOY will argue that the claimed "housing" is somehow not the cartridge's housing, but instead can be another housing ***inside the cartridge*****,** rather than forming the actual outside of the cartridge. However, the claimed "housing" cannot be any housing, but must be the housing of the cartridge. *See supra* § IV.B.1.ii.

2. The mouthpiece is a required component of the claimed "housing"

Dr. Vallee acknowledges that the JUUL1 Pod is the "cartridge" recited in the asserted claims and that the JUUL1 Pod includes the mouthpiece. *See, e.g.*, CX-2157C (Vallee Opening Rpt.) at ¶ 732. As explained, however, when identifying what portions of the JUUL1 Pod correspond to the claimed "housing" of the cartridge, Dr. Vallee conveniently excludes the mouthpiece as part of the cartridge housing for the JUUL1 Pod. *See, e.g.*, CX-2157C (Vallee Opening Rpt.) at ¶ 737. But as Dr. Dahm will testify, the mouthpiece is an integral and necessary portion of the JUUL1 Pod housing that cannot simply be removed and omitted; [redacted] properly be identified as the claimed "housing." *See, e.g.*, RX-0841C (Dahm Rebuttal Rpt.) at ¶ 245.

NJOY and Dr. Vallee attempt to exclude the mouthpiece from the alleged "housing" because the JUUL1 Pod does not infringe several limitations of the Asserted Claims when the mouthpiece is properly included as part of the alleged housing. For example, as will be explained in more detail herein, Dr. Vallee concedes that [redacted] *See, e.g.*, RX-1014C (Vallee 4/11/24 Tr.) at 56:6-28:8. The JUUL1 Pod, therefore, cannot infringe the Asserted Claims to the extent the mouthpiece is rightly included as being part of the alleged housing of the alleged cartridge. *Id*.

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[redacted]

The evidence will show that the mouthpiece of the JUUL1 Pod must be part of the claimed "housing" of the cartridge under any definition of that term. ***First***, the mouthpiece of the JUUL1 Pod meets the plain and ordinary meaning of the "housing." *See supra* § IV.B.1. The mouthpiece is part of the outside structure of the alleged cartridge, the JUUL1 Pod, [redacted] *See, e.g.*,

As imported and used, the cartridge's mouthpiece is attached to the tank, [redacted] *Id.* at 228:13-24, 176:25-177:7; CX-2157C (Vallee Opening Rpt.) at ¶ 706.

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[redacted]

also RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

Dr. Vallee also admitted that the cartridge mouthpiece makes up the exterior and proximal end of the cartridge. At his deposition, Dr. Vallee annotated the figure below,

Dr. Vallee then outlined his alleged cartridge housing in blue pen, including

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[redacted]

see also RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)). As Dr. Vallee admitted, the exterior of the cartridge "include[s] the mouthpiece," and that mouthpiece [redacted] RX-1014C (Vallee 4/11/24 Tr.) at 174:11-19. Indeed, without the mouthpiece of the housing, [redacted]

; RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

Applying the proper construction of "housing," which is confirmed by NJOY's and Dr. Vallee's own assertions (*see supra* § IV.B.1,),also confirms that their alleged "housing" is in fact ***not*** the claimed housing. As shown above, the top end of NJOY's and Dr. Vallee's alleged housing is formed by the [redacted] . But this [redacted] is not an "outside structure"; it admittedly is an "internal structure" that is contained and encompassed

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[redacted]

within the mouthpiece and tank. RX-1014C (Vallee 4/11/24 Tr.) at 176:25-177:7; *see also* RX-1018C (Dahm) at 150:10-11. Indeed, Dr. Vallee specifically testified and agreed that such an "internal structure" of the cartridge "can't be part of the housing." CX-2728C (Vallee Rebuttal Report, App'x A-1) at CX-2728C.35; RX-1014C (Vallee 4/11/24 Tr.) at 154:25-155:10, 157:1-4. Indeed, Dr. Vallee testified that one way to know that a component is an "internal structure" and "not part of the housing" is that there are other components between it and the end of the cartridge device. CX-2728C (Vallee Rebuttal Report, App'x A-1) at CX-2728C.35; RX-1014C (Vallee 4/11/24 Tr.) at 157:5-9. Here, Dr. Vallee admitted (as he must) that [redacted] RX-1014C (Vallee 4/11/24 Tr.) at 178:1-5.

Second, even under Dr. Vallee's alternative definition of "housing" offered at his deposition — anything "connected to the exterior of the housing" is "part of the housing" — Dr. Vallee admits that the mouthpiece is part of the "housing" [redacted]

Thus, the evidence will establish that the JUUL1 mouthpiece is part of the housing and the JUUL1 device cannot infringe the asserted claims of the '881 Patent.

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[redacted]

3. The mouthpiece is a required component for the JUUL1 Pod cartridge to perform its intended functions

The evidence will also show that [redacted]

; *see also* RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 126-152, 250-254;

see also RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

Specifically, [redacted]

RX-1014C (Vallee 4/11/24 Tr.) at 48:15-51:21; *see also* RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 126-152, 250-254; *see also* RPX-0016 (JUUL Device), RPX-0017 (JUUL Pod), RPX-0018 (JUUL Pod (disassembled)).

The mouthpiece not only [redacted]

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[redacted]

; RX-1014C (Vallee 4/11/24 Tr.) at 53:12-54:8; *see also* RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 126-152, 250-254; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)). As Dr. Vallee himself acknowledges

. The JUUL1 Pod without the mouthpiece attached, using Dr. Vallee's own words, would be an "inoperable" device.

[redacted]

. *See*

; *see also*

; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)). Removing the mouthpiece from

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[redacted]

the JUUL1 Pod would, therefore, destroy the structural integrity of the JUUL1 Pod and make it inoperable.

Dr. Vallee agrees that it is not appropriate to modify an e-cigarette device in a way that renders it inoperable, as he has done by excluding the JUUL1 Pod's mouthpiece. For example, Dr. Vallee opined, in the context of his validity analysis, that Xia '610 cannot be modified without rendering it inoperable for its intended use because any proposed modifications would interfere with its disclosed process for mixing air with solution vapor to prevent droplets of e-liquid solution from being delivered to the user. *See* CX-2728 (Vallee Rebuttal Rpt., Appx. A-1) at ¶ 61 ("I disagree that these would be merely simple design choices. For example, modifying Xia '610 … to transform the solution storage having a central through-hole would interfere with the aforementioned liquid blocking mechanism."), ¶ 64 ("Xia '610 states that the liquid is instantaneously vaporized, but that does not mean that large droplets are not still entrained in the airflow."), ¶ 65 ("It is notable here that the modification proposed by Mr. Leinsing would eliminate these features that provide reabsorption of liquid droplets. And without reabsorption, those droplets would end up in the consumer's mouth."). For this same reason, the JUUL1 Pod also cannot be modified by simply removing the mouthpiece and [redacted], as Dr. Vallee suggests; again, doing so would remove safeguards that

.

See, e.g.,

; *see also* RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 126-152, 250-254;

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[redacted]

; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

Moreover, Dr. Dahm will explain that, as Dr. Vallee also acknowledges, the JUUL1 Pod as imported and offered for sale includes the mouthpiece attached to the JUUL1 Pod tank in a fixed way using locking tabs and an engagement bead, and is neither intended to be removed from the tank nor is removable without considerable difficulty. *See, e.g.*,

; *see also* RX-0841C (Dahm Rebuttal Rpt.) at ¶ 250; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)). For example, in order to remove the affixed mouthpiece from the rest of the cartridge, which a user is never advised to do, one must use hardware tools to squeeze and pull on the tank and the mouthpiece, causing damage to the cartridge, resulting in several deformities,

[redacted]

See RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 139-141. Dr. Vallee admitted at his deposition that he had to use a tool to "pry" the mouthpiece off from the JUUL1 Pod. *See* RX-1014C (Vallee 4/11/24 Tr.) at 108:23-209:17. The deformities he caused by doing so can be seen in images in Dr. Vallee's report. *See* CX-2157C (Vallee Opening Rpt.) at ¶ 739.

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[redacted]

[redacted]

4. NJOY and Dr. Vallee seek to improperly include the [redacted] and the [redacted] as part of the claimed housing of the JUUL1 Pod

JLI expects NJOY and Dr. Vallee will take inconsistent positions at the Hearing as to what should and should not be included as part of the alleged JUUL1 Pod "housing." For example, JLI expects that NJOY and Dr. Vallee will argue that internal components such as the JUUL1 Pod's [redacted] are part of the alleged "housing," while the mouthpiece of the JUUL1 Pod is not. *See, e.g.*, CX-2157C (Vallee Opening Rpt.) at ¶¶ 1084-1089; RX-1014C (Vallee 4/11/24 Tr.) at 5:2-11; *see also* RX-0841C (Dahm Rebuttal Rpt.) at ¶ 247. But neither NJOY nor Dr. Vallee can explain how or why these interior components (as shown below) are the "housing" of the JUUL1 Pod cartridge; neither have identified any intrinsic evidence, for example, that supports including these internal components within the scope of the alleged "housing." *See, e.g.*,

; *see also* RPX-0016 (JUUL Device);

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[redacted]

RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassem]bled)). In fact, the only justification Dr. Vallee gives to support his argument that the [redacted] are part of the JUUL1 Pod housing is that the [redacted] "[a]re connected to the exterior of the housing." RX-1014C (Vallee 4/11/24 Tr.) at 219:8-15 ([redacted]).

see also RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

However, the evidence at trial will show that the [redacted] are not part of the tank, but instead are [redacted] *See, e.g.*,

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[redacted]

RX-1018C (Dahm) at 148:1-15, 161:10-17; RX-1539C (Dahm Ex. 8) at RX-1539C.17-26; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)). Further, as the below views of the JUUL1 Pod components make clear,

the vast majority of which is located ***inside the tank*** (and which, in any event, is not part of the tank).

RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

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[redacted]

; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

Likewise, as discussed above, the [redacted] that NJOY and Dr. Vallee claim is part of the "housing" is, in fact, also internal to the JUUL1 Pod (the alleged cartridge) because it is completely covered by the mouthpiece. Therefore, the [redacted] cannot meet the plain and ordinary meaning of "housing," including the "housing" definition identified by NJOY in its IPR responses. *See supra* § IV.B.1; IV.D.1.i.a.

b. NJOY fails to show that the JUUL1 Pod's housing has "a first aperture on the first end and a second aperture on the second end" as required by claim 16

Claim 16 of the '881 Patent requires "the housing having a first aperture on the first end and a second aperture on the second end." *See* JX-0004 ('881 Patent), Claim 16[b] ("the housing having a first aperture on the first end and a second aperture on the second end"). NJOY and Dr. Vallee will argue at the Hearing that the JUUL1 Pod includes a first end "formed by the distal end of the tank and the electrical contact," a second end "formed by the proximal end of the tank cap," a first aperture on the first end being "the central air inlet hole at the distal end of the tank," and a second aperture on the second end being "the opening at the top of the tank top." *See, e.g.*, CX-

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[redacted]

2157C (Vallee Opening Rpt.) at ¶¶ 1083-1089, 1102-1106, 1190. However, as explained below, in addition to Dr. Vallee and NJOY improperly identifying the housing of the JUUL1 Pod, NJOY and Dr. Vallee will fail to show that either alleged aperture is actually ***on*** an end of the housing; the evidence will instead show that both apertures are interior to the ends of the JUUL1 Pod and not part of the alleged housing. RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 255-260.

1. NJOY fails to show the JUUL1 Pod includes a "second aperture on the second end"

NJOY and Dr. Vallee will argue at the Hearing that the JUUL1 Pod includes a second aperture (*i.e.*, the opening at the top of the tank cap) on the second end of the housing (*i.e.*, the top of the tank cap). *See, e.g.*, CX-2157C (Vallee Opening Rpt.) at ¶ 1088. However, this argument will be based entirely on NJOY's and Dr. Vallee's incorrect identification of the cartridge "housing" as the [redacted] but ***not*** the JUUL1 Pod's mouthpiece. *Id*. However, as explained above and as Dr. Dahm will explain at the Hearing, the [redacted] cannot be part of the claimed "housing" of the cartridge under any proffered understanding of what the claimed "housing" is meant to encompass. Thus, the opening in the [redacted] cannot be the claimed "second aperture," which must be part of the housing. *See, e.g.*, *supra* § IV.D.1.i.a; *see also* RX-0841C (Dahm Rebuttal Rpt.) at ¶ 257.

c. NJOY fails to show that the JUUL1 System includes a "solution holding medium"

Claim 16 of the '881 Patent requires "a solution holding medium adapted to hold a solution." *See e.g.*, JX-0004 ('881 Patent), Claim 16[a] ("a housing having an interior and a solution holding medium adapted to hold a solution in the interior of the housing"). The evidence at the Hearing, including the testimony of JLI's expert Dr. Dahm, will show that NJOY cannot meet its burden of proving that the JUUL1 System satisfies the aforementioned "a solution holding medium adapted to hold a solution" limitation of the '881 Patent because [redacted]

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[redacted]

See e.g., RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 283-289.

1. The alleged solution holding medium [redacted]

The ALJ construed the term "solution holding medium adapted to hold a solution" to "have its plain and ordinary meaning, that is, a location, container, or mechanism to hold the solution."

[redacted]

See e.g., RX-0841C (Dahm Rebuttal Rpt.) at ¶ 285. [redacted]

; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

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[redacted]

; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

2. The alleged solution holding medium is not a separate and distinct component from the alleged housing interior and airflow passageway

The evidence at the Hearing will also show that the JUUL1 Pod cannot satisfy the "solution holding medium" limitations because Dr. Vallee ignores and will fail to address at the Hearing the fact that the asserted claims clearly recite the interior of the housing, the solution holding medium, and the airflow passageway to be separate and distinct components included in the housing. *See e.g.,* JX-0004 ('881 Patent), at claim 16 ("a housing having an interior and a solution holding medium …; an airflow passageway in the interior of the housing …. the airflow passageway having an exterior adjacent to the solution holding medium along a majority of the length of the airflow passageway, …"). [redacted]

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[redacted]

d. NJOY fails to show that the JUUL1 System infringes the claimed "first end of the housing having an electrically conductive portion adapted to mechanically and electrically couple to an electrically conductive portion of the power source"

Claim 16 of the '881 Patent requires that an electrically conductive portion of the first end of the housing be configured to both mechanically and electrically couple to the power source. *See e.g.,* JX-0004 ('881 Patent), Claim 16[d] ("the first end of the housing having an electrically conductive portion adapted to mechanically and electrically couple to an electrically conductive portion of the power source"). JLI expects that Dr. Vallee will argue at the Hearing that the alleged first end of the JUUL1 Pod includes an electrically conductive portion—specifically, [redacted]—that are adapted to electrically couple to the JUUL Device. *See e.g.*, CX-2157C (Vallee Opening Rpt.) at ¶ 1093. However, as explained above, the evidence will show that the [redacted] Dr. Vallee will rely upon in his infringement analysis cannot possibly be part of the claimed "housing," either under the plain meaning of "housing" or even Dr Vallee's very broad definition of housing (i.e., anything attached to the exterior of the housing is part of the housing). *See supra* §§ IV.B.1; IV.D.1.i.a. *See also*

; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)). Because the claimed "housing" cannot include the [redacted], the first end of the housing comprises the same material of the tank – – which is not electrically conductive. *Id.; see*

; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)). Said another way, because the

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[redacted]

entirety of the housing of the JUUL1 Pod is not electrically conductive, that housing cannot possibly satisfy the Asserted Claims' requirement that the "first end of the housing hav[e] ***an electrically conductive portion***." *See id.* Nor can the JUUL1 Pod's housing possibly have any portion that can "electrically couple" to any components. *See id.* Therefore, if it is determined that the [redacted] are not part of the claimed "housing," the JUUL1 Pod cannot infringe the Asserted Claims for at least this reason.

Moreover, JLI expects that Dr. Vallee will allege that a different portion of his alleged housing—not the [redacted]—is adapted to mechanically couple to the JUUL1 power source. *See e.g.,* JX-0004 ('881 Patent), Claim 16[d] ("the first end of the housing having ***an electrically conductive portion adapted to mechanically and electrically couple to*** an electrically conductive portion of the power source") (emphasis added); CX-2157C (Vallee Opening Rpt.) at ¶ 1096; *see also id.* at ¶ 1193. However, Dr. Vallee appears to forget that claim 16 explicitly requires that the "***electrically conductive portion***" of the cartridge housing be adapted to mechanically couple to the power source. This is important because Dr. Vallee has conceded, in both in his expert report and at his deposition, that the [redacted] that he claims are on the first end of the alleged housing of the JUUL1 Pod do not **mechanically** couple the JUUL1 Pod to an electrically conductive portion of the alleged power source. *See, e.g.*, *also*

and ¶ 1097

; *see also* CX-2157C (Vallee Opening Rpt.) at ¶¶ 1095-1101, 1193; *see also* RX-1014C (Vallee 4/11/24 Tr.) at 227:4-9; 227:21-228:2. [redacted]

[redacted]

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[redacted]

[redacted] CX-2157C (Vallee Opening Rpt.) at ¶ 1097. [redacted]

[redacted] *See e.g.*, RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 309-310. [redacted] ; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

[redacted]

;

CX-2157C (Vallee Opening Rpt.) at ¶ 1099.

Finally, JLI also expects that Dr. Vallee will rely on the *Fuma Int'l v. R.J. Reynolds Vapor Co.* litigation to argue that claim 16 of the '881 Patent allows for two separate portions of the claimed housing to meet the claim's coupling limitation, where the two separate portions do not

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need to be part of the first end of the housing or even part of the housing. *See e.g.,* JX-0004 ('881 Patent), Claim 16[d] ("the first end of the housing having ***an electrically conductive portion adapted to mechanically and electrically couple to*** an electrically conductive portion of the power source") (emphasis added). But the evidence will show that the part of the district court's opinion in *Fuma Int'l v. R.J. Reynolds Vapor Co.* on which Dr. Vallee relies actually contradicts the specification and claim 16 of the '881 Patent. CX-2157C (Vallee Opening Rpt.) at ¶ 1100; CX-2277 (Memorandum Opinion and Order) at CX-2277.9-10. For example, the *Reynolds* court relied on a single sentence of the '881 Patent specification – "The cartridge 104 also comprises a first end 122 and a second end 124, which may be considered a portion of the housing 120 or apart from the housing 120." (JX-0004 ('881 Patent) at 3:45-47) – and concluded that "[n]owhere in the specifications or the asserted claims does the term 'portion' refer to a particular feature or some individual part of the connection mechanism." CX-2277 (Memorandum Opinion and Order) at CX-2277.9. But this sentence from the '881 Patent discusses whether the first end and second end *generally* may be considered as part of the housing or not—it does not, as Dr. Vallee alleges, disclose embodiments where the features that enable electrical and mechanical coupling need not be part of the first end of the housing. JX-0004 ('881 Patent) at 3:45-47. Thus, this sentence has nothing to do with the limitation at issue here, which is "***the first end of the housing having an electrically conductive portion*** adapted to mechanically and electrically couple to an electrically conductive portion of the power source." *Id.* (emphasis added).

Indeed, when the specification does disclose the "the first end of the housing having an electrically conductive portion," it states that:

> The electronic vaporizer 100 comprises a power source 102 and a cartridge 104. The power source 102 and the cartridge 104 are configured to be mechanically and electrically coupled to one another. For example, the cartridge 104 may comprise ***an electrically conductive threaded fastener***, and the power source 102 may

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[redacted]

> comprise an electrically conductive threaded receiver. ***The threaded fastener*** and the threaded receiver can be coupled to one another, thereby ***mechanically and electrically coupling*** the power source 102 with the cartridge 104.

JX-0004 ('881 Patent) at 2:60-3:2 (emphasis added). The specification further provides that:

> The cartridge 200 further comprises ***a conductive element 216***, at least a portion of which resides in the interior of the housing 202. For instance***, the conductive element*** may be metallic threads that facilitate ***mechanically and electrically coupling*** the cartridge 200 with a power source (battery).

Id. at 6:25-29 (emphasis added).

The disclosure is clear that there is one ***single portion*** of the housing, conductive element 216, that mechanically ***and*** electrically couples to the power source. *Id.* at 2:60-3:9, 6:25-29. This can be achieved, for example, using a metallic threaded fastener, which was a conventional component used for electrically and mechanically coupling then-common e-cigarette cartridges with batteries. *Id.*; *see also supra* §§ I.3; I.D.2; IV.G.1.i.a. The claim itself also explicitly requires ***one single portion***—and not just any portion, but a portion of the first end of the housing—must be "adapted to mechanically ***and*** electrically *couple* to an electrically conductive portion of the power source." *See e.g.,* JX-0004 ('881 Patent), Claim 16[d] ("the first end of the housing having ***an electrically conductive portion adapted to mechanically and electrically couple to*** an electrically conductive portion of the power source") (emphasis added). To sum up, the evidence will clearly show that (1) the asserted claim 16 requires the electrically conductive portion of the first end of the housing to also be adapted to both electrically ***and*** mechanically couple to the power source, and (2) as Dr. Vallee concedes, the JUUL1 Pod does not include such an electrically conductive portion. *See* RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 308-310.

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[redacted]

e. NJOY fails to show the JUUL1 System infringes the claimed "the heating element being electrically configured to vaporize at least a portion of the solution to be contained in the solution holding medium for oral provision to an individual in an airflow from the second aperture"

Claim 16 of the '881 Patent requires a "heating element being electrically configured to vaporize at least a portion of the solution … contained in the solution holding medium for oral provision to an individual." *See e.g.*, JX-0004 ('881 Patent), Claim 16[n-o] ("… the heating element being electrically configured to vaporize at least a portion of the solution to be contained in the solution holding medium for oral provision to an individual in an airflow from the second aperture"). NJOY and Dr. Vallee will assert that the [redacted] *See, e.g.,* CX-2157C (Vallee Opening Rpt.) at ¶ 753. But as explained below, the evidence at the Hearing, including the testimony of JLI's expert Dr. Dahm, will show that the JUUL1 System does not infringe the aforementioned "heating element being electrically configured to vaporize … the solution … for oral provision to an individual" limitations of the '881 Patent because [redacted] *See* RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 320, 323-347.

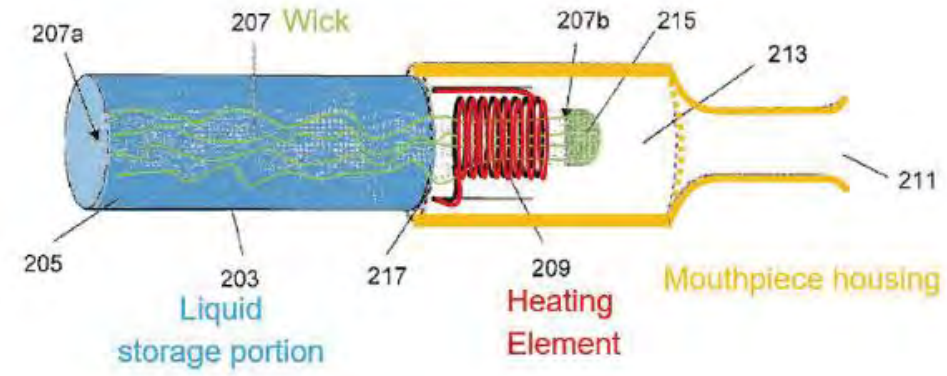
1. The wick cannot be part of the claimed heating element

Dr. Vallee will assert that the "coil and the wick, in combination, is the recited heating element." *See, e.g.,* CX-2157C (Vallee Opening Rpt.) at ¶ 753. The evidence at the Hearing will show otherwise, [redacted]. *See, e.g.*, RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 325-345.

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[redacted]

First, Dr. Vallee is expected to rely on a single sentence from the specification of the Asserted Patents to argue that the claimed heating element can include a [redacted] *See, e.g.*, CX-2157C (Vallee Opening Rpt.) at ¶ 55 (citing '881 Patent at 6:44-47 ("The heating element 222 can comprise wicking material that draws the liquid solution from the absorbent material 204 towards the heating element 222")); *see also id.* at ¶ 1396. However, this is the exact application that the Applicant expressly disavowed during prosecution of the parent patent of the Asserted Products. *See, e.g.*, RX-0530 (Prosecution History of U.S. Patent Appl. 14/510,955 (U.S. Patent No. 8,897,628)) at RX-0530.126. Specifically, during the prosecution of dependent claim 7 of the related '628 Patent (from which the Asserted Patents claim priority), the Applicant successfully distinguished a claim drawn toward a "***heating element compris[ing] a wicking material*** to attract the solution from the solution holding medium to the heating element" from the heating element in the *Thorens* prior art reference, which disclosed a separate "wick" being wrapped around by a heating coil. *See id*. The Applicant did so by arguing that "while Thorens teaches a wick in proximity to its heating element, the heating element of Thorens does not include any form of wicking material which attracts the solution." *Id*.



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[redacted]

RX-0002 (*Thorens* reference) at Fig. 2 (annotated), 6:44-50. A POSITA would therefore understand that the only disclosure in the Asserted Patents relied on by Dr. Vallee ("The heating element 222 can comprise wicking material …") to support his claim that the JUUL1 Pod's heating element includes both [redacted], does ***not*** allow or contemplate the heating element 222 being made of non-wicking material to include a separate wick. *Id.*; RX-0530 (Prosecution History of U.S. Patent Appl. 14/510,955 (U.S. Patent No. 8,897,628)) at RX-0530.126.

Second, the evidence will show that [redacted] *See, e.g.*, CX-0213 (2024-01-23 Revised Joint Claim Construction Chart). The ALJ has ordered that the "heating element …" limitations are not subject to § 112, ¶ 6 and deferred the construction. RX-1538 (Order No. 36 Claim Construction Order) at RX-1538.48. However, the ALJ provided guidance that the "heating element" as recited in the asserted claims of the '881 Patent must be "connected to the electrically conductive portion of the first end of the housing" to receive power from the power source. *Id*. at RX-1538.39-40; *see also supra* § IV.B.4.i. The evidence will show, and Dr. Vallee admitted, that [redacted] *See, e.g.*, RX-1014C (Vallee 4/22/2024 Tr.), at 34:4-20;

; *see also*

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[redacted]

see also RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

Further, the evidence will show that [redacted] under NJOY's proposed construction (if not subject to § 112 (6)). *Id.* The evidence will also show that the [redacted] under JLI's proposed construction (if not subject to § 112 (6)). *Id*; *see also* CX-1014C (Vallee 4/11/2024 Tr.) at 31:6-33:23 ([redacted]); *see also* CX-1018C (Dahm Tr.) at 160:6-12 ([redacted]. The evidence will further show that because [redacted] it is not a "conductive material that, in response to current, outputs heat to vaporize at least a portion of the solution for oral provision to an individual in the airflow" under Staff's proposed construction (if not subject to § 112 (6)). *Id*. Even NJOY's own 30(b)(6) witness, Mr. Bonet, agreed that NJOY does not consider components that do not perform heating, [redacted], to be a heating element or part of the heating element. *See* [redacted]. The [redacted], therefore, cannot be part of the alleged "heating element."

Instead, the only component in Dr. Vallee's alleged heating element that can receive power from the power source and output heat via resistive heating is the [redacted]. *See, e.g.*, [redacted]; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)). Yet, the evidence

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[redacted]

will show that even the [redacted] *Id.* As Dr. Vallee acknowledges, the JUUL1 Pod

. As Dr. Vallee also concedes, [redacted]

Id.

2. The heating coil is not "configured to vaporize at least a portion of the solution" held in the solution holding medium

Claim 16 of the '881 Patent requires the heating element to be configured to vaporize "at least ***a portion*** of ***the solution.***" *See e.g.*, JX-0004 ('881 Patent) at Claim 16[n-o] ("… the heating element being electrically configured to vaporize at least a portion of ***the solution*** to be contained in the solution holding medium for oral provision to an individual in an airflow from the second aperture") (emphasis added). The use of the definite article "the" before the term "solution" refers to the previous recitation of "a solution" held or contained in the solution holding medium. *Id.* For example, claim 16 of the '881 Patent (reproduced below) uses the reference "the solution" to refer to the recitation of "a solution" held in the solution holding medium.

> 16. A cartridge configured to mechanically and electrically couple to a power source of an electronic vaporizer, the cartridge comprising:
>
> a housing having an interior and ***a solution holding medium adapted to hold a solution …***
>
> ***the heating element being electrically configured to vaporize at least a portion of the solution to be contained in the solution holding medium*** for oral provision to an individual in an airflow from the second aperture responsive to electrical power received from the power source through the electrically conductive portion of the cartridge.

JX-0004 ('881 Patent), Claim 16.

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[redacted]

However, the evidence will show that [redacted] and Dr. Vallee has not alleged otherwise.

; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)). Rather, [redacted]. *Id*. [redacted] *Id.* In fact, Dr. Vallee admitted that [redacted]

3. The alleged heating element does not "vaporize" any solution "for oral provision" but instead delivers aerosol to users

Dr. Vallee is expected to testify that the asserted claims do not limit the nature of substance for oral provision to vaporized solution but allows for an aerosolized solution. *See, e.g.*, CX-2157C (Vallee Opening Rpt.) at ¶ 1362. However, the evidence will show that the Asserted Patent recognizes the significant material differences between a vapor and an aerosol, and the patent chose to disclose and claim providing only a vaporized solution to users—not an aerosolized solution. *See, e.g.*, JX-0004 ('881 Patent) at 5:5-7 (using "aerosol" in the disclosure), 8:5-7 (same);

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[redacted]

id. at 6:60-63 ("This gap 228 can be utilized to mix air and the vaporized liquid solution to provide the user with an appropriate amount of vaporized solution.").

The evidence will also show that there are, in fact, material differences between a vapor and an aerosol. For example, an aerosol is "a system of liquid or solid particles uniformly distributed in a finely divided state through a gas, usually air." RX-0920 (Definition of "aerosol"); *see also* RX-1018C (Dahm) at 57:16-58:3 ("…and an aerosol, which is typically formed by taking a vapor and changing its thermodynamic state, primarily by cooling it…[to] form tiny droplets, or at least a spectrum of droplet sizes"). By contrast, vaporization is the "conversion of a substance from the liquid or solid phase into the gaseous (vapour) phase." RX-0922 (Definition of "vaporization"); *see also* RX-1018C (Dahm) at 57:11-14 ("No. Well, certainly, I mean, there is a fundamental technical distinction between a vapor, which is, you know, in the gaseous phase…"). A POSITA would understand that the claimed vaporized solution is not an interchangeable term with an aerosolized solution. Indeed, the Asserted Patent specification distinguishes between vaporized solution (which is a gas) and aerosolized solution (which is solution suspended in tiny droplets) and discloses embodiments in which vaporized solutions can be converted to aerosolized solutions before provision to an individual, through use of an optional "gap" or "ventilation." *See e.g.,* JX-0004 ('881 Patent) at 6:56-61.

The evidence will further show that the JUUL1 System is designed to deliver only an aerosol, not vaporized solution, to an individual for oral provision. *See e.g.,*

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[redacted]

; RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 341-346; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)). The evidence will show that the structure of the JUUL1 Pod, and

allow for aerosolization to occur within the Pod. *Id.*;

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[redacted]

Thus, the JUUL1 Pod is designed to perform aerosolization , such that the JUUL1 Pod delivers aerosol, rather than vapor, to the user. *Id.*

To the extent Dr. Vallee argues at the Hearing that the Asserted Claims are practiced so long as a vapor is created at some point in the process of delivering the solution, in some form, to the user, the evidence at the Hearing will prove otherwise. *See* CX-2157C (Vallee Opening Rpt.) at ¶ 1362. The ALJ notes that "[w]ith respect to the phrase 'for oral provision to an individual in the airflow,' … one of ordinary skill in the art would recognize that this refers to the solution to be provided orally to a user" and further cites several portions of the Asserted Patents disclosing that this limitation requires that the "resulting vapor" is what is provided to the individual – not merely that a vapor is created, or that a different form of solution, such as an aerosol, is provided to a user. *See* RX-1538 (Order No. 36 Claim Construction Order) at RX-1538.33 (citing JX-0001 ('864 Patent) at 4:52–54 ("The heating element 126 outputs a sufficient amount of heat to vaporize at least a portion of the solution 128, and ***the user receives the vaporized solution*** orally.") (emphasis added); 5:23–25 ("[T]he user depresses a button to activate the heating element and draw ***the vaporized solution*** from the electronic vaporize 100.")(emphasis added); 6:56–58 ("The heating

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element 222 acts to vaporize the liquid solution in the absorbent material 204, and ***the resulting vapor*** is received by the user.") (emphasis added)). Dr. Vallee similarly argued during claim construction that it is not just any solution, but the vaporized solution, that is to be provided orally to a user. *See* RX-0540C (Glenn Vallee Decl.) at ¶¶ 33-35. Dr. Vallee's argument that the form of the solution provided to the user is irrelevant so long as vapor is created at some point of the process of providing solution to the user is, therefore, unavailing.

Further, to the extent Dr. Vallee argues at the Hearing that the Asserted Claims are practiced because the aerosol provided by the JUUL1 Pod to the user includes the claimed vapor, Dr. Vallee has provided no such evidence; nor will Dr. Vallee be able to provide any evidence that any solution is orally provisioned to users in vapor form. *See* CX-2157C (Vallee Opening Rpt.) at ¶ 1362. To the contrary, the evidence will show that the JUUL1 Pod is designed to

thus, the only known gaseous component of the aerosol generated and provided by the JUUL1 Pod is the airflow that carries the aerosolized solution to the user. *See, e.g.,*

; RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 341-346; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

f. NJOY fails to establish that the JUUL1 System infringes the claimed "airflow passageway in the interior of the housing, the airflow passageway having a length extending centrally and axially with respect to the housing intermediate of the first aperture on the first end of the housing and the second aperture on the second end of the housing"

Claim 16 of the '881 Patent requires the airflow passageway to extend centrally and axially from the first aperture on the first end, and the second aperture on the second end. *See* JX-0004

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[redacted]

('881 Patent), Claim 16[e] ("an airflow passageway in the interior of the housing, the airflow passageway having a length extending centrally and axially with respect to the housing intermediate of the first aperture on the first end of the housing and the second aperture on the second end of the housing, the airflow passageway being configured to allow an airflow through the cartridge from the first aperture to the second aperture of the housing").

NJOY and Dr. Vallee will argue that there exists a central and axial airflow passageway in the interior of the JUUL1 Pod extending from the alleged first aperture [redacted] and the alleged second aperture [redacted]. *See* CX-2157C (Vallee Opening Rpt.) at ¶¶ 1090-1094. As an initial matter, [redacted] *See supra* Sections IV.D.1.i.a, b. However, NJOY will also be unable to prove that the JUUL1 System infringes this limitation of the asserted '881 Claims for the following additional reasons discussed below.

1. The JUUL1 Pod does not have a central and axial airflow passageway when the mouthpiece is properly included as part of the alleged housing

To begin, NJOY cannot prove that the JUUL1 Pod satisfies the aforementioned central and axial "airflow passageway" limitation because the claimed airflow passageway in the JUUL1 Pod [redacted]

As explained above, the evidence does not support Dr. Vallee's identification of the claimed "housing" because the claimed "housing" must necessarily include the mouthpiece of the JUUL1 Pod. *See supra* § Section IV.D.1.i.a. It is also undisputed that [redacted]

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[redacted]

See e.g., RX-1014C (Vallee 4/11/24 Tr.) at 56:6-58:8 [redacted]; 65:25:67:12 (confirming that he has no opinion on infringement if the housing has to include the mouthpiece); 94:20-95:4. RX-0841C (Dahm Rebuttal Rpt.) at ¶ 257-258, 379;

; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

2. The alleged airflow passageway does not extend from a centrally located first aperture all the way to a centrally located second aperture

The aforementioned "airflow passageway …" limitation in claim 16 requires that the airflow passageway must extend from the first aperture to the second aperture, *i.e.*, in the entire distance between them. *See* JX-0004 ('881 Patent), at Claim 16[e]; Order No. 36 (Claim Construction Order) at 5 (adopting the parties agreed upon construction for the "airflow passageway …" limitations: "The airflow passageway ***extends in a straight path through the center of the housing from a first opening on the first end to a second opening on the opposite end of the housing.***"). Dr. Vallee fails to show the JUUL1 Pod has the claimed airflow passageway because the evidence will show that there is [redacted]

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[redacted]

; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)). [redacted]

.

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[redacted]

; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

Therefore, as nothing "extends" from the alleged first aperture [redacted] at all, there is no defined airflow passageway structure that extends all the way

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[redacted]

from the alleged first aperture to the second aperture as required by the asserted claims. *See supra* § IV.B.4 (the proper construction of an airflow passageway requires that the passageway be a physical structure); *see also*

.

To the extent the JUUL1 Pod has an "airflow passageway" at all, it is defined

. This was confirmed by NJOY's own Senior Director of Product Design, and corporate representative, Mr. Bonet, who identified

as the only structure that NJOY would consider to be an "airflow passageway." *Id*.

; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

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[redacted]

Using JLI's nomenclature, the [redacted] that Mr. Bonet identified corresponds to [redacted]. In the JUUL1 Pod, the [redacted]; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

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[redacted]

; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

Despite JLI's and NJOY's apparent agreement that there is no airflow passageway in the JUUL1 Pod other than [redacted] NJOY's expert, Dr. Vallee, concocted another alleged "airflow passageway," which he claims includes [redacted] and a portion of the [redacted]. *See, e.g.*, CX-2157C (Vallee Opening Rpt.) at ¶ 768. This interpretation, however, would render the claim term "extends" superfluous. Under NJOY's interpretation, the airflow passageway is "extending" from the first aperture to the second aperture simply because the alleged housing includes an opening through which air can flow, and because that air eventually enters the alleged airflow passageway, *See id*.; Order No. 36 (Claim Construction Order) at 5. However, the asserted claims of the '881 Patent separately require both (i) a housing having a first aperture, and (ii) an airflow passageway "extending" from that first aperture to the second aperture. *See, e.g.,* JX-0004 ('881 Patent), at Claim 16; Order No. 36 (Claim

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[redacted]

Construction Order) at 5. There would be no reason for the airflow passageway to "extend[]" from the first aperture to the second aperture, rather than merely exist between the first and second apertures, if the claim were meant to be interpretated as NJOY interprets it (i.e., where the claim is satisfied so long as air entering the alleged first aperture eventually enters the alleged airflow passageway, and where the claim does not require structure extending from the aperture itself).

Further, the evidence will show that the and [redacted] do not "extend" from the alleged first aperture. The

therefore it cannot "extend" from the [redacted], which NJOY identifies as the alleged first aperture.

; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod; RPX-0018 (JUUL Pod (disassembled)).

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[redacted]

Even NJOY's Senior Director of Product Design and corporate representative, Jose Bonet, agreed that there is no airflow passageway extending from the alleged first aperture:

[redacted]

3. The alleged airflow passageway does not extend centrally and axially from the first aperture to the second aperture

Claim 16 requires that the airflow passageway extends "***centrally and axially***" from the first aperture to the second aperture." *See* JX-0004 ('881 Patent), Claim 16[e]; Order No. 36 (Claim Construction Order) at 5. However, as the evidence will show, at least within the [redacted] RX-0841C (Dahm Rebuttal Rpt.) at ¶ 387-389;

[redacted]

; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

For example, as discussed above, there is [redacted] *See supra* § IV.D.1.i.f.2. Furthermore, to the extent NJOY and Dr. Vallee argue that the [redacted] of the JUUL1 Pod extends from the alleged first aperture, [redacted]

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[redacted]

; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)). [redacted] *See id.*

Additionally, as Dr. Dahm will testify, any alleged airflow passageway in the [redacted] as shown by Dr. Valle's annotated airflow passageway figure, because [redacted]

See e.g., CX-2157C (Vallee Opening Rpt.) at ¶ 768.

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[redacted] See, *e.g.*, CX-2157C (Vallee Opening Rpt.) at ¶¶ 612-613; CX-2277C (Memorandum Opinion and Order) at CX-2277C.14-1. [redacted]

Further, to the extent Dr. Vallee proffers [redacted] while the evidence will show that [redacted] is flawed for many reasons (including but not limited to because [redacted]), [redacted]

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[redacted]

see also RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

[redacted]

Further still, the evidence will show that [redacted]

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[redacted]

see also RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)). NJOY and Dr. Vallee, therefore, will be unable to show with how air flows from the alleged first aperture generally, much less why the air from the alleged first aperture is not impeded by any of the aforementioned structures.

4. Dr. Vallee's interpretation of a central and axial airflow passageway precludes the JUUL1 device from infringing

Dr. Vallee is expected to argue at the Hearing, when alleging that the Asserted Patents are valid in view of the prior art, that Mr. Leinsing's proposed modifications to the airflow passageway of the Wang '927 device would not result in a central and axial airflow passageway because a portion of the airflow passageway would extend the entire diameter of Wang '927's housing. But if Dr. Vallee is correct that an airflow passageway cannot extend the entire diameter of a claimed cartridge, [redacted] *See* RX-1015C (Vallee 4/12/24 Tr.) at 485:7-16.

5. The interior of the housing, solution holding medium, and airflow passageway must comprise separate structures

At the hearing, JLI expects Dr. Vallee to rely on the [redacted] *See* CX-2157C (Vallee Opening Rpt.) at ¶¶ 1083-1088, 1091-1093, 1104-1105. However, as with the housing and the solution holding medium, the claims require that the airflow passageway be separate and distinct from other claimed elements, such as the solution holding medium and the interior of the housing. *See, e.g.*, '881 Patent, Claim 16 ("a housing having an interior and a solution holding medium …; an airflow passageway in the interior of the housing …. the airflow passageway having an exterior adjacent to the solution holding medium along a majority of the

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[redacted]

length of the airflow passageway, …"). [redacted]

[redacted] NJOY and Dr. Vallee thus fail to point to an airflow passageway in the JUUL1 Pod that is separate and distinct from the alleged housing and solution holding medium, as required by the asserted claims.

g. NJOY fails to show the JUUL1 System satisfies the airflow passing on both transverse sides of the heating element limitations

Claim 16 of the '881 Patent requires airflow to pass "on both transverse sides of the heating element during use of the electronic vaporizer." *See, e.g.*, JX-0004 ('881 Patent), Claim 16[j] ("the airflow through the passageway passing on both transverse sides of the heating element"). NJOY and Dr. Vallee will claim that this limitation is met in the JUUL1 Pod because air flowing through the pod passes on both sides of the claimed heating element, i.e., [redacted] But the evidence at the Hearing, including the testimony of JLI's expert Dr. Dahm, will show that NJOY cannot meet its burden of proving that the JUUL1 System satisfies the aforementioned "transverse sides" limitations of the '881 Patent. *See, e.g.*, RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 468-474.

For example, Dr. Vallee will fail to show that ***the claimed airflow*** passes on his alleged transverse sides of the alleged heating element. *See, e.g.*, CX-2157C (Vallee Opening Rpt.) at ¶¶ 830-832. The airflow that needs to pass on both transverse sides of the heating element is not any airflow, but specifically the airflow from the first aperture to the second aperture. *See, e.g.*, JX-0004 ('881 Patent) at claim 16 ("the airflow passageway being configured to allow ***an airflow*** through the cartridge ***from the first aperture*** to the second aperture of the housing, … ***the airflow*** through the passageway passing on both transverse sides of the heating element") (emphasis added). Dr. Vallee has performed no analysis on whether any airflow from Dr. Vallee's identified

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[redacted]

"first aperture" passes on both transverse sides of the alleged heating element. *See, e.g.*, CX-2157C (Vallee Opening Rpt.) at p. 435. And Dr. Dahm will explain that a POSITA cannot assume, as Dr. Vallee has, [redacted] passes on both of Dr. Vallee's transverse sides as he claims, without significant computational simulation and testing data using an actual JUUL1 Pod — none of which Dr. Vallee performs himself nor has analyzed elsewhere in his report. *See* CX-2157 (Vallee Opening Rpt.) at ¶¶ 1107-1117; RX-0841C (Dahm Rebuttal Rpt.) at ¶ 473-474. Accordingly, NJOY will be unable to meet its burden of showing that this limitation is met.

h. NJOY fails to show the JUUL1 System satisfies the heating element extending "transversely across the airflow passageway" limitation

Claim 16 of the '881 Patent requires the heating element to extend "transversely across the airflow passageway." *See, e.g.*, JX-0004 ('881 Patent), Claim 16[i] ("a heating element located in the interior of the housing and extending transversely across the airflow passageway…"). Dr. Vallee is expected to testify that [redacted] *See* CX-2157C (Vallee Opening Rpt.) at ¶¶ 1110-1113. But even assuming for the sake of argument that NJOY is able to identify the claimed airflow passageway and the claimed heating element in the JUUL1 System, the evidence at the Hearing, including the testimony of JLI's expert Dr. Dahm, will show that NJOY cannot meet its burden of proving that the alleged heating element in the JUUL1 Pod extends transversely ***across*** the alleged airflow passageway. *See, e.g.*, RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 482-483.

The ALJ construed the term "transversely" "to have its plain and ordinary meaning, that is, crosswise." Order No. 36 at 17. Specifically, in the context of "transversely across the airflow passageway," the ALJ opined that "Fig. 2 and the specification plainly and unambiguously disclose

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[redacted]

heating 222 element at a right angle to the airflow (which ***extends from one end to the other of the airflow passageway 214***) and at a right angle to a central axis of the cartridge 200. JX-0004 ('881 Patent) at 6:10–47 and Fig. 2." *Id.* (emphasis added). Thus, for a claimed heating element to extend transversely across a claimed airflow passageway, the heating element must extend transversely from one end of the airflow passageway to the other end of the airflow passageway.

[redacted]

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[redacted]

[redacted]

[redacted],

see also RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)). For example,

According to Dr. Vallee,

is the alleged airflow passageway in the JUUL1 Pod.

[redacted]

see

also RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

see also RPX-0016 (JUUL

Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

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[redacted]

Moreover, the evidence will show that JLI designed [redacted]

see also RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

Because of this design, [redacted]

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[redacted]

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[redacted]

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[redacted]

Applicant expressly chose **not** to claim the first aperture as being approximately or relatively close to being central or axial, in contrast with other disclosure in the ’881 Patent that did describe the first and second apertures to be “located at approximately the center of the [first/second] end” and with the claims of the ’864 Patent, which use terms such as “proximate” or “substantially” central and axial to allow for the components to be approximately, even if not exactly, central and axial. *See, e.g.,* JX-0004 (’881 Patent), at 4:28-35; *see also* JX-0001 (’864

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[redacted]

Patent), Claims 9, 16.

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[redacted]

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[redacted]

2. The ’864 Patent

i. The JUUL1 System

NJOY asserts that the Accused JUUL1 System infringes claims 2, 9, 10, 12, 13, 15, 16, 20, 26[20] of the ’864 Patent. The evidence will show that the Accused JUUL1 System does not directly infringe any of the asserted claims of the ’864 Patent, at least because NJOY fails to meet its burden of proof showing the JUUL1 Pod satisfies the following limitations:

- “a housing having an interior”;
- “the housing having a first aperture proximate the first end and a second aperture proximate the second end”;
- “a solution holding medium adapted to hold a solution”;
- “the first end of the housing being adapted to electrically couple to the power source”;
- “the heating element being configured to vaporize at least a portion of the solution for oral provision to an individual in the airflow”;
- “the heating element being configured to vaporize at least the portion of the solution drawn to the heating element for oral provision to an individual in the airflow”;
- “the airflow passageway extends centrally and axially from the first aperture to the second aperture”;
- “the airflow passageway extends in a straight path from the first aperture to the second aperture”;

[20] Claim 2 depends on independent claim 1 and claim 26 depends on independent claim 25. Accordingly, although not expressly asserted, limitations of independent claims 1 and 25 are included in the following discussion.

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[redacted]

- "only the heating element obstructing a portion of the airflow through the airflow passageway along a central longitudinal axis of the housing";
- "the airflow through the housing follows an airflow path, a first portion of the airflow path proximate the first aperture being defined substantially centrally and axially with respect to the central longitudinal axis of the housing, and a second portion of the airflow path proximate to the second aperture being defined substantially centrally and axially with respect to the central longitudinal axis of the housing";
- the airflow passing "on both transverse sides of the heating element during use of the electronic vaporizer"; and
- "the heating element extending transversely to a central longitudinal axis of the housing [and transversely to a direction of the airflow]."

a. NJOY fails to show the JUUL1 System satisfies the "housing" limitations found in all asserted independent claims of the '864 Patent

All of the asserted independent claims require "a housing having an interior." *See e.g.,* JX-0001 ('864 Patent), Claim 1[a] ("a housing having an interior and a solution holding medium adapted to hold a solution, the housing having a first end and a second end that is opposite the first end, the housing having a first aperture proximate the first end and a second aperture proximate the second end"); *see also id.*, Claim 9[a], Claim 25[a]. Rather than identifying the entire exterior structure of the JUUL1 Pod (which is what Dr. Vallee identifies as the recited "cartridge"), NJOY's expert Dr. Vallee contends that the housing of the [redacted]. *See, e.g.,* CX-2157C (Vallee Opening Rpt.) at ¶¶ 737. The evidence at the Hearing, including the testimony of JLI's expert Dr. Dahm, will show that NJOY cannot meet its burden of proving that the JUUL1 System satisfies the aforementioned "housing" / "end" of the "housing" limitations of the '864 Patent for the same reasons that NJOY will be unable to show the JUUL1 System satisfies the "housing" limitation of the '881 Patent. *See e.g.,* RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 243-260; *see also supra* Section IV.D.1.i.a. First, Dr. Vallee's interpretation of the term "housing" as including internal components is inconsistent with

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[redacted]

the plain and ordinary meaning of that term, which is "the outside structure of the cartridge that contains and protects the cartridge's internal structures." *See supra* §§ IV.B.1; IV.D.1.i.a. Second, [redacted] *Id*. Third, [redacted] *Id*.

b. NJOY fails to show the JUUL1 System satisfies the "the housing having a first aperture proximate the first end and a second aperture proximate the second end" limitations found in all asserted independent claims of the '864 Patent

All of the asserted independent claims require "the housing having a first aperture proximate the first end and a second aperture proximate the second end." *See* JX-0001 ('864 Patent), Claim 1[a] ("a housing having an interior and a solution holding medium adapted to hold a solution, the housing having a first end and a second end that is opposite the first end, the housing having a first aperture proximate the first end and a second aperture proximate the second end"), Claim 9[a] (same), Claim 25[a] (same).

NJOY and Dr. Vallee will argue at the Hearing that the JUUL1 Pod includes a second aperture ([redacted]) proximate to the second end of the housing ([redacted]). *See, e.g.,* CX-2157C (Vallee Opening Rpt.) at ¶ 743. However, this argument will be based entirely on NJOY's and Dr. Vallee's incorrect identification of the cartridge "housing," and the end of the housing, [redacted] *Id*. However, as Dr. Dahm will explain, [redacted] *See, e.g.*, *supra* Sections IV.D.1.i.a, IV.D.1.b.(2); *see also* RX-0841C (Dahm Rebuttal Rpt.) at ¶ 257.

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[redacted]

c. NJOY fails to show the JUUL1 System satisfies the "solution holding medium" limitations

All of the asserted independent claims require "a solution holding medium adapted to hold a solution." *See, e.g.*, JX-0001 ('864 Patent), Claim 1[a] ("a housing having an interior and a solution holding medium adapted to hold a solution"); *see also id.* at Claim 9[a], Claim 25[a]. The evidence at the Hearing, including the testimony of JLI's expert Dr. Dahm, will show that NJOY cannot meet its burden of proving that the JUUL1 System satisfies the aforementioned "solution holding medium adapted to hold a solution" limitations of the '864 Patent for the same reasons that NJOY will be unable to show the JUUL1 System satisfies the "solution holding medium adapted to hold a solution" limitation of the '881 Patent. *See e.g.,* RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 283-289; *see also supra* § IV.D.1.i.c. [redacted]

d. NJOY fails to show the JUUL1 System satisfies "the first end of the housing being adapted to electrically couple to the power source" limitations

All of the asserted independent claims require "the first end of the housing being adapted to electrically couple to the power source." *See, e.g.*, JX-0001 ('864 Patent), Claim 1[c], Claim 9[c], Claim 25[c]. Dr. Vallee will argue at the Hearing that the JUUL1 Pod has [redacted] *See e.g.*, CX-2157C (Vallee Opening Rpt.) at ¶ 746. However, as explained above, the evidence will show that the [redacted] Dr. Vallee will rely upon in his infringement analysis cannot be part of the claimed "housing," under either the plain meaning of "housing," or even Dr Vallee's very broad alternative definition of housing offered at his deposition (*i.e.*, anything attached to the exterior of the housing is part of the housing). *See supra* §§ IV.B.1; IV.D.2.i.a;

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[redacted]

IV.D.1.i.a; *see also*

; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

Moreover, because the claimed "housing" cannot include the [redacted] *Id.; see*

; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)). Said another way, the Asserted Claims require that the first end of the "housing" be "adapted to electrically couple," but the evidence will show that the alleged first end of the JUUL1 tank is not conductive and is therefore unable to "electrically couple" to any components. *See id.* Therefore, if it is determined that the [redacted] are not part of the claimed "housing," the JUUL1 Pod cannot infringe the Asserted Claims for at least this reason.

e. NJOY fails to show the JUUL1 System satisfies "the heating element being configured to vaporize at least [a/the] portion of the solution [drawn to the heating element] for oral provision to an individual in the airflow" limitations

All of the asserted independent claims require "the heating element being configured to vaporize at least [a/the] portion of the solution [drawn to the heating element] for oral provision to an individual in the airflow." *See e.g.,* JX-0001 ('864 Patent), Claim 1[f-g] ("the heating element being configured to vaporize at least a portion of the solution for oral provision to an individual in the airflow"), Claim 9[f-g] ("the heating element being configured to vaporize at least a portion of the solution for oral provision to an individual in the airflow"), Claim 25[g-h] ("the heating element

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[redacted]

being configured to vaporize at least the portion of the solution drawn to the heating element for oral provision to an individual in the airflow"). NJOY and Dr. Vallee will assert that the "coil and the wick, in combination, is the recited heating element." *See, e.g.,* CX-2157C (Vallee Opening Rpt.) at ¶ 753, 1110, 1111. However, the evidence at the Hearing, including the testimony of JLI's expert Dr. Dahm, will show that NJOY cannot meet its burden of proving that the JUUL1 System satisfies the aforementioned "the heating element being configured to vaporize …" limitations of the '864 Patent because [redacted] *See, e.g.*, RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 325-345.

1. The [redacted] cannot be part of the claimed heating element

Dr. Vallee will assert that the [redacted] *See, e.g.,* CX-2157C (Vallee Opening Rpt.) at ¶ 753. The evidence at the Hearing will show that, for the same reason discussed in Section IV.D.1.i.e.1 *supra*, the [redacted] *See, e.g.*, RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 325-345.

2. The [redacted] is not "configured to vaporize at least a portion of the solution" held in the solution holding medium

Claims 1 and 9 of the '864 Patent require the heating element to be configured to vaporize "at least ***a portion*** of ***the solution.***" *See, e.g.*, JX-0001 ('864 Patent) at Claim 1[f] ("the heating element being configured to vaporize at least a portion of the solution for oral provision to an individual in the airflow, the heating element being responsive to electrical power received from

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[redacted]

the power source") (emphasis added), Claim 9[f] (same). The use of the definite article "the" before the term "solution" refers to the previous recitation of "a solution" held or contained in the solution holding medium. *Id.* For example, claim 1 of the '864 Patent (reproduced below) is similar to the language of claim 9, and uses the reference "the solution" to refer to the recitation of "a solution" held in the solution holding medium.

> A cartridge configured to couple to a power source of an electronic vaporizer, the cartridge comprising:
>
> a housing having an interior and ***a solution holding medium adapted to hold a solution***, the housing having a first end and a second end that is opposite the first end, the housing having a first aperture proximate the first end and a second aperture proximate the second end, the first end of the housing being adapted to electrically couple to the power source, the first aperture and the second aperture being in communication with one another to permit an airflow through the housing from the first aperture to the second aperture;
>
> a heating element located in the interior of the housing, the heating element extending transversely to a central longitudinal axis of the housing and being at least partially exposed to the airflow, ***the heating element being configured to vaporize at least a portion of the solution*** for oral provision to an individual in the airflow, the heating element being responsive to electrical power received from the power source; and
>
> an airflow passageway in the housing, at least a portion of the airflow passageway extending centrally and axially with respect to the housing
>
> wherein the airflow passageway extends centrally and axially from the first aperture to the second aperture.

JX-0001 ('864 Patent), Claim 1.

The evidence at the Hearing will show that for the same reason discussed in Section IV.D.1.i.e.2 *supra*, the [redacted]

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[redacted]

3. The [redacted] is not "configured to vaporize at least the portion of the solution drawn to the heating element" held in the solution holding medium

Claim 25 of the '864 Patent, on the other hand, requires the heating element to be "configured to vaporize at least ***the portion of the solution drawn to the heating element***." (emphasis added). The evidence will show that the JUUL1 Pod does not infringe this claim limitation, [redacted] *See* RX-1080C (Vallee Rebuttal Rpt.) at ¶ 760-766, 880, 894. [redacted] *See id.;* RX-1014C (Vallee 4/12/24 Tr.) at 37:3-18. Therefore, the [redacted] is not configured to vaporize the portion of the solution drawn to it, and therefore does not meet the "heating element …" limitations.

4. The alleged heating element does not "vaporize" any solution "for oral provision" but instead delivers aerosol to users

Dr. Vallee is expected to testify that the asserted claims do not limit the nature of the substance for oral provision to vaporized solution but instead also allows aerosolized solution. *See e.g.,* CX-2157C (Vallee Opening Rpt.) at ¶ 1362. However, the evidence will show that the Asserted Patent recognizes the significant material differences between a vapor and an aerosol, and the patent chose to disclose and claim providing only a vaporized solution—not an aerosolized solution—"for oral provision to an individual." *See* Section IV.D.1.i.e.3 *supra*. For the same reasons discussed in Section IV.D.1.i.e.(3 *supra*, the JUUL1 Pod is designed to perform [redacted]

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[redacted] Therefore, the JUUL1 Pod does not satisfy the aforementioned "heating element" limitation.

f. NJOY fails to show the JUUL1 System satisfies the claimed airflow passageway extending "centrally and axially" or "in a straight path" from the first aperture to the second aperture limitation

Asserted independent claim 1 requires "the airflow passageway extends centrally and axially from the first aperture to the second aperture" and asserted independent claim 25 requires that "the airflow passageway extends in a straight path from the first aperture to the second aperture." *See* JX-0001 ('864 Patent), Claim 1[i] ("an airflow passageway in the housing, at least a portion of the airflow passageway extending centrally and axially with respect to the housing, wherein the airflow passageway extends centrally and axially from the first aperture to the second aperture"); Claim 15 ("an airflow passageway in the housing, at least a portion of the airflow passageway extending centrally and axially with respect to the housing"); Claim 25[i] ("an airflow passageway in the housing, at least a portion of the airflow passageway extending centrally and axially with respect to the housing, wherein the airflow passageway extends in a straight path from the first aperture to the second aperture with only the heating element obstructing a portion of the airflow through the airflow passageway along a central longitudinal axis of the housing"). The evidence at the Hearing, including the testimony of JLI's expert Dr. Dahm, will show that NJOY cannot meet its burden of proving that the JUUL1 System satisfies the aforementioned "airflow passageway" limitations of the '864 Patent. *See e.g.*, RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 370-389.

As a preliminary matter, the parties do not dispute that extending axially means extending in a straight path and, therefore, there is no meaningful difference between the aforementioned "airflow passageway" limitations. *See, e.g.*, CX-0213 (2024-01-23 Revised Joint Claim Construction Chart) (the parties adopting the construction of "airflow passageway …" terms from

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[redacted]

the prior *Fuma v RJR* litigation);

Therefore, in order to satisfy its burden of demonstrating that the JUUL1 Pod meets these limitations, NJOY must prove that the alleged airflow passageway in the JUUL1 Pod extends in a straight path from the alleged first aperture ([redacted]) to the second aperture. As explained below, NJOY cannot meet its burden.

1. The JUUL1 Pod does not have a central and axial airflow passageway when the mouthpiece is properly included as part of the alleged housing

For the same reason discussed in Section IV.D.1.i.f.1 *supra*, NJOY cannot prove that the JUUL1 Pod "airflow passageway extends centrally and axially from the first aperture to the second aperture" because [redacted]

2. The alleged airflow passageway does not extend from a centrally located first aperture all the way to a centrally located second aperture

Claims 1and 25 require that the airflow passageway extends from the first aperture to the second aperture, *i.e.*, in the entire distance between them. *See* JX-0001 ('864 Patent), at Claim 1 ("the airflow passageway extends centrally and axially ***from the first aperture to the second aperture***"); *see also id.* at Claim 25 ("the airflow passageway extends in a straight path ***from the first aperture to the second aperture***") (emphasis added). For the same reason discussed in Section

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[redacted]

IV.D.1.i.f.2 *supra*, Dr. Vallee fails to show the JUUL1 Pod has the claimed airflow passageway because [redacted]

3. The alleged airflow passageway does not extend centrally and axially from the first aperture to the second aperture

Claim 1 requires that "the airflow passageway extends ***centrally and axially*** from the first aperture to the second aperture" and claim 25 requires that the "airflow passageway extends ***in a straight path*** from the first aperture to the second aperture." *See* JX-0001 ('864 Patent), at Claims 1, 25. However, as the evidence will show, for the same reasons discussed in Section IV.D.i.f.(3) *supra*, [redacted]

4. Dr. Vallee's interpretation of a central and axial airflow passageway precludes the JUUL1 device from infringing

For the same reasons discussed in Section IV.D.i.f.(4) *supra*, if Dr. Vallee is correct that an airflow passageway cannot extend the entire diameter of a claimed cartridge, then the JUUL1 Pod also cannot include a central and axial airflow passageway and therefore, cannot satisfy the aforementioned "airflow passageway" limitations.

5. The interior of the housing, solution holding medium, and airflow passageway must comprise separate structures

For the same reasons discussed in Section IV.D.i.f.(5) *supra*, the [redacted] NJOY and Dr. Vallee thus fail to point to an airflow passageway in the JUUL1 Pod that is separate and distinct from the alleged housing and solution holding medium, as required by the asserted claims. *See supra* § IV.D.i.f.(5).

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[redacted]

g. NJOY fails to show the JUUL1 System satisfies the "only the heating element obstructing a portion of the airflow through the airflow passageway along a central longitudinal axis of the housing" limitation

Independent claim 25[21] requires "an airflow passageway … with only the heating element obstructing a portion of the airflow through the airflow passageway along a central longitudinal axis of the housing." *See* JX-0001 ('864 Patent), Claim 25[i] ("an airflow passageway in the housing, at least a portion of the airflow passageway extending centrally and axially with respect to the housing, wherein the airflow passageway extends in a straight path from the first aperture to the second aperture with only the heating element obstructing a portion of the airflow through the airflow passageway along a central longitudinal axis of the housing"). JLI expects that Dr. Vallee will testify that because [redacted] *See* CX-2157C (Vallee Opening Rpt.) at ¶ 807, 895. However, Dr. Vallee is incorrect—and NJOY will not be able to prove that the JUUL1 Pod infringes this limitation of claim 25—for at least two reasons.

First, as discussed above in Section IV.D.2.i.e.(1), because [redacted]

Second, to the extent the ALJ agrees with JLI that the airflow passageway is defined by the [redacted]

[21] Asserted claim 26 depending from independent claim 25.

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[redacted]

[redacted]

; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

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[redacted]

h. NJOY fails to show the JUUL1 System satisfies the substantially central and axial airflow path portions limitations

Asserted independent claims 9 requires that "the airflow through the housing follows an airflow path, a first portion of the airflow path proximate the first aperture being defined substantially centrally and axially with respect to the central longitudinal axis of the housing, and a second portion of the airflow path proximate to the second aperture being defined substantially centrally and axially with respect to the central longitudinal axis of the housing." *See, e.g.*, JX-0001 ('864 Patent), Claim 9[i].

In an attempt for NJOY to meet its burden with respect to claim 9, Dr. Vallee is expected to use grossly over-simplified arrows to show that the airflow through the alleged housing follows an airflow path, wherein a first portion of the airflow path proximate the first aperture and a second portion of the airflow path proximate the second aperture are each defined substantially centrally and axially with respect to the central longitudinal axis of the alleged housing. *See, e.g.,* CX-2157C (Vallee Opening Rpt.) at ¶¶ 821-824. However, the evidence will show that those arrows do not show or even approximate the airflow through the alleged housing because [redacted] *See, e.g.*, RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 426-431, 435-437;

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[redacted]

; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

Moreover, the evidence will show that the portions of the airflow path that Dr. Vallee points to are not the portions proximate to the apertures, as described by the Asserted Patents. The ALJ construed the term "proximate" to mean "at, near, or close to, which in the context of the '864 Patent claims identifies relative positioning." Order No. 36 at 12-13. Clearly, a POSITA would not believe that an airflow path that is non-central or non-axial immediately or shortly after exiting the alleged first aperture would meet the claim requirement of being substantially central and axial with respect to the central longitudinal axis of the housing "proximate" the first aperture. Without some defined minimum distance that the airflow path must travel centrally and axially after exiting the first and second aperture, the claim would be non-sensical. *See, e.g.*, RX-0841C (Dahm Rebuttal Rpt.) at ¶ 432. In the context of the '864 Patent, Dr. Dahm will testify that a POSITA would understand the language of claim 9, especially when read in conjunction with the ALJ's claim construction order, to mean that "a first portion of the airflow path proximate the first aperture" is the first half of the airflow path between the first aperture to the midway point between the first and second aperture, and "a second portion of the airflow path proximate the second aperture" is the other half of the airflow path between the midway point between the first and second aperture and the second aperture. *See, e.g.*, RX-0841C (Dahm Rebuttal Rpt.) at ¶ 425; RX-1013 (Vallee 12/21/23 Tr.) at 31:21-32:6, 79:12-80:9. As explained below, when claim 9 is interpreted this way, it is undisputed that the entire portion of each airflow path proximate to its alleged aperture is not substantially central or axial.

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[redacted]

1. Dr. Vallee fails to show the first portion of the airflow path is substantially central and axial

Regardless of which "first portion" of the airflow path is determined to be the "first portion" as claim 9 describes, Dr. Vallee will be unable to show that his alleged first portion of the airflow path in the JUUL1 Pod is substantially central and axial with respect to the central longitudinal axis of the housing. *See* CX-2157C (Vallee Opening Rpt.) at ¶¶ 823. ***First,*** the evidence will show that the first half of the airflow path is not substantially central and axial to the central longitudinal axis of the alleged housing, at least because it is undisputed that [redacted]. *See e.g.,* RX-0841C (Dahm Rebuttal Rpt.) at ¶ 435; RX-1014C (Vallee 4/11/24 Tr.) at 56:16-25, 94:20-95:4;

; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)).

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[redacted]

Further, Dr. Dahm will testify that even setting aside the fatal omission of the direction of the incoming air, Dr. Vallee's airflow arrows are incorrect and cannot depict the airflow from the first aperture to the second aperture. *See, e.g.*, RX-0841C (Dahm Rebuttal Rpt.) at ¶ 423;

; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)). For example, there are numerous flow paths from the alleged first aperture to the alleged second aperture that are far more intricate than that shown by Dr. Vallee. *Id*. Of particular relevance, the evidence will show that a POSITA

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[redacted]

would expect [redacted]

[redacted] *See* RX-0924 (Computational Fluid Dynamics Study on Characteristics of Flow Separation in Flow Rate Measurement Using Multi-Hole Plates) at RX-0924.8; RX-0917 (Flow-Pressure Drop Characteristics of Perforated Plates) at RX-0917.21; RX-0916 (Numerical Modelling of the Gas Flow Through Perforated Plates) at RX-0916.5; RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 433-437; RX-0918 (Fundamentals of Fluid Mechanics); RX-0915 (Pipe Flow Presentation).

Furthermore, Dr. Vallee's analysis will fail to account for the well-known "vena contracta" flow phenomenon that a POSITA would expect to occur once the flow has entered any of the microperforations, including the alleged first aperture. *See* RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 428-429; RX-0918 (Fundamentals of Fluid Mechanics); RX-0915 (Pipe Flow Presentation) at RX-0915.10 (slide 58). A "vena contracta" forms naturally in any flow immediately past any relatively sharp-edged entrance to a passageway and produces a recirculation zone, causing the airflow through the microperforation to be curved, not straight, and therefore cause the airflow path not to be directed substantially centrally and axially. *Id; see also*

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[redacted]

Further still, Dr. Vallee's analysis will completely ignore the effects [redacted]. *See* CX-2157C (Vallee Opening Rpt.) at ¶¶ 430-437. [redacted]

See

; *see also* RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)). [redacted]

Second, even if it is determined that the "first portion" of the airflow path in the JUUL1 Pod can be any length (however small), the evidence will show that NJOY, through its expert, Dr. Vallee, fails to meet its burden of proof. The first portion of the airflow path in the JUUL1 Pod

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[redacted]

that Dr. Vallee identifies is a small portion that includes [redacted]. *See e.g., id.;* RX-1082C (Vallee Ex. 4); RX-1014C (Vallee 4/11/24 Tr.) at 122:1-124:14. As shown below and annotated by Dr. Vallee, during operation of the JUUL1 Pod,

; RPX-0016 (JUUL Device); RPX-0017 (JUUL Pod); RPX-0018 (JUUL Pod (disassembled)). As Dr. Dahm will explain, a POSITA would

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[redacted]

understand that [redacted]

[redacted]

2. Dr. Vallee fails to show the second portion of the airflow path is substantially central and axial

As stated above in Section IV.D.2.i.a, the evidence will show that the mouthpiece of the JUUL1 Pod must be part of the "housing" of the cartridge. Because the mouthpiece [redacted]

[redacted] *Id*. [redacted]

[redacted] *See e.g., id.*; RX-1014C (Vallee 4/11/24 Tr.) at 56:6-58:8.

i. NJOY fails to show the JUUL1 System satisfies the airflow passing on both transverse sides of the heating element limitations

The asserted independent claim 25 and asserted dependent claim 11 require the airflow to pass "on both transverse sides of the heating element during use of the electronic vaporizer." *See e.g.,* JX-0001 ('864 Patent), Claim 11 ("wherein the cartridge is adapted to permit the airflow to pass on both transverse sides of the heating element during use of the electronic vaporizer"), Claim 25[f] ("such that the airflow passes on both transverse sides of the heating element during use of the electronic vaporizer"). For the same reasons discussed in Section IV.D.1.i.g *supra*, the evidence

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[redacted]

at the Hearing, including the testimony of JLI's expert Dr. Dahm, will show that NJOY cannot meet its burden of proving that the JUUL1 System satisfies the aforementioned "transverse sides" limitations of the '864 Patent. *See e.g.,* RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 468-474.

j. NJOY fails to show the JUUL1 System satisfies the heating element extending transversely to the central longitudinal axis

All of the asserted independent claims require "the heating element extending transversely to a central longitudinal axis of the housing" and claim 25 of the '864 Patent further requires the heating element " extending … transversely to a direction of the airflow." *See, e.g.*, JX-0001 ('864 Patent), Claim 1[e] ("the heating element extending transversely to a central longitudinal axis of the housing…"), Claim 9[e] (same), Claim 25[e] ("the heating element including a coil extending transversely to the central longitudinal axis of the housing and transversely to a direction of the airflow…").

Dr. Vallee is expected to testify that [redacted]

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[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

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[redacted]

NJOY Exhibit 2008.0290
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[redacted]

NJOY Exhibit 2008.0291
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[redacted]

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[redacted]

(

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[redacted]

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[redacted]

iii. The JUUL2 System

NJOY asserts that the Accused JUUL2 System infringes claims 2[22], 9-10, 12-13, 15, and 20 of the '864 Patent. The evidence will show that the Accused JUUL2 System does not directly infringe any of the asserted claims of the '864 Patent, at least because NJOY fails to meet its burden of proof showing the JUUL2 Pod satisfy the following limitations:

- "a housing having an interior";
- "the housing having a first aperture proximate the first end and a second aperture proximate the second end";
- "the first end of the housing being adapted to electrically couple to the power source";
- "the heating element being configured to vaporize at least a portion of the solution for oral provision to an individual in the airflow";

[22] Claim 2 depends on independent claim 1. Accordingly, although not expressly asserted, limitations of independent claim 1 are included in the following discussion.

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[redacted]

- "the airflow passageway extends centrally and axially from the first aperture to the second aperture";
- "the airflow through the housing follows an airflow path, a first portion of the airflow path proximate the first aperture being defined substantially centrally and axially with respect to the central longitudinal axis of the housing, and a second portion of the airflow path proximate to the second aperture being defined substantially centrally and axially with respect to the central longitudinal axis of the housing";
- "the airflow to pass on both transverse sides of the heating element during use of the electronic vaporizer"; and
- "the heating element extending transversely to a central longitudinal axis of the housing."

a. NJOY identifies structures and components of the JUUL2 System that do not satisfy the "housing" limitations found in both asserted independent claims of the '864 Patent

Both of the asserted independent claims 1 and 9 require "a housing having an interior." *See e.g.,* JX-0001 ('864 Patent), Claim 1[a] ("a housing having an interior and a solution holding medium adapted to hold a solution, the housing having a first end and a second end that is opposite the first end, the housing having a first aperture proximate the first end and a second aperture proximate the second end"); *see also id.*, Claim 9[a]. As a preliminary matter, it is undisputed that the JUUL2 Pod is the "cartridge" recited in the asserted claims.

JLI expects that Dr. Vallee will attempt to argue that the [redacted]t is part of the JUUL2 Pod cartridge housing. But Dr. Vallee should not be permitted to assert this new argument at the Hearing because NJOY never disclosed it in any of its infringement contentions or in Dr. Vallee's Opening Report. In fact, Dr. Vallee not only repeatedly identified only the [redacted] *See e.g.,* CX-2157C (Vallee Opening Rpt.) at ¶ 966 [redacted]; RX-1014C (Vallee 4/11/24 Tr.) at 262:24-263:14 [redacted]

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[redacted], 265:11-19 [redacted]; 266:4-267:26 [redacted]; RX-1094C (Vallee Ex. 17) [redacted].

To the extent Dr. Vallee is allowed to present his new [redacted] theory at the Hearing, the ALJ should reject this argument because the [redacted] does not meet any definition of the "housing."

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[redacted]

.

[redacted]

See, e.g., JX-0024 (Merriam-Webster definition for "housing"); JX-0023 (Cambridge English definition for "housing"); JX-0022 (Britannica definition for "housing"). [redacted]

See, e.g., JX-0025 (Patent Owner's Preliminary Response (IPR2024-00160)) at JX-0025.5 ("the 'housing' is an outside structure containing the device internals"); RX-1014C (Vallee 4/11/24 Tr.) at 219:8-221:9 (repeatedly confirming that anything connected or attached to the exterior of the housing is part of the housing).

b. NJOY fails to show the JUUL2 System satisfies "a solution holding medium adapted to hold a solution" limitations

All of the asserted independent claims require "a solution holding medium adapted to hold a solution." *See, e.g.*, JX-0001 ('864 Patent), Claim 1[a] ("a housing having an interior and a solution holding medium adapted to hold a solution"); *see also id.* at Claim 9[a], Claim 25[a]. JLI expects Dr. Vallee to assert that [redacted]

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[redacted]

See, e.g., CX-2157C (Vallee Opening Rpt.) at ¶ 967. However, Dr. Vallee cannot include the as part of the JUUL2 Pod's solution holding medium because he has already identified each of these components as forming other claimed components of the claimed cartridge.

Indeed, the asserted claims are clear that the claimed "solution holding medium" must be separate and distinct from both the claimed "interior" of the housing and from the "airflow passageway." *See e.g.,* '864 Patent, Claim 1 ("a housing having an interior and a solution holding medium adapted to hold a solution, … an airflow passageway in the housing …"), claim 25 (same), claim 9 ("… a housing having an interior and a solution holding medium adapted to hold a solution …"). Because Dr. Vallee asserts that the [redacted]

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[redacted]

c. NJOY fails to show the JUUL2 System satisfies "the first end of the housing being adapted to electrically couple to the power source" limitations

All of the asserted independent claims require "the first end of the housing being adapted to electrically couple to the power source." *See e.g.,* JX-0001 ('864 Patent), Claim 1[b], Claim 9[b], Claim 25[b]. JLI expects Dr. Vallee will argue that the JUUL2 Pod [redacted] *See e.g.*, CX-2157C (Vallee Opening Rpt.) at ¶¶ 976. His argument is flawed for several reasons. The evidence will show that [redacted]

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[redacted]

Dr. Vallee defines the first end being the bottom-facing surfaces. RX-1014C (Vallee 4/11/24 Tr.) at 206:9-207:5, 213:15-23, 215:15-21 (testifying that the blue line shows the bottom end of the cartridge); RX-1080C (Vallee Rebuttal Rpt.) at ¶¶ 137-139. For example, in the below annotated figure from his report, Dr. Vallee identifies in blue what he considers to be the end of the cartridge housing, and he does not identify the outside side surfaces of the housing as part of the end of the housing. *Id.*



RX-1080C (Vallee Rebuttal Rpt.) at ¶ 139 (Dr. Valle using blue to annotate the first/bottom end).

Here, as can be clearly seen

[redacted]

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[redacted]

see also RPX-0019 (JUUL2 Device); RPX-0020 (JUUL2 Pod); RPX-0021 (JUUL2 Pod (disassembled)).

Thus, even assuming Dr. Vallee's unsupported allegation that [redacted]

d. NJOY fails to show the JUUL2 System satisfies "the heating element being configured to vaporize at least a portion of the solution for oral provision to an individual in the airflow" limitations

All of the asserted independent claims require "the heating element being configured to vaporize at least [a/the] portion of the solution [drawn to the heating element] for oral provision to an individual in the airflow." *See e.g.,* JX-0001, Claim 1[f-g] ("the heating element being configured to vaporize at least a portion of the solution for oral provision to an individual in the airflow"), Claim 9[f-g] ("the heating element being configured to vaporize at least a portion of the

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[redacted]

solution for oral provision to an individual in the airflow"), Claim 25[g-h] ("the heating element being configured to vaporize at least the portion of the solution drawn to the heating element for oral provision to an individual in the airflow"). NJOY and Dr. Vallee will assert that [redacted] *See, e.g.,* CX-2157C (Vallee Opening Rpt.) at ¶¶ 986, 1272. However, as explained below, the evidence at the Hearing, including the testimony of JLI's expert Dr. Dahm, will show that NJOY cannot meet its burden of proving that the JUUL1 System satisfies the aforementioned "the heating element being configured to vaporize …" limitations of the '864 Patent because [redacted] *See e.g.,* RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 325-345.

1. The [redacted] cannot be part of the claimed heating element

While JLI expects Dr. Vallee to assert that the [redacted] *ee, e.g.,* CX-2157C (Vallee Opening Rpt.) at ¶ 986.

First, for the same reasons as discussed above in Section IV.D.2.i.e.1, the Asserted Claims do not allow [redacted] ***Second***, the evidence will show that [redacted] *See, e.g.*,

see also RPX-0019 (JUUL2 Device); RPX-0020 (JUUL2 Pod); RPX-0021

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[redacted]

(JUUL2 Pod (disassembled)). The evidence will also show that the [redacted] in the JUUL2 Pod does not generate heat and therefore cannot "perform heating" or "output heat" under JLI's proposed construction (if not subject to § 112 (6)). *Id.* The evidence will further show that because the [redacted] is made of [redacted], it is not a "conductive material that, in response to current, outputs heat to vaporize at least a portion of the solution for oral provision to an individual in the airflow" under Staff's proposed construction (if not subject to § 112 (6)). *Id*. Even NJOY's own 30(b)(6) witness, Mr. Bonet, agreed that NJOY does not consider components that do not perform heating, such as the wick in the JUUL2 Pod, to be a heating element or part of the heating element. *See* RX-1120C (Bonet) at 218:9-219:12. The [redacted] in the JUUL2 Pod, therefore, cannot be part of the alleged "heating element."

Instead, the only component in Dr. Vallee's alleged heating element that can receive power from the power source and output heat via resistive heating is the [redacted]. *See, e.g.*,

see also RPX-0019 (JUUL2 Device); RPX-0020 (JUUL2 Pod); RPX-0021 (JUUL2 Pod (disassembled)). Yet, the evidence will show that [redacted]

.

[redacted]

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[redacted]

the

[redacted]

2. The [redacted] is not "configured to vaporize at least a portion of the solution" held in the solution holding medium

For the same reasons discussed in Section IV.D.1.i.e.2*supra*, the asserted claims require the heating element to vaporize solution held ***in the solution holding medium***. However, Dr. Vallee has not alleged and the evidence will not show that [redacted]

See, e.g.,

see also RPX-0019 (JUUL2 Device); RPX-0020 (JUUL2 Pod); RPX-0021 (JUUL2 Pod (disassembled)). Rather, [redacted]

Id.; *see also* RX-1014C (Vallee 4/11/24 Tr.) at 37:3-18 ([redacted]). The JUUL2 Pod [redacted] thus is not configured to heat or vaporize any portion of the solution held in the alleged solution holding medium, as required by the asserted claims. *Id.*

3. The JUUL2 Pod does not "vaporize" any solution "for oral provision" but instead delivers aerosol to users

For the same reasons discussed in Section IV.D.1.I.e.3*supra*, the evidence will show that the Asserted Patent recognizes the significant material differences between a vapor and an aerosol, and the patent chose to disclose and claim providing only a vaporized solution—not an aerosolized solution—"for oral provision to an individual." The evidence will show that similar to the JUUL1 Pod, the JUUL2 Pod is also designed to deliver only an aerosol, not a vaporized solution, to an individual for oral provision:

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[redacted]

See

[redacted]

See

Dr. Vallee provides no evidence that JLI's technical documentation is incorrect, that any vapor is ever actually provided to a user of the JUUL2 System (theoretically or in practice), or that the JUUL2 System is designed or intended to supply a vapor "for oral provision to an individual," as required by the asserted claims. Thus, the evidence does not support Dr. Vallee's argument that the JUUL2 System infringes the claimed "heating element being configured to vaporize at least a portion of the solution for oral provision to an individual in the airflow."

e. NJOY fails to show the JUUL2 System satisfies "the airflow passageway extends centrally and axially from the first aperture to the second aperture" limitation

Asserted independent claim 1 requires "the airflow passageway extends centrally and axially from the first aperture to the second aperture." *See* JX-0001 ('864 Patent), Claim 1[i-j] ("an

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[redacted]

airflow passageway in the housing, at least a portion of the airflow passageway extending centrally and axially with respect to the housing, wherein the airflow passageway extends centrally and axially from the first aperture to the second aperture"). At the Hearing, JLI expects that Dr. Vallee will argue that [redacted] *See, e.g.*, CX-2157C (Vallee Opening Rpt.) at ¶¶ 1000, 1245; *see also id.* at ¶¶ 999-1004 (claim element 1[i] of the '864 Patent), 1244-1250 (claim element 1[f-g] of the '881 Patent); pp. 500-501. However, for several reasons discussed in detail below, the evidence will show that the JUUL2 Pod does not include the claimed "airflow passageway."

1. The alleged airflow passageway does not extend from a centrally located first aperture all the way to a centrally located second aperture

To begin, claim 9 requires that the airflow passageway "***extends centrally and axially from the first aperture to the second aperture***," *i.e.*, in the entire distance between them. *See* JX-0001 ('864 Patent), at Claim 9 (emphasis added). Again, Dr. Vallee is expected to argue that the alleged airflow passageway is [redacted] *See, e.g.*, CX-2157C (Vallee Opening Rpt.) at ¶¶ 1000, 1245. But as is clear [redacted] and as JLI's Dr. Dahm will explain, [redacted]

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[redacted]

Thus, Dr. Vallee will not be able to show the JUUL2 Pod has the claimed airflow passageway because the evidence will show that [redacted]

see also RPX-0019 (JUUL2 Device); RPX-0020 (JUUL2 Pod); RPX-0021 (JUUL2 Pod (disassembled)).

In addition to requiring an airflow passageway that ***extends from*** a first aperture, claim 1 also requires that "the airflow passageway extends ***centrally and axially*** from the first aperture to the second aperture." *See* JX-0001 ('864 Patent), at Claim 1. Even assuming that Dr. Vallee can identify an airflow passageway structure that extends from the alleged first aperture, the evidence

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[redacted]

will show that such an airflow passageway cannot be central or axial between the first and second alleged apertures

see also RPX-0019 (JUUL2 Device); RPX-0020 (JUUL2 Pod); RPX-0021 (JUUL2 Pod (disassembled)).

see also RPX-0019 (JUUL2 Device); RPX-0020 (JUUL2 Pod); RPX-0021 (JUUL2 Pod (disassembled)).

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[redacted]

Dr. Vallee concedes as much by attempting to omit the inconvenient,

However, Dr. Vallee will not be able to explain why he argues that

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[redacted]

see also RPX-0019 (JUUL2 Device); RPX-0020 (JUUL2 Pod); RPX-0021 (JUUL2 Pod (disassembled)).

Nor will Dr. Vallee provide any intrinsic support for his "test" for determining what structures are mere "obstacles" versus what structures define the boundary of an airflow passageway. CX-2157C (Vallee Opening Rpt.) at ¶ 1000-1003. Dr. Vallee will also provide no analysis, testing, or other evidence to support his argument that the "obstacle" formed by

Id. He cannot provide such reasoning, support, analysis, or testing, because the original disclosure of the Asserted Patents provides no support for Dr. Vallee's test. *See generally* JX-0001 ('864 Patent). The evidence will also show that what Dr. Vallee calls an "obstacle"

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[redacted]

see also RPX-0019 (JUUL2 Device); RPX-0020 (JUUL2 Pod); RPX-0021 (JUUL2 Pod (disassembled)).

see also RPX-0019 (JUUL2 Device); RPX-0020 (JUUL2 Pod); RPX-0021 (JUUL2 Pod (disassembled)).

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[redacted]

see also RPX-0019 (JUUL2 Device); RPX-0020 (JUUL2 Pod); RPX-0021 (JUUL2 Pod (disassembled)).

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[redacted]

.

Moreover, as the evidence will show,

Accordingly, the evidence will show that the

[redacted]

3. The JUUL2 Pod cannot have a central and axial airflow passageway because [redacted]

In addition to Dr. Vallee's improper omission of the structure, the evidence will show that [redacted] *See, e.g.,* RX-0841C (Dahm Rebuttal Rpt.) at ¶ 415;

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[redacted]

see also RPX-0019 (JUUL2 Device); RPX-0020 (JUUL2 Pod); RPX-0021 (JUUL2 Pod (disassembled)). As Dr. Dahm will testify, [redacted] *Id.*; CX-2157C (Vallee Opening Rpt.) at ¶ 1275.

Contrary to Dr. Vallee's assertions, therefore, the JUUL2 Pod does not include a central and axial airflow passageway extending from the alleged first aperture to the alleged second aperture, as required by the claims.

4. The interior of the housing, solution holding medium, and airflow passageway must comprise separate structures

At the hearing, JLI expects Dr. Vallee to rely on the [redacted] as part of the claimed "housing" (*see, e.g.*, CX-2157C (Vallee Opening Rpt.) at ¶ 966), the claimed "solution holding medium" (*see, e.g.*, CX-2157C (Vallee Opening Rpt.) at ¶ 967), and the claimed "airflow passageway" (*see, e.g.*,

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[redacted]

CX-2157C (Vallee Opening Rpt.) at ¶ 1000). However, for reasons discussed in Section IV.D.2.i.f.5 *supra*, the asserted claim 9 requires that the airflow passageway be separate and distinct from other claimed elements, such as the solution holding medium and the interior of the housing. The [redacted]

f. NJOY fails to show the JUUL2 System satisfies the substantially central and axial airflow path portions limitations

Asserted independent claim 9 requires that "the airflow through the housing follows an airflow path, a first portion of the airflow path proximate the first aperture being defined substantially centrally and axially with respect to the central longitudinal axis of the housing, and a second portion of the airflow path proximate to the second aperture being defined substantially centrally and axially with respect to the central longitudinal axis of the housing." *See, e.g.*, JX-0001 ('864 Patent), Claim 9[i]. To meet its burden with respect to this limitation, Dr. Vallee is again expected to use grossly over-simplified arrows, based on no analysis, testing, or other evidence, to show that [redacted] *See, e.g.,* CX-2157C (Vallee Opening Rpt.) at ¶¶ 1016-1020. Specifically, JLI expects Dr. Vallee to rely on

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[redacted]

see also RPX-0019 (JUUL2 Device); RPX-0020 (JUUL2 Pod); RPX-0021 (JUUL2 Pod (disassembled)).

[redacted]

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[redacted]

Moreover, as with the JUUL1 Product, Dr. Vallee will fail to even opine on the distance from the alleged apertures that the airflow path must be central and axial; nor can he, as he will be unable to provide any simulation or testing data that would support such an opinion. *Id.* Nor will Dr. Vallee provide any objective test or criteria to use to decide whether the alleged airflow paths are "proximate" the alleged apertures or substantially central and axial with respect to the housing, including any objective criteria used to decide that the alleged portions of the airflow path are substantially central and axial for a sufficient distance for the limitation to have meaning in the context of the claims. *Id.*

Thus, as further explained below, regardless of which first and second "portions" of the airflow path in the JUUL2 Pod one examines—i.e., the first and second portions that are required under the ALJ's claim construction order (*i.e.*, the first and second half of the airflow path), or the first and second portions that Dr. Vallee points to in his analysis—NJOY and Dr. Vallee will not be able to meet NJOY's burden of proving that the JUUL2 System satisfies the aforementioned "airflow path" limitations of the '864 Patent.

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[redacted]

1. Dr. Vallee fails to show the two half portions of the airflow path are substantially central and axial

For reasons discussed above in Section IV.D.2.i.h, a POSITA reading the ALJ's construction of "proximate" would understand that "a first portion of the airflow path proximate the first aperture" is first half of the airflow path between the first aperture to the midway point between the first and second aperture, and "a second portion of the airflow path proximate the second aperture" is the other half of the airflow path between the midway point between the first and second aperture and the second aperture. The evidence will show that, as Dr. Vallee depicted in the below exhibit from his deposition, [redacted] *See, e.g.*, RX-0841C (Dahm Rebuttal Rpt.) at ¶ 455-467; RX-1014C (Vallee 4/11/24 Tr.) at 239:4-24;

see also RPX-0019 (JUUL2 Device); RPX-0020 (JUUL2 Pod); RPX-0021 (JUUL2 Pod (disassembled)).

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[redacted]

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[redacted]

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[redacted]

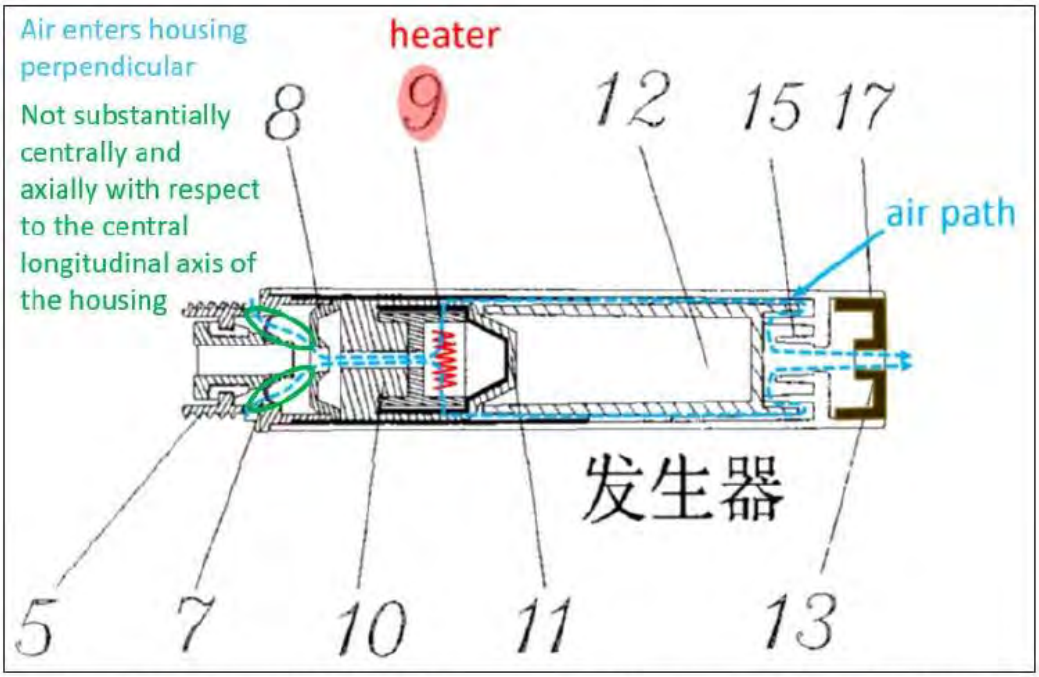
Moreover, Dr. Vallee admits that

However, to advance his infringement theory, Dr. Vallee was forced to come up with an entirely new theory at his deposition—that because

. Even if Dr. Vallee is permitted to offer this never-before-disclosed "average of the flow" theory at the Hearing (he should not be), Dr. Vallee's new theory contradicts his validity positions. For example, with respect to the Xia '610 reference, Dr. Vallee argues that Xia '610 includes non-substantially centrally and axially airflow paths with respect to the central longitudinal axis of the housing as shown below. However, the average of these two airflow paths circled in green by Dr. Vallee would be central and axial to the central and longitudinal axis of the housing. Dr. Vallee cannot creditably maintain both positions.

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[redacted]



Annotation of Fig. 1 of Xia '610 Illustrating Non-Central and Axial Portions of Airflow Path

CX-2728C (Vallee Rebuttal Rpt., Appx. A-1) at ¶ 345.

In any event, the evidence will show that Dr. Vallee's new "average of the flow" theory has no support in the asserted patents. *See, e.g.,* JX-0001 ('864 Patent). The concept of an airflow path is only disclosed in the claims, where the claims unambiguously require the airflow path itself must have substantially central and axial portions. *Id.* at claim 9 ("wherein the airflow through the housing follows ***an airflow path***, ***a first portion of the airflow path*** proximate the first aperture being defined substantially centrally and axially with respect to the central longitudinal axis of the housing, and ***a second portion of the airflow path*** proximate to the second aperture being defined substantially centrally and axially with respect to the central longitudinal axis of the housing.") (emphasis added). There is no disclosure of using the average of the airflow paths in lieu of the actual airflow paths.

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[redacted]

2. Dr. Vallee fails to show his alleged first and second portions of the airflow path are substantially central and axial

Even using the identification of portions of the airflow path that Dr. Vallee adopts here, which conflicts with both the definition of "proximate" he used during claim construction and the ALJ's construction of "proximate,"[23] Dr. Vallee's opinion is still wrong. Dr. Vallee's two claimed "portions" of the JUUL2 airflow path are shown But as noted above, Dr. Vallee provides his opinion about the purported airflow in these alleged portions without any reasoned analysis of facts, such as simulation or testing of the JUUL2 Pod. *See, e.g.*, CX-2157C (Vallee Opening Rpt.) at ¶¶ 1016-1020. More importantly, the evidence will show that Dr. Vallee's opinion is contradicted by the undisputed facts. *See, e.g.,*

see also RPX-0019 (JUUL2 Device); RPX-0020 (JUUL2 Pod); RPX-0021 (JUUL2 Pod (disassembled)).

[23] During Dr. Vallee's deposition related to the claim construction proceeding, Dr. Vallee argues that "proximate" describes relative positioning, i.e., that an aperture or airflow is "closer to one side than the other." *See* RX-1013 (Vallee 12/21/23 Tr.) at 31:21-32:6, 79:12-80:9. As Dr. Vallee explained and as the ALJ has construed the term "proximate," therefore, the entire airflow path up to the midline must be the "portion of the airflow path proximate" to each aperture.

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[redacted]

CX-2157C (Vallee Opening Rpt.) at ¶ 1019.

First, Dr. Vallee's grossly simplified airflow arrows are based on his baseless and incorrect assumption that [redacted] *See, e.g.*, CX-2157C (Vallee Opening Rpt.) at ¶ 1017. The evidence will show that

it is clear that Dr. Vallee's alleged airflow path is based on an imaginary and incorrect incoming airflow. Therefore, his airflow arrows cannot depict the airflow from the alleged first aperture to the alleged second aperture.

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[redacted]

see also RX-0019 (JUUL2 Device); RPX-0020 (JUUL2 Pod); RPX-0021 (JUUL2 Pod (disassembled).

Second, even focusing solely on the first portion identified by Dr. Vallee, the evidence will show that [redacted]

This is because, similar to his (lack of) analysis for the airflow in the JUUL1 Pod, Dr. Vallee ignores the well-known "vena contracta" flow phenomenon and the effects that other openings and objects will have on the airflow path through the alleged first aperture, both of which cause the airflow from the alleged first aperture not to be substantially central and axial. *See supra* Section IV.D.2.i.h.1. Moreover, because [redacted] *See, e.g.,* RX-0841C (Dahm Rebuttal Rpt.) at ¶ 455;

see also RPX-0019 (JUUL2 Device); RPX-0020 (JUUL2 Pod); RPX-0021 (JUUL2 Pod (disassembled)).

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[redacted]

Third, having chosen not to simulate the airflow through the JUUL2 Pod, Dr. Vallee relies on . However, Dr. Vallee has failed to prove that Even assuming

[redacted]

[redacted] This is because, as discussed above,

See, e.g., RX-0841C (Dahm Rebuttal Rpt.) at ¶ 405-413.

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[redacted]

see also RPX-0019 (JUUL2 Device); RPX-0020 (JUUL2 Pod); RPX-0021 (JUUL2 Pod (disassembled).

Fourth, even with respect to the alleged first portion of the airflow path, the

contradicts Dr. Vallee's assertion that the first portion of the airflow path is substantially central and axial. For example, by requiring that "the first aperture and the second aperture being in communication with one another to permit ***an airflow*** through the housing from the first aperture to the second aperture," the claims define what "the airflow" is, so when they later recite that "***the airflow*** through the housing follows ***an airflow path,***" that means that ***the*** airflow path must follow ***the*** airflow, which comes "from the first aperture. *See, e.g.,* JX-0001 ('864 Patent) at Claim 9. Because of this, the only airflow paths that are of interest are found in the center plane of the device. *Id.* But

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[redacted]

Presumably due to this reason, Dr. Vallee does not try to identify the location of the alleged first aperture or where the airflow path from the alleged "first aperture" starts and ends: for example, even if some air from a different inlet followed a different path, the claims require that the airflow path from the first aperture have a potion defined substantially centrally and axially. *See, e.g.*, JX-0001 ('864 Patent) at Claim 9.

The fact that NJOY and Dr. Vallee *could* have, but chose not to, perform special purpose simulation and testing that would have more clearly shown this information, is particularly

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[redacted]

egregious given that Dr. Vallee's opinion is contradicted by

See CX-2157C (Vallee Opening Rpt.) at ¶¶ 1016-1020. Because they did not perform any simulations or testing, and failed to perform any objective, reasoned analysis of the airflow in the JUUL2 Pod, NJOY has failed to meet its burden of showing that the JUUL2 Pod has two portions of an airflow path that are substantially central and axial. *Id.*

g. NJOY fails to show the JUUL2 System satisfies "the heating element extending transversely to a central longitudinal axis of the housing" limitations

Both of the asserted independent claims of the '864 Patent require a "heating element extending transversely to a central longitudinal axis of the housing." *See, e.g.*, JX-0001 ('864 Patent), Claim 1[e] ("the heating element extending transversely to a central longitudinal axis of the housing…"), Claim 9[e] (same). In support of NJOY's attempt to show that the JUUL2 system satisfies this limitation, Dr. Vallee will argue that [redacted] *See, e.g.,* RX-0841C (Dahm Rebuttal Rpt.) at ¶ 485-486;

; *see also* RPX-0019 (JUUL2 Device); RPX-0020 (JUUL2 Pod); RPX-0021 (JUUL2 Pod (disassembled)). Rather,

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[redacted]

see also RPX-0019 (JUUL2 Device); RPX-0020 (JUUL2 Pod); RPX-0021 (JUUL2 Pod (disassembled).

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[redacted]

Accordingly, [redacted]

[redacted]

h. NJOY fails to show the JUUL2 System satisfies "the airflow to pass on both transverse sides of the heating element during use of the electronic vaporizer" limitation

The asserted dependent claim 11 require the airflow to pass "on both transverse sides of the heating element during use of the electronic vaporizer." *See, e.g.*, JX-0001 ('864 Patent), Claim 11 ("wherein the cartridge is adapted to permit the airflow to pass on both transverse sides of the heating element during use of the electronic vaporizer"). With respect to this limitation, Dr. Vallee alleges that the airflow through the alleged airflow passageway passes on both transverse sides of the alleged heating element in the JUUL2 System, [redacted] *See, e.g.*, CX-2157C (Vallee Opening Rpt.) at ¶¶ 1269-1277. However, Dr. Vallee fails to demonstrate how any of the claimed airflow passes on his alleged transverse sides of the alleged heating element. *See, e.g.,* CX-2157C (Vallee Opening Rpt.) at ¶¶ 1026-1028. Indeed, as discussed above with respect to the JUUL1 System, the claimed airflow that needs to pass on both transverse sides of the claimed heating element is not just any airflow, but is the specific airflow from the first aperture to the second aperture. *See, e.g.,* JX-0001 ('864 Patent), claim 9; *see also supra* § IV.D.2.i.i. Here, Dr. Vallee has not shown and will not be able to show at the Hearing that the specific airflow from his alleged first aperture ([redacted]) to his alleged second aperture passes on both

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[redacted]

transverse sides of the alleged heating element. *See, e.g.,* CX-2157C (Vallee Opening Rpt.) at ¶¶ 1026-1028.

JLI expects that Dr. Vallee may rely on his grossly oversimplified airflow arrows in the below figure to show the airflow passes on both transverse sides of the heating element.

But as explained above in Section IV.D.2.iii.f, [redacted] JLI also expects that Dr. Vallee rely on to show the claimed airflow passes on both transverse side of the JUUL2 Pod's heater. But as discussed above in Section IV.D.2.iii.f, Dr. Vallee has failed to show Therefore, is likewise insufficient to meet NJOY's burden of proof with respect to the transverse sides limitation in claim 9.

E. No Indirect Infringement

Indirect infringement requires an underlying act of direct infringement. Because none of the Accused Products directly infringes any claims of the Asserted Patent, the Accused Products do not indirectly infringe any of those claims.

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[redacted]

F. Domestic Industry – Technical Prong

1. The ’881 Patent

i. Vuse Solo

NJOY asserts that RJR’s Vuse Solo Systems utilizing RJR’s Vuse Solo G1 and G2 Cartridges practice independent claim 1 of the ’881 Patent. *See e.g.,* CX-2157C (Vallee Opening Rpt.) at ¶ 1853 (“It is my opinion that the VUSE Solo System practices claim 1 of the ’881 Patent for at least the reasons explained below.”). However, the evidence will show that the Vuse Solo Systems utilizing the Vuse Solo G1 and G2 Cartridges do not practice claim 1 of the ’881 Patent, at least because NJOY has failed to meet its burden of proving that the Vuse Solo Cartridges satisfy the following limitations:

- “a solution holding medium adapted to hold a solution”;
- “the first end of the housing includes an electrically conductive portion that is adapted to mechanically and electrically couple to the electrically conductive portion of the power source”;
- “the heating element is electrically configured to vaporize at least a portion of the solution to be contained in the solution holding medium for oral provision to an individual in an airflow from the second aperture”;
- “an airflow passageway that extends centrally and axially with respect to the housing intermediate of the first aperture on the first end of the housing and the second aperture on the second end of the housing”;
- “the solution holding medium surrounds the airflow passageway and the heating element”
- “the airflow through the passageway passes on both transverse sides of the element”; and
- “the heating element extends transversely across the airflow passageway.”

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[redacted]

a. NJOY fails to show that the Vuse Solo Systems practice the claimed "solution holding medium adapted to hold a solution"

Claim 1 of the '881 Patent requires a housing comprising "a solution holding medium adapted to hold a solution." *See e.g.,* JX-0003 ('881 Patent), Claim [1.6] ("wherein the housing includes a solution holding medium adapted to hold a solution in the interior of the housing"). JLI expects that NJOY and Dr. Vallee will allege that the solution holding medium in the Vuse Solo Systems includes "a batting, [redacted], any portion of the chamber in which liquid solution resides, or a combination thereof." *See* CX-2157C (Vallee Opening Rpt.) at ¶¶ 1878-1882. However, the evidence at the Hearing, including the testimony of JLI's expert Dr. Dahm, will show that NJOY cannot meet its burden of proving that the Vuse Solo Systems satisfy the aforementioned "a solution holding medium adapted to hold a solution" limitation of the '881 Patent because the alleged solution holding medium improperly includes "any portion of the chamber in which liquid solution resides, or a combination thereof" and "the [redacted]." *See e.g.,* RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 671-679; JX-0577C (Vuse Solo PMTA, Sec H); JX-0509C (Alto and Solo Graphics).

First, Dr. Vallee's analysis will be limited to whether the batting, i.e., the "Reservoir Substrate," and [redacted] satisfies the "solution holding medium adapted to hold a solution" because Dr. Vallee has never presented any evidence on how any portion of the chamber in which liquid solution resides—or a combination of the batting, [redacted], and any portion of the chamber in which liquid solution resides—satisfy the "solution holding medium adapted to hold a solution" limitation. *See* CX-2157C (Vallee Opening Rpt.) at ¶¶ 1878-1882; RX-0841C (Dahm Rebuttal Rpt.) at ¶ 674. Even if Dr. Vallee were allowed to present evidence that any portion of the chamber in which liquid solution resides can form part of the solution holding medium, the evidence will show that no

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[redacted]

portion of the chamber can be part of the solution holding medium because the claim requires the solution holding medium to be separate and distinct from the interior of the housing, which Dr. Vallee claims the chamber is also part of. *See, e.g.,* JX-0003 ('881 Patent), Claims [1.3] and [1.6] ("a cartridge having a housing that comprises an interior…the housing includes a solution holding medium adapted to hold a solution in the interior of the housing").

Second, as shown in the below figures from Dr. Vallee's report, JLI expects that Dr. Vallee will arbitrarily separate the wick in the Vuse Solo Cartridges into three portions – [redacted]. CX-2157C (Vallee Opening Rpt.) at ¶¶ 1878-1882. However, the evidence will show that the wick is [redacted] as suggested by Dr. Vallee. *See, e.g., id*; JX-0577C (Vuse Solo PMTA, Sec H), at JX-0577C.26-41, 108-118; JX-0509C (Alto and Solo Graphics); RX-0841C (Dahm Rebuttal Rpt.) at ¶ 675. [redacted], the wick as a whole is clearly not adapted to hold the solution in the regions Dr. Vallee alleges as the solution holding medium regions.

[redacted]

CX-2157C (Vallee Opening Rpt.) at ¶ 1881 (annotated in red; green annotations in original).

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[redacted]



Id. (annotated in red; green annotations in original).

Noticeably, unlike Dr. Vallee's assertion with respect to the '864 Patent, where he alleges the wick forms part of both the claimed "solution holding medium" and the "heating element, Dr. Vallee has not alleged that [redacted] also forms part of the "heating element" for the '881 Patent. *See, e.g.,* CX-2157C (Vallee Opening Rpt.) at ¶ 1664 (For the '864 Patent, Dr. Vallee alleges that the Vuse Solo Cartridges "include a heating element (i.e., at least a resistive heating coil)" and that "[t]he heating element may also include [redacted]."); *c.f.*, *id.* at ¶ 1886 (For the '881 Patent, Dr. Vallee alleges that the Vuse Solo Cartridges "include a heating coil (heating element)."); *id.* at ¶ 1888 (For the '881 Patent, Dr. Vallee alleges that the Vuse Solo Cartridges include "the heating element (i.e., at least the resistive heating coil)."); *id.* at ¶¶ 1899-1904. *See also* Section IV.F.2.iii.a *infra*. However, to the extent Dr. Vallee is allowed to change his opinion and allege that with respect to the '881 Patent, the heating element includes both the heating coil and [redacted], Dr. Vallee fails to show [redacted] can be part of the solution holding medium. RX-0841C (Dahm Rebuttal Rpt.) at ¶ 676. This is because the claim does ***not*** allow the wick to be part of the claimed "solution holding medium" ***and*** part of the claimed "heating element". *See, e.g.,* '881 Patent, Claims [1.6] and [1.7] ("wherein the housing

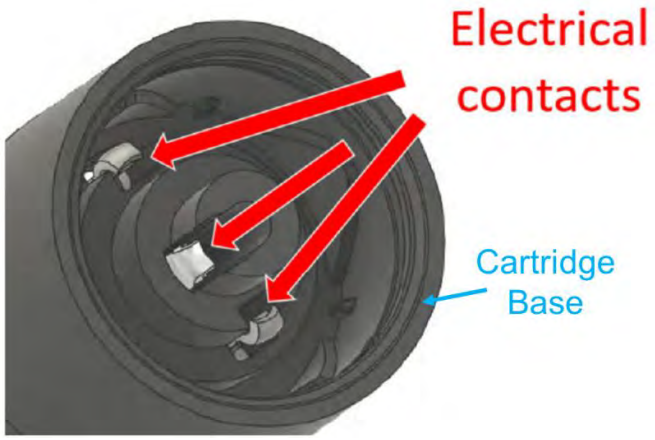
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[redacted]

includes a solution holding medium adapted to hold a solution in the interior of the housing, wherein the housing includes a heating element located in the interior of the housing, …"). Therefore, NJOY has failed to meet its burden to show the Vuse Solo Systems practice the "solution holding medium adapted to hold a solution" limitation.

b. NJOY is unable to show that the Vuse Solo Systems practice the claimed "first end of the housing having an electrically conductive portion adapted to mechanically and electrically couple to an electrically conductive portion of the power source"

Claim 1 of the '881 Patent requires that an electrically conductive portion of the first end of the housing be adapted to both mechanically and electrically couple to the power source. *See e.g.,* JX-0003 ('881 Patent), Claim [1.5] ("wherein the first end of the housing includes an electrically conductive portion that is adapted to mechanically and electrically couple to the electrically conductive portion of the power source"). JLI expects that Dr. Vallee will argue at the Hearing that "the electrical contacts" of the Vuse Solo Cartridges are the "electrically conductive portion" of the first end of the housing, despite that Dr. Vallee has never identified the electrical contacts as part of the claimed cartridge "housing." *See* CX-2157C (Vallee Opening Rpt.) at ¶¶ 1864-1865 (identifying the exterior structures of the cartridge base, external stainless tube, and mouth end cap as being the alleged housing of the cartridge), 1873-1876 (same).



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[redacted]

CX-2157C (Vallee Opening Rpt.) at ¶ 1874 (annotated in blue; red annotation in original).

However, the evidence will show that the electrical contacts are separate structures from the alleged first end of the housing (i.e., the downward facing surfaces of the cartridge base) or even the housing (i.e., the exterior structures of the cartridge base, external stainless tube, and mouth end cap), and therefore cannot be the claimed "electrically conductive portion," which must be part of the "first end of the housing." *See* JX-0003 ('881 Patent), Claim [1.5] ("***the first end of the housing includes an electrically conductive portion*** that is adapted to mechanically and electrically couple to the electrically conductive portion of the power source"); JX-0577C (Vuse Solo PMTA, Sec H), at JX-0577C.26-41, 45-46, 108-118; JX-0509C (Alto and Solo Graphics); RX-0841C (Dahm Rebuttal Rpt.) at ¶¶ 706-713. Further, neither NJOY nor Dr. Vallee has ever argued that his alleged "first end of the housing," *i.e.*, a portion of the cartridge base, is an electrically conductive portion. *See e.g.,* CX-2157C (Vallee Opening Rpt.) at ¶¶ 1872-1877. It cannot be because the cartridge base is made from [redacted] JX-0577C (Vuse Solo PMTA, Sec H), at JX-0577C.28, 36, 45-46. Therefore, Dr. Vallee has failed to show that the electrical contacts of the Vuse Solo Cartridges can satisfy the "the first end of the housing includes an electrically conductive portion that is adapted to mechanically and electrically couple to the electrically conductive portion of the power source" limitation.

Even if Dr. Vallee were to be allowed to present this new theory of "housing" that includes the electrical contacts, the evidence will show that the electrical contacts cannot be part of the "housing" because the electrical contacts do not meet any of the definitions of "housing." For example, the electrical contacts of the Vuse Solo Cartridges do not meet any of the dictionary definitions of "housing" because the electrical contacts are [redacted]. JX-0577C (Vuse

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[redacted]

Solo PMTA, Sec H), at JX-0577C.26-41, 109-118; JX-0024 (Merriam-Webster definition for "housing"); JX-0023 (Cambridge English definition for "housing"); JX-0022 (Britannica definition for "housing"). *See also* Section IV.B.1 *supra*. [redacted]

JX-0577C (Vuse Solo PMTA, Sec H), at JX-0577C.26-41, 109-118; JX-0025 (IPR2024-00160, Paper 7) at JX-0025.11 (emphasis added); JX-0026 (IPR2024-00161, Paper 6) at JX-0026.11 (same). *See also* Section IV.B.1 *supra*. Further, even under Dr. Vallee's own definition of "housing" definition of "housing" – anything "connected to the exterior of the housing" is "part of the housing" – the evidence will show that the electrical contacts cannot form part of the claimed "housing" because [redacted]. JX-0577C (Vuse Solo PMTA, Sec H), at JX-0577C.26-41, 109-118. Rather, [redacted]. *Id.*

[redacted]

See, e.g., JX-0577C (Vuse Solo PMTA, Sec H), at JX-0577C.109; *see also id.* at JX-0577C.115.

Further, JLI expects that Dr. Vallee will allege that a different portion of his alleged housing— not the electrical contacts—is adapted to mechanically couple to the Vuse Solo Power

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[redacted]

Unit. *See e.g.,* CX-2157C (Vallee Opening Rpt.) at ¶¶ 1872-1877. However, Dr. Vallee appears to forget that claim 1 explicitly requires that the "***electrically conductive portion***" of the cartridge housing be adapted to both electrically and mechanically couple to the power source. *See e.g.,* JX-0003 ('881 Patent), Claim [1.5] ("the first end of the housing includes ***an electrically conductive portion that is adapted to mechanically and electrically couple to*** the electrically conductive portion of the power source"). This is important because Dr. has never alleged, and is not expected to allege at the Hearing, that the electrical contacts of the Vuse Solo Cartridges are also adapted to mechanically couple to the Vuse Solo Power Unit. CX-2157C (Vallee Opening Rpt.) at ¶¶ 1872-1877. He cannot because the evidence will show that the electrical contacts, setting aside that it cannot be part of the claimed "housing," [redacted]. *See, e.g.,* JX-0577C (Vuse Solo PMTA, Sec H), at JX-0577C.28 ([redacted]); *see also id. at* JX-0577C.14-16, 28, 36-37, 46. [redacted] *Id*. Therefore, even if the electrical contacts Dr. Vallee identifies could be included as part of the first end of the housing, which they cannot, NJOY still fails to establish that the Vuse Solo Cartridges practice "the first end of the housing includes an electrically conductive portion that is adapted to mechanically and electrically couple to the electrically conductive portion of the power source."

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[redacted]

c. NJOY fails to show the Vuse Solo Systems practice the claimed "the heating element being electrically configured to vaporize at least a portion of the solution to be contained in the solution holding medium for oral provision to an individual in an airflow from the second aperture."

Claim 1 of the '881 Patent requires "the heating element is electrically configured to vaporize at least a portion of the solution to be contained in the solution holding medium for oral provision to an individual in an airflow from the second aperture." *See e.g.*, JX-0003 ('881 Patent), Claim [1.9]. Dr. Vallee and NJOY will argue at the Hearing that the "resistive heating coil" of the Vuse Solo Cartridges is the alleged "heating element" that is "electrically configured to vaporize at least a portion of the solution to be contained in the solution holding medium for oral provision to an individual in an airflow from the second aperture." *See, e.g.,* CX-2157C (Vallee Opening Rpt.) at ¶¶ 1883, 1896-1908, 2041. But as explained below, the evidence at the Hearing, including the testimony of JLI's expert Dr. Dahm, will show that the Vuse Solo Systems do not practice the aforementioned "heating element …" limitations of the '881 Patent because (1) the Vuse Solo Systems' heating coil alone is not configured to vaporize the claimed solution, and (2) [redacted] (3) the wick cannot be part of the claimed heating element. *See* RX-0841C (Dahm Rebuttal Rpt. and Errata) at ¶¶ 683-705; JX-0577C (Vuse Solo PMTA, Sec H); JX-0509C (Alto and Solo Graphics).

1. The heating coil is not "configured to vaporize at least a portion of the solution" held in the solution holding medium

For the same reasons discussed in Sections IV.B.4 and IV.D.1.i.e.2 *supra*, Claim 1 of the '881 Patent requires the heating element to be configured to vaporize "at least a portion of ***the solution***" held in the solution holding medium. *See e.g.*, JX-0003 ('881 Patent), Claim 1 ("wherein the housing includes ***a solution holding medium adapted to hold a solution*** in the interior of the

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