

1 UNITED STATES PATENT AND TRADEMARK OFFICE

2
3 BEFORE THE PATENT TRIAL AND APPEAL BOARD

4
5 AIR PRODUCTS AND CHEMICALS, INC.,

6 Petitioner

7 v.

8 EVONIK OPERATIONS GMBH and EVONIK CORPORATION,

9 Patent Owner

10
11 Case IPR2024-00611

12 Patent 10,471,380

13
14 DEPOSITION OF GEOFFREY MATTHEW GEISE, PH. D.

15 Friday, March 28, 2025; 9:57 a.m. EDT

16
17
18 Reported by: Cindy L. Sebo, RMR, CRR, CLR, RPR,
19 CCR, CSR, RSA, CA CSR 14409, NJ Certified CR
30XI0024460, NJ Certified RT 30XR00019500, NM CSR
20 589, NY Realtime Court Reporter, NY Association
Certified Reporter, OR CSR 230105, TN CSR 998, TX
21 CSR 12778, WA CSR 23005926, Remote Counsel Reporter,
LiveLitigation Authorized Reporter

1 Deposition of GEOFFREY MATTHEW GEISE,
2 PH.D., held at the law offices of Wilmer Cutler
3 Pickering Hale and Dorr LLP, 2100 Pennsylvania
4 Avenue, Northwest, Washington, D.C. 20037, before
5 Cindy L. Sebo, Registered Merit Court Reporter,
6 Certified Real-Time Reporter, Certified LiveNote
7 Reporter, Registered Professional Reporter,
8 Certified Court Reporter, Certified Shorthand
9 Reporter, Real-Time Systems Administrator,
10 California Shorthand Reporter 14409, New Jersey
11 Certified Court Reporter 30XI00244600, New Jersey
12 Certified Realtime Reporter 30XR00019500, New Mexico
13 CSR 589, New York Realtime Certified Reporter,
14 New York Association Certified Reporter, Oregon CSR
15 230105, Tennessee CSR 998, Texas CSR 12778,
16 Washington CSR 23005926, Remote Counsel Reporter,
17 LiveLitigation Authorized Reporter and Notary
18 Public, beginning at approximately 9:57 a.m. EDT,
19 and when were present on behalf of the respective
20 parties:

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INDEX OF EXAMINATION

GEOFFREY MATTHEW GEISE, PH. D.

Air Products v. Evonik Operations GmbH, et al.

Friday, March 28, 2025

--o0o--

EXAMINATION BY	PAGE
Attorney Lane	6
Attorney Linn	78

--o0o--

CERTIFICATE OF REPORTER	80
INSTRUCTIONS TO WITNESS	81
ERRATA	82
ACKNOWLEDGMENT OF WITNESS	84

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
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INDEX TO EXHIBITS

GEOFFREY MATTHEW GEISE, PH. D.

Air Products v. Evonik Operations GmbH, et al.

Friday, March 28, 2025

--oOo--

GEISE IPR DEPOSITION EXHIBIT NUMBER	DESCRIPTION	PAGE
Exhibit 1	Petitioner's Notice of Deposition of Dr. Geoffrey Geise	10
Exhibit 2	Patent Owner Evonik's Response Under 37 C.F.R. Section 42.120	18

INDEX TO PREVIOUSLY MARKED EXHIBITS

PREVIOUSLY MARKED	PAGE
Exhibit 1001	47
Exhibit 1006	73
Exhibit 1038	21
Exhibit 2008	12

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P R O C E E D I N G S

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Washington, D. C.

6

Friday, March 28, 2025; 9:57 a.m. EDT

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10

GEOFFREY MATTHEW GEISE, PH. D. ,

09:38:48

11

after having been first duly sworn under penalty

09:38:48

12

of perjury by the certified stenographer to tell

09:38:48

13

the truth, the whole truth and nothing but the

09:38:48

14

truth, testified herein as follows:

09:38:48

15

--o0o--

09:38:48

16

CERTIFIED STENOGRAPHER: Thank you.

09:38:48

17

The witness is sworn, Counsel.

09:38:48

18

--o0o--

09:38:48

19

EXAMINATION BY COUNSEL FOR PETITIONER

09:38:48

20

--o0o--

09:55:16

21

BY ATTORNEY LANE:

09:57:09

22

Q. Good morning, Dr. Geise.

09:57:16

1	A.	Good morning.	09:57:20
2	Q.	Can you please state your full name	09:57:20
3		for the record?	09:57:21
4	A.	Geoffrey Matthew Geise.	09:57:22
5	Q.	Have you ever had any other legal	09:57:25
6		names?	09:57:26
7	A.	No.	09:57:28
8	Q.	A few formalities and housekeeping	09:57:30
9		things to make sure we're on the same page: If you	09:57:32
10		need a break today, just let me know, and we'll	09:57:34
11		break at the next convenient time.	09:57:36
12		Okay?	09:57:38
13	A.	Yes.	09:57:39
14	Q.	And you understand there's a	09:57:39
15		transcript being made of the deposition today?	09:57:40
16	A.	Yes.	09:57:42
17	Q.	So it's important for the court	09:57:43
18		reporter that we try not to talk over each other.	09:57:45
19		Do you understand that?	09:57:47
20	A.	Yes.	09:57:48
21	Q.	And also so the court reporter can	09:57:55
22		try to make as accurate a transcript as possible,	09:57:56

1	it's important that you answer orally for the	09:57:59
2	transcript and not with gestures, like nods.	09:58:01
3	Do you understand?	09:58:03
4	A. Yes.	09:58:04
5	Q. And Evonik's counsel may object to	09:58:05
6	some of my questions today, but unless counsel	09:58:12
7	instructs you not to answer on the basis of	09:58:13
8	privilege, you still must answer even if there's an	09:58:15
9	objection.	09:58:18
10	Do you understand that?	09:58:18
11	A. Yes.	09:58:18
12	Q. Do you understand that you're under	09:58:19
13	oath today just like testifying in a courtroom	09:58:20
14	under penalties of perjury?	09:58:22
15	A. Yes.	09:58:23
16	Q. You'll tell the truth, the whole	09:58:24
17	truth and nothing but the truth in this deposition	09:58:25
18	today?	09:58:28
19	A. Yes.	09:58:28
20	Q. Are you feeling okay today?	09:58:29
21	A. Yes.	09:58:32
22	ATTORNEY LINN: Can you speak up a	09:58:32

1	little bit?	09:58:33
2	BY ATTORNEY LANE:	09:58:36
3	Q. You're not sick or taking any	09:58:37
4	medication that would affect your ability to give	09:58:38
5	truthful, accurate and complete answers in the	09:58:40
6	deposition today?	09:58:42
7	A. No, I'm not.	09:58:43
8	Q. Will you let me know during the	09:58:44
9	deposition if, for some reason, that changes?	09:58:45
10	A. Yes.	09:58:49
11	Q. Is there any reason you can't give	09:58:49
12	truthful, accurate and complete answers in the	09:58:51
13	deposition today?	09:58:53
14	A. Not to my knowledge.	09:58:54
15	Q. Will you let me know during the	09:58:55
16	deposition if, for some reason, that changes?	09:58:56
17	A. Yes.	09:58:58
18	Q. Have you ever been convicted of any	09:59:00
19	felonies or misdemeanors other than a traffic	09:59:02
20	violation?	09:59:04
21	A. No.	09:59:05
22	Q. You understand your deposition is in	09:59:06

1	connection with the inter partes review where	09:59:08
2	Air Products challenges the validity of the claims	09:59:13
3	in U.S. Patent Number 10,471,380?	09:59:15
4	A. Yes.	09:59:19
5	Q. And is it okay to call that patent	09:59:20
6	the "'380" or "Priske patent"?	09:59:23
7	A. Yes.	09:59:26
8	ATTORNEY LANE: Geise 1.	09:59:40
9	--oOo--	09:59:41
10	(Geise IPR Deposition Exhibit Number	09:59:41
11	1, Petitioner's Notice of	09:59:41
12	Deposition of Dr. Geoffrey Geise,	09:59:41
13	marked for identification, as of	09:59:41
14	this date.)	09:59:41
15	--oOo--	09:59:41
16	BY ATTORNEY LANE:	09:59:41
17	Q. Dr. Geise, the court reporter has	10:00:15
18	handed you what's been marked as Exhibit Geise	10:00:16
19	IPR 1.	10:00:19
20	Do you see that?	10:00:20
21	A. Yes.	10:00:21
22	(Interruption in the proceedings.)	10:00:21

1	ATTORNEY LANE: Do you want to go	10:04:11
2	off the record?	10:04:12
3	--oOo--	10:04:12
4	(Whereupon, a discussion was held	10:04:12
5	off the record.)	10:04:12
6	--oOo--	10:04:13
7	BY ATTORNEY LANE:	10:04:13
8	Q. All right. Dr. Geise, you've been	10:04:18
9	handed what's been marked as Geise IPR Exhibit 1.	10:04:20
10	Do you see that --	10:04:24
11	A. Yes.	10:04:24
12	Q. -- which is the deposition notice?	10:04:24
13	Have you seen this document	10:04:25
14	before?	10:04:27
15	A. I have not.	10:04:28
16	Q. Okay. Do you see there in the middle	10:04:29
17	of that first page that it says, Case	10:04:30
18	IPR2024-00611?	10:04:32
19	A. Yes, I see that.	10:04:32
20	Q. You understand that that's the number	10:04:37
21	of the IPR for which we're here today?	10:04:38
22	A. I do.	10:04:41

1	Q.	All right.	10:04:42
2		ATTORNEY LANE: This one's been	10:05:05
3		previously marked.	10:05:07
4		Do I need to give it to you?	10:05:07
5		(Previously marked was Exhibit	10:05:19
6		Number 2008.)	10:05:19
7		BY ATTORNEY LANE:	10:05:19
8	Q.	Dr. Geise, you've been handed what's	10:05:30
9		been previously marked as Exhibit 2008, which is	10:05:31
10		your declaration submitted in this IPR on	10:05:34
11		December 12th, 2024.	10:05:38
12		Do you understand that?	10:05:40
13	A.	Yes.	10:05:41
14		ATTORNEY LINN: So you're not	10:05:43
15		marking that as Exhibit 2?	10:05:43
16		ATTORNEY LANE: I am marking it as	10:05:45
17		an exhibit, but it's just been previously	10:05:45
18		marked.	10:05:47
19		ATTORNEY LINN: Okay.	10:05:48
20		ATTORNEY LANE: Is that okay?	10:05:48
21		CERTIFIED STENOGRAPHER: Yeah,	10:05:52
22		that's fine.	10:05:53

1	BY ATTORNEY LANE:	10:05:53
2	Q. And let me -- if you want to flip	10:05:53
3	through for a minute just to make sure it's a	10:05:54
4	correct copy, that would be fine, Dr. Geise.	10:05:57
5	(Whereupon, the witness reviews the	10:06:00
6	material provided.)	10:06:00
7	THE WITNESS: Okay.	10:06:54
8	BY ATTORNEY LANE:	10:06:55
9	Q. All right. Can I turn your attention	10:06:55
10	to Page 60 of Exhibit 2008?	10:06:57
11	A. I'm on Page 60, yes.	10:07:04
12	Q. And is that your signature there on	10:07:06
13	Page 60?	10:07:08
14	A. Yes, it is.	10:07:09
15	Q. Did you sign your declaration that's	10:07:10
16	been marked as Exhibit 2008 on December 12th, 2024?	10:07:12
17	A. Yes.	10:07:17
18	Q. I'll change subjects a little bit.	10:07:21
19	How did you prepare for your	10:07:22
20	deposition today?	10:07:23
21	ATTORNEY LINN: And I caution the	10:07:23
22	witness not to reveal any attorney-client	10:07:26

1 privileged information. 10:07:28

2 THE WITNESS: So in preparing for 10:07:30

3 today, I've reviewed documents that -- such 10:07:33

4 as my declaration and other documents that 10:07:37

5 -- that I relied on to form my opinions in 10:07:39

6 order to -- to just familiarize myself with 10:07:44

7 those documents. 10:07:48

8 BY ATTORNEY LANE: 10:07:48

9 Q. Did you have any meetings with 10:07:50
10 counsel? 10:07:51

11 A. Yes, we did have meetings with 10:07:51
12 counsel. 10:07:55

13 Q. Okay. And, again, your attorney has 10:07:55
14 cautioned you not to reveal the substance of your 10:07:58
15 discussions, and I would caution you the same way; 10:08:00
16 I'm not asking you to. 10:08:03

17 But how many meetings did you 10:08:04
18 have with counsel to prepare for your deposition? 10:08:05

19 A. The exact number is -- I'm going to 10:08:16
20 say around four or five that -- thereabouts. 10:08:17

21 Q. Were any of those meetings in person? 10:08:23

22 A. No. 10:08:27

1	Q.	Were they all by Zoom or Teams?	10:08:29
2	A.	They were all virtual calls, yes.	10:08:32
3	Q.	Okay. When was the last one?	10:08:33
4	A.	We had a meeting on Wednesday of this	10:08:37
5		week.	10:08:40
6	Q.	Who did you meet with on Wednesday?	10:08:45
7	A.	So Janet was on the call. I believe	10:08:53
8		Jason Liss and -- and Seth -- I'm blanking on	10:08:58
9		Seth's last name right now, but I believe it was	10:09:05
10		just -- those are the three that I recall at this	10:09:08
11		point.	10:09:11
12		There may have been someone who	10:09:11
13		jumped on the call quickly somewhere in there, but	10:09:14
14		those were the three main folks that -- that we met	10:09:16
15		with.	10:09:18
16	Q.	And in your previous meetings before	10:09:19
17		Wednesday to prepare for your deposition, did you	10:09:21
18		meet with anybody else?	10:09:23
19	A.	Again, there --	10:09:27
20		ATTORNEY LINN: If you recall.	10:09:29
21		THE WITNESS: -- I think on a few	10:09:29
22		of those calls, perhaps someone else joined	10:09:30

1	in, but I don't recall specifically.	10:09:33
2	BY ATTORNEY LANE:	10:09:33
3	Q. How long was your meeting on	10:09:35
4	Wednesday?	10:09:36
5	A. I want to say it was probably three	10:09:43
6	or four hours long. I forget exactly, but . . .	10:09:44
7	Q. And how long would you estimate all	10:09:50
8	the meetings have been together, all the meetings	10:09:53
9	that you've had to prepare for your deposition?	10:09:54
10	A. I would estimate it's probably in the	10:10:02
11	range of 15 to 20 hours total in terms of meetings	10:10:04
12	with counsel.	10:10:11
13	Q. When was the first meeting, to the	10:10:14
14	best you recall?	10:10:17
15	ATTORNEY LINN: To prepare for	10:10:19
16	the --	10:10:19
17	BY ATTORNEY LANE:	10:10:20
18	Q. To prepare for the deposition.	10:10:20
19	A. With the specific goal of preparing	10:10:26
20	for the deposition -- or this deposition, I want to	10:10:28
21	say it was -- it was maybe two weeks ago. I forget	10:10:33
22	the exact date off the top of my head, but . . .	10:10:38

1 Q. Was that the first time you started 10:10:43

2 preparing for this deposition, or had you reviewed 10:10:45

3 documents before? 10:10:47

4 A. I had reviewed documents before that 10:10:49

5 meeting. 10:10:50

6 Q. Okay. Did you review documents 10:10:51

7 specifically to prepare for the deposition before 10:10:53

8 two weeks ago? 10:10:55

9 A. Yes. 10:10:57

10 Q. When was the first time you started 10:10:59

11 reviewing documents to prepare for the deposition, 10:11:00

12 to the best you recall? 10:11:02

13 A. It would have been shortly after 10:11:11

14 getting the notice -- or getting the communication 10:11:15

15 as to when the deposition had been scheduled. And 10:11:18

16 I -- as I sit here right now, I don't precisely 10:11:21

17 remember when that was, but it likely was shortly 10:11:24

18 after that date was chosen. 10:11:27

19 Q. You reviewed your declaration, 10:11:35

20 Exhibit 2008, in preparing for your deposition? 10:11:37

21 A. Yes. 10:11:44

22 ATTORNEY LANE: Let's mark that as 10:12:10

1	Geise 2.	10:12:11
2	--o0o--	10:12:12
3	(Geise IPR Exhibit Number 2, Patent	10:12:12
4	Owner Evonik's Response Under 37	10:12:12
5	C.F.R. Section 42.120, marked for	10:12:12
6	identification, as of this date.)	10:12:12
7	--o0o--	10:12:34
8	BY ATTORNEY LANE:	10:12:39
9	Q. Dr. Geise, the court reporter has	10:12:42
10	handed you what's been marked as Geise IPR	10:12:43
11	Exhibit 2.	10:12:46
12	Do you see that?	10:12:49
13	A. I do.	10:12:49
14	Q. And that's Patent Owner's response in	10:12:50
15	this IPR.	10:12:51
16	Have you seen this document	10:12:52
17	before?	10:12:54
18	A. I'm not sure if I've seen this	10:12:56
19	before.	10:12:57
20	May I take a look?	10:12:58
21	Q. Yeah, if you can flip through and let	10:12:59
22	me know, please.	10:13:00

1	(Whereupon, the witness reviews the	10:13:32
2	material provided.)	10:13:32
3	THE WITNESS: I -- I -- I don't	10:13:32
4	recall having seen this document prior to	10:14:06
5	today.	10:14:09
6	BY ATTORNEY LANE:	10:14:09
7	Q. Okay. Do you understand in general	10:14:09
8	what that document is? It's the response filed in	10:14:19
9	this IPR by Evonik.	10:14:22
10	A. Yes.	10:14:25
11	Q. Okay. And you can look through it	10:14:26
12	again, but it cites your declaration, Exhibit 2008,	10:14:27
13	throughout.	10:14:31
14	Do you see that?	10:14:31
15	A. I did see things that -- that cited	10:14:32
16	that as I was flipping through.	10:14:34
17	Q. Okay. And in preparing for your	10:14:35
18	deposition, did you review the '380 Priske patent?	10:14:38
19	A. Yes.	10:14:41
20	Q. Did you review the claims?	10:14:42
21	A. Yes.	10:14:43
22	Q. Did you review the specification?	10:14:43

1	A.	Yes.	10:14:46
2	Q.	Let me turn your attention back to	10:14:48
3		Exhibit 2008, your declaration, and specifically to	10:14:49
4		the last two pages, which are called Appendix B.	10:14:53
5	A.	Yes.	10:14:56
6	Q.	Do you see Document AP1006 there?	10:14:56
7	A.	Yes.	10:15:09
8	Q.	And that's U.S. Patent Number	10:15:11
9		8,999,038?	10:15:14
10	A.	I see that.	10:15:15
11	Q.	Did you review that document in	10:15:15
12		preparing for your deposition?	10:15:17
13	A.	Yes.	10:15:19
14	Q.	Do you see on Appendix B to Exhibit 8	10:15:29
15		-- 2008 AP1007, an article by Scholz?	10:15:31
16	A.	I see that.	10:15:37
17	Q.	Did you review that document in	10:15:37
18		preparing for your deposition?	10:15:39
19	A.	Yes.	10:15:40
20	Q.	Do you see a document listed there,	10:15:43
21		AP1002, the prosecution history of Priske '380?	10:15:46
22	A.	I see that.	10:15:53

1	Q. Did you review that document in	10:15:53
2	preparing for your deposition?	10:15:55
3	A. I have reviewed that document in the	10:15:57
4	past and in preparing for the declaration. It's	10:15:59
5	been a little while since I've reviewed that one.	10:16:05
6	Q. Can I turn your attention to the	10:16:12
7	second page of Appendix B of Exhibit 8 [sic]?	10:16:14
8	There's a document there listed as AP1038, which is	10:16:16
9	a U.S. patent application publication ending in	10:16:23
10	242.	10:16:27
11	Do you see that?	10:16:27
12	A. Yes.	10:16:27
13	Q. Did you review that document in	10:16:27
14	preparing for your deposition?	10:16:31
15	A. Could you refresh my memory as to	10:16:35
16	which — I don't know the document by the number.	10:16:38
17	Q. Yeah. Let me give it to you.	10:16:39
18	ATTORNEY LANE: This one's	10:17:00
19	previously been marked as 1038.	10:17:00
20	(Previously marked was Exhibit	10:17:03
21	Number 1038.)	10:17:03
22	(Whereupon, the witness reviews the	10:17:23

1	material provided.)	10:17:23
2	THE WITNESS: I reviewed this	10:17:29
3	document in the course of putting together	10:17:30
4	the declaration. I -- I did not	10:17:32
5	specifically review it prior to this	10:17:35
6	deposition.	10:17:37
7	BY ATTORNEY LANE:	10:17:38
8	Q. Okay. In preparing your declaration,	10:17:38
9	Exhibit 2008, did you have any discussions or	10:17:53
10	communications with anyone at Evonik?	10:17:56
11	A. No.	10:17:59
12	Q. In preparing your declaration,	10:18:03
13	Exhibit 2008, did you have any discussions or	10:18:04
14	communications with anyone who formerly worked at	10:18:07
15	Evonik?	10:18:11
16	A. Not to my knowledge.	10:18:11
17	Q. In preparing your declaration,	10:18:13
18	Exhibit 2008, did you have any discussions or	10:18:15
19	communications with Markus Priske?	10:18:17
20	A. No.	10:18:19
21	Q. In preparing your declaration,	10:18:23
22	Exhibit 2008, did you have any discussions or	10:18:25

1	communication with Markus Ungerank?	10:18:26
2	A. No.	10:18:31
3	Q. In preparing your declaration,	10:18:31
4	Exhibit 2008, did you have any discussions or	10:18:33
5	communications with Goetz Baumgarten?	10:18:35
6	A. No.	10:18:38
7	Q. In preparing your declaration,	10:18:39
8	Exhibit 2008, did you have any discussions or	10:18:41
9	communications with Harald Roegl?	10:18:43
10	A. No.	10:18:46
11	Q. In preparing your declaration,	10:18:47
12	Exhibit 2008, did you have any discussions or	10:18:49
13	communications with Marco Scholz?	10:18:51
14	A. No.	10:18:54
15	Q. In preparing your declaration,	10:18:54
16	Exhibit 2008, did you have any discussions or	10:18:55
17	communications with Michael Alders?	10:18:58
18	A. No.	10:19:00
19	Q. In preparing your declaration,	10:19:01
20	Exhibit 2008, did you have any discussions or	10:19:02
21	communications with Theresa Lohaus?	10:19:05
22	A. No.	10:19:08

1	Q. In preparing your declaration,	10:19:09
2	Exhibit 2008, did you have any discussions or	10:19:10
3	communications with Mattias Westling?	10:19:12
4	A. No.	10:19:16
5	Q. In preparing your declaration,	10:19:26
6	Exhibit 2008, did you ever ask to speak or	10:19:35
7	communicate with Markus Priske, Markus Ungerank,	10:19:39
8	Goetz Baumgarten, Harald Roegel, Marco Scholz,	10:19:42
9	Michael Alders, Theresa Lohaus or Mattias Westling?	10:19:47
10	ATTORNEY LINN: Objection to the	10:19:52
11	form of the question.	10:19:52
12	THE WITNESS: No, I did not.	10:19:56
13	BY ATTORNEY LANE:	10:19:57
14	Q. You didn't ever ask to speak to any	10:19:57
15	of those individuals?	10:19:59
16	A. I did not ask to speak to them, no.	10:19:59
17	Q. Did you ever ask for someone else to	10:20:01
18	speak or communicate with any of those individuals?	10:20:03
19	A. No, I did not.	10:20:08
20	Q. Let's turn back to Exhibit 2008, your	10:20:26
21	declaration, and to Page 59, please.	10:20:29
22	Do you see Paragraph 143 there	10:20:30

1	under the section called Jurat, J-U-R-A-T?	10:20:42
2	A. Yes.	10:20:47
3	Q. The language in Paragraph 143 was	10:20:48
4	written by Evonik's attorneys, correct?	10:20:51
5	A. It was -- it was drafted by them,	10:20:54
6	yes.	10:20:55
7	Q. Before you signed Exhibit 2008 on	10:20:57
8	December 12th, 2024, did you review all the	10:21:00
9	statements in the declaration to make sure they	10:21:02
10	were entirely accurate, in your opinion?	10:21:06
11	A. Yes, to the best of my ability.	10:21:09
12	Q. When you signed Exhibit 2008 on	10:21:11
13	December 12th, 2024, did you believe everything	10:21:14
14	stated in it was truthful?	10:21:17
15	A. Yes.	10:21:19
16	Q. When you signed Exhibit 2008 on	10:21:20
17	December 12th, 2024, did you believe everything	10:21:22
18	stated in it was accurate?	10:21:25
19	A. Yes.	10:21:28
20	Q. When did you first start working on	10:21:32
21	this IPR?	10:21:34
22	A. I believe I was contacted initially	10:21:38

1 in November of -- at some point in November of 10:21:42

2 2024. 10:21:47

3 Q. And, again, I want to caution you not 10:21:51

4 to reveal the substance of your communications with 10:21:52

5 attorneys, but do you recall what part of November 10:21:54

6 it was? 10:21:57

7 A. I don't recall explicitly. 10:22:03

8 Q. How many hours, approximately, did 10:22:08

9 you spend working on your declaration, 10:22:09

10 Exhibit 2008, up to when you signed it on 10:22:12

11 December 12th, 2024? 10:22:14

12 A. I don't recall specifically, but I 10:22:26

13 would estimate it at probably somewhere around 20, 10:22:27

14 perhaps 30 hours. 10:22:30

15 Q. Over how much time was that work 10:22:35

16 conducted? In other words, a couple of weeks? A 10:22:37

17 month? 10:22:40

18 A. It was largely conducted over a -- I 10:22:44

19 would say about a month. Yeah. 10:22:46

20 Q. Before you signed your declaration, 10:22:56

21 Exhibit 2008, were you able to ask Evonik's lawyers 10:22:57

22 any questions you had about the IPR process? 10:23:01

1	ATTORNEY LINN: I caution the	10:23:06
2	witness, do not reveal the attorney-client	10:23:07
3	privileged information.	10:23:11
4	THE WITNESS: I -- I felt like I	10:23:12
5	could ask whatever questions about the	10:23:14
6	process I might have needed to ask.	10:23:15
7	BY ATTORNEY LANE:	10:23:19
8	Q. Before you signed your declaration,	10:23:20
9	Exhibit 2008, were you able to ask Evonik lawyers	10:23:21
10	any questions you had about the applicable legal	10:23:25
11	principles?	10:23:27
12	A. Yes.	10:23:30
13	ATTORNEY LINN: Just -- you're	10:23:31
14	getting close to --	10:23:32
15	BY ATTORNEY LANE:	10:23:35
16	Q. And I don't -- I'm not trying to --	10:23:35
17	ATTORNEY LINN: -- no. I	10:23:37
18	understand --	10:23:38
19	BY ATTORNEY LANE:	10:23:39
20	Q. -- just yes or no, Dr. Geise, no	10:23:39
21	substance of your communications with Evonik's	10:23:41
22	attorneys.	10:23:44

1	ATTORNEY LANE: And I'm almost	10:23:46
2	done.	10:23:46
3	BY ATTORNEY LANE:	10:23:47
4	Q. Before you signed Exhibit 2008, were	10:23:47
5	you able to ask Evonik's lawyers any questions you	10:23:51
6	had about the relevant facts for your declaration?	10:23:52
7	A. Yes, I had that opportunity.	10:24:00
8	Q. Was there any information you wanted	10:24:02
9	to review before you signed Exhibit 2008 that you	10:24:04
10	were not able to review?	10:24:08
11	A. I don't recall feeling like there was	10:24:15
12	anything that I wanted to review that I could not	10:24:16
13	at the time.	10:24:19
14	Q. What attorneys did you work with on	10:24:23
15	your declaration, Exhibit 2008?	10:24:24
16	A. I worked with a number of attorneys	10:24:30
17	in the course of the process. You know, Janet,	10:24:33
18	Seth, Amy -- Seth and Amy were probably the two who	10:24:41
19	I worked the most with on this declaration, but I	10:24:47
20	-- I -- as I sit here right now, I -- there were	10:24:50
21	certainly others who I -- I don't recall off the	10:24:53
22	top of my head.	10:24:55

1	Q.	Do you recall Amy's last name?	10:24:58
2		ATTORNEY LINN: If you recall.	10:25:02
3		THE WITNESS: I'm sorry. I don't.	10:25:04
4		BY ATTORNEY LANE:	10:25:04
5	Q.	Do you recall which law firm Amy	10:25:05
6		works for?	10:25:07
7	A.	WilmerHale.	10:25:10
8	Q.	Do you recall which office she works	10:25:13
9		in?	10:25:14
10	A.	I think she works in the Boston	10:25:17
11		office.	10:25:18
12	Q.	And Seth -- do you recall his last	10:25:21
13		name?	10:25:22
14	A.	I think it's Seth Miller.	10:25:25
15	Q.	Do you know if Seth works for -- what	10:25:28
16		law firm Seth works for?	10:25:31
17	A.	I believe Seth also works for	10:25:32
18		WilmerHale.	10:25:33
19	Q.	And Janet is Janet Linn, who's here	10:25:37
20		today?	10:25:40
21	A.	That's correct.	10:25:40
22	Q.	Did you work with anyone else on your	10:25:43

1	declaration, Exhibit 2008, besides Evonik's	10:25:45
2	lawyers?	10:25:47
3	A. No. I only worked with -- with	10:25:52
4	counsel who joined the -- the meetings during those	10:25:54
5	calls, you know, set up by the counsel.	10:25:57
6	Q. Okay. In connection with the work	10:26:02
7	you did to prepare your declaration, Exhibit 2008,	10:26:15
8	did you speak or communicate with anyone besides	10:26:18
9	Evonik's lawyers?	10:26:21
10	A. Not -- not about preparing the	10:26:26
11	declaration, no.	10:26:27
12	Q. Without revealing the substance of	10:26:39
13	any conversations or communications you had with	10:26:41
14	attorneys, can you describe the process you and the	10:26:44
15	attorneys used to prepare Exhibit 2008?	10:26:46
16	A. So we -- we held discussions, you	10:26:52
17	know, related to -- to the matter. You know,	10:26:56
18	during that time, the counsel acted as scribes,	10:27:02
19	essentially, capturing my opinions.	10:27:05
20	Counsel then drafted much of the	10:27:08
21	document. I reviewed it thoroughly, making edits	10:27:15
22	and revisions as necessary to make sure that the	10:27:20

1	document reflected my opinions.	10:27:22
2	Q. Did counsel do the first draft of	10:27:28
3	your declaration?	10:27:29
4	A. Yes.	10:27:32
5	Q. And do you know if that was the	10:27:33
6	attorneys from WilmerHale or from Tarter Krinsky?	10:27:35
7	ATTORNEY LINN: I'm going to	10:27:41
8	tell -- have the witness not answer that	10:27:42
9	question. I think we're getting too into	10:27:45
10	attorney-client privilege.	10:27:49
11	BY ATTORNEY LANE:	10:27:58
12	Q. Parts of Exhibit 2008, your	10:27:58
13	declaration, were written by attorneys, correct?	10:28:00
14	A. Yes.	10:28:03
15	Q. Did anyone else besides you and	10:28:05
16	Evonik's attorneys prepare or write parts of	10:28:06
17	Exhibit 2008?	10:28:10
18	A. Not to my knowledge.	10:28:11
19	Q. In preparing Exhibit 2008, your	10:28:14
20	declaration, how many times did you meet in person	10:28:16
21	with Evonik's attorneys?	10:28:20
22	A. We did not meet in person.	10:28:24

22 THE WITNESS: To the best of my 10:29:25

1	ability, I reviewed the document to make	10:29:28
2	sure it reflected my opinions.	10:29:30
3	BY ATTORNEY LANE:	10:29:42
4	Q. Before you signed Exhibit 2008, did	10:29:43
5	you believe everything in it was truthful and	10:29:45
6	accurate?	10:29:47
7	A. Yes.	10:29:52
8	Q. And before you signed Exhibit 2008,	10:29:53
9	did you believe you understood everything in the	10:29:58
10	declaration?	10:30:00
11	A. Yes.	10:30:05
12	Q. Let me turn your attention to	10:30:06
13	Paragraph 14 of Exhibit 2008.	10:30:07
14	ATTORNEY LINN: Before we get into	10:30:08
15	specifics, I think that Dr. Geise wants to	10:30:12
16	make one correction to the declaration.	10:30:16
17	ATTORNEY LANE: I haven't asked him	10:30:22
18	that, no.	10:30:23
19	ATTORNEY LINN: Just in case you	10:30:24
20	were getting to it. Okay.	10:30:25
21	BY ATTORNEY LANE:	10:30:34
22	Q. Dr. Geise, do you see Paragraph 14 in	10:30:34

1	Exhibit 2008?	10:30:35
2	A. I do.	10:30:36
3	Q. And it states there, I am being	10:30:38
4	compensated for my work on this declaration at the	10:30:39
5	rate of \$300 an hour.	10:30:42
6	Do you see that?	10:30:43
7	A. Yes.	10:30:43
8	Q. Are you being paid \$300 an hour for	10:30:48
9	the rest of your work in this IPR?	10:30:51
10	ATTORNEY LINN: Objection to the	10:30:55
11	form of the question.	10:30:55
12	THE WITNESS: So I have a -- a rate	10:30:59
13	structure that has different rates for, for	10:31:00
14	example, depositions or -- or travel.	10:31:06
15	But . . .	10:31:09
16	BY ATTORNEY LANE:	10:31:14
17	Q. Can you explain the rate structure	10:31:14
18	for depositions?	10:31:15
19	A. So for depositions, I just have a --	10:31:18
20	a daily rate.	10:31:20
21	Q. Do you recall what that rate is?	10:31:22
22	A. I don't recall the exact number right	10:31:29

1	now.	10:31:31
2	Q. Do you recall ballpark what it is?	10:31:32
3	A. I think it's around \$2,750, but I'm	10:31:38
4	not 100 percent sure on that number.	10:31:43
5	Q. Let me turn your attention to	10:31:58
6	Paragraph 65 of your declaration, Exhibit 2008.	10:32:00
7	Do you see that?	10:32:09
8	A. Yes.	10:32:09
9	Q. Do you see that Paragraph 65 is under	10:32:09
10	a heading called Claim Construction?	10:32:13
11	A. I do.	10:32:16
12	Q. Did Evonik's counsel write the	10:32:18
13	language in Paragraph 65?	10:32:20
14	ATTORNEY LINN: I'm going to direct	10:32:26
15	the witness not to answer.	10:32:27
16	ATTORNEY LANE: On what basis?	10:32:31
17	ATTORNEY LINN: Work product --	10:32:34
18	ATTORNEY LANE: This is an IPR.	10:32:34
19	ATTORNEY LINN: -- and	10:32:35
20	attorney-client.	10:32:37
21	BY ATTORNEY LANE:	10:32:39
22	Q. Dr. Geise, do you see Paragraph 66 in	10:32:40

1	your declaration?	10:32:42
2	A. Yes.	10:32:43
3	Q. Did counsel write the language in	10:32:44
4	Paragraph 66?	10:32:45
5	ATTORNEY LINN: Same objection;	10:32:47
6	same direction.	10:32:47
7	BY ATTORNEY LANE:	10:32:52
8	Q. Dr. Geise, in Paragraph 66, you see	10:32:52
9	the second sentence, where it says, Accordingly, I	10:32:54
10	understand that the claim terms "capacity" and	10:32:57
11	"standard conditions" as defined in the description	10:33:00
12	should be applied as they are defined in Priske	10:33:03
13	'380?	10:33:06
14	A. I see that.	10:33:07
15	Q. Is that your opinion or something you	10:33:11
16	understood from Evonik's counsel?	10:33:12
17	ATTORNEY LINN: Objection to the	10:33:16
18	form of the question.	10:33:16
19	THE WITNESS: I'm -- I'm not a	10:33:25
20	lawyer, so the -- the legal elements aside,	10:33:26
21	my understanding is that looking to the	10:33:30
22	specification for the definition of terms is	10:33:33

1	an appropriate way to view those terms.	10:33:36
2	BY ATTORNEY LANE:	10:33:38
3	Q. Were the claim construction	10:33:53
4	principles set out in Paragraph 65 and 66 of	10:33:54
5	Exhibit 2008 the principles you applied in your	10:33:59
6	work preparing your declaration?	10:34:01
7	A. Yes.	10:34:07
8	Q. Going back to Paragraph 66 in your	10:34:16
9	declaration, do these contain your opinions on the	10:34:20
10	claim constructions or are these claim construction	10:34:26
11	-- these -- let me strike that.	10:34:28
12	In Paragraph 66, do these -- do	10:34:35
13	the statements there reflect your opinions on claim	10:34:39
14	construction or counsel's?	10:34:42
15	ATTORNEY LINN: Objection to the	10:34:44
16	form of the question.	10:34:44
17	THE WITNESS: So in the course of	10:34:53
18	discussing claims construction, it's my	10:34:55
19	understanding that -- and my opinion that	10:34:59
20	these are -- these are the principles that	10:35:03
21	would be applied.	10:35:06
22		

1	BY ATTORNEY LANE:	10:35:09
2	Q. Okay. And you're not an attorney,	10:35:09
3	correct?	10:35:10
4	A. That's correct.	10:35:10
5	Q. You're not registered to practice	10:35:12
6	before the United States Patent and Trademark	10:35:14
7	Office, correct?	10:35:17
8	A. I am not.	10:35:17
9	Q. And you're not an expert on	10:35:17
10	United States patent law?	10:35:19
11	A. No.	10:35:21
12	Q. You're not an expert on -- well,	10:35:22
13	strike that.	10:35:24
14	Are you an expert on	10:35:25
15	United States Patent and Trademark Office's	10:35:26
16	procedures?	10:35:30
17	A. No.	10:35:31
18	Q. Are you an expert on what constitutes	10:35:32
19	prior art under U.S. patent law?	10:35:34
20	ATTORNEY LINN: Objection to the	10:35:41
21	form of the question.	10:35:41
22	THE WITNESS: I guess it depends --	10:35:46

1	I've been instructed on those principles.	10:35:47
2	I'm not sure I would consider myself to be	10:35:48
3	an expert on them.	10:35:50
4	BY ATTORNEY LANE:	10:35:52
5	Q. Are you an expert on environmental	10:35:52
6	laws and regulations?	10:35:54
7	A. No.	10:35:55
8	Q. Are you an expert on European	10:35:56
9	environmental laws and regulations?	10:35:58
10	A. No.	10:36:00
11	Q. Are you an expert on U.S.	10:36:01
12	environmental laws and regulations?	10:36:03
13	A. No.	10:36:06
14	Q. Are you an expert on any country's	10:36:06
15	environmental laws and regulations?	10:36:09
16	A. No.	10:36:12
17	Q. Are you an expert on any region's	10:36:13
18	environmental laws and regulations?	10:36:15
19	A. No.	10:36:17
20	Q. You're not an economist, correct?	10:36:20
21	A. No.	10:36:23
22	Q. You're not an expert on economics?	10:36:23

1	A.	I've taken coursework and have some	10:36:27
2		experience with economic principles, but --	10:36:32
3		ATTORNEY LINN: I guess I'm going	10:36:36
4		to object to the form of these questions.	10:36:38
5		I've been letting it go. But what do you	10:36:40
6		mean by "expert"?	10:36:43
7		BY ATTORNEY LANE:	10:36:46
8	Q.	Dr. Geise, do you understand my	10:36:46
9		question?	10:36:47
10	A.	I guess it depends on -- on what the	10:36:54
11		definition of "expert" is.	10:36:55
12	Q.	Let me turn your attention to	10:37:11
13		Paragraph 1 of your declaration.	10:37:13
14		Do you see that?	10:37:13
15	A.	Yes.	10:37:21
16	Q.	Do you see the first sentence there	10:37:22
17		that says, I've been retained as an expert	10:37:23
18		consultant?	10:37:24
19	A.	Yes.	10:37:25
20	Q.	Okay. Using that definition of	10:37:25
21		"expert consultant," are you an expert consultant	10:37:26
22		on economics?	10:37:30

1	ATTORNEY LINN: Objection to the	10:37:37
2	form of the question.	10:37:37
3	THE WITNESS: I have familiarity	10:37:39
4	with economic principles, you know, through	10:37:41
5	my work as an engineer, and so I do have	10:37:45
6	experience in understanding economic	10:37:51
7	principles as they -- as they pertain to	10:37:53
8	engineering applications.	10:37:55
9	BY ATTORNEY LANE:	10:37:56
10	Q. Are you an expert consultant on	10:37:59
11	marketing?	10:38:01
12	ATTORNEY LINN: I'm going to	10:38:03
13	continue to object to the form of the	10:38:04
14	questions.	10:38:05
15	You can answer.	10:38:09
16	THE WITNESS: I guess it depends on	10:38:11
17	the definition of "expert" again, but I -- I	10:38:11
18	have -- I've not worked explicitly as a	10:38:16
19	marketing person.	10:38:20
20	BY ATTORNEY LANE:	10:38:21
21	Q. Are you an expert consultant on	10:38:26
22	market analysis?	10:38:27

1	A.	What market?	10:38:33
2	Q.	Are you an expert consultant on	10:38:37
3		analyzing the markets for gas separation membranes?	10:38:38
4		ATTORNEY LINN: I'm going to	10:38:42
5		object. The paragraph says, I have been	10:38:42
6		retained as an expert consultant.	10:38:45
7		Are you asking him if he's been	10:38:46
8		retained as an expert consultant?	10:38:48
9		ATTORNEY LANE: You're making a	10:38:49
10		speaking objection, which is prohibited by	10:38:50
11		the Trial Practice Guide.	10:38:51
12		BY ATTORNEY LANE:	10:38:58
13	Q.	Are you an expert, Dr. Geise, on	10:38:58
14		analyzing the markets for gas separation membranes?	10:39:00
15		ATTORNEY LINN: Objection to the	10:39:03
16		form of the question.	10:39:03
17		THE WITNESS: I'm familiar with the	10:39:06
18		fields related to gas separation membranes	10:39:07
19		and -- and the applications of those	10:39:12
20		membranes in industrial settings.	10:39:14
21		BY ATTORNEY LANE:	10:39:16
22	Q.	You're familiar?	10:39:17

1	A.	Yes.	10:39:18
2	Q.	Are you an expert on analyzing	10:39:18
3		markets for gas separation membranes?	10:39:20
4		ATTORNEY LINN: Objection to the	10:39:22
5		form of the question.	10:39:22
6		THE WITNESS: Again, it probably	10:39:26
7		depends on the nature of -- of the	10:39:27
8		definition of -- of "expert," but I have	10:39:29
9		familiarity in -- in those areas.	10:39:32
10		BY ATTORNEY LANE:	10:39:36
11	Q.	Turning back to your Exhibit 2008,	10:39:36
12		your declaration, Paragraph 1, you see there in the	10:39:38
13		first sentence it says, I've been retained as an	10:39:40
14		expert consultant?	10:39:42
15	A.	I see that.	10:39:44
16	Q.	Did you write that?	10:39:44
17	A.	I believe consistent with the -- the	10:39:51
18		declaration being drafted, that that was initially	10:39:54
19		drafted by counsel.	10:39:59
20	Q.	Okay. But you said, before you	10:40:01
21		signed your declaration, you thought you understood	10:40:02
22		everything in your declaration, correct?	10:40:04

1	A. Yes.	10:40:07
2	Q. Okay. With the understanding you had	10:40:07
3	when you signed your declaration of what "expert	10:40:09
4	consultant" meant in Paragraph 1, are you an expert	10:40:11
5	consultant on analyzing the market for gas	10:40:15
6	separation membranes?	10:40:17
7	ATTORNEY LINN: Objection to the	10:40:19
8	form of the question: asked and answered.	10:40:19
9	And it says, Retained as an expert	10:40:21
10	consultant.	10:40:24
11	THE WITNESS: I'm sorry. Could you	10:40:38
12	repeat the question?	10:40:38
13	BY ATTORNEY LANE:	10:40:40
14	Q. Are you an expert consultant on	10:40:42
15	analyzing the markets for gas separation membranes?	10:40:44
16	ATTORNEY LINN: Objection to the	10:40:48
17	form of the question.	10:40:48
18	THE WITNESS: So I have experience	10:40:51
19	with -- with the field in that area,	10:40:52
20	which -- which applies to gas separation	10:40:59
21	membranes.	10:41:04
22		

1	BY ATTORNEY LANE:	10:41:06
2	Q. I understand that, Dr. Geise. You	10:41:06
3	said that now a couple of times. But I'm asking	10:41:08
4	you — I'm not asking you if you have experience.	10:41:09
5	I'm asking you: Are you an expert consultant on	10:41:12
6	analyzing the markets for gas separation membranes?	10:41:15
7	ATTORNEY LINN: Objection to the	10:41:18
8	form of the question.	10:41:18
9	Objection: asked and answered.	10:41:18
10	How many times are you going to	10:41:20
11	ask the same question?	10:41:21
12	THE WITNESS: I have experience	10:41:26
13	with gas separation membranes systems in the	10:41:27
14	way that we would look at those with	10:41:30
15	industrial applications.	10:41:34
16	BY ATTORNEY LANE:	10:41:34
17	Q. Are you not going to answer my	10:41:46
18	question about whether you're an expert on that	10:41:47
19	field other than saying that you have familiarity	10:41:49
20	with it?	10:41:52
21	ATTORNEY LINN: Objection to the	10:41:53
22	form of the question.	10:41:53

1	Objection. You're badgering the	10:41:54
2	witness.	10:41:56
3	THE WITNESS: I think to better	10:42:01
4	answer the question, I need to know more	10:42:01
5	about the -- the -- the definition of	10:42:07
6	"expert" as it would pertain to -- to that	10:42:09
7	specific area.	10:42:14
8	BY ATTORNEY LANE:	10:42:20
9	Q. Anything you want to add to that?	10:42:20
10	A. Not at this time.	10:42:23
11	Q. What training have you had in	10:42:47
12	analyzing markets for gas separation membranes?	10:42:47
13	A. I've taken coursework in engineering	10:42:57
14	economics. I've also conducted research projects	10:43:00
15	where techno-economic analysis has been part of	10:43:07
16	those projects, and the principles in those areas	10:43:11
17	are broadly applicable to different types of	10:43:17
18	separation systems.	10:43:22
19	Q. Let's turn to something different.	10:43:39
20	Can I turn your attention to	10:43:40
21	Paragraph 34 of your declaration, Exhibit 2008.	10:43:41
22	Are you there?	10:43:50

1	A.	Yes.	10:43:51
2	Q.	Do you see the first sentence there	10:43:51
3		says, The specification provides 12 examples of the	10:43:52
4		claimed invention and compares each of these	10:43:57
5		examples to a reference example?	10:43:59
6	A.	I see that.	10:44:02
7	Q.	This specification that you're	10:44:09
8		referring to in the first sentence of Paragraph 34	10:44:09
9		is the specification of the Priske '380 patent,	10:44:12
10		correct?	10:44:15
11	A.	That's correct.	10:44:18
12		ATTORNEY LANE: This one has	10:44:29
13		already been marked as 1001.	10:44:52
14		(Previously marked was Exhibit	10:44:53
15		Number 1001.)	10:44:53
16		BY ATTORNEY LANE:	10:45:00
17	Q.	Dr. Geise, you've been handed what's	10:45:00
18		been previously marked as AP1001, which is the	10:45:02
19		Priske '380 patent.	10:45:06
20		Do you see that?	10:45:08
21	A.	I do.	10:45:08
22	Q.	You reviewed this patent carefully in	10:45:14

1	preparing for your deposition, correct?	10:45:15
2	A. That's correct.	10:45:25
3	Q. Let me turn your attention to	10:45:36
4	Column 15 in the Priske '380 patent.	10:45:37
5	And you see about halfway down	10:45:51
6	in Column 15, there's a heading Examples?	10:45:52
7	A. Yes.	10:45:55
8	Q. Did you review the examples in	10:45:57
9	preparing for your deposition?	10:45:58
10	A. Yes.	10:46:00
11	Q. At Column 15, about Line 34 there, it	10:46:07
12	says, General description of the Simulation. And	10:46:11
13	then it says, The simulation is based on the	10:46:15
14	following assumptions.	10:46:17
15	Do you see that?	10:46:18
16	A. Yes.	10:46:18
17	Q. The examples in the	10:46:25
18	Priske '380 patent are all simulations, correct?	10:46:27
19	A. That is my understanding.	10:46:31
20	Q. And that includes the reference	10:46:36
21	examples, correct?	10:46:37
22	A. The reference example is being pulled	10:46:49

1	from -- from a different source and being restated	10:46:51
2	in the Priske patent.	10:46:58
3	Q. Well, there's more than one reference	10:47:00
4	example, right?	10:47:02
5	There's at least --	10:47:02
6	ATTORNEY LINN: Dr. Geise, if you	10:47:05
7	would pause before answering, give me a	10:47:06
8	chance to object.	10:47:08
9	THE WITNESS: Okay.	10:47:09
10	BY ATTORNEY LANE:	10:47:09
11	Q. -- there's -- if you flip through,	10:47:09
12	for example, to Column 19, there's a Reference	10:47:14
13	Example 2; Column 20, there's a Reference	10:47:15
14	Example 3.	10:47:17
15	Do you see that?	10:47:26
16	A. I do see that.	10:47:29
17	Q. All right. Are all the reference	10:47:30
18	examples in the Priske '380 patent simulations?	10:47:31
19	ATTORNEY LINN: Objection to the	10:47:34
20	form of the question.	10:47:34
21	THE WITNESS: So looking at the --	10:47:43
22	the Reference Example 1, Reference Example 2	10:47:43

1	and Reference Example 3 -- these are all	10:47:47
2	restating reproductions of examples that are	10:47:51
3	-- are presented elsewhere. So the	10:47:56
4	specification does not explicitly specify	10:48:00
5	whether or not these are simulations.	10:48:05
6	BY ATTORNEY LANE:	10:48:09
7	Q. Do you believe they're simulations?	10:48:09
8	ATTORNEY LINN: Objection to the	10:48:11
9	form of the question.	10:48:11
10	THE WITNESS: The specification	10:48:25
11	doesn't explicitly state whether they are	10:48:26
12	simulations or not.	10:48:28
13	BY ATTORNEY LANE:	10:48:30
14	Q. Right. But do you believe they're	10:48:32
15	simulations?	10:48:34
16	ATTORNEY LINN: Objection to the	10:48:35
17	form of the question.	10:48:35
18	THE WITNESS: So when -- when I	10:48:47
19	read the -- the description and what's	10:48:48
20	listed in the specification, I see that --	10:48:50
21	that these are, you know, examples that are	10:48:54
22	being reproduced from another source, and I	10:48:58

1	take them to be just that.	10:49:01
2	BY ATTORNEY LANE:	10:49:02
3	Q. Are they simulations, in your	10:49:10
4	opinion?	10:49:11
5	ATTORNEY LINN: Objection to the	10:49:13
6	form of the question: asked and answered.	10:49:13
7	THE WITNESS: I take them to be the	10:49:19
8	reproductions as they're -- as they're	10:49:20
9	specified in the specification.	10:49:22
10	BY ATTORNEY LANE:	10:49:27
11	Q. Dr. Geise, you need to answer my	10:49:27
12	questions.	10:49:28
13	Do you -- in your opinion, are	10:49:28
14	the referenced examples in the Priske '380 patent	10:49:31
15	simulations?	10:49:34
16	ATTORNEY LINN: Objection to the	10:49:36
17	form of the question: asked and answered.	10:49:36
18	THE WITNESS: It's my opinion that	10:49:41
19	the Reference Example 1, 2 and 3 as written	10:49:42
20	in the specification do not specify as to	10:49:47
21	whether they are -- are a simulation or not	10:49:52
22	and, as such, the document doesn't --	10:49:56

1	doesn't provide specific information to --	10:49:58
2	to answer that.	10:50:00
3	BY ATTORNEY LANE:	10:50:03
4	Q. You don't know if the reference	10:50:04
5	examples in the Priske '380 patent are simulations?	10:50:05
6	ATTORNEY LINN: Objection to the	10:50:11
7	form of the question: asked and answered.	10:50:11
8	THE WITNESS: My opinion on -- on	10:50:19
9	Reference Examples 1, 2 and 3 are that they	10:50:20
10	are, you know, reproductions from the	10:50:23
11	document that's listed in the specification	10:50:26
12	and the -- that the specification does not	10:50:29
13	specify anything beyond that they are	10:50:32
14	reproduced from that source.	10:50:36
15	BY ATTORNEY LANE:	10:50:42
16	Q. Reference Example 1 -- strike that.	10:50:42
17	Let me turn your attention back	10:51:21
18	to --	10:51:22
19	ATTORNEY LINN: We've been going	10:51:23
20	about an hour. Do you want to take a break	10:51:23
21	shortly?	10:51:25
22	ATTORNEY LANE: Sure. Sure.	10:51:25

1	CERTIFIED STENOGRAPHER: Off the	10:51:29
2	record?	10:51:29
3	--oOo--	10:51:29
4	(Whereupon, a recess was taken from	10:51:29
5	10:51 a.m. EDT to 11:07 a.m. EDT.)	10:51:29
6	--oOo--	10:51:29
7	BY ATTORNEY LANE:	11:07:11
8	Q. Welcome back, Dr. Geise.	11:08:39
9	I want to turn your attention	11:08:41
10	back to what's been marked as Geise IPR Exhibit 2,	11:08:41
11	which is the Patent Owner's response in this IPR.	11:08:46
12	Do you see that?	11:08:49
13	A. Yes.	11:08:52
14	Q. And, again, you understand this is a	11:08:52
15	document that the Evonik's attorneys submitted to	11:08:54
16	the Patent Office in this IPR?	11:08:58
17	A. Yes.	11:09:00
18	Q. Okay. And let me turn your attention	11:09:01
19	to the second-to-last page there -- actually,	11:09:03
20	sorry, Page 71.	11:09:08
21	Do you see that?	11:09:16
22	A. I do.	11:09:16

1	Q.	Do you see that this was signed by	11:09:16
2		Philip Braginsky?	11:09:19
3	A.	I see that's what that's indicating,	11:09:21
4		yes.	11:09:23
5	Q.	Have you ever met or talked to	11:09:24
6		Mr. Braginsky before?	11:09:24
7	A.	Yes.	11:09:26
8	Q.	Okay. So you know he's an attorney	11:09:27
9		for Evonik, correct?	11:09:29
10	A.	Yes.	11:09:30
11	Q.	Let me turn your attention in that	11:09:33
12		same document, the Patent Owner response, to	11:09:35
13		Page 13.	11:09:38
14		Are you with me?	11:09:55
15	A.	Yes.	11:09:56
16	Q.	Do you see the first full paragraph	11:09:56
17		on Page 13 of the Patent Owner response says, In	11:09:58
18		some cases, modeling software can assist a POSITA	11:10:02
19		in designing a membrane gas separation system;	11:10:06
20		however, an effective model must not only	11:10:11
21		accurately represent design constraints and	11:10:16
22		logistical challenges but also include sufficient	11:10:17

1	information and assumptions to ensure its practical	11:10:20
2	applicability; any separation process designed	11:10:25
3	using a model must be validated or tested to	11:10:29
4	confirm its effectiveness in real-world conditions?	11:10:33
5	Do you see that?	11:10:35
6	A. I see that.	11:10:35
7	Q. And then it cites your declaration	11:10:38
8	there, which is Exhibit 2008?	11:10:39
9	A. I see that.	11:10:41
10	Q. Okay. Do you agree that any	11:10:42
11	separation process designed using a model must be	11:11:08
12	validated or tested to confirm its effectiveness in	11:11:10
13	real-world conditions?	11:11:13
14	A. It's my opinion, you know, that	11:11:21
15	separation processes that are designed using models	11:11:22
16	are -- are only as good as the information and the	11:11:24
17	assumptions that are used to put them together.	11:11:28
18	And so, you know, in order to move from, you know,	11:11:30
19	a simulation or a model into a system working	11:11:35
20	in -- in real-world conditions, there are multiple	11:11:40
21	steps between those two things that -- that need to	11:11:42
22	be accomplished.	11:11:47

1	And so if you're, you know, thinking	11:11:47
2	about as an engineer whether, you know, the model	11:11:50
3	that you've -- or the process that you've modeled,	11:11:54
4	you know, is going to -- to work effectively in	11:11:58
5	real-world conditions, there may be other things in	11:12:00
6	between those two that end up, you know, getting in	11:12:04
7	the way of that model describing how the system	11:12:08
8	would work in -- in a real-world situation.	11:12:11
9	Q. And when you say "model" there, is	11:12:14
10	that the same thing as a simulation?	11:12:16
11	ATTORNEY LINN: Objection to the	11:12:23
12	form of the question.	11:12:23
13	THE WITNESS: I think, you know,	11:12:27
14	models can -- you know, sort of broadly can	11:12:28
15	include simulations but -- but some sort	11:12:32
16	of -- you know, some sort of likely	11:12:35
17	math-based representation of the process.	11:12:39
18	There could be -- there could be multiple	11:12:41
19	different ways of -- of modeling a process.	11:12:44
20	BY ATTORNEY LANE:	11:12:48
21	Q. So simulation is one way of modeling	11:12:49
22	a process?	11:12:51

1	A. Yes.	11:12:52
2	Q. Do you agree that any separation	11:12:54
3	process designed using a simulation must be	11:12:56
4	validated or tested to confirm its effectiveness in	11:13:01
5	real-world conditions?	11:13:04
6	ATTORNEY LINN: Objection to the	11:13:10
7	form of the question.	11:13:10
8	THE WITNESS: I think if your goal	11:13:12
9	as an engineer is to, you know, ultimately,	11:13:14
10	you know, use that -- that simulation	11:13:20
11	results in, you know, a real-world	11:13:23
12	situation, then -- then it would be, you	11:13:26
13	know, prudent to go through and validate or	11:13:29
14	test.	11:13:32
15	I mean, certainly one could	11:13:32
16	imagine, you know, running a model or a	11:13:34
17	simulation where there's no goal of using	11:13:37
18	that in a real-world application. And so	11:13:40
19	in -- in that example, you know, it	11:13:42
20	wouldn't -- it wouldn't necessarily make	11:13:45
21	sense to validate or test if -- if the --	11:13:49
22	if the -- if the intent or the objective is	11:13:51

1 not there. 11:13:54

2 BY ATTORNEY LANE: 11:13:57

3 Q. For any membrane gas separation 11:13:57

4 apparatus that's intended to be used in real-world 11:14:01

5 conditions, if it's designed using a simulation so 11:14:04

6 that -- should that simulation be validated or 11:14:09

7 tested to confirm its effectiveness in real-world 11:14:12

8 conditions? 11:14:16

9 ATTORNEY LINN: Objection: asked 11:14:17

10 and answered. 11:14:17

11 THE WITNESS: I think, again, it 11:14:22

12 depends on -- on the -- on the goal of what 11:14:22

13 was the engineer is trying to do as to 11:14:26

14 whether -- you know, whether -- as to how 11:14:28

15 that -- that validation or testing would 11:14:32

16 mitigate risk associated with the 11:14:35

17 effectiveness or ineffectiveness of -- of 11:14:38

18 translating the model to a real-world 11:14:41

19 condition. 11:14:43

20 BY ATTORNEY LANE: 11:15:35

21 Q. Let me turn -- well -- yeah, let me 11:15:35

22 turn your attention to Paragraph 27 of your 11:15:43

1	declaration.	11:15:46
2	Are you with me?	11:16:06
3	A. Yes.	11:16:07
4	Q. Okay. In membrane gas separation	11:16:07
5	apparatuses, the permeances of the membranes can	11:16:10
6	change over time, correct?	11:16:13
7	A. That is correct.	11:16:15
8	Q. Okay. In membrane gas separation	11:16:17
9	apparatuses, the selectivities of the membranes can	11:16:18
10	change over time, correct?	11:16:21
11	A. That -- that can happen over time,	11:16:25
12	yes.	11:16:27
13	Q. Changes in a membrane's permeance	11:16:36
14	over time can affect the performance of a membrane	11:16:38
15	gas separation apparatus, correct?	11:16:41
16	A. There's certainly, you know, examples	11:16:48
17	that are known where, you know, physical processes	11:16:50
18	that occur in a membrane could influence the	11:16:54
19	permeance. And depending on the circumstances of	11:16:57
20	those changes, you know, they -- they certainly	11:17:00
21	could ultimately affect how a process would --	11:17:05
22	would perform.	11:17:07

1	Q. Changes in a membrane's selectivities	11:17:09
2	over time can affect the performance of a membrane	11:17:11
3	gas separation apparatus, correct?	11:17:13
4	ATTORNEY LINN: Objection to the	11:17:16
5	form of the question.	11:17:16
6	THE WITNESS: Again, it depends on	11:17:22
7	the extent of the changes and the specifics	11:17:23
8	of the membrane and a few other factors, but	11:17:28
9	it will ultimately -- that is a -- a -- that	11:17:32
10	is a quantity or a property that -- that is	11:17:35
11	important for informing how a process would	11:17:38
12	work.	11:17:41
13	BY ATTORNEY LANE:	11:17:55
14	Q. Changes in a membrane's permeance	11:17:55
15	over time can lead to changes in the pressure ratio	11:17:57
16	of the membrane, correct?	11:18:01
17	ATTORNEY LINN: Objection to the	11:18:04
18	form of the question.	11:18:04
19	THE WITNESS: So that would depend	11:18:08
20	on the -- the nature of the system that	11:18:09
21	is -- that is being considered.	11:18:11
22		

1	BY ATTORNEY LANE:	11:18:13
2	Q. It's possible, though, correct?	11:18:14
3	A. One could -- one could imagine	11:18:17
4	circumstances where you could have a -- a process	11:18:19
5	where those sorts of variables would affect the way	11:18:24
6	the system would -- would operate, but it --	11:18:27
7	ultimately, it depends on the details of the	11:18:29
8	process, because these are ultimately complex	11:18:33
9	systems that depend on a number of different	11:18:36
10	variables that are interconnected.	11:18:38
11	Q. All right. Changes in a membrane's	11:18:40
12	selectivity over time can change the recycle volume	11:18:43
13	in the system, correct?	11:18:49
14	ATTORNEY LINN: Objection to the	11:18:50
15	form of the question.	11:18:50
16	THE WITNESS: So this also depends	11:18:55
17	on the specifics of, you know, how the	11:18:56
18	system is set up. Certainly, one could --	11:19:00
19	could imagine or, you know, come up with an	11:19:02
20	example system where that would -- would be	11:19:05
21	a variable that -- that would ultimately	11:19:11
22	change the -- the optimum configuration of	11:19:12

1	the system if you were -- were looking at it	11:19:15
2	from that perspective.	11:19:17
3	I mean, you know, sort of as -- as	11:19:18
4	-- as stated in -- in the paragraph that	11:19:21
5	we're -- we're talking about, right, the --	11:19:22
6	ultimately, alteration of these system	11:19:25
7	variables can have effects on, you know,	11:19:26
8	any or all of the other process variables	11:19:29
9	in the system.	11:19:32
10	BY ATTORNEY LANE:	11:19:40
11	Q. Let me turn your attention back to	11:19:40
12	Page 12 of Exhibit 2.	11:19:42
13	ATTORNEY LINN: Are we going back	11:19:51
14	to Patent Owner's?	11:19:52
15	ATTORNEY LANE: Right.	11:19:53
16	BY ATTORNEY LANE:	11:19:53
17	Q. That's Geise IPR Exhibit 2, the	11:19:53
18	Patent Owner response, Page 12, Dr. Geise.	11:19:54
19	Are you with me?	11:20:02
20	A. Yes.	11:20:03
21	Q. And near the bottom of that page,	11:20:03
22	there's a sentence that says, Changing the pressure	11:20:07

1	ratio over a separation stage will change the	11:20:10
2	amount of gas passing through a membrane and thus	11:20:16
3	will necessarily change the recycle volume of the	11:20:21
4	process.	11:20:24
5	Do you see that?	11:20:24
6	A. I do see that.	11:20:24
7	Q. Do you agree with that?	11:20:28
8	A. So operating under the -- the	11:20:37
9	assumption that a few other things are -- are true	11:20:38
10	about the way the system is set up, you know, when	11:20:41
11	you change the pressure ratio over a particular	11:20:47
12	separation stage, that ultimately is going to	11:20:51
13	affect the gas fluxes through the membrane.	11:20:52
14	And, again, depending on how that	11:20:56
15	stage is, you know, set up within a process, there	11:21:00
16	-- there could be circumstances where, you know,	11:21:04
17	that would -- would change the recycle volume.	11:21:07
18	Q. Let me turn your attention to your	11:21:43
19	declaration, Exhibit 8 [sic], Paragraph 101.	11:21:46
20	Are you with me?	11:22:06
21	A. Yes.	11:22:06
22	Q. Can concentration polarization change	11:22:06

1 a membrane's selectivity over time? 11:22:14

2 A. Yes, there are circumstances where 11:22:16

3 concentration polarization could end up influencing 11:22:24

4 membrane selectivity. And if -- if that 11:22:30

5 polarization were -- were to change over time, for 11:22:34

6 example, that could create a situation where those 11:22:36

7 effects would -- would be transient. 11:22:40

8 Q. Can concentration polarization change 11:22:43

9 a membrane's permeability over time? 11:22:45

10 A. So it depends on the circumstances, 11:22:50

11 the details of the polarization, but there are 11:22:51

12 membranes and circumstances where one would expect 11:22:58

13 to see that the changes in permeability could 11:23:02

14 result as of -- as a result of concentration 11:23:05

15 polarization. 11:23:08

16 Q. Can concentration polarization affect 11:23:10

17 the performance of a membrane gas separation 11:23:12

18 apparatus? 11:23:15

19 ATTORNEY LINN: Objection to the 11:23:17

20 form of the question. 11:23:17

21 THE WITNESS: So there certainly 11:23:25

22 are circumstances where concentration 11:23:26

1 polarization could be a factor that one 11:23:30
2 would want to discuss. 11:23:33

3 And I think as we -- perhaps not 11:23:35
4 allude to here, but that -- that's a -- a 11:23:42
5 caution that is -- that is provided in some 11:23:46
6 of the work from Scholz, talking about the 11:23:49
7 concern of not considering concentration 11:23:55
8 polarization and its potential impact on a 11:23:57
9 system. 11:24:00

10 BY ATTORNEY LANE: 11:24:01

11 Q. So concentration polarization can 11:24:01
12 have an effect on a membrane gas separation 11:24:07
13 apparatus -- its performance? 11:24:10

14 ATTORNEY LINN: Objection to the 11:24:12
15 form of the question. 11:24:12

16 THE WITNESS: So it depends on the 11:24:13
17 circumstances of, you know, the membranes 11:24:15
18 and of the gases and of the particulars of 11:24:17
19 the process. But it is possible that 11:24:20
20 circumstances could arise where 11:24:24
21 concentration polarization would affect the 11:24:27
22 performance of the system through the -- the 11:24:28

1	complicated nature of how the -- the various	11:24:32
2	properties of the components of the system	11:24:35
3	all interplay against each other.	11:24:38
4	BY ATTORNEY LANE:	11:24:39
5	Q. Can concentration polarization change	11:24:40
6	the pressure ratio of a membrane?	11:24:42
7	ATTORNEY LINN: Objection to the	11:24:52
8	form of the question.	11:24:52
9	THE WITNESS: So generally	11:24:59
10	speaking, the way a system would be set up,	11:24:59
11	the pressure ratio would be dictated or	11:25:01
12	controlled in other ways that -- that could	11:25:06
13	sidestep any influence of concentration	11:25:10
14	polarization on the specific pressure ratio.	11:25:15
15	BY ATTORNEY LANE:	11:25:21
16	Q. Is it possible that concentration	11:25:22
17	polarization could affect the pressure ratio of a	11:25:23
18	membrane?	11:25:26
19	ATTORNEY LINN: Objection to the	11:25:28
20	form of the question: asked and answered.	11:25:28
21	THE WITNESS: It would depend on	11:25:31
22	the nature of the membranes and the gases in	11:25:32

1	the system and the way the system is being	11:25:35
2	controlled.	11:25:38
3	You know, one -- one could	11:25:41
4	certainly imagine a situation where one	11:25:42
5	could create an example where -- where that	11:25:48
6	-- that might play a role, but oftentimes	11:25:49
7	in the way these sorts of systems would be	11:25:52
8	-- be set up or operated, you would --	11:25:55
9	would aim to operate in a way that would	11:25:57
10	mitigate that -- that potential effect.	11:26:01
11	BY ATTORNEY LANE:	11:26:04
12	Q. To mitigate that effect, you would	11:26:04
13	have to make changes to the system, correct?	11:26:11
14	ATTORNEY LINN: Objection to the	11:26:14
15	form of the question.	11:26:14
16	THE WITNESS: Not necessarily.	11:26:14
17	It's more a question of just how the system	11:26:18
18	is being set up or controlled in the -- in	11:26:20
19	the process of actually sort of building the	11:26:23
20	physical system and then -- and then	11:26:27
21	controlling the way it operates.	11:26:28
22		

1	BY ATTORNEY LANE:	11:26:31
2	Q. Can you explain that more? How --	11:26:31
3	how would controlling the system mitigate against	11:26:32
4	the effects of concentration polarization?	11:26:38
5	A. So if the system is set up in a way,	11:26:43
6	you know, where you have valves, for example,	11:26:46
7	controlling pressures upstream and downstream of	11:26:49
8	the separation stage, the control logic or process	11:26:53
9	could be set up in a way that ultimately maintains	11:26:58
10	that pressure ratio in response to whatever changes	11:27:01
11	might be happening within the membrane over time.	11:27:07
12	So in that sense, the particulars of	11:27:09
13	how the engineer has decided or targeted to operate	11:27:12
14	the process can be -- can be imposed.	11:27:18
15	Q. Okay. So the pressure could be	11:27:23
16	maintained with a control valve, correct?	11:27:27
17	A. Using a -- a valve to -- to control	11:27:31
18	pressure is a common way that pressure is	11:27:33
19	controlled in these sorts of systems.	11:27:35
20	Q. And control valves control pressure	11:27:38
21	by controlling the flow rate, correct?	11:27:40
22	A. So flow rate can be impacted by -- by	11:27:50

1	the way that the valve is operated. It depends on	11:27:56
2	a few more things than just that. But -- but,	11:27:59
3	certainly, all those -- those factors are -- are	11:28:02
4	interrelated.	11:28:04
5	Q. Going back to the Priske patent	11:28:11
6	that's been previously marked as Exhibit 1001.	11:28:15
7	Again, you studied this patent	11:28:29
8	in preparing your declaration, correct?	11:28:30
9	A. That's correct.	11:28:33
10	Q. And you've studied the Priske '380	11:28:34
11	patent in preparing for your deposition, correct?	11:28:37
12	A. This document, right?	11:28:41
13	Q. Yes.	11:28:42
14	A. Yes.	11:28:42
15	Q. Okay. Does the Priske '380 patent	11:28:43
16	disclose any new types of compressors that were not	11:28:56
17	known before December 2014?	11:28:59
18	A. So the discussion of compressors --	11:29:05
19	just consulting the document for a minute.	11:29:07
20	(Whereupon, the witness reviews the	11:29:15
21	material provided.)	11:29:15
22	THE WITNESS: So not to my	11:29:15

1	knowledge. I don't believe the patent	11:29:40
2	describes compressors that were unknown	11:29:41
3	prior to that time.	11:29:45
4	BY ATTORNEY LANE:	11:29:46
5	Q. The types of compressors disclosed in	11:29:46
6	the Priske '380 patent were known to POSITAs before	11:29:48
7	December 2014, correct?	11:29:51
8	A. I believe so, yes.	11:29:54
9	Q. The types of multistage compressors	11:29:55
10	disclosed in the Priske '380 patent were known to	11:29:58
11	POSITAs before December 2014, correct?	11:30:01
12	A. So, for example, in, you know,	11:30:11
13	Claim 17, saying the compressor is a multistage	11:30:12
14	compressor -- you know, the idea of having two	11:30:16
15	compression stages in a multistage compressor, as	11:30:20
16	described in Claim 17, I -- you know, would have	11:30:23
17	been something that would have been known to a	11:30:26
18	person of ordinary skill prior to the patent.	11:30:30
19	Q. Prior to December 2014, correct?	11:30:31
20	A. Yes, yes.	11:30:33
21	Q. Let me turn your attention to your	11:31:39
22	declaration, Exhibit 2008, Paragraph 47.	11:31:40

1	Are you with me?	11:32:00
2	A. I see that, yes.	11:32:00
3	Q. The first sentence there says,	11:32:01
4	Examples 2 through 4 --	11:32:02
5	And that's referring to	11:32:03
6	Examples 2 through 4 in Ungerank, correct?	11:32:05
7	A. Yes, I believe that's correct, yes.	11:32:09
8	Q. Okay. And this says, Examples 2	11:32:17
9	through 4 teach that in order to satisfy various	11:32:20
10	legislators, it is necessary to minimize the	11:32:24
11	methane loss into the atmosphere.	11:32:27
12	Do you see that?	11:32:29
13	A. I see that.	11:32:29
14	Q. And then the next sentence says,	11:32:31
15	These examples all require a methane content in the	11:32:32
16	third permeate stream of less than .5 percent by	11:32:37
17	volume.	11:32:42
18	A. I see that.	11:32:42
19	Q. All right. And refer to Exhibit 1038	11:32:43
20	if you want to, Ungerank.	11:33:13
21	My question, though, is,	11:33:16
22	Examples 2 to 4 in Ungerank do not say that CO2	11:33:18

1	purity levels of above 99.5 percent are a	11:33:27
2	legislator requirement, correct?	11:33:31
3	A. I'd like to review --	11:33:35
4	ATTORNEY LINN: I'm sorry --	11:33:36
5	THE WITNESS: -- those examples.	11:33:37
6	ATTORNEY LINN: -- what are we	11:33:38
7	looking at? 1038?	11:33:38
8	ATTORNEY LANE: Yes.	11:33:43
9	ATTORNEY LINN: 1038 is not the	11:33:58
10	Ungerank patent; it's the Ungerank	11:34:01
11	publication.	11:34:06
12	The declaration is referring to	11:34:06
13	the patent, I believe.	11:34:08
14	ATTORNEY LANE: You need to stop	11:34:13
15	making speaking objections.	11:34:14
16	ATTORNEY LINN: You -- you said	11:34:16
17	Exhibit -- Examples 2 to 4; what is that?	11:34:16
18	And he said it was the Ungerank patent.	11:34:19
19	BY ATTORNEY LANE:	11:34:30
20	Q. Dr. Geise, do you see Examples 2 to 4	11:34:30
21	in Exhibit 1038?	11:34:35
22	A. I do see Examples 2 to 4 in	11:34:41

1	Exhibit 1038.	11:34:45
2	(Previously marked was Exhibit	11:35:29
3	Number 1006.)	11:35:29
4	BY ATTORNEY LANE:	11:35:29
5	Q. I've handed you, Dr. Geise, what's	11:35:30
6	previously been marked as Exhibit 1006, which is	11:35:31
7	the Ungerank patent.	11:35:34
8	Do you see that?	11:35:37
9	A. I see that.	11:35:37
10	Q. Did you review this document in	11:35:39
11	preparing for your deposition?	11:35:40
12	A. Yes, this was a document that I	11:35:46
13	reviewed.	11:35:47
14	Q. Did you review Examples 2 through 4	11:35:48
15	in preparing for your deposition?	11:35:51
16	A. Yes, I did.	11:36:01
17	Q. Examples 2 through 4 in the Ungerank	11:36:02
18	patent do not say CO2 purity levels above	11:36:03
19	99.5 percent are a legislative requirement,	11:36:06
20	correct?	11:36:10
21	(Whereupon, the witness reviews the	11:36:10
22	material provided.)	11:36:10

1	THE WITNESS: Well, the examples	11:36:10
2	start off with saying that in order to	11:36:19
3	satisfy various legislators, it is necessary	11:36:20
4	to minimize the methane loss into the	11:36:23
5	atmosphere.	11:36:26
6	And these -- these examples are --	11:36:26
7	are being set up around the idea that the	11:36:31
8	methane content in the permeate stream is	11:36:35
9	less than .5 percent.	11:36:39
10	BY ATTORNEY LANE:	11:36:39
11	Q. Right. But it doesn't say that	11:36:41
12	there's a legislative requirement that it be	11:36:43
13	below -- the methane content be below .05 percent,	11:36:46
14	correct?	11:36:52
15	A. It doesn't -- the specification	11:36:57
16	doesn't explicitly say "requirement." The examples	11:36:59
17	are being framed around the idea of satisfying	11:37:04
18	various legislators, as -- as stated in the	11:37:08
19	specification.	11:37:12
20	Q. Let me turn your attention to	11:37:43
21	Paragraph 42 in your declaration, Exhibit 2008.	11:37:44
22	Are you there?	11:37:57

1	A.	Yes.	11:37:58
2	Q.	Did you write this language?	11:37:58
3		ATTORNEY LINN: I caution the	11:38:09
4		witness not to reveal attorney-client	11:38:09
5		information.	11:38:12
6		THE WITNESS: As -- as discussed	11:38:15
7		before, you know, the first draft of the	11:38:16
8		declaration was put together by counsel	11:38:20
9		acting as scribes based on -- based on some	11:38:24
10		of the conversations that we had.	11:38:27
11		BY ATTORNEY LANE:	11:38:57
12	Q.	The second sentence in Paragraph 42	11:38:58
13		says, I have been informed that as of the priority	11:38:59
14		date of Priske '380, December 29th, 2014, both the	11:39:02
15		application for the Ungerank patent and the	11:39:07
16		application for Priske '380 were assigned to Evonik	11:39:09
17		Fibres GmbH.	11:39:13
18		Do you see that?	11:39:15
19	A.	I see that.	11:39:15
20	Q.	What significance does that sentence	11:39:17
21		have to your opinions in this case?	11:39:19
22		ATTORNEY LINN: Objection to the	11:39:26

1	form of the question.	11:39:26
2	THE WITNESS: So it's restating the	11:39:31
3	priority date, which is what we're thinking	11:39:33
4	about in terms of this matter, and also	11:39:35
5	establishing the assignee of those -- of	11:39:38
6	those applications.	11:39:45
7	BY ATTORNEY LANE:	11:39:45
8	Q. Why did you include that information	11:39:50
9	about the assignees in your report?	11:39:51
10	ATTORNEY LINN: Objection to the	11:39:57
11	form of the question: asked and answered.	11:39:57
12	THE WITNESS: It's a -- a statement	11:40:09
13	that -- that is contributing to the summary	11:40:10
14	of the Ungerank patent.	11:40:13
15	BY ATTORNEY LANE:	11:40:24
16	Q. Do you see Footnote 1 there on	11:40:25
17	Page 15?	11:40:27
18	A. Yes.	11:40:29
19	Q. It says, I understand that the	11:40:29
20	Ungerank patent and Priske '380 were assigned from	11:40:31
21	Evonik Fibres GmbH to Evonik Operations GmbH on	11:40:34
22	September 20th, 2022.	11:40:38

1	A.	I see that.	11:40:41
2	Q.	Does that information have any	11:40:42
3		significance to your opinions?	11:40:44
4		ATTORNEY LINN: Objection to the	11:40:49
5		form of the question.	11:40:49
6		THE WITNESS: Within the -- the	11:40:54
7		scope of this section of the declaration	11:40:56
8		providing a summary of -- of the art and, in	11:40:58
9		this case, the Ungerank patent, it -- it's	11:41:00
10		summarizing, you know, information about,	11:41:04
11		you know, what has happened, you know, with	11:41:05
12		these two patents.	11:41:11
13		ATTORNEY LANE: Okay. Dr. Geise, I	11:41:26
14		don't have any more questions for you at	11:41:30
15		this time.	11:41:31
16		ATTORNEY LINN: That's it.	11:41:32
17		If we can just make the correction	11:41:33
18		that we -- that I mentioned before.	11:41:37
19		ATTORNEY LANE: I don't think --	11:41:43
20		no. I think -- I'm done with my questions.	11:41:43
21		ATTORNEY LINN: Okay.	11:41:45
22			

1	--oOo--	11:41:45
2	EXAMINATION BY COUNSEL FOR PATENT OWNER	11:41:45
3	--oOo--	11:41:48
4	BY ATTORNEY LINN:	11:41:48
5	Q. Dr. Geise, just one question.	11:41:48
6	Was there any correction that	11:41:49
7	you wanted to make to your declaration, having	11:41:54
8	reviewed it?	11:41:56
9	A. We -- we did notice -- or I noticed	11:41:56
10	in preparation for the deposition, in	11:42:02
11	Paragraph 135 -- we're looking toward the last	11:42:06
12	sentence of Paragraph 135. That sentence reads,	11:42:11
13	Since the process in Scholz 7(a) was shown to	11:42:16
14	achieve its required purity of at least	11:42:22
15	95 percent -- and at that point, the -- the word	11:42:24
16	"purity" was a typo and should read "recovery."	11:42:29
17	So that sentence would then read,	11:42:35
18	Since the process in Scholz 7(a) was shown to	11:42:36
19	achieve its required recovery of at least	11:42:39
20	95 percent and optimized for the highest profit, a	11:42:42
21	person of ordinary skill would understand this	11:42:47
22	process works for its intended purpose and have no	11:42:49

1	motivation to modify it.	11:42:51
2	ATTORNEY LINN: And our intent is	11:42:54
3	to file a paper making that correction.	11:42:56
4	ATTORNEY LANE: I have no further	11:42:58
5	questions.	11:43:09
6	ATTORNEY LINN: I have no	11:43:10
7	questions.	11:43:10
8	ATTORNEY LANE: Thank you,	11:43:13
9	Dr. Geise.	11:43:13
10	THE WITNESS: Thank you.	11:43:14
11	CERTIFIED STENOGRAPHER: I have	
12	this down for five-day delivery; is that	
13	right?	
14	ATTORNEY LANE: That is our order.	
15	CERTIFIED STENOGRAPHER: Five day	
16	for you as well?	
17	ATTORNEY LINN: We'll do five day.	
18	And a rough.	
19		
20	(Witness excused)	
21	(Deposition concluded at 11:43 a.m. EDT.)	
22		

1 I, Cindy L. Sebo, Nationally Certified Court
2 Reporter herein, do hereby certify that the
3 foregoing deposition of GEOFFREY MATTHEW GEISE,
4 PH.D. was taken before me pursuant to notice at the
5 time and place indicated; that said witness duly
6 swore to tell the truth, the whole truth, and
7 nothing but the truth under penalties of perjury;
8 that said testimony of witness was correctly
9 recorded to the best of my abilities in machine
10 shorthand, thereafter transcribed under my
11 supervision with computer-aided transcription; that
12 deposition is a true and accurate record of the
13 testimony given by the witness; that I am neither
14 counsel, nor kin to any party in said action, nor
15 interested in the outcome; and that a copy of this
16 transcript obtained from a source other than the
17 court reporting firm, including an adversary or
18 co-counsel in the matter, is uncertified and may not
be used at trial.

19 

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21 RSA, CA CSR 14409, NJ Certified CR 30X10024460,
22 NJ Certified RT 30XR00019500, NM CSR 589, NY
Realtime Court Reporter, NY Association Certified
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12778, WA CSR 23005926, Notary Public

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INSTRUCTIONS TO WITNESS

Please read your deposition over carefully and make any necessary corrections. You should state the reason in the appropriate space on the errata sheet for any corrections that are made.

After doing so, please sign the errata sheet and date it.

You are signing same subject to the changes you have noted on the errata sheet, which will be attached to your deposition.

It is imperative that you return the original errata sheet to the deposing attorney within thirty (30) days of receipt of the deposition transcript by you. If you fail to do so, the deposition transcript may be deemed to be accurate and may be used in court.

1	GEOFFREY MATTHEW GEISE, PH. D.
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ACKNOWLEDGMENT OF WITNESS

I, GEOFFREY MATTHEW GEISE, PH.D., do hereby
certify that I have read the foregoing pages herein,
and that the same is a correct transcription of the
answers given by me of the proceedings taken
remotely to the questions therein propounded under
penalty of perjury, except for the corrections or
changes in form or substance, if any, noted in the
attached errata sheet.

DATE SIGNATURE

Subscribed and sworn to before me
this ____ day of _____, 20____.

My Commission expires:

Notary Public