BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
AMENDMENTS TO 35 ILL.	)	R23-18(1)
ADMIN. CODE PARTS 201, 202	)	(Rulemaking-Air)
AND 212.	)	
	)	First Hearing
	)	

REPORT OF PROCEEDINGS OF THE HEARING in the above-captioned case, called for examination pursuant to the provisions of the State of Illinois Environmental Protection Agency, heard by MS. CHLOE SALK, Hearing Officer, taken before Kathy L. Johnson, C.S.R., on September 27th, 2023, at the hour of 9:00 a.m., at the Illinois Environmental Protection Agency, Sangamon Room, 1021 N. Grand Avenue East, Springfield, Illinois, 62701.

I N D E X

E X H I B I T S

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MICHELLE GIBSON 09:01:56
09:01:56
JENNIFER VAN WIE 09:01:59
09:01:59
MICHAEL D. MANKOWSKI 09:02:01
ANAND RAO
MARIE TIPSORD, General Counsel

P R O C E E D I N G S

HEARING OFFICER: Good morning, and welcome to the Illinois Pollution Control hearing. My name is Chloe Salk and I am the hearing officer for this rulemaking proceeding entitled Amendments to 35 Illinois Administrative Code 201, 202 and 212. 09:01:23 09:01:24 09:01:26 09:01:31 09:01:31 09:01:37

The Board docket number for this rulemaking is R23-18(A). To get started, I want to quickly go through three preliminary items: Introductions, the procedure to date, and then housekeeping, including the order in which we'll plan to proceed. 09:01:39 09:01:39 09:01:42 09:01:46 09:01:49 09:01:49

First, introductions: Present today from the Board are Board member Michelle Gibson, the lead Board member assigned to this docket, Board member Jennifer Van Wie, Board member Michael D. Mankowski. 09:01:52 09:01:53 09:01:58 09:01:59 09:01:59

And present from the Board's staff are Anand Rao of the Board's technical staff, and General Counsel Marie Tipsord who is in the audience today. 09:02:03 09:02:03 09:02:03 09:02:03

Second, the Board's procedure to date: On August 7th, 2023, the Illinois Environmental 09:02:12 09:02:13

Regulatory Group, Rain Carbon, LLC, Dynegy Midwest Generation, LLC, and Midwest Generation, LLC, American Petroleum Institute, and East Dubuque Nitrogen Fertilizer, LLC, filed rulemaking proposals. 09:02:13 09:02:13 09:02:26 09:02:30 09:02:31

In an order on August 17th the Board accepted the proposals for hearing. In an order on August 17th, 2023 the hearing officer scheduled two hearings. 09:02:32 09:02:34 09:02:37 09:02:40

Notice for this hearing was posted on August 21st, 2023 in the Chicago Sun Times; on August 22nd in the Belleville News Democrat and the News Tribune; and on August 23rd in the News-Gazette, the State Journal-Register, and the Galena Gazette. 09:02:42 09:02:43 09:02:48 09:02:52 09:02:56 09:02:56

Today we are of course holding the first hearing. In the order scheduling hearings, the hearing officer directed participants intending to testify at this hearing to pre-file their testimony no later than August 28th. 09:03:01 09:03:02 09:03:04 09:03:05 09:03:07

Another hearing officer order granted Rain Carbon's motion to extend the deadline for its pre-filed testimony to September 5th. On August 28th the Board received pre-filed 09:03:10 09:03:14 09:03:15 09:03:18

testimony from Ross Garres, David Wall, John Derek Reese, Phillip G. Crnkovich, Sharene Shealey, and Cynthia Vodopivec. On September 5th the Board received pre-filed testimony from Bryan Higgins. 09:03:20 09:03:24 09:03:29 09:03:33 09:03:34

The order also directed participants to pre-file questions based on that testimony by Wednesday, September 20th. 09:03:35 09:03:37 09:03:40

On that date the Board received pre-filed questions from the Illinois Attorney General's Office. In a hearing office order on that date the Board also submitted questions. 09:03:41 09:03:44 09:03:46 09:03:50

The Board posted all of these documents to its Clerk's Office On-Line, or COOL, under this docket number R23-18(A) as they were filed. 09:03:51 09:03:53 09:03:58

Finally, our housekeeping for this hearing. This hearing is governed by the Board's procedural rules. Under Section 102.426 of those rules all information that is relevant and is not repetitious or privileged will be admitted by the hearing officer into the record. 09:04:03 09:04:04 09:04:07 09:04:12 09:04:15 09:04:19

Please bear in mind that any questions posted today by the Board and its staff are intended solely to help develop a clear and 09:04:20 09:04:22 09:04:25

complete record for the Board's decision, and those questions do not reflect any determination or judgment on the proposal, testimony, or questions. 09:04:28 09:04:30 09:04:32 09:04:35

For the sake of our court reporter please speak clearly and avoid speaking at the same time as another person so that we can help produce a clear transcript. If you are asking questions please state your name and the organization you represent prior to any questions. 09:04:35 09:04:37 09:04:40 09:04:43 09:04:44 09:04:47

Also, if talking about sections of the rules please spell out the Section letters such as 620.101(D), as in dog. Miss Court Reporter, please feel free to stop me or anyone else if we are going too fast, talking too softly, or if you need something repeated. 09:04:49 09:04:51 09:04:54 09:04:58 09:05:01 09:05:05

There's a sign-in sheet at the door over there in the back for anyone who wants to sign up for public comment. So if there are any members of the public in person here today, please go ahead and write your name on the list. 09:05:06 09:05:09 09:05:11 09:05:13 09:05:15

As a reminder, anyone can submit written comments on the Board's Clerk's Office On-Line system. The Board weighs oral and written public 09:05:17 09:05:20 09:05:22

comment equally. As to the order of today's proceedings, we'll call the following witnesses in this order. First will be Ross Gares and Bryan Higgins. Then it will be David Wall, then John Derek Reese, then Phillip G. Crnkovich, and then Sharene Shealey and Cynthia Vodopivec. 09:05:24 09:05:27 09:05:29 09:05:32 09:05:36 09:05:40

After being duly sworn in, the pre-filed testimony will be entered into the record as if read under Section 102.424(f) of the Board's procedural rules. 09:05:44 09:05:44 09:05:48 09:05:53

We will then turn to questions for each witness with pre-filed questions from the Attorney General's Office first, then to any other questions from any participants and then the Board's pre-filed questions. 09:05:54 09:05:56 09:05:58 09:06:00 09:06:03

Should we finish with witness questioning today, at the end of the hearing I'll ask if there are any public comments from the members of the public. 09:06:07 09:06:09 09:06:10 09:06:13

I anticipate taking a 10-minute break around 10:30 a.m. and then breaking for an hour for lunch from noon to 1:00, and then another short break -- afternoon break -- around 3:00 p.m. If we haven't finished with questions and 09:06:13 09:06:15 09:06:18 09:06:20 09:06:23

public comments already we'll end today at around 5:00 p.m. Are there any questions about our order of proceeding? Okay. Seeing none, we will turn to testimony starting with Ross Gares and Bryan Higgins. Are they ready to go? 09:06:25 09:06:27 09:06:29 09:06:32 09:06:37

Okay. We'll have you step up to the front table up here. 09:06:40 09:06:42

MR. LORING: One procedural question. 09:06:42

HEARING OFFICER: Yeah. 09:06:42

MR. LORING: There are some questions that we -- yeah, this is David Loring on behalf of Rain Carbon. There are some questions that were filed by the Illinois Attorney General that Ross Gares will answer and some Bryan Higgins will answer, and so they may be out of order. 09:06:42 09:06:55 09:06:57 09:07:04 09:07:07 09:07:10

HEARING OFFICER: That's fine. 09:07:10

MR. LORING: I'm not sure how we want to proceed with that. 09:07:14 09:07:14

HEARING OFFICER: Yeah. Yeah, we will have you sworn in first and then we'll go to questions and the questions will be directed at each person. Yeah, like a panel. Okay. 09:07:16 09:07:17 09:07:19 09:07:21

So would the court reporter please swear in the witnesses? 09:07:27 09:07:29

(Witnesses sworn) 09:07:29

ROSS GARES and BRYAN HIGGINS, 09:07:29

being both duly sworn on oath, were examined and 09:07:29

testified as follows: 09:07:29

HEARING OFFICER: Okay. As mentioned 09:07:38

earlier, the witness' testimony is entered into 09:07:39

the record as if read, and we'll enter Ross 09:07:41

Gares' testimony as Hearing Exhibit Number One 09:07:46

and then Bryan Higgins' testimony as Hearing 09:07:48

Exhibit Number Two. 09:07:52

So we'll proceed with questions first 09:07:58

from the Attorney General's Office. If you would 09:08:00

like to step up to the podium. And if you could 09:08:02

please state your name first for the court 09:08:02

reporter. 09:08:02

MR. JAMES: Jason James, Illinois 09:08:17

Attorney General's Office. 09:08:18

HEARING OFFICER: And go ahead. 09:08:20

MR. JAMES: Sure. We pre-filed a set of 09:08:21

questions so I'll just go ahead and read on the 09:08:27

pre-filed questions and then if I have follow-ups 09:08:29

to those I'll go ahead and ask you after you 09:08:31

answer. 09:08:32

DIRECT EXAMINATION BY 09:08:32

MR. JAMES: 09:08:32

MR. JAMES: Our pre-filed question number one; given that Rain Carbon's proposed amendments are site-specific, does Rain Carbon agree that the proposal is subject to the requirements of 35 Illinois Administrative Code 102.110? 09:08:35 09:08:36 09:08:39 09:08:41 09:08:44

MR. LORING: Again, this is David Loring, counsel for Rain Carbon. One comment on that question before I ask my client to respond. I believe, unless I'm mistaken, that -- that you were likely referring to 102.210 -- 09:08:49 09:08:51 09:08:53 09:08:57 09:09:01

MR. JAMES: Okay. 09:09:01

MR. LORING: -- which governs the contents for site-specific rulemaking. Assuming that that's correct, I do believe that this calls for a legal conclusion. If we need to file any type of post-hearing brief we will do so, but we do have a response to your question. 09:09:08 09:09:09 09:09:11 09:09:14 09:09:17 09:09:21

MR. JAMES: Okay. Yes, please go ahead. 09:09:22

MR. GARES: Ross Gares, Rain Carbon. Rain Carbon's proposal was filed in this sub docket at the direction of the Board's July 6th order in this proceeding which directed anyone who sought to file a rulemaking proposal for 09:09:25 09:09:27 09:09:28 09:09:31 09:09:33

alternative standards during startup, malfunction, and breakdown, to do so by August 7th, 2023. We agreed with the Board's determination that this is the proper forum to submit Rain Carbon's proposal. 09:09:36 09:09:39 09:09:43 09:09:44 09:09:47

MR. JAMES: Okay. Question number two; Rain Carbon acknowledges that Illinois EPA's -- and by the EPA I mean Environmental Protection Agency -- authority to grant exceptions to emission limitations during SMB events stem from their regulatory provisions appealed in R23-18. 09:09:52 09:09:54 09:09:57 09:10:00 09:10:02 09:10:06

R23-18(A), Rain Carbon's regulatory proposal. I'll skip the citations in the future if that makes sense since they're all written in our pre-filed comments. 09:10:10 09:10:14 09:10:18 09:10:20

U.S. EPA founded those provisions, including the prima facie defense provisions in 35 Illinois Administrative Code, Section 201.2-65 were substantially inadequate because they may grant a state official unilateral exercise of discretionary authority in violation of the Clean Air Act's enforcement structure. 09:10:21 09:10:25 09:10:27 09:10:32 09:10:35 09:10:37 09:10:41

In light of the above context, what does Rain Carbon mean when it argues that the, quote, 09:10:42 09:10:44

relief provided to Rain Carbon's facility during SMB events does not reflect Illinois EPA's exercise of enforcement discretion or authorization under prima facie defense to enforce it during an SMB event? 09:10:47 09:10:48 09:10:53 09:10:54 09:10:54

MR. LORING: Again, this is David Loring. I'll start off by saying I do think that question calls for a legal conclusion. If we need to file something post hearing, we will, but we do have a response. 09:11:00 09:11:01 09:11:05 09:11:06 09:11:06

MR. GARES: Ross Gares, Rain Carbon. Rain Carbon explained its meaning later in the paragraph quoted by Illinois AG on page three of its Statement of Reasons. 09:11:10 09:11:12 09:11:14 09:11:19

Rain Carbon explained that the SMB relief of the facility and the CAAPP permit is authorized by separate Illinois EPA's settlement agreement in 2017. 09:11:21 09:11:25 09:11:26 09:11:29

In other words, Rain Carbon is required by the settlement agreement to maintain a minimum inlet pyroscrubber temperature 1800 degrees Farenheit except during startup, malfunction, breakdown events. 09:11:33 09:11:33 09:11:37 09:11:40 09:11:43

MR. JAMES: And is that settlement 09:11:45

affected by the previous rulemaking in R23-18, or the rules that are being proposed today by Rain Carbon? 09:11:47 09:11:51 09:11:51

MR. GARES: No. 09:11:51

MR. JAMES: Okay. Question number three. Rain Carbon notes that its kilns take less than 24 hours to start up and that malfunctions or breakdowns are typically resolved within four to five hours. 09:12:01 09:12:02 09:12:06 09:12:09 09:12:11

Rain Carbon's regulatory proposal 15. Rain Carbon also notes that each kiln experiences fewer than 10 start-ups annually. And then a couple subquestions to number three. 09:12:14 09:12:14 09:12:17 09:12:20

On average, how many malfunctions and breakdowns does each kiln experience on an annual basis over the past decade? 09:12:22 09:12:24 09:12:27

MR. GARES: Ross Gares, Rain Carbon. In response to these questions and a similar question by the Board, Rain Carbon intends to submit to the Board records related to hours of operation as well as startup, malfunction, and breakdown, and associated pyroscrubber and the temperatures. 09:12:32 09:12:34 09:12:37 09:12:39 09:12:42 09:12:44 09:12:48

It is not appropriate to average the 09:12:49

number of operational hours or the number of startup, shutdown, and malfunction hours over the past decade as such averages do not reflect changes in operation. That is based on market conditions. 09:12:51 09:12:53 09:12:57 09:13:00 09:13:03

In some years the facility has operated periodically on campaigns, and in other years the facility has operated more continuously. 09:13:05 09:13:06 09:13:10

MR. JAMES: All right. And would that response also apply to question 3B? 09:13:16 09:13:16

MR. LORING: It would, yes. 09:13:21

MR. JAMES: Okay. 09:13:21

MR. RAO: Mr. James, I guess a clarification. You mentioned that your response addressed a Board question on some. Are you referring to the Board's question number six? 09:13:27 09:13:29 09:13:32 09:13:32

MR. LORING: I believe it's question, yes, number 6B. 09:13:34 09:13:56

MR. RAO: And you did mention that you'd be filing something in your comments also, right? 09:14:00 09:14:03

MR. LORING: That's correct. So that data that both the Board requested and the AG asked for, we'll submit that post hearing. 09:14:06 09:14:08 09:14:11

MR. RAO: Mr. Gares, you -- in response 09:14:13

to Mr. James' question -- you mentioned that, you know, it's not appropriate to use averages because your operation may change depending on the market conditions. 09:14:16 09:14:21 09:14:22 09:14:25

The numbers that you gave in your testimony about less than five start-ups per -- and 10 annual functions per year -- is that based on normal operations or when, you know, you're operating at a higher level to meet the market conditions? 09:14:28 09:14:29 09:14:34 09:14:38 09:14:41 09:14:44

Or what kind of, you know, what do these numbers represent in terms of your operation? 09:14:45 09:14:48

MR. GARES: Ross Gares, Rain Carbon. The data I'm submitting in the document was for the three years, which the plant has run campaign-type operations as market conditions -- our need, our customer needs -- were met due to market conditions. 09:14:48 09:14:48 09:14:56 09:14:59 09:15:13 09:15:15

If we look at the normal -- I mean, Rain Carbon's position is we want to run the plant continuously -- 09:15:15 09:15:21 09:15:23

MR. RAO: Yeah. 09:15:23

MR. GARES: -- and we don't want to start it up and shut it down. So it's hard -- that's 09:15:24 09:15:26

why I say it's hard -- to use an average because we don't really have a good average. I think the last time we had a good year of operation, continuous operation, was in 2017 at that facility. So that's why the answer was it was -- it's not good to average that. 09:15:28 09:15:33 09:15:36 09:15:38 09:15:42 09:15:45

MR. RAO: And do you believe based on, you know, the experience that Rain Carbon over the years, that you need like 30 days per year for each kiln in terms of the relief that you have requested? 09:15:49 09:15:52 09:15:56 09:16:00 09:16:06

MR. GARES: We believe that we needed to submit something very quickly in response to this rulemaking change, and that the modeling showed that a worst-case scenario, if we did do that for 720 hours, we would not impact the operation. 09:16:10 09:16:12 09:16:17 09:16:22 09:16:29

MR. RAO: That I understand. All I was asking was do you need those 30 days of 720 hours? Because, you know, based on the numbers here provided as for breakdown and malfunctions it would seem that you would not need 30 days. 09:16:33 09:16:34 09:16:39 09:16:41 09:16:44

If you can take a look at it and get back to us in your comments or -- 09:16:48 09:16:50

MR. LORING: Sure. Yeah, we'll be able 09:16:51

to provide some of that information in the context of the historical data and why we've requested the amount of hours or amount of days, however you want to look at it, in the post hearing. 09:16:53 09:16:55 09:16:58 09:17:00 09:17:00

MR. RAO: Thank you. Thank you. 09:17:03

MR. JAMES: So pick up at pre-filed question 3C. Is it appropriate to assume that when a kiln is experiencing an SMB event the temperature in the kiln is less than 1800 degrees Farenheit? 09:17:05 09:17:08 09:17:11 09:17:16 09:17:16

By extension is it appropriate to assume that when the temperature in the kiln is less than 1800 degrees Fahrenheit the kiln was operating in excess of its CAAPP emissions limitations? 09:17:20 09:17:22 09:17:26 09:17:26 09:17:28

MR. GARES: Ross Gares, Rain Carbon. As an initial response the relevant 1800 degrees Fahrenheit temperature is measured at the inlet of the pyroscrubber. This differs from the kiln temperature which is hotter than the inlet of the pyroscrubber. 09:17:31 09:17:33 09:17:36 09:17:38 09:17:42 09:17:47

The facility is prohibited under its CAAPP and the 2017 settlement agreement in 09:17:47 09:17:49

Illinois EPA from operating when the three hour average of the inlet to the pyroscrubber is below 1800 degrees Fahrenheit, unless it is during a start-up, malfunction, or breakdown. 09:17:51 09:17:56 09:17:58 09:18:02

Below that temperature, the pyroscrubber cannot ensure compliance at all times with the opacity, PM, and VOM emission limits applicable to the kilns. 09:18:06 09:18:08 09:18:13 09:18:14

When the pyroscrubber and the temperature is below 1800 degrees Fahrenheit it is either because the kiln is in startup or because the facility has stopped adding feed to the kiln as a result of a malfunction or breakdown at the facility. 09:18:14 09:18:19 09:18:22 09:18:26 09:18:29 09:18:32

The converse is not always true for malfunctions and breakdowns. Some malfunctions or breakdowns are remedied quickly enough and the facility does not need to stop the kiln -- the feed to the kiln -- and therefore the pyroscrubber ambient temperatures do not always drop below 1800 degrees Fahrenheit in a rolling three hour average. 09:18:34 09:18:36 09:18:39 09:18:44 09:18:45 09:18:48 09:18:49 09:18:53

MR. JAMES: Thank you. Going on to 3D, there are a couple of footnotes from my pre-filed 09:18:55 09:19:00

questions, but I'll skip those when just talking about that today. Looking at only at start-ups, Rain Carbon exceeds its emissions limitations approximately 432 hours per year, equivalent to 5.4 percent of its estimated operating time. 09:19:03 09:19:07 09:19:09 09:19:11 09:19:15

Rain Carbon proposes to establish an annual limit on the number of hours, 720, that each kiln may, during SBB events, exceed the PM standard. 09:19:18 09:19:20 09:19:23 09:19:25

In other words, if the proposed amendments were adopted, Rain Carbon could exceed its non-SMB emissions limitations for PM -- that's particulate matter -- for up to 1440 hours per year, equivalent to 18 percent of its estimated operating time. 09:19:26 09:19:27 09:19:29 09:19:32 09:19:36 09:19:38

Why does Rain Carbon believe that its alternative emission limitation for PM is appropriate and narrowly tailored? How, if at all, does Rain Carbon's proposal avoid backsliding prohibited by Section 110 sub L of the Clean Air Act? 09:19:41 09:19:42 09:19:44 09:19:47 09:19:48 09:19:51

And I recognize some of this is already addressed by other questions that Mr. -- but the aspects that weren't brought up, could you answer 09:19:52 09:19:54 09:19:57

those? 09:19:59

MR. GARES: Sure. Ross Gares, Rain 09:20:00

Carbon. By their very nature, startups and 09:20:02

malfunctions and breakdowns events can vary 09:20:06

greatly in a given year. 09:20:10

Per the Illinois AG request in the prior 09:20:12

question, we'll provide historic startup, 09:20:15

malfunction, and breakdown data following this 09:20:17

hearing. 09:20:20

During the last three years, 2021, 2022 09:20:22

and 2023, due to market conditions the facility 09:20:25

has operated for brief campaigns during which 09:20:29

time the kiln will operate for a few weeks to 09:20:33

fulfill customer demand, and then go offline. 09:20:35

Prior to 2021 there were years, such as 09:20:38

2017 and 2019, where both kilns operated more 09:20:42

steady state. The number of malfunctions and 09:20:47

breakdowns can increase the more hours the 09:20:48

facility operates. 09:20:51

Similarly, operating and campaigns can 09:20:54

require more startups in a given year. While the 09:20:56

Illinois AG is correct to observe that the 09:21:00

average number of startups and malfunctions have 09:21:02

not equaled or exceeded 720 hours per year as 09:21:05

proposed, the 720 hours was selected for two reasons. First, while it is in the facility's best interest to minimize the duration of such events there may be years when startup and malfunction, breakdown hours exceed the recent past. 09:21:09 09:21:13 09:21:15 09:21:18 09:21:21 09:21:25

Because there are no technical or economically feasible options to control emissions while the inlet pyroscrubber temperature is below 1800 degrees, we propose 720 hours to ensure a satisfactory margin of compliance. 09:21:26 09:21:28 09:21:31 09:21:31 09:21:35 09:21:39

Second, and relatedly, we conducted extremely conservative ambient air quality modeling to demonstrate that 720 hours per kiln per year would not interfere with the applicable PM National Ambient Air Quality standards. 09:21:41 09:21:43 09:21:46 09:21:50 09:21:57

In other words, while we do not anticipate reading -- meeting -- 720 hours per kiln in a year to exceed the PM process weight limit under part 212, the modeling demonstrates that such an occurrence would not have a negative impact on air quality. 09:21:58 09:22:01 09:22:05 09:22:09 09:22:13 09:22:16

We respectfully refer the Illinois AG to 09:22:18

the Technical Support documents submitted in conjunction with the pre-filed testimony of Bryan Higgins, specifically sections two and three of the pre-filed testimony, that details how Rain Carbon's proposed AELs are consistent with Section 110.1 of the Clean Air Act. 09:22:22 09:22:24 09:22:27 09:22:30 09:22:34 09:22:37

MR. JAMES: Thank you. And then number four; USEPA describes startup events as, quote, part of the normal operation of the source and should be accounted for in the design and operation of the source. 09:22:42 09:22:46 09:22:50 09:22:53 09:22:55

USEPA goes on to detail the, quote, correct approach for creating an emissions limitation during startup which considers four factors. 09:22:59 09:22:59 09:23:02 09:23:03

One, the emission limitation contains no exception for emissions during SSM or SMB events. The component of any alternative emissions limitation that applies during startup and shutdown is clearly stated and obviously is an emission limitation that applies to the source. 09:23:04 09:23:06 09:23:11 09:23:13 09:23:14 09:23:17

The component of any alternative emission limitation that applies during startup and shutdown meets the applicable stringency level 09:23:20 09:23:22 09:23:24

for this type of emission limitation. And four, the emission limitation contains requirements to make it legally and practically enforceable. Do each of Rain Carbon's proposed amendments satisfy these factors? If so, please provide bases for each factor in each proposed amendment. 09:23:27 09:23:29 09:23:32 09:23:35 09:23:36 09:23:42

MR. LORING: And just again as a, for the record, as an initial matter I do think that this calls in part for a legal -- a legal conclusion. But with that -- with that said, I'll ask Bryan Higgins to respond on behalf of Rain Carbon. 09:23:43 09:23:45 09:23:48 09:23:49 09:23:53

MR. HIGGINS: Bryan Higgins, Rain Carbon. Yes, Rain Carbon's Statement of Reasons provides substantial support that each of the proposed AELs is consistent with USEPA's 2015 SSM SIP call, including the factors identified in the AG's question. 09:23:56 09:23:57 09:24:00 09:24:04 09:24:11 09:24:12

We believe it is worth noting for the record that USEPA clarified in that same preamble that numerical limitations are not required at all times, stating that, quote, EPA has not taken the position and sources will be subject to SIP emission limitations that are set at the same numerical level at all times or that are 09:24:13 09:24:15 09:24:18 09:24:22 09:24:25 09:24:28 09:24:31

expressed as numerical limitations, end quote. 09:24:35

MR. JAMES: Thank you. And then number 09:24:39

five, why does Rain Carbon believe that adopting 09:24:43

the proposed amendment, 35 Illinois 09:24:47

Administrative Code, Section 212.124(e) is 09:24:49

preferable to pursuing an adjusted opacity 09:24:53

standard pursuant to Section 212.126? 09:24:57

MR. HIGGINS: Bryan Higgins, Rain Carbon. 09:25:02

Section 212.126 does not apply to Rain Carbon's 09:25:04

facility. Section 212.126 governs adjusted and 09:25:08

-- adjusted and visible -- adjusted visible 09:25:13

emission standards for emission sources subject 09:25:15

to Sections 212.201, 212.202, 212.203, or 09:25:17

212.204. 09:25:17

Those sections apply only to fuel 09:25:27

combustion sources. The facility operates kilns 09:25:31

that are process emission units which are not 09:25:33

fuel combustion emission units. 09:25:36

MR. JAMES: Thank you. Number six, Rain 09:25:41

Carbon asserts that its proposed amendments, 09:25:43

quote, are narrowly tailored and provide 09:25:45

alternative emissions limitations for particulate 09:25:48

matter during startup, malfunction, or breakdown. 09:25:51

Rain Carbon notes that to estimate the 09:25:53

impact of alternative emissions limitations on particulate matter, NAAQS, the company conducted an engineering test during startup conditions. 09:25:54 09:25:58 09:26:00

is it appropriate to draw our conclusion about PM emissions during malfunction or breakdown events based on modeling that relied on data gathered during start-up? 09:26:03 09:26:04 09:26:07 09:26:09

MR. HIGGINS: Yes. Bryan Higgins, Rain Carbon. Yes, it is appropriate to model malfunction breakdown emissions based on PM data collected during start-up conditions. 09:26:14 09:26:16 09:26:18 09:26:20

The common denominator during startup, malfunction and breakdown is that the ambient temperature to the pyroscrubber is below 1800 degrees Fahrenheit which limits the ability of the affected kiln to comply with the applicable PM process weight emission limit. 09:26:22 09:26:24 09:26:27 09:26:30 09:26:33 09:26:33

In fact, the use of emissions data during startup to model malfunction, breakdown conditions is inherently conservative. This is largely because of, one, startup events generally last longer than malfunction breakdown events. 09:26:39 09:26:41 09:26:43 09:26:46 09:26:49

Two, during the initial hours of startup the inlet temperature to the pyroscrubber is 09:26:52 09:26:55

lower than the temperature typically experienced during a malfunction breakdown, meaning that startup events have greater PM emissions. 09:26:58 09:27:00 09:27:03

And three, during malfunction, breakdown events the facility stops feed to the kiln as compared to startup conditions where feed is increased, helping to minimize the generation of PM emissions. 09:27:07 09:27:09 09:27:12 09:27:14 09:27:17

This is further explained on pages 14 and 15 of Rain Carbon's Statement of Reasons. 09:27:20 09:27:22

MR. JAMES: Thank you. And number seven, Rain Carbon describes conducting its engineering test during the startup of kiln one. Rain Carbon assumes that, quote, due to similar design operations, kiln two would have similar results to kiln one if it were subjected to the same engineering test. 09:27:25 09:27:28 09:27:30 09:27:35 09:27:36 09:27:39 09:27:41

Are there any differences between kiln one and kiln two which could call into question the conclusion that similar emission results during startup would be expected between both kilns? 09:27:42 09:27:43 09:27:47 09:27:49 09:27:52

MR. GARES: Ross Gares, Rain Carbon. No, they are not. Kiln one and kiln two are nearly 09:27:53 09:27:54

identical in design. The model impact from kiln one and two differ because of the different geographic location of the stacks from the pyroscrubber servicing each kiln. 09:27:59 09:28:02 09:28:05 09:28:08

MR. JAMES: Thank you. That's all. 09:28:14

HEARING OFFICER: Thank you. Okay. Are there any other questions from any other participants? Okay. Seeing none, we will next go to the Board's questions. 09:28:16 09:28:18 09:28:19 09:28:23

CROSS EXAMINATION BY 09:28:23

MR. RAO: 09:28:23

MR. RAO: Okay. Like the AG, we had pre-filed questions so I'll just read off the questions, starting with -- there's a general question that we had pre-filed that applies to all proponents. It's changes to the rule language. 09:28:25 09:28:30 09:28:33 09:28:38 09:28:43 09:28:45

And we'd like you to get back to us in your comments if those changes are acceptable. We went to Rain Carbon. Mr. Gares, this is a question for you on pre-filed questions. 09:28:47 09:28:50 09:28:55 09:28:59

On page one you note that you advised all Rain Carbon U.S. facilities, including the one in Illinois, on startup and operation of coke 09:29:03 09:29:07 09:29:09

calciners and associated equipment. 09:29:14

2A, how many calcining facilities does 09:29:20
Rain Carbon operate in the U.S. and where are 09:29:20
they located? 09:29:23

MR. GARES: Ross Gares, Rain Carbon. We 09:29:23
have four calcining plants in Louisiana. We have 09:29:28
another calcining plant in Mississippi, and of 09:29:33
course the one we're discussing in Robinson, 09:29:37
Illinois. 09:29:37

MR. RAO: Are any of Rain Carbon's 09:29:42
facilities located in other states covered by 09:29:44
USEPA's 2015 SIP call? 09:29:47

MR. GARES: My understanding -- Ross 09:29:50
Gares, Rain Carbon. Sorry. My understanding is 09:29:52
that most states are covered by 2015's SIP call. 09:29:55

MR. RAO: If so, can you comment how 09:30:01
those facilities are addressing SSM SIP call 09:30:03
compliance? 09:30:08

MR. GARES: Ross Gares, Rain Carbon. At 09:30:09
this time Rain Carbon has not taken any action at 09:30:12
these facilities to address any changes in state 09:30:14
rules governing startup, shutdown, or 09:30:17
malfunction. 09:30:21

MR. RAO: How is the state of Louisiana 09:30:22

implementing 2015 SIP call with respect to your facilities, or are you aware of that? 09:30:27 09:30:30

MR. GARES: We haven't -- Ross Gares, Rain Carbon. We haven't looked into it so post-hearing conference -- 09:30:43 09:30:44 09:30:46

MR. LORING: Post-hearing comments. 09:30:49

MR. GARES: Comments. 09:30:49

MR. RAO: Okay. 09:30:49

MR. LORING: We'll provide. 09:30:50

MR. RAO: All right. Thank you. 09:30:51

Question three. On pages two and three you state that the facility will often be forced to shut down and restart the kilns during malfunction events. 09:30:53 09:30:57 09:31:00 09:31:03

Can you describe typical malfunction or breakdown events encountered at the Robinson facility? 09:31:03 09:31:06 09:31:06

MR. GARES: Ross Gares, Rain Carbon. There's no such thing as a typical malfunction or breakdown. A malfunction or breakdown could be the result of a mechanical failure, an electrical failure, a refractory failure of our process equipment. 09:31:10 09:31:12 09:31:15 09:31:17 09:31:21 09:31:24

Another form of malfunction could be 09:31:25

plugging of material. Petroleum coke is a solid material that can have the tendency to build up, create, and convey transitions of the pour chutes. When that happens it requires some manual intervention by the operations or maintenance staff to clear the plug-up. It is important to note that each kiln is operated as an independent train of equipment. 09:31:27 09:31:31 09:31:34 09:31:36 09:31:38 09:31:41 09:31:44 09:31:48

MR. RAO: Can malfunctions also include any problems with the air pollution control if you have any on these kilns, or is it just associated with the operation of the kilns? 09:31:50 09:31:55 09:31:59 09:32:06

MR. GARES: It would be associated with the operation of the equipment and the kilns. 09:32:09 09:32:10

MR. RAO: Okay. 09:32:12

MR. GARES: Our associated equipment for the kiln operations. 09:32:14 09:32:16

MR. RAO: The proposed alternative -- this is question four. The proposed alternative particulate matter -- 09:32:18 09:32:21 09:32:24

MR. LORING: Excuse me. I'm sorry for interrupting you just for a second. 09:32:26 09:32:29

MR. RAO: Sure. 09:32:29

MR. LORING: Part of Ross' response he 09:32:30

wanted to convey to you just to read, so I just wanted to make sure we put that into the record. Thank you. 09:32:32 09:32:35 09:32:37

MR. GARES: Ross Gares, Rain Carbon. Continuing the answer there; in my pre-filed testimony I stated that without the ability to operate the kilns when the inlet pyroscrubber is below 1800 degrees the facility would often be forced to shut down during a malfunction or breakdown. 09:32:38 09:32:40 09:32:43 09:32:45 09:32:48 09:32:50 09:32:53

That is because some malfunctions or breakdowns can be repaired in a reasonable time period which allows the facility to operate in an idle or slow roll mode, meaning that coke is not added to the kiln. 09:32:55 09:32:56 09:32:59 09:33:04 09:33:07

This can cause the inlet temperature to the pyroscrubber to drop below 1800 degrees Fahrenheit without the requested rules to allow alternative emissions limits. 09:33:10 09:33:12 09:33:15 09:33:18

When the inlet pyroscrubber drops below 1800 degrees Fahrenheit the facility would be required to shut down during these malfunctions and breakdowns. 09:33:21 09:33:24 09:33:26 09:33:28

I would refer the Board members to pages 09:33:30

seven and eight of my pre-filed testimony where I discuss this in further detail. 09:33:32 09:33:35

MR. RAO: Thank you. Question four; the proposed alternative particulate matter standard under Section 212.322(d)2 states in part, quote, it shall not be a violation of this part to operate the pyroscrubber servicing kiln one or kiln two below the minimum operating temperature in subsection (d)(1) during this time, unquote. 09:33:38 09:33:44 09:33:49 09:33:55 09:33:58 09:34:03 09:34:05

Please clarify if Rain Carbon is required by any provisions in part 212 to operate the pyroscrubber servicing kiln one or kiln two to operate at 1800 degrees Fahrenheit. 09:34:10 09:34:13 09:34:18 09:34:22

If not, please explain the proposed intent. 09:34:25 09:34:25

MR. GARES: Rain Carbon is required to demonstrate compliance with part 212, specifically PM emissions for process emission units under Section 212.322. 09:34:30 09:34:33 09:34:35 09:34:39

During periods when the inlet to the pyroscrubber is below 1800 degrees Fahrenheit the facility cannot demonstrate continuous compliance with the PM emissions limits as determined under Section 212.322. 09:34:43 09:34:46 09:34:49 09:34:53 09:34:56

Stated differently, the facility is effectively required to maintain a temperature at or above 1800 degrees Fahrenheit at the inlet to the pyroscrubber to ensure that the PM emissions are sufficiently controlled by the pyroscrubber to demonstrate compliance with Section 212.322. 09:35:01 09:35:03 09:35:05 09:35:09 09:35:12 09:35:15

In addition, as discussed in Rain Carbon's Statement of Reasons supporting his proposed rulemaking, I would refer the Board members to pages 16 through 20 of the Statement of Reasons, as well as pages nine and 10 of my pre-filed testimony. 09:35:22 09:35:24 09:35:25 09:35:29 09:35:31 09:35:34

In 2017 Rain Carbon entered into a settlement agreement with Illinois EPA. That settlement agreement requires, which remains in effect to this day, that the facility maintain an inlet pyroscrubber temperature of 1800 degrees Fahrenheit in order to ensure compliance with the PM emissions limits under part 212, Section 4.2.2 FIE of the CAAPP permit explicitly incorporates this requirement to maintain an 1800 degree Fahrenheit inlet scrubber temperature except during startup and malfunction, breakdown conditions. 09:35:35 09:35:40 09:35:43 09:35:47 09:35:48 09:35:51 09:35:54 09:36:06 09:36:10 09:36:12 09:36:15 09:36:18

A copy of the CAAPP permit and a copy of the 2017 Illinois EPA settlement agreement was provided to the Board as exhibits to the Statement of Reasons. 09:36:19 09:36:21 09:36:24 09:36:27

MR. RAO: Thank you. Question five. On page six you stated the natural gas burners are used to increase the temperature of the kiln and pyroscrubber from ambient to a minimum temperature of 400 degrees Farenheit as measured at the inlet to the pyroscrubber. 09:36:31 09:36:36 09:36:41 09:36:45 09:36:48 09:36:52

Please comment on whether high temperature natural gas burners are available that may be used to help increase the temperature of the kiln and pyroscrubber from ambient to a minimum temperature 1800 degree Fahrenheit. 09:36:54 09:36:56 09:36:58 09:37:00 09:37:03

If so, discuss the implications of using such high temperature burners in the calcining kilns. 09:37:06 09:37:09 09:37:09

MR. GARES: The burners are utilized to reach a minimum temperature of 400 degrees Fahrenheit at the inlet to the pyroscrubber. This is further discussed on page five of my pre-filed testimony. 09:37:15 09:37:16 09:37:19 09:37:22 09:37:25

The kiln temperatures achieved by firing 09:37:27

the burner before feed is added to the kilns are much higher. Approximately 1100 degrees Fahrenheit on the discharge end of the kiln and approximately 800 degrees Fahrenheit on the feed and inlet chamber of the kiln. It is important for there to be clear understanding of the function of the burners. 09:37:29 09:37:32 09:37:36 09:37:39 09:37:43 09:37:46 09:37:48

The burners are not operated and are not designed for the purpose of achieving a minimum pyroscrubber inlet temperature to ensure environmental compliance. 09:37:50 09:37:52 09:37:55 09:37:57

The purpose of the burner is to preheat the refractory line kiln and its supporting refractory line equipment. The addition of green coat to the kiln is necessary to achieve the 1800 degree Fahrenheit pyroscrubber inlet temperature. 09:37:59 09:38:02 09:38:03 09:38:06 09:38:09

That temperature cannot be achieved by burners alone. As discussed on pages 11 and 12 of my pre-filed testimony, the facility has already agreed as part of a settlement agreement earlier this year with USEPA to increase each burner's natural gas-firing capacity. 09:38:12 09:38:14 09:38:20 09:38:23 09:38:26 09:38:30

That burner upgrade project is currently underway and with an anticipated completion 09:38:34 09:38:36

before the end of 2023. The higher capacity burners will not be able to raise temperatures anywhere near sufficient to maintain 1800 degrees Fahrenheit at the pyroscrubber inlet temperature. Therefore, the burner upgrade project will not eliminate the need for the requested alternative emissions limits contained in the Rain Carbon's proposed rule language. 09:38:40 09:38:43 09:38:46 09:38:49 09:38:53 09:38:56 09:38:58 09:39:01

MR. RAO: You mentioned the burner upgrade will not help in raising the temperature to 1800 degrees Fahrenheit, but will it reduce the time it takes to reach 1800 degrees Fahrenheit? 09:39:06 09:39:07 09:39:11 09:39:15 09:39:18

MR. GARES: I think it would be premature to give you that answer now. 09:39:20 09:39:22

MR. RAO: Okay. 09:39:24

MR. GARES: We -- we've -- when we complete this project obviously we will learn a lot from it. We believe that the capacity increase will be 20 to 30 percent more capacity on the burner. 09:39:25 09:39:27 09:39:31 09:39:33 09:39:36

Whether that comes to actual fruition upon completion of that project and what we get as a result of this project, but it would not -- 09:39:38 09:39:40 09:39:43

I don't -- I think -- we want to make sure that we point out to you is we won't get to the 1800 degrees -- 09:39:46 09:39:48 09:39:48

MR. RAO: Okay. 09:39:53

MR. GARES: -- that's required of the burner. 09:39:53 09:39:54

MR. RAO: Thank you. Question six. We already touched on this and you said you'll get back to us some of the information in that question, so we'll skip that one. 09:39:56 09:39:58 09:40:02 09:40:03

Question seven. Mr. Gares, on page 11 you reference to a settlement agreement made with USEPA recently. Can you please say if that agreement is in the record? If not, can you please send us a copy of it? 09:40:08 09:40:15 09:40:19 09:40:23 09:40:25

MR. GARES: The 2023 Consent Agreement with USEPA was submitted as Exhibit C -- 09:40:28 09:40:30

MR. RAO: Okay. 09:40:30

MR. GARES: -- to Rain Carbon's Statement of Reasons. 09:40:33 09:40:33

MR. RAO: Thank you. 09:40:35

MR. GARES: Yes. 09:40:36

MR. RAO: Question eight. On page 14 you state the proposed particulate matter alternate 09:40:38 09:40:41

emission limit provides limited relief during the period of startup when it's not possible to read the pyroscrubber temperature sufficient to control PM, particulate matter, rather than an averaging period for the duration of the startup. Please comment on whether there is a significant difference between the two time periods? 09:40:47 09:40:49 09:40:52 09:40:54 09:40:59 09:41:02 09:41:04

MR. GARES: The ability of the facility to demonstrate compliance with the opacity and PM regulations differ. Opacity is generally expected to -- opacity is generally expected to achieve compliance -- with the 30 percent opacity standard by the end of the first hour of startup from ambient temperatures. 09:41:10 09:41:12 09:41:16 09:41:19 09:41:24 09:41:27 09:41:29

This was demonstrated during the recent engineering testing in July of this year. While opacity exceeded 50 percent during the periods of the first hour of startup, the averaging period proposed by Rain Carbon's alternative emissions limit is appropriate to demonstrate compliance with the opacity limit because opacity levels are generally highest during the initial period of startup, and rapidly decrease thereafter. 09:41:32 09:41:34 09:41:38 09:41:44 09:41:44 09:41:48 09:41:51 09:41:55 09:41:58

An averaging period is appropriately 09:42:02

tailored for this type of emissions profile. By contrast, compliance with the PM emission limits may not be achieved until the pyroscrubber inlet temperature reaches 1800 degrees F. It generally can take from 17 to 24 hours after feed is introduced to the kiln to achieve a pyroscrubber inlet temperature of 1800 degrees during a startup, and anywhere from five to seven hours after feed is reintroduced to the kiln to reach that temperature if the kiln was in idle or slow roll state during a malfunction or breakdown event. 09:42:04 09:42:07 09:42:11 09:42:15 09:42:19 09:42:23 09:42:26 09:42:28 09:42:31 09:42:35 09:42:38 09:42:40

Thus, while opacity compliance may be achieved within one hour, PM compliance will take substantially longer. 09:42:41 09:42:44 09:42:47

As observed during the July engineering test, see table 4-1 of the Technical Support Document, PM emissions were greater than the calculated maximum allowable PM emission rate under Section 212.322 throughout portions of the startup period. 09:42:48 09:42:50 09:42:54 09:42:57 09:43:00 09:43:05

Even as temperatures continue to climb from about 700 degrees Farenheit through about 1400 degrees Fahrenheit, PM emissions rates also 09:43:07 09:43:10 09:43:15

fluctuated during this period. Taken together, the engineering test evidences that PM emissions may exceed regulatory limits during any period of time that the inlet temperature to the pyroscrubber is below 1800 degrees Fahrenheit. 09:43:19 09:43:22 09:43:26 09:43:29 09:43:32

This includes periods of startup as well as malfunctions and breakdowns that cause temperatures to drop below 1800 degrees Fahrenheit. 09:43:36 09:43:38 09:43:41 09:43:43

As a consequence, the averaging period approach utilized for capacity -- excuse me, utilized for opacity -- is not appropriate as an alternative emissions limit for PM due to the longer and more varied scenarios when PM compliance cannot be achieved. 09:43:44 09:43:47 09:43:52 09:43:56 09:43:59 09:44:02

MR. RAO: Thank you. I think you answered the second part of the question. So that's all I have for you, Mr. Gares. I have a few questions for Mr. Higgins. 09:44:06 09:44:07 09:44:11 09:44:14

(Starting questions directed to Mr. Higgins) 09:44:14

MR. RAO: On pages six and seven of your testimony you state that Trinity and USEPA's Significant Impact Levels for assessing the environmental impact of the proposed AELs because 09:44:18 09:44:20 09:44:25 09:44:29

of lack of thresholds for evaluating the environmental impact from SMB events. Line A. Please comment on whether this methodology has been previously used in Illinois and other states to evaluate the impact of SMB emissions on attainment or maintenance of NAAQS to USEPA. 09:44:31 09:44:33 09:44:41 09:44:43 09:44:47 09:44:52

MR. HIGGINS: If you don't mind, I'll answer B and C all together. 09:44:56 09:44:57

MR. RAO: Okay. 09:45:00

MR. HIGGINS: Okay. We are not familiar with how or whether other states are modeling impact of proposed startup, malfunction or breakdown rulemakings following U.S. -- yeah. 09:45:02 09:45:03 09:45:05 09:45:07

We are not familiar with how or whether other states are modeling the impact of proposed startup, malfunction, or breakdown rulemakings following the USEPA SSM SIP com. 09:45:12 09:45:14 09:45:16 09:45:20

Nevertheless, it is important to clarify that the modeling of emissions generated during startup, malfunction and breakdown events are no different than modeling emissions generated during normal operations, except in terms of their frequency and randomness. 09:45:23 09:45:25 09:45:28 09:45:31 09:45:34 09:45:37

That is to say that AERMOD, the ambient 09:45:40

air quality modeling software, does not differentiate between emissions during normal operations and those during startup, malfunction and breakdown. This is relevant because the use of significant impact levels to assess the impact of a proposed major modification is a well-accepted methodology. 09:45:42 09:45:45 09:45:47 09:45:50 09:45:53 09:45:56 09:45:59

its application to assess the impact of additional emissions from operation during startup, malfunction and breakdown is no different as the AERMOD software considers these emissions as if they were generated by a plan modification. 09:46:02 09:46:04 09:46:06 09:46:09 09:46:12 09:46:15

That is, the model considered the increase in emissions that would result from operating during startup, malfunction and breakdown as compared to normal or baseline operations. 09:46:16 09:46:18 09:46:20 09:46:23 09:46:26

As explained in Section eight of Rain Carbon's Statement of Reasons, specifically pages 30 and 31, the use of Sils to demonstrate and honor appearance under Section 110 L of the Clean Air Act is appropriate because the impacts of the model below the Sil are regarded as having a, 09:46:28 09:46:31 09:46:33 09:46:37 09:46:41 09:46:44

quote, not meaningful or significant, end quote, impact on air quality. 09:46:47 09:46:50

Using the Sil to demonstrate that proposed AELs would have an insignificant impact on air quality also demonstrates that the proposed AELs will not interfere with the PM or ozone max in Illinois. 09:46:54 09:46:57 09:46:59 09:47:03 09:47:07

MR. RAO: Thank you. Question 10. On page 1-1 the Technical Support Document states that during the startup test performed on July 20th, 2023, the maximum opacity reading was recorded at 50 percent and about 30 percent for more than eight minutes in a 60 minute feed, which is I think named as run number one. 09:47:09 09:47:14 09:47:19 09:47:21 09:47:25 09:47:30 09:47:32

The other four test runs did not exceed opacity limit of 30 percent. Based on the opacity testing results, 10(a), what would be the shortest averaging time required to comply with the 30 percent opacity limit? 09:47:39 09:47:41 09:47:44 09:47:49 09:47:52

I realize Mr. Gares answered some of these questions about opacity and PM, but -- 09:47:54 09:47:57

MR. HIGGINS: Sure. 09:47:57

MR. RAO: -- if you want to add anything please feel free. 09:48:01 09:48:03

MR. HIGGINS: So Rain Carbon believes that the July 20th, 2023 engineering test was a representative startup event at the facility. However, because the facility is not required by rule or by its CAAPP permit to monitor opacity during startup, the July engineering test reflects the only available data of method nine opacity observations during startup.

Rain Carbon lacks sufficient data to determine the shortest averaging time required to comply with the 30 percent opacity standard during startup.

Part of the reason is that, as noted above, the facility does not routinely conduct method nine observations during startup conditions.

In addition, the startup conditions are inherently variable. While the startup on July 20th of 2023 may have resulted in a few minutes of opacity exceeding the 30 percent standard, subsequent startups at different time periods under different conditions will produce different results.

For example, the first opacity

observation on July 20th occurred when the inlet temperature to the pyroscrubber was about 600 degrees Fahrenheit. See tables 2-1 and 4-1 of the TSD. A lower temperature, for example, closer to 400 degrees Fahrenheit, is expected to result in higher opacity readings. 09:49:04 09:49:07 09:49:10 09:49:15 09:49:18 09:49:21

The proposed averaging period in Rain Carbon's AEL for opacity is intended to accommodate such higher and longer duration of opacity readings. 09:49:24 09:49:29 09:49:31 09:49:32

MR. RAO: Does that answer 10(b) or -- 09:49:38

MR. HIGGINS: Yes. 09:49:44

MR. RAO: Okay. Go on to question 11. 09:49:45

On page 3-1 the Technical Support Document notes that the mass VOM emission rates calculated by AirSource during each of the five test runs were significantly below the allowable volatile organic material emission rate of eight pounds per hour under 35 Ill. Admin code 215 -- I think it should be 3-0. 09:49:50 09:49:55 09:49:59 09:50:03 09:50:07 09:50:11 09:50:19

I'll have to get that citation. I think the citation that we have applies to question one. So given the test runs conducted by AirSource were procedurally representative of a 09:50:24 09:50:26 09:50:29 09:50:34

typical startup, do you believe that the test results support a much shorter averaging time rather than the proposed 24-hour averaging figure for VOM emissions during startups? 09:50:37 09:50:41 09:50:44 09:50:47

MR. HIGGINS: Well, the July 20th, 2023 engineering test was conducted during a representative startup event. The VOM sampling results serve to demonstrate that VOM emissions are substantially higher during the initial period of startup when the inlet temperature to the pyroscrubber is lowest. 09:50:50 09:50:54 09:50:56 09:51:00 09:51:03 09:51:06 09:51:09

Looking at table 3-1 of the Technical Support Document, VOM emissions during run one were over six times greater than emissions during runs where the pyroscrubber inlet temperature was approximately over 300 degrees Fahrenheit hotter. 09:51:11 09:51:14 09:51:17 09:51:22 09:51:24

And while run one was below the eight pound per hour regulatory limit, the inlet pyroscrubber temperature during run one was close to 700 degrees Fahrenheit, nearly 300 degrees Fahrenheit hotter than the typical 400 degree Fahrenheit temperature at which green coat is typically introduced. 09:51:28 09:51:30 09:51:34 09:51:37 09:51:40 09:51:44 09:51:47

VOM emissions are therefore expected to 09:51:48

be significantly higher than 2.41 pounds per hour when the inlet temperature to the pyroscrubber is below 700 degrees Fahrenheit, as is often the case. As a result, the proposed AEL for VOM that allows for averaging VOM emissions during startup remains an appropriate averaging period to accommodate expected high VOM emissions during initial periods of startup. 09:51:51 09:51:56 09:51:59 09:52:02 09:52:06 09:52:10 09:52:13 09:52:16

MR. RAO: Thank you. 09:52:19

HEARING OFFICER: Okay. 09:52:19

MR. RAO: That's all. 09:52:19

HEARING OFFICER: I do have one other question. If you could please respond here today or in a public written comment to the Joint Committee on Administrative Rules or JCAR's staff changes to add the questions to the rule text in public comment two. Okay. 09:52:22 09:52:23 09:52:26 09:52:31 09:52:33 09:52:37

MR. LORING: Yeah, we will -- we'll respond in our post-hearing comments. 09:52:38 09:52:40

HEARING OFFICER: Excellent. Thank you. Are there any other questions from the Board? Okay. Thank you so much. So one second. Okay. Yeah. And there might be more changes as well so we'll submit those and then the hearing officer 09:52:42 09:52:43 09:52:45 09:53:01 09:53:03

will adopt those. 09:53:03

MR. LORING: Okay. Thank you. Thank you. 09:53:08

HEARING OFFICER: Okay. Next we will have David Wall of the Illinois Environmental Regulatory Group. Please step up here. All right. If you're ready would the court reporter please swear in the witness? 09:53:11

(Witness sworn) 09:53:46

DAVID WALL, 09:53:46

being first duly sworn on oath, was examined and testified as follows: 09:53:46

HEARING OFFICER: Okay. As mentioned earlier, the witness' testimony is entered into the record as if read and it's entered as Hearing Exhibit Number Three. 09:53:53

We will again proceed with questions first from the Attorney General's Office, if you want to step up. 09:54:03

DIRECT EXAMINATION BY 09:54:07

MR. JAMES: 09:54:07

MR. JAMES: Jason James, Illinois Attorney General's Office. I'm going to go through my pre-filed questions like I did with 09:54:18

Rain Carbon and maybe have some follow-ups depending on your responses. 09:54:27 09:54:30

IERG states that its proposed amendment, quote, has no potential to adversely impact air quality. In support, IERG states that, quote, there has never been a carbon monoxide non-attainment area in the state of Illinois under the National Ambient Air Quality Standards Program, also known as NAAQS. 09:54:33 09:54:35 09:54:37 09:54:41 09:54:45 09:54:45 09:54:49

However, IERG proposes to implement standards based on the National Emission Standards for hazardous air pollutants known as NESHAP, rather than the NAAQS program. 09:54:50 09:54:53 09:54:55 09:54:59

The federal boiler NESHAP is intended to regulate emissions of hazardous air pollutants known as HAPs. HAPs are types of pollutants that are known or suspected to cause cancer or other serious health effects, often in very low quantities. 09:55:01 09:55:04 09:55:05 09:55:08 09:55:10 09:55:13

So sub question A; how does Illinois' attainment status for carbon monoxide under the NAAQS program relate to HAP emissions from boilers and compliance with the federal boiler NSEHAP? 09:55:14 09:55:17 09:55:21 09:55:23 09:55:23

MR. HIGGINS: Illinois' attainment status for CO does not directly relate to HAP emissions for boilers. Rather, it demonstrates the current levels of CO emissions which includes SMB emissions from heaters and boilers within the state are not and have not caused adverse ambient air quality impacts of CO in Illinois. 09:55:27 09:55:30 09:55:33 09:55:35 09:55:38 09:55:40 09:55:43

This further demonstrates that IERG's proposal, which will not increase CO emissions from regulated sources, will not cause or contribute to any adverse ambient impacts. 09:55:46 09:55:49 09:55:51 09:55:53

MR. JAMES: But in IERG's proposal the alternative emissions location is based on the NESHAP regulation, is that right? 09:55:58 09:56:00 09:56:03

MR. HIGGINS: So IERG's proposal references the boiler map of NESHAP because it's an established USEPA approved program that regulates SSM similar to SMB emissions from combustion sources. 09:56:05 09:56:07 09:56:11 09:56:14 09:56:21

And as we can explain, I believe, when we get to question 2(b), it's appropriate to look at that as an established regulatory format for CO emissions as that boiler map uses CO as the surrogate pollutant for HAP under that rule. 09:56:22 09:56:24 09:56:28 09:56:32 09:56:35

MR. JAMES: Okay. I'll go ahead and move onto B then. The federal boiler NESHAP is not primarily intended to limit carbon monoxide emissions, rather it uses carbon monoxide as a surrogate for limits on organic hazardous air pollutants. 09:56:39 09:56:40 09:56:44 09:56:46 09:56:49 09:56:49

Why does the federal boiler NESHAP operate in this way? How does using carbon monoxide as a surrogate for organic HAPs relate to IERG's proposal? And like you said, we sort of already addressed this, but please go ahead and add anything else. 09:56:55 09:56:57 09:57:00 09:57:03 09:57:05 09:57:08

MR. HIGGINS: The USEPA included CO as a surrogate for organic HAP emissions in the boiler map regulation as the pollutants generally trend together from combustion sources as both are products of incomplete combustion and are impacted by similar operational parameters. 09:57:08 09:57:12 09:57:14 09:57:16 09:57:19 09:57:21

It is also simpler and more economical to set emission limits, work practice standards, or monitor emissions from a single pollutant compared to several, which is why USEPA often utilizes surrogate pollutants in rulemaking. 09:57:25 09:57:27 09:57:30 09:57:30 09:57:36

Further, the feasible control 09:57:38

technologies are the same for both pollutants. That is to say, good combustion practices. IERG is proposing to reference the SMS language from the boiler map as it is an established regulatory compliance option, in this case a work practice, established by USEPA with respect to SSM emissions from combustion sources. 09:57:40 09:57:43 09:57:48 09:57:51 09:57:53 09:57:56 09:58:00

While NESHAP regulates organic HAP emissions it sets CO as a surrogate pollutant. As the formation of the pollutants is impacted by the same operating characteristics and the feasible control technologies and limitations of their effectiveness during SSM are the same, it is appropriate to follow the same requirements minimizing CO emissions as for organic HAP emissions from combustion sources. 09:58:02 09:58:04 09:58:04 09:58:10 09:58:12 09:58:15 09:58:19 09:58:21 09:58:25

MR. JAMES: Thank you. Question C; could IERG's proposed regulations have any adverse impact on human health or the environment due to emissions of HAPs? 09:58:26 09:58:29 09:58:31 09:58:34

MR. HIGGINS: No. IERG's proposal does not address or change any requirements regarding HAPs. Rather, IERG's proposal would use the same work practice requirements from the boiler map 09:58:35 09:58:38 09:58:40 09:58:43

which does regulate HAPs but with C/O as a surrogate to regulate CO emissions. The proposal would not have any adverse impact on human health or the environment as the emissions from regulated sources will not increase under this proposal. 09:58:45 09:58:49 09:58:52 09:58:55 09:58:58 09:58:59

MR. JAMES: Thank you. Question D; have boilers in Illinois emitted organic HAPs in violation of state or federal environmental laws or regulations? 09:59:00 09:59:03 09:59:05 09:59:07

MR. HIGGINS: Emissions of HAP from boilers within Illinois are not specifically relevant to IERG's proposal. IERG does not have knowledge of the compliance history of all boilers within the state given the large number of boilers operating within the state. 09:59:09 09:59:10 09:59:13 09:59:16 09:59:17 09:59:19

While not relevant to IERG's proposal, USEPA has identified a number of organic HAPs for which CO serves as a regulated surrogate under the boiler map. 09:59:22 09:59:24 09:59:27 09:59:27

These emissions can also vary significantly by type and magnitude depending on the type of fuel combusted. These emissions could include, however, acetaldehyde, benzene, 09:59:30 09:59:32 09:59:35 09:59:38

chloroform, formaldehyde, hexane, and toluene as well as many others. 09:59:45 09:59:47

Again, however, these organic HAPs are not relevant here. IERG is proposing an alternative emission limit only as to the CO standard in Section 216.121. 09:59:48 09:59:50 09:59:52 09:59:55

MR. JAMES: Thanks. And that answer also addresses the question in 1E, is that right, that asks for types of HAPs? 09:59:59 10:00:02 10:00:08

MR. HIGGINS: Yes. 10:00:09

MR. JAMES: Okay. Question number two; at hearing for the R23-18 rulemaking, Illinois EPA testified that the US Environmental Protection Agency is now requiring SIP submittals, and that's State Implementation Plan submittals, to include impacts on environmental justice or EJ areas and EJ communities. 10:00:10 10:00:14 10:00:19 10:00:21 10:00:25 10:00:28 10:00:30

Neither IERG's proposal nor testimony in this R23-18(a) docket mentioned environmental justice. At the second hearing in R23-18, IERG stated that, quote, IERG's proposed provisions will not result in any adverse impacts on EJ areas or EJ communities. 10:00:35 10:00:38 10:00:42 10:00:48 10:00:50 10:00:53

IERG's post-hearing responses stated that 10:00:56

based on IEPA's EJ Start tool, quote, at least one IERG member that could be impacted by IERG's alternative proposal is located in an environmental justice area. IERG intends its proposal to be submitted to USEPA as a SIP revision upon being adopted. 10:00:57 10:01:02 10:01:05 10:01:08 10:01:12 10:01:16

Is it your understanding that USEPA will require discussion of EJ impacts to be included in this SIP submittal? What's your understanding of the kind of information about EJ impacts USEPA requires? 10:01:17 10:01:20 10:01:23 10:01:26 10:01:30

Does the current rulemaking record in R23-18(a) include sufficient information about EJ impacts to support a SIP submittal? 10:01:30 10:01:33 10:01:37

MR. HIGGINS: It is IERG's understanding that pursuant to a federal executive order, federal agencies are directed to identify and address EJ impacts of their actions to the greatest extent practicable and permitted by the law. 10:01:40 10:01:41 10:01:44 10:01:47 10:01:52 10:01:53

However, it is also IERG's understanding that neither the Clean Air Act nor the implementing regulations for SIP submittals requires or prohibits an EJ evaluation. 10:01:53 10:01:55 10:01:58 10:02:01

Regardless, as IERG has previously stated, the proposal will not result in any increase in emissions from the regulated combustion sources. Boilers and heaters across the state have always had elevated emissions during SMB events. 10:02:05 10:02:06 10:02:09 10:02:12 10:02:15 10:02:18

Under IERG's proposal regulated sources will continue to operate as they always have with no increase in emissions. With no increased emissions there is no potential for adverse impact to EJ areas as a result of this proposal. 10:02:20 10:02:20 10:02:23 10:02:26 10:02:28

Therefore, it is IERG's position that its proposal include sufficient information needed to support SIP submittal. 10:02:31 10:02:33 10:02:35

MR. JAMES: And when you say no increase, is that -- that's relative to the regulations that existed before the rule was adopted in R23-18? 10:02:37 10:02:39 10:02:41 10:02:45

MR. HIGGINS: That's relative to how the boilers have always operated and are likely to continue to operate. 10:02:47 10:02:49 10:02:52

MR. JAMES: How would it change relative to the rules as they currently exist which include the regs that the Board adopted in 10:02:55 10:02:56 10:02:59

R23-18? 10:03:01

MR. HIGGINS: I don't believe they will change, as I previously testified. It's not economically or technically feasible to control emissions during SMB events. 10:03:03 10:03:03 10:03:06 10:03:09

MR. JAMES: Okay. 2(b). What impact will IERG's proposal in R23-18(a) have on EJ communities and EJ areas relative to Illinois' current air regulations? And then provide the locations of these communities and areas that would be affected. 10:03:12 10:03:15 10:03:21 10:03:24 10:03:27 10:03:28

MR. HIGGINS: There are a number of currently identified EJ areas within Illinois as IEPA's EJ Start mapping tool demonstrates. 10:03:30 10:03:31 10:03:35

Given the number of regulated combustion sources within the state, there are numerous boilers and heaters operating within a number of these EJ areas within the state. 10:03:37 10:03:39 10:03:41 10:03:43

However, as noted previously, the IERG proposal will have no impact on emissions and therefore no adverse impact to any EJ area in the state. 10:03:46 10:03:49 10:03:51 10:03:54

MR. JAMES: Thanks. Question three. The regulatory text of IERG's proposal incorporates 10:03:56 10:04:00

by reference 40 C.F.R. 63, Subpart DDDDD, that's five D's, (2022). Last year USEPA revised Subpart DDDDD, five D's. The 2022 annual edition of Title 40 of the Code of Federal Regulations was published on July 1st, 2022. Therefore, the 2022 annual editions, Title 40, does not contain the most recent revisions to Subpart DDDDD. 10:04:02 10:04:10 10:04:18 10:04:23 10:04:26 10:04:30 10:04:34

The Title 40 in the e-C.F.R. -- that's electronic C.F.R. -- is regularly updated and does contain the most recent version of Subpart DDDDD. Does IERG's proposed regulatory language refer to the 2022 annual edition of the C.F.R.? 10:04:34 10:04:34 10:04:44 10:04:47 10:04:51

If not, what does IERG's proposed regulatory language refer to? 10:04:55 10:04:57

MR. HIGGINS: IERG's proposal refers to the current version of the boiler map as of today, last amended October 6th, 2022. 10:04:59 10:05:00 10:05:03

MR. JAMES: And is that reflected in the proposed regulatory text that's submitted by IERG? 10:05:08 10:05:10 10:05:13

MR. HIGGINS: I believe that was the intent of our proposal, and we can clarify that as needed. 10:05:14 10:05:14 10:05:17

MR. JAMES: Okay. And that sort of goes 10:05:18

to my question in 3B. Does IERG's most recent -- and then onto 3C -- should it directly cite the most recently revised version to avoid ambiguity, or would you propose some other form of citing this? 10:05:19 10:05:23 10:05:27 10:05:31 10:05:34

MR. HIGGINS: IERG has referenced the boiler map because it contains approved USEPA work practices for minimizing emissions, including organic HAPs, with CO as a surrogate for combustion sources during SMS events. 10:05:34 10:05:35 10:05:37 10:05:39 10:05:43

IERG is amenable to referencing the most recently revised version of the boiler map as amended October 6th, 2022. 10:05:44 10:05:48 10:05:50

MR. JAMES: Okay. Thank you. That's all I have. 10:05:52 10:05:54

HEARING OFFICER: Okay. Are there any other questions from any other participants? Seeing none -- 10:05:55 10:05:57 10:06:00

MR. RAO: I'd just like to note for the record, the Board had questions -- previously asked questions -- of Mr. Wall, and it's still part of the record. So your answers to those questions will be used in our evaluation. 10:06:00 10:06:03 10:06:05 10:06:10 10:06:15

HEARING OFFICER: Yes. Do any Board 10:06:19

members have any additional questions? Okay. 10:06:21
Again, I'm just going to reiterate, if you could 10:06:23
please respond here or in a written public 10:06:26
comment to JCAR's staff changes to the questions 10:06:29
in the rule text in public comment number two. 10:06:30
Awesome. Thank you. 10:06:33
All right. So we will move on to the 10:06:36
next witness which is John Derek Reese with the 10:06:37
American Petroleum Institute. All right. Would 10:06:41
the court reporter please swear in the witness? 10:07:22
(Witness sworn) 10:07:22
JOHN REESE, 10:07:22
being first duly sworn on oath, was examined and 10:07:22
testified as follows: 10:07:22
HEARING OFFICER: Okay. As mentioned 10:07:30
earlier, the witness' testimony is entered into 10:07:33
the record as if read and entered as hearing 10:07:35
Exhibit Number Four. So we will then proceed 10:07:38
with questions from the Attorney General's Office 10:07:44
first. 10:07:46
And if you can please state your name 10:07:54
first for the court reporter. Thank you. 10:07:56
DIRECT EXAMINATION BY 10:07:56
MR. ARMSTRONG: 10:07:56

MR. ARMSTRONG: Andrew Armstrong for the Illinois Attorney General's Office. Good morning. 10:07:58 10:07:59 10:08:09

MR. REESE: Good morning. 10:08:09

MR. ARMSTRONG: In its Statement of Reasons, API asserts that one of the refineries conducted screening modeling of impacts using continuous emission monitoring system data from recent startup events to conservative estimate of ambient impacts during these events. 10:08:10 10:08:11 10:08:13 10:08:16 10:08:20 10:08:25

The incremental emission impact during startups were less than three percent and six percent of the one hour and eight hour standards respectively. So that's taken from API's statement of Reasons at page 40. 10:08:29 10:08:32 10:08:35 10:08:38 10:08:42

Question number one: Does this assertion refer to monitoring data summarized in the Technical Support Document accompanying Marathon Petroleum Company, LLC's Petition For an Adjusted Standard at page TSD-14? 10:08:45 10:08:48 10:08:52 10:08:55 10:09:00

MR. REESE: John Derek Reese, American Petroleum Institute. This passage instead refers to the modeling conducted by ExxonMobil and described in their petition for the adjusted 10:09:09 10:09:16 10:09:21 10:09:24

standard. 10:09:24

MR. ARMSTRONG: Oh. Okay. Thank you. 10:09:27

If I could though ask about the Marathon data. 10:09:30

Why was Marathon required to operate the two 10:09:36

monitoring stations from calendar years 2017 10:09:40

through 2019? 10:09:43

When were the monitoring stations first 10:09:45

installed, and have the monitoring stations been 10:09:47

operated at any time since the end of the 2019 10:09:50

calendar year? 10:09:52

MR. REESE: John Derek Reese, American 10:09:55

Petroleum Institute. Marathon was required to 10:09:57

operate two monitoring stations per the 10:10:02

conditions of the consent order effective May 10:10:03

15th, 2015, between Marathon and the State in 10:10:06

People versus Marathon Petroleum Company, 10:10:10

Crawford County, as a result of the resolution of 10:10:12

the alleged violations which were mostly 10:10:15

permitting vapor pressure and VOM-related 10:10:18

allegations, which Marathon did not admit to. 10:10:21

Marathon agreed to conduct a supplemental 10:10:23

environmental project SEP. The purpose of the 10:10:26

SEP was to undertake an ambient air modeling and 10:10:27

monitoring project at and around the Robinson 10:10:30

refinery to evaluate emissions from the refinery for baseline purposes and to compare them, then recently revised as of two NAAQS. The project included installation of two ambient air monitors and a meteorological station. The project operated from January 1st of 2017 through December 31st, 2020. 10:10:33 10:10:36 10:10:39 10:10:45 10:10:45 10:10:49 10:10:52

The monitoring stations monitor the following emissions; carbon monoxide, CO; Nitrogen dioxide, NO2; total reduced sulphur, TRSEM 10, and VOC. 10:10:54 10:10:57 10:11:00 10:11:05

MR. ARMSTRONG: Thank you. That covered number three so we'll move on to number four. Please describe the location of the two monitoring stations relative to both (a) the Marathon refinery's fence line, and (b) the Marathon refinery's fluid catalytic cracking unit, FCCU, including both distance and direction. 10:11:09 10:11:10 10:11:14 10:11:15 10:11:18 10:11:21 10:11:27 10:11:30

MR. REESE: John Derek Reese, American Petroleum Institute. A little wordy as I give you the details, but you have it. Monitoring station number one is situated on property owned and maintained by Marathon and is located 10:11:31 10:11:34 10:11:37 10:11:39 10:11:42

approximately 670 feet north of the northeastern Section of the refinery fence line and approximately 95 feet southeast of a refinery service road. Monitoring station number one is approximately 2000 feet north of the FCCU. 10:11:44 10:11:49 10:11:51 10:11:54 10:11:56

Monitoring station number two is situated on property owned and maintained by Marathon and is approximately -- is located approximately -- 115 feet west of the western edge of Southeast Street, 80 feet northeast of the nearest edge of East Orlando Drive, and 100 feet west of the southwestern fence line. 10:12:01 10:12:03 10:12:06 10:12:09 10:12:12 10:12:15 10:12:22

Monitoring station number two is located at approximately 1900 feet southwest of the FCCU. 10:12:22 10:12:24

MR. ARMSTRONG: Thank you. Question number five. Please state the date and time of each of the five FCCU startups at the Marathon refinery during calendar years 2017 through 2019 as described in Marathon's Technical Support Document at TSD-14. 10:12:30 10:12:32 10:12:34 10:12:39 10:12:43 10:12:46

MR. MESSINA: Alec Messina on behalf of API. And again there is a chart that he's going to read off but it may be easier to look at the chart. 10:12:51 10:12:52 10:12:55 10:12:58

MR. REESE: John Derek Reese, American Petroleum Institute. I'll go in order. So the first startup begins January 7th, 2018 at 01:45. Startup is completed January 8th, 2018 at 07:30. The second startup is February 17th, 2019 at 23:00 hours. Startup is complete February 18th, 2019, 16:45. 10:12:59 10:13:02 10:13:05 10:13:10 10:13:17 10:13:21 10:13:27

The third startup is April 4th, 2019, 17:30. It ends April 5th, 2019 at 04:30. The fourth startup is June 6th, 2019, 13:30. It's complete June 7th, 2019 at 00:30. The last one is December 8th, 2019 at 15:30. It's complete at December 9th, 2019 at 12:00. 10:13:33 10:13:36 10:13:45 10:13:51 10:13:58 10:14:04

MR. ARMSTRONG: Thank you. And I know we won't be reading this into the record today, but if API could please provide all monitoring data available from the two monitoring stations from the dates of those five FCCU startups at the Marathon refinery that were just summarized in post-hearing comments, we would appreciate that. 10:14:11 10:14:13 10:14:15 10:14:20 10:14:23 10:14:27 10:14:32

MR. REESE: John Derek Reese, American Petroleum Institute. We will do that. 10:14:35 10:14:39

MR. ARMSTRONG: That's all for us. Thank you. 10:14:40 10:14:40

HEARING OFFICER: Thank you. All right. Are there any other questions from any other participants? Okay. Seeing none, we will go to Board questions. 10:14:42 10:14:42 10:14:45 10:14:50

MR. RAO: Okay. 10:14:50

CROSS EXAMINATION BY 10:14:50

MR. RAO: 10:14:50

MR. RAO: Good morning, Mr. Reese. 10:14:53

MR. REESE: Good morning. 10:14:54

MR. RAO: Let's start with the Board's question number 13. On page one of your testimony you state that your current responsibilities include advocating on environmental and process safety issues that may impact the procedures and/or operations of the refineries in the United States. 10:14:57 10:14:58 10:15:01 10:15:02 10:15:05 10:15:09 10:15:11

13(a). Please comment on how many refineries with petroleum catalytic cracking units have been affected by USEPA's 2015 SSM SIP call in states other than Illinois? 10:15:13 10:15:16 10:15:21 10:15:24

MR. REESE: John Derek Reese, American Petroleum Institute. There are over 100 refineries operating in 31 different states. Each state had distinctive changes that were 10:15:28 10:15:31 10:15:32 10:15:35

required by the USEPA's 2015 SSM SIP call. Those changes have been focused primarily on the rule of affirmative defense language. What is unique about Illinois' response is that it eliminated for purposes of safety, compliance and startups, use of a federal emission alternative for catalytic cracking unit startups which was specifically written to address safety concerns. 10:15:39 10:15:44 10:15:47 10:15:50 10:15:53 10:15:55 10:15:58 10:16:00

MR. RAO: Are you -- 13B. Are you aware of how the affected refineries in other states are addressing the SIP call requirements? 10:16:04 10:16:08 10:16:11

MR. REESE: John Derek Reese, American Petroleum Institute. I refer the Board back to the public testimony of David Wall on behalf of IERG in the original rulemaking R200-23-018. 10:16:13 10:16:17 10:16:19 10:16:20

In that testimony he stated that other states either do not have CO standards, FCCUs, or they exempt units subject to federal regulations. Examples from Indiana and California were provided with links. 10:16:28 10:16:29 10:16:34 10:16:37 10:16:39

The 200 part per million CO limit in Section 216.361 is unique to Illinois without the proposed AEL. As such, refineries in other states are able to utilize the federal 10:16:41 10:16:45 10:16:50 10:16:53

alternatives for startups. Again, Illinois is the outlier on their approach with respect to process safety. But not including the federal alternative as part of their SIP changes it's important to note that U.S. refineries have been implementing the federal alternatives successfully since 2019. 10:16:56 10:16:58 10:17:01 10:17:02 10:17:05 10:17:08 10:17:08

MR. RAO: Does that answer 13(c) or do you have any more to add to your response? 10:17:14 10:17:17

MR. REESE: John Derek Reese. Just a couple more sentences. So all U.S. refineries and catalytic cracking units are subject to Part 63 NESHAP standards. 10:17:22 10:17:23 10:17:28 10:17:30

These standards have been applicable since the promulgation of the rule in 2016. The final compliance state was 2019. The alternative standard prescribed in refinery Section rules are applicable requirements in all states. 10:17:30 10:17:33 10:17:36 10:17:37 10:17:41

MR. RAO: Question 14. Please clarify whether new or existing petroleum catalytic cracking units are generally subject to the NESHAP standards for petroleum refineries, or would they have to comply with them only if the proposed alternative standards are adopted by the 10:17:42 10:17:45 10:17:50 10:17:52 10:17:56 10:17:59

Board? 10:18:01

MR. REESE: All U.S. refineries with catalytic cracking units are subject to the part 63 NESHAP standards. These standards have been applicable since 2016 promulgation of these standards. 10:18:03 10:18:07 10:18:08 10:18:11 10:18:14

The alternative standard prescribed in the refinery section rules are applicable requirements in all states. Illinois, without the proposed alternative emission limit which incorporates these standards, removes the provision for SCC and startup in refineries. 10:18:15 10:18:16 10:18:20 10:18:21 10:18:24 10:18:27

While this is unlikely to be the intent, the effect of not having an AEL would essentially mandate the refinery conduct startup operations in an unsafe manner. 10:18:29 10:18:33 10:18:36 10:18:38

MR. RAO: Question 15. On page three of your testimony you note that if refractory repairs were made a refractory dry-out period is required and the regenerator temperature must be raised slowly to prevent water from damaging the refractory. 10:18:43 10:18:46 10:18:50 10:18:55 10:18:58 10:19:00

15(a). Please comment on how frequently refractory repairs are done on the cracking 10:19:02 10:19:05

units. 10:19:07

MR. REESE: Every refinery startup is unique and an individual company decision as to the extent of the repairs and the maintenance actions taken during the downtime. 10:19:09 10:19:11 10:19:14 10:19:17

Refractory inspection is a typical task during downtime or when vessel entry occurs. Inspection findings identify the type of refractory repairs to be executed. 10:19:17 10:19:22 10:19:23 10:19:25

MR. RAO: 15(b). What would be typical rate of regenerator temperature increase under normal startup conditions when no refractory repair is involved? 10:19:31 10:19:33 10:19:37 10:19:41

MR. REESE: It's not possible to provide a typical profile answer to the question. The temperature increase profile is dependent upon the individual's vessels and the extent of the refractory work conducted. So some would, you could go faster or slower, depending on the amount of work you had. Right. 10:19:43 10:19:44 10:19:47 10:19:49 10:19:53 10:19:57 10:20:00

MR. RAO: Question 16. On page 10 regarding Marathon Refinery's adjusted standard petition you indicate that Marathon's FCCU had five startups over a period of three years. 10:20:03 10:20:07 10:20:11 10:20:15

16(a). Please clarify whether one or two startups per year are typical for a catalytic cracking unit? 10:20:18 10:20:21 10:20:27

MR. REESE: The number of unit startups can vary based on the reasons for unit downtime. As such, while large turnarounds are on multiple-year intervals is not uncommon for unplanned events to create unit shutdowns or hot standby in a given year, a power outage due to grade issues or weather such as winter storms, hurricanes, or flooding may necessitate a catalytic crack to be shut down. 10:20:30 10:20:32 10:20:35 10:20:38 10:20:40 10:20:43 10:20:46 10:20:49 10:20:53

Equipment breakdowns at the catalytic cracking unit or other units may necessitate a shutdown and subsequent startup. 10:20:54 10:20:54 10:20:58

MR. RAO: 16(b). Would it be possible to provide startup information like Marathon's for FCCUs at other refineries covered by the API's proposal? 10:21:01 10:21:03 10:21:07 10:21:13

MR. REESE: The existing federal refinery standards for catalytic cracking units require continuous emissions monitoring, SIMS, for CO. Performance reports for these monitors is provided on a semiannual basis to IEPA and USEPA. 10:21:14 10:21:16 10:21:18 10:21:21 10:21:23

In these reports the CO concentrations are recorded as well as the periods of shutdown, startup, malfunctions, and/or maintenance which are provided by date and hour. 10:21:28 10:21:31 10:21:33 10:21:35

In its pre-filed questions the Attorney General's Office records Marathon's ambient monitoring data. To our knowledge, the other Illinois refineries have not had similar monitors in their areas in recent years. 10:21:38 10:21:42 10:21:42 10:21:45 10:21:48

MR. RAO: Okay. And you will be responding to the Attorney General's question? 10:21:51 10:21:52

MR. REESE: Right. Yes, sir. 10:21:54

MR. RAO: Okay. Question 17. Also on page 10 you note that API's proposed alternative emissions limit requires the frequency and duration of operations in startup or hot standby mode are minimized to the greatest extent practicable. 10:21:58 10:22:01 10:22:05 10:22:08 10:22:11 10:22:15

17(a). Please comment on whether the affected refineries maintain information on frequency and duration of FCCUs in hot standby mode on a monthly or yearly basis. If so, please provide such data. 10:22:16 10:22:18 10:22:20 10:22:25 10:22:28

MR. REESE: As noted in the previous 10:22:30

answer to question 16, this information is part of the current regulatory report contents for CO SIPs. 10:22:31 10:22:34 10:22:37

MR. RAO: 17(b). Also comment on whether hot standby -- 10:22:38 10:22:41

HEARING OFFICER: Did you have a question? 10:22:43 10:22:45

MR. ARMSTRONG: Yes. Andrew Armstrong with the Illinois Attorney General's Office. I have a follow-up question about the ExxonMobil AERMOD data. I believe it's referenced in the Technical Support Documents for ExxonMobil's proposal for adjusted standard on page 34. 10:22:45 10:22:47 10:22:49 10:22:51 10:22:55 10:23:00

It doesn't appear that there was more detail provided beyond the statement that ExxonMobil has used AERMOD to conduct screening modeling. 10:23:04 10:23:06 10:23:09 10:23:13

And then the -- the results of that, generally summarized -- I was wondering if API could submit more detail about the AERMOD screening that ExxonMobil performed, including the inputs and then more detail on the results? 10:23:14 10:23:17 10:23:20 10:23:23 10:23:26

MR. MESSINA: This is Alec Messina on behalf of API, and we will follow up after the 10:23:32 10:23:34

hearing and provide what information we can. 10:23:37

MR. ARMSTRONG: Sounds good. Thank you. 10:23:39

HEARING OFFICER: Okay. 10:23:41

MR. RAO: So where were we? 17 -- 10:23:42

HEARING OFFICER: A. 10:23:46

MR. RAO: 17(b). Yeah. 17B. Also 10:23:48

comment on whether hot standby operational mode 10:23:51

falls under the purview of SSM SIP calls? 10:23:55

MR. REESE: Hot standby is specifically 10:24:00

noted as an opt-in scenario for the alternative 10:24:01

emission standard in the federal language. 10:24:05

MR. RAO: Okay. Thank you. That's all. 10:24:07

HEARING OFFICER: Okay. Are there any 10:24:10

other questions from the Board? Okay. And then 10:24:11

just again, if you could please respond here 10:24:13

today or in written public comment to JCAR's 10:24:14

staff changes to, and questions, to the rule text 10:24:17

in public comment two as well as to the Board's 10:24:20

suggested changes attached to its pre-filed 10:24:23

questions. Thank you. 10:24:26

MR. REESE: All right. 10:24:26

HEARING OFFICER: It's close enough to 10:24:31

10:30 that I think we'll take a break now for 10 10:24:32

minutes and be back here at 10:35. 10:24:34

(Break taken at this time) 10:24:34

HEARING OFFICER: Back on the record. So we'll be going next to Philip Crnkvich with East Dubuque Nitrogen Fertilizers. Okay. Are you set? And so if the court reporter could please swear in the witness. 10:36:57 10:37:09 10:37:16 10:37:18 10:37:20

(Witness sworn) 10:37:20

PHILIP CRNKVICH, 10:37:20

being first duly sworn on oath, was examined and testified as follows: 10:37:20 10:37:20

HEARING OFFICER: Okay. 10:37:20

MR. TAYLOR: And just for the record, my name is Byron Taylor representing Mr. Crnkvich and Dubuque Fertilizers. 10:37:28 10:37:30 10:37:33

HEARING OFFICER: Okay. As mentioned earlier, the witness' testimony is entered into the record as a thread and it's entered as Hearing Exhibit Number Five. 10:37:35 10:37:36 10:37:38 10:37:43

We will proceed with questions first from the Attorney General's Office, if you'd like to come up here. 10:37:47 10:37:50 10:37:51

MR. JAMES: Hi. Jason James, Illinois Attorney General's Office. And like we had before, I'll read through the questions that we 10:37:52 10:37:59 10:38:03

had pre-filed and then perhaps ask some follow-up depending. 10:38:05 10:38:08

DIRECT EXAMINATION BY 10:38:08

MR. JAMES: 10:38:08

MR. JAMES: And so number one, how did EDNF determine that alternative -- the calculation method -- in using an averaging period was the best option to comply with emission standards while accounting for startups and shutdowns? 10:38:09 10:38:11 10:38:15 10:38:16 10:38:20 10:38:20

EDNF's testimony explains that it's not practicable to initiate emissions control technology sooner by increasing the temperature of the flue more quickly. 10:38:21 10:38:25 10:38:28 10:38:29

Were any other emission control methods considered? For example, using different reductant in the SCR process, or hydrogen peroxide injection? 10:38:32 10:38:34 10:38:36 10:38:36

Please explain whether any alternatives aside from increasing the flue heat more rapidly were considered, and the reasons they would or would not be effective or practical in this context. 10:38:41 10:38:41 10:38:46 10:38:47 10:38:47

MR. CRNKVICH: Okay. East Dubuque 10:38:51

Nitrogen followed the method that USEPA approved in Subpart Ga, which explicitly includes an averaging method that it does not have a carve-out for startup, shutdown or malfunction. 10:38:53 10:38:55 10:38:58 10:39:01

It's a standard that applies at all times during -- during operating periods. This -- okay, that's part one. To the second part of your question, the minimum temperature requirement is independent of the reductant that is used. 10:39:03 10:39:06 10:39:10 10:39:14 10:39:16 10:39:19

It is based on the catalyst that is utilized and that determines what temperature is necessary for the reaction that destroys the nit -- the NO2 or NO -- so it is not emitted. 10:39:19 10:39:22 10:39:25 10:39:33

So changing the reductant would not have any effect. While hydrogen peroxide could theoretically improve the effectiveness of absorption it would not be -- it would be insufficient here. 10:39:37 10:39:40 10:39:44 10:39:46 10:39:49

It does reduce it somewhat, but it would not allow us to meet the three pounds per ton limit during startup and shutdown. 10:39:50 10:39:53 10:39:56

MR. JAMES: Thank you. Number two. EDNF states that the proposed 30 operating day rolling 10:40:02 10:40:04

average and calculation method are drawn from Subpart Ga of Title 40, part 60, of the Code of Federal Regulations, which, quote, applies to any nitric acid production unit that commences construction or modification after October 14th of 2011. 10:40:07 10:40:10 10:40:15 10:40:17 10:40:21 10:40:21

However, both of EDNF's nitric acid processes were built and/or modified before 2011 and so are governed by Subpart G. Is EDNF operationally similar to sources to which Subpart Ga applies, particularly with respect to startups and shutdowns? 10:40:21 10:40:27 10:40:30 10:40:30 10:40:37 10:40:40

What, if any, differences exist and how might they impact the effectiveness of the rolling average or calculation method? 10:40:42 10:40:44 10:40:46

MR. CRNKVICH: The units that were designed and that were constructed or modified prior -- after the applicability date for Subpart Ga -- were designed to meet the Subpart Ga standard. 10:40:49 10:40:51 10:40:55 10:41:01 10:41:03

Our units were designed to meet the standards that were in effect at the time they were constructed. However, they all do different designs, so since we only have two acid plants 10:41:04 10:41:06 10:41:08 10:41:12

we're not familiar with others, so we cannot comment further on other units. 10:41:15 10:41:18

MR. JAMES: Thank you. Number three. 10:41:21

EDNF proposes to reduce the current NOx emissions limit in 35 Illinois Administrative Code 217.381(a)(1) to 1.5 pounds per ton. How did it determine that limit was reasonable? Please provide any documentation in support. 10:41:25 10:41:30 10:41:37 10:41:39 10:41:41

EDNF bases other portions of the proposed amendments, including the 30-day rolling average, on USEPA standards which lowered the NOx emissions limit to 0.50 pounds per ton. 10:41:44 10:41:49 10:41:50 10:41:54

How do EDNF's processes differ from those sources governed by that role and how do these differences justify the different standards? 10:41:58 10:42:02 10:42:04

MR. CRNKVICH: EDNF completed analysis of our existing data to determine what the applicable pound per ton limit would be on -- that we could comply with on a 30 -- on a 30 operating day average, and that is the number that we did -- that we did propose. 10:42:06 10:42:09 10:42:12 10:42:15 10:42:18 10:42:22

MR. JAMES: Okay. 10:42:33

MR. CRNKVICH: So for the sub facilities that are subject to Subpart Ga, they were 10:42:40 10:42:43

designed specifically for that. We have two acid plants in Illinois. They are the only two acid plants that we were aware of in Illinois. 10:42:45 10:42:48 10:42:51

And when I say acid I'm referring to nitric acid. And so we do not know -- we're not familiar with how the other plants were designed or constructed -- so we cannot comment further. 10:42:55 10:42:57 10:43:00 10:43:03

MR. JAMES: Okay. Thank you. Number four. If EDNF's proposal were adopted and a weak acid nitric manufacturing process were subsequently constructed or modified in Illinois, would EDNF's proposed generally applicable NOx emissions limit of 1.5 pounds per ton for new weak nitric acid manufacturing processes in 35 Illinois Administrative Code 217.381(a)(1), which applies to any emission sources constructed or modified after April 14th, 1972, conflict with 40 C.F.R., Section 60.72 a's limit of 0.50 pounds per ton for new nitric acid production units that commence construction or modification after October 14th, 2011? 10:43:05 10:43:08 10:43:13 10:43:16 10:43:18 10:43:21 10:43:25 10:43:28 10:43:33 10:43:36 10:43:40 10:43:47 10:43:51 10:43:53

MR. CRNKVICH: A new source constructed after the Subpart Ga applicability date would be subject to the federal Subpart Ga standard of 10:43:57 10:43:59 10:44:03

0.5. It would also be subject to the applicable standard in Illinois, which we are proposing to be 1.5 on the same calculation basis. 10:44:06 10:44:09 10:44:13

MR. JAMES: Thank you. Number five. What impact, if any, does EDNF predict its proposed regulations will have on overall monthly and yearly NOx emissions relative to existing rules? 10:44:19 10:44:22 10:44:26 10:44:29 10:44:33

Please include date on current monthly or yearly NOx emissions and the maximum NOx emissions allowable under EDNF's proposed modifications? 10:44:34 10:44:36 10:44:40 10:44:44

MR. CRNKVICH: The adoption of the proposed rule is not expected to result in a change in emissions from the nitric acid plants. 10:44:45 10:44:46 10:44:49

We are proposing the rule -- to have a rule that we can actually demonstrate compliance with and not have a mal -- a deviation every time we start it up or shut down an acid plant. 10:44:53 10:44:54 10:44:56 10:44:59

MR. JAMES: Thank you. Number six. Are there any alternatives to a non-numerical opacity standard during startup and shutdown? For example, is it possible to use an averaging method like that used for NOx emissions for 10:45:04 10:45:06 10:45:09 10:45:12 10:45:14

opacity? If yes, why did EDNF choose to use non-numerical opacity standards during startup and shutdowns? Why are these non-numerical standards preferable to other options? 10:45:17 10:45:23 10:45:27 10:45:29

MR. CRNKVICH: In the USEPA in the preamble to Subpart Ga it made it very clear that opacity from a nitric acid plant is non-particulate matter. 10:45:30 10:45:33 10:45:37 10:45:41

It is the actual color of the NO2 gas that is being emitted. So they're -- and they are being -- can you rephrase or say your question again? 10:45:42 10:45:44 10:45:53 10:46:00

MR. JAMES: Oh, sure. Why choose to use non-numerical opacity standards during startup and shutdowns, and why is that preferable to other options? 10:46:01 10:46:04 10:46:09 10:46:11

MR. CRNKVICH: Okay. Since NOx is the actual cause of the emission of opacity and that is being measured by SIMS and the whole goal is to minimize NOx emissions, so that by minimizing NOx emissions we also minimize opacity. 10:46:13 10:46:14 10:46:18 10:46:21 10:46:26

And there's not going to be any difference. By controlling NOx you're also controlling opacity. 10:46:31 10:46:33 10:46:37

MR. JAMES: Thanks. Number seven. How are EDNF's proposed amendments to opacity standards and limitations during startups and shutdowns, quote, legally practical -- practically enforceable -- as required by USEPA guidance? 10:46:39 10:46:43 10:46:47 10:46:49 10:46:52 10:46:55

MR. CRNKVICH: Since Subpart Ga regulates NOx without an opacity limit and is considered legally and practically enforceable, the same would be expected to apply to this regulation. 10:46:56 10:47:00 10:47:01 10:47:04

In particular, since the opacity literally is the NOx and NOx has numerical limitations, all operations are subject to enforceable limits. 10:47:07 10:47:09 10:47:12 10:47:14

MR. JAMES: Thank you. Number eight. Did EDNF consider whether the proposed non-numerical standards for startup and shutdown might be, quote, an inappropriately high level of emissions or an effectively unlimited or controlled level of emissions -- pardon me, uncontrolled level of emissions -- such that they would constitute impermissible de facto exemptions for emissions during startup and shutdowns? 10:47:17 10:47:20 10:47:24 10:47:26 10:47:29 10:47:30 10:47:33 10:47:36 10:47:39 10:47:41

MR. CRNKVICH: The proposed NOx limit in averaging period will provide an effective limit and enforceable limit on NOx emissions. And since opacity literally is the NOx, that will also provide an effective and enforceable limit on opacity. 10:47:42 10:47:44 10:47:46 10:47:48 10:47:51 10:47:55

MR. JAMES: Thanks. And number nine. Have any other states proposed similar non-numerical opacity standards for weak nitric acid processes during startups and shutdowns in response to the SIP call? 10:47:56 10:47:59 10:47:59 10:48:06 10:48:07

MR. CRNKVICH: Since EDNF only has operations in Illinois, the SIP call response of other states was not investigated. Florida as director of institute approval from EPA in Florida just last month, we're reviewing that and will be happy to provide comments following the hearing. 10:48:09 10:48:11 10:48:14 10:48:18 10:48:21 10:48:23 10:48:26

MR. JAMES: Great. Thank you. Those are all the questions I have. 10:48:27 10:48:28

MR. TAYLOR: Could I just state that questions three and five asked us to submit data and we'll respond by submitting that data in supplemental comments? 10:48:31 10:48:32 10:48:35 10:48:39

MR. JAMES: Thank you. 10:48:41

HEARING OFFICER: Okay. Are there any 10:48:41

other questions from any other participants? 10:48:43

Seeing none, we will go to the Board's questions. 10:48:46

CROSS EXAMINATION BY 10:48:46

MR. RAO: 10:48:46

MR. RAO: I'll start with question 80 on 10:48:48

the Board's Hearing Officer order. On page four 10:48:53

of your testimony you state that nitric acid 10:48:56

processes emit more NOx per pound of production 10:49:00

during startup and shutdown than they do during 10:49:04

normal operations. 10:49:08

Please comment on whether EDNF maintains 10:49:09

records of the frequency and duration of startups 10:49:12

and shutdown of the two nitric acid processes? 10:49:15

MR. CRNKVICH: Yes. As required by our 10:49:19

CAAPP permit we do maintain records of each 10:49:22

startup and shutdown which includes the start 10:49:24

time and the end time of each startup or 10:49:27

shutdown. And we would be more than happy to 10:49:29

provide that information for the record. 10:49:32

MR. RAO: Thank you. Question 19. On 10:49:34

page five you note that the nitric acid processes 10:49:37

cannot meet Section 217.381 during startup and 10:49:43

shutdown because ammonia cannot be added to the SCRs unless the temperature of the SCRs is at least 350 degrees Fahrenheit. 10:49:48 10:49:52 10:49:58

Please comment on whether auxiliary heaters could be used to increase the SCR temperature to 350 degrees Farenheit prior to addition of ammonia during startup and shutdown. 10:50:01 10:50:04 10:50:07 10:50:10

MR. CRNKVICH: Preheating the SCR would require a source of heat resulting in an increase in emission, and an extensive engineering study would be determined -- would be needed -- to determine whether it was actually feasible. 10:50:12 10:50:14 10:50:19 10:50:20 10:50:22

We would have to find a source for the preheating energy, a way to transfer the energy to the flue gas screen without impacting the process during normal operation can be physically added to the process. 10:50:25 10:50:27 10:50:29 10:50:33 10:50:35

It is not clear at this juncture where that would be -- whether that would be successful. It does not make sense to make significant changes to the operation for a few hours of reduction in NOx emissions, and the excess emissions are included in the averaging period. 10:50:36 10:50:40 10:50:42 10:50:45 10:50:48 10:50:53 10:50:56

MR. RAO: Question 20. On page 12 you note that EDNF's proposal is more stringent than the existing rule because the 30-day rolling average, rolled daily available NOx emissions limit, is lower than the current single value daily limit. 10:50:59 10:51:01 10:51:01 10:51:11 10:51:12 10:51:16

Please explain the rationale for proposing a NOx limit based on that 30-day rolling average during normal operations. 10:51:17 10:51:19 10:51:22

MR. CRNKVICH: Since Subpart Ga supplies a compliance method that includes startup, shutdown and malfunction, we follow the EPA's calculation methodologies as it would have a good chance of acceptance by USEPA. 10:51:26 10:51:29 10:51:31 10:51:34 10:51:38

The Subpart methodology, Subpart Ga methodology, its averaging period provides adequate insurances to prevent spikes during normal operations. 10:51:40 10:51:44 10:51:47 10:51:49

But if the Board would prefer to keep the existing three pound per ton for limit other than startup and shutdown, we would not object to that. 10:51:50 10:51:52 10:51:55 10:51:57

MR. RAO: Thank you. That answers 20(b). 10:51:59

Question 21. Are you aware of a recent USEPA 10:52:04

final rule? I refer the citation here. It's in Federal Register, Volume 88, number 149, dated August 4, 2023, approving Florida's State Implementation Plan revisions including NOx limitations for nitric acid plants. 10:52:08 10:52:12 10:52:17 10:52:24 10:52:25

If so, please comment on how the proposed NOx limitations compare with those in the Florida SIP revisions approved by USEPA? 10:52:27 10:52:30 10:52:35

MR. CRNKVICH: We are just starting to review the Florida approach and we'll be happy to provide comments -- any comments that we have -- following the hearing. 10:52:37 10:52:39 10:52:42 10:52:45

MR. RAO: Thank you. That's all I have. 10:52:47

HEARING OFFICER: Any other questions? The only other thing is if you could -- 10:52:48 10:52:53

MR. CRNKVICH: I'd also like to supplement my answer. On the terms of spikes, we also have other permit limits that would eliminate the possibility of spikes because, number one, an acid plant does have a separate limit on pounds per hour and pounds per ton that does not apply during startup or shutdown. 10:52:56 10:52:57 10:53:00 10:53:02 10:53:06 10:53:08 10:53:13

The pound per hour limit has an exception for startup and shutdown. The pounds per -- 10:53:17 10:53:19

pound per ton -- has an exemption for startup, shutdown and malfunction. And that -- the latter limit -- came from USEPA's consent decree. 10:53:22 10:53:25 10:53:28

MR. RAO: Can you provide citations to those? 10:53:35 10:53:37

MR. CRNKVICH: Yes. 10:53:37

MR. TAYLOR: Sure. 10:53:39

MR. RAO: Thank you. 10:53:40

HEARING OFFICER: Okay. So just one last thing. If you could please respond here today or in a written public comment to JCAR staff's changes to and questions to the rule text in public comment two as well as the Board suggested changes attached to its pre-filed questions. 10:53:42 10:53:44 10:53:45 10:53:47 10:53:49 10:53:53

MR. TAYLOR: We'll do that. 10:53:55

HEARING OFFICER: Okay. Thank you. All right. We will move on to the next witnesses. We'll have both Sharene Shealey from Midwest Generation and Cynthia Vodopivec with Dynegy come up, please. Okay. 10:53:57 10:53:58 10:54:00 10:54:03 10:54:07

Would the court reporter please swear in the witnesses? 10:54:56 10:54:56

(Witnesses sworn) 10:55:04

SHARENE SHEALEY AND CYNTHIA VODOPIVEC, 10:55:04

being first duly sworn on oath, were examined and testified as follows:

HEARING OFFICER: As mentioned earlier, the witness' testimony is entered into the record as a thread and Shealey's testimony will be entered in as Hearing Exhibit Six and Vodopivec's testimony will be entered as Hearing Exhibit Number Seven.

We'll proceed with questions from the Attorney General's Office first. And if the witnesses could please when you first answer the question state your name.

MR. ARMSTRONG: Thank you. Andrew Armstrong for the Illinois Attorney General's Office. One note from my last question, I referenced AERMOD. That's A-E-R-M-O-D, all capital letters.

DIRECT EXAMINATION BY
MR. ARMSTRONG:

MR. ARMSTRONG: Good morning. So I have -- we had questions for both Dynegy and Midwest Generation. Some of them are the same questions, so if you would like to answer them as a panel just provide one answer on behalf of the

joint proponents. That would be fine from our perspective. And I'll flag that when I ask one of those questions. 10:56:13 10:56:17 10:56:22

So question number one for Dynasty -- Dynegy -- Dynegy Midwest Generation. Is it your opinion that condition 7.1.3 of the Baldwin, Kincaid and Newton Clean Air Act Permit Program permits authorized opacity exceedances and/or violations? 10:56:26 10:56:29 10:56:31 10:56:39 10:56:44 10:56:50

MS. VODOPIVEC: This is Cynthia Vodopivec from Dynegy. And before I respond I just want to note that in my testimony today I'm going to refer to Dynegy Midwest Generation, LLC, Illinois Power Generating Company, and Kincaid Generation, LLC, individually and collectively as Dynegy for the record. 10:56:50 10:56:55 10:56:58 10:57:00 10:57:04 10:57:06 10:57:06

It is my opinion and Dynegy's position that the Baldwin, Kincaid and Newton CAAPP permits authorize the opacity of emissions from the permittee's operation of coal fired boilers in these plants to exceed the applicable opacity standards set forth in the Illinois State Implementation Plan during periods of startup, malfunction and breakdown, subject to the terms 10:57:13 10:57:16 10:57:20 10:57:23 10:57:25 10:57:27 10:57:29 10:57:32

and conditions set forth in the conditions 7.1.3 B and C of each permit. The basis for this conclusion is detailed in our Statement of Reasons included on pages 11 through 18. 10:57:34 10:57:39 10:57:44 10:57:47

To be clear, when I talk about the Statement of Reasons in my testimony today I am referring to the August 7th, 2023 Statement of Reasons of Dynegy and Midwest Generation in the sub document. 10:57:50 10:57:52 10:57:55 10:57:59 10:58:02

MR. ARMSTRONG: Question number two. You assert that the Joint Proposal is intuitively and demonstrably more stringent than the current SMB authorizations in the station's CAAPP, C-A-A-P-P, permits, and the Illinois SIP, which allow operations in excess of applicable opacity standards during SMB events. 10:58:07 10:58:08 10:58:14 10:58:18 10:58:23 10:58:28 10:58:31

That's from the Statement of Reasons that you referenced at page three. Sub question A. If condition 7.1.3 of the CAAPP permits only authorizes continued operation during startup, shutdown and malfunction events, how is the Joint Proposal more stringent than the conditions of these current CAAPP permits? 10:58:34 10:58:35 10:58:41 10:58:46 10:58:50 10:58:54 10:58:56

MS. VODOPIVEC: Cynthia Vodopivec from 10:59:01

Dynegy. This question is based on inaccurate and incomplete summary of condition 7.1.3. Condition 7.1.3(b) of each CAAPP permit states that during startup, quote, the permittee is authorized to operate an effective boiler in violation of the applicable standards. End quote. 10:59:02 10:59:04 10:59:12 10:59:14 10:59:17 10:59:20

That sentence goes on to identify which applicable standards are the subject of that sentence, including the applicable opacity standards set forth in the Illinois SIP, State Implementation Plan. 10:59:23 10:59:25 10:59:27 10:59:31 10:59:35

Dynegy understands this to mean that opacity in excess of those standards is authorized during periods of startup subject to the other terms and conditions of condition 7.1.3(b). 10:59:36 10:59:38 10:59:40 10:59:43 10:59:48

Condition 7.1.3(c) of each CAAPP permit states that in the event of a malfunction or breakdown, quote, the permittee is authorized to continue operation of an effective boiler in violation of the applicable standards. End quote. 10:59:54 10:59:55 10:59:57 11:00:01 11:00:04 11:00:07

That sentence goes on to identify which applicable standards are the subject of that 11:00:08 11:00:10

sentence, including the applicable opacity standards set forth in the Illinois SIP, State Implementation Plan. 11:00:12 11:00:15 11:00:18

Dynegy understands this to mean that opacity in excess of those standards is authorized during periods of malfunction and breakdown subject to the other terms and conditions of condition 7.1.3 C. 11:00:21 11:00:23 11:00:25 11:00:28 11:00:31

The Joint Proposal is more stringent because it includes a limit on the percent value and duration of an authorized opacity -- of authorized opacity -- during periods of startup, malfunction and breakdown and work practice requirements. 11:00:37 11:00:39 11:00:42 11:00:47 11:00:49 11:00:51

Those limits and work practice requirements are not required by the current CAAPP permits or the Illinois State Implementation Plan. 11:00:53 11:00:54 11:00:56 11:01:00

MR. ARMSTRONG: This question two, sub question B, could be answered as a panel question if you'd like. How, if at all, does the Joint Proposal avoid backsliding, which is prohibited under Section 110(l) of the Clean Air Act? 11:01:05 11:01:09 11:01:12 11:01:18 11:01:20

MR. SAWULA: Yeah, I think we can answer 11:01:45

that as a joint, and Cynthia can deliver the answer. Andrew Sawula, S-a-w-u-l-a, from ArentFox Schiff. 11:01:46 11:01:50 11:01:57

MS. VODOPIVEC: Cynthia Vodopivec from Dynegy again. Section 111 -- sorry. Section 110(l) of the Clean Air Act prohibits USEPA from approving any SIP provision that, quote, would interfere with any applicable requirement concerning attainment and reasonable further progress as defined in Section 7501 of this title, or any other applicable requirement of this chapter. End quote. 11:02:01 11:02:03 11:02:05 11:02:10 11:02:12 11:02:14 11:02:16 11:02:21 11:02:25

Dynegy believes that the Joint Proposal is fully approvable pursuant to S110(l), including for the reasons detailed on pages 31 through 33 of its Statement of Reasons. 11:02:28 11:02:30 11:02:35 11:02:38

In short, the Joint Proposal would not affect the emissions of any pollutant, would not negatively impact air quality in relation to any National Ambient Air Quality standard. 11:02:43 11:02:45 11:02:48 11:02:52

It would not negatively affect compliance with any other Clean Air Act requirement. And as explained in the Technical Support Document prepared by Steven Northey and discussed in the 11:02:56 11:02:58 11:03:02 11:03:04

Statement of Reasons, the Joint Proposal would not interfere with attainment, reasonable further progress, or any other Clean Air Act requirements. 11:03:07 11:03:10 11:03:13 11:03:16

MR. SAWULA: And Sharene Shealey would also like to make a statement in response to what was question number four from the Attorney General's pre-filed questions. 11:03:19 11:03:20 11:03:22 11:03:24

MS. SHEALEY: I'm Sharene Shealey, Midwest Generation, LLC. S-h-a-r-e-n-e, S-h-e-a-l-e-y. I just wanted to affirm the answer from Dynegy, we agree with that. Midwest Generation, LLC, agrees with that answer. 11:03:28 11:03:28 11:03:35 11:03:37 11:03:41

MR. ARMSTRONG: Moving on to question number three, which also could be answered as a panel if preferred. The Joint Proposal in part relies on compliance with work practices as a condition to using an alternative averaging period. 11:03:46 11:03:47 11:03:50 11:03:55 11:04:00 11:04:03

Specifically, what do you mean by, quote, good engineering practices? End quote. That's from the Statement of Reasons at page 24. Please explain how a standard of quote, good engineering practices, end quote, is, quote, legally and 11:04:05 11:04:08 11:04:13 11:04:16 11:04:20

practically enforceable. End quote. And that's quoting from 80 Federal Register 33840, 33978. 11:04:24 11:04:28

MR. SAWULA: We'll respond as a panel with Cynthia Vodopivec first answering for Dynegy and then Sharene Shealey will make a statement for Midwest Generation. 11:04:50 11:04:51 11:04:55 11:04:55

MS. VODOPIVEC: Cynthia Vodopivec from Dynegy. So Dynegy modeled this requirement on a recommendation -- on recommendation six -- for an alternative emission limitation from USEPA's 2015 SIP State Implementation Plan call. 11:05:00 11:05:02 11:05:05 11:05:07 11:05:11

That recommendation calls for operating, quote, in a manner consistent with good practice for minimizing emissions. 11:05:15 11:05:17 11:05:22

Note also that similar terms are used in the Clean Air Act regulations and in Dynegy's CAAPP permits. 11:05:23 11:05:25 11:05:29

For example, 40 C.F.R., Section 3063.10000(b), which is incorporated to the CAAPP permits -- I lost my space here. Requires operation, quote, in a manner consistent with safe and good air pollution control practices for minimizing emissions. End quote. And provisions of a national emission standard for hazardous air 11:05:31 11:05:36 11:05:45 11:05:50 11:05:53 11:05:58 11:06:01

pollutants use the term good engineering practices. 11:06:06 11:06:08

MS. SHEALEY: Sharene Shealey, Midwest Generation, LLC. Similarly, Powerton's stations CAAPP permit condition, I think it was 6.6.3(d), as in door, has -- has some -- has similar language, and so I affirm that answer on behalf of Midwest Gen. 11:06:13 11:06:15 11:06:17 11:06:24 11:06:30 11:06:33

MR. ARMSTRONG: A follow-up question on that. On September 7th JCAR staff emailed the Pollution Control Board and provided a request regarding the reference to good engineering practices. 11:06:35 11:06:35 11:06:43 11:06:46 11:06:49

Specifically, JCAR said please incorporate by reference the standard to be enforced. Do Dynegy or Midwest Generation have any suggestions about how that comment could be responded to? 11:06:51 11:06:54 11:06:58 11:07:03 11:07:05

MR. SAWULA: I think we will take that question under advisement and can respond to it in our joint comment at the end of the proceeding. Is there -- where would that specific question be located? 11:07:19 11:07:21 11:07:24 11:07:28 11:07:31

MR. ARMSTRONG: This is public comment 11:07:34

number two in the docket, the September 7th, 2023 email. And I believe it is comment 30 on part 212. 11:07:36 11:07:42 11:07:53

MR. SAWULA: Thank you. 11:08:06

MR. ARMSTRONG: Question number four. This is directed to Dynegy specifically. In your Statement of Reasons you explained that, quote, it is technically infeasible to avoid all opacity exceedances during SMB, end quote; and that Baldwin boiler two, equipped with a baghouse, came, quote, precariously close to exceeding the standard, end quote. That is from the Statement of Reasons at 19. 11:08:12 11:08:14 11:08:19 11:08:21 11:08:25 11:08:29 11:08:34 11:08:39 11:08:41

Sub question A. Is it your understanding that the boiler in this example did not ultimately exceed the opacity standard at that time? 11:08:43 11:08:46 11:08:49 11:08:51

MS. VODOPIVEC: Cynthia Vodopivec from Dynegy. Yes, that is my understanding. 11:08:54 11:08:57

MR. ARMSTRONG: Sub question B. From January of 2020 through the present on how many occasions has the Baldwin plant exceeded the applicable opacity standard? 11:08:58 11:08:59 11:09:03 11:09:07

MS. VODOPIVEC: From January 2020 through 11:09:08

September 26th, 2023, the coal fired boilers at the Baldwin plant have not exceeded the applicable opacity standard codified at 35 IAC 212.123. 11:09:10 11:09:15 11:09:18 11:09:18

MR. ARMSTRONG: Question number five. Have you, Dynegy, considered utilizing baghouses or other pollution control technologies at other facilities to similarly avoid exceeding the opacity standard? 11:09:26 11:09:29 11:09:33 11:09:37 11:09:40

If so, why have you determined not to install additional pollution controls at other facilities? 11:09:43 11:09:45 11:09:45

MS. VODOPIVEC: Cynthia Vodopivec, Dynegy. As I explained to my declaration supported Dynegy Statement of Reasons, which I incorporated into my pre-filed testimony with sub docket, Dynegy does not believe that Kincaid and Newton coal fired boilers could avoid exceeding the opacity standard through the installation of baghouses or other pollution control technologies. 11:09:49 11:09:50 11:09:53 11:09:56 11:09:59 11:10:01 11:10:04 11:10:06 11:10:08

Installing fabric filter baghouses on Kincaid and Newton coal fired boilers might have the potential to further reduce opacity to an 11:10:08 11:10:12 11:10:14

extent; however, Dynegy believes it would not eliminate the risk of opacity exceedances during startup, malfunction and breakdown events. 11:10:16 11:10:22 11:10:22

Moreover, based on Dynegy's industry experience, Dynegy believes that baghouses would cost tens of millions of dollars at each plant. It would take approximately three years to design, procure and install. 11:10:26 11:10:29 11:10:31 11:10:34 11:10:37

That means that baghouses could not help control emissions of particulate matter and the associated opacity from those units until late 2026 at the earliest. Yet, Dynegy currently plans to cease operation and retire the Kincaid and Newton plants in 2027. 11:10:38 11:10:41 11:10:44 11:10:47 11:10:50 11:10:53

As a result, even if Dynegy took immediate steps to add baghouses to these coal fired boilers at a cost of tens of millions of dollars, the baghouses would operate for one year or less, if at all. 11:10:57 11:10:58 11:11:01 11:11:03 11:11:06

MR. ARMSTRONG: What analyses form the basis of your opinion that installation of baghouses at Kincaid and Newton would not allow compliance with the opacity standard? 11:11:08 11:11:12 11:11:14 11:11:19

MS. VODOPIVEC: Cynthia Vodopivec from 11:11:19

Dynegy. So as I mentioned before, based on our experience with the baghouses we do not believe that that is going to help us, especially in our startup, shutdown -- or startup, malfunction and breakdown limitations. 11:11:51 11:11:53 11:11:57 11:12:00 11:12:04

And as I've also mentioned, even if we did install those baghouses they would not operate for very much time because of the already committed shutdown dates of those boilers. 11:12:07 11:12:09 11:12:12 11:12:16

MR. ARMSTRONG: But in your experience would you agree that the baghouses at Baldwin have been effective in preventing exceedances of the opacity limit at that plant? 11:12:20 11:12:21 11:12:25 11:12:29

MS. VODOPIVEC: So based on my knowledge, yes, the baghouses at Baldwin have been effective. However, as we've stated in our testimony, there's no guarantee that they will be effective for those periods of startup and breakdown and malfunction. 11:12:41 11:12:42 11:12:46 11:12:48 11:12:52 11:12:55

MR. ARMSTRONG: Okay. Question number six. And I believe this could be answered as a panel question if preferred. You state that, quote, short-term changes in opacity make no difference to the corresponding anticipated 11:13:02 11:13:05 11:13:10 11:13:15 11:13:19

maximum particulate matter emission range, end quote. That's at the Statement of Reasons at 32. What is the basis for that statement? 11:13:21 11:13:26 11:13:29

MS. VODOPIVEC: Cynthia Vodopivec, Dynegy. The full statement from the Statement of Reasons is, quote, short-term changes in opacity make no difference to the corresponding anticipated maximum PM emission rate and associated PM mass emissions under Mr. Northey's correlations or under the correlations that Illinois EPA relied upon in approving these plans, so long as the three hour opacity average remains at or below 20 percent or 30 percent as applicable. 11:13:34 11:13:37 11:13:38 11:13:41 11:13:45 11:13:47 11:13:50 11:13:52 11:13:56 11:14:00 11:14:03

The Technical Support documentation provides the rationale for this conclusion, including on pages nine, 10 and 12. 11:14:05 11:14:07 11:14:09

MR. ARMSTRONG: So with respect to the reference to the anticipated maximum particulate matter emission rate, would that be fair to say that you're referencing the rate on an hourly basis? 11:14:14 11:14:18 11:14:22 11:14:26 11:14:29

MR. SAWULA: For follow-up questions about the Technical Support Document we do have 11:14:33 11:14:35

Mr. Northey. He's en route. He's going to be here about 12:00. So if there are -- if you have questions that get into the specifics about his conclusions -- we'd be happy to have him answer those questions here today. 11:14:38 11:14:40 11:14:43 11:14:46 11:14:48

I apologize, he was -- he had travel delays -- and so I know he's arriving at about 12:00 today. 11:14:49 11:14:52 11:14:55

MR. ARMSTRONG: If we could just have an answer to that in post-hearing comments that would be acceptable. 11:14:57 11:14:59 11:15:02

MR. SAWULA: Okay. I'd be happy to do that. Yeah. 11:15:04 11:15:06

MS. SHEALEY: Sharene Shealey, Midwest Generation. Just for the record, you didn't ask that question of Midwest Generation so that was not a panel response. 11:15:11 11:15:12 11:15:13 11:15:16

MR. ARMSTRONG: Oh, I'm sorry. 11:15:17

MS. SHEALEY: That's okay. I just want it to be clear. 11:15:19 11:15:21

MR. ARMSTRONG: Fair point. 11:15:22

MR. SAWULA: And just a follow-up question. Could you restate for me, please, the specific question you'd like us to respond to on 11:15:25 11:15:25 11:15:27

that for follow-up? 11:15:30

MR. ARMSTRONG: Yes. So in the quote in 11:15:31

question number six there's a reference to the 11:15:34

corresponding anticipated maximum particulate 11:15:39

matter emission rate. 11:15:44

And my question was, in that quote would 11:15:46

it be fair to say that rate is referring to an 11:15:51

hourly rate of emissions? 11:15:54

MR. SAWULA: Thank you. We'll -- 11:15:58

MR. ARMSTRONG: If not, what rate is that 11:16:01

referring to? 11:16:03

MR. SAWULA: Okay. Thank you. We'll 11:16:04

respond to that. 11:16:05

MR. ARMSTRONG: Question number seven to 11:16:08

Dynegy. Does a longer averaging period allow for 11:16:25

more variability in terms of meeting the opacity 11:16:30

standard? 11:16:34

MS. VODOPIVEC: Cynthia Vodopivec from 11:16:35

Dynegy. The Joint Proposal will provide an 11:16:37

exception to the applicable Illinois opacity 11:16:40

standard, meaning that certain six minute 11:16:40

exceedances of the applicable opacity -- meaning 11:16:46

that certain -- excuse me. Meaning that certain 11:16:47

six minute exceedances in the applicable opacity 11:16:49

standard, but it would not result in more variability in actual performance. 11:16:52 11:16:55

As discussed in the Statement of Reasons, including on pages 13 through 19, the Joint Proposal is narrower on its face than the current SMP authorizations in the station's CAAPP permits which state that the permittees are authorized to operate in excess of their Illinois SIP opacity limits during startup, malfunction and breakdown events with no numerical opacity limit during such events, no numeric limit on duration of such events, and with fewer work practice requirements. 11:16:56 11:16:59 11:17:02 11:17:06 11:17:09 11:17:13 11:17:15 11:17:17 11:17:20 11:17:23 11:17:25

In practice, Dynegy has historically operated its coal fired boilers in reliance on these startup, malfunction and breakdown authorizations. 11:17:26 11:17:30 11:17:32 11:17:37

MR. ARMSTRONG: Question number eight, for Dynegy. How does a longer period of allowed variability opacity, which is an indicator for PM, avoid negative impacts to air quality? 11:17:40 11:17:41 11:17:45 11:17:50

MS. VODOPIVEC: Cynthia Vodopivec from Dynegy. So this is explained in detail in the Technical Support documentation and in related 11:17:54 11:17:56 11:17:59

portions of the Statement of Reasons, and I refer you to that explanation. But to summarize, I offer the following brief explanation. 11:18:02 11:18:04 11:18:07

Opacity can be an indicator for PM. The National Ambient Air Quality Standards for PM are set in 24-hour and annual period. The National Ambient Air Quality Standards, or NAAQS, is impacted by changes in daily PM emission. 11:18:10 11:18:14 11:18:17 11:18:22 11:18:25

The current state opacity rules which have been revised to eliminate the startup, malfunction and breakdown provisions allow a source to have 20 percent or 30 percent opacity as applicable for each six minute period. 11:18:31 11:18:33 11:18:33 11:18:36 11:18:40

Note that at times opacity could be higher. Based on 35 ILC, Sections 212.122(b), 212.123(b), and 212.124. But I will focus my answer on what is allowed looking only at sections 212.122(a), and 212.123(a). 11:18:46 11:18:47 11:19:03 11:19:09 11:19:11

A source operating at 20 percent or 30 percent opacity for every six minute period during the day will have a daily average of 20 percent or 30 percent respectively. And it is that daily average that would correlate with the daily PM emissions rate, which in turn is a point 11:19:19 11:19:22 11:19:25 11:19:28 11:19:31 11:19:33

of reference for evaluating air quality under the PM NAAQS. 11:19:38 11:19:40

Under the Joint Proposal, six minute opacity values will be allowed to exceed 20 percent or 30 percent under certain circumstances, but only if a three hour average does not exceed 20 percent or 30 percent respectively. 11:19:44 11:19:46 11:19:49 11:19:51 11:19:55 11:19:58

If opacity is no higher than 20 percent or 30 percent in a three hour average basis then it cannot be higher than 20 percent or 30 percent on a 24-hour basis. 11:19:59 11:20:02 11:20:06 11:20:09

On a 24-hour basis the current version of the State opacity regulations on the one hand, in our Joint Proposal on the other hand, both would allow the same maximum average opacity on a 24 hour basis. And again, 24 hour PM and annual PM is what matters for the purposes of air quality. 11:20:11 11:20:14 11:20:19 11:20:22 11:20:26 11:20:30

MR. ARMSTRONG: Question number nine. And this would be a panel answer potentially. Given that the Joint Proposal would apply only to a subset of Illinois coal fired power plants, what makes it a rulemaking of general applicability as opposed to a site-specific 11:20:34 11:20:41 11:20:46 11:20:49 11:20:53 11:20:56

rulemaking? 11:20:59

MR. SAWULA: Before either witness 11:21:00

answers I just wanted to check that the question 11:21:02

calls for a legal conclusion and it's outside the 11:21:04

scope of testimony, but there are statements that 11:21:07

the witnesses would like to make in response. 11:21:10

MS. VODOPIVEC: So Cynthia Vodopivec, 11:21:14

Dynegy. The Joint Proposal was filed with a sub 11:21:16

docket at the direction of the Board in its July 11:21:19

6th, 2023 order. 11:21:21

Given that the Joint Proposal was 11:21:24

previously submitted and discussed at length 11:21:26

before the Board in the main docket, we have 11:21:28

deferred to and agreed with the Board's judgment 11:21:30

that this is the proper forum to submit the Joint 11:21:33

Proposal. 11:21:36

MS. SHEALEY: Sharene Shealey, Midwest 11:21:38

Generation. I affirm that answer for Midwest 11:21:40

Generation. 11:21:42

MR. ARMSTRONG: Okay. Thank you. That 11:21:42

is all the questions for Dynegy, so I'll move on 11:21:45

to Midwest Generation. Question number one, is 11:21:49

it your opinion that condition 7.1.3 of the 11:21:58

Powerton CAAPP permit authorizes opacity 11:22:04

exceedances and/or violations? 11:22:08

MS. SHEALEY: Sharene Shealey, Midwest 11:22:12

Generation, LLC. And forgive me if I say Midwest 11:22:14

Gen, but that's -- it's Midwest Generation, LLC. 11:22:16

It is my opinion and Midwest Generation's opinion 11:22:20

that the Powerton CAAPP permit authorizes the 11:22:23

opacity of emissions from its operation of the 11:22:25

Powerton coal fired boilers to exceed the 11:22:29

applicable opacity standards set forth in the 11:22:32

Illinois State Implementation Plan during periods 11:22:34

of startup, malfunction and breakdown, subject to 11:22:37

the terms and conditions set forth in conditions 11:22:39

7.1.3(b), bravo, and (c), cat, of the permit. 11:22:42

MR. ARMSTRONG: Question number three, 11:22:55

I'll skip to that one. You have previously 11:22:56

stated that opacity exceedances still occur when 11:22:59

using a longer averaging period. 11:23:02

That's a reference to Midwest 11:23:05

Generation's responses to questions received at 11:23:07

hearing at page four from March 1st, 2023. How 11:23:09

does a longer averaging period address the 11:23:16

opacity standard exceedances at issue? 11:23:18

MS. SHEALEY: To clarify, are you 11:23:22

referring to the following statements from page 11:23:23

four of Midwest Generation's March 1st, 2023 responses to questions received at hearing? Quote, notably these are just two examples of what -- of the need for a longer averaging period. 11:23:25 11:23:28 11:23:32 11:23:36 11:23:40

Excess opacity events may last longer or result in higher opacity, thus creating the need for a proposed alternative averaging period, end quote. 11:23:41 11:23:44 11:23:47 11:23:50

MR. ARMSTRONG: Yes. 11:23:52

MS. SHEALEY: And can you also clarify what you mean in reference to the opacity exceedances at issue? Opacity standard exceedances at issue. 11:23:54 11:23:56 11:23:59 11:24:04

MR. ARMSTRONG: The opacity standard exceedances that Midwest Generation has reported at its Powerton station. 11:24:05 11:24:07 11:24:16

MS. SHEALEY: So the exceedances in -- that occur -- are the opacity and we can't do anything about those. In the future what we meant on page four of the March 1st responses and in supplement to that response -- and in our supplement to that response -- was that the examples Midwest Generation provided were just 11:24:47 11:24:50 11:24:53 11:24:58 11:25:03 11:25:06 11:25:08

that, examples of actual monitoring data supporting the need for a proposed averaging period in the Joint Proposal. 11:25:11 11:25:14 11:25:17

MR. ARMSTRONG: Okay. I'll move to question four. I'm sorry. I'll move to question five. Has Midwest Generation considered utilizing baghouses or other pollution control technologies at the Powerton plant to avoid opacity exceedances? 11:25:29 11:25:30 11:25:33 11:25:41 11:25:44 11:25:48

If so, why have you determined not to install additional pollution controls at the Powerton plant? 11:25:50 11:25:52 11:25:52

MS. SHEALEY: As I explained in my direct declaration in support of Midwest Generation's Statement of Reasons, which I incorporated into my pre-filed testimony in the sub docket, Midwest Generation does not believe it can take any steps through installation or upgrading of pollution controls or changing operating practices that would eliminate the risk of opacity exceedance storm periods of startup, malfunction and breakdown. 11:25:56 11:25:58 11:26:00 11:26:03 11:26:08 11:26:11 11:26:14 11:26:16 11:26:19 11:26:20

My declaration explains all the steps Midwest Generation has always taken -- has 11:26:21 11:26:24

already taken -- pursuant to a May 10th, 2018 Federal Consent Decree such as upgrading its ESPs, electrostatic precipitators, and setting an alarm to trigger at 25 percent opacity as a six minute average to alert operational personnel to take appropriate action to minimize the likelihood of an exceedance of a 30 percent opacity limit. 11:26:27 11:26:33 11:26:36 11:26:38 11:26:42 11:26:45 11:26:48 11:26:48

Notwithstanding that Midwest Generation's rigorous implemation -- implementation -- of the Consent Decree requirements, the Powerton coal fired boilers still experience occasional unavoidable opacity exceedances resulting from startup, malfunctions, or breakdowns. 11:26:53 11:26:56 11:26:57 11:26:59 11:27:03 11:27:04

As further explained in my declaration, installation and operation of fabric filter baghouses might have the potential to reduce opacity to an extent; however, Midwest Generation does not believe the installation of baghouses would eliminate the risk of opacity exceedances during SMB events, and so installation of baghouses would not obliviate the need -- obviate the need -- for the relief Midwest Generation is requesting through the Joint Proposal. Moreover, 11:27:07 11:27:09 11:27:12 11:27:15 11:27:19 11:27:22 11:27:25 11:27:28 11:27:30 11:27:33

Midwest Generation believes it would take approximately three years to design, procure and install baghouses. Midwest Generation currently plans to cease operating and retire the Powerton station coal fired boilers on or before December 31st, 2028. 11:27:37 11:27:39 11:27:41 11:27:45 11:27:47 11:27:50

The tremendous cost of installing baghouses cannot be justified given the limited years remaining prior to the retirement of these boilers and a limited further control improvement that the baghouses may provide, if any, compared to the controls in operational practices specified in the Consent Decree. 11:27:54 11:27:55 11:27:59 11:28:01 11:28:05 11:28:07 11:28:10

Finally, I want to emphasize that the Consent Decree was - as agreed to by the State of Illinois, United States and the organization Citizens Against Ruining the Environment -- does not require the installation of baghousees to avoid exceedances of the opacity standard. 11:28:15 11:28:17 11:28:20 11:28:25 11:28:25 11:28:28

MR. ARMSTRONG: And what analysis underlie Midwest Generation's conclusion that installation of baghouses at Powerton would not eliminate opacity exceedances? 11:28:34 11:28:36 11:28:39 11:28:43

MS. SHEALEY: I'm sorry, could you 11:29:26

please -- 11:29:29

MR. ARMSTRONG: What analyses underlie 11:29:30

Midwest Generation's conclusion that installation 11:29:32

of baghouses at the Powerton facility would not 11:29:35

eliminate opacity exceedances? 11:29:40

MS. SHEALEY: We don't have specific 11:29:42

experience with baghouse ESPs combinations, but 11:29:44

we relied on the analysis done for Baldwin plant 11:29:48

and the Statement of Reasons. 11:29:53

MR. ARMSTRONG: Okay. I can skip number 11:29:54

six. Question seven. And I'm referring to in 11:30:04

this question to include good engineering 11:30:23

practices referenced in the proposed alternative 11:30:25

limitation. 11:30:29

How, if at all, would these work 11:30:32

practices measurably impact elevated opacity 11:30:34

levels during startup, shutdown and malfunction 11:30:38

events? 11:30:41

MS. SHEALEY: Sharene Shealey, Midwest 11:30:43

Generation. The work practices will be codified 11:30:44

requirements. Midwest Generation already 11:30:46

operates its boilers in a manner that would 11:30:49

comply with these parameters; thus we do not 11:30:49

anticipate any additional increase in opacity 11:30:55

levels during startup, malfunction or breakdown events. Please also note that the Joint Proposal does not address shutdown events except as it's related to breakdowns. 11:30:56 11:30:59 11:31:01 11:31:05

MR. ARMSTRONG: Question number eight. The Joint Proposal Statement of Reasons asserts that, quote, none of the affected units is located in an area designated as an EJ area. That's from the Statement of Reasons at 40. 11:31:10 11:31:11 11:31:14 11:31:17 11:31:25

Are you aware that the Illinois Environmental Protection Agency's EJ Start tool currently shows that Powerton is located in an EJ area? 11:31:29 11:31:32 11:31:34 11:31:37

MS. SHEALEY: I'm sorry. Sharene Shealey, Midwest Generation. Shortly before filing the Statement of Reasons, Midwest Generation reviewed IEPA's Start tool and confirmed that at that time Powerton was outside of any environmental justice area. 11:31:54 11:31:56 11:31:58 11:32:01 11:32:04 11:32:06

Specifically, the stack serving Powerton's coal fired boilers was more than one mile from the nearest EJ area. On August 1st of 2023, just days before filing the Statement of Reasons, IEP updated the EJ Start tool based on 11:32:11 11:32:13 11:32:15 11:32:19 11:32:23

2022 data. Midwest Generation was unaware of that update at the time it filed its Statement of Reasons. Using the 2022 data, the Powerton stack is located within a buffer area for an EJ area based on low income. 11:32:26 11:32:29 11:32:33 11:32:37 11:32:40

MR. ARMSTRONG: Question number nine. Has Midwest Generation analyzed how the EJ area in which Powerton is located will be impacted by the Joint Proposal? 11:32:44 11:32:45 11:32:50 11:32:55

MR. SAWULA: I guess, if I may ask a question of clarification, to ensure that we're all using the term EJ area in the same way, could you just define for us what you mean by, you know, which areas from the EJ Start tool you're referring to as qualifying as an EJ area? 11:33:05 11:33:06 11:33:09 11:33:13 11:33:15 11:33:18

MR. ARMSTRONG: So the Illinois EPA EJ Start tool uses two different metrics to determine whether a specific area should be considered an area of environmental justice concern. 11:33:21 11:33:24 11:33:27 11:33:31 11:33:33

And then for any area that is flagged as being in one of those parameters there's also a buffer zone around that specific area. So when I refer to EJ area I refer to any geographic area 11:33:35 11:33:38 11:33:40 11:33:43

identified by Illinois EPA as being an area of environmental justice concern on the EJ Starting map. 11:33:47 11:33:53 11:33:55

MR. SAWULA: And do you include the buffer area as -- as -- when you use the term EJ area do you -- do you use that term to include the buffer area or just the area that's designated based on low income or minority population? 11:33:56 11:33:58 11:34:01 11:34:04 11:34:07 11:34:09

MR. ARMSTRONG: Consistent with -- consistent with Illinois EPA's approach, we -- I am including the buffer zone. 11:34:10 11:34:11 11:34:13

MR. SAWULA: Okay. Okay. And so for the record then our answer will -- or Midwest Generation's answer -- will similarly use the term to include the buffer zone. 11:34:15 11:34:17 11:34:20 11:34:23

MR. ARMSTRONG: Okay. 11:34:25

MS. SHEALEY: Yeah. Sharene Shealey, Midwest Gen. Because it's -- my whole understanding -- is that the station itself is not within the EJ area, it's within the buffer zone. That -- so just -- that's where I was getting confused, so forgive me. 11:34:25 11:34:32 11:34:32 11:34:34 11:34:37 11:34:39

MR. ARMSTRONG: No problem. 11:34:41

MS. SHEALEY: How is this -- okay. Could you -- after all of that could you please reask your question? 11:34:44 11:34:47 11:34:49

MR. ARMSTRONG: Yes, no problem. So referring to the EJ area as the geographic area that is identified by IEPA's EJ Start tool as an area of environmental justice concern, has Midwest Generation analyzed how the EJ area in proximity to the Powerton plant will be impacted by the Joint Proposal? 11:34:50 11:34:52 11:34:57 11:35:03 11:35:06 11:35:13 11:35:16

MS. SHEALEY: Yes. Sharene Shealey, Midwest Generation. Yes. As indicated in the Statement of Reasons, including on page 40 and as demonstrated in a Technical Support Document, the Joint Proposal will not result in any impacts to human health or the environment anywhere, and so it will not have any disproportionate impacts or create any EJ environmental justice concern for Illinois Environmental Justice communities. 11:35:19 11:35:22 11:35:24 11:35:27 11:35:30 11:35:33 11:35:36 11:35:39 11:35:42

That conclusion remains the same irrespective of whether Powerton is inside or outside the EJ area. 11:35:46 11:35:51 11:35:54

MR. ARMSTRONG: Thank you. That's all the questions we have. 11:35:55 11:35:57

HEARING OFFICER: And just to clarify, you're not waiting for the witness and just having them answer in a comment later on? 11:35:58 11:35:59 11:36:01

MR. ARMSTRONG: Yes. Thank you. 11:36:03

HEARING OFFICER: Okay. All right. Are there any other questions from any other participants? Seeing none, we'll go to the Board's questions. 11:36:04 11:36:05 11:36:06 11:36:09

CROSS EXAMINATION BY 11:36:09

MR. RAO: 11:36:09

MR. RAO: I have one question. It's question number 12 on the Board's Hearing Officer order. On page 22 of the Statement of Reasons refers to Miss Vodopivec's pre-filed testimony that indicates Dynegy's affected units are controlled by both ESPs and baghouses. 11:36:10 11:36:14 11:36:16 11:36:21 11:36:25 11:36:28

(A) Please clarify if all five Dynegy boilers in Baldwin, Kincaid and Newton plants which are covered by the proposed alternative emission limits are equipped with both ESPs and baghouses? 11:36:33 11:36:36 11:36:41 11:36:44 11:36:46

MS. VODOPIVEC: Cynthia Vodopivec from Dynegy. So the only two coal fired boilers equipped with both ESP and baghouses are the two 11:36:48 11:36:49 11:36:53

coal fired boilers at Baldwin. The coal fired boilers at Kincaid and Newton are equipped with ESPs but not baghouses. 11:36:56 11:37:00 11:37:02

MR. RAO: Okay. 12B. Comment on whether the Dynegy proposal could be further narrowed by limiting the proposal alternative emission standards to apply to boilers equipped with only ESPs. 11:37:03 11:37:07 11:37:10 11:37:12 11:37:16

Alternatively, could the boilers equipped with both ESPs and baghouses have a shorter averaging time than the proposed three hours? 11:37:20 11:37:21 11:37:24

MR. SAWULA: Just a quick question. Is that question directed to Dynegy or to both companies or -- 11:37:27 11:37:28 11:37:31

MR. RAO: I would say Dynegy because I don't think Midwest Generation -- yeah. 11:37:33 11:37:36

MR. SAWULA: Thank you. 11:37:39

MS. VODOPIVEC: Cynthia Vodopivec from Dynegy. So Dynegy needs an alternative emission standard for the Baldwin coal fired boilers because it cannot assure compliance with a 30 percent opacity standard on a six-minute basis 100 percent of the time during periods of SMB. 11:37:42 11:37:42 11:37:45 11:37:48 11:37:51 11:37:53

Dynegy agrees that the risk of 11:37:58

exceedances is lower at Baldwin than at coal fired boulders not equipped with both an ESP and baghouse. 11:38:01 11:38:03 11:38:03

Consequently, while Dynegy believes that the proposed three hour standard is justified for Baldwin coal fired boilers, it is willing to accept a one hour -- a one hour averaging period -- for the Baldwin boilers. 11:38:03 11:38:09 11:38:12 11:38:14 11:38:19

This would increase the risk of non-compliance due to unavoidable opacity during SMB events, but would not result in any difference in opacity levels as the company has already taken numerous steps to minimize opacity and there are no further steps involved. 11:38:21 11:38:23 11:38:27 11:38:30 11:38:32 11:38:35

MR. RAO: Will you be able to submit changes to your Joint Proposal? 11:38:42 11:38:42

MR. SAWULA: Yes, we would be happy to do that. 11:38:47 11:38:49

MR. RAO: Thank you. 11:38:49

HEARING OFFICER: Okay. Any further questions from the Board members? Okay. Then just one last thing again. If you could please respond here today or in a written public comment to JCAR staff changes to and questions to the 11:38:50 11:38:51 11:38:54 11:38:57 11:39:00

rule text in public comment number two as well as to the Board's suggested changes attached to its pre-filed questions. 11:39:03 11:39:05 11:39:05

MR. SAWULA: We would be happy to. And I have one follow-up question. For the proposed changes regarding the one-hour proposal for Baldwin, is that something you would like to see in the Company's joint comment at the end of the process for the sub docket, or is that something you'd like to see sooner after this first hearing? 11:39:09 11:39:10 11:39:13 11:39:16 11:39:19 11:39:22 11:39:25 11:39:29

MR. RAO: If you can do it sooner it will be helpful. 11:39:30 11:39:32

MR. SAWULA: Okay. We will do so. Thank you. 11:39:33 11:39:33

HEARING OFFICER: Okay. Thank you so much. All right. So we will move on to public comments. I did not see any names on the sign-up sheet but I just want to double-check if there's anyone here who would like to provide a public comment? 11:39:36 11:39:40 11:39:43 11:39:49 11:39:51 11:39:54

Okay. Seeing none, I'd like to go off the record for just a second. 11:39:56 11:39:58

(Discussion off the record) 11:39:58

HEARING OFFICER: So we'll go back on the record to adjourn then. Copies of the transcript of today's hearing are expected to be available no later than Tuesday, October 3rd. 11:40:45 11:40:46 11:40:50 11:40:52

When the Board receives the transcript we will promptly post it to COOL from which it can be viewed and printed. 11:40:55 11:40:57 11:40:59

The second hearing is scheduled on Wednesday, November 1st, 2023, beginning at 9:00 a.m. at the Michael A. Bilandic Building in Chicago. 11:41:01 11:41:03 11:41:06 11:41:10

The deadline to pre-file testimony for the second hearing is October 18th, 2023, and to pre-file questions is Wednesday, October 25th, 2023. Before the second hearing adjourns we will set a post-hearing comment deadline. 11:41:10 11:41:12 11:41:16 11:41:20 11:41:23

Are there any other matters that need to be addressed at this time? Yes? 11:41:25 11:41:27

MR. SAWULA: Can I ask a follow-up question off the record on the second hearing? 11:41:30 11:41:31

HEARING OFFICER: Yes. We'll go off the record, please. 11:41:34 11:41:35

(Discussion off the record) 11:41:35

HEARING OFFICER: We'll go back on the 11:42:02

record. Okay. I would like to thank everyone for participating today, and this first hearing is adjourned. 11:42:03 11:42:06 11:42:08

(Hearing end time: 11:42 a.m.)

CERTIFICATE OF REPORTER

I, Kathy L. Johnson, a Certified Court Reporter, and Notary Public within and for the State of Illinois, DO HEREBY CERTIFY that the testimony of all witnesses in the foregoing hearing were duly sworn to testify to the truth and nothing but the truth; that the testimony of said witnesses was taken by stenographic means by me to the best of my ability and thereafter reduced to print under my direction.

I further certify that I am neither attorney nor counsel for, nor related, nor employed by any of the parties to the action in which this deposition was taken; further, that I am not a relative or employee of any attorney or counsel employed by the parties hereto, or financially interested in this action.

Kathy Johnson

Kathy Johnson
Notary Public within and
For the State of Illinois.

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