WEBVTT

1
00:00:03.179 --> 00:00:03.750
Tom Ruiz: Okay.

2
00:00:04.950 --> 00:00:14.160
Tom Ruiz: Recording to the Cloud. And folks, it's six o'clock. I'm going to admit all the folks in the waiting room, we have 71 and counting who will be joining. Here we go.

3
00:00:21.480 --> 00:00:22.290
Janetta Coats: Good evening.

4
00:00:23.430 --> 00:00:33.900
Janetta Coats: And welcome to the ethylene oxide Zoom community meeting for the Indorama facility in Port Neches, Texas.

5
00:00:35.070 --> 00:00:40.590
Janetta Coats: My name is Janetta Coats with EPA, and I am the moderator for the evening.

6
00:00:41.910 --> 00:00:43.110
Janetta Coats: Next slide please.

7
00:00:45.330 --> 00:00:53.700
Janetta Coats: For those attendees requiring language interpretation, service instructions have posted on the screen.

8
00:00:54.780 --> 00:01:03.930
Janetta Coats: This will assist our participants to enable the appropriate language preference for English or Spanish services.

9
00:01:06.990 --> 00:01:11.310
Janetta Coats: I would like to welcome and introduce the Spanish interpreters.

10
00:01:13.230 --> 00:01:14.070
Janetta Coats: Xiomara

11
00:01:15.180 --> 00:01:16.020
Janetta Coats: Crespo

12
00:01:17.130 --> 00:01:19.230
Janetta Coats: And Nestor Lima.

13
00:01:22.500 --> 00:01:32.220
Janetta Coats: For those requiring American Sign Language services, the interpreter window is available to pin the interpreter on the screen.

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00:01:33.360 --> 00:01:39.180
Janetta Coats: I would like to welcome and introduce the American Sign Language interpreters.

15
00:01:41.280 --> 00:01:55.860
Janetta Coats: The Spanish interpreter is Xiomara Crespo and the Spanish interpreter is Nestor Lemma. Karen Evans is our translator and Corey Langridge.

16
00:01:57.150 --> 00:01:58.560
Janetta Coats: Next slide please.

17
00:02:01.800 --> 00:02:02.850
Janetta Coats: The logistics.

18
00:02:04.110 --> 00:02:26.010
Janetta Coats: This is a Zoom meeting, and due to the size of the audience all participants are in listening mode-only except for the speakers' microphones. At the end of the presentation EPA will address questions during the question-and-answer session.

19
00:02:28.320 --> 00:02:42.330
Janetta Coats: Participants may write their question in the chat box during the presentation. However, the questions will not be answered until the question-and-answer session is completed.

20
00:02:43.350 --> 00:02:54.840
Janetta Coats: Please include your name and affiliation in the chat box so we can be aware of your participation in this meeting. Next slide please.

21
00:02:57.000 --> 00:03:15.150
Janetta Coats: Your comments are very important to us. This meeting is focused on hearing from the citizens in the Port Neches area near the Indorama facility. Questions related to industry permits,

22
00:03:16.620 --> 00:03:29.340
Janetta Coats: any enforcement or legal actions, or about other areas or facilities will not be addressed during this community meeting.

23
00:03:30.750 --> 00:03:34.470
Janetta Coats: You may send those questions that are not related to the meeting tonight

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00:03:35.670 --> 00:03:54.210
Janetta Coats: and other questions related to ethylene oxide to the EPA Region 6 email box for a response at the email address shown on the screen. That email address is R6 underscore

25
00:03:55.440 --> 00:04:23.640
Janetta Coats: ethylene oxide E t h y l e n e capital O x i d e “at” sign epa.gov. Again, the address is posted on your screen. You can also take a picture with your cell phone if you desire to do so, just to make sure that you have the correct email address.

26
00:04:26.010 --> 00:04:38.520
Janetta Coats: Please submit additional questions to R6ethylene oxide@epa.gov or in the chat box.

27
00:04:39.870 --> 00:04:49.260
Janetta Coats: This event is being recorded and will be posted on the EPA Region 6 website for ethylene oxide.

28
00:04:50.610 --> 00:04:58.740
Janetta Coats: These web page links will be posted in the chat box on the right side of your monitor screen.

29
00:05:00.210 --> 00:05:01.500
Janetta Coats: Next slide, please.

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00:05:04.620 --> 00:05:17.370
Janetta Coats: For Zoom meeting best practices during the question-and-answer session, in addition to writing the question in the chat box you may raise your hand to ask a question.

31
00:05:18.750 --> 00:05:34.770
Janetta Coats: Those participating by dialing in will also have an opportunity to ask a question during the question-and-answer session. When you're not speaking, we ask that you please mute your microphone.

32
00:05:36.570 --> 00:05:37.980
Janetta Coats: Next slide please.

33
00:05:40.170 --> 00:05:46.050
Janetta Coats: This slide shows an example of where to find the mute button,

34
00:05:47.760 --> 00:05:49.110
Janetta Coats: the chat box,

35
00:05:50.370 --> 00:05:52.470
Janetta Coats: and how to raise your hand.

36
00:05:54.360 --> 00:05:55.650
Janetta Coats: Next slide please.

37
00:06:02.100 --> 00:06:23.550
Janetta Coats: EPA would like to welcome our Texas congressional delegations, state and local officials, local offices and the environmental justice stakeholders, along with members of the community attending and participating in this meeting.

38
00:06:25.020 --> 00:06:50.250
Janetta Coats: In partnership with the Texas Commission on Environmental Quality known as TCEQ, EPA would like to introduce Dr. Michael Honeycutt, the Chief Toxicologist for TCEQ. At this time, I would like to welcome Dr. Honeycutt to the mic, please.

39
00:06:52.170 --> 00:07:03.630
Michael Honeycutt: Thank you. Again, I'm Dr. Michael Honeycutt, Chief Toxicologist for the Texas Commission on Environmental Quality, and I'm happy to be here this evening to listen to what you have to say. Thank you.

40
00:07:07.680 --> 00:07:08.910
Janetta Coats: Thank you, Dr. Honeycutt.

41
00:07:10.560 --> 00:07:25.800
Janetta Coats: At this time, I would like to introduce you to Jonna Polk, EPA Region 6 Director of the Office of Communities, Tribes, and Environmental Assessment, for general comments.

42
00:07:27.450 --> 00:07:36.450

JPOLK03: Thank you, Janetta. Good evening. I’m Jonna Polk and I serve as Director for Region 6 EPA

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00:07:36.930 --> 00:07:45.090
JPOLK03: Office of Communities, Tribes, and Environmental Assessment. I want to thank you for your time and participation this evening

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00:07:45.450 --> 00:07:54.480
JPOLK03: as EPA shares information concerning ethylene oxide emissions and provides an opportunity for you to ask questions.

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00:07:55.080 --> 00:08:05.910
JPOLK03: We had hoped to meet with community members in person but continue to be protective of everyone during this pandemic. So we are holding meetings virtually.

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00:08:06.300 --> 00:08:13.470
JPOLK03: I hope that you and your families are safe and we look forward to the time when we can safely gather again.

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00:08:14.100 --> 00:08:26.610
JPOLK03: My special thank you this evening to a group of community stakeholders from Texas and Louisiana who expressed their ethylene oxide concerns to EPA’s Administrator.

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00:08:27.210 --> 00:08:37.590
JPOLK03: This past spring, EPA invited this group of stakeholders to work with EPA to improve outreach to communities concerning ethylene oxide,

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00:08:38.520 --> 00:08:47.610
JPOLK03: including recommendations on how to remove language barriers, provide meeting notices, and improve communication materials.

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00:08:48.120 --> 00:08:56.070
JPOLK03: With the community stakeholders, we have a common goal of providing you the best information in the best manner.

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00:08:56.580 --> 00:09:05.970
JPOLK03: This stakeholder group also recommended community participation in these meetings. So this evening we appreciate Mr. Hilton Kelly,

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00:09:06.420 --> 00:09:15.750

JPOLK03: Founder and Director of Community In-Power and Development Association. We appreciate him joining us from the community tonight to speak.

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00:09:16.560 --> 00:09:27.690
JPOLK03: Again, thank you for your time and participation this evening. I would like to introduce your very strong community advocate in our office, Gloria Vaughn,

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00:09:27.960 --> 00:09:40.860
JPOLK03: Associate Director for Environmental Justice, who I'm sure many of you may already know through her tireless efforts in getting information to communities. So Gloria, I'll turn it over to you.

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00:09:47.580 --> 00:09:59.190
Gloria Vaughn: As Jonna said, I'm Gloria Vaughn, Associate Director for Environmental Justice in the Office of Communities, Tribes, and Environmental Assessment at EPA Region 6.

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00:10:01.050 --> 00:10:08.520
Gloria Vaughn: I have been fortunate to meet and/or talk with some of the attendees at this community meeting. But for those who I have not met,

57
00:10:09.030 --> 00:10:27.030
Gloria Vaughn: my name may be familiar to you because I'm the person who sends you notices of great opportunities: training opportunities, meeting invitations, opportunities to comment on projects and on issues that you want to bring to the EPA's attention.

58
00:10:28.080 --> 00:10:40.230
Gloria Vaughn: We appreciate your time and the sacrifices that for you to attend this meeting. Please reach out to me if you have suggestions for making these meetings better. I will place my contact information in the chat

59
00:10:40.290 --> 00:10:40.860
box.

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00:10:41.640 --> 00:10:50.490
Gloria Vaughn: For those of you who are calling in by phone, you can also reach me by phone at 214-665-7535.

61
00:10:51.900 --> 00:10:53.640
Gloria Vaughn: Your feedback is important.

62
00:10:54.810 --> 00:11:01.860
Gloria Vaughn: Thank you for attending tonight's meeting and I hand the mic back to Janetta Coats, who will provide further details.

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00:11:03.750 --> 00:11:18.840
Janetta Coats: Thank you Gloria and Jonna. Now I would like to introduce David Garcia EPA Region 6 Director, Air and Radiation Division, for opening comments. David.

64
00:11:19.500 --> 00:11:21.270
dgarcia: Okay. Can you hear me okay?

65
00:11:21.600 --> 00:11:23.550
Janetta Coats: Yes, we hear you loud and clear. Thank you.

66
00:11:23.790 --> 00:11:34.470
dgarcia: Once again, thank you for joining us today. As Debora stated, my name is David Garcia. I'm the Director of the Air and Radiation Division for the EPA Region 6 office in Dallas, Texas.

67
00:11:35.040 --> 00:11:46.410
dgarcia: EPA is presenting this community meeting on a potential risk associated with the emissions of ethylene oxide from the Indorama Ventures facility in Port Neches, Texas.

68
00:11:46.920 --> 00:11:59.700
dgarcia: We will provide information on the current estimated risk from emissions of ethylene oxide from this facility, what actions Indorama has completed since 2014 until 2020,

69
00:12:00.690 --> 00:12:14.340
dgarcia: and what EPA is planning to do to regulate this air toxic. Ethylene oxide is a significant building block for many useful day-to-day consumer products and is used as a sterilizer for medical equipment.

70
00:12:15.120 --> 00:12:31.500
dgarcia: During our periodic review of risk from air toxics chemicals, EPA determined that ethylene oxide presents a greater potential risk for getting cancer through inhalation, breathing, route of exposure purposes.

71
00:12:32.550 --> 00:12:45.960
dgarcia: However, across the nation, the total emissions of air toxics pollutants are declining and air quality monitoring data shows that

concentrations of individual air toxics pollutants in the air are trending downward.

72
00:12:47.010 --> 00:12:58.950
dgarcia: However, despite these trends, some local areas are facing challenges from ethylene oxide emissions. In 2014 and based on the latest National Air Toxics Assessment,

73
00:12:59.520 --> 00:13:14.430
dgarcia: ethylene oxide significantly contributed to potential elevated cancer risk in less than 1% of the census tracts across the United States. One of the census tracts is located in Port Neches, Texas.

74
00:13:15.630 --> 00:13:29.670
dgarcia: Community outreach on ethylene oxide is a critical issue for EPA Administrator Michael Regan. We will be addressing your questions after the presentations by EPA, by Indorama, and by Hilton Kelly.

75
00:13:30.840 --> 00:13:47.910
dgarcia: We appreciate you taking the time to join us today. With that said, allow me to introduce Ms. Frances Verhalen, Chief of the region's Air Monitoring and Grant section. She will provide more details on potential risk from ethylene oxide in Port Neches.
76
00:13:49.860 --> 00:13:50.220
Thank you.

77
00:13:54.810 --> 00:14:06.570
Fran Verhalen: Good evening. Thank you, David. My name is Frances Verhalen. I'm a supervisor for the U.S. EPA in Dallas. Tonight I will be talking about

78
00:14:07.800 --> 00:14:12.870
Fran Verhalen: a review of the ethylene oxide, including its importance and uses;

79
00:14:14.520 --> 00:14:22.800
Fran Verhalen: the EPA-estimated health risks from breathing ethylene oxide near the Indorama facility in Port Neches, Texas;

80
00:14:24.690 --> 00:14:32.910
Fran Verhalen: what Indorama has done to provide updated and more accurate information on their ethylene oxide emissions;
81
00:14:34.440 --> 00:14:44.910

Fran Verhalen: and what conclusions EPA has made after reviewing updated information on ethylene oxide at Indorama provided by TCEQ and the company.

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00:14:47.130 --> 00:14:53.580
Fran Verhalen: Tonight's discussion is specific to ethylene oxide emissions from this facility.

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00:14:54.990 --> 00:15:05.790
Fran Verhalen: I'm focusing on: providing you information on ethylene oxide uses and the health effects from breathing ethylene oxide (both short-term and long-term risks);

84
00:15:06.900 --> 00:15:13.410
Fran Verhalen: information on what the facility has done to update its information on emissions of ethylene oxide;

85
00:15:14.910 --> 00:15:21.630
Fran Verhalen: EPA's conclusions after reviewing updated technical information and the risk modeled for this facility;

86
00:15:23.190 --> 00:15:26.970
Fran Verhalen: and more accurate information provided by the company and TCEQ.

87
00:15:31.560 --> 00:15:41.220
Fran Verhalen: Ethylene oxide exists at room temperature as a colorless gas. It is flammable, meaning it can burn.

88
00:15:42.720 --> 00:15:52.290
Fran Verhalen: It is a chemical component in making other chemicals and is a component for common household products, like detergents or carpeting.

89
00:15:54.510 --> 00:16:09.990
Fran Verhalen: It is a sterilizing agent for materials that cannot be heated or gotten wet. For example, ethylene oxide sterilization is being used in hospitals on masks and gowns used by doctors and nurses.

90
00:16:15.180 --> 00:16:28.020
Fran Verhalen: In recent years, EPA has learned more about the health risks from breathing air that contains ethylene oxide over a lifetime, but there is a lot about ethylene oxide, that we still do not know.

91

00:16:29.520 --> 00:16:41.100
Fran Verhalen: One of the questions we are examining is whether ethylene oxide is in the air broadly across the United States and, if it is, at what levels.

92
00:16:42.150 --> 00:16:48.660
Fran Verhalen: Another question is if we are actually measuring ethylene oxide, or is it something different.

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00:16:50.730 --> 00:17:00.930
Fran Verhalen: We began examining these questions after monitoring studies of ethylene oxide in the air near industrial facilities in another state in 2018 and 2019

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00:17:03.750 --> 00:17:07.500
Fran Verhalen: found it at monitors downwind of the facility.

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00:17:08.700 --> 00:17:29.250
Fran Verhalen: This was expected because wind carries ethylene oxide from facilities towards the monitors. But the studies also detected ethylene oxide, although at lower levels, at monitors upwind of the facility, indicating the possibility that background ethylene oxide exists.

96
00:17:32.310 --> 00:17:44.880
Fran Verhalen: EPA has found concentrations of ethylene oxide in the outdoor air that are not clearly linked to a particular industrial facility, such as a chemical plant or commercial sterilizer.

97
00:17:46.200 --> 00:17:50.430
Fran Verhalen: We do not yet know where the ethylene oxide is coming from.

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00:17:51.870 --> 00:18:06.210
Fran Verhalen: The scientists and engineers at EPA continue to study and research multiple things that can contribute to ethylene oxide concentrations to better understand where the ethylene oxide is coming from.

99
00:18:07.800 --> 00:18:28.500
Fran Verhalen: EPA has sampled the air in both urban and rural cities across the nation to monitor the concentrations of air toxics including ethylene oxide. While these lower levels of ethylene oxide suggest there is a background level of ethylene oxide in the outdoor area,

100
00:18:29.970 --> 00:18:41.820

Fran Verhalen: EPA is not yet certain about the exact background ethylene oxide levels due to uncertainty with current measurement methods.

101
00:18:48.180 --> 00:18:59.220
Fran Verhalen: Tonight I plan to tell you about potential health risks of cancer associated with air emissions of ethylene oxide from the Indorama facility in Port Neches.

102
00:19:00.330 --> 00:19:12.900
Fran Verhalen: I use the term 'potential cancer risk' because each of us is unique in our reaction to cancer causing agents and we may not get cancer from the same exposure as our neighbor.

103
00:19:14.940 --> 00:19:25.470
Fran Verhalen: When we, the scientists at EPA, discuss health risks, we focus on both short-term risk and long-term, or lifetime, risk.

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00:19:27.120 --> 00:19:35.940
Fran Verhalen: Tonight, I am focusing on risks from breathing air toxics. You may also hear this called 'inhalation risk.'

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00:19:38.550 --> 00:19:43.170
Fran Verhalen: Short-term risks are those potential risks that impact quickly.

106
00:19:44.190 --> 00:19:46.410
Fran Verhalen: You may know this as 'acute risk.'

107
00:19:47.460 --> 00:20:01.890
Fran Verhalen: For ethylene oxide, we normally associate this risk with workers who come into contact with, and in this specific case breathe in, higher concentrations of ethylene oxide.

108
00:20:03.090 --> 00:20:12.090
Fran Verhalen: Short-term inhalation exposure of workers to high levels of ethylene oxide has resulted in serious physical effects.

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00:20:13.290 --> 00:20:23.100
Fran Verhalen: For those of you living in the community near the Indorama facility, this situation or type of risk is not likely or probable.

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00:20:26.760 --> 00:20:39.960

Fran Verhalen: Long-term risks are potential risks that may develop over years of exposure, such as breathing in lower concentrations of the ethylene oxide over longer periods of time.

111
00:20:41.070 --> 00:20:43.290
Fran Verhalen: You may know this as 'chronic risk.'

112
00:20:44.700 --> 00:21:06.000
Fran Verhalen: Long-term effects from breathing concentrations of ethylene oxide for multiple years can but do not always include: cancer, irritation of the eyes, skin, and respiratory passages, and effects to the nervous system such as headaches or memory loss.

113
00:21:09.930 --> 00:21:36.960
Fran Verhalen: We, the scientists at EPA, have determined that a long-term, that is a lifetime of about 70 years exposure to ethylene oxide, increases the estimated risk of possibly developing certain cancers of the white blood cells. These cancers include lymphoma, myeloma, and potentially breast cancer.

114
00:21:41.400 --> 00:21:47.340
Fran Verhalen: Let me start with an explanation about what the potential increased cancer risk means.

115
00:21:48.630 --> 00:21:58.470
Fran Verhalen: EPA discusses 'increased cancer risk' as a comparison of the number of people at risk of developing cancer for every 1 million cases.

116
00:21:59.520 --> 00:22:07.620
Fran Verhalen: You may hear it as 'a potential risk of…,' such as '…10 in a million' or '…100 in a million.'

117
00:22:08.970 --> 00:22:14.460
Fran Verhalen: This risk is in addition to the chances of developing cancer for other reasons.

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00:22:16.770 --> 00:22:29.940
Fran Verhalen: This slide shows the emissions of ethylene oxide for 2014 and 2018 and the associated risk estimates for the Indorama facility.

119
00:22:32.010 --> 00:22:40.770
Fran Verhalen: Using the 2014 emissions inventory information in the National Air Toxics Assessment model,

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00:22:42.060 --> 00:22:53.700
Fran Verhalen: EPA estimated the potential increased cancer risk in the Port Neches area from ethylene oxide to be over 1,400 cases in 1 million.

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00:22:55.500 --> 00:23:06.960
Fran Verhalen: And EPA determined that the ethylene oxide emissions were from the Indorama Ventures facility. This facility was formerly known as the Huntsman Port Neches facility.

122
00:23:09.870 --> 00:23:27.450
Fran Verhalen: We at the EPA consider excess cancer risks that are estimated to be above 100 in 1 million as not sufficiently protective of human health and in need of further evaluation to address this concern.

123
00:23:30.060 --> 00:23:47.010
Fran Verhalen: Using Indorama's 2018 emissions inventory, EPA found that the potential risk in increased cancer risk to be 2,000 in 1 million. In discussion with Indorama, the root cause of the emissions increase

124
00:23:48.840 --> 00:23:51.720
Fran Verhalen: was presumed to be process upsets.

125
00:23:53.880 --> 00:24:06.210
Fran Verhalen: EPA uses actual annual emissions for a specific year to develop the estimated lifetime risks because the amount of annual emissions change

126
00:24:06.690 --> 00:24:28.260
Fran Verhalen: based on a facility's use of ethylene oxide. The associated risk continues to change for 2020. Indorama worked to control the process upsets, and the amount of ethylene oxide emitted from their facility was reduced by 72% compared to the 2018
127
00:24:29.460 --> 00:24:30.180
Fran Verhalen: emissions.

128
00:24:32.670 --> 00:24:46.830
Fran Verhalen: Please note that EPA uses actual emissions for a specific year to develop the estimated lifetime risk. Risk continues to change as actual emissions change.

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00:24:51.450 --> 00:24:59.940
Fran Verhalen: In 2016, EPA published the Integrated Risk Information System, or IRIS assessment, for ethylene oxide.

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00:25:02.040 --> 00:25:12.180
Fran Verhalen: This risk assessment underwent two rounds of public comment and two rounds of peer review by the EPA Scientific Advisory Board.

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00:25:13.200 --> 00:25:22.710
Fran Verhalen: EPA stands behind the ethylene oxide IRIS value. However, you may hear different views this evening about the risk.

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00:25:23.430 --> 00:25:44.130
Fran Verhalen: I'm not here tonight to debate the different risk values, but rather to explain the risks based on the EPA's latest scientific assessment. Suggestions to consider risk values other than the IRIS will be addressed by EPA through our formal agency processes.

133
00:25:49.620 --> 00:25:58.800
Fran Verhalen: In developing our risk number for breathing ethylene oxide, EPA chooses to be protective and conservative.

134
00:25:59.640 --> 00:26:24.090
Fran Verhalen: We base the increased estimated risk of possibly contracting cancer on someone breathing air with ethylene oxide in it at the same concentration every day for 24 hours a day for 70 years. It does not mean that it will take 70 years to develop cancer, it could be less or more time.

135
00:26:26.460 --> 00:26:35.490
Fran Verhalen: We do not expect a one-time or short-term exposure of low amounts of ethylene oxide to cause immediate harm to a person's health.

136
00:26:37.500 --> 00:26:55.080
Fran Verhalen: We found that a long-term exposure, that is a lifetime or about 70 years exposure to ethylene oxide, increases the potential risk of certain cancers such as non-Hodgkins lymphoma, myeloma, and lymphocytic leukemia.

137
00:26:56.490 --> 00:27:04.740
Fran Verhalen: Some studies also conclude that long-term exposure to ethylene oxide may increase the risk of breast cancer.

138
00:27:08.730 --> 00:27:18.780
Fran Verhalen: The EPA used the Human Exposure Model to perform the risk assessment for sources emitting air toxics into the air.

139

00:27:21.090 --> 00:27:42.540
Fran Verhalen: This model only addresses the inhalation exposure. It is designed to predict estimated risks associated with chemicals emitted into the air. That is, air toxics released into the air that move beyond a facility's property boundary and remain in the vicinity of the facility.

140
00:27:44.130 --> 00:27:54.990
Fran Verhalen: In this case, we used the emissions and facility information from Indorama and ran the model to predict the estimated risk from this facility.

141
00:27:57.210 --> 00:28:19.890
Fran Verhalen: The results of the Human Exposure Model provide estimates of potential cancer risk and noncancer hazards for the chemicals evaluated in the model. The actual health of an -- of an individual and one's likelihood of developing cancer may be affected by other factors.

142
00:28:21.060 --> 00:28:35.730
Fran Verhalen: Examples of this include how long a person is exposed to air toxics, what their regular routines normally are, and how long a person has lived in a particular location.

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00:28:37.440 --> 00:28:42.360
Fran Verhalen: More information can be found at the following website.

144
00:28:43.590 --> 00:29:06.570
Fran Verhalen: W-W-W dot E-P-A dot G-O-V forward slash F-E-R-A forward slash risk dash assessment dash and dash modeling dash human

145
00:29:07.680 --> 00:29:09.210
Fran Verhalen: dash exposure

146
00:29:10.440 --> 00:29:11.670
Fran Verhalen: dash model

147
00:29:12.870 --> 00:29:15.120
Fran Verhalen: dash H-E-M.

148
00:29:23.520 --> 00:29:43.500
Fran Verhalen: The Indorama Port Neches facility is located south of the Neches River off of Highway 136. The facility has multiple manufacturing units and processes which includes ethylene oxide production as well as the production of other chemicals and products using ethylene oxide.

149
00:29:44.640 --> 00:30:01.050
Fran Verhalen: Products from this facility are used in various industries, including electronics, beauty and personal care, solvents, resins, intermediates, stabilizers, energy, and construction.

150
00:30:03.420 --> 00:30:12.570
Fran Verhalen: As EPA began updating information from 2014 to 2020, we initiated discussions with Indorama.

151
00:30:14.400 --> 00:30:24.780
Fran Verhalen: In April, EPA sent a letter to Indorama asking for updates on ethylene oxide emissions since 2014.

152
00:30:27.750 --> 00:30:45.300
Fran Verhalen: In May, EPA and TCEQ held a conference call with Indorama to discuss facility efforts to reduce reported ethylene oxide emissions and Indorama provided EPA and TCEQ with updated facility information.

153
00:30:54.090 --> 00:31:00.990
Fran Verhalen: One area that Indorama has worked to improve is its Process Upset events.

154
00:31:02.010 --> 00:31:11.010
Fran Verhalen: These events account for more than 50% of the ethylene oxide emissions from 2014 to 2019.

155
00:31:12.480 --> 00:31:20.460
Fran Verhalen: Indorama has undertaken multiple corrective action efforts to reduce air emission events at the facility.

156
00:31:21.780 --> 00:31:36.390
Fran Verhalen: Annual upsets at the facility involving ethylene oxide hit an all-time low in 2020 with only one reported upset that year releasing a minimal amount of ethylene oxide.

157
00:31:37.650 --> 00:31:37.830
Fran Verhalen: In 2021,

158
00:31:39.780 --> 00:31:53.610
Fran Verhalen: the Indorama facility has reported a number of upsets involving ethylene oxide. EPA remains concerned that the historic problems with upsets at the site may not be completely resolved.

159

00:31:59.040 --> 00:32:02.970
Fran Verhalen: Emission updates [upsets] can best be explained using a year-by-year breakdown.

160
00:32:05.520 --> 00:32:16.410
Fran Verhalen: For the 2016 emission inventories review, Indorama discovered that emissions of another compound were incorrectly added to the ethylene oxide number

161
00:32:17.430 --> 00:32:21.900
Fran Verhalen: and they revised the emission inventory to correct this error.

162
00:32:23.880 --> 00:32:34.800
Fran Verhalen: During the review of ethylene oxide emissions inventory numbers in 2017, Indorama discovered that there was an overreporting of ethylene oxide emissions.

163
00:32:37.740 --> 00:32:42.870
Fran Verhalen: Indorama made two updates to the emission inventory in 2019.

164
00:32:44.340 --> 00:33:01.740
Fran Verhalen: First, Indorama identified an error of previously reported ethylene oxide emission numbers during a facility and state review. This required Indorama to increase its emission inventory for the year to correct the error.

165
00:33:03.060 --> 00:33:20.940
Fran Verhalen: And secondly, during an internal review the facility -- the facility discovered an incorrectly low destruction and removal efficiency was being used in a calculation, which resulted in a higher estimated

166
00:33:22.500 --> 00:33:28.320
Fran Verhalen: -- in a higher estimated value than actually emitted for ethylene oxide.

167
00:33:29.670 --> 00:33:37.980
Fran Verhalen: This resulted in a reduction of the reported ethylene oxide emissions for 2019.

168
00:33:41.610 --> 00:33:54.120

Fran Verhalen: From 2014 to 2020, through emission reductions and/or reevaluation of actual emission levels, reported ethylene oxide emissions at Indorama were reduced.

169
00:33:56.370 --> 00:34:06.060
Fran Verhalen: Reported 2020 emissions decreased about 44% from 2014 to 2020 levels.

170
00:34:08.430 --> 00:34:25.830
Fran Verhalen: EPA will continue to work with Indorama to monitor the annual emissions. On an annual basis, you too can check on emission inventories and toxic risk inventories from Indorama and other facilities of interest.

171
00:34:31.230 --> 00:34:35.970
Fran Verhalen: What has Indorama done to improve the facility ethylene oxide emissions?

172
00:34:37.500 --> 00:34:53.100
Fran Verhalen: The facility has improved its leak detection and repair program to reduce ethylene oxide emissions. Some of these improvements have been taken already, some are in progress, and some are planned.

173
00:34:58.800 --> 00:35:00.060
Fran Verhalen: In 2020,

174
00:35:01.080 --> 00:35:09.840
Fran Verhalen: Indorama had a 1,300-pound reduction in calculated ethylene oxide emissions. This was a correction.

175
00:35:11.310 --> 00:35:24.630
Fran Verhalen: They also have utilized actual monitoring data in lieu of using emission factors for determining their annual ethylene oxide emissions inventory.

176
00:35:25.980 --> 00:35:50.010
Fran Verhalen: They are also working on improving working methods. That is, they have revised the training to prevent over-tightening of connections and they've increased the quality of the washers installed in different areas for the ethylene oxide reactors and other large equipment.

177
00:35:52.320 --> 00:36:02.460

Fran Verhalen: Indorama has also changed the priorities for maintenance activities to reduce the time for repairs to the system components that are leaking.

178
00:36:03.930 --> 00:36:15.510
Fran Verhalen: The facility continues to focus on the leak detection and repair program to seek further emission reductions and better ethylene oxide estimates.

179
00:36:19.230 --> 00:36:25.980
Fran Verhalen: Indorama has additional emission reduction efforts planned at the Port Neches facility.

180
00:36:28.020 --> 00:36:44.580
Fran Verhalen: They are planning several phases in the next three-to-five years, which are expected to improve the reliability of the units and reduce unit upsets. This in turn should reduce unplanned emission events.

181
00:36:46.410 --> 00:36:59.490
Fran Verhalen: They're continuing to use the Risk-Based Mechanical Integrity program, which tracks mechanical integrity failures. This is expected to reduce unplanned events.

182
00:37:01.170 --> 00:37:08.520
Fran Verhalen: They are continuing to improve their electrical and steam infrastructure and their electrical relays.

183
00:37:10.410 --> 00:37:19.860
Fran Verhalen: And they are continuing to focus on their Leak Detection and Repair Program to seek further emission reductions and better ethylene oxide estimates.

184
00:37:23.370 --> 00:37:25.800
Fran Verhalen: To summarize, the estimated 2018

185
00:37:28.020 --> 00:37:37.200
Fran Verhalen: maximum individual risk for the area around the Indorama facility is above the 100 in 1 million cancer risk guideline.

186
00:37:38.340 --> 00:37:50.610
Fran Verhalen: EPA finds that this risk is not sufficiently protective of human health and we will be talking with Indorama to further reduce ethylene oxide emissions.

187

00:37:52.110 --> 00:37:55.650
Fran Verhalen: I remind you that EPA modeling is an estimate

188
00:37:57.390 --> 00:38:00.630
Fran Verhalen: of – estimate of risk and is very conservative.

189
00:38:02.400 --> 00:38:12.480
Fran Verhalen: It assumes a continuous 24-hours-per-day inhalation exposure to ethylene oxide for a lifetime of 70 years.

190
00:38:14.340 --> 00:38:26.130
Fran Verhalen: EPA noted that more than 50% of the ethylene oxide emissions from 2014 to 2019 were caused by upset emissions, and we note that

191
00:38:27.330 --> 00:38:43.980
Fran Verhalen: Indorama reported only one 2020 upset event and has had about a 72% reduction in annual ethylene oxide emissions when compared to 2018.

192
00:38:50.130 --> 00:39:01.950
Fran Verhalen: EPA is concerned that problems with upsets at the site may not be resolved. We plan to continue to monitor the facility upsets involving ethylene oxide, evaluate if

193
00:39:02.610 --> 00:39:12.660
Fran Verhalen: historical problems with upsets have been resolved, and continue to monitor Indorama's progress in reducing ethylene oxide emissions.

194
00:39:13.800 --> 00:39:23.100
Fran Verhalen: We will also continue to review and revise our national regulations that affect ethylene oxide emissions.

195
00:39:24.750 --> 00:39:36.000
Fran Verhalen: EPA, TCEQ, and the facility will also be discussing additional ways to address control of ethylene oxide emissions.

196
00:39:42.450 --> 00:40:04.410
Fran Verhalen: We have provided a link for your convenience to look up additional information about ethylene oxide. The EPA ethylene oxide webpage is found at W-W-W dot E-P-A dot G-O-V forward slash ethylene dash oxide.

197

00:40:07.050 --> 00:40:26.220
Fran Verhalen: EPA also hosted an introductory webinar on ethylene oxide in May of this year. This information can be found at W-W-W dot E-P-A dot G-O-V forward slash TX forward slash

198
00:40:27.240 --> 00:40:32.430
Fran Verhalen: air dash issues dash Texas.

199
00:40:38.310 --> 00:40:48.600
Fran Verhalen: EPA has provided some resources for additional information about air toxics and regulations for air toxics. Some of these topics include

200
00:40:49.650 --> 00:40:53.070
Fran Verhalen: the list of the air toxics pollutants,

201
00:40:54.540 --> 00:40:58.350
Fran Verhalen: an overview of our risk and technology program,

202
00:40:59.460 --> 00:41:02.820
Fran Verhalen: and the Plain English Guide to the Clean Air Act.

203
00:41:05.100 --> 00:41:10.830
Fran Verhalen: At this time, I return the meeting back over to Janetta. Thank you, Janetta.

204
00:41:12.510 --> 00:41:34.200
Janetta Coats: Thank you, Fran, for your ethylene oxide presentation. Again, we want to thank all the participants for joining us tonight, but we would also like to introduce our next presenter, which is Kim Hoyt, Indorama site director. And we definitely look forward to hearing from

205
00:41:35.850 --> 00:41:58.530
Janetta Coats: Kim about their activities since 2014 to reduce or control ethylene oxide emissions from their facility, their ongoing efforts, and any future plans that they can share with us. I would like to turn the mic over to Kim. Thank you.

206
00:41:59.760 --> 00:42:00.420
Kim Hoyt: Thank you.

207
00:42:01.980 --> 00:42:15.600
Kim Hoyt: Good Evening, my name is Kim Hoyt and I am the site director for the Indorama Ventures plant in Port Neches, Texas. Tonight I’m going

to share with you some information about our plan for Port Neches and Indorama, but first a little about myself.

208
00:42:16.770 --> 00:42:28.230
Kim Hoyt: I have worked at this site for 23 years. I'm a chemical engineer, and I have worked in many areas and departments throughout the site. In February of this year, I became Site Director.
209
00:42:29.490 --> 00:42:42.900
Kim Hoyt: In my personal life, I have been married for 28 years and my husband and I have three children. It's hard for me to separate my work life from my personal life because my husband also works here at Indorama and we are neighbors to the plant.

210
00:42:43.950 --> 00:42:48.900
Kim Hoyt: We live about a block away from the plant and we can see the plant from our home.

211
00:42:50.520 --> 00:42:58.080
Kim Hoyt: All three of our children have attended school right outside of one of the gates to the facility, as well as Port Neches Groves High School, which is only a couple of miles away.

212
00:42:58.620 --> 00:43:09.540
Kim Hoyt: What we do every single day in this plant matters to me, to my family, to my neighbors, and to everyone that lives in this community. And I take that responsibility very seriously.

213
00:43:13.260 --> 00:43:27.270
Kim Hoyt: The Port Neches site began operations in 1944. In 1994, Huntsman Corporation purchased Texaco Chemical. Last year, in January of 2020, Indorama Ventures purchased the Port Neches site.
214
00:43:28.530 --> 00:43:33.000
Kim Hoyt: Many people locally are still learning about Indorama since Indorama is new to this area.

215
00:43:34.350 --> 00:43:50.700
Kim Hoyt: Indorama Ventures is a global chemical company headquartered in Bangkok, with presence in 33 countries. There are 124 manufacturing facilities and over 24,000 employees. Indorama Ventures is the global leader in 70% of its business.

216
00:43:51.630 --> 00:44:04.920
Janetta Coats: Kim I'm sorry to interrupt you. This is Janetta, the moderator. Can you slow it down just a little tad bit? I've got a couple

of folks wanting you to slow it down just a little bit, so I apologize for the interruption. So, if we could slow down a little bit.

217
00:44:05.190 --> 00:44:05.970
Kim Hoyt: No problem.

218
00:44:06.090 --> 00:44:08.070
Janetta Coats: Thank you so much. Appreciate it.

219
00:44:09.420 --> 00:44:25.320
Kim Hoyt: Alright. Indorama Ventures is the global leader in 70% of its businesses. The Port Neches site is a great fit with Indorama because the products we manufacturer are vertically integrated with other Indorama businesses.

220
00:44:31.230 --> 00:44:48.150
Kim Hoyt: The Port Neches site was the largest plant within Huntsman and then they're now the largest site within Indorama. We have about 600 employees and our contract workforce can fluctuate from about 400 associates to well over 1,000 during a turnaround event.

221
00:44:49.380 --> 00:45:00.300
Kim Hoyt: Thirty-five percent of our Indorama associates live within about a 10-mile radius in the surrounding communities of Port Neches, Groves, Nederland, and Port Arthur.

222
00:45:01.620 --> 00:45:06.900
Kim Hoyt: The plant itself sits on about 600 acres, but our total land

223
00:45:07.920 --> 00:45:20.310
Kim Hoyt: is about 3,000 acres. Some of that land is just woodlands, but a large portion is a protected wetlands area. Other large tracts are used for grazing and some of it is used for youth sports.

224
00:45:21.300 --> 00:45:31.920
Kim Hoyt: You can't see all 3,000 acres in this picture, but you can see that we are located right next to the cities of Groves and Port Neches. We are a member of these communities.

225
00:45:33.300 --> 00:45:43.620
Kim Hoyt: Our associates are dedicated to continuous improvement in all aspects of environmental health and safety, and we do not take that for granted.

226

00:45:44.730 --> 00:45:47.250
Kim Hoyt: It is our right to operate in these communities.

227
00:45:48.690 --> 00:45:59.250
Kim Hoyt: Our site operates under permits granted by federal and state agencies and under our site and corporate EHS management policies and procedures.

228
00:46:00.060 --> 00:46:15.270
Kim Hoyt: These policies and procedures are tools that help us manage EHS and support high performance across our site. They are the foundation of our resolve for compliance and a clear demonstration of our commitment.

229
00:46:19.620 --> 00:46:29.850
Kim Hoyt: Like me, many of the Indorama staff and contract associates that work here also live in these communities and if they don't, they likely have family members that do.

230
00:46:31.050 --> 00:46:51.390
Kim Hoyt: We all have not only professional but very personal reasons to ensure our site operates with a primary concern of the safety and environmental compliance for our associates and community. We believe that we have a duty to give back to society and to help those who are less fortunate.

231
00:46:52.440 --> 00:47:00.780
Kim Hoyt: To that end, we sponsor and participate in initiatives throughout Jefferson County and the surrounding communities. For example.

232
00:47:01.320 --> 00:47:19.710
Kim Hoyt: we have helped in our communities during hurricane and flood events with cleanup efforts, meals for first responders, and financial assistance. We award STEM grants for middle school and high school teachers and we provide intern and co-op opportunities for college students.

233
00:47:20.790 --> 00:47:37.050
Kim Hoyt: We have been a strong partner with local colleges that provide process technology degree programs. Further, we encourage associates to become involved and give of their time and resources to improve the quality of life in our community.

234
00:47:38.310 --> 00:47:48.660
Kim Hoyt: In 2000, the State of Texas awarded our site with the Clean Texas 2000 Award for establishing a wildlife refuge on our property.

235
00:47:49.620 --> 00:48:05.850
Kim Hoyt: Since then, we have established an environmental education center and partner with local schools and universities to encourage and support environmental education through field trips and even activities such as building duck nesting boxes.

236
00:48:07.320 --> 00:48:16.020
Kim Hoyt: Last year when the global pandemic began, Indorama was quick to develop a process to manufacturer hand sanitizer.

237
00:48:16.920 --> 00:48:25.170
Kim Hoyt: Product was shipped to Port Neches and our drumming team engineered a gallon-jug filling system, allowing us to distribute the sanitizer

238
00:48:25.860 --> 00:48:45.030
Kim Hoyt: when it was in such short supply to hospitals, first responders, schools, churches, and others. I am proud of what we have been able to do for our area and we now have a team that is leading efforts to become even more actively involved in outreach efforts.

239
00:48:49.470 --> 00:49:02.490
Kim Hoyt: As a committed community partner, Indorama understands the importance of engaging near neighbors about our operations. In 1990 we established a Citizens Advisory Panel, or CAP,
240
00:49:03.000 --> 00:49:15.390
Kim Hoyt: consisting of area leaders and near neighbors that meet on a monthly basis. The CAP has a standing agenda that includes substantive discussion of major maintenance schedules,

241
00:49:15.900 --> 00:49:25.680
Kim Hoyt: review of site environmental status, review of site’s safety status, review a business status, and discussion of community activities.

242
00:49:26.700 --> 00:49:33.360
Kim Hoyt: Indorama is diligent in posting to the Southeast Texas Alert Network, also called the STAN,

243
00:49:34.470 --> 00:49:42.210
Kim Hoyt: to alert near neighbors of events such as flaring, high noise activity, and off-site odors as the need arises.

244
00:49:43.260 --> 00:49:57.090

Kim Hoyt: Additionally, Indorama makes door-to-door visits on occasion to respond to neighborhood questions and concerns. Indorama also sends mail communications to neighbors in the event of planned maintenance or startup activities.

245
00:50:02.010 --> 00:50:15.270
Kim Hoyt: Port Neches' operation produces ethylene, which is the most basic building block in the petrochemical industry. All of the ethylene produced in Port Neches is used as a raw material in our ethylene oxide production units.

246
00:50:16.410 --> 00:50:24.870
Kim Hoyt: The majority of ethylene oxide is used to produce products such as detergents, cosmetics, textiles, and antifreeze.

247
00:50:26.310 --> 00:50:35.340
Kim Hoyt: Port Neches also produces propylene, which goes into making construction materials, paints, cosmetics, solvents, and more.

248
00:50:36.810 --> 00:50:48.180
Kim Hoyt: A lot of power is required to manufacture these chemicals. Consequently, we have two cogen units on-site to produce steam and electricity, providing power to our facility.

249
00:50:49.080 --> 00:51:00.930
Kim Hoyt: The plant's electrical needs are typically met with only the cogen units and the additional level of electricity production is exported to the grid to support the community's usage needs.

250
00:51:01.620 --> 00:51:10.350
Kim Hoyt: This February, we were actually able to supply power from our cogen units back to the community while Entergy was restoring stability back to the grid.

251
00:51:16.710 --> 00:51:21.990
Kim Hoyt: This graph shows the significant capital investment that we have made to improve our utility reliability.

252
00:51:23.130 --> 00:51:39.510
Kim Hoyt: Improved reliability has a direct impact to reduced emissions, and you can see the improvement we have begun to realize. Over the last few years, we have reduced our total EO emissions by 64%. From 2014 to 2020,
253
00:51:40.560 --> 00:51:57.090

Kim Hoyt: we have added several new substations, transformers, and made improvements to our high voltage transmission lines. We have implemented additional preventative maintenance measures on our high voltage equipment and improved the electrical supply protection.

254
00:51:58.410 --> 00:52:09.270
Kim Hoyt: In our steam systems we have replaced hardware and control systems, we have rebuilt boilers, upgraded gas turbines, and replaced the natural gas feed line.

255
00:52:10.530 --> 00:52:13.620
Kim Hoyt: So far, over $70 million has been invested.

256
00:52:14.760 --> 00:52:28.800
Kim Hoyt: These projects, along with improvements in the processes by operators and engineers, have all resulted in significant improvements in reliability. Which, as I said, has a direct impact on emissions reduction.

257
00:52:29.700 --> 00:52:38.970
Kim Hoyt: However, our efforts don't end here. We have other efforts and ongoing initiatives aimed at further reducing emissions that I would like to share with you.

258
00:52:42.360 --> 00:52:50.730
Kim Hoyt: Leak Detection and Repair is a program to detect leaks from our piping system and then expeditiously repair them when found.

259
00:52:51.600 --> 00:53:05.880
Kim Hoyt: This program is required by our permit and is a program we highly value. We have a team that utilizes special equipment to monitor emissions from valves, flanges, and other points in our processes.

260
00:53:06.810 --> 00:53:13.530
Kim Hoyt: If a leak is discovered through this monitoring, the operations and maintenance teams work together to get it repaired.

261
00:53:14.670 --> 00:53:33.420
Kim Hoyt: We have also established an operational excellence team to look for more ways we may be able to eliminate leaks. The team has already made some changes to our repair process and the materials being used. We have already seen an improvement as a result of this team's work.

262
00:53:34.830 --> 00:53:39.810

Kim Hoyt: Our operators use sophisticated control systems to monitor and operate units.

263
00:53:40.560 --> 00:53:54.090
Kim Hoyt: Advanced Process Control, also called APC, is technology that reduces process variability and allows a plant to be operated optimally, which reduces unit upsets in emissions.

264
00:53:54.870 --> 00:54:02.700
Kim Hoyt: APC can be done through additional control strategies or even with the use of artificial intelligence or machine learning.

265
00:54:03.870 --> 00:54:13.260
Kim Hoyt: Expanding our use of APC will improve the overall control of the process units and alert operators of even slight changes.

266
00:54:14.640 --> 00:54:22.950
Kim Hoyt: Artificial Intelligence or machine learning applications can give suggestions to operators to run the unit at optimal conditions.

267
00:54:24.810 --> 00:54:33.300
Kim Hoyt: Risk Based Mechanical Integrity, or RBMI, is a program that we implemented a little over 10 years ago at the site.

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00:54:34.320 --> 00:54:45.210
Kim Hoyt: Our EO units have been through two turnarounds utilizing RBMI, which helps identify through study and monitoring areas more likely to have failure.

269
00:54:46.170 --> 00:55:00.450
Kim Hoyt: The RBMI process continues to improve as it matures with more data feeding the model. It also helps us prioritize where and how we should make capital investments at the site to improve reliability.

270
00:55:01.770 --> 00:55:14.730
Kim Hoyt: Finally, we are continuing to improve our electrical and steam infrastructure. We still have some areas of our electrical distribution system and some substations that need to be upgraded.

271
00:55:15.600 --> 00:55:28.350
Kim Hoyt: We also have more work planned for our steam boilers and cogen units. We are also planning to upgrade our water treatment systems to improve our water quality and steam system reliability.

272

00:55:29.550 --> 00:55:46.140
Kim Hoyt: Indorama is committed to compliance with all regulatory requirements. We comply with current TCEQ and EPA EO emission standards. When new rules and regulatory requirements are implemented, we will continue to comply.

273
00:55:50.580 --> 00:56:04.680
Kim Hoyt: After the EPA revised their EO cancer risk value, we hired a highly regarded environmental consulting firm, Ramboll, to run an independent analysis of our EO emissions and the predicted risk.

274
00:56:05.490 --> 00:56:20.340
Kim Hoyt: Dr. Sonja Sax is a member of the team that has worked on the data analysis of our EO emissions. Dr. Sax has both her master's and doctorate in environmental health sciences from the Harvard School of Public Health.

275
00:56:21.240 --> 00:56:32.580
Kim Hoyt: She has over 20 years of experience studying the impact of air emissions on public health and understanding the toxicity of chemicals released into the environment.

276
00:56:33.030 --> 00:56:46.830
Kim Hoyt: As well as methods to assess public health impacts, she has authored papers on the toxicity of air pollutants and has presented research at conferences and testified in front of regulatory agencies.

277
00:56:47.670 --> 00:57:01.230
Kim Hoyt: Dr. Sax was a scientific advisor to the U.S. EPA Clean Air Science Advisory Committee on ozone and on particulate matter for the National Ambient Air Quality Standards in 2019.

278
00:57:02.010 --> 00:57:02.370
Fran Verhalen: Miss Hoyt --

279
00:57:03.720 --> 00:57:15.960
Fran Verhalen: This is Fran Verhalen. Can y'all wrap this up in a couple of minutes? We had asked that you have a presentation of about 10 minutes and we're cutting into the question-and-answer time.

280
00:57:16.350 --> 00:57:32.670
Fran Verhalen: And we still have our community advocate to present, so I ask that you speed this up a little bit. But please don't speed up your speaking, because the interpreters need to translate. But if you could wrap it up in a couple of minutes, I'd appreciate it. Thank you.

281
00:57:33.570 --> 00:57:38.880
Kim Hoyt: Well, I'm going to turn it over to Dr. Sax and let her continue and we are just about done.

282
00:57:40.290 --> 00:57:50.520
Sonja Sax: Good evening, and thank you for this opportunity to speak. I just want to briefly provide some context for the ethylene oxide risk assessment that EPA conducted.

283
00:57:51.270 --> 00:58:02.700
Sonja Sax: So, EPA's mission is to protect public health. And therefore the risk assessment approach, as was mentioned earlier by EPA, tends to be highly conservative. As it should be.

284
00:58:03.330 --> 00:58:12.000
Sonja Sax: However, this doesn't necessarily mean that it reflects real risks. Risk is a function of both the exposure and that's the level

285
00:58:12.360 --> 00:58:21.540
Sonja Sax: of the concentrations of the air pollutants that a person is exposed to as well as the amount of time that they are exposed to that air pollution

286
00:58:22.140 --> 00:58:34.110
Sonja Sax: as well as the toxicity. Toxicity is usually evaluated using animal studies and sometimes also evaluating the risks in workers that are exposed to very high levels of ethylene oxide.

287
00:58:35.280 --> 00:58:41.130
Sonja Sax: EPA makes assumptions that are highly conservative, again to protect public health, for both of these.

288
00:58:41.490 --> 00:58:54.450
Sonja Sax: For exposures, EPA models the maximum concentration for a census tract and then assumes, as we heard earlier, that a person is exposed to that maximum concentration

289
00:58:54.750 --> 00:59:13.980
Sonja Sax: for 70 years, seven days a week 24 hours a day. So, clearly this is very conservative because people don't spend all their time in one single location. They move around to different locations during the day, and they don't necessarily live in the same location for 70 years.

290
00:59:15.240 --> 00:59:20.100

Sonja Sax: EPA also makes assumptions regarding the toxicity of the air pollutant

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00:59:20.580 --> 00:59:29.520
Sonja Sax: and this is often because we have data at very high levels of exposure that need to be extrapolated down to these low-level exposures.

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00:59:29.880 --> 00:59:46.830
Sonja Sax: For ethylene oxide, EPA estimated toxicity using an unconventional method -- statistical method that resulted in a toxicity value that was far greater than what other agencies had estimated. For example, TCEQ's value

293
00:59:47.760 --> 00:59:56.910
Sonja Sax: is about 2,000 times lower, and this was derived using a more conventional, still very conservative, methodology.

294
00:59:58.080 --> 01:00:10.980
Sonja Sax: So overall, EPA estimated risks that are overly conservative to protect public health but they don't necessarily predict people's actual exposures or risks. Next slide, please.

295
01:00:13.320 --> 01:00:24.060
Sonja Sax: So as I mentioned, EPA's exposure estimates are very conservative. But they are also based on modeled estimates of ethylene oxide concentrations

296
01:00:24.660 --> 01:00:35.790
Sonja Sax: that are far lower than actual measured concentrations. So EPA touched on this a little bit. They have started measuring concentrations across sites

297
01:00:36.360 --> 01:00:47.220
Sonja Sax: in the U.S. and in this figure I show the maximum measured concentrations from one of these locations from 2018 to 2019.

298
01:00:47.670 --> 01:00:57.300
Sonja Sax: This is not a location that is around a facility that emits ethylene oxide, so it's not clear where this ethylene oxide is coming from.

299
01:00:57.600 --> 01:01:10.560
Sonja Sax: But it's clearly, as I show in this figure, much higher, about three times higher, than the maximum modeled concentrations that are found around the Indorama facility. Next slide please.

300
01:01:11.880 --> 01:01:23.190
Sonja Sax: So it's worth putting in perspective the risk estimates. So here I have risk estimates that were derived by EPA

301
01:01:24.660 --> 01:01:32.760
Sonja Sax: in 2018 based on the HEM model as EPA noted, and that maximum cancer risk was about 2,000. Now, based on 2020

302
01:01:34.170 --> 01:01:42.270
Sonja Sax: data, and again, this was the year that had much lower emissions, the risks went down significantly.

303
01:01:43.770 --> 01:01:54.450
Sonja Sax: But importantly for this purpose, I wanted to show that if we apply the TCEQ toxicity value, then the risks,

304
01:01:55.110 --> 01:02:14.520
Sonja Sax: you know, go down significantly. They go down to levels that are below one in a million, and this is the level that EPA considers to be associated with negligible risks. So the toxicity value does make a significant difference in the risk assessment. Next slide please.

305
01:02:16.860 --> 01:02:21.870
Sonja Sax: Finally, I just want to provide some context about the ethylene oxide risks.

306
01:02:22.380 --> 01:02:33.210
Sonja Sax: Now we are associated – The air we breathe every single day in our daily lives is associated with some amount of cancer risks. There are multiple air pollutants

307
01:02:33.630 --> 01:02:45.210
Sonja Sax: that are considered to be carcinogens. For example, benzene. So when you're refueling your gas tank at the gas station, that's associated with a level of cancer risk.

308
01:02:45.600 --> 01:02:52.170
Sonja Sax: Formaldehyde is also a carcinogen and it's found in many household products.

309
01:02:52.680 --> 01:03:00.510

Sonja Sax: Particle board, especially in your kitchen cabinets. Your flooring. All might be emitting formaldehyde, and that produces a cancer risk.

310
01:03:01.110 --> 01:03:13.920
Sonja Sax: As I noted, concentrations in background areas, in urban areas, rural areas, could be much higher than the estimated maximum

311
01:03:14.430 --> 01:03:27.960
Sonja Sax: concentrations around the Indorama facility. Finally, I just want to note that we actually produce ethylene oxide in our bodies as a normal body function

312
01:03:28.950 --> 01:03:45.990
Sonja Sax: and estimates of ethylene oxide that our bodies actually produce have been found to be greater than the potential maximum concentrations that that are estimated for the Indorama facility. So the risks associated

313
01:03:47.130 --> 01:03:59.910
Sonja Sax: with our everyday lives, background concentrations of ethylene oxide, all of these concentrations are far greater than the concentrations that have been modeled

314
01:04:01.050 --> 01:04:15.270
Sonja Sax: for the Indorama facility. I just want to thank you and I hope that this information that I provided today places these risk estimates into context.

315
01:04:16.680 --> 01:04:17.280
Thank you, Kim.

316
01:04:18.480 --> 01:04:33.210
Kim Hoyt: Thank you, Sonja, we appreciate you sharing your expertise and independent opinion. This is my last slide. I'll rush. We want to thank the EPA for allowing us to share information about our site in this meeting. If there are any questions,

317
01:04:34.860 --> 01:04:39.030
Kim Hoyt: please email them to communications@indorama.net. Thank you.

318
01:04:40.740 --> 01:04:52.020
Janetta Coats: Thank you, this is Janetta again. Thank you, Kim and thank you Sonja. We have heard from the Environmental Protection Agency and Indorama.

319
01:04:52.620 --> 01:05:07.440
Janetta Coats: At this time EPA would like to introduce to you our next presenter, an advocate for the community, Mr. Hilton Kelly. Mr. Kelly would like to share community concerns

320
01:05:07.800 --> 01:05:16.680
Janetta Coats: and information about ethylene oxide emissions. At this time I would like to turn the mic over to Mr. Kelly. Thank you.

321
01:05:17.310 --> 01:05:22.530
hilton kelley: Yes, thank you very much. My name is Hilton Kelly and I'm the Founder and Director of the Community

322
01:05:22.620 --> 01:05:24.390
hilton kelley: In-Power and Development Association

323
01:05:24.690 --> 01:05:29.490
hilton kelley: located in Port Arthur, Texas, right next to Port Neches and Groves.

324
01:05:30.600 --> 01:05:38.910
hilton kelley: For years, the Community In-Power and Development Association has been dealing with a number of issues when it comes to environmental injustice.

325
01:05:39.660 --> 01:05:49.680
hilton kelley: Around the Port Arthur and Port Neches area, we have a number of industries that accidentally and sometime intentionally,

326
01:05:49.920 --> 01:06:02.880
hilton kelley: have to release toxins that are known carcinogens. For instance, Port Arthur, Texas, sits on the fenceline of the Valero oil refinery, we sit next to the

01:06:04.200 --> 01:06:14.370
hilton kelley: Oxbow Calcining facility, and we also sit next to numerous other facilities. And to the North, we have another refinery

328
01:06:14.700 --> 01:06:20.880
hilton kelley: and we have the Motiva oil refinery to the West.

329
01:06:21.630 --> 01:06:33.120

hilton kelley: There has never been a cumulative impact study on how all of these chemicals coming from the various refineries that basically surround our communities, how they actually impact the human body.

330
01:06:33.540 --> 01:06:43.590
hilton kelley: We have a disproportionate number of people that are suffering from cancer, that have become ill with cancer, respiratory issues, skin disease, and other illnesses
331
01:06:43.860 --> 01:06:55.590
hilton kelley: that studies have shown there is a direct correlation between those illnesses and the types of chemicals they are being exposed to or chronically exposed to on a daily basis.

332
01:06:55.860 --> 01:07:04.410
hilton kelley: I do understand that Indorama is one industry and they release a certain amount of ethylene oxide that contributes

333
01:07:04.890 --> 01:07:19.170
hilton kelley: to some of the illnesses, maybe over a long period of time. But yet we haven't talked about the impacts that ethylene oxide can have on unborn children and pregnant women that live in the Port Neches-Groves area.

334
01:07:19.890 --> 01:07:28.260
hilton kelley: I live within a two-and-a-half-mile radius from the Indorama facility here in Port Arthur on the east end.

335
01:07:28.740 --> 01:07:36.240
hilton kelley: And many times there are accidents that take place like during the cold snap, that we know that there was a large amount of ethylene oxide

336
01:07:36.780 --> 01:07:42.360
hilton kelley: released from the Indorama facility and unannounced to us. We were impacted by that.

337
01:07:42.780 --> 01:07:50.310
hilton kelley: And many times when people go to the hospital in our areas suffering with respiratory illnesses, suffering with cancer, liver, kidney disease,

338
01:07:50.550 --> 01:08:03.240
hilton kelley: we don't really know exactly where to point because we're so inundated with facilities. This is one of the reasons why we fight so hard to get these industries like Indorama, Koch, and Valero,

339
01:08:04.260 --> 01:08:06.510
hilton kelley: you name them, Oxbow Calcining,

340
01:08:07.770 --> 01:08:13.620
hilton kelley: Veolia. Consideration should be given for these chemical facilities to reduce these emissions because we're overburdened

341
01:08:13.920 --> 01:08:22.050
hilton kelley: in the southeast Texas Golden Triangle area with chemicals like ethylene oxide, which contributes to cancer illnesses and other illnesses.

342
01:08:22.380 --> 01:08:28.710
hilton kelley: It is critically important that we find other chemicals which we can use to make the products we need

343
01:08:28.950 --> 01:08:36.930
hilton kelley: to reduce the carcinogenic effects that's taking place on many of the citizens in the Port Neches-Groves area and in the Port Arthur area.

344
01:08:37.260 --> 01:08:39.750
hilton kelley: We understand that you contribute back

345
01:08:40.110 --> 01:08:50.490
hilton kelley: to our community in many ways, but we have 12% unemployment within the Golden Triangle area. Particularly here in Port Arthur we have a high unemployment rate, but yet we see very

346
01:08:50.730 --> 01:09:04.380
hilton kelley: little benefit in the Port Arthur area from Indorama. But yet we have to share the burden of the chemical emissions which we've been exposed to for the industry to make the money that it needs to keep surviving.

347
01:09:04.830 --> 01:09:16.890
hilton kelley: But even though you bring in a lot of jobs for some populations, but yet those people that live here on a day-to-day basis benefit very, very little in the Port Arthur area and we also are impacted

348
01:09:17.250 --> 01:09:24.150

hilton kelley: because we border the Port Neches area to the east. And so, therefore, with that being said,

349
01:09:24.600 --> 01:09:32.340
hilton kelley: I think it's imperative that we find a way to find safer chemicals to make the products we need to sterilize and do whatever we need

350
01:09:32.730 --> 01:09:37.320
hilton kelley: like what ethylene outside is doing, because it's literally

351
01:09:37.740 --> 01:09:49.050
hilton kelley: contributing to the onslaught on our community when it comes to the cancer rate, when it comes to respiratory illnesses. As we know, as with many of these gases, ethylene oxide is colorless,

352
01:09:49.290 --> 01:09:58.350
hilton kelley: odorless, and many times we don't even know when we have been exposed to it. And we have to depend on monitors which under the Trump Administration for more than four years

353
01:09:58.560 --> 01:10:02.220
hilton kelley: we haven't been getting any type of enforcement action due to the leaks

354
01:10:02.550 --> 01:10:11.160
hilton kelley: that happened. We haven't had any type of representation when it comes to protecting our health from the Texas Commission on Environmental Quality

355
01:10:11.400 --> 01:10:19.710
hilton kelley: and EPA, for four years under the Trump Administration has been basically a lame duck agency and we are hoping that that change.

356
01:10:19.920 --> 01:10:35.340
hilton kelley: So what do you guys plan to do to possibly reduce? I know you got leak detection, but what do you guys plan to do to further make sure that the Port Neches residents are safe? As you know, in 2019 they had a major explosion at TPC

357
01:10:35.940 --> 01:10:40.980
hilton kelley: Facility and people were exposed to dangerous toxins and known carcinogens as well.

358
01:10:41.370 --> 01:10:47.490
hilton kelley: We have some major problems here in Southeast Texas, and particularly in the Golden Triangle, Port Arthur, Beaumont,

359
01:10:47.760 --> 01:10:55.950
hilton kelley: and Orange area. We must do something to reduce chemicals from being dumped into our air legally or illegally due to emission events.

360
01:10:56.190 --> 01:11:06.540
hilton kelley: We are in a dire situation. We have a disproportionate number of people with cancer, respiratory illnesses, and liver and kidney disease. It's time that we do more than just talk about it

361
01:11:06.930 --> 01:11:19.770
hilton kelley: giving back to the community. Let's give back in a healthy way. Let's give back by looking at ways in which we can safely protect the citizens in the Golden Triangle area, meaning Port Neches, Grove, Port Arthur, and the Beaumont and Orange area.

362
01:11:20.190 --> 01:11:26.130
hilton kelley: We have been inundated enough with toxic chemicals and too many people have died due to pre-exposure and

363
01:11:26.400 --> 01:11:39.930
hilton kelley: chronic exposure. Now, I do understand that under long period -- over a long period of time doesn't mean ethylene oxide can have a detrimental impact on one's life. But at the same time, that minute amount of

364
01:11:40.230 --> 01:11:45.930
hilton kelley: ethylene oxide that we've been exposed to, and many of the unsuspecting motorists that drive up and down

365
01:11:46.320 --> 01:11:53.400
hilton kelley: 366 Highway. They're being pre-exposed when they're going to work every day and unbeknownst to them they don't even realize it.

366
01:11:53.700 --> 01:12:07.770
hilton kelley: But yet, 5 or 10 years down the road many people fall victim to cancer not even knowing how it happened. We have to do more than just use models. We have to actually look at the numbers and look at the inventory, for the last four years, as to how much

367

01:12:08.280 --> 01:12:12.300
hilton kelley: everything outside was actually emitted into the air in our area.

368
01:12:16.260 --> 01:12:17.460
Janetta Coats: Thank you, Mr. Kelly.

369
01:12:19.230 --> 01:12:20.400
Janetta Coats: At this time --

370
01:12:23.220 --> 01:12:23.550
or.

371
01:12:25.440 --> 01:12:26.490
Janetta Coats: Can you guys hear me?

372
01:12:27.090 --> 01:12:29.250
Janetta Coats: Yes. Okay. Thank you, Mr. Kelly.

373
01:12:30.480 --> 01:12:38.280
Janetta Coats: Again, we want to move continue moving forward to our Q&A session, so if we could have the next slide, please, we would appreciate it.

374
01:12:40.950 --> 01:12:52.350
Janetta Coats: So, we are at the question-and-answer session of this meeting. Your comments and your questions are very, very important to us.

375
01:12:53.010 --> 01:13:07.890
Janetta Coats: And extra time has been included to hear from the community. As mentioned at the beginning of this meeting, you can post a question in the chat box using the button at the bottom of your screen.

376
01:13:09.300 --> 01:13:22.260
Janetta Coats: But please note that we have a limited amount of time this evening and ask that you limit your questions to two minutes in order to address as many questions as possible.

377
01:13:23.100 --> 01:13:38.010
Janetta Coats: In addition to that note, we also ask that you post one question at a time so that it will allow opportunities from others to provide questions in the chat section and to raise their hand so that

378

01:13:38.250 --> 01:13:50.730
Janetta Coats: everyone will be given an opportunity to ask a question. If you have more than one question, we can always go back around to get to your second or third question once we answer questions from others.

379
01:13:51.660 --> 01:14:02.910
Janetta Coats: As a reminder, this meeting is focused on hearing from the citizens in the Port Neches area and near the Indorama facility.

380
01:14:03.810 --> 01:14:19.020
Janetta Coats: Any questions related to industry permits, any enforcement or legal actions, or about other areas or facilities will not be addressed during this particular meeting.

381
01:14:19.530 --> 01:14:43.590
Janetta Coats: However, you may send those questions or other ethylene oxide-related questions and comments to the EPA Region 6 mailbox and the email address is quoted there at the very top of this screen, Region 6 underscore ethylene oxide@epa.gov.

382
01:14:44.820 --> 01:15:00.300
Janetta Coats: Again, please submit all your questions there, so we will post this as these questions. So at this time, if there are no other additional comments from Ms. Verhalen or others, we would like to begin our chat section.

383
01:15:01.020 --> 01:15:26.700
Janetta Coats: And I will begin at the very top of those questions that we are receiving and we will do those in sequential order and we will also monitor the hand-raises and all those that have called in by telephone. So is everyone on board with that? And, if so, we will proceed with the first question.

384
01:15:27.810 --> 01:15:29.190
Janetta Coats: And that question is,

385
01:15:30.540 --> 01:15:35.310
Janetta Coats: “Will the presentation be available after this meeting?”

386
01:15:41.460 --> 01:15:43.620
Fran Verhalen: Sorry Janetta, I’m trying to get off mute.

387
01:15:45.780 --> 01:15:47.340
Fran Verhalen: Technical difficulty here.

388
01:15:47.550 --> 01:15:50.580
Janetta Coats: We understand that, Fran. We understand that.

389
01:15:50.970 --> 01:15:53.820
Fran Verhalen: Okay. Yes, we are going to be posting

390
01:15:54.900 --> 01:16:10.050
Fran Verhalen: a copy of the presentation and a copy of the transcript. It takes us about 10 days to transcribe everything and go through our processes for posting. So, about 10 days for the posting of these

391
01:16:11.820 --> 01:16:12.840
Fran Verhalen: documents.

392
01:16:13.500 --> 01:16:24.690
Janetta Coats: All right, thank you Fran. And just as a reminder, there are others that will assist in monitoring the hand-raise feature to make sure that we answer questions from everyone.

393
01:16:25.140 --> 01:16:37.380
Janetta Coats: And for those that are dialing in on the phone, please mute your phone by pressing *6 and there will be an opportunity for phone attendees to ask a question

394
01:16:38.250 --> 01:16:51.000
Janetta Coats: during the Q&A session. And when recognized, again, please speak. You will unmute your line by pressing *6 and identify yourself prior to asking your questions.

395
01:16:51.480 --> 01:17:00.900
Janetta Coats: I would like to back up a little bit and ask if there is anyone from the State that would that has any questions that they would like to ask.

396
01:17:06.300 --> 01:17:10.260
Janetta Coats: No? Okay, so let's move right along here.

397
01:17:11.340 --> 01:17:14.280
Janetta Coats: Let's see the next question. Let me get up here.

398
01:17:14.880 --> 01:17:17.160
Fran Verhalen: Janetta, we do have a hand raised.

399
01:17:19.380 --> 01:17:25.590
Fran Verhalen: And if you would like to do that, since we have someone who's speaking.

400
01:17:26.340 --> 01:17:32.910
Janetta Coats: OK, so the individual that has raised your hand, could you please unmute and ask your question, please?

Sam Gammage: Am I unmuted?

401
01:17:41.790 --> 01:17:42.450
Fran Verhalen: Yes, you are.

402
01:17:44.220 --> 01:17:48.480
Sam Gammage: This is Sam Gammage from the Texas Chemical Council and I've got a question.

403
01:17:49.770 --> 01:17:58.860
Sam Gammage: I wanted to give a background. The Texas Chemical Council represents approximately 70 companies who own or operate more than 200 manufacturing and research facilities in Texas.

404
01:17:59.250 --> 01:18:09.840
Sam Gammage: Our members have invested more than $150 billion in physical assets in the state and also directly employ more than 75,000 Texans; indirectly employ more than half
405
01:18:10.470 --> 01:18:22.560
Sam Gammage: a million Texans. As you mentioned earlier, I think it's important to highlight ethylene oxide as an important building block essential in making a variety of products we use every day to help benefit the lives of every Texan.

406
01:18:23.880 --> 01:18:31.980
Sam Gammage: These come as clothing, safety glass, pharmaceuticals shampoos, and especially as we live through a global pandemic, sterilization of medical devices.

407
01:18:32.430 --> 01:18:46.230
Sam Gammage: It's also important to note that the national ethylene oxide emissions for the industrial sector fell by 79% from 2002 to 2014. This stat came from EPA's own National Emissions Inventory database.

408
01:18:47.100 --> 01:18:57.690

Sam Gammage: Last year, TCEQ released an ethylene oxide long-term screening value ESL of 2.4 parts per billion. This came after 2016 release of EPA

409
01:18:58.050 --> 01:19:08.310
Sam Gammage: IRIS value of one part per trillion. That's a pretty significant delta in order of magnitude. Additionally, data has shown that the EPA IRIS value is actually at a level

410
01:19:09.240 --> 01:19:21.930
Sam Gammage: far below concentrations found in our environment where no ethylene oxide is being produced. That leads to my question which is for both Dr. Honeycutt from TCEQ, I think he's on the line, as well as Fran Verhalen from EPA.

411
01:19:22.410 --> 01:19:33.630
Sam Gammage: Can you first please explain why there's such a significant difference in the values between EPA and TCEQ, and what reviews have been done on these values to ensure the reliability of the numbers?

412
01:19:34.200 --> 01:19:51.480
Sam Gammage: As well as can -- EPA, can you please explain why the IRIS value is 19,000 times lower than the normal naturally-created levels of ethylene oxide in the human body and orders of magnitude lower than levels of ethylene oxide from other sources measured in ambient air?

413
01:19:56.760 --> 01:20:00.180
Fran Verhalen: Sure. Well, let me -- Let me start with

414
01:20:01.710 --> 01:20:11.910
Fran Verhalen: the primary difference between EPA’s IRIS and the TCEQ number. We used a different model

415
01:20:13.650 --> 01:20:18.960
Fran Verhalen: to evaluate the same information. And so --

416
01:20:21.150 --> 01:20:24.000
Fran Verhalen: and then EPA also included additional

417
01:20:28.170 --> 01:20:36.420
Fran Verhalen: epidemiological information in our evaluation. We included the breast cancer studies because we did feel that there was

418
01:20:37.920 --> 01:20:48.600

Fran Verhalen: a correlation that we wanted to include. So those are the two primary factors that cause a lot of the difference in the two numbers.

419
01:20:51.810 --> 01:20:54.150
Fran Verhalen: So let me stop there. Dr. Honeycutt?

420
01:20:55.230 --> 01:20:56.430
Michael Honeycutt: Yeah. Thanks, Fran. Yeah.

421
01:20:57.510 --> 01:21:06.480
Michael Honeycutt: Well, I would just point out that our number is four years newer than EPA's number and so we had the benefit of data

422
01:21:08.610 --> 01:21:22.110
Michael Honeycutt: derived since 2016 for our assessment. And so we went through an external scientific peer review, so that is the difference Fran points out to

423
01:21:23.610 --> 01:21:28.140
Michael Honeycutt: account for the difference. So we just, you know, we just have different numbers.

424
01:21:32.850 --> 01:21:34.020
Fran Verhalen: Alrighty. Thank you.

425
01:21:34.620 --> 01:21:40.080
Janetta Coats: Thank you for that response. Our next question was, "Is the meeting being recorded?"

426
01:21:41.610 --> 01:21:52.620
Fran Verhalen: Oh yes, the meeting is being recorded and that -- the transcript from the recording will be posted, like I said, in about 10 days to two weeks.

427
01:21:53.550 --> 01:21:54.780
Janetta Coats: Right. Thank you, Fran.

428
01:21:55.080 --> 01:22:03.450
Tom Ruiz: Oh yes, I do see a hand raised. Another hand raised up for a while now, John Beard.

429
01:22:03.870 --> 01:22:04.800

Janetta Coats: John Beard?

430
01:22:05.130 --> 01:22:07.560
Janetta Coats: Okay, let's do this. Let's do this.

431
01:22:07.830 --> 01:22:12.780
Janetta Coats: We have a hand raised from John Beard and we have another hand raised from Sam.

432
01:22:14.280 --> 01:22:25.890
Janetta Coats: I hope I don't just destroy your name here. Is it "Gammage"? So, we'll go to John first and then we'll go to Sam. And then we'll swing back around to the chat box.

433
01:22:27.450 --> 01:22:28.950
Tom Ruiz: John has already asked his question.

434
01:22:29.430 --> 01:22:30.270
Janetta Coats: Oh did he? Okay.

435
01:22:30.450 --> 01:22:37.770
Fran Verhalen: I do have another one from Jeff. So I had Sam just ask us. I've got one from John Beard and one from Jeff.

436
01:22:38.100 --> 01:22:42.690
Janetta Coats: Okay, so let's do John and then Jeff, and then we'll go back to the chat box.

437
01:22:43.350 --> 01:22:46.260
Janetta Coats: Then thank you guys. Thank you for your help here.

438
01:22:49.680 --> 01:22:51.210
John Beard: Okay. Can you all hear me?

439
01:22:51.990 --> 01:22:52.530
Fran Verhalen: Yes, sir.

440
01:22:53.370 --> 01:23:09.510
John Beard: First of all, let me say thank you and good evening. I'm John Beard with the Port Arthur Community Action Network. My kudos to Mr. Kelly for his presentation and the rest of you also. My question is this: Indorama said it has reduced emissions at its facility.

441
01:23:10.620 --> 01:23:17.220
John Beard: Precisely what did it do to reduce those emissions? Or was it just a change in the way they go about doing their production?

442
01:23:18.030 --> 01:23:34.200
John Beard: The other question or part of the question I have to ask is: What does the EPA intend to do about the background ethylene oxide it says that it's picking up which may not be from Indorama? Thank you.

443
01:23:35.820 --> 01:23:52.140
Fran Verhalen: Thank you, sir. Let me just start with the reduced emissions and I'm going to be submitting the question to Indorama also at the end of the meeting, so we'll get you back a --

444
01:23:53.160 --> 01:24:10.470
Fran Verhalen: or we'll post an answer for other reduced emission reduction controls that they've done. But over the last couple of years, Indorama has been working on improving some of their facility operations

445
01:24:11.280 --> 01:24:23.010
Fran Verhalen: including their Leak Detection and Repair Program so that they are addressing leaks more quickly as well as changing out some of the

446
01:24:25.950 --> 01:24:32.430
Fran Verhalen: practices that they have right now. They're installing different gaskets in their lines which --

447
01:24:33.720 --> 01:24:48.990
Fran Verhalen: which don't fail as quickly and they're much stronger. So they've been working on that. They have done some other things, but I'm going to have to get that in writing from them and we will be posting that on our website, the answer for that question.

448
01:24:50.280 --> 01:25:01.920
Fran Verhalen: As far as the EPA actions for the background concentrations, we continue to monitor as part of our

449
01:25:03.690 --> 01:25:08.460
Fran Verhalen: National Air Toxic Trends Stations and the Urban Air

450
01:25:09.540 --> 01:25:27.660
Fran Verhalen: Toxics Monitoring stations. It's two different network systems that we use. We are trying to understand better what

concentrations are out there at the lower levels. As we get closer to our detection limit, we have

451
01:25:28.680 --> 01:25:38.400
Fran Verhalen: some uncertainty in the actual concentration when it's low. When it's higher, we're very confident in our

452
01:25:39.540 --> 01:25:50.790
Fran Verhalen: sampling methodology. But as we get near the lower limit of our technical – technological capabilities, we're less confident in those numbers.

453
01:25:53.760 --> 01:26:03.060
Fran Verhalen: First of all, we have to find out where that background is coming from. We're doing a lot of research at this time to find that answer.

454
01:26:06.000 --> 01:26:16.080
Janetta Coats: Thank you, Fran. Now if we could move forward to Mr. Jeff. If you could hit *6 and unmute your phone, state your name and your affiliation.

455
01:26:16.350 --> 01:26:17.730
Janetta Coats: It would be greatly appreciated.

Jeff: Can you hear me? [DOG BARKING]

456
01:26:18.270 --> 01:26:20.430
Janetta Coats: Thank you. Yes, we can.

457
01:26:20.760 --> 01:26:23.160
Jeff: Thank you. Okay. My name is Jeff Branick.

458
01:26:24.150 --> 01:26:29.400
Jeff: I am the Jefferson County Judge. [DOG BARKING] I apologize for the doorbell ringing and my dog barking.

459
01:26:31.650 --> 01:26:32.040
Jeff: I

460
01:26:33.180 --> 01:26:46.830
Jeff: live about 200 yards from the Indorama fenceline. I am an old trial lawyer and in my past life I represented a lot of workers exposed to chemicals -- Benzene and so forth, and

461
01:26:47.910 --> 01:26:49.920
Jeff: workplace-related

462
01:26:51.810 --> 01:27:05.760
Jeff: cancers, leukemias, blood dysplasias, and so forth. So I'm familiar with it. And living so close to the fenceline, I've had the opportunity -- John, as you just asked a question about what they've done to

463
01:27:06.870 --> 01:27:20.940
Jeff: reduce the emissions. I have asked in the past of Huntsman and now Indorama those same questions, and I hope I'm not butchering it or misstating it, but if I recall correctly

464
01:27:21.660 --> 01:27:30.270
Jeff: I've asked about several different substances. But with regard to ethylene oxide, I believe that they've spent about $72 million

465
01:27:33.870 --> 01:27:44.130
Jeff: trying to stop the upsets that have occurred as a result of loss of power through the many natural disasters we've suffered over the last several years

466
01:27:46.860 --> 01:27:47.340
Jeff: through

467
01:27:50.550 --> 01:27:57.660
Jeff: Ike and Harvey and Iota and Imelda and Laura and so on and so forth.

468
01:27:58.770 --> 01:28:02.220
Jeff: I think that Indorama has turned out to be a very --

469
01:28:04.410 --> 01:28:14.460
Jeff: very good at communicating with locals about what they're doing and working with the community. I do not doubt the carcinogenic effects of

470
01:28:16.740 --> 01:28:30.840
Jeff: ethylene oxide, and, as I said in my comments I posted online, I also don't doubt that sugar and peanut butter at certain threshold levels over some period of time are also carcinogens. So

471
01:28:32.220 --> 01:28:54.240

Jeff: I want this community to be safe, and I want us to have an open and transparent conversation with industry. I want the activists that are present on the line to have their questions answered. But I also want a reasonable -= Y'all call it IRIS, I used to call it a threshold limit value, set that

472
01:28:55.350 --> 01:29:17.490
Jeff: accurately portrays what levels of exposures are acceptable over what period of time before a person becomes susceptible to cancer or some other type of disease process. I just have a hard time understanding how the EPA's

473
01:29:19.590 --> 01:29:24.330
Jeff: value is being said to be below those that are naturally occurring in the environment.

474
01:29:26.940 --> 01:29:30.330
Jeff: Where the industrial sources are regulated

475
01:29:31.440 --> 01:29:33.900
Jeff: and where they're unregulated was,

476
01:29:34.980 --> 01:29:45.840
Jeff: you know, something that I could hang my hat on. So I appreciate the opportunity very much to listen in tonight. I appreciate all the comments and thank you for the presentation and thank you for

477
01:29:47.280 --> 01:29:52.650
Jeff: the opportunity to speak. I enjoyed listening. Thank you so much.

478
01:29:53.430 --> 01:30:10.800
Janetta Coats: Thank you, Mr. Jeff. Our next question is another individual that has their hand raised and that is from Mr. Glenn Johnson. So if you could *6 and unmute your phone, state your name and affiliation, that would be greatly appreciated.

479
01:30:11.610 --> 01:30:13.350
Glenn Johnson: Thank you very much. You can hear me now?

480
01:30:13.740 --> 01:30:14.940
Janetta Coats: Yes, sir. We sure can.

481
01:30:15.930 --> 01:30:21.990

Glenn Johnson: Gotcha. Thank you so much, my name is Glenn Johnson, I have the honor of serving as Mayor of the City of Port Neches.

482
01:30:22.890 --> 01:30:30.480
Glenn Johnson: And I think it's important that I highlight a few of the ways which Indorama, previously, like Jeff said, previously known as Huntsman,

483
01:30:31.050 --> 01:30:40.440
Glenn Johnson: has contributed to the City of Port Neches. You know, in the early stages of COVID-19 pandemic amid great uncertainty, Indorama stepped up

484
01:30:40.830 --> 01:30:48.780
Glenn Johnson: to produce and distribute sterilizing products during the time of great need to our community.

485
01:30:49.320 --> 01:30:58.770
Glenn Johnson: Indorama has been there through several, as Jeff mentioned, several natural disasters and local disasters over the past several years.

486
01:30:59.550 --> 01:31:08.820
Glenn Johnson: And I'm very supportive of Indorama continuing the operations in Port Neches and the outreach work that that they do in the community and the efforts that they've made

487
01:31:09.450 --> 01:31:24.300
Glenn Johnson: to routinely communicate with us here in the City of Port Neches on a city level. I value Indorama as a valued community partner and I'm proud of the strong relationship that we in Port Neches
488
01:31:25.260 --> 01:31:39.720
Glenn Johnson: maintain with that site. They're a very important part of our community and I just wanted to share those comments and get those into the record. And I appreciate your allowing me to speak, and thank you very much.

489
01:31:40.620 --> 01:31:50.850
Janetta Coats: Thank you, Mr. Johnson. At this time, we would like to hear from Earthea Nance. Her question is, "What is 'in 1 million'"?
01:31:52.800 --> 01:31:53.100
Fran Verhalen: Oh.

491
01:31:54.540 --> 01:31:58.320
Fran Verhalen: When we talk about "in 1 million," we're talking about

492
01:31:59.820 --> 01:32:04.620
Fran Verhalen: the number of cases of cancer

493
01:32:06.330 --> 01:32:15.630
Fran Verhalen: based on a certain concentration and that becomes our risk number. So if

494
01:32:17.640 --> 01:32:20.250
Fran Verhalen: we model concentrations

495
01:32:23.160 --> 01:32:24.720
Fran Verhalen: of ethylene oxide,

496
01:32:26.460 --> 01:32:40.680
Fran Verhalen: when we complete those models using a certain concentration, we are predicting that there will be a certain number of people per 100 million people that

497
01:32:41.850 --> 01:32:52.230
Fran Verhalen: would likely or potentially develop cancer based on that concentration. It is a way to

498
01:32:53.640 --> 01:32:54.750
Fran Verhalen: communicate

499
01:32:55.860 --> 01:33:00.330
Fran Verhalen: what the risk is for specific concentrations.

500
01:33:01.050 --> 01:33:03.060
Earthea Nance: You didn’t provide the risk for the 2020 situation.

501
01:33:04.230 --> 01:33:07.230
Earthea Nance: You provided it for the previous ones.

502
01:33:08.190 --> 01:33:14.460
Fran Verhalen: We have not calculated the risk for 2020 yet. We've only calculated through 2018.

503
01:33:17.250 --> 01:33:37.080

Fran Verhalen: And that is an artifact of when we obtain full sets of emission inventory data. So we have to we run it on the full annual set, and the most complete -- most recent complete set of data is 2018.

504
01:33:38.670 --> 01:33:58.530
Janetta Coats: Thank you, Fran. Our next question is from Robin Barrows. And Mr. Barrows' question is, "Health risk to exposure, cancer endpoint. At what distance from a source of EtO and at what concentration?"

505
01:34:01.560 --> 01:34:10.530
Fran Verhalen: Wow. that's a very involved question. Thank you, sir. As far as distance

506
01:34:12.120 --> 01:34:13.860
Fran Verhalen: from a facility,

507
01:34:17.190 --> 01:34:25.410
Fran Verhalen: there are several factors that go into determining how far away from a facility there could be an impact.

508
01:34:27.060 --> 01:34:35.190
Fran Verhalen: And that depends on the concentrations that are being emitted, how much is being emitted into the air,

509
01:34:36.450 --> 01:34:37.140
Fran Verhalen: and what the

510
01:34:38.460 --> 01:34:45.630
Fran Verhalen: wind patterns are that day. Do we have a strong wind? Is it steady? Is it gusty?

511
01:34:47.070 --> 01:34:47.700
Fran Verhalen: Other

512
01:34:49.350 --> 01:34:54.090
Fran Verhalen: weather conditions. Is it raining? Is it hot and sunny?

513
01:34:55.590 --> 01:34:59.970
Fran Verhalen: So all of those go into a determination of how far

514
01:35:01.800 --> 01:35:24.450

Fran Verhalen: an air toxic will travel from a facility. So we take all that into account. When we're developing the risk estimates, we run both a meteorological-type model to determine how far the concentrations

515
01:35:26.040 --> 01:35:31.170
Fran Verhalen: will travel and then we run a second model on risk to determine --

516
01:35:33.210 --> 01:35:48.270
Fran Verhalen: using how far it will travel, what areas are likely to have the highest impact based on a particular chemical. And that will give us an area that

517
01:35:50.250 --> 01:35:53.310
Fran Verhalen: will likely have an increase in risk.

518
01:35:54.870 --> 01:35:56.730
Fran Verhalen: I hope I addressed your question, sir.

519
01:35:58.620 --> 01:36:11.310
Janetta Coats: Thank you, Fran. Our next question is from Neil Carman, C-A-R-M-A-N, and his question is, "How accurate is the emissions inventory?"

520
01:36:13.740 --> 01:36:16.830
Fran Verhalen: Oh wow. The emission inventory

521
01:36:18.060 --> 01:36:18.660
Fran Verhalen: is

522
01:36:22.200 --> 01:36:28.920
Fran Verhalen: derived from information provided – well, it's provided by the facility.

523
01:36:30.600 --> 01:36:32.880
Fran Verhalen: It is a cumulative

524
01:36:34.410 --> 01:36:39.090
Fran Verhalen: estimate of emissions for the facility

525
01:36:40.200 --> 01:36:48.840
Fran Verhalen: from each of the sources as well as an estimate of what is called a 'fugitive emission,' and that would be

526
01:36:51.810 --> 01:36:55.230
Fran Verhalen: an emission that is not tied to

527
01:36:56.610 --> 01:36:59.100
Fran Verhalen: a control device. So

528
01:37:00.630 --> 01:37:06.420
Fran Verhalen: those are typically estimated, and they may be estimated high.

529
01:37:09.120 --> 01:37:13.110
Fran Verhalen: So they can go either way. So

530
01:37:14.280 --> 01:37:20.100
Fran Verhalen: it depends on each one of the control devices. Many of those

531
01:37:22.020 --> 01:37:23.130
Fran Verhalen: emissions

532
01:37:24.510 --> 01:37:42.900
Fran Verhalen: are based on testing and measurement, though the fugitives most likely are not. So you have your control sources and you have your fugitives, and the controls usually have measurements that they're based on and the fugitives are an estimate.

533
01:37:44.460 --> 01:37:45.300
Janetta Coats: Thank you, Fran.
534
01:37:46.380 --> 01:37:53.430
Janetta Coats: Our next question is, “What data validates the 2020 reductions?”

535
01:37:57.840 --> 01:38:00.510
Fran Verhalen: I’m not sure I understand the question. I’m sorry.

536
01:38:01.650 --> 01:38:15.150
Janetta Coats: If we would -- Mr. Neil Carman -- Let's ask Mr. Neil Carman to clarify that question, because that's all that is listed here is, “What data validates the 2020 reductions?”

537
01:38:19.860 --> 01:38:20.490

Fran Verhalen:--

538
01:38:22.350 --> 01:38:24.090
Fran Verhalen: I’m sorry. I’m going to need more.

539
01:38:24.480 --> 01:38:27.480
Fran Verhalen: Okay, I don't understand that one. I apologize.

540
01:38:27.660 --> 01:38:48.150
Janetta Coats: Okay, so let's do this, let's move forward and we'll go back to Mr. Neal Carman to be more specific in his question and then we will work on getting an answer for that question. Okay, so the next question is from Earthea Nance and her question is, “What was the 2020 risk?”

541
01:38:50.310 --> 01:38:54.300
Fran Verhalen: We have not calculated the 2020 risk yet.

542
01:38:55.380 --> 01:39:00.330
Earthea Nance: Right. But, you know, you just did in the presentation to show that things are getting better. But you couldn't --

543
01:39:01.170 --> 01:39:01.650
Fran Verhalen:--

544
01:39:01.890 --> 01:39:05.670
Fran Verhalen: I’m sorry. The emissions is what I used, not the risk estimate.

545
01:39:07.080 --> 01:39:08.760
Fran Verhalen: The emissions have

546
01:39:09.990 --> 01:39:13.140
Fran Verhalen: reduced and the number of upsets that they've had at

547
01:39:14.310 --> 01:39:22.530
Fran Verhalen: Indorama has decreased in 2020. And because risk is based on

548
01:39:24.120 --> 01:39:34.770
Fran Verhalen: the emissions, there will be a correlation as to a reduction or increase based on the emissions

549
01:39:35.910 --> 01:39:56.940
Fran Verhalen: amount. And so that's where I was coming from. But it is the emissions that have reduced in 2020 based on the work that Indorama has completed for corrective actions on their control devices with their LDAR program and then having

550
01:39:58.680 --> 01:40:02.160
Fran Verhalen: less upsets from the facility.

551
01:40:03.300 --> 01:40:10.740
Fran Verhalen: And an upset would be an unplanned release of gases.

552
01:40:11.880 --> 01:40:18.720
Earthea Nance: Right. I was just trying to make sure what -- Were you saying that the risk had dropped below the acceptable risk level?

553
01:40:19.830 --> 01:40:20.310
Fran Verhalen: No.

554
01:40:21.270 --> 01:40:23.400
Earthea Nance: So it's still a problem. Okay. Thank you.

555
01:40:23.550 --> 01:40:34.680
Fran Verhalen: It's still a problem. Yes. The risk is still above 100 in a million, so we find that to be not protective of human health.

556
01:40:36.000 --> 01:40:51.930
Janetta Coats: Thank you, Fran. We have another raised hand from a Mr. Colby Plaia. P-L-A-I-A. I don't want to destroy your name here. But if you could *6 and unmute your phone, we would appreciate it.

557
01:40:52.650 --> 01:40:56.190
Colby Plaia: Yes, yes. So, my name is Coby Plaia.

558
01:40:57.390 --> 01:41:07.770
Colby Plaia: I’m the Regional Operations Manager with Turner Industries here at our local office in Nederland, Texas. So, Turner industries is a national industrial contractor

559
01:41:08.610 --> 01:41:24.990
Colby Plaia: with offices all across the Gulf South and we’ve operated a regional office here locally for approximately 30-plus years and employ

over 1000 local employees that operate within the various industrial facilities located in the greater Port Neches region.

560
01:41:26.310 --> 01:41:40.320
Colby Plaia: Turner has been a nested contractor at the Indorama, formerly Huntsman Port Neches facility for going on 10 years now and we've worked closely with their management, including senior management, for nine.

561
01:41:41.640 --> 01:41:51.480
Colby Plaia: Our goals here at Turner are to improve plant production, reduce maintenance costs, and help keep units and processes running to maximize performance.

562
01:41:52.410 --> 01:42:02.760
Colby Plaia: So with that, we value the health and safety of our employees and we work closely with Indorama to ensure that is their interest or a primary focus when delivering on our services.

563
01:42:03.810 --> 01:42:10.200
Colby Plaia: Throughout our 60-year journey here at Turner, we have successfully built a multi-generational safety culture.

564
01:42:11.100 --> 01:42:17.970
Colby Plaia: And quite frankly, we would not work for Indorama if they did not share and live by those same safety principles.

565
01:42:18.840 --> 01:42:25.140
Colby Plaia: So I do appreciate the opportunity to make this statement and to have this included in the record, because we are --

566
01:42:25.740 --> 01:42:37.830
Colby Plaia: We, myself personally, and Turner Industries as a whole, we'd love to extend our support, full support, for Indorama as well as appreciate the opportunity to make a statement during this event. So thank you very much.

567
01:42:38.490 --> 01:43:07.830
Janetta Coats: Thank you. We appreciate your question. Our next question is from Scott Eustis, E-U-S-T-I-S, and his question is, "Will EPA implement fenceline monitoring or ambient air monitoring for ethylene oxide near this source and, if so, when and how can the public assess the monitoring data?"

568
01:43:10.830 --> 01:43:12.030

Fran Verhalen: At this time,

569
01:43:13.260 --> 01:43:18.540
Fran Verhalen: and meaning here in August of 2021,

570
01:43:20.580 --> 01:43:25.770
Fran Verhalen: there are -- we are not planning on ambient air monitoring

571
01:43:28.020 --> 01:43:29.910
Fran Verhalen: in Region 6.

572
01:43:31.650 --> 01:43:33.450
Fran Verhalen: That's as of right now.

573
01:43:34.980 --> 01:43:44.250
Fran Verhalen: That doesn't mean that we won't do something in the future. I don't know that answer. With respect to fenceline monitoring,

574
01:43:45.720 --> 01:43:59.760
Fran Verhalen: at this time there is not a requirement for fenceline monitoring for ethylene oxide, and for that reason we will not be requiring it.

575
01:44:02.010 --> 01:44:02.520
Janetta Coats: Okay, thank you Fran.

576
01:44:02.550 --> 01:44:05.070
Fran Verhalen: Should we have changes,

577
01:44:05.490 --> 01:44:09.330
Fran Verhalen: we could require it. But right now, no.

578
01:44:10.950 --> 01:44:11.460
Janetta Coats: Thank you.

579
01:44:11.790 --> 01:44:12.240
Fran Verhalen: You're welcome.

580
01:44:13.590 --> 01:44:25.260
Janetta Coats: The next question is from Robin Barrows and that question is very specific. It says, “Define what you mean by ‘upset.’”

581
01:44:25.500 --> 01:44:28.080
Fran Verhalen: An upset is an unplanned release of

582
01:44:29.610 --> 01:44:31.980
Fran Verhalen: gases or air toxics from a facility.

583
01:44:34.110 --> 01:44:35.010
Janetta Coats: Alright. Thank you.

584
01:44:36.000 --> 01:44:36.390
Yes.

585
01:44:37.740 --> 01:44:59.370
Janetta Coats: The next question is from John Beard and his question is, "Has EPA implemented or will EPA implement fenceline monitoring or ambient air monitoring for ethylene oxide on other sources? If so, when?"

586
01:45:00.600 --> 01:45:04.650
Janetta Coats: And I think that is the same question, Fran. It seems like it's the same question.

587
01:45:04.890 --> 01:45:15.510
Fran Verhalen: Right. That's very similar question. Thank you, Mr. Beard. At this time, we are not scheduled for either ambient air monitoring or fenceline monitoring

588
01:45:16.590 --> 01:45:17.730
Fran Verhalen: in the Port Neches area.

589
01:45:18.690 --> 01:45:20.490
Janetta Coats: Okay, Fran.

Fran Verhalen: For ethylene oxide.

590
01:45:21.930 --> 01:45:46.110
Janetta Coats: There's a second part to that question, Fran, and the second part to that question is, "As this information shows that cancer risk is unacceptable from this facility, what action has EPA taken or does EPA plan to take to reduce the emissions of ethylene oxide from this source?"

591
01:45:47.340 --> 01:45:52.290
Fran Verhalen: EPA is continuing in discussions with Indorama to

592
01:45:53.700 --> 01:46:05.760
Fran Verhalen: leverage additional control measures on ethylene oxide emissions. We are working with TCEQ and the company to see

593
01:46:06.480 --> 01:46:20.520
Fran Verhalen: what additional controls can be installed, what processes can be changed that would reduce ethylene oxide. Indorama is doing a great deal of work currently on their own to

594
01:46:21.990 --> 01:46:28.500
Fran Verhalen: bring about these changes and we're going to be in discussion with them to see if there's anything that we can assist them with.

595
01:46:30.210 --> 01:46:39.720
Janetta Coats: Thank you for that. The next question is, “Where were their unreported upsets? If so, how many?”

596
01:46:41.250 --> 01:46:50.460
Fran Verhalen: I don't have a number of reported, well, if they're unreported, I’m not sure that I would know where to find those.

597
01:46:51.840 --> 01:46:52.680
Fran Verhalen: But the

598
01:46:55.890 --> 01:47:00.990
Fran Verhalen: the reported upsets are recorded

599
01:47:02.010 --> 01:47:03.240
Fran Verhalen: either in the state

600
01:47:05.730 --> 01:47:10.680
Fran Verhalen: database or the EPA, the national database for

601
01:47:11.880 --> 01:47:20.250
Fran Verhalen: releases. And we will just evaluate those databases to find out if there have been any releases.

602
01:47:22.020 --> 01:47:36.900
Janetta Coats: Thank you. At this time we'd like to move to individuals that have questions on the phone. So if you would *6 to unmute your phone and ask your question at this time, we would appreciate it.

603
01:47:45.660 --> 01:47:49.320
Janetta Coats: We will give a couple more seconds for them to find the *6 button.

604
01:47:59.460 --> 01:48:09.180
Janetta Coats: Okay, so I don't think we have any. So we'll move to the next question from Earthea Nance, “Has the permit been violated?”

605
01:48:10.590 --> 01:48:27.900
Fran Verhalen: We are not going to talk about permits tonight, or violations, mostly because I have no idea. I’m sorry I don't have that information. That's not something that I would know about. We'll see about posting the answer to that online.

606
01:48:29.010 --> 01:48:30.060
Janetta Coats: Thank you, Fran.

607
01:48:30.240 --> 01:48:30.630
Fran Verhalen: Thank you.

608
01:48:32.190 --> 01:48:50.880
Janetta Coats: The next question, “Regarding process facility upset increases, will EPA initiate a review of process procedures -- and procedures and monitor efforts at reducing such incidents?”

609
01:48:52.500 --> 01:48:59.760
Fran Verhalen: At this time, we are continuing discussions with Indorama and we intend to continue to do that

610
01:49:01.020 --> 01:49:06.720
Fran Verhalen: while we work through this and see if we can determine if there are any additional actions that can be taken.

611
01:49:08.550 --> 01:49:11.190
Janetta Coats: Thank you, Fran. The next question:

612
01:49:12.360 --> 01:49:23.670
Janetta Coats: Has either EPA Region 6 or TCEQ conducted recent ambient air monitoring at Indorama?

613
01:49:26.400 --> 01:49:43.080

Fran Verhalen: EPA has not, and I have not heard from the TCEQ monitoring staff that they have conducted anything like that.
Dr. Honeycutt, are you able to address that any better?

614
01:49:43.800 --> 01:49:49.380
Michael Honeycutt: Fran, no, we have not. You mentioned yourself earlier, there is difficulty in the method.

615
01:49:50.220 --> 01:49:51.720
Fran Verhalen: Yes. Thank you.

616
01:49:53.130 --> 01:50:00.000
Janetta Coats: Thank you both for answering that question. Now the next two questions. Fran, I think they pretty much

617
01:50:01.500 --> 01:50:22.110
Janetta Coats: complement each other. The first part of that question is, “Have the neighborhoods been monitored?” That's the first question. The second question is, “Has EPA used its TAGA vehicle to perform ETA EtO monitoring at Indorama?”

618
01:50:23.520 --> 01:50:24.270
Fran Verhalen: Well, thank you.

619
01:50:27.420 --> 01:50:33.990
Fran Verhalen: EPA has not monitored in the neighborhoods in Port Neches for ethylene oxide.

620
01:50:35.670 --> 01:50:44.610
Fran Verhalen: It is my understanding that the TAGA vehicle, which is EPA’s mobile lab, has not

621
01:50:45.690 --> 01:50:53.910
Fran Verhalen: been in the Port Neches area. Oh gosh, probably since, well probably since the hurricanes last year
622
01:50:55.230 --> 01:50:59.880
Fran Verhalen: and I don't know that they have collected any samples that would

623
01:51:01.080 --> 01:51:05.610
Fran Verhalen: be analyzed for ethylene oxide. The TAGA is

624
01:51:07.710 --> 01:51:11.250

Fran Verhalen: very useful but it is not a full-scale

625
01:51:12.390 --> 01:51:18.240
Fran Verhalen: laboratory and I don't know that they can actually analyze for ethylene oxide with the TAGA.

626
01:51:19.980 --> 01:51:27.990
Janetta Coats: Okay, Fran. We also have an individual interested in, "What is the 2020 cancer risk?"

627
01:51:29.160 --> 01:51:35.760
Fran Verhalen: I don't know. We have not received all of the

628
01:51:36.780 --> 01:51:55.740
Fran Verhalen: data nationally for the emission inventory. When EPA runs -- Typically when we run the emission -- when we run the risk evaluations and the risk assessment, we do it on a national scale.

629
01:51:57.390 --> 01:52:09.000
Fran Verhalen: We can run them individually, but it makes it harder for comparison purposes. It is a national program. So the most recent full complete data set

630
01:52:11.100 --> 01:52:11.640
Fran Verhalen: is 2018.

631
01:52:14.130 --> 01:52:20.400
Fran Verhalen: We're completing those risk evaluations. The 2020 data,

632
01:52:21.540 --> 01:52:36.030
Fran Verhalen: we're still waiting for a few states to finish up their quality assurance of emission inventory data before we can run the risk on that and it'll be a couple of years before we can get that risk assessment completed.

633
01:52:37.260 --> 01:52:51.960
Janetta Coats: Thank you, Fran. The next question: Given the hazards of EtO, will LDAR be utilized to address fugitive source emissions at the facility?

634
01:52:54.000 --> 01:52:55.620
Fran Verhalen: Would you repeat that one more time?

635

01:52:56.370 --> 01:52:59.250
Janetta Coats: Given the hazards of EtO,

636
01:53:00.480 --> 01:53:08.040
Janetta Coats: will LDAR be utilized to address fugitive source emissions at the facility?

637
01:53:08.580 --> 01:53:18.270
Fran Verhalen: It is my understanding from Indorama that they are utilizing the LDAR program, the Leak Detection and Repair program, to

638
01:53:20.280 --> 01:53:25.590
Fran Verhalen: control and manage fugitive emissions from their

639
01:53:27.300 --> 01:53:34.020
Fran Verhalen: different equipment.

640
01:53:35.460 --> 01:53:39.240
Fran Verhalen: So that they are using it. They have been working on

641
01:53:40.290 --> 01:53:43.860
Fran Verhalen: assessing if there are tweaks to their program that they can

642
01:53:45.120 --> 01:53:55.740
Fran Verhalen: add. They have added several over the last couple of years and they're seeing if there's anything else that they can add to go even further and try to control more fugitives. So, yes.

643
01:53:56.610 --> 01:54:16.620
Janetta Coats: Thank you, Fran. The next question is from Adam Brown. Adam's question is, "What air monitoring methodology is the EPA using for EtO and what cross-sensitivities for ethylene oxide exist?"

644
01:54:17.880 --> 01:54:21.570
Fran Verhalen: Currently, EPA uses

645
01:54:23.250 --> 01:54:27.330
Fran Verhalen: EPA method TO-15-A.

646
01:54:29.670 --> 01:54:34.950
Fran Verhalen: I'm not sure of the method detection limit.

647
01:54:35.970 --> 01:54:41.130
Fran Verhalen: We've been trying to lower it, but we do have some

648
01:54:42.600 --> 01:54:53.160
Fran Verhalen: interferences that we are still working through. The research scientists are working on that. The other thing the research scientists are working on are some

649
01:54:54.720 --> 01:55:06.930
Fran Verhalen: other innovative technologies that we may be able to implement in the field that will allow us to monitor ethylene oxide. Those are in the research stage

650
01:55:08.130 --> 01:55:17.490
Fran Verhalen: and it'll be a couple of years before those will actually be tested and released if they do pass all the

651
01:55:19.200 --> 01:55:24.870
Fran Verhalen: testing and standardization that we need to do to come up with a standard methodology.

652
01:55:26.100 --> 01:55:30.000
Janetta Coats: Thank you, Fran. The next question is from Suzanne.

653
01:55:31.050 --> 01:55:50.130
Janetta Coats: Suzanne's question, “Many houses and schools within close proximity to Indorama. Does the EPA understand just how close? Like, literally across the street? I live about a mile away.”

654
01:55:53.340 --> 01:56:02.130
Fran Verhalen: We are aware that there are neighborhoods that are very close to the Indorama facility boundaries.

655
01:56:03.330 --> 01:56:03.990
Fran Verhalen:--

656
01:56:05.760 --> 01:56:07.620
Fran Verhalen: We would have to do some

657
01:56:08.910 --> 01:56:10.110
Fran Verhalen: measurements

658

01:56:11.850 --> 01:56:21.030
Fran Verhalen: for the distance to the sources, but there are houses and there are schools that are nearby that we are aware of.

659
01:56:23.850 --> 01:56:25.320
Janetta Coats: Thank you, Fran.

660
01:56:26.610 --> 01:56:41.640
Janetta Coats: There's another question from Scott and his question is: What additional jobs were created by monitoring and fixing leaks and how many of them would be created with full-time monitoring?

661
01:56:43.170 --> 01:56:53.250
Fran Verhalen: I don't know that question, but I will send it to Indorama and we will post the answer on EPA's website when we get the answer back.

662
01:56:54.030 --> 01:56:55.800
Janetta Coats: Okay. Thank you, Fran.

663
01:56:57.150 --> 01:56:59.190
Janetta Coats: The next question is,

664
01:57:00.930 --> 01:57:16.020
Janetta Coats: "An epidemiological survey needs to be done to discover the cancers in the Port Neches and nearby communities of Grove, Port Arthur, Nederland, and other residences."

665
01:57:17.340 --> 01:57:19.260
Janetta Coats: I think this is for our information, there. Okay.

666
01:57:21.090 --> 01:57:21.510
Fran Verhalen: Thank you.

667
01:57:22.950 --> 01:57:27.720
Janetta Coats: Okay. Let's see. The next question is from Roishetta Sibley.

668
01:57:28.860 --> 01:57:38.430
Janetta Coats: "Indorama is in my backyard. There is flaring every night and the flares look like a second sunrise. Why so many

669
01:57:39.720 --> 01:57:40.380
Janetta Coats: flaring?"

670
01:57:44.280 --> 01:58:03.390
Fran Verhalen: Well, I’m not sure why. But flaring is a control device. It is burning off the gases, and that is when you can see the flames. It means that it is combusting the gas.

671
01:58:05.130 --> 01:58:21.870
Fran Verhalen: So that's typically a good sign that you can see that. As far as why there are so many, I don't know. That would be the control device that Indorama uses for that particular emission.

672
01:58:23.070 --> 01:58:48.000
Janetta Coats: Okay, Fran. Roishetta had a second part to that question, and it says, “Why isn't EPA having any meetings on the sterilizers that emit ethylene oxide in our community? These are discussed in the EPA Office of Inspector General's 2020 and 2021 reports.”

673
01:58:48.810 --> 01:58:50.070
Fran Verhalen: Thank you for the question.

674
01:58:52.110 --> 01:58:54.060
Fran Verhalen: EPA is currently

675
01:58:55.200 --> 01:58:57.270
Fran Verhalen: drafting the

676
01:58:59.340 --> 01:59:20.910
Fran Verhalen: regulation. I guess we're revising and reviewing the regulation for commercial sterilizers. We expect to have the proposed rulemaking published this -- by the end of this calendar year and we will be conducting

677
01:59:22.020 --> 01:59:35.730
Fran Verhalen: community outreach during that proposed rulemaking process. So there will be upcoming meetings, specifically on the commercial sterilizers. But thank you for the question.

678
01:59:36.960 --> 01:59:54.930
Janetta Coats: Okay. Thank you. The next question is from Jeff. Jeff’s question, “Please clarify. Are you saying that 70 years of exposure for 24 hours per day at a threshold below
679
01:59:55.950 --> 02:00:03.030
Janetta Coats: that at which EtO naturally occurs in the environment is carcinogenic?”

680
02:00:05.100 --> 02:00:07.290
Fran Verhalen: Yes, that is what we are saying.

681
02:00:08.490 --> 02:00:11.760
Fran Verhalen: It is regardless of

682
02:00:13.380 --> 02:00:15.930
Fran Verhalen: a naturally occurring concentration.

683
02:00:17.130 --> 02:00:23.520
Fran Verhalen: EPA's risk model shows that concentrations below -- that concentrations

684
02:00:27.540 --> 02:00:30.510
Fran Verhalen: below a background level or the levels that we've

685
02:00:31.680 --> 02:00:32.280
Fran Verhalen: found
686
02:00:33.330 --> 02:00:48.120
Fran Verhalen: could cause cancer, yes. It is a very conservative number, it is a very conservative risk, but we do feel that it is present and it exists regardless of the source.

687
02:00:50.430 --> 02:00:50.940
Janetta Coats: Thank you.

688
02:00:52.350 --> 02:00:53.610
Janetta Coats: The next question.

689
02:00:54.810 --> 02:01:12.990
Janetta Coats: "EPA mentioned that there are some non-Indorama-associated off-site readings. Has EPA determined the source of these emissions or readings and what actions will be taken to protect the public?"

690
02:01:15.480 --> 02:01:16.650
Fran Verhalen: One more time, Janetta.

691
02:01:18.150 --> 02:01:19.590
Janetta Coats: "EPA mentioned

692

02:01:20.760 --> 02:01:39.780
Janetta Coats: that there are non-Indorama-associated off-site readings. Has EPA determined the source of these emissions or readings and what actions will be taken to protect the public?”

693
02:01:40.470 --> 02:01:44.100
Fran Verhalen: I apologize for confusing you.

694
02:01:45.420 --> 02:01:54.270
Fran Verhalen: When I was talking about the other facilities, those other facilities were located in a different state. They were not in Texas.

695
02:01:55.350 --> 02:02:00.630
Fran Verhalen: And we do not have any readings in the Port Neches area at all.

696
02:02:02.070 --> 02:02:14.520
Fran Verhalen: As for other facilities in the Port Neches area that emit ethylene oxide, we’ll have to go back and look that up. I don't have any that I know off the top of my head.

697
02:02:15.810 --> 02:02:20.250
Fran Verhalen: None of them in the Port Neches facility are above

698
02:02:21.750 --> 02:02:27.240
Fran Verhalen: a risk value of 100 in 1 million, so I haven't concentrated on those recently.

699
02:02:28.800 --> 02:02:29.670
Janetta Coats: Thank you, Fran.

700
02:02:29.970 --> 02:02:33.780
Janetta Coats: The next question, “Is there any background

701
02:02:34.950 --> 02:02:41.490
Janetta Coats: EtO in Port Neches or is Indorama the primary source of EtO?”

702
02:02:43.410 --> 02:02:44.100
Fran Verhalen: Um. I

703
02:02:45.150 --> 02:03:04.230

Fran Verhalen: have not looked at the background levels in Port Neches. Indorama is a large source of ethylene oxide in Port Neches. I don't know that it's the only source, but it's probably going to be the largest nearby source that we know of.

704
02:03:05.250 --> 02:03:16.410
Janetta Coats: Okay. I'd like to remind the participants again that some questions that we addressed earlier that we would not be able to answer are in the text section.

705
02:03:17.340 --> 02:03:27.240
Janetta Coats: We're kind of skipping over some of those questions. So it's not that I'm ignoring your questions. It is just that those are questions that we stressed earlier

706
02:03:28.290 --> 02:03:32.790
Janetta Coats: in the logistics part of the meeting that we would not be able to address or answer.

707
02:03:33.900 --> 02:03:35.550
Janetta Coats: So apologies up front here.

708
02:03:37.500 --> 02:03:48.330
Janetta Coats: Let's see here. So, does the EPO -- Yes, does the ETO -- EPA EtO TCEQ ABC --

709
02:03:52.230 --> 02:03:53.160
Janetta Coats: [LAUGHING]

710
02:03:53.280 --> 02:04:02.880
Janetta Coats: "Does the EPA post the annual inspections of the plant by the TCEQ? Transparency is critical."

711
02:04:04.500 --> 02:04:09.990
Fran Verhalen: EPA does not post the inspections by TCEQ.

712
02:04:11.130 --> 02:04:16.560
Fran Verhalen: You would have to request those inspection reports from TCEQ itself.

713
02:04:17.790 --> 02:04:19.680
Janetta Coats: Okay. Great. Thank you, Fran.

714

02:04:20.040 --> 02:04:20.400
Fran Verhalen: You're welcome.

715
02:04:20.850 --> 02:04:42.900
Janetta Coats: The next question. “Did EPA scientists create this risk assessment and did EPA assess the risk based on the emissions the source is allowed to release or only based on the estimate risk from reported emissions?”

716
02:04:44.940 --> 02:05:01.950
Fran Verhalen: EPA based the risk -- EPA completed the risk assessment. EPA based the risk assessment on the emissions inventory, and that is the reported emissions by the facility.

717
02:05:02.970 --> 02:05:09.960
Fran Verhalen: It is not based on a limited concentration or permanent amount.

718
02:05:11.790 --> 02:05:13.530
Janetta Coats: OK, the next question.

719
02:05:14.850 --> 02:05:37.560
Janetta Coats: “How much ethylene oxide was released in the NRC report ID number, they’re specific here with this ID number, 1299141, dated 2/26/21, due to the freeze?”

720
02:05:38.910 --> 02:05:44.250
Fran Verhalen: I don't know. We'll have to look that up and post that information in our Q&A.

721
02:05:45.990 --> 02:05:46.860
Janetta Coats: Thank you, Fran.

722
02:05:49.170 --> 02:05:50.340
Janetta Coats: The next question.

723
02:05:51.780 --> 02:06:12.480
Janetta Coats: “Leaks are legally allowed below a certain threshold and are not reported as leaks, and so the thousands of pieces of equipment in EtO service are likely leaking legally 24/7, 365 days a year.”

724
02:06:15.990 --> 02:06:16.920
Fran Verhalen: Is there a question?

725
02:06:17.400 --> 02:06:19.500
Janetta Coats: That's what they're saying. That's their comment.

726
02:06:19.590 --> 02:06:20.880
Fran Verhalen: Okay, that's a comment. Okay.

727
02:06:21.210 --> 02:06:24.720
Janetta Coats: Yeah. They want it to be noted.

Fran Verhalen: Got it.

728
02:06:26.040 --> 02:06:26.640
Janetta Coats: Okay.

729
02:06:27.840 --> 02:06:32.610
Janetta Coats: Let's see here. I don't think we have any more hands raised.

730
02:06:32.910 --> 02:06:34.740
Janetta Coats: So the next question is from Adam --

732
02:06:46.080 --> 02:06:48.660
Janetta Coats: Okay, there was one question from Adam Brown

733
02:06:50.010 --> 02:07:04.890
Janetta Coats: that says, "How is the government able to make assumptions that an invisible virus is only airborne indoors for approximately three hours, but when risk-assessing EtO, is it assumed to be airborne?"

734
02:07:09.930 --> 02:07:12.630
Fran Verhalen: One more time, Janetta. I missed the first part of that.

735
02:07:13.380 --> 02:07:28.440
Janetta Coats: Okay, the question is, "How is the government able to make assumptions that an invisible virus is only airborne indoors for approximately three
736
02:07:28.440 --> 02:07:29.070
hours,

737
02:07:30.450 --> 02:07:40.170
Janetta Coats: but when risk-assessing EtO, it is assumed to be airborne at maximum emissions quantity for 70 years?"

738
02:07:41.310 --> 02:07:47.190
Fran Verhalen: Okay. That is based on modeling, so there's

739
02:07:49.170 --> 02:07:56.580
Fran Verhalen: looking at some testing data to determine how long a chemical

740
02:07:57.960 --> 02:08:06.090
Fran Verhalen: -- it takes to break down a chemical in the air as opposed to a virus, and then it's modeled for

741
02:08:07.530 --> 02:08:09.840
Fran Verhalen: a certain period of time and then

742
02:08:11.100 --> 02:08:17.820
Fran Verhalen: you put it into a different model for the risk evaluation itself. So we're looking at two different models. One that deals with

743
02:08:19.170 --> 02:08:29.130
Fran Verhalen: how long the chemical will be in the environment, how long it stays and then the second would be to determine the risk evaluation from that. So.

744
02:08:30.000 --> 02:08:43.980
Janetta Coats: Thank you Fran, and thank you for your responses to these questions. EPA would like to thank everyone for attending the meeting on ethylene oxide near the Indorama facility in Port Neches.

745
02:08:44.520 --> 02:09:00.570
Janetta Coats: And we would like to remind you to please submit any additional questions to the EPA Region 6 email box at Region6Ethylene Oxide@epa.gov.

746
02:09:01.590 --> 02:09:11.040
Janetta Coats: EPA will provide a response to your email, so be sure to include your contact information with your questions or comment.

747
02:09:11.970 --> 02:09:23.370
Janetta Coats: Again, we appreciate everyone participating in the meeting tonight and for those without computer access unable to submit your written questions, a verbal

748

02:09:24.240 --> 02:09:44.820
Janetta Coats: request for additional information may be made by contacting Gloria Vaughn, the EPA Associate Director for Environmental Justice, at the telephone number of 214-665-7535.

749
02:09:45.690 --> 02:10:03.240
Janetta Coats: In addition to that information, all news media inquiries should be directed to the EPA Region 6 press office at R6press@epa.gov.

750
02:10:06.180 --> 02:10:12.930
Janetta Coats: Next slide, please. This concludes the meeting and this event has been recorded.

751
02:10:13.980 --> 02:10:28.140
Janetta Coats: EPA will be posting the recording along with the question-and-answers to the EPA Region 6 website for ethylene oxide posted on the screen and in the chat box.

752
02:10:29.250 --> 02:10:50.760
Janetta Coats: Written transcriptions of this meeting is in English and Spanish, and will be posted to the EPA website. EPA would like to thank you, the interpreters for their services this evening, and lastly and most importantly, EPA would like to thank you for your participation.

753
02:10:51.900 --> 02:10:55.710
Janetta Coats: Thank you, good evening, and have a great night. Thank you.