

00:00:15.584 --> 00:00:19.544

I am the moderator for the evening for those attendees

00:00:19.544 --> 00:00:22.894

requiring Closed caption Services, instructions are posted

00:00:22.894 --> 00:00:26.124

on the screen. This will assist our

00:00:26.124 --> 00:00:29.304

bilingual participants to enable the closed caption

00:00:29.304 --> 00:00:32.714

portion for Spanish and Vietnamese services;

00:00:32.714 --> 00:00:35.944

for those requiring American Sign Language Services,

00:00:35.944 --> 00:00:37.414

please join the live event

00:00:37.414 --> 00:00:41.254

as well as the zoom link posted in the chat

00:00:41.254 --> 00:00:41.934

Box. Next slide.

00:00:42.694 --> 00:00:46.064

This is a live event

00:00:46.064 --> 00:00:49.114

and due to the size of the audience. all participants

00:00:49.114 --> 00:00:52.614

are in listening mode only, except for the speakers

00:00:52.614 --> 00:00:56.234

microphones. This webinar does have closed captioning

00:00:56.234 --> 00:00:59.564

capabilities and can be selected at the lower right

00:00:59.564 --> 00:01:00.564

hand side of your screen.

00:01:01.144 --> 00:01:04.244

This event is being recorded and will be

00:01:04.244 --> 00:01:07.834

posted to the EPA Region 6 websites for

00:01:07.834 --> 00:01:10.854

ethylene oxide. These web page links are posted in

00:01:10.854 --> 00:01:13.914

the chat box as an announcement on the

00:01:13.914 --> 00:01:16.524

right side of your monitor screen. Next slide.

00:01:18.444 --> 00:01:22.114

Please send your questions and comments into the

00:01:22.114 --> 00:01:25.744

EPA region 6 email box at R

00:01:25.744 --> 00:01:29.844

6 ethylene oxide at EPA DOT.

00:01:29.844 --> 00:01:32.914

EPA will post a list of questions and answers

00:01:32.914 --> 00:01:36.144

on the EPA Region 6 websites for

00:01:36.144 --> 00:01:39.154

ethylene oxide, which is posted in the chat box

00:01:39.154 --> 00:01:42.514

and on the screen during the Q and A portion of this

00:01:42.514 --> 00:01:46.334

presentation. As time permits, at the end of the

00:01:46.334 --> 00:01:49.054

presentation, EPA will address questions. Next slide.

00:01:50.264 --> 00:01:53.314

At this time, I would like to

00:01:53.314 --> 00:01:56.374

introduce Jonna Polk, Region 6 Director

00:01:56.374 --> 00:01:59.504

of Communities, Tribes and Environmental Assessment

00:01:59.504 --> 00:02:00.294

for general comments.

00:02:02.534 --> 00:02:05.554

Thank you, Deborah. Good

00:02:05.554 --> 00:02:09.004

evening, as Deborah said, I'm Jonna Polk and

00:02:09.004 --> 00:02:12.394

I serve as the director for Region 6 EPAs

00:02:12.394 --> 00:02:16.684

Office of Communities, Tribes, and Environmental

00:02:16.684 --> 00:02:20.414

Assessment, and in this new role I'm very interested

00:02:20.414 --> 00:02:25.194

in community awareness of tonight's ethylene oxide information.

00:02:25.194 --> 00:02:28.944

I'm so pleased to meet everyone participating this

00:02:28.944 --> 00:02:32.104

evening, virtually, of course, during the pandemic.

00:02:32.104 --> 00:02:32.544

My preference?

00:02:32.544 --> 00:02:35.584

Is to meet with you in your communities

00:02:35.584 --> 00:02:39.014

in person to hear your thoughts and

00:02:39.014 --> 00:02:42.484

concerns. And I look forward to that time and I'm

00:02:42.484 --> 00:02:45.714

hopeful those in person meetings will begin

00:02:45.714 --> 00:02:46.584

soon when we can safely.

00:02:53.844 --> 00:02:56.984

I've environmental justice

00:02:56.984 --> 00:03:00.084

and transparency in working with communities

00:03:00.084 --> 00:03:03.444

and the those priorities are shared and are

00:03:03.444 --> 00:03:06.554

being carried out by Region 6 EPA's

00:03:06.554 --> 00:03:10.464

acting regional administrator, David

00:03:10.464 --> 00:03:13.884

Gray. Administrative Regan has directed the agency

00:03:13.884 --> 00:03:16.954

to engage the fullest public participation

00:03:16.954 --> 00:03:21.274

with all points of view from communities of color,

00:03:21.274 --> 00:03:24.354

Native Americans, rural communities, low

00:03:24.354 --> 00:03:24.914

income communities.

00:03:24.914 --> 00:03:28.364

Small businesses local

00:03:28.364 --> 00:03:31.444

governments, tribes, States and those who have

00:03:31.444 --> 00:03:34.454

been historically under-represented in EPA

00:03:34.454 --> 00:03:37.474

Decision making. We hope that

00:03:37.474 --> 00:03:41.504

this webinar provides information that explains

00:03:41.504 --> 00:03:44.714

ethylene oxide uses and potential risks

00:03:44.714 --> 00:03:48.094

and I encourage all of you to send your

00:03:48.094 --> 00:03:51.514

questions and concerns after the webinar. And

00:03:51.514 --> 00:03:54.584

again, we look forward to the time we can

00:03:54.584 --> 00:03:55.144

meet with you in person

00:03:55.144 --> 00:03:56.684

to hear your concerns.

00:03:57.204 --> 00:04:01.124

I know that you were all busy and your time is

00:04:01.124 --> 00:04:05.214

valuable, so we're very appreciative of you joining us this

00:04:05.214 --> 00:04:08.304

Evening. I realized that you are making time in your schedules for this

00:04:08.304 --> 00:04:11.434

webinar because you're concerned

00:04:11.434 --> 00:04:14.614

for yourselves and your families and how

00:04:14.614 --> 00:04:17.844

ethylene oxide emissions, possibly

00:04:17.844 --> 00:04:21.274

near you, could potentially affect your health and the health of your families.

00:04:22.034 --> 00:04:25.394

As a protective mom and grandmother myself,

00:04:27.174 --> 00:04:30.184

I appreciate your concern

00:04:30.184 --> 00:04:33.294

and hope that you will find the information we present

00:04:33.294 --> 00:04:33.804

tonight helpful.

00:04:34.454 --> 00:04:38.104

The information we're discussing tonight

00:04:38.104 --> 00:04:41.214

is general information about ethylene

00:04:41.214 --> 00:04:44.384

oxide, such as how it is used and how it

00:04:44.384 --> 00:04:47.984

potentially affects human health when it's in the air that we

00:04:47.984 --> 00:04:51.574

breathe, including both short term and long

00:04:51.574 --> 00:04:55.134

term health effects. Although tonight's information

00:04:55.134 --> 00:04:58.424

will be general in nature, EPA plans to

00:04:58.424 --> 00:05:02.744

conduct additional meetings this summer in communities where local

00:05:02.744 --> 00:05:04.964

industry has ethylene oxide emissions.

00:05:04.964 --> 00:05:08.274

In those meetings, we will provide

00:05:08.274 --> 00:05:12.764

more detailed information that is specific to your

00:05:12.764 --> 00:05:16.184

community. If we're unable to meet in person due to the

00:05:16.184 --> 00:05:19.524

pandemic, we will meet with you virtually this

00:05:19.524 --> 00:05:22.974

Summer, continuing to provide information, answer

00:05:22.974 --> 00:05:26.444

your questions, and listen to your

00:05:26.444 --> 00:05:29.814

concerns again. I'm hopeful those community meetings can be

00:05:29.814 --> 00:05:31.154

held safely in person.

00:05:31.994 --> 00:05:35.084

Along with EPA, there are

00:05:35.084 --> 00:05:38.574

many community advocates representatives and

00:05:38.574 --> 00:05:42.624

organizations who are working to ensure that community

00:05:42.624 --> 00:05:45.794

members have information about ethylene

00:05:45.794 --> 00:05:48.814

oxide. I'd like to sincerely thank the

00:05:48.814 --> 00:05:51.884

30 or more community stakeholders who've

00:05:51.884 --> 00:05:56.264

met with us at EPA twice in the past couple of

00:05:56.264 --> 00:05:59.274

weeks, sharing their ideas and recommendations

00:05:59.274 --> 00:06:02.514

on how to best reach community

00:06:02.514 --> 00:06:03.304

members like yourselves,

00:06:03.304 --> 00:06:06.344

to let you know about tonight's webinar.

00:06:06.344 --> 00:06:10.254

ng their very valuable suggestions

00:06:10.254 --> 00:06:13.334

about removing language barriers for both

00:06:13.334 --> 00:06:16.374

Spanish and Vietnamese speaking communities.

00:06:16.374 --> 00:06:19.834

They were also very helpful in reviewing

00:06:19.834 --> 00:06:21.564

the information we are presenting this evening.

00:06:23.214 --> 00:06:26.564

EPA wanted to quickly plan this webinar,

00:06:26.564 --> 00:06:29.984

so we included as many of their helpful comments

00:06:29.984 --> 00:06:33.054

as possible in the last few weeks and

00:06:33.054 --> 00:06:36.124

we will continue to incorporate their suggestions as

00:06:36.124 --> 00:06:39.604

we plan additional community meetings this

00:06:39.604 --> 00:06:43.094

summer. Thank you to these strong community advocates.

00:06:43.094 --> 00:06:46.304

We appreciate you working with us so

00:06:46.304 --> 00:06:49.624

closely to improve our outreach in communities.

00:06:49.624 --> 00:06:52.744

Thank you again for joining us this evening and

00:06:52.744 --> 00:06:54.084

I'll turn it back to Deborah

00:06:54.084 --> 00:06:57.374

so that we can move on to the important topic of

00:06:57.374 --> 00:06:59.774

the evening - ethylene oxide. Thank you.

00:07:01.764 --> 00:07:05.374

Thank you Jonna. Now I would like to

00:07:05.374 --> 00:07:08.664

introduce David Garcia Region 6

00:07:08.664 --> 00:07:11.564

Director Air and Radiation Division for opening comments.

00:07:13.014 --> 00:07:16.264

Thank you, Deborah. Thank you, Jonna

00:07:16.264 --> 00:07:19.874

Thank you for joining us this evening. As Deborah states stated

00:07:19.874 --> 00:07:23.264

my name, David Garcia. I am the director of

00:07:23.264 --> 00:07:26.564

the Air and Radiation Division for the United States

00:07:26.564 --> 00:07:29.684

Environmental Protection Agency's office in

00:07:29.684 --> 00:07:29.994

Dallas, TX.

00:07:30.594 --> 00:07:34.014

The EPA is personally webinar

00:07:34.014 --> 00:07:37.134

As Jonna said, an ethylene oxide. We will

00:07:37.134 --> 00:07:40.634

provide us information on what ethylene oxide is used

00:07:40.634 --> 00:07:43.794

for and what EPA is doing to regulate this

00:07:43.794 --> 00:07:44.134

air toxics.

00:07:44.684 --> 00:07:47.874

Ethylene oxide is a significant

00:07:47.874 --> 00:07:52.064

building block for many useful everyday consumer

00:07:52.064 --> 00:07:55.824

products such as cosmetics, shampoos and other commonly

00:07:55.824 --> 00:07:59.994

used products and is also used as a sterilizer

00:07:59.994 --> 00:08:02.114

for medical equipment.

00:08:02.114 --> 00:08:05.484

EPA's periodic review of risk from air

00:08:05.484 --> 00:08:08.514

toxics chemicals, EPA

00:08:08.514 --> 00:08:12.114

found ethylene oxide presents a greater risk for getting

00:08:12.114 --> 00:08:15.334

cancer through long term chronic exposure than

00:08:15.334 --> 00:08:19.394

we previously knew. However,

00:08:19.394 --> 00:08:22.414

nationwide it is important to note that the total emissions

00:08:22.414 --> 00:08:26.174

of air toxics pollutant emissions are

00:08:26.174 --> 00:08:29.214

declining, and air quality monitoring data

00:08:29.214 --> 00:08:32.604

show that concentrations of many air toxics pollutants in the air

00:08:32.604 --> 00:08:34.364

are trending downward.

00:08:35.024 --> 00:08:38.594

Despite these trends, some

00:08:38.594 --> 00:08:41.634

local areas still face

00:08:41.634 --> 00:08:44.644

challenges. Ethylene oxide significantly contributes

00:08:44.644 --> 00:08:47.794

to potentially elevated cancer risk in

00:08:47.794 --> 00:08:52.464

less than 1% of the census tracts across from United States

00:08:52.464 --> 00:08:55.534

but several of these census tracts

00:08:55.534 --> 00:08:58.554

are located and reside EPA region

00:08:58.554 --> 00:09:01.694

6 based upon the latest air

00:09:01.694 --> 00:09:04.714

Toxics assessment. So today we will

00:09:04.714 --> 00:09:07.974

be providing some basic information to you on ethylene oxide.

00:09:07.974 --> 00:09:11.294

Please note community outreach on ethylene

00:09:11.294 --> 00:09:15.144

oxide is a critical issue for EPA Administrator Michael

00:09:15.144 --> 00:09:18.544

Regan. We appreciate you taking the time to join us

00:09:18.544 --> 00:09:22.414

Today. So with that, allow me to introduce Miss Fran

00:09:22.414 --> 00:09:25.944

Verhalen, chief of the Regions Air Monitoring and

00:09:25.944 --> 00:09:29.314

Grants Section. She will provide more detail on ethylene oxide.

00:09:29.864 --> 00:09:30.604

Fran.

00:09:32.084 --> 00:09:33.614

Thank you David.

00:09:34.384 --> 00:09:35.294

Good evening.

00:09:35.984 --> 00:09:39.734

My name is Frances Verhalen and,

00:09:39.734 --> 00:09:43.174

next slide please, I'm the supervisor for the ambient

00:09:43.174 --> 00:09:46.394

Air Monitoring and Grant Section for the Dallas EPA office.

00:09:46.944 --> 00:09:50.144

And I have the honor of being your presenter

00:09:50.144 --> 00:09:50.464

this evening.

00:09:51.664 --> 00:09:54.984

Tonight I will be talking

00:09:54.984 --> 00:09:57.764

about what is ethylene oxide and how it is used.

00:09:58.784 --> 00:10:01.964

Why are discussion about ethylene oxide

00:10:02.714 --> 00:10:04.284

is important now.

00:10:05.664 --> 00:10:08.814

What we at EPA and the states

00:10:09.424 --> 00:10:12.214

are doing about ethylene oxide emissions.

00:10:13.484 --> 00:10:17.154

How EPA regulates

00:10:17.154 --> 00:10:18.964

ethylene oxide and other air toxics?

00:10:20.004 --> 00:10:23.174

And what the next steps

00:10:23.174 --> 00:10:28.114

EPA is going to be taking regarding ethylene oxide emissions.

00:10:28.114 --> 00:10:31.434

Tonight's discussion is a broad overview for

00:10:31.434 --> 00:10:34.774

educational information. I am focusing

00:10:34.774 --> 00:10:38.564

on providing you information on ethylene oxide, its uses

00:10:38.564 --> 00:10:41.844

and how EPA regulates this and other air toxics.

00:10:42.754 --> 00:10:45.904

Information about specific facilities

00:10:45.904 --> 00:10:50.424

or communities, specific emission control technologies

00:10:50.424 --> 00:10:53.984

or state specific topics will not

00:10:53.984 --> 00:10:54.874

be discussed tonight.

00:10:55.794 --> 00:10:58.934

EPA will be scheduling community meetings

00:10:58.934 --> 00:11:02.064

later this summer, in person if possible as

00:11:02.064 --> 00:11:05.384

the COVID-19 meeting restrictions allow,

00:11:05.384 --> 00:11:08.514

and plans to discuss specific facilities emission

00:11:08.514 --> 00:11:11.784

control technologies and state specific topics then.

00:11:13.314 --> 00:11:14.564

Next slide.

00:11:18.974 --> 00:11:22.164

Let's begin with a

00:11:22.164 --> 00:11:25.414

discussion about what ethylene oxide is and why it

00:11:25.414 --> 00:11:26.574

is important in our lives.

00:11:27.994 --> 00:11:28.944

Next slide.

00:11:31.604 --> 00:11:34.714

Ethylene oxide exists at

00:11:34.714 --> 00:11:38.094

room temperature as a colorless

00:11:38.094 --> 00:11:40.814

gas. It is flammable, meaning it can burn.

00:11:41.534 --> 00:11:44.784

It is a chemical component in

00:11:44.784 --> 00:11:45.674

making other chemicals.

00:11:47.034 --> 00:11:49.114

It is a sterilizing agent.

00:11:50.134 --> 00:11:53.204

And it can be found in nature.

00:11:53.834 --> 00:11:56.084

It is created by some plants.

00:11:56.644 --> 00:11:59.784

It is created from cooking

00:11:59.784 --> 00:12:03.144

oils and it can be created in the human body.

00:12:04.394 --> 00:12:05.384

Next slide.

00:12:08.874 --> 00:12:12.074

Some industries

00:12:12.074 --> 00:12:15.304

produce ethylene oxide while other industries

00:12:15.304 --> 00:12:18.454

use it to make other chemicals or

00:12:18.454 --> 00:12:19.974

commonly used consumer products.

00:12:20.864 --> 00:12:24.154

Ethylene oxide is needed as a

00:12:24.154 --> 00:12:27.254

chemical ingredient to make and manufacture those

00:12:27.254 --> 00:12:28.684

common household project products.

00:12:29.914 --> 00:12:32.944

You can look around your house to see products made

00:12:32.944 --> 00:12:33.614

with ethylene oxide.

00:12:34.234 --> 00:12:35.574

For example.

00:12:36.324 --> 00:12:37.444

Paint solvents.

00:12:38.394 --> 00:12:39.464

Cosmetics.

00:12:40.624 --> 00:12:41.664

Plastics.

00:12:42.594 --> 00:12:44.354

Detergents or cleaners?

00:12:46.514 --> 00:12:49.614

Also, ethylene oxide is the key.

00:12:50.134 --> 00:12:53.314

Ingredient for things such

00:12:53.314 --> 00:12:55.624

as synthetic fibers used in carpeting.

00:12:56.164 --> 00:13:00.064

Polyurethane foam

00:13:00.064 --> 00:13:03.134

upholstery. And in PVC pipes used for

00:13:03.134 --> 00:13:03.944

water delivery systems.

00:13:05.244 --> 00:13:06.744

Next slide.

00:13:08.784 --> 00:13:12.064

Ethylene oxide is also

00:13:12.064 --> 00:13:15.404

used for sterilization procedures normal

00:13:15.404 --> 00:13:18.574

sterilization techniques include heat

00:13:18.574 --> 00:13:21.944

using steam, high temperatures or pressurization.

00:13:22.784 --> 00:13:25.834

Flame or fire

00:13:25.834 --> 00:13:27.574

or rubbing or immersion in alcohol.

00:13:28.324 --> 00:13:32.264

Ethylene oxide is used to sterilize equipment

00:13:32.264 --> 00:13:35.364

and supplies that cannot be heated, or

00:13:35.364 --> 00:13:35.564

get wet.

00:13:36.894 --> 00:13:40.334

It has been used by hospitals for years

00:13:40.334 --> 00:13:43.914

to sterilize medical equipment, such as the masks and

00:13:43.914 --> 00:13:47.124

gowns worn by doctors and an in hospitals across

00:13:47.124 --> 00:13:47.294

the country.

00:13:47.984 --> 00:13:52.134

Or plastic tubing such as respiratory

00:13:52.134 --> 00:13:53.804

tubes used in hospitals for patients.

00:13:54.474 --> 00:13:55.974

And for catheters.

00:13:56.504 --> 00:13:59.594

Used by residents and citizens

00:13:59.594 --> 00:14:00.364

in their homes.

00:14:01.704 --> 00:14:05.714

Ethylene oxide helps to prevent disease, and

00:14:05.714 --> 00:14:08.554

infection by sterilizing 20 billion.

00:14:09.064 --> 00:14:10.954

Medical devices each year.

00:14:13.804 --> 00:14:16.834

In addition, ethylene oxide is

00:14:16.834 --> 00:14:20.284

also used to control microorganisms and

00:14:20.284 --> 00:14:23.484

bacteria in grain silos and with

00:14:23.484 --> 00:14:24.264

spices or nuts.

00:14:25.064 --> 00:14:28.624

It is also used as a sterilizer

00:14:28.624 --> 00:14:32.204

on one of a kind items such as museum artifacts.

00:14:33.984 --> 00:14:35.584

Next slide, please.

00:14:43.344 --> 00:14:46.524

Ethylene oxide may be produced naturally

00:14:46.524 --> 00:14:50.054

or emitted or released from chemical manufacturing

00:14:50.054 --> 00:14:52.544

industries or hospitals or commercial sterilizers.

00:14:53.074 --> 00:14:56.154

Natural production of ethylene

00:14:56.154 --> 00:14:59.684

oxide occurs when ethylene when

00:14:59.684 --> 00:15:00.834

ethylene is oxidized.

00:15:02.024 --> 00:15:05.904

We metabolize ethylene in our own bodies

00:15:05.904 --> 00:15:09.004

to produce very low levels of ethylene oxide, which we

00:15:09.004 --> 00:15:09.904

then is excrete.

00:15:11.964 --> 00:15:15.114

When ethylene oxide is produced or used

00:15:15.114 --> 00:15:18.254

for manufacturing the products we use or to sterilize

00:15:18.254 --> 00:15:21.874

medical equipment and industrial

00:15:21.874 --> 00:15:25.084

facilities, there are emissions and releases of the chemical

00:15:25.084 --> 00:15:25.554

into the air.

00:15:26.254 --> 00:15:29.294

Emissions are permitted, which means

00:15:29.294 --> 00:15:32.404

the facility has obtained a permit and is

00:15:32.404 --> 00:15:35.804

allowed to emit or put a certain amount of that

00:15:35.804 --> 00:15:38.654

chemical. In this case, ethylene oxide into the air.

00:15:39.744 --> 00:15:42.944

Releases are typically

00:15:42.944 --> 00:15:46.024

not permitted, though they may be defined within

00:15:46.024 --> 00:15:46.404

the permit.

00:15:46.924 --> 00:15:50.024

Such as how a facility would prepare for

00:15:50.024 --> 00:15:51.504

a hurricane to make landfall.

00:15:54.144 --> 00:15:57.684

Facilities that produce or use ethylene oxide

00:15:57.684 --> 00:16:01.254

are required to provide the amounts of chemical that are released

00:16:01.254 --> 00:16:04.364

and emitted to the air to the states

00:16:04.364 --> 00:16:05.254

and EPA every year.

00:16:06.084 --> 00:16:09.114

This chart shows

00:16:09.114 --> 00:16:12.524

the amount of ethylene oxide from 2014

00:16:12.524 --> 00:16:15.634

to 2017. The facilities

00:16:15.634 --> 00:16:18.654

that emit the most ethylene oxide are the

00:16:18.654 --> 00:16:21.804

chemical manufacturing and sterilization

00:16:21.804 --> 00:16:22.144

facilities.

00:16:23.634 --> 00:16:27.304

You can see that there is a decrease between

00:16:27.304 --> 00:16:31.574

2014 to 2017. It is about 15 [percent]

00:16:31.574 --> 00:16:33.524

or 20 tons per year.

00:16:34.674 --> 00:16:38.124

The latest reports for calendar year

00:16:38.124 --> 00:16:41.164

2020 were submitted to the States and

00:16:41.164 --> 00:16:44.384

EPA on April 1st and are undergoing

00:16:44.384 --> 00:16:45.944

review for accuracy at this time.

00:16:47.914 --> 00:16:49.224

Next slide, please.

00:16:52.274 --> 00:16:57.984

EPA

00:16:57.984 --> 00:17:01.064

has sampled the air in both urban and rural

00:17:01.064 --> 00:17:04.564

cities across the nation to monitor the

00:17:04.564 --> 00:17:04.864

concentrations of air toxics.

00:17:05.584 --> 00:17:08.634

We found concentrations of ethylene oxide in

00:17:08.634 --> 00:17:12.414

the outdoor air that are not clearly linked to a

00:17:12.414 --> 00:17:16.034

particular industrial facility, such as a chemical plant, or

00:17:16.034 --> 00:17:19.874

commercial sterilizer. We consider this to be background

00:17:19.874 --> 00:17:23.454

concentrations of ethylene oxide and we do not yet

00:17:23.454 --> 00:17:24.304

know the source of it.

00:17:26.584 --> 00:17:29.744

Our data indicates that ethylene

00:17:29.744 --> 00:17:33.324

oxide from these locations range from

00:17:33.324 --> 00:17:36.664

about 0.2 to zero point [four]

00:17:36.664 --> 00:17:38.364

grams per cubic meter.

00:17:40.794 --> 00:17:42.154

When health effects.

00:17:43.044 --> 00:17:45.104

From Air Toxics are discussed.

00:17:45.784 --> 00:17:48.964

We talk about acute or chronic effects.

00:17:49.554 --> 00:17:52.594

Acute effects implies a

00:17:52.594 --> 00:17:55.634

person is exposed to a large amount of

00:17:55.634 --> 00:17:58.974

chemical in a very short period of time and has a rapid

00:17:58.974 --> 00:18:00.964

or quick adverse reaction.

00:18:01.484 --> 00:18:04.674

Such as immediately vomiting or having

00:18:04.674 --> 00:18:04.984

trouble breathing.

00:18:06.724 --> 00:18:10.184

Chronic effects implies that a

00:18:10.184 --> 00:18:13.474

person is exposed to a smaller amount of a

00:18:13.474 --> 00:18:16.834

chemical over a longer period of time and may develop

00:18:16.834 --> 00:18:20.794

a variety of illnesses or sensitivities after many

00:18:20.794 --> 00:18:21.494

years, like cancer.

00:18:23.274 --> 00:18:26.544

For ethylene oxide, EPA

00:18:26.544 --> 00:18:29.814

has characterized it as a known

00:18:29.814 --> 00:18:33.404

human carcinogen. Further, the World

00:18:33.404 --> 00:18:37.194

Health Organization notes that it is a potent

00:18:37.194 --> 00:18:40.354

neurotoxin, a potential reproductive hazard, and

00:18:40.354 --> 00:18:41.544

an allergic sensitizer.

00:18:45.034 --> 00:18:48.494

In workers industrial workers

00:18:48.494 --> 00:18:51.794

acute inhalation exposure to high levels

00:18:51.794 --> 00:18:56.954

of ethylene oxide has resulted in nausea

00:18:56.954 --> 00:18:59.314

vomiting, neurological disorders, bronchitis.

00:18:59.844 --> 00:19:02.564

Pulmonary edema and emphysema.

00:19:03.744 --> 00:19:07.494

In addition, in industrial facilities

00:19:07.494 --> 00:19:10.574

skin contact with ethylene oxide that

00:19:10.574 --> 00:19:13.974

is inadequately aerated can cause severe burns.

00:19:16.664 --> 00:19:20.154

Major chronic effects observed

00:19:20.154 --> 00:19:23.364

in workers exposed to ethylene oxide at low

00:19:23.364 --> 00:19:27.514

levels for several years include irritation of the

00:19:27.514 --> 00:19:30.824

eyes, skin, and respiratory passages

00:19:30.824 --> 00:19:33.934

and effects to the nervous system such

00:19:33.934 --> 00:19:37.294

as headache, nausea, memory

00:19:37.294 --> 00:19:38.084

loss, and numbness.

00:19:39.904 --> 00:19:43.494

For those of us who do not work around ethylene

00:19:43.494 --> 00:19:46.924

oxide every day, we expect the health effects

00:19:46.924 --> 00:19:49.954

to be much lower. However, EPA has

00:19:49.954 --> 00:19:53.274

characterized ethylene oxide as a carcinogen, meaning that

00:19:53.274 --> 00:19:54.884

it may cause cancer.

00:19:56.044 --> 00:19:56.984

Next slide.

00:20:00.084 --> 00:20:04.164

Why is ethylene important on ethylene

00:20:04.164 --> 00:20:04.574

oxide important now?

00:20:05.354 --> 00:20:08.584

EPA periodically reviews

00:20:08.584 --> 00:20:11.744

the scientific information about human and

00:20:11.744 --> 00:20:13.704

ecological risk from air toxic chemicals.

00:20:15.014 --> 00:20:16.754

In 2016

00:20:18.944 --> 00:20:22.224

EPA concluded its review

00:20:22.224 --> 00:20:25.364

of ethylene oxide and found it

00:20:25.364 --> 00:20:28.924

presents a greater risk for getting cancer through long

00:20:28.924 --> 00:20:31.674

term chronic exposure than we previously knew.

00:20:32.694 --> 00:20:35.964

We are concerned about this greater

00:20:35.964 --> 00:20:38.984

risk and are committed to taking action to reduce that risk.

00:20:39.634 --> 00:20:42.964

We're talking about ethylene oxide tonight

00:20:42.964 --> 00:20:46.184

because EPA has found that people have a higher chance

00:20:46.184 --> 00:20:49.474

for developing cancer from breathing ethylene oxide in

00:20:49.474 --> 00:20:52.714

several areas in our region than we previously understood.

00:20:53.364 --> 00:20:56.964

We want to be protective of human health and the

00:20:56.964 --> 00:21:00.084

environment because these are areas where we or our

00:21:00.084 --> 00:21:00.534

families live.

00:21:01.424 --> 00:21:02.574

Next slide.

00:21:04.974 --> 00:21:07.084

Let me begin with a little history.

00:21:07.754 --> 00:21:11.814

In 2016

00:21:11.814 --> 00:21:15.124

EPA finished a risk evaluation of ethylene

00:21:15.124 --> 00:21:18.264

oxide as a routine part of EPA

00:21:18.264 --> 00:21:21.724

s integrated Risk Information System

00:21:21.724 --> 00:21:22.034

or IRIS.

00:21:23.264 --> 00:21:26.774

As part of our IRIS

00:21:26.774 --> 00:21:30.214

procedure, we review reports on research to

00:21:30.214 --> 00:21:32.744

identify the health hazards from exposure to a chemical.

00:21:33.364 --> 00:21:37.444

And look at the responses to specific dosages

00:21:37.444 --> 00:21:38.004

of the chemical.

00:21:40.384 --> 00:21:43.864

Through our scientific procedures

00:21:43.864 --> 00:21:47.144

we assign risk values or numbers

00:21:47.144 --> 00:21:48.604

associated with concentrations.

00:21:49.154 --> 00:21:52.424

These risk values are assigned for a health

00:21:52.424 --> 00:21:55.564

effect resulting from chronic or long term exposure.

00:21:56.954 --> 00:22:00.524

In 2016

00:22:00.524 --> 00:22:03.884

EPA, through the IRIS program, characterized

00:22:03.884 --> 00:22:05.224

ethylene oxide as carcinogenic.

00:22:06.304 --> 00:22:09.344

In 20

00:22:09.344 --> 00:22:12.414

18, we completed our review of how much

00:22:12.414 --> 00:22:16.154

Air Toxics were emitted or released into the

00:22:16.154 --> 00:22:19.244

air across the nation using the National

00:22:19.244 --> 00:22:22.384

Air Toxics Assessment

00:22:22.384 --> 00:22:23.794

tool. This is called the NATA.

00:22:25.634 --> 00:22:29.074

We identified Metropolitan statistical

00:22:29.074 --> 00:22:33.464

areas across the US that had higher

00:22:33.464 --> 00:22:36.784

potential chances for developing cancer then we

00:22:36.784 --> 00:22:36.944

want to accept.

00:22:37.614 --> 00:22:42.084

And we identified that most of the higher risk from

00:22:42.084 --> 00:22:45.324

potential exposure was related

00:22:45.324 --> 00:22:46.674

to ethylene oxide emissions.

00:22:48.404 --> 00:22:51.774

With this increase in risk in so

00:22:51.774 --> 00:22:55.064

many areas, EPA started planning how

00:22:55.064 --> 00:22:58.214

to protect people from ethylene oxide

00:22:58.214 --> 00:22:59.784

exposure using a two pronged plan.

00:23:00.774 --> 00:23:03.854

First, review and revise the

00:23:03.854 --> 00:23:07.264

Clean Air Act regulations facilities

00:23:07.264 --> 00:23:10.614

that emit ethylene oxide and

00:23:10.614 --> 00:23:14.404

2nd gather additional information on ethylene oxide emissions

00:23:14.404 --> 00:23:16.874

I'll talk about both of these in more detail shortly.

00:23:20.084 --> 00:23:22.514

In 2020

00:23:23.054 --> 00:23:27.164

Our Office of Inspector General sent a management alert

00:23:27.164 --> 00:23:30.184

to our office of Air and Radiation

00:23:30.184 --> 00:23:33.564

recommending that EPA initiate public outreach

00:23:33.564 --> 00:23:36.654

to notify the residents in communities near ethylene

00:23:36.654 --> 00:23:39.734

oxide emitting facilities about the potential

00:23:39.734 --> 00:23:43.824

health risks related to long term ethylene

00:23:43.824 --> 00:23:44.134

oxide exposure.

00:23:46.144 --> 00:23:47.094

Next slide.

00:23:50.714 --> 00:23:54.304

There are approximately

00:23:54.304 --> 00:23:57.444

30 facilities in Region 6 that emit over

00:23:57.444 --> 00:24:00.494

100 pounds of ethylene oxide each

00:24:00.494 --> 00:24:03.844

Year. In the inspector general's management

00:24:03.844 --> 00:24:07.404

alert, they named 10 facilities in Region 6

00:24:07.404 --> 00:24:10.794

as contributing to a high estimated cancer

00:24:10.794 --> 00:24:11.474

risk based on.

00:24:12.004 --> 00:24:12.864

the NATA

00:24:13.924 --> 00:24:17.574

The NATA estimated that ethylene

00:24:17.574 --> 00:24:20.824

oxide significantly contributes to potential elevated cancer

00:24:20.824 --> 00:24:22.784

risks. In some census tracts,

00:24:23.954 --> 00:24:28.014

these areas and facilities within region

00:24:28.014 --> 00:24:31.854

6 are in St. Gabriel

00:24:31.854 --> 00:24:34.984

Louisiana; Taminco and BCP Ingredients.

00:24:36.284 --> 00:24:39.924

In the Reserve area of

00:24:39.924 --> 00:24:41.744

Louisiana, Evonik and Union Carbide

00:24:43.424 --> 00:24:46.684

In Lake Charles, LA

00:24:46.684 --> 00:24:47.614

Sasol facility.

00:24:49.424 --> 00:24:52.774

In Santa Teresa,

00:24:52.774 --> 00:24:55.894

New Mexico, the Sterigenics Santa Teresa

00:24:55.894 --> 00:24:56.284

sterilization facility.

00:24:57.264 --> 00:25:00.454

In Port Neches,

00:25:00.454 --> 00:25:03.244

Texas Indorama, formerly the Huntsman facility.

00:25:04.204 --> 00:25:07.494

In Houston, TX the Shell

00:25:07.494 --> 00:25:08.524

Technology Research facility.

00:25:09.374 --> 00:25:13.734

In Laredo, TX Midwest Sterilization facility.

00:25:14.264 --> 00:25:17.844

And in Longview TX the

00:25:17.844 --> 00:25:19.024

Texas Eastman facility.

00:25:19.854 --> 00:25:22.894

As noted earlier, EPA plans

00:25:22.894 --> 00:25:25.974

to conduct community meetings in these areas to speak with

00:25:25.974 --> 00:25:29.274

the local community leaders and residents later

00:25:29.274 --> 00:25:33.044

this summer to discuss facility

00:25:33.044 --> 00:25:36.484

specific details. Some of these meetings may be

00:25:36.484 --> 00:25:36.974

grouped geographically.

00:25:37.794 --> 00:25:38.654

Next slide.

00:25:44.494 --> 00:25:47.694

I spoke a few minutes ago about acute

00:25:47.694 --> 00:25:51.164

versus chronic effects. Our risk

00:25:51.164 --> 00:25:54.334

numbers for ethylene oxide are protective.

00:25:55.064 --> 00:25:58.964

We base increased risk of contracting

00:25:58.964 --> 00:26:02.074

cancer on breathing air with ethylene oxide in it

00:26:02.074 --> 00:26:05.674

for 24 hours a day every day for

00:26:05.674 --> 00:26:08.774

70 years. We do not expect a

00:26:08.774 --> 00:26:12.114

one time or short term exposure of low amounts

00:26:12.114 --> 00:26:15.124

of ethylene oxide to cause immediate harm

00:26:15.124 --> 00:26:15.934

to a person's health.

00:26:18.294 --> 00:26:21.744

We found that a long term that

00:26:21.744 --> 00:26:24.854

is lifetime or about 70 year

00:26:24.854 --> 00:26:27.904

exposure to ethylene oxide increases

00:26:27.904 --> 00:26:30.964

the risk of certain cancers. These

00:26:30.964 --> 00:26:33.794

cancers include non-Hodgkins lymphoma,

00:26:34.394 --> 00:26:38.224

Myeloma and lymphocytic leukemia.

00:26:39.504 --> 00:26:43.104

Some studies also conclude

00:26:43.104 --> 00:26:46.534

that long term exposure to ethylene oxide

00:26:46.534 --> 00:26:48.384

may increase the risk of breast cancer.

00:26:49.824 --> 00:26:50.644

Next slide.

00:26:56.524 --> 00:26:59.714

What is EPA doing about

00:26:59.714 --> 00:27:00.454

ethylene oxide emissions?

00:27:01.484 --> 00:27:04.554

Once EPA identified ethylene oxide

00:27:04.554 --> 00:27:08.474

as carcinogenic, that is, it may cause

00:27:08.474 --> 00:27:11.604

Cancer, we evaluated the amount of ethylene oxide emitted

00:27:11.604 --> 00:27:14.914

or released into the air. We then worked with the

00:27:14.914 --> 00:27:18.764

States to reduce or minimize the emissions of ethylene

00:27:18.764 --> 00:27:22.204

oxide from numerous facilities across the

00:27:22.204 --> 00:27:25.544

nation and improve air quality for everyone.

00:27:27.084 --> 00:27:30.254

We and the states have reached out to

00:27:30.254 --> 00:27:33.294

the industries and sterilizing facilities and found

00:27:33.294 --> 00:27:37.264

that they have voluntarily completed

00:27:37.264 --> 00:27:41.074

two types of projects since 2018 that reduce

00:27:41.074 --> 00:27:42.184

or minimize emissions.

00:27:43.484 --> 00:27:47.074

Some have installed new control devices

00:27:47.074 --> 00:27:50.454

which capture and send ethylene oxide gases through

00:27:50.454 --> 00:27:53.854

the units which destroy the

00:27:53.854 --> 00:27:57.474

chemical. Others have improved their leak detection

00:27:57.474 --> 00:28:00.854

system, repaired leaks throughout their process lines

00:28:00.854 --> 00:28:03.364

and prevented the release of ethylene oxide to the air.

00:28:05.364 --> 00:28:06.194

Next slide.

00:28:08.694 --> 00:28:14.404

Earlier

00:28:14.404 --> 00:28:17.764

I introduced the EPA strategy for controlling ethylene oxide

00:28:18.274 --> 00:28:20.744

emissions, there are two parts.

00:28:21.314 --> 00:28:24.844

First, we are currently reviewing

00:28:24.844 --> 00:28:27.924

our regulations used by facilities that are permitted

00:28:27.924 --> 00:28:30.034

to release ethylene oxide into the air.

00:28:30.624 --> 00:28:33.814

Regulations are rules

00:28:33.814 --> 00:28:37.114

that set the limits on what can be done and how

00:28:37.114 --> 00:28:38.974

much pollution can be admitted or released.

00:28:40.224 --> 00:28:43.264

To start our regulatory

00:28:43.264 --> 00:28:47.164

review, we have identified those regulations which apply to

00:28:47.164 --> 00:28:49.774

facilities that make or use ethylene oxide.

00:28:51.204 --> 00:28:55.044

Ethylene oxide is used in a lot of different

00:28:55.044 --> 00:28:59.334

processes and each process may be regulated

00:28:59.334 --> 00:29:03.214

separately. We can group similar processes into a

00:29:03.214 --> 00:29:04.804

sector for regulatory purposes.

00:29:06.944 --> 00:29:09.954

Then because the risk

00:29:09.954 --> 00:29:10.174

values changed,

00:29:11.104 --> 00:29:14.224

we are also undergoing a review of

00:29:14.224 --> 00:29:17.374

the regulatory requirements to decide if we need

00:29:17.374 --> 00:29:20.064

to change any of the requirements in the rules.

00:29:20.924 --> 00:29:22.174

Next slide.

00:29:25.464 --> 00:29:28.774

EPA has six regulations

00:29:28.774 --> 00:29:31.314

that directly regulate ethylene oxide emissions.

00:29:31.984 --> 00:29:35.354

These regulations have limits that can

00:29:35.354 --> 00:29:37.464

affect or reduce ethylene oxide emissions.

00:29:38.474 --> 00:29:41.954

For industrial processes, there's not

00:29:41.954 --> 00:29:45.094

one overarching regulation because ethylene oxide

00:29:45.094 --> 00:29:46.594

is used in different processes.

00:29:47.604 --> 00:29:51.364

These processes include the miscellaneous

00:29:51.364 --> 00:29:52.614

organic chemical manufacturing.

00:29:53.364 --> 00:29:56.874

The polyether polyols production.

00:29:58.134 --> 00:30:01.164

The synthetic organic chemical

00:30:01.164 --> 00:30:02.064

manufacturing industry.

00:30:03.104 --> 00:30:05.944

And the organic liquid's distribution.

00:30:06.634 --> 00:30:08.164

Not for gasoline.

00:30:10.234 --> 00:30:13.364

And there are two

00:30:13.364 --> 00:30:17.084

regulations, one for commercial sterilizers, the ethylene

00:30:17.084 --> 00:30:20.404

oxide emitting sterilization facilities and

00:30:20.404 --> 00:30:22.024

one for hospital sterilizers.

00:30:23.694 --> 00:30:24.524

Next slide.

00:30:26.964 --> 00:30:30.054

The second step we have taken in

00:30:30.054 --> 00:30:33.254

our strategy for controlling ethylene oxide emissions is to work with

00:30:33.254 --> 00:30:36.444

our state partners to gather information

00:30:36.444 --> 00:30:40.134

on updated ethylene oxide facility emissions to

00:30:40.134 --> 00:30:42.724

identify early opportunities for reductions.

00:30:44.674 --> 00:30:47.734

With the states we have

00:30:47.734 --> 00:30:50.934

contacted and spoken with the industrial and

00:30:50.934 --> 00:30:51.384

sterilizing facilities.

00:30:52.364 --> 00:30:55.674

The facilities have begun or completed

00:30:55.674 --> 00:30:58.704

projects voluntarily to check and

00:30:58.704 --> 00:31:00.544

reduce the amount of ethylene oxide they emitted.

00:31:02.144 --> 00:31:05.344

They want to continue to be good stewards of

00:31:05.344 --> 00:31:05.634

the environment.

00:31:07.584 --> 00:31:10.784

We have been working with the facilities to get the

00:31:10.784 --> 00:31:14.044

most recent amounts of ethylene oxide that they emit

00:31:14.044 --> 00:31:17.874

in our discussions. The facilities have

00:31:17.874 --> 00:31:21.314

explained that they had often used conservative estimates for

00:31:21.314 --> 00:31:24.444

the emission calculations, which

00:31:24.444 --> 00:31:27.424

resulted in over estimating how much chemical they emitted.

00:31:28.474 --> 00:31:31.624

We are talking with the facilities

00:31:31.624 --> 00:31:34.764

about any new technology advances that

00:31:34.764 --> 00:31:38.064

they could begin using to see if these advances

00:31:38.064 --> 00:31:41.604

could reduce or minimize the release of ethylene oxide

00:31:41.604 --> 00:31:42.014

from their facilities.

00:31:43.154 --> 00:31:46.274

Finally, we are beginning to revise the risk

00:31:46.274 --> 00:31:49.304

estimates using this current information

00:31:49.304 --> 00:31:52.324

to see if the work that has been done in the past

00:31:52.324 --> 00:31:56.484

four years has decreased the risk from ethylene oxide

00:31:56.484 --> 00:31:58.614

emissions from these facilities in Region 6.

00:31:59.954 --> 00:32:01.184

Next slide.

00:32:04.124 --> 00:32:07.414

I have talked about what ethylene oxide

00:32:07.414 --> 00:32:11.004

is, what it is used for, what some health concerns

00:32:11.004 --> 00:32:14.104

are, and what EPA is doing to reduce or minimize emissions.

00:32:14.684 --> 00:32:17.784

Now I want to discuss a little

00:32:17.784 --> 00:32:21.894

more about how we write the regulations to control emissions

00:32:21.894 --> 00:32:25.684

It is through these regulations that we have authority

00:32:25.684 --> 00:32:29.994

to require certain actions to control or minimize

00:32:29.994 --> 00:32:33.274

pollution and provide for better air

00:32:33.274 --> 00:32:36.594

quality. We are committed to taking actions to reduce the

00:32:36.594 --> 00:32:38.274

risk from ethylene oxide emissions.

00:32:39.624 --> 00:32:42.994

Next I will talk about the difference

00:32:42.994 --> 00:32:46.014

between the criteria pollutants that many of

00:32:46.014 --> 00:32:47.794

about and air toxics pollutants.

00:32:48.584 --> 00:32:49.374

Next slide.

00:32:51.954 --> 00:32:55.514

EPA recognizes

00:32:55.514 --> 00:32:58.614

two major categories of air pollutants, the

00:32:58.614 --> 00:33:02.524

criteria pollutants and air toxic pollutants.

00:33:02.524 --> 00:33:06.254

EPA has specific criteria to establish

00:33:06.254 --> 00:33:09.324

the standards for the criteria pollutants

00:33:09.324 --> 00:33:10.934

that is based on research.

00:33:11.494 --> 00:33:14.944

That same type of

00:33:14.944 --> 00:33:18.684

research is not available to EPA for establishing

00:33:18.684 --> 00:33:20.344

standards for air toxics.

00:33:21.614 --> 00:33:22.564

However,

00:33:23.364 --> 00:33:26.414

for particulate matter and for lead,

00:33:27.004 --> 00:33:30.594

these two pollutants, air pollutants

00:33:30.594 --> 00:33:34.684

are in both the criteria pollutant and the air

00:33:34.684 --> 00:33:35.814

toxic pollutant categories.

00:33:37.014 --> 00:33:37.924

Next slide.

00:33:40.134 --> 00:33:43.574

Criteria

00:33:43.574 --> 00:33:47.124

pollutants are also called air quality standards.

00:33:47.644 --> 00:33:49.904

These criteria pollutants

00:33:51.694 --> 00:33:54.894

use air quality standards to set limits on

00:33:54.894 --> 00:33:57.704

how much of these chemicals can be released into the air.

00:33:58.494 --> 00:34:01.514

These are common widespread pollutants that

00:34:01.514 --> 00:34:02.714

are found in outside air.

00:34:03.614 --> 00:34:06.944

The six criteria pollutants

00:34:06.944 --> 00:34:09.264

are ozone, particulate matter,

00:34:09.874 --> 00:34:11.364

Carbon monoxide.

00:34:12.004 --> 00:34:13.454

Sulfur dioxide

00:34:14.394 --> 00:34:17.334

Nitrogen dioxide and lead.

00:34:18.854 --> 00:34:21.934

The health effects from excessive amounts

00:34:21.934 --> 00:34:24.344

of these pollutants will include:

00:34:25.164 --> 00:34:28.314

Respiratory diseases, asthma

00:34:28.314 --> 00:34:29.114

or bronchitis.

00:34:29.854 --> 00:34:32.094

Heart disease like angina.

00:34:32.694 --> 00:34:36.034

and possible developmental issues

00:34:36.034 --> 00:34:36.334

in children.

00:34:37.444 --> 00:34:38.234

Next slide.

00:34:40.194 --> 00:34:43.294

Air toxics

00:34:43.294 --> 00:34:44.674

or hazardous air pollutants

00:34:45.254 --> 00:34:48.574

use industry categories or

00:34:48.574 --> 00:34:51.594

sectors for emission standards to set limits

00:34:51.594 --> 00:34:54.744

on how much of these chemicals can be released into

00:34:54.744 --> 00:34:55.164

the air.

00:34:56.364 --> 00:34:59.424

Emissions from industries are typically

00:34:59.424 --> 00:35:02.454

localized and come from

00:35:02.454 --> 00:35:05.574

individual specific facilities like industrial plants

00:35:05.574 --> 00:35:06.264

or power plants.

00:35:07.734 --> 00:35:10.914

EPA sets emission

00:35:10.914 --> 00:35:15.214

standards for the categories or sectors of the industries

00:35:15.214 --> 00:35:17.084

that emit air toxic pollutants.

00:35:17.684 --> 00:35:20.834

These standards are known

00:35:20.834 --> 00:35:25.254

as national emission Standards for hazardous air pollutants

00:35:25.254 --> 00:35:27.494

Or you may hear the term NESHAPs.

00:35:28.154 --> 00:35:31.384

There are over 100

00:35:31.384 --> 00:35:34.444

different categories or sectors that regulate hazardous air

00:35:34.444 --> 00:35:35.324

pollutant emissions.

00:35:36.804 --> 00:35:39.964

For examples of individual categories

00:35:39.964 --> 00:35:40.204

or sectors,

00:35:40.794 --> 00:35:43.544

these include petroleum refineries,

00:35:44.104 --> 00:35:47.374

Dry cleaners, gasoline

00:35:47.374 --> 00:35:48.304

dispensing facilities.

00:35:49.264 --> 00:35:51.904

and hazardous waste combustion units.

00:35:53.874 --> 00:35:56.914

Under the Clean Air Act, EPA

00:35:56.914 --> 00:36:00.384

regulates 187

00:36:00.384 --> 00:36:01.604

pollutants as air toxics.

00:36:02.524 --> 00:36:05.574

Health effects from excessive amounts

00:36:05.574 --> 00:36:09.574

of air toxics may cause cancer and other

00:36:09.574 --> 00:36:10.384

serious health effects.

00:36:11.464 --> 00:36:15.024

Air toxics may cause

00:36:15.024 --> 00:36:15.894

adverse environmental effects.

00:36:17.484 --> 00:36:18.484

Next category

00:36:21.174 --> 00:36:27.734

Is

00:36:27.734 --> 00:36:30.824

we are reviewing the various regulations associated

00:36:30.824 --> 00:36:31.584

with ethylene oxide.

00:36:32.744 --> 00:36:36.394

We look at two different categories

00:36:36.394 --> 00:36:39.554

or sources for the hazardous air pollutants.

00:36:41.174 --> 00:36:44.564

A major source

00:36:44.564 --> 00:36:48.104

is stationary and can release more than 10 tons per

00:36:48.104 --> 00:36:51.544

year of any one hazardous air pollutant,

00:36:51.544 --> 00:36:54.744

or air toxic, or 25 tons

00:36:54.744 --> 00:36:55.684

per year or more

00:36:56.194 --> 00:36:59.234

of any combination of hazardous air

00:36:59.234 --> 00:36:59.544

pollutants.

00:37:00.854 --> 00:37:03.504

An area source, on the other hand

00:37:04.294 --> 00:37:05.834

is stationary.

00:37:07.374 --> 00:37:10.454

But it does not release is not

00:37:10.454 --> 00:37:13.484

allowed to release as much air toxic. it

00:37:13.484 --> 00:37:17.104

will release 10 or less tons per

00:37:17.104 --> 00:37:18.534

year of any one contaminant.

00:37:19.324 --> 00:37:22.544

Or release than 25 tons per

00:37:22.544 --> 00:37:25.534

year of any combination of hazardous air toxics.

00:37:27.844 --> 00:37:30.344

Next slide, please.

00:37:33.184 --> 00:37:36.344

Once we have determined

00:37:36.344 --> 00:37:37.404

the type of sources

00:37:38.074 --> 00:37:41.654

for the air pollutants, then we review

00:37:41.654 --> 00:37:44.724

what types of control technology is

00:37:44.724 --> 00:37:45.804

applicable for those sources.

00:37:47.094 --> 00:37:48.644

We have two

00:37:49.374 --> 00:37:52.634

standards. The maximum

00:37:52.634 --> 00:37:55.994

achievable control technology or MACT

00:37:55.994 --> 00:37:59.084

Standard, are used by major sources.

00:37:59.694 --> 00:38:02.784

These facilities, the

00:38:02.784 --> 00:38:06.044

major source facilities, are required

00:38:06.044 --> 00:38:09.364

to control their emissions of an air toxic by the

00:38:09.364 --> 00:38:12.524

same amount as any other industry that

00:38:12.524 --> 00:38:14.104

releases that same chemical.

00:38:15.194 --> 00:38:18.744

These standards require a facility

00:38:18.744 --> 00:38:22.404

to reduce the amount of air pollution they

00:38:22.404 --> 00:38:24.794

emit by as much as they possibly can.

00:38:27.414 --> 00:38:30.504

The generally

00:38:30.504 --> 00:38:33.584

available control technology standards are

00:38:33.584 --> 00:38:35.234

used by the area sources.

00:38:35.954 --> 00:38:39.564

These standards are based

00:38:39.564 --> 00:38:42.734

on typical performance or just the

00:38:42.734 --> 00:38:46.224

very best effort by that industry in

00:38:46.224 --> 00:38:47.504

that source category.

00:38:48.284 --> 00:38:51.994

These standards are usually less stringent

00:38:51.994 --> 00:38:55.114

than the maximum achievable control technology

00:38:55.114 --> 00:38:55.354

standards.

00:38:57.484 --> 00:38:58.284

Next slide.

00:39:01.984 --> 00:39:05.104

For revising

00:39:05.104 --> 00:39:08.424

the standard to reduce emissions,

00:39:08.424 --> 00:39:11.434

we have existing air toxic rules and

00:39:11.434 --> 00:39:14.474

at different times we review them and bring them up

00:39:14.474 --> 00:39:17.944

to date by looking at any new risk

00:39:17.944 --> 00:39:20.874

information and the latest control technologies.

00:39:21.534 --> 00:39:24.834

To protect air quality since we

00:39:24.834 --> 00:39:26.674

have last reviewed the regulations,

00:39:28.024 --> 00:39:32.654

we may conduct a residual risk

00:39:32.654 --> 00:39:36.334

review. This would look at whether the maximum

00:39:36.334 --> 00:39:39.394

achievable control technology standard or the

00:39:39.394 --> 00:39:42.944

very best practices that industries can do

00:39:42.944 --> 00:39:45.384

will protect the public with an ample margin of safety.

00:39:46.674 --> 00:39:50.324

EPA is required to complete these

00:39:50.324 --> 00:39:51.744

reviews within eight years

00:39:52.304 --> 00:39:55.504

after a MACT standard

00:39:55.504 --> 00:39:56.324

is first issued.

00:39:58.144 --> 00:40:01.234

EPA will also

00:40:01.234 --> 00:40:04.354

consider previously unregulated processes in

00:40:04.354 --> 00:40:07.484

air toxics and make

00:40:07.484 --> 00:40:09.964

technical corrections during a risk review.

00:40:12.334 --> 00:40:15.524

Once the

00:40:15.524 --> 00:40:18.684

residual risk review is completed,

00:40:18.684 --> 00:40:22.044

a technology review is planned for every 8

00:40:22.044 --> 00:40:25.084

years after the MACT standard is issued.

00:40:25.084 --> 00:40:28.334

The technology review looks

00:40:28.334 --> 00:40:31.874

at new developments in the industry, that

00:40:31.874 --> 00:40:35.224

is, developments in practices,

00:40:35.224 --> 00:40:38.414

processes, and control technologies

00:40:38.414 --> 00:40:42.264

and any changes to research into inhalation

00:40:42.264 --> 00:40:42.584

assessment. Whether it's

00:40:42.584 --> 00:40:45.034

carcinogenic or non-carcinogenic?

00:40:46.644 --> 00:40:49.874

We also consider how much it costs

00:40:49.874 --> 00:40:54.374

to use the new practices and whether a

00:40:54.374 --> 00:40:57.814

facility can feasibly or actually use the

00:40:57.814 --> 00:40:58.374

new practices.

00:40:59.614 --> 00:41:03.184

Taking these factors into consideration,

00:41:03.684 --> 00:41:07.004

we then revise our standards

00:41:07.004 --> 00:41:08.854

as necessary to improve air quality.

00:41:10.494 --> 00:41:11.804

Next slide.

00:41:14.864 --> 00:41:18.984

EPA completed

00:41:20.764 --> 00:41:24.634

the technology review for the miscellaneous

00:41:24.634 --> 00:41:27.774

organic chemical NESHAP

00:41:27.774 --> 00:41:30.344

regulatory review in May of 2020.

00:41:31.234 --> 00:41:34.744

The next regulations that are being

00:41:34.744 --> 00:41:38.874

reviewed are for the commercial and hospital sterilizers

00:41:38.874 --> 00:41:41.984

which we plan to finish in the next two years.

00:41:44.314 --> 00:41:47.694

In addition, EPA is

00:41:47.694 --> 00:41:50.744

reviewing four other rules associated with processes that

00:41:50.744 --> 00:41:53.714

emit ethylene oxide in three years.

00:41:54.444 --> 00:41:58.224

These are the Group One polymers and

00:41:58.224 --> 00:42:03.094

Resins, then synthetic organic chemical manufacturing

00:42:03.094 --> 00:42:07.014

Industry, the polyether polyols

00:42:07.014 --> 00:42:09.724

Production, and the chemical manufacturing area sources.

00:42:13.874 --> 00:42:15.354

Next slide.

00:42:18.114 --> 00:42:21.794

So what are EPA's next

00:42:21.794 --> 00:42:23.824

steps? I've discussed a lot of these already.

00:42:24.444 --> 00:42:27.734

We're continuing to review and revise

00:42:27.734 --> 00:42:31.614

our regulations and expect to complete our work on these

00:42:31.614 --> 00:42:34.734

regulations in about 3 years, currently

00:42:34.734 --> 00:42:36.944

scheduled for September 2024.

00:42:38.224 --> 00:42:41.294

We are working with our state partners to reach

00:42:41.294 --> 00:42:44.594

out to the industries in EPA region

00:42:44.594 --> 00:42:47.644

6 to review the industrial processes to see

00:42:47.644 --> 00:42:50.794

if there are additional activities that the

00:42:50.794 --> 00:42:54.124

industries can undertake to reduce or minimize releases

00:42:54.124 --> 00:42:56.594

of ethylene oxide from their facilities.

00:42:57.684 --> 00:43:01.334

And we will be reaching out to communities

00:43:01.334 --> 00:43:04.614

near certain facilities in the coming months to plan

00:43:04.614 --> 00:43:08.074

our future facility specific outreach

00:43:08.074 --> 00:43:10.284

efforts for the late summer of 2021.

00:43:10.824 --> 00:43:14.614

We hope to host these community meetings in

00:43:14.614 --> 00:43:17.124

person as COVID-19 safety protocols allow.

00:43:17.954 --> 00:43:22.454

If we're not able to do so, then we'll plan virtual outreach

00:43:22.454 --> 00:43:25.464

events similar to this webinar at a more

00:43:25.464 --> 00:43:26.874

localized scale.

00:43:27.724 --> 00:43:30.964

Overall, we continue to attain

00:43:30.964 --> 00:43:33.574

and improve air quality in our local environment.

00:43:34.894 --> 00:43:35.744

Next slide.

00:43:37.604 --> 00:43:41.014

During the webinar tonight, I

00:43:41.014 --> 00:43:44.234

spoke about what ethylene oxide is and how it is used.

00:43:44.884 --> 00:43:48.014

It's a colorless gas used to make things

00:43:48.014 --> 00:43:49.404

like plastics and carpets.

00:43:51.514 --> 00:43:54.594

Why telling you about ethylene oxide is

00:43:54.594 --> 00:43:58.084

important now. Ethylene oxide was

00:43:58.084 --> 00:44:01.214

recently determined to be more harmful than originally

00:44:01.214 --> 00:44:04.384

thought and exposure to ethylene oxide emissions

00:44:04.384 --> 00:44:07.044

may increase the likelihood of getting cancer.

00:44:07.914 --> 00:44:11.424

And what EPA is

00:44:11.424 --> 00:44:13.154

doing about ethylene oxide emissions?

00:44:14.084 --> 00:44:17.234

How EPA regulates ethylene

00:44:17.234 --> 00:44:20.614

oxide and other air toxics? And we're working

00:44:20.614 --> 00:44:23.934

on two major projects, one to review and

00:44:23.934 --> 00:44:27.094

revise the regulations that affect industries

00:44:27.094 --> 00:44:30.584

that emit ethylene oxide and working with

00:44:30.584 --> 00:44:33.864

the States and industries to find ways to

00:44:33.864 --> 00:44:34.884

reduce ethylene oxide emissions.

00:44:35.994 --> 00:44:37.174

And finally,

00:44:37.934 --> 00:44:41.974

the next steps that we're taking

00:44:41.974 --> 00:44:43.314

regarding ethylene oxide emissions

00:44:44.894 --> 00:44:48.184

is to revise the regulations that

00:44:48.184 --> 00:44:51.964

impact ethylene oxide emissions from industrial and sterilizing

00:44:51.964 --> 00:44:53.444

facilities over the next three years.

00:44:54.394 --> 00:44:58.514

We are working to collect the most recent emission inventories

00:44:58.514 --> 00:45:01.564

and review and revise the risk assessments.

00:45:02.254 --> 00:45:05.774

And we will be hosting community meetings

00:45:05.774 --> 00:45:08.814

later this summer in Region 6 in areas

00:45:08.814 --> 00:45:12.264

near the facilities listed in the Inspector General's

00:45:12.264 --> 00:45:12.744

Management Alert.

00:45:14.454 --> 00:45:15.694

Next slide.

00:45:17.234 --> 00:45:21.284

We've provided 2 links for your

00:45:21.284 --> 00:45:25.094

convenience to look up additional information. The EPA

00:45:25.094 --> 00:45:28.344

ethylene oxide webpage is found at.

00:45:29.194 --> 00:45:32.244

WWW

00:45:32.244 --> 00:45:35.954

epa.go

00:45:35.954 --> 00:45:36.564

v slash.

00:45:37.314 --> 00:45:40.524

Ethylene dash oxide.

00:45:42.664 --> 00:45:45.804

In the EPA webpage for the

00:45:45.804 --> 00:45:48.974

National Air Toxics Assessment is found at.

00:45:49.504 --> 00:45:50.954

WWW.

00:45:51.494 --> 00:45:54.834

DOT EPA dot

00:45:54.834 --> 00:45:57.584

nata, NATA.

00:45:59.724 --> 00:46:00.524

Next slide.

00:46:02.304 --> 00:46:05.554

EPA has also provided some resources

00:46:05.554 --> 00:46:08.614

for other information about air toxics and regulations for

00:46:08.614 --> 00:46:12.154

Air Toxics. Some of these topics include

00:46:12.154 --> 00:46:15.274

the list of the air toxic pollutants -

00:46:15.274 --> 00:46:18.784

all 187. An overview

00:46:18.784 --> 00:46:20.704

of our risk and technology program.

00:46:21.574 --> 00:46:24.644

And the plain English guide to

00:46:24.644 --> 00:46:25.324

the Clean Air Act.

00:46:26.444 --> 00:46:29.214

I thank you for your time this evening.

00:46:30.054 --> 00:46:32.154

Back to you, Deborah.

00:46:34.674 --> 00:46:38.764

Thank

00:46:38.764 --> 00:46:42.024

You, Fran, for your ethylene oxide presentation.

00:46:42.024 --> 00:46:45.304

It was very educational. EPA

00:46:45.304 --> 00:46:48.454

recently held environmental justice stakeholder roundtables

00:46:48.454 --> 00:46:51.594

with Jonna Polk and some questions were asked

00:46:51.594 --> 00:46:55.254

during these roundtables. EPA would like to provide a

00:46:55.254 --> 00:46:59.464

response to these, as well as a few other questions at this

00:46:59.464 --> 00:47:02.624

time. As a reminder, you can send additional

00:47:02.624 --> 00:47:04.764

questions and comments into the EPA.

00:47:04.764 --> 00:47:08.064

Region 6 email box

00:47:08.064 --> 00:47:11.294

at R6 ethylene

00:47:11.294 --> 00:47:13.234

oxide at epa.gov.

00:47:13.854 --> 00:47:17.434

EPA will post a list of questions and

00:47:17.434 --> 00:47:20.904

answers on the EPA Region 6 website listed on

00:47:20.904 --> 00:47:24.194

the slide and in the chat box. These

00:47:24.194 --> 00:47:27.334

web links were included in the announcement and will be forwarded to

00:47:27.334 --> 00:47:30.464

the States afterwards for distribution as well.

00:47:31.354 --> 00:47:33.404

The first question is.

00:47:34.384 --> 00:47:37.414

Is EPA finding ethylene oxide

00:47:37.414 --> 00:47:40.714

in the air near and around industrial

00:47:40.714 --> 00:47:41.544

facilities?

00:47:42.414 --> 00:47:45.694

Deborah,

00:47:45.694 --> 00:47:46.844

thank you for the question.

00:47:47.914 --> 00:47:51.134

EPA has collected some air samples

00:47:51.134 --> 00:47:52.914

near industrial facilities.

00:47:53.754 --> 00:47:56.554

EPA is also collecting air samples

00:47:57.804 --> 00:48:01.904

as part of our long standing air toxics

00:48:01.904 --> 00:48:04.934

monitoring networks, the National Air Toxics

00:48:04.934 --> 00:48:05.584

Trends Stations,

00:48:06.254 --> 00:48:08.864

and the Urban Air Toxics Monitoring Program.

00:48:09.884 --> 00:48:13.214

The monitors in these two networks

00:48:13.214 --> 00:48:16.494

are located in both rural

00:48:16.494 --> 00:48:20.624

and urban areas, but not

00:48:20.624 --> 00:48:23.864

near industrial facilities. They are located where they

00:48:23.864 --> 00:48:26.804

are to track progress in reducing air toxics

00:48:27.394 --> 00:48:28.754

across the country.

00:48:31.374 --> 00:48:35.164

We found some air toxics.

00:48:35.164 --> 00:48:38.264

We found background levels for ethylene oxide

00:48:38.264 --> 00:48:39.724

at our two networks.

00:48:40.224 --> 00:48:43.524

And we're trying to find out the sources

00:48:43.524 --> 00:48:46.574

for those. We were not sure why

00:48:46.574 --> 00:48:49.834

we have the concentrations that we're seeing and

00:48:49.834 --> 00:48:52.194

we're finding concentrations between

00:48:53.024 --> 00:48:56.404

0.2 and Point 4 micrograms per

00:48:56.404 --> 00:48:56.894

cubic meters.

00:48:57.494 --> 00:49:01.724

And that's higher than we would have expected;

00:49:01.724 --> 00:49:04.934

so we're looking for the reasons why.

00:49:04.934 --> 00:49:08.534

One of the things we're also looking at,

00:49:09.094 --> 00:49:12.144

because of the ethylene oxide,

00:49:12.144 --> 00:49:15.254

were working with training laboratories to

00:49:15.254 --> 00:49:18.294

analyze for ethylene oxide in air quality samples

00:49:18.294 --> 00:49:21.374

from other sites besides the national

00:49:21.374 --> 00:49:24.544

Air Toxics Trends Station and the Urban Air Toxics

00:49:24.544 --> 00:49:27.604

Monitoring Program. Our data is

00:49:27.604 --> 00:49:28.984

posted on the EPA website.

00:49:33.354 --> 00:49:37.094

Back to you. Then the next question

00:49:37.094 --> 00:49:39.674

Are there alternatives for ethylene oxide?

00:49:40.744 --> 00:49:43.594

Sure.

00:49:43.594 --> 00:49:46.914

Sometimes it depends on what the ethylene

00:49:46.914 --> 00:49:50.254

oxide is used for.

00:49:50.254 --> 00:49:53.844

Sterilization purposes if you

00:49:53.844 --> 00:49:56.764

have materials that can't get wet or be heated -

00:49:57.494 --> 00:50:00.664

there's not a lot of options

00:50:01.804 --> 00:50:05.174

for ethylene oxide. If you're

00:50:05.174 --> 00:50:06.974

using sterilization,

00:50:07.494 --> 00:50:10.734

or ethylene oxide for sterilization

00:50:10.734 --> 00:50:13.984

for other purposes and the materials

00:50:13.984 --> 00:50:17.054

could be heated or could get

00:50:17.054 --> 00:50:21.204

wet, then there you could

00:50:21.204 --> 00:50:24.274

substitute heat. Autoclaves

00:50:24.274 --> 00:50:28.384

at hospitals do a lot for the metal instruments

00:50:28.384 --> 00:50:31.464

so they don't use ethylene oxide on that.

00:50:31.464 --> 00:50:34.684

Industries also may be able to substitute another chemical

00:50:34.684 --> 00:50:38.314

for ethylene oxide, but that will depend on the

00:50:38.314 --> 00:50:38.964

technical requirements

00:50:38.964 --> 00:50:42.904

of its use and what they're actually trying to

00:50:42.904 --> 00:50:45.154

make, so the it's going to depend.

00:50:48.474 --> 00:50:49.964

The next question.

00:50:50.854 --> 00:50:54.024

I live next door to a facility that

00:50:54.024 --> 00:50:56.374

emits ethylene oxide. Will I get cancer?

00:50:59.524 --> 00:51:04.124

Deborah, I can't tell you if you will get

00:51:04.124 --> 00:51:07.494

cancer based on the available data that we

00:51:07.494 --> 00:51:11.094

Have. The scientists and modelers at EPA

00:51:11.094 --> 00:51:14.774

do not expect to ethylene oxide levels in the air around

00:51:14.774 --> 00:51:18.194

facilities to be high enough to cause immediate

00:51:18.194 --> 00:51:18.494

health effects.

00:51:19.204 --> 00:51:22.284

The EPA risk levels are based on

00:51:22.284 --> 00:51:25.544

you being exposed every day all

00:51:25.544 --> 00:51:28.614

day long for 70 years. This

00:51:28.614 --> 00:51:32.134

means that you're always at your house and

00:51:32.134 --> 00:51:33.894

the concentrations are always elevated.

00:51:35.324 --> 00:51:39.134

And yet, EPA has

00:51:39.134 --> 00:51:43.244

determined and categorized

00:51:43.244 --> 00:51:44.644

ethylene oxide as a carcinogen.

00:51:48.174 --> 00:51:51.204

Fran, it looks like we have time for two

00:51:51.204 --> 00:51:54.284

more questions, so the next one will be: I would

00:51:54.284 --> 00:51:57.584

like to know how exactly ethylene outside

00:51:57.584 --> 00:51:59.564

travels in the air through the wind.

00:52:00.384 --> 00:52:03.644

Will ethylene oxide

00:52:03.644 --> 00:52:06.984

can last in the air for four weeks

00:52:06.984 --> 00:52:10.164

and it can be transported by the prevailing winds?

00:52:10.774 --> 00:52:13.904

At higher temperatures

00:52:13.904 --> 00:52:16.924

especially above 50 degrees Fahrenheit, which

00:52:16.924 --> 00:52:20.244

is what we have here in our region a lot of the time -

00:52:20.244 --> 00:52:23.594

most of the year, in fact, and with stronger winds,

00:52:23.594 --> 00:52:26.854

we would expect ethylene oxide to

00:52:26.854 --> 00:52:29.934

transport farther away from the emission source much

00:52:29.934 --> 00:52:30.764

more effectively.

00:52:31.324 --> 00:52:34.384

At the same time, sunlight

00:52:34.384 --> 00:52:38.164

can cause ethylene oxide to breakdown and winds can

00:52:38.164 --> 00:52:41.524

mix and spread out the ethylene oxide over larger

00:52:41.524 --> 00:52:43.694

areas at lower concentrations.

00:52:45.264 --> 00:52:46.394

I hope that helps.

00:52:47.734 --> 00:52:49.074

It does.

00:52:49.904 --> 00:52:52.974

Another question is will

00:52:52.974 --> 00:52:56.344

EPA be redoing the National Air Toxics

00:52:56.344 --> 00:52:59.594

Assessments for facilities in the near future?

00:53:01.984 --> 00:53:06.394

Right now, Region

00:53:06.394 --> 00:53:09.734

6 is working on providing updated

00:53:09.734 --> 00:53:13.094

risk assessments for the five industrial facilities

00:53:13.094 --> 00:53:16.274

in Louisiana and the three facilities

00:53:16.274 --> 00:53:16.654

in Texas.

00:53:17.434 --> 00:53:21.204

The commercial sterilizers, one in Texas and one in

00:53:21.204 --> 00:53:24.474

New Mexico are being addressed by national

00:53:24.474 --> 00:53:26.754

Rule-making that is in progress now.

00:53:27.644 --> 00:53:31.074

However, at this time, EPA is

00:53:31.074 --> 00:53:33.474

not planning to update the NATA.

00:53:36.044 --> 00:53:39.114

Fran, looks like I have

00:53:39.114 --> 00:53:42.444

time for one more question, so I'm gonna go ahead and ask

00:53:42.444 --> 00:53:46.594

the last question. What is EPA doing to

00:53:46.594 --> 00:53:49.684

reduce ethylene oxide in my area and across the country?

00:53:50.354 --> 00:53:53.804

Thank you Deborah for the question.

00:53:53.804 --> 00:53:57.124

We're working on a

00:53:57.124 --> 00:54:00.214

2 pronged approach to finding

00:54:00.214 --> 00:54:04.334

opportunities to reduce ethylene oxide emissions

00:54:04.334 --> 00:54:07.534

First off, we're working on

00:54:07.534 --> 00:54:10.614

our regulations to see if

00:54:10.614 --> 00:54:14.304

there are opportunities within the regulations

00:54:14.304 --> 00:54:15.464

to

00:54:17.354 --> 00:54:20.614

improve the

00:54:20.614 --> 00:54:21.214

amount that

00:54:21.814 --> 00:54:24.824

we are going to

00:54:24.824 --> 00:54:27.914

allow for emissions if that's what the science

00:54:28.504 --> 00:54:33.024

will tell us. We've begun

00:54:33.024 --> 00:54:36.144

reviewing 6 Air Toxics regulations that pertain

00:54:36.144 --> 00:54:38.704

to the industrial and sterilizing facilities.

00:54:39.264 --> 00:54:43.204

We're working on the reviews

00:54:43.204 --> 00:54:46.334

and are hoping to get them

00:54:46.334 --> 00:54:48.054

completed in 2024.

00:54:48.714 --> 00:54:51.994

The other thing that

00:54:51.994 --> 00:54:55.074

we're working on is we're making sure we have the latest

00:54:55.074 --> 00:54:59.904

information from the facilities

00:54:59.904 --> 00:55:03.824

about how much they are emitting and

00:55:03.824 --> 00:55:07.084

we're asking the facilities to look at their

00:55:07.084 --> 00:55:10.484

processes and procedures to see if they

00:55:10.484 --> 00:55:13.624

can reduce ethylene oxide now before the regulations

00:55:13.624 --> 00:55:14.184

coming out.

00:55:14.694 --> 00:55:18.894

There may be new control technologies

00:55:18.894 --> 00:55:22.504

that exist that they can

00:55:22.504 --> 00:55:25.894

implement rapidly that would allow them to reduce

00:55:25.894 --> 00:55:27.304

their air emissions

00:55:27.914 --> 00:55:31.794

for ethylene oxide. And we're also asking them

00:55:31.794 --> 00:55:35.124

to review their leak detection programs

00:55:35.124 --> 00:55:38.324

so that they can respond to a leak of

00:55:38.324 --> 00:55:41.844

ethylene oxide much faster and control the

00:55:41.844 --> 00:55:45.474

amount that leaks. So we're

00:55:45.474 --> 00:55:46.354

working on those two things.

00:55:46.884 --> 00:55:49.974

And right now

00:55:49.974 --> 00:55:53.054

we're also just trying to get out and tell the

00:55:53.054 --> 00:55:55.834

public about what we're doing.

00:55:55.834 --> 00:55:56.624

So.

00:55:57.714 --> 00:56:01.064

We're wanting people to understand what's

00:56:01.064 --> 00:56:01.524

going on.

00:56:06.794 --> 00:56:12.164

Thank you, Fran, for your responses to these

00:56:12.164 --> 00:56:15.304

questions. EPA would like to thank you for attending the

00:56:15.304 --> 00:56:18.424

ethylene oxide ETO 101 and remind you

00:56:18.424 --> 00:56:21.884

to submit additional questions to the EPA region

00:56:21.884 --> 00:56:25.364

6 email box: R 6

00:56:25.364 --> 00:56:28.864

ethylene oxide at EPA DOT

00:56:28.864 --> 00:56:32.164

Lastly, this event is being

00:56:32.164 --> 00:56:35.464

recorded. EPA will post the recording along with the Q and As

00:56:35.464 --> 00:56:38.154

to the EPA Region 6 websites.

00:56:38.434 --> 00:56:41.474

Ethylene oxide posted on the screen

00:56:41.474 --> 00:56:44.924

and in the chat box. Written transcriptions

00:56:44.924 --> 00:56:48.224

of this recording in English

00:56:48.224 --> 00:56:51.444

Spanish, and Vietnamese will also be posted to the

00:56:51.444 --> 00:56:52.834

EPA Region 6 website.

00:56:53.444 --> 00:56:56.744

This concludes our webinar. Good evening.