

EXHIBIT E

In The Matter Of:

*THE CITY OF NEW YORK, ET AL v.
EXXON MOBIL CORPORATION, ET AL*

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[1] cancer, and we look at that in the control group, the group
[2] that wasn't exposed to anything and we look at that also in the
[3] group or groups of animals that were exposed to whatever we
[4] were concerned about.

[5] **Q.** You said these were lifetime studies. What do you mean by
[6] that?

[7] **A.** We followed the animals into old age, or at least that's
[8] the goal. Sometimes the animals don't get all the way to old
[9] age, but they usually do. And the reason that we do that is
[10] because for the most part we know people start to manifest or
[11] are diagnosed with cancer at increasing rates as they get
[12] older. It tends to be a disease more associated, you know,
[13] with people in their 50s, 60s or 70s, so we need to follow the
[14] animals for a long period of time so they get to the equivalent
[15] age of what we are when we are at an age when we are more
[16] likely to get cancer.

[17] **Q.** What is the life span of these rats and mice you are
[18] talking about?

[19] **A.** It's approximately two years. That allows us to get an
[20] answer to the question fairly quickly, you know, is this
[21] particular agent likely to cause cancer.

[22] **Q.** Are there any particular findings that toxicologists and
[23] public health officials look for in these rat and mice studies
[24] which typically lead to the conclusion that a substance may
[25] cause cancer?

[1] **Q.** Of the types of rat and mice studies that you spoke about,
[2] have any been performed in connection with MTBE?

[3] **A.** Yes. We have three studies that were performed in MTBE,
[4] and this is just a very brief outline of the studies.

[5] So, you can see in the first column it lists the names
[6] of the people that did the study. The second column are the
[7] study subjects. And we have studies for both mice and rats.
[8] In the third column this is where the cancers were observed at
[9] levels that were statistically significant in their difference
[10] from the unexposed animals and the exposed animals. So, there
[11] is a natural background rate of cancers, but in these cases for
[12] these types of cancer that were listed there was a
[13] scientifically valid difference between the unexposed
[14] populations and the exposed populations, and that's a very
[15] important point.

[16] The study sponsor is listed in the fourth column. The
[17] Ramazzini Foundation is in Italy, and the industry studies were
[18] done at Bushy Run labs. And the last column lists the
[19] publication dates. And there are two sets of dates for the two
[20] industry-sponsored studies, because the information was
[21] provided, you know, industry and to EPA at one date, and it
[22] wasn't published in scientific journals until another date.

[23] With the last study on the bottom row, that was
[24] published in 1995, so there is just one date there.

[25] **Q.** Dr. Burns, let me ask you, what do you mean by industry?

[1] **A.** Yes. We look for more than one study, because in science
[2] we always try to have more than one study, you know, done by
[3] independent labs in many cases. We look for, you know,
[4] different types of cancer. You know, it's much more powerful
[5] if we see multiple types of cancer than if we see one.

[6] We look to see if where the cancer was caused has an
[7] analogy in humans. Some animals have some parts we don't have.
[8] And we also look at how the cancer was caused. Often times
[9] there are follow-up studies that help us to understand what
[10] occurred and whether or not that has a parallel in people.

[11] We often look to see if both the males and females had
[12] cancer. That can be a really important piece of evidence as
[13] well.

[14] **Q.** Is it important that the cancer is manifested in different
[15] types of animals like some in mice and some in rats?

[16] **A.** Yes. Multiple -- we call it multiple species. So, you
[17] know, rats and mice are two different species. Within the
[18] animals that we are directed to use and that we prefer to
[19] choose because they replicated what can happen in people, there
[20] are also different strains. Strains is kind of like in a dog,
[21] you can have a German Shepard, or you can have a Chihuahua or
[22] different kinds and they have different health profiles. So,
[23] even within a given species often times we will look at
[24] different strains of animals, and so that's analogous to the
[25] different breeds that you would have in your pets.

[1] **A.** These studies were sponsored by the petroleum industry.

[2] **Q.** And so the right-hand column, 1991 was the date the study
[3] was completed and submitted to the industry and to the EPA, is
[4] that correct?

[5] **A.** That's what I have in the cover memos that I have seen,
[6] yes.

[7] **Q.** And what's the second date, the 1997?

[8] **A.** That's the date that it was accessible to the public health
[9] scientists, to cancer scientists around the world, and to
[10] people who keep track of these things.

[11] So, for the most part, you know, those of us who are
[12] out in the field working on different things, you know, that's
[13] when we would have seen it in a journal, a medical journal
[14] basically.

[15] **Q.** The second date.

[16] **A.** The second date.

[17] **Q.** Now, have you reviewed the first study on mice?

[18] **A.** Yes, I have.

[19] **Q.** Can you describe briefly what was done in that study and
[20] how it was conducted?

[21] **A.** Yes. The first two studies actually were inhalation
[22] studies. That's about, you know, being exposed to MTBE in air.
[23] So, they put the animals that are unexposed in chambers that
[24] don't have MTBE, and they put the animals that we do want to
[25] test and see, you know, is this chemical going to problem, in

[1] scientists throughout the United States. This is what the
[2] federal government tells us to do. And in their own studies
[3] this is the way that the process is carried out. They give
[4] them relatively high doses so that we can get that answer that
[5] we need.

[6] **Q.** Well, does that mean that cancer will only manifest
[7] itself -- if it does at all -- in people at those same relative
[8] high doses?

[9] **A.** No, it doesn't mean that at all.

[10] **Q.** Why is that?

[11] **A.** Because what we are looking for is the potential for the
[12] chemical to cause cancer. If it has the potential to cause
[13] cancer, we need to pay attention as public health
[14] professionals. We need to then look at how it caused that
[15] cancer, is that relevant to people, and, if it is, then we need
[16] to act on that as a carcinogen or a probable human carcinogen.
[17] And that's actually the basis for most of the drinking water
[18] standards that currently exist in the United States as well as
[19] a lot of other protective standards we have for chemicals.

[20] So, we use this kind of data, the same types of doses,
[21] on a very regular basis.

[22] **Q.** Now, what is the difference between a possible human
[23] carcinogen, a probable human carcinogen and a human carcinogen?

[24] **A.** If we had just one of those studies, we would say, well,
[25] that's some evidence that's pretty strong, it was a well done

[1] evidence to show it is very, very likely to cause cancer in
[2] human beings.

[3] **Q.** Now, based upon your knowledge of these studies, and to a
[4] reasonable scientific certainty, is MTBE a probable human
[5] carcinogen?

[6] **A.** Yes, it is.

[7] **Q.** Now, Dr. Burns, what is the National Science and Technology
[8] Council?

[9] **A.** The National Science and Technology Council is a group that
[10] advises the President's office on issues of science that are
[11] urgent and need to be addressed outside of just standard agency
[12] procedures.

[13] **Q.** I am now going to be referring to PL-3339, which is in
[14] evidence, and I am going to hand a copy to Mr. Sacripanti, and
[15] I apologize it's not in the book, but I understand a couple of
[16] copies are coming.

[17] **MR. SACRIPANTI:** I have just been handed the document,
[18] your Honor, so I may need a minute or two between cross.

[19] **THE COURT:** OK. We'll see.

[20] **Q.** So, again, the National Science and Technology Council is
[21] what?

[22] **A.** It's a group that advises the President on scientific
[23] issues that are of urgent concern.

[24] **MR. SACRIPANTI:** Sorry. Forgive me. But how is
[25] this -- I don't see it marked in evidence. I don't see a Bates

[1] study, but we don't have as much confidence. If we see two
[2] different species -- which is a criteria --

[3] **MR. SACRIPANTI:** Your Honor, just who is we?
[4] According to who, and who is we?

[5] **A.** Sure, that's fine. Toxicologists. So, toxicologists,
[6] public health community that practices toxicology related to
[7] chemicals. I am talking now about federal register guidelines.
[8] So this is the United States Environmental Protection Agency
[9] guidance on evaluating the risk of carcinogens. They prescribe
[10] very specific things that we need to look at.

[11] I helped to write some of that guidance. I said we.
[12] I have written federal register notices on how you do cancer
[13] studies and so on.

[14] So, one of the things that scientists do is to look at
[15] how much evidence we have. And here we have the evidence that
[16] satisfies the criteria established by the federal government,
[17] and that's a really important point.

[18] Now, there is no human study there. We cannot do a
[19] human study now. MTBE hasn't been out there and around
[20] fortunately and exposing people for the last 60 or 70 years, so
[21] there is no way to do a human study. And in order to call
[22] something a human carcinogen, we have to have a human study
[23] that proves it causes cancer in people. So, we can't call this
[24] what they call a known human carcinogen, but we can say it's a
[25] probable human carcinogen because we have more than enough

[1] number. Before we get into the document I just --

[2] **THE COURT:** It shouldn't even be on the screen.

[3] **MR. CHAPMAN:** Let me take it down. There is a PL
[4] number, your Honor, PL-3339, and I am told that it's on its
[5] way. I can come back to that later.

[6] **THE COURT:** You are told what's on its way?

[7] **MR. CHAPMAN:** The copies of the document with the
[8] Bates numbers, etc. I have given a copy to Mr. Sacripanti but
[9] he is really questioning whether it's that exhibit number.

[10] **MR. SACRIPANTI:** No. In fairness what I'm saying is I
[11] have just been handed a document that looks to be about 70
[12] pages; I haven't seen it before, it bears no Bates number.

[13] **THE COURT:** But when he produces it with the Bates
[14] number it may become clear that you had it before.

[15] **MR. SACRIPANTI:** It very well may be. There are a
[16] million documents in this case.

[17] **THE COURT:** I understand.

[18] **MR. SACRIPANTI:** OK.

[19] **MR. CHAPMAN:** Should I move on, your Honor, and wait
[20] until it comes?

[21] **THE COURT:** Yes.

[22] **Q.** Are you familiar with the NSTC?

[23] **A.** Yes, I am.

[24] **Q.** And are you familiar with the document which is PL-3339?

[25] **A.** I am familiar with the part of it that specifically

[1] addresses the health effects of MTBE, yes.
[2] **Q.** And were there representatives from a number of government
[3] agencies involved in that study?
[4] **A.** Yes.
[5] **Q.** What agencies, do you recall?
[6] **A.** The agencies that were involved in that were the United
[7] States Environmental Protection Agency --
[8] **MR. SACRIPANTI:** Sorry, your Honor, forgive me, but
[9] was this relied on by the expert? I don't believe so, but I
[10] could be wrong.
[11] **THE COURT:** I don't know.
[12] **THE WITNESS:** I think I did cite this in my work, if
[13] that's what you're asking me.
[14] **THE COURT:** If she cited it, it's certainly something
[15] that she considered --
[16] **MR. SACRIPANTI:** Absolutely.
[17] **THE COURT:** -- in forming her opinion. You think you
[18] cited it in your report?
[19] **THE WITNESS:** I believe so, but somebody may have my
[20] report here and may be able to absolutely nail that down.
[21] **Q.** Have you looked at that report?
[22] **A.** I looked at this report many times, yes.
[23] **Q.** And is anything in that report consistent with your own
[24] opinion?
[25] **A.** Yes.

[1] **THE COURT:** Yes.
[2] **Q.** So, are you familiar with the conclusion of this government
[3] agency?
[4] **A.** Yes, I am.
[5] **Q.** And what conclusions did it reach that you are speaking
[6] about?
[7] **A.** They concluded that MTBE was a known animal carcinogen and
[8] it had the potential -- I want to use the exact words that they
[9] used, and I haven't memorized them -- but the potential to be a
[10] human carcinogen.
[11] **Q.** Now, does the fact that the NSTC didn't list it as a
[12] probable human carcinogen mean that it's not a probable human
[13] carcinogen?
[14] **A.** No, it doesn't mean that.
[15] **Q.** Why is that?
[16] **MR. SACRIPANTI:** Objection to what the agency knew,
[17] your Honor. I don't believe this witness can testify as to
[18] what the NSTC knew.
[19] **THE COURT:** I don't think she was asked what they
[20] knew.
[21] Yeah, she wasn't asked whether the fact that the NSTC
[22] didn't list it as a possible human carcinogen, does that mean
[23] it's not a probable human carcinogen. She said it doesn't mean
[24] that. And then she was asked why.
[25] **MR. CHAPMAN:** Yes.

[1] **Q.** And what --
[2] **A.** Absolutely.
[3] **Q.** What conclusion in that report is consistent with your
[4] opinion?
[5] **MR. SACRIPANTI:** Well, before the conclusion is given,
[6] we are looking to see if it's cited in the appendix, and thus
[7] far we don't see it. It's a multi-page appendix, so if I had
[8] been given this document a little earlier I would have checked
[9] that. I don't want to interrupt the flow here, but perhaps
[10] what we could do is move on to a different area while at least
[11] we check whether this is something we have that was relied on
[12] and used in the report. It could very well be. And if you
[13] have it there, just tell us what page and we will look at it.
[14] **THE WITNESS:** I would like to provide a clarification
[15] of something that I was just discussing previously. Is that
[16] allowed?
[17] **MR. CHAPMAN:** Excuse me, your Honor.
[18] **THE COURT:** Go ahead, Mr. Chapman.
[19] **MR. CHAPMAN:** On page 76 of Dr. Burns' report, which
[20] is listing a number of documents that she relied upon, it
[21] refers to this exact document, and that's the Science and
[22] Technology Council, 1997, Inner Agency Assessment of Oxygenated
[23] Fuel.
[24] **THE COURT:** OK.
[25] **MR. CHAPMAN:** May I continue?

[1] **THE COURT:** That's different. That's not the
[2] knowledge of the agency, so I will allow that.
[3] You can answer that.
[4] **THE WITNESS:** I want to answer the right question, so
[5] the question is why -- sorry.
[6] **THE COURT:** The NSTC didn't list it as a probable
[7] human carcinogen. You were asked does that mean it's not a
[8] probable human carcinogen. You said it doesn't mean that. He
[9] said why doesn't it mean it, the fact that the agency didn't
[10] list it. Why does it mean it's not?
[11] **MR. SACRIPANTI:** In this witness's opinion.
[12] **THE COURT:** Of course, she is here solely to give her
[13] opinion.
[14] **MR. SACRIPANTI:** OK.
[15] **THE COURT:** In your opinion.
[16] **Q.** Do you need the question again? Do you need it again?
[17] **A.** I think I have the question. I think I understand the
[18] question. The NSTC did not use exactly the same terminology
[19] that the USEPA uses, which is typically probable human
[20] carcinogen. But the language that they used, essentially you
[21] would read it as meaning the same thing as a health scientist.
[22] And the NSTC committee that reviewed this was made up of
[23] multiple people from the US Environmental Protection Agency,
[24] from the US Centers for Disease Control, which is our main
[25] public health agency, and from an agency called The National

[1] Institutes of Environmental Health Sciences, which is the
[2] agency within the NIH, the National Institutes of Health, that
[3] does research on chemical carcinogens. And the person who led
[4] this team, Dr. Ronald Melnick, is a cancer expert. So, the
[5] language that they used is consistent with saying that this is
[6] a probable human carcinogen.

[7] **Q.** Is it your opinion, to a reasonable degree of scientific
[8] certainty, that MTBE is a probable mutagenic substance?

[9] **A.** Yes.

[10] **Q.** And upon what do you base that opinion?

[11] **A.** We now have at least ten studies, new studies of the
[12] mutagenicity of MTBE which are coming out quickly, but the last
[13] count I had, in the last ten years we have had ten new studies
[14] showing that MTBE is mutagenic. So, subsequent to what the
[15] NSTC or EPA or these other agencies had available to them, we
[16] now have very strong evidence that MTBE is a mutagen. The
[17] reason that's critically important is that we know there is a
[18] connection between something causing mutations and something
[19] causing cancer. That's been very well established in cancer
[20] research and in the toxicological literature. So, the fact
[21] that we have good evidence -- and you saw the slide of the
[22] DNA -- of not only studies that show it does cause mutations,
[23] but we have studies that show how it causes those mutations,
[24] and that the types of mutations are consistent with causing
[25] cancer, it gives us a coherent picture of what MTBE can do.

[1] **Q.** What is the relationship between MTBE being mutagenic and
[2] also a probable human carcinogen?

[3] **A.** It adds a great deal of strength to the evidence that we
[4] have to know how things occur in the cells at the smallest
[5] level that we can observe. And we know that the way that
[6] happens can lead to the uncontrolled growth of cells -- which
[7] is very important part of cancer -- and it can move from that
[8] into, you know, full blown cancer if the body does not correct
[9] that problem.

[10] **Q.** So, does that mean that even the smallest amounts of MTBE
[11] potentially on a mutagenic level can lead to cancer?

[12] **A.** Yes. It only takes one molecule interacting, one molecule
[13] of MTBE interacting with DNA, to start to initiate the sequence
[14] that will give us an abnormal reproducing cell line and
[15] ultimately lead to cancer.

[16] **Q.** So, in your opinion, and from a public health standpoint,
[17] should MTBE -- should as much MTBE as possible be removed from
[18] any groundwater before people are exposed to it?

[19] **MR. SACRIPANTI:** Objection, your Honor. This is an
[20] MIL on this sheet. She is not qualified to give this opinion.
[21] You have so ruled.

[22] I am happy to show your Honor the MIL. I have a
[23] summary of it here.

[24] **THE COURT:** Do you need to see it?

[25] **MR. CHAPMAN:** I would like to know what he is

[1] **Q.** Can you describe in general how those mutagenic studies are
[2] performed?

[3] **A.** Most studies, mutagenic studies, are performed by taking
[4] cells from either an animal or a few cells from a person and
[5] putting them in a dish, and we call it culturing. They culture
[6] the cells, they grow a layer of cells, and they expose that
[7] layer of cells in a laboratory under sterile conditions to the
[8] chemicals that we are concerned about, and they will also have
[9] another culture of cells, the controlled plate of cells or
[10] culture of cells that they don't expose, and they watch them
[11] over time, and they look at what happens to the cells. They
[12] typically look at them using electron microscopes. They look
[13] at them using different kinds of chemical analyses. They can
[14] extract the DNA from those cells, and they can look at, you
[15] know, how the DNA itself looks like. They can look at abnormal
[16] aspects of the chemistry of the DNA within those cells.

[17] So, there is a lot of different ways to look at how
[18] mutations are caused by chemicals.

[19] **Q.** Now, were the cells that were studied only animal cells?

[20] **A.** There are also human cell cultures. So, those are quite
[21] important in the case of MTBE and most other suspected
[22] carcinogens. Human lymphocytes, which are your white blood
[23] cells, are studied and they are cultured. And when the MTBE is
[24] put on those cultures we can see if there is damage that's
[25] done.

[1] referring to.

[2] **THE COURT:** Oh, you do know what he is referring to.
[3] You know exactly what he is referring to. The question is do
[4] you want to see it.

[5] **MR. SACRIPANTI:** This is my summary. I am happy to
[6] get the opinion.

[7] **THE COURT:** We have it in a notebook.
[8] (Discussion held off the record at sidebar)
[9] (Continued on next page)

[11] (Question read)

[12] **A.** Yes, absolutely.

[13] **THE COURT:** That's your view from a public health

[14] standpoint?

[15] **THE WITNESS:** That's from a public health standpoint

[16] as a scientist.

[17] **BY MR. CHAPMAN:**

[18] **Q.** Are you familiar with what "MCL" means?

[19] **A.** Yes: Maximum contaminant level.

[20] **Q.** In your work have you come into contact with MCL?

[21] **A.** Yes. I helped to establish MCL's for the State of New

[22] Jersey, for the federal government, and the federal drinking

[23] water program, and I continue to provide comments from the

[24] public health perspective on federal MCL's as they are

[25] proposed.

[16] **Q.** What is an MCL?

[17] **A.** An MCL is a maximum amount of a contaminant, usually a

[18] chemical, that is allowable in water. It's the most

[19] contamination that is permitted by a state or by the federal

[20] government. In this case we are talking about drinking water.

[21] Usually MCL's are for drinking water.

[22] **Q.** Based upon your experience, what factors are typically

[23] taken into account when the state sets an MCL?

[24] **A.** Usually there are a number of factors taken into account.

[25] Health is taken into account. But in addition to that,

[11] physiology, pathology, anatomy, and other basic medical

[12] sciences.

[13] **Q.** In the past hasn't MTBE been used for medical procedures?

[14] **A.** MTBE was used in patients, as I understand it from reading

[15] the medical journals, that could not tolerate certain types of

[16] surgery, as an alternative when they had gallstones.

[17] **Q.** If it was used for medical procedures, doesn't that mean it

[18] was safe?

[19] **A.** It absolutely does not mean it was safe. It means that

[20] there were cases in which judgments by physicians and others

[21] were made that that option for a patient that had gallstones

[22] was the option that they should have. So patients typically

[23] consult with their doctors, the doctors look at their medical

[24] condition, and under some circumstances this was the option

[25] that they elected to take. That entails in most cases people

[16] having informed consent about the hazards, medical monitoring

[17] after they have a procedure, and things that we very commonly

[18] associate when we go in and have medical procedures done.

[19] **Q.** Are there any other examples that you are aware of where

[20] toxic substances are used in medical treatment?

[21] **A.** One of the most common examples that I think we are all

[22] familiar with is chemotherapy, where patients are usually at

[23] risk of losing their life or at the very least being in

[24] considerable pain, and they are given drugs that are often

[25] extremely toxic. They are monitored carefully. Sometimes the

[11] economic issues are taken into account: Feasibility, can it be

[12] removed, how would that occur, and stakeholder interests or the

[13] interests of parties that have specific concerns about

[14] regulating a particular chemical.

[15] **Q.** What do you mean by "stakeholder"?

[16] **A.** Stakeholders are organizations or individuals or parties

[17] that have an interest in how the MCL is set. So one of the

[18] things that I did in my work for EPA was to request

[19] stakeholders, a variety of different interested parties, to

[20] provide input when we were setting federal regulations.

[21] **Q.** In other words, a company that might manufacture a chemical

[22] might have one interest and an environmental group might have

[23] another interest, and both of those interests are considered,

[24] is that right?

[25] **A.** That's right.

[16] **Q.** Does the EPA have an MCL for MTBE?

[17] **A.** No, they do not.

[18] **Q.** You're not a medical doctor, are you?

[19] **A.** That's right.

[20] **Q.** Does a toxicologist or public health official have to be a

[21] medical doctor to make their opinions valid?

[22] **A.** No.

[23] **Q.** Why is that?

[24] **A.** We have training specifically in the ways that chemicals or

[25] other agents can affect people in addition to our training in

[11] toxicity of the drug does severe damage or even kills the

[12] patient. But they have informed consent, they have made a

[13] decision, and that's a necessary trade-off that they make in

[14] consultation with their doctor and the family, and so on.

[15] **Q.** Are you aware of any tests were human volunteers have been

[16] used to assess certain effects of MTBE?

[17] **A.** Yes. There were very, very short-term tests done where

[18] people were exposed for brief periods to MTBE. Those are not

[19] very similar to what we would think of as a lifetime or many

[20] years of exposure through drinking water. There were also a

[21] certain number of evaluations done on people exposed when MTBE

[22] was used in gasoline.

[23] **Q.** I thought you said we don't conduct tests on people. What

[24] happened?

[25] **A.** These were short-term tests that were done a number of

[16] years ago for the most part to determine what the short-term

[17] consequences would be of MTBE if they inhaled it. I think some

[18] of them were also given oral doses. But they were very

[19] short-term. They were only given one dose, for example. And

[20] there are people who have substantial ethical concerns about

[21] that.

[22] **Q.** Are you familiar with ethanol?

[23] **A.** Yes, I'm familiar with ethanol.

[24] **Q.** What is ethanol?

[25] **A.** Ethanol is the scientific term for alcohol that we have in

[11] wine, in beer, in a mixed drink that we might have. So it is
[12] something that people have been using for a very long time as a
[13] way -- as part of their food really, the things that people
[14] drink.

[15] **Q.** Are there potential health concerns about alcohol use?

[16] **A.** There absolutely are very valid health concerns about
[17] alcohol use when alcohol use is excessive. If people routinely
[18] drink a lot of alcohol, or even a college student drinks the
[19] equivalent of a couple of gallons of alcohol, it could be
[20] really damaging. So it's really something that we are most
[21] aware of in terms of alcoholism. It can cause liver cancer in
[22] people that have high exposures over a long period of time.

[23] **Q.** In this case we have heard about MTBE in the parts per
[24] billion range. Can you relate that to, say, how much alcohol
[25] is in a can of beer?

[16] **A.** Yes. The alcohol in beer may be in the range of 4 percent,
[17] for example. 4 percent is the equivalent of 40 million parts
[18] per billion. It's a massively larger quantity than what we are
[19] talking about in terms of MTBE in water. If you have a glass
[20] of wine, maybe it has 10 percent alcohol. That's a hundred
[21] million parts per billion. So it's a very different scale
[22] altogether.

[23] **Q.** From your studies, how does the body handle ethanol or
[24] alcohol when it's ingested?

[25] **A.** We've developed a lot of very useful ways to deal with

[11] of the water contamination in a couple of different states.
[12] **Q.** Can you be certain that MTBE causes cancer in people?
[13] **A.** We can't be certain, as health scientists, 100 percent
[14] unless we measure this through a very carefully designed study
[15] in people observed over many, many years. So we won't say with
[16] absolute certainty. But based on the evidence that we have, I
[17] think it's clear, and my opinion on this is consistent with
[18] other health scientists that we know. It's mutagenic, it's
[19] carcinogenic in animals in a way that I would say, yes, we can
[20] be very certain that it's a probable human carcinogen.

[21] **MR. CHAPMAN:** Your Honor, I'd like to refer back
[22] briefly to PL3339, an exhibit Mr. Sacripanti has had now for a
[23] while. It's a public document. The practice of the parties
[24] has not been to Bates stamp pages of public documents.

[25] **THE COURT:** Has it been previously produced?

[16] **MR. CHAPMAN:** Oh, yes. It's in evidence, your Honor.

[17] **THE COURT:** It's in evidence.

[18] **MR. SACRIPANTI:** There is a stipulation, your Honor,
[19] that public documents such as this shall be allowed into
[20] evidence. Counsel makes a representation that it has been
[21] produced. I have no basis to doubt that. Again, there have
[22] been a million pages produced here.

[23] **THE COURT:** I understand.

[24] **MR. SACRIPANTI:** A million documents, well over a
[25] million pages. So if it's been produced, that's his

[11] digestion of most of our foods. Since alcohol has really been
[12] used since people began walking the earth, as far as we can
[13] tell, and it's in a lot of fruits that we get from trees and
[14] other things, we have developed a special enzyme called alcohol
[15] dehydrogenase. It basically means alcohol, and then there is
[16] an enzyme that takes it apart. It breaks it down very quickly
[17] in our bodies. People are very good at doing this.

[18] So with normal, even high levels of consumption, we
[19] break down the alcohol fairly quickly in our bodies. That's
[20] why it doesn't last for too long. So the effects of drinking,
[21] usually you can't tell many hours down the road. The next day,
[22] if you have had a glass of wine, the alcohol is gone.

[23] **Q.** In your work in the public health field when you worked on
[24] water contamination, have you come across the fact that ethanol
[25] has contaminated any water?

[16] **A.** I haven't seen instances of ethanol contaminating any
[17] water, no.

[18] **Q.** Do you know why that is?

[19] **MR. SACRIPANTI:** Objection, your Honor. I don't think
[20] this witness --

[21] **THE COURT:** Sustained. I don't think she is an expert
[22] on that.

[23] **Q.** You haven't seen that any of the literature you have
[24] reviewed, correct?

[25] **A.** No, I haven't, and I was responsible for dealing with a lot

[11] representation, I take his representation. I just hadn't seen
[12] it before he handed it to me.

[13] **MR. CHAPMAN:** May we publish it now, your Honor, to
[14] the jury?

[15] **THE COURT:** You're not publishing all 70 pages. What
[16] part do you want to refer to?

[17] **MR. CHAPMAN:** I just want to refer to three short
[18] parts. Can we have them up on the screen, please.

[19] **Q.** This is the NSTC document we referred to before, correct?

[20] **A.** Correct.

[21] **Q.** I'd like to refer to the pages in chapter 4 that says
[22] "prepared by" and talks about the potential health of
[23] oxygenated gasoline. Are you familiar with who those people
[24] are?

[25] **A.** Yes. Ronald Melnick, Dr. Ronald Melnick, is a toxicologist
[16] at the National Institute of Environmental Health Sciences.
[17] He's a senior cancer scientist at the National Toxicology
[18] Program, which is a part of that. Mary White is a scientist at
[19] the Centers for Disease Control. And Michael Davis is a
[20] toxicologist at the United States Environmental Protection
[21] Agency. These are all health scientists.

[22] **Q.** Can we go to the next page, please, and blow that up. Is
[23] this highlighted language what you referred to before, where it
[24] says, "We believe the weight of evidence supports regarding
[25] MTBE as having a carcinogenic hazard potential for humans"?

[1] A. Yes.
[2] Q. Again, the NSTC is a government group that advises the
[3] president?
[4] A. That's correct.
[5] Q. To conclude, are you able to say to a reasonable scientific
[6] certainty that MTBE is a probable human carcinogen?
[7] A. Yes.
[8] Q. Are you able to say to a reasonable scientific certainty
[9] that MTBE is a probable human mutagen?
[10] A. Yes.
[11] Q. Are you able to say to a reasonable scientific certainty
[12] that MTBE is a probable human mutagenic carcinogen?
[13] A. Yes.
[14] MR. CHAPMAN: Your Honor, I have no more questions.
[15] THE COURT: We'll take our afternoon recess now. Take
[16] ten minutes. We'll reconvene at 25 of 4:00.
[17] Before we do, however, Juror No. 1 must have shared
[18] her earlier note with you folks because people told my clerk
[19] that you are asking what the schedule will be on Monday. You
[20] must have told the other jurors that you have an issue on
[21] Monday.
[22] JUROR NO. 1: Yes.
[23] THE COURT: You need to be in Maryland. I have
[24] consulted with counsel. What we will do, with your agreement,
[25] is we'll work a half day early. So we would start at 9:00 but

[1] (Jury not present)
[2] THE COURT: Juror No. 8 or something wrote us a note
[3] that said, "I don't think this would matter, but I am a first
[4] responder and am in the Mount Sinai 9/11 monitoring program."
[5] I think he told us that during jury selection.
[6] MR. CHAPMAN: He did, your Honor.
[7] THE COURT: He meant by that he responded quickly to
[8] the 9/11 disaster and because of that he is being monitored at
[9] Mount Sinai regularly, I guess tested regularly, regularly
[10] seen, regularly watched. He wrote that early in this
[11] examination when people were talking about possible human
[12] carcinogen and all that, mutagen -- is that the word? I think
[13] he was trying to say that's what I'm being watched for. Does
[14] that trouble you?
[15] MR. CHAPMAN: Dr. Burns testified that she has worked
[16] with her organization on that project with Mount Sinai and the
[17] first responders. That may have been what prompted it. But I
[18] don't think that is an issue.
[19] MR. BONGIORNO: No issue, Judge.
[20] MR. SHER: No issue for us.
[21] THE COURT: Then I'll just tell him I talked about it
[22] with the attorneys and there is no concern.
[23] MR. STACK: We concur it is not an issue.
[24] (Recess)
[25] (Continued on next page)

[1] stop at 12:00.
[2] JUROR NO. 1: Thank you.
[3] THE COURT: You probably wouldn't waste too much time
[4] and your fellow juror could make the appointment she has to
[5] make in Maryland, an emergency with her house that nobody else
[6] can cover. So we would still get in pretty much a half today
[7] day, 9:00 to 12:00. Are you all willing to come at 9:00 on
[8] Monday if you will be out at 12:00? OK, then that's Monday's
[9] schedule, 9:00 to 12:00. That answers that question, and the
[10] jury is excused for 10 minutes.
[11] (Continued on next page)

[1] (Jury present)
[2] THE COURT: Just to go over the announcements one last
[3] time, don't forget this is it for this week, and then Monday is
[4] only half a day. So not tomorrow and Monday at 9:00. All
[5] right, everybody's got it.
[6] Notebooks are coming.
[7] CROSS-EXAMINATION
[8] BY MR. SACRIPANTI:
[9] Q. Doctor, good afternoon. I'm Peter Sacripanti. I represent
[10] Exxon. I'm going to ask you some questions. And when I go to
[11] the doctor, I get real nervous, so I understand, and I'm going
[12] to go slow. If you have any questions, if I haven't asked a
[13] question that you understand, let me know. I'll try my best to
[14] rephrase it for you, understanding you're nervous at this time.
[15] THE COURT: Not to break your flow, but my clerk is
[16] very solicitous of the jurors, and I missed a beat. He said
[17] that we should order bagels for 10:30. So at the one break,
[18] since you're coming to early on Monday, I should supply the
[19] food. That was good of him.
[20] They're all happy. So at 10:30, we will send some
[21] food.
[22] MR. SACRIPANTI: Your Honor, you may always interrupt
[23] me for bagels.
[24] THE COURT: It is my favorite subject, too, Mr.
[25] Sacripanti, actually.