

IN THE COUNTY COURT OF THE FIFTEENTH JUDICIAL CIRCUIT
IN AND FOR PALM BEACH COUNTY, FLORIDA

STATE OF FLORIDA,

CASE NO.: 08MM003373AXX

vs.

PETER TSOLKAS,

Defendant.

ORIGINAL

JURY TRIAL EXCERPT
(TESTIMONY OF DR. JOHN VAN LEER)

PRESIDING: HONORABLE LAURA JOHNSON

APPEARANCES:

ON BEHALF OF THE STATE OF FLORIDA:

BARRY KRISCHER, STATE ATTORNEY
OFFICE OF THE STATE ATTORNEY
15th Judicial Circuit, Palm Beach County
401 North Dixie Highway
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By: Assistant State Attorney

ON BEHALF OF THE DEFENDANT:

CAREY HAUGHWOUT, PUBLIC DEFENDER
OFFICE OF THE PUBLIC DEFENDER
15th Judicial Circuit, Palm Beach County
421 Third Street
West Palm Beach, FL 33401
By: Erich Taylor,
Assistant State Attorney

Date: December 3, 2008
Times: 2:05 p.m. to 2:38 p.m.
Palm Beach County Courthouse
205 North Dixie Highway
West Palm Beach, Florida 33401

Rhonda Gattis, Certified Electronic Transcriber

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1 BE IT REMEMBERED that the following
2 proceedings were had in the above-entitled cause
3 before Honorable Laura Johnson, one of the
4 Judges of the aforesaid Court, at the Palm Beach
5 County Courthouse, located in the City of West
6 Palm Beach, County of Palm Beach, State of
7 Florida, on the 3rd day of December, 2008
8 with appearances as hereinbefore noted, to wit:

9 * * * * *

10 THE COURT: Defense, call your next
11 witness.

12 MR. TAYLOR: The defense calls Dr. John
13 Van Leer.

14 WHEREUPON:

15 DR. JOHN VAN LEER
16 having been called as a witness by the defense, and
17 after being first duly sworn by the Court, was examined
18 and testified under oath as follows:

19 DIRECT EXAMINATION

20 BY: MR. TAYLOR:

21 Q. Good afternoon, Dr. Van Leer. Could you please
22 state your name and spell your name for the record.

23 A. Yes, my name is Dr. John Cloud Van Leer. That's
24 C-L-O-U-D, Van V-A-N, Leer L-E-E-R, both capitalized.

25 Q. Thank you. And what degrees do you have, Dr. Van

1 Leer?

2 A. I have a Bachelor of Science in Mechanical
3 Engineering from Case Institute of Technology, and I
4 have a Doctorate of Science in Physical Oceanography
5 from M.I.T. and Woods Hole Oceanographic Institution
6 jointly.

7 Q. Okay. And after you graduated undergrad, what did
8 you do? What was your job?

9 A. I spent the next three years designing missile
10 guidance systems for M.I.T. at what was called the
11 M.I.T. Instrumentation Lab at the time.

12 Q. And you testified that you have some graduate
13 degrees. What is your current job right now?

14 A. I'm an Associate Professor at the University of
15 Miami and I teach physical oceanography courses at the
16 graduate level, and I teach sustainable living courses
17 at the undergraduate level.

18 Q. And are you a member of any scientific
19 organizations?

20 A. I am a member of the Miami-Dade Climate Task
21 Force, the scientific committee thereof.

22 Q. And have you ever been active in politically
23 campaigning in the nation's capitol?

24 A. Yes, I --

25 Q. What were the circumstances of those?

1 A. Well, it was not a political campaign. It was a
2 non-partisan campaign with a combination of the union
3 of concerned scientists and leading economists in the
4 nation campaigning to reduce greenhouse gases and
5 impose carbon caps.

6 Q. Okay. How long have you been a scientist, Dr. Van
7 Leer?

8 A. About forty years.

9 Q. Okay. And to start off with, what is your general
10 opinion on the topic of global warming -- as to the
11 existence of global warming or non-existence?

12 A. Well, global warming is happening and it is
13 accelerating in response principally to greenhouse gas
14 increases in the atmosphere.

15 Q. And based on your forty years of scientific
16 experience, is it your opinion that global warming is
17 something that is generally accepted -- the existence
18 of global warming, excuse me, is something that is
19 generally accepted in the scientific community, or is
20 it a matter of dispute?

21 A. It's very widely accepted in the scientific
22 community. I can't remember any issue that has been as
23 widely accepted. In some of the popular press, there
24 has been the appearance of dissent, but that is not
25 genuine in fact.

1 Q. Okay, and when did you first start to deal
2 significantly with global warming?

3 A. Well, I've been aware of it for awhile. The first
4 time I became really interested and focused in it was
5 on my third expedition to the Arctic under a Navy
6 sponsorship. We were maintaining a winter over
7 experience and we had a young scientist with us who was
8 measuring the increase in ice thickness in forty
9 degrees below zero temperatures, and he was shocked to
10 find that the base of the ice was, in fact, melting in
11 these extremely cold temperatures, and at that point
12 everybody on the ship was alarmed including the old
13 hands. Some of the Norwegian crew had been to the ice
14 for thirty-five years and they had never seen ice
15 melting in such extreme winter cold. And at that
16 point, I realized that some basic kind of shift had
17 occurred in the climate system and when we were blown
18 south into the Berent Sea by a hurricane-strength
19 storm, we found that there was open water everywhere in
20 the Berent Sea in forty degrees below zero when you
21 would normally expect the region to be ice covered.

22 Q. Okay. And you testified that one of the things
23 that you did after that was become involved in the Dade
24 County Climate Change Scientific Task Force? Am I
25 saying that whole name correctly?

1 A. Yes, that's correct.

2 Q. And how -- what was your involvement in that task
3 force?

4 A. It was a committee that was chartered by the
5 Miami-Dade County Commission in order to figure out
6 what the major effects of climate change would be and
7 what to do about them once you discovered what they
8 might be, and part of the committee I'm on has been the
9 scientific part although I have opinions on what to do
10 about it as well.

11 Q. Well, did the committee that you were on reach any
12 conclusions or findings during your service?

13 A. Yes.

14 Q. And what were those findings?

15 A. Well, there are many effects of climate change,
16 but by far the overwhelming effect is in the case of
17 sea level rise. We projected there would be a minimum
18 of a foot and a half of sea level rise in the next
19 fifty years, possibly more, and there would be between
20 three and five feet in sea level rise, possibly
21 significantly more by the end of the century, that is
22 the year 2100.

23 Q. And what is -- what is that a result of?

24 A. It's principally a result of two factors. There
25 is a thermal expansion of the water itself as it warms

1 due to global warming, and the more significant and
2 perhaps the most alarming aspect is the part that has
3 to do with the melting of glacial ice both in the
4 Arctic and also beginning in the Antarctic.

5 Q. And what is the melting of glacial ice, if you
6 know or have an opinion, due to?

7 A. The melting of sea ice which is frozen from the
8 sea water doesn't raise sea level directly, but the
9 melting of glacial ice which is ice that is piled up on
10 the land in many places a mile or more in thickness,
11 when that water melts it runs off into the ocean and
12 results in a global rise of sea level.

13 Q. And you mentioned -- you gave us some figures a
14 couple of moments ago, you said the sea level will rise
15 a foot and a half over fifty years --

16 A. Yes, I brought this prop along in order to
17 demonstrate that.

18 Q. Okay. Why don't you explain, because I am
19 interested, what is that?

20 A. If this were placed at sea level, this is a foot
21 and a half which is the minimum that would be expected
22 within fifty years, possibly more, so it could be
23 somewhere up in this region. That doesn't seem like
24 much perhaps to you, but it would be enough to flood my
25 garage on the spring tides. By the end of the century,

1 the range, predicted range is between three and five
2 feet, which is this much. Somewhere in this interval,
3 we will lose our fresh water aquifer. It will
4 inundated by saltwater, and so we will lose our
5 drinking water supply. And the real question is, will
6 the Greenland ice cap run away. It has entered a new
7 type of melting in which the Greenland ice cap is
8 collapsing around the edges and become active, instead
9 of just melting on the surface. And the collapses that
10 are occurring there are violent enough they are
11 triggering earthquakes. Seismologists didn't know what
12 to think of them, some of them as much as Richter Six
13 on the scale. This is like a, you know, a real seismic
14 event because of the melting of the ice and the
15 collapsing of the caverns that are internal to the ice.
16 Q. And Dr. Van Leer, you said a lot of things there.
17 Let's -- you can probably go back, and thank you for
18 that illustration.

19 A. There is more of it actually. If we lose
20 Greenland, we will have six meters of sea level rise --

21 THE COURT: You're going to get the ceiling
22 there.

23 BY: MR. TAYLOR:

24 A. Sorry I can't put it straight up to give you the
25 full effect of six meters --

- 1 Q. Fair to say it's more than this room?
- 2 A. Yes, so that will flood South Florida up to the
3 north shore of Lake Okeechobee.
- 4 Q. Okay, you said a lot of things there. Let's
5 unpack some of them, okay. First of all, you are
6 talking about sea level rise and you said that was
7 principally due to thermal expansion, if I have
8 correctly --
- 9 A. Up to now.
- 10 Q. Up to now. In the future, would it be due to
11 anything different?
- 12 A. Well, it's due to the combination of thermal
13 expansion and glacial melt.
- 14 Q. Okay.
- 15 A. The long term trend for the last two thousand
16 years has been about one-eighth of a foot rise for each
17 century.
- 18 Q. Okay.
- 19 A. What has happened since the industrial revolution,
20 that has accelerated and in 1930 it increased. So at
21 the present time, it's one foot per century and it's
22 going to be multiple feet per century by the end of
23 this century. That's what is alarming.
- 24 Q. Okay. Let me ask you a different question. Maybe
25 we can tie it back. Are you familiar with the West

1 County Energy Center?

2 A. I'm not intimately familiar, but I have the
3 general idea. It's a very, very large gas burning
4 power plant that is cooled using water from the
5 aquifer.

6 Q. Okay. And do you know, based on your knowledge,
7 if it will emit greenhouse gases?

8 A. Yes, it's a fossil fuel plant. It burns natural
9 gas which is a fossil fuel, and the principal affluent
10 will be CO₂, and it's a relatively clean greenhouse gas
11 but it is a greenhouse gas, and there's no doubt about
12 that.

13 Q. Okay. So when fossil fuels, in this case natural
14 gas, are burned and CO₂ is released into the
15 atmosphere, what effect, if any, does that have on
16 global warming?

17 A. It would increase global warming and the rate of
18 increase has doubled since the 1930's. It's going up
19 at twice the rate it presently was, so right now the
20 rate of increase of greenhouse gas is accelerating.

21 Q. Let's take a step back. How does CO₂, I'm sorry,
22 what does CO₂ stand for?

23 A. Carbon dioxide.

24 Q. Okay. And how does carbon dioxide release cause
25 global warming, if it does?

1 A. Well, it does so by block radiation which is
2 emitted from the Earth. The Earth absorbs radiation in
3 the visible part of the spectrum and infrared, but
4 because of its low temperature can only emit infrared
5 radiation, and CO2 absorbs that radiation, and so the
6 less of it gets back into space, therefore, the
7 temperature of the Earth rises much as the interior of
8 a greenhouse rises or your parked car. If you park
9 your car with your windows closed in the sun, the
10 temperature in the car goes up.

11 Q. Okay. So CO2 -- so you are saying CO2 rise
12 increases temperature. Once the temperature increases,
13 what happens next?

14 A. Well, what has been happening is that we are
15 losing the Arctic sea ice cover. 2007 was the lowest
16 ice extent on record, and it makes an enormous
17 difference to the radiation balance of the Earth
18 because ice that's covered with snow reflects about
19 ninety percent of the sunlight that strikes it. It
20 goes right back out into space. On the other hand, if
21 you melt the ice and there is open water there, that
22 open water absorbs about ninety percent of the energy
23 that comes in from outer space, and it warms up. And
24 what that is caused is an increase in temperature of
25 the Arctic of something like five degrees C.

1 Q. And how does relate to the increase in the sea
2 level you testified about before?

3 A. Well, those warm waters surround Greenland. In
4 fact, the last two years it's been possible to take a
5 ship through the so-called Northwest Passage which
6 forever has been clogged with ice. A number of famous
7 explorers lost their ships and their lives in their
8 attempt to get through it, and the last two years a
9 German cruise ship has gone through the Northwest
10 Passage. The first time it occurred, the Coast Guard
11 guys in Point Barrow were just absolutely amazed to see
12 this ocean going cruise ship, you know, anchor off of
13 Point Barrow. And they said, you know, how did you get
14 here? And they said we came from the Atlantic which
15 just doesn't happen or hasn't happened.

16 Q. So when you had the illustration just a moment ago
17 and you said that sea level rises a foot and a half
18 over the next -- a foot to a foot and a half over the
19 next fifty years and you made a comment about your
20 garage being flooded --

21 A. Yes.

22 Q. -- why would your garage -- where is your garage
23 located?

24 A. I have a waterfront house, and during this last
25 September during the high tides, I had to wait for low

1 tide to drive my car down the street because the street
2 was flooded with saltwater as were parts of Miami Beach
3 and also the City of Miami had experienced street
4 flooding.

5 Q. So how much more does water need to rise, does sea
6 level need to rise, in order to have a significant
7 impact on the residents of Florida who live along the
8 coast?

9 A. Oh, it's having an impact right now. The people
10 who maintain the Coral Gables government, that
11 maintains the park, essentially that's a sea front
12 park, had to increase the height of the causeway by two
13 feet so that people could drive out to the park without
14 going through saltwater. So they are building up the
15 height of the road going into the Florida Keys another
16 it looks like three feet to me. That's obviously to
17 make it a safer way out of the Keys as sea level comes
18 up. Because it's not just the sea level, it's also the
19 storm surge that you would have to deal with in case of
20 a hurricane.

21 Q. So what -- give us a practical illustration. What
22 happens when sea level rises a foot and a half, three
23 feet, what parts of Florida does that threaten, if any?

24 A. It is going to inundate the southern -- in fact,
25 the southern part of the Everglades is already

1 converting from a freshwater ecosystem to a saltwater
2 ecosystem. The alligators and the saw grass are being
3 replaced by mangroves and crocodiles, so the area to
4 the south end of Florida is already in the process of
5 the conversion and it's happening all over the place.
6 I have requested that they add an additional two feet
7 to the elevation of the street in front of my house so
8 that I can reliably get out in high water events.

9 Q. And you also testified a couple of moments ago
10 about how salt water affects the aquifer, something
11 about flooding the aquifer, is that correct?

12 A. Right, yes.

13 Q. What was that, exactly?

14 A. Well, in order to keep saltwater from penetrating
15 the aquifer, there has to be a greater pressure in the
16 freshwater than there is in the saltwater. So you have
17 to maintain an additional two feet of freshwater
18 elevation to develop enough pressure to keep saltwater
19 out. And because of the inundation of saltwater, that
20 means that you have to have an impossibly amount of
21 freshwater to keep it out because there are glades that
22 run through the coastal ridge and so saltwater will
23 come in along those systems. We have Saloomey
24 (phonetic) control structures but they are not high
25 enough, and without an amazing amount of modification

1 they would not be effective, and our subsoil in South
2 Florida is very porous. It's a mixture of sand on the
3 one side and porous limestone. We have what is called
4 a karst limestone mineralogy here in South Florida
5 which is what our aquifer is stored in. It's very good
6 for that purpose, but it has no way of keeping out
7 saltwater unlike clay, so the kind of diking and things
8 that would be effective in New Orleans are not
9 effective in South Florida. You cannot build a dike to
10 keep the flooding out of South Florida. That's what is
11 scary about it.

12 Q. Okay. So I guess question we are asking is, what,
13 I mean, we are just talking about one power plant here.

14 A. Right.

15 Q. How -- what -- how can we quantify -- what impact
16 does that have in the grand scheme of things in terms
17 of global warming?

18 A. Well, it has an enormous psychological impact
19 because if we are going to expect other countries like
20 China and others to stop building fossil fuel power
21 plants, we ourselves in this country have to stop
22 building fossil fuel power plants. Otherwise, we have
23 absolutely no credibility, no standing to make such a
24 request. And because the United States wastes twice as
25 much energy per capita as Europeans do, there is plenty

1 of way to economize on our waste of energy, and
2 therefore not -- we don't really have to build any more
3 power plants, we just have to stop wasting energy on
4 the scale that we presently do.

5 Q. Speaking on that topic, are you familiar with any
6 studies regarding electricity consumption?

7 A. Yes. The State of California, in 1970, adopted a
8 set of power saving measures and restructured their
9 agreement with their power plants so that the amount of
10 electricity consumed in California has not increased
11 per capita since 1970, even though it's one of the
12 fastest growing parts of the United States as the very
13 high tech place. And even so, they haven't
14 increased --

15 Q. Why is that? Why hasn't the electricity per
16 capita, if you know, basically your knowledge --

17 A. Oh, yes, because they have adopted hundreds of
18 different electricity saving methods. For example,
19 it's required that the tops of roofs be painted white
20 in California. The Courthouse outside would be illegal
21 in California, for example, because it wastes energy in
22 air conditioning. And they have standards with respect
23 to automobile emissions which the Federal government
24 has been fighting them about. And there is a whole
25 series of -- they had net metering for years since

1 1970, whereas Florida has finally got net metering. We
2 are almost the last state, we are the thirty-eighth
3 state to allow that, so it has discouraged the
4 installation of renewal energy sources in Florida.

5 Q. So -- and based on your experience, does Florida
6 have similar regulations as California does in that
7 area?

8 A. We aspire to. Our new Governor, Charlie Crist,
9 has adopted many of the measures that Arnold
10 Schwarzenegger and the other Californians. It's not a
11 political thing in California. Energy conservation and
12 air quality are a bi-partisan issue. They are not a
13 political issue. We need to -- no matter whether it's
14 a Democrat or a Republican in charge, it's not just
15 Schwarzenegger that's done it. I have to give credit
16 for the previous Democratic as well as Republican
17 regimes in California to maintain this drum beat. So,
18 for example, you have to use Energy Star appliances.
19 All of those save energy. They have standards on
20 emissions of power plants. They have standards on
21 things that are more stringent than they are in the
22 rest of the country.

23 Q. Well, let me just ask you, Dr. Van Leer. In your
24 opinion, do these regulations increase or decrease the
25 need for the creation of new power plants?

1 A. Oh, with those regulations, you don't need to have
2 any more power plants. We have -- we have more power
3 plants today than we actually need. In fact, the
4 population of Florida, for the first time, has actually
5 begun to shrink slightly. And if the amount of
6 flooding that is forecast for the end of century
7 occurs, the number of customers, residential and
8 commercial customers in South Florida, will also shrink
9 because the most densely populated electricity
10 consuming parts of Florida are the coastal parts which
11 will themselves be inundated.

12 Q. So, just to wrap this all up, Dr. Van Leer, in
13 your opinion, how big of a concern is this? How
14 immediate of a concern is this?

15 A. I would say it's as serious as a heart attack,
16 although slower to occur. We are in a situation where
17 South Florida is in grave risk from sea level rise, and
18 if we don't get busy on this thing, if we continue the
19 business as usual, it's possible that we lose all of
20 the ice in Greenland and some of the ice in Antarctica,
21 and the Florida peninsula will be just a tiny fraction
22 of what it is today. I don't know whether FP&L's area
23 of service goes north of Lake Okeechobee, but if it
24 doesn't they stand to lose their entire area of
25 service.

1 Q. But can't we just wait until Florida starts
2 actually disappearing, until these things start
3 actually happening to do anything?

4 A. No, no, the problem --

5 Q. Why not?

6 A. The problem is that CO2 has a resonance time in
7 the atmosphere of about two hundred years, so the CO2
8 that we casually throw up there today won't be coming
9 down anytime soon, and on top of that we are increasing
10 the acidity of the ocean which is killing off our
11 corals along with the actual warming effect. There was
12 an article in The Herald recently about how we have
13 lost almost all of our staghorn and elkhorn coral in
14 Florida, and when I first came here in 1971 there were
15 huge areas of it. It was a treat to swim in the
16 Florida Keys with a snorkel and look at the beautiful
17 reefs that we had then. Now we have just a tiny
18 fraction of that and part of that has to do with the
19 acidification as well as the increase in temperature of
20 the water.

21 Q. Thank you very much, Dr. Van Leer.

22 A. No problem.

23 THE COURT: All right. Cross-examination?

24 PROSECUTOR: Thank you, Judge.

25 CROSS-EXAMINATION

1 BY: PROSECUTOR:

2 Q. Good afternoon, Doctor. You testified that global
3 warming is a widely accepted, I guess, theory in the
4 scientific community, correct?

5 A. Yes, absolutely.

6 Q. And you would say the vast majority of the
7 scientific community agrees with that, that global
8 warming does exist and is in existence?

9 A. Oh, absolutely. In the peer-reviewed literature,
10 there was recently a survey, there were nine hundred
11 and some articles that said it was real and there were
12 zero that said it wasn't. So if that constitutes a
13 consensus, yes there is a consensus.

14 Q. Okay, and you would agree with me, I guess, that
15 there is schools of thought about the causes of global
16 warming, right? Some people think it's man-made and
17 some people think it's cyclable?

18 A. Oh, well, there are some elements of the popular
19 press that think that there is a debate, but the
20 scientific community itself doesn't think that it's a
21 debate. The only issue regarding global warming that
22 has any debate at all to it has to do with hurricanes,
23 whether or not there are more hurricanes today than
24 there were in the pre-global warming era, and the
25 answer is unclear but it seems almost certain that the

1 intensity of the storms that we have and the number of
2 high category storms that we have has increased. I
3 think there is a pretty good consensus on that issue.

4 Q. Okay. And you testified you have a little bit of
5 familiarity with the West County Energy Center, right?

6 A. Yes.

7 Q. And you are aware that that is a natural gas
8 plant?

9 A. Yes, I am.

10 Q. And you even said that that is the relatively
11 clean type of fuel, correct?

12 A. Yes. If it was necessary to build a fossil fuel
13 plant, that would be the one you would build, but it is
14 not necessary.

15 Q. And you indicated that the sea level rise in the
16 next fifty years is going to be one and a half feet?

17 A. Minimum.

18 Q. And that's in the next fifty years?

19 A. And that's in the next fifty years.

20 Q. And even more by the year 2100?

21 A. By the year 2100, at least three to five feet,
22 possibly significantly more depending on whether and
23 how fast the Greenland ice cap collapses.

24 Q. And you indicated that the burning of a fossil
25 fuel causes the emission of CO₂, correct?

1 A. Right.

2 Q. And you would agree with me that if the power
3 plant is not yet functioning, no fuel is being burned,
4 then it can't be causing the emission of CO2 at this
5 point?

6 A. Well, there is CO2 emitted in the construction
7 process. A cement manufacturer, for example, releases
8 a lot of CO2 and I'm guessing that there is some cement
9 involved in your factory.

10 Q. And any construction --

11 A. Any construction does cause --

12 Q. -- would emit the same thing, not just the
13 construction of a power plant?

14 A. Yes, well, each would be an individual case. You
15 would have to do a budget as to how much CO2 is being
16 emitted by the process of the construction. If you
17 consult the lead certification process, they have put
18 numbers to the different kinds of materials and how
19 much CO2 is involved, and also how far are they
20 transporting. So if you bring something in from a long
21 distance away, you burn fossil fuel to transport the
22 materials and/or the finished products.

23 Q. And that's not only with the building of this
24 power plant, that's with the building of anything that
25 could involve the transport of materials or the use of

1 cement?

2 A. Yes, and again you would have to do the budget for
3 the individual thing that is being built to decide how
4 much is being emitted.

5 Q. Okay, and your testimony was that -- I believe
6 your direct quote was the impact is as serious as a
7 heart attack but slow to occur?

8 A. Slower.

9 Q. Slower to occur?

10 A. I mean, it's a question of ten or fifteen minutes,
11 you know, versus a hundred years. But the effect is
12 more serious than a heart attack because it effects not
13 just one person, but it effects an entire coastline.
14 In fact, Miami is the number one most at risk coastal
15 city in the world to sea level rise. In the whole
16 world, out of two hundred and seventy cities that were
17 studied, Miami is the number one most at risk. And if
18 the sea level rises in Miami, trust me it's going to
19 rise in Palm Beach.

20 Q. Okay. And so if it is slower to occur, the sea
21 level rise is not imminent, meaning it's not going to
22 happen tomorrow, next week, next month or next year?

23 A. It is happening today.

24 Q. It's happening today, but you said it takes fifty
25 years for it to rise --

1 A. It's happening slowly, but the CO2 that you put in
2 the air --

3 Q. Sir, excuse me, can I -- excuse me, sir, if I can
4 just finish my question. I'm sorry.

5 A. Okay.

6 Q. If it's slower to occur, you said it takes about
7 fifty years for the rise to occur, correct?

8 A. Well, it's steadily rising. It's not just
9 happening in fifty years. It's happening everyday.

10 Q. Okay, but that one and a half feet is not going to
11 be present tomorrow, next week or next year? It's a
12 yes or no answer, sir.

13 A. Probably not.

14 PROSECUTOR: I have no further questions.

15 THE COURT: Any re-direct?

16 MR. TAYLOR: Yes.

17 RE-DIRECT EXAMINATION

18 BY: MR. TAYLOR:

19 Q. Dr. Van Leer, your testimony -- is it your
20 testimony that any construction causes CO2 emissions
21 when there are things like cement mixers used?

22 A. When there are materials and vehicles and so forth
23 used, I mean you can get -- if you wanted to get fine
24 about it, everything has some sort of CO2 impact.

25 Q. Sure. But does a large scale construction

1 operation have a greater or lesser CO2 emission than a
2 smaller scale construction operation?

3 A. Well, again, you would have to do an actual
4 calculation on the individual project. There are some
5 projects that include the planting of large numbers of
6 trees as mitigation that actually have a negative CO2
7 impact.

8 Q. Okay. And how much of a CO2 impact does no
9 construction have?

10 A. Does what?

11 Q. Does no construction have, not constructing
12 anything -- how much of a CO2 --

13 A. Not constructing is probably going to have none or
14 negative, because you leave the trees in place that
15 grow and so they take up CO2, so that's a plus.

16 Q. And finally, in your opinion, is global warming a
17 real concern?

18 A. Yes, it's a reason that I'm not retiring. I could
19 comfortably retire, but I'm staying engaged as a
20 faculty member at the University of Miami because I
21 want the next generation to know what is actually going
22 on.

23 Q. Okay. And do we, as residents of Florida and
24 residents of the United States, have the ability to
25 avert some of the dangers of global warming?

1 A. Yes, we have the chance to slow it down. The
2 really terrible thing about it is the long resonance
3 time. Once you put the CO2 in the air, at the present
4 time we have no economical way of extracting the CO2.
5 There are some proposals around, but none of them are
6 proven.

7 Q. Okay. And how long is our window of opportunity
8 to make any meaningful difference in preventing serious
9 effects of global warming?

10 PROSECUTOR: Objection, outside the scope
11 of cross.

12 MR. TAYLOR: Judge, the --

13 THE COURT: Can you re-ask the question?

14 MR. TAYLOR: Sure.

15 BY: MR. TAYLOR:

16 Q. How long do we have the ability to make a
17 difference in significantly preventing the effects of
18 global warming?

19 THE COURT: All right, overruled. I'll give
20 you a chance to ask some questions on the subject
21 as well. Go ahead. You can answer that.

22 BY: MR. TAYLOR:

23 A. Oh, okay, yes, the sooner we act absolutely the
24 better. The window of opportunity that we have is
25 rapidly closing. There is some debate whether we can

1 stop it at all. But if we are going to have any
2 fighting chance to do it, it has to be done in this
3 decade in my opinion.

4 Q. Thank you. No further questions.

5 THE COURT: All right, any re-cross based
6 on that?

7 PROSECUTOR: No, Your Honor.

8 THE COURT: All right. Thank you very much,
9 Doctor. You can step down.

10 [END OF TESTIMONY]

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C E R T I F I C A T E

STATE OF FLORIDA

COUNTY OF PALM BEACH

I, CARLOS SANTISO, Certified Electronic Reporter and Transcriber of electronically recorded proceedings in the Fifteenth Judicial Circuit, as authorized by Administrative Order 2.011 3/93, do hereby certify that the copy of the master CD of the electronically recorded proceeding which took place on the 3rd day of December, 2008, is the original CD of the above proceeding recorded in its entirety and archived in the Centralized Recording Department.



CARLOS SANTISO, CERT
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Fifteenth Judicial Circuit

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C E R T I F I C A T E

STATE OF FLORIDA

COUNTY OF PALM BEACH

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