STATE OF ILLINOIS

IN RE: THE APPLICATION FOR	)	
APPROVAL OF THE DEKALB	)	
COUNTY LANDFILL EXPANSION,	)	Kishwaukee
	)	Community College
	)	
	)	DeKalb, Illinois
	)	March 5, 2010

Hearing commenced, pursuant to assignment, at 9:00 a.m.

BEFORE:

JOHN J. MCCARTHY, Hearing Officer.

POLLUTION CONTROL FACILITY COMMITTEE MEMBERS PRESENT:

Paul Stoddard
Ken Andersen
Michael Haines

REGISTERED OBJECTORS PRESENT:

Mike McIntyre
Roger Steimel
Clay Campbell
Dan Steimel

REPORTERS:

Julie K. Edeus and Callie Bodmer,
Certified Shorthand Reporters,
Dixon, Illinois.

APPEARANCES:

ATTORNEY DONALD J. MORAN,
of the firm of Pedersen & Houpt,
161 North Clark Street, Ste. 3100,
Chicago, Illinois, 60601-3242,

Counsel for Waste Management of
Illinois, Inc. as the Applicant.

ATTORNEY RENEE CIPRIANO,
of the firm of Schiff Hardin,
6600 Sears Tower,
Chicago, Illinois, 60606,

Counsel for DeKalb County.

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Witness: DAVE MILLER

Witness: DAVID YOCCA

Witness: AUBREY SEREWICZ

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EXHIBITS

HEARING OFFICER MCCARTHY: Let's begin then. When we left yesterday Mr. Miller was being cross-examined by -- I think we ended with Mr. Roger Steimel.

MR. CHARVAT: I have a point order please before we begin.

HEARING OFFICER MCCARTHY: Okay.

MR. CHARVAT: Two-thirds of the Pollution Control Committee are not present and if they are to act as jurors wouldn't that require a majority? In a court of law if your jury is not present can you proceed with the proceedings -- if the sitting jury is not present?

HEARING OFFICER MCCARTHY: Mr. Moran, you want to respond to that objection?

MR. MORAN: Yes. Indeed in a siting proceeding it has been determined by case law that members of the county board or members of the committee designated to hear the proceedings are not required to attend any of the hearings provided that a hearing officer has been appointed, provided that a court reporter is transcribing the entirety of the proceedings -- there's no requirement of any attendance from

any county board member. So the fact that the Committee may only have one or two members present does not in any way affect their ability to proceed with the hearing or for the hearing to continue.

MR. CHARVAT: The Hearing Officer indicated when we started the proceedings that they are acting as a jury and as far as I know from the U.S. Constitution, when you have a court case and you have a jury present -- when you have members of a jury -- when you are having a court case the members of the jury are required to be present otherwise alternate jurors are assigned. So what takes precedence here, the constitution or the case law and which case law is that, if I may ask?

MR. MORAN: Well, the United States Constitution, the 7th Amendment, which I believe is what you're referring to, gives the right to a jury trial obviously to individuals in certain types of cases. That provision does not apply in a situation such as this hearing, a quasi adjudicatory proceeding, under state law. And indeed, there is no provision that provides for

the hearing by a jury of this case. When Mr. McCarthy referred to the role of the County Board here it was to analogize and describe the nature of their function which is to consider and required to be considered the evidence presented, the testimony presented and the courts have ruled in these proceedings that that can be done as effectively or as appropriately by reviewing and having a transcript available of what was presented as appearing in person. That's why there's no requirement that those decision-makers, those County Board members physically appear and be present to hear the testimony. They can choose to or not choose to, but there's no requirement that a quorum of the Committee, for example, a quorum of the County Board actually be physically present provided that the Hearing Officer is present, the court reporter transcribes the proceedings and that those transcripts and this record can be made available to those County Board members, so there is not that requirement.

HEARING OFFICER MCCARTHY: So your objection -- Mr. Moran is --

MR. MORAN: Oh, I'm sorry. You wanted to know the case as well?

MR. CHARVAT: Yeah, you cited a case law --

MR. MORAN: Yes. There is a City of Evanston versus I believe it's Homefinders case from 1976 I believe that set the initial standard. There have been additional rulings, whose specific names I don't recall now, but have basically endorsed that concept that in these types of quasi adjudicatory proceedings decision-makers, whether they're county board members, city council members, they are not required to attend the hearings that are conducted provided that a hearing officer will preside over the proceedings and a court reporter transcribes the proceedings.

HEARING OFFICER MCCARTHY: Yes, ma'am?

ROSEMARIE DIETZ-SLAVENAS: Yes. I also have a procedural concern here.

HEARING OFFICER MCCARTHY: Well, let's deal with this procedural issue first.

ROSEMARIE DIETZ-SLAVENAS: Oh, okay. Thank you.

HEARING OFFICER MCCARTHY: Do you have any response, Ms. Cipriano?

MS. CIPRIANO: I really -- I really don't think I can say it much clearer than Mr. Moran has. I did want to add, however, that the transcripts are -- have been requested on an expedited basis and as soon as they arrive in the morning they are being copied and they are sitting currently at the County Board offices for all to review.

MR. CAMPBELL: Mr. Hearing Officer, could I just make a comment?

HEARING OFFICER MCCARTHY: Sure.

MR. CAMPBELL: I think Mr. Moran accurately states the law in regards to this matter. I just -- as a participant I just think it's important that we actually -- since we have a court reporter that the court reporter accurately reflect that two of the six County Board members are present here today, Mr. Andersen and Mr. Stoddard and I commend them for their presence. Absent this morning are Ms. Allen, Mr. Haines, Mr. Oncken and Ms. Vary, so I just thought it was important that the

record reflect that we only have two of the six DeKalb County Board members present.

MR. CHARVAT: And Ms. Tobias.

MR. CAMPBELL: I'm sorry. I misspoke here. Ms. Tobias is not present. Ms. Allen never attended nor should she be here today.

HEARING OFFICER MCCARTHY: Yeah, the objection is denied. Mr. Moran has accurately stated the law. It's the duty of the Committee to review the application, the written comments, the transcripts of the public hearing and any other pertinent documents that come into evidence. As Ms. Cipriano has stated, the court reporters have transcribed each day of the public hearing and those transcripts are available to the members of the Committee and to the County Board. And I can assure you that those things will be considered by both the Committee and the County Board in making their decision. So that motion, I guess I would call it, is denied.

Yes, ma'am?

MS. DIETZ-SLAVENAS: These are two ambient or procedural -- or perhaps I'm not sure what

the legalistic appropriate thing would be, but just a couple of things to try to orient myself to what's going on here. I haven't been able to be here all the time and our party here with Mr. Moran has done excellent research, so as a community member I just have a couple of questions.

First of all, we have six rows of seats reserved and I'm wondering for whom they are reserved and when we may expect to see these people?

HEARING OFFICER MCCARTHY: I have no idea. I assume that some -- this would only be my assumption. I assume that some of the rows are reserved for the Applicant and their witnesses. I assume that some of the rows are reserved for members of the County Board who may attend and there have been various members of the County Board here off and on. And I assume that the rows over here have been reserved for Objectors and their witnesses.

MS. DIETZ-SLAVENAS: Okay. I'm just trying to understand what's going on here because -- and I do consider in legal matters

assumptions to be something very serious to be dealt with.

The second concern I have and I don't know how to put this appropriately in this quasi legal formula as Mr. Moran said, a quasi legal procedure, is that --

MR. MORAN: Quasi adjudicatory.

ROSEMARIE DIETZ-SLAVENAS: Okay, say that to me again. I'm not from a legal field.

MR. MORAN: It's an adjudicatory proceeding.

ROSEMARIE DIETZ-SLAVENAS: A quasi --

MR. MORAN: Quasi adjudicatory because the conduct of the hearing is not conducted by an appointed or an elected judge of the judiciary. It is conducted by a body that's been designated by the state legislature to function as an adjudicator. In other words, someone who will adjudicate, determine the facts presented, the evidence presented and make legal determinations. That would be adjudication.

ROSEMARIE DIETZ-SLAVENAS: Who in the state legislature did this and when?

MR. MORAN: Well, the Illinois legislature

back in 1981 enacted Section 39.2 of the Illinois Environmental Protection Act which sets out the provisions and procedures that define those proceedings. So it was the legislature that was sitting back in the first and second session of 1981.

ROSEMARIE DIETZ-SLAVENAS: Oh, okay. Thank you very much. That's very helpful, that's very helpful, very helpful indeed. And I have a request or a suggestion or whatever a perfectly naive, ignorant person might present here completely taken aback and unprepared, etcetera and having no idea of what our County Board thinks it's doing here and they evidently don't care because there aren't very many of them here. But anyway, I -- I would request respectfully a continuance of this process so those of who have -- who have been utterly surprised by it who are neither attorneys or members of the County Board and who are just, you know, trying to live a life here might have some opportunity to prepare for the rest of the -- of this process with all due respect to all of the preparation that Mr. Moran has made on

behalf of Waste Management to whom I've very grateful for picking up my trash every Tuesday morning and doing the recycling they do. Thank you very much to Waste Management, whoever is here for that. And I would suggest a continuance might be appropriate so that we, the people -- the people -- where did I here we, the people? I don't know. Somewhere I heard that word. Maybe in third grade. We, the people, would have some opportunity to be prepared here. We can't talk to our County Board members, so you know, we are really kind of taken aback by all of this and now '90, '91 we know when this procedure was set up, so you know, we have some correlation to start researching here. So would that be possible or is that out of order or irrelevant?

HEARING OFFICER MCCARTHY: Well, that's not possible. As Mr. Moran has previously pointed out, there was a notice published in the newspaper I believe on November 9th which is almost four months ago now informing the public that this application would be filed on November 30th. There were written notices sent to

surrounding property owners, members of the general assembly, that this application would be filed on November 30th. It was indeed filed on November 30th. It has been available for public inspection in the office of the County since that time. There was another notice published and the date escapes me for the moment, maybe February 9th, does that sound right?

MR. MORAN: Yes, 9th and 10th actually.

HEARING OFFICER MCCARTHY: 9th and 10th that this public hearing would begin on March 1st. So the public I think has had ample time within which to prepare for this hearing. So if that's a motion -- and this is a-time sensitive process. As I indicated at the outset, after the public hearing there is a 30-day public comment period during which you may file written comments with the County Board and that would give you another 30 days to review the application, to review the transcripts, to review any other pertinent information that there may be and make a written comment which would be considered by the County Board in making its decision. And then the final date is

a hundred and eighty days from the filing of the application. In fact, the statute provides that if the County Board takes no action within the hundred and eighty days then the application is approved. So this is a process that's somewhat time sensitive. It takes place over about a six-month period and so any -- any motion to continue would be denied. Yes, ma'am?

ROSEMARIE DIETZ-SLAVENAS: May I ask another question? You say the process is highly time sensitive. Now, I'm assuming you're coming from a legal position there, not a public health and welfare position, because getting poisoned is not time sensitive, it happens over time, generations. I am a parent. Those of us who are not in the legal profession do -- are -- are just unable to keep up with everything the legal profession does. We are unable to do that. And most of us are not able to hire full-time lawyers. We thought that's why we had elected representatives. We were obviously wrong.

MR. MORAN: Mr. McCarthy, if I could respond perhaps.

HEARING OFFICER MCCARTHY: You may.

MR. MORAN: Perhaps I could explain a little bit about this legal process and how it was set up by the Illinois legislature. Prior to 1981 the procedure whereby an applicant or a party interested in developing a pollution control facility need only go to the Illinois Environmental Protection Agency in order to get the proper authority to proceed with building and operating a landfill. The only other requirements that were in place at the time were, perhaps, any applicable zoning requirements of the particular locality. So all the issues that we're here today to decide and the Board is here to review and consider, were never before the problems or the authority of local governments to review. The legislature determined it was important to do that. It was important to provide the opportunity for citizens at the local level to be able to review the criteria that has been set forth in the statute. It was very important. And it was -- it was made the law in these proceedings back in 1981 and indeed the purpose and the idea was that this was a very critical part of this whole

process. As many of the participants have stated over and over again, this is a very critical part of the process. In setting it up this way the legislature made very clear that the role of the local decision-maker, the county board, the city trustees, was to be different than any role they had played before, because as elected officials they would generally deal with their constituents, talk with their constituents on an informal or formal basis to hear their views and consider them. The legislature here said because of the special process we are setting up here, this opportunity for citizens to speak to their elected officials, to speak to those whom they put in office would not take place in the traditional, ordinary sense, but in the context of this adjudicatory hearing which puts limits on what the County Board members can and cannot do and listen to. It puts no limits, however, on the ability of any interested citizen or person to come in and tell your elected officials and tell these County Board members exactly what you think of the proposal. The only limitation is you can't do it outside

the context of this hearing. You come here to present your views, to talk to the County Board members. You have a full opportunity to do that. No limitation whatsoever provided it's done in the context of this hearing. That's the essence of this process. As Mr. McCarthy pointed out, the other thing the legislature decided was important was that these proceedings had to move forward in a specific and a time-bounded way. That is to say there had to be some end point by which a decision one way or the other had to be made. So the legislature provided that as important as this process is, there has to be a decision. Because frequently in the past if local units of government found the decision difficult or uncomfortable, challenging, they may not ever make a decision which was unfair not just to the applicant, but to the process. So the legislature said once this application is filed the local decision-maker will have a hundred and eighty days, six months to decide the case. We want you to decide it based on the evidence presented, but it has to be decided. If you

don't decide it within that six months we will determine as a matter of law that it's deemed approved. So that the incentive has provided that a decision be made based on a review of the evidence, based on a review of what was presented so that there's finality to this process. That's what the legislature has provided. So every opportunity to participate, express views and talk to your officials is provided for in this process. It's just not perhaps what you've been used to in other contexts where the communication can occur here and not outside this process, because in that sense because we have an adjudicatory proceeding the limitations -- because there are different parties involved you can't do that unilaterally or without the participation of others. That's how the process is set up and that's why you have the opportunity to participate.

HEARING OFFICER MCCARTHY: Yes, ma'am?

ROSEMARIE DIETZ-SLAVENAS: Yes. Out of this very expansive explanation of which, of course, I am completely naive of most of what is going on here so that I can't even interpret it,

but I did believe that I heard Mr. Moran say quite a while ago that what had been applied for was a pollution control device -- company -- corporation -- I have no --

MR. MORAN: Facility.

ROSEMARIE DIETZ-SLAVENAS: Facility. So that's what's being built here, a pollution control facility? I thought we were talking about a landfill? What they have up there all the time. I'm sorry, my time is valuable too. I'm not getting paid for it, but you know, we all end up in a box.

HEARING OFFICER MCCARTHY: Well --

ROSEMARIE DIETZ-SLAVENAS: I'm out of order? I was irrelevant?

HEARING OFFICER MCCARTHY: Well, I'm going to try to explain to you that the statute calls a landfill a pollution control facility so that the Illinois Environmental Protection Act refers to this facility as a pollution control facility.

ROSEMARIE DIETZ-SLAVENAS: I have just been told by Mr. Moran that we're here to be able to discuss unlimitedly with our County

Board members who we elected and who Mr. Moran in his wisdom and his research and his expertise has discovered by case law in 1981 -- excuse me -- I hate to take all your time here, but I'm taking my time to be here, you know.

HEARING OFFICER MCCARTHY: Well --

ROSEMARIE DIETZ-SLAVENAS: And it's really a difficult situation here to sort this all out and you said that time is an enormous factor. Okay. I'm supposed to be communicating with my County Board but they're not here. And Mr. Moran said I can communicate endlessly with my County Board, but there's nothing in the law that says they have to be here. If they can't bother to be here do I really believe they're going to read that record? No. Do I believe Mr. Moran will read it? Yes. He's getting paid to read it. It's his job. My job is to be a human being and to live here. That doesn't count. It's irrelevant. It's out of order. Excuse me. Excuse me. We've got more than enough attorneys crawling around. We've got more attorneys in this country per square inch than any other country in the world and we don't

give them scholarships. Guess what? Okay. Excuse me. Irrelevant.

HEARING OFFICER MCCARTHY: Anything -- yes?

MR. CHARVAT: I have a point of order. You mentioned written comments would be available -- would be allowed to be submitted 30 days after this hearing?

HEARING OFFICER MCCARTHY: That's correct.

MR. CHARVAT: Okay. That 30 days also, are we allowed to communicate with our Board members verbally specifically, written only?

HEARING OFFICER MCCARTHY: No, in writing.

MR. CHARVAT: Question for Ms. Cipriano --

HEARING OFFICER MCCARTHY: Now, let me try to go over this again in an attempt to answer your question. You know, I've bent over backwards here I think to be as fair as possible. I have allowed members of the public to ask questions -- any question that they have desired. I have indicated over and over again that you may make any public comment that you want to make. I'm going to give you another opportunity today to make a comment. If this

continues next week I'm going to do it again. You are to communicate with the decision-maker in this process and you can do that in one of three ways. You can be a participant and you can call witnesses, you can cross-examine witnesses and we have several citizens who have chosen to do that. You may make an oral public comment during this public hearing. We had a whole evening of that and I've allowed it at other times throughout the hearing and you may make written comment within 30 days after the close of the public hearing.

MR. CHARVAT: Does that include the Applicant can make written comments as well?

HEARING OFFICER MCCARTHY: Yes, sir.

MR. CHARVAT: Okay. Just wanted to verify.

HEARING OFFICER MCCARTHY: Right.

MR. CHARVAT: Ms. Cipriano, you mentioned that these are -- the comments are -- proceedings are available each day after the proceeding. Specifically are these comments and the testimony being made electronically as well? And will this be made electronically available

to the Board members or will the same method be made available to the public as is being available to the Board members like this DVD that was only made available to the Board members prior to this hearing?

MS. CIPRIANO: The transcripts are being provided to us in written document form and they are being copied and made available at the County Board offices for anyone to review. We'll also be placing them in a library where the application was made available and they will be available to copy.

MR. CHARVAT: Okay, so these will not be made available via electronic means in any way?

MS. CIPRIANO: They are in document form.

MR. CHARVAT: I asked you would they be made available via electronic means?

MS. CIPRIANO: No.

MR. CHARVAT: Okay. Thank you.

HEARING OFFICER MCCARTHY: Yes, sir?

MR. MELLOTT: Mr. Hearing Officer, do the transcripts -- or should I say do -- does the 30-day period begin from the end of the actual hearing or does it begin from the point in time

at which the transcripts and all other information become available to the general populus?

HEARING OFFICER MCCARTHY: No, it's 30 days from the date of the last public hearing. So for example, someone asked me before we started today -- let's assume that it ends today, okay, the 30th day actually would be April 4th, well, that's a Sunday and so you would have until April 5th within which to make your written comment.

MR. MELLOTT: Thank you.

MS. CIPRIANO: And if I may add, Mr. Hearing Officer, in this instance we have requested expedited copies and so we are providing them -- as quickly as they arrive here in the morning they are being copied and made available.

MR. MELLOTT: So then are those transcripts, those documents, typically available within a day or so of the point at which they're made?

MS. CIPRIANO: Yeah, we're trying to -- like Monday's transcript, for example, arrived

Tuesday morning and then we had it copied on Tuesday afternoon. So we're trying as quickly as possible to make those documents available.

MR. MELLOTT: Thank you.

MR. MCINTYRE: Mr. Hearing Officer, I'm sorry, but I have to ask a couple of questions in light of things that were said. Do the courts recognize the county board members' legislative duties? In response to --

HEARING OFFICER MCCARTHY: I'm not sure I understand the question.

MR. MCINTYRE: Mr. Moran's statement that they can clearly only act in a quasi adjudicatory role, do the Illinois courts, appellate courts recognize that the county board members are legislators and must act accordingly?

HEARING OFFICER MCCARTHY: I guess I'm not sure what you're asking. Normally members of the county board, like members of the city council, members of -- you know, village trustees, townships --

MR. MCINTYRE: I understand that. I'm asking on the state -- the Illinois Appellate

courts have made decisions regarding the ex parte communication, regarding the adjudicatory role and they have determined that they recognize that the county board members are legislators and must respond to their constituents. If case law is going to be --

HEARING OFFICER MCCARTHY: Not in this instance, no.

MR. MCINTYRE: Well, I guess I --

HEARING OFFICE MCCARTHY: They are to avoid -- you know, what I tell county board members or city council members is that if someone approaches you after the application is filed you should be polite, but you should tell the person to make their comment in the proper form. To make their comment either in writing or orally at the public hearing. This is -- you know, they are to avoid ex parte contacts. We've been through this, defined it. Normally they act as policy-makers. That's not the case in this process.

MR. MCINTYRE: Well, I guess we'll see you in appeal court then.

Then the second one, is the transcript

subject to the Freedom of Information Act?

HEARING OFFICER MCCARTHY: Well, they're available.

MR. MCINTYRE: Are they subject to the Freedom of Information Act?

HEARING OFFICER MCCARTHY: Sure.

MR. MCINTYRE: Was the -- was the transcripts -- was a word processor used to finalize the reliability of the transcripts?

HEARING OFFICER MCCARTHY: Say that again.

MR. MCINTYRE: Was a word processor used?

MR. CHARVAT: Electronic means.

MR. MCINTYRE: Electronic means. In the -- in the spirit of reduction of paper, if these were created electronically they should be made available electronically and the new FOIA laws, in fact, state that. They went into effect January 1st of this year.

HEARING OFFICER MCCARTHY: Did you want to comment?

MS. CIPRIANO: They're being provided to us, Mr. Hearing Officer, in paper form.

HEARING OFFICER MCCARTHY: Right.

MR. CHARVAT: County Board procedural

question. Ms. Cipriano perhaps could address this. This issue will have to be taken up as a vote by the full County Board and by the Pollution Control Committee. At the County Board level public is encouraged to comment at that level on issues that are before the Board. Will the public be allowed to comment, as is allowed currently with the County Board issues, on this particular subject when it hits the County Board level after these proceedings are concluded?

MS. CIPRIANO: I think both Mr. Moran as well as the Hearing Officer has described the process and the record --

MR. CHARVAT: This is --

MS. CIPRIANO: If you'd like me to answer your question I will do so. There is a record that is developed. The record is based on the application, comments that come in at these hearings, what you all say here and the County Board members are limited to that record when rendering their decision which is why it is so very important for every citizen who has a comment on this particular application to come

here orally, share their comments or submit them in writing because they are limited to the record. That is established. And the record does come to a close, so at these proceedings where the vote is taken they are limited to making their decision on the record.

MR. CHARVAT: So hence, the County Board will have to change its current rules that are in place where the public can address the County Board on issues before them?

MS. CIPRIANO: There is a state statute that details the way this proceeds as well as an ordinance that details the way this particular proceeding proceeds.

MR. CHARVAT: So you didn't answer yes or no. Will the County Board have to change its rules that are in place?

MS. CIPRIANO: No, they will not.

MR. CHARVAT: Okay, so that tells me that public comment can be made at the County Board meetings.

MS. CIPRIANO: There is an ordinance that describes how the process proceeds and so there is no -- there is no --

MR. CHARVAT: You haven't answered yes or no. Will the County Board have to change the rules that are in place that allow --

MS. CIPRIANO: They will not need to change the rules that are in place.

MR. ANDERSEN: Mr. Hearing Officer, may we approach Counsel?

HEARING OFFICER MCCARTHY: Yeah. Would you like to take a short break and -- to do that?

MR. ANDERSEN: Thank you.

(A recess was taken at 9:43 a.m. and proceedings resumed at 10:04 a.m.)

HEARING OFFICER MCCARTHY: Okay. Let's reconvene the public hearing. Did you have any comment you wanted to make, Ms. Cipriano?

MS. CIPRIANO: Mr. Hearing Officer, just to reiterate what I had said previously and that is that the Illinois General Assembly has put in place, as has been discussed, a procedure for siting new pollution control facilities and that's found at Section 39.2 of the Illinois Environmental Protection Act. Those are the

exclusive procedures for these local siting -- local siting hearings. We also have an ordinance here in the County that sets forth the siting procedures as well and they are the exclusive approval procedures and criteria for this local siting process. I encourage everyone to make their comments on the record. The Board, again, is limited to considering comments -- public comments that are on the record and the record does come to a close 30 days -- after the 30-day written comment period and so public comments -- I encourage, Mark, for you to put your comments on the record so that they are appropriately considered in this matter.

MR. CHARVAT: Will the County Board have a discussion amongst themselves when it comes up before the Board? Will they be discussing this amongst themselves or will they just be making a vote on the issue?

MS. CIPRIANO: They will be voting -- voting on this particular matter in a -- in their County Board meeting which is open to the public.

MR. CHARVAT: Right, but issues that come

before the County Board, as you know, are often discussed by the Board members at the board level. Will they be allowed to discuss the issue amongst themselves in an open forum?

MS. CIPRIANO: The Pollution Control Committee will be holding, again, a meeting that will be a public meeting and will be presented with -- with documentation, recommendations from their experts. There will be no new evidence that will be presented at that time. There could be questions posed by the County Board members that are on the Pollution Control Committee of both Patrick Engineering and myself on the recommendation that we file during the public comment period, but it will -- it cannot and will not include new evidence.

MR. CHARVAT: Okay, so you guys as representatives -- as legal representatives with the County Board will be making additional presentations on the evidence that was already presented you're saying?

MS. CIPRIANO: They will be submitted -- a report will be submitted during the written comment period so it is appropriately

considered.

MR. CHARVAT: Okay. You didn't answer my question whether the Board members will be discussing amongst themselves in an open forum kind of like when the city council gets together they talk about the issues amongst themselves before the vote gets placed. Will the County Board members be engaging in such a discussion or have the right to engage in such a discussion?

MS. CIPRIANO: No, they will just be rendering their decision at that meeting.

MR. CHARVAT: Okay.

HEARING OFFICER MCCARTHY: Okay. With that, we've had Mr. Miller standing up here for quite some time. You remain under oath. I think we were in the cross-examination stage and we were going to go to Mr. Steimel.

CROSS-EXAMINATION

BY MR. D. STEIMEL:

Q. Thank you, Mr. Hearing Officer, and good morning, Mr. Miller. I'm going to ask you a series of questions and some of it is reviewing some of the material that was gone through

rather quickly yesterday during your presentation. In one of the slides you had talked about the different counts of traffic that were made at several different points along not only Peace Road, Route 38 and Somonauk Road. Are those counts from the mechanical counts that were taken?

A. I mentioned there was two types of counts. What we call manual counts where we physically have somebody at a location counting all the turns and through traffic from all four directions of the intersection and we did those for a 14-hour period from 5 a.m. until 7 p.m. In addition, we did do what we call mechanical counts. Those are the ones where you have the tube counters across the road and there we did both daily and hourly volumes. So that was depicted here. In the blue were the five locations of the manual counts where we did all the turns. In the purple was a series of the mechanical counts that were done along Peace Road, Illinois 38 and Somonauk Road.

Q. So the numbers that were generated for traffic not at the intersection, but for the road

itself, those are the mechanical count numbers?

A. Correct.

Q. And as you mentioned, the mechanical counts are the black lines across the road that is driven over; is that correct?

A. Yes.

Q. How long a time frame were those counts taken?

A. The manual counts where we did all the turns, those were I believe one day which is typical of what we do, but it was for a 14-hour period. We have a couple of shifts of people. The mechanical counts typically -- I'd have to double-check -- we would do over a series of two to three days to see if there's any variation in that daily flow.

Q. Can you tell me when those counts were done?

A. I can check. I believe most of those counts were done in April and May of 2009.

Q. What day of the week were they done?

A. I'd have to check the calendar. One of the mechanical counts was done on May 12th, May 8th, May 7th. Some were done on May 6th. It depends on where the location was. And in terms -- and it looks like the earliest that we did the

mechanical counts were May 4th through -- I think the last date we did the counts was -- it looks like it was May 12th. For the intersection counts one was done on Wednesday, May 13th; Wednesday, May 16 -- or May 6th; Thursday, April 30th; Wednesday, April 29th. So the manual counts were done in the latter part of April to the beginning of May and the mechanical counts were done beginning of May to the middle of May.

Q. And none of these counts were done on a weekend or holiday?

A. No. We always make sure when we're doing counts -- unless there's a specific reason for doing a count, if it's, say, for a shopping center or something where the peak traffic would be higher on a Saturday we would include a Saturday count, but typically when we do a count we want to make sure that there's not bad weather, it's not a holiday or something -- something out of the ordinary.

Q. These mechanical count devices, they -- do they turn on and off automatically for like a 24 or a 48-hour period or how do they work?

A. Well, they're battery driven and we will put them out and we field check all these to make sure that they're operating correctly and as the -- they're based on the number of axles that goes across so that a two-axle car would be considered one vehicle. If you have multiple axles and we're actually able to determine where we have vehicles such as a semi and they have three axles or four axles, whatever and it takes that into account. So we're able to differentiate between cars and larger vehicles. And so when we put those out, we stretch them across the street and this gives us a continuous count so we're able to determine the hourly variation and then what it would be for the whole day and we can do that by direction whether it's eastbound, westbound or whatever.

Q. Back to the question of how the units are placed. Are they -- they're put into place and then they're removed -- you know, a 24-hour period so that someone goes out at 6 a.m. and puts it out and the next day they come out at 6 a.m. and they take it off or how is that done?

A. If we're only doing a one-day count. Most of

the time when we put the mechanical counters out there we will leave them there for a period of two to three days. In some cases we've left them out a whole week if we need to get what the counts are on a Saturday and Sunday in addition to the weekday, so it really depends on the count. It's usually rare that we would do a mechanical count for only one day. We typically want to get a couple of days so that we can see if there's any variation in the counts.

Q. Were they repeated or were they just done for one, two or three-day stretch?

A. They were not repeated. They were just done for whatever that time period they were out there. And this is consistent with -- my company in the course of a year, we typically do 5, 600 counts a year for all kinds of developments and these are reviewed by the State of Illinois, various towns and municipalities. So this practice of how we do these counts and whether they're mechanical or manual is a very standard practice that's acceptable to the industry.

Q. So the differentiation between a two-axle car

and a four-axle semi or an 18-wheel vehicle, you're able to differentiate how?

A. What it does is it's based on the speed and so then we actually have the counters set apart and we're able to determine as those axles are going across. It's also -- I'm not sure of all the mechanics of how the counters are done. This is something that we use all the time, but if we need to -- not all counts do we need to differentiate the different types of trucks, but it's really -- it's able to count the number of axles as it crosses that particular location.

Q. So a semi is not able to be counted as two cars?

A. No.

Q. You went through the process of showing the ratings at each of the roads and/or intersection received. They were rated from A through D. What -- and you gave percentages at those different points. What -- what are the breakdowns on those ranges?

A. I've got that. Do you want it for the roadways or the intersections or both?

HEARING OFFICER MCCARTHY: Mr. Miller,

she's not sure that your mic is on. She's having a little difficulty hearing you.

Q. For the roadway.

A. Well, to give you a breakdown at least for the C and the D. For level of service C it's between 55.1 and 70 seconds and it's -- that's the criteria. For D it's 70.1 to 85.1 seconds.

Q. Mr. Miller, I thought your -- the ratings -- yesterday you used them as a percent of capacity. Is that not how the ratings are listed?

A. There's several different ways of doing it, you're correct. And one is what they call a volume to capacity ratio where the roadway given different constraints of the number of lanes, the width of the lanes, percents of trucks, if there's any grade differences, whatever, that will determine what the capacity is of that roadway. And then you compare that to the volume on that roadway and that gives you what is called the volume to capacity ratio. So when I said a road was operating at 40 percent of its capacity, that was that equation, taking the volume that was on that road and the existing

conditions, I believe it was on Peace Road, versus that calculated capacity. That also equates into a level of service and the level of service is based on the seconds of delay that I was mentioning. So it's the same way with intersections. There's two ways -- you can look at it from delay at an intersection or its -- its capacity. So there's a couple of different ways to do that.

Q. And you mentioned I believe in your testimony yesterday that -- that the Rating D is kind of the limit that you want for any of your roadways; is that correct?

A. Well, that's the -- what's considered the minimum acceptable. That's something that you try to strive for. The Illinois Department of Transportation has established that. We did check with DeKalb County, that's their minimum that they try to shoot for. If you can improve on that that's fine, but that's really -- for design purposes that's what you try to establish for a roadway or an intersection.

Q. And that D rating that I think you talked about yesterday, that was roughly about 50 percent of

capacity?

A. Yes.

Q. So when you were giving percentages of the roads as a percentage of capacity and maybe if -- if those could be put up quickly on the screen. And I believe there was another slide that had the percentages on there, am I correct?

A. No. I believe I mentioned that verbally.

Q. So really when a lot of those percentages, capacity -- if you look at that bar chart capacity is that full chart, but as it's been presented here by Mr. Miller the -- really the minimum of D is 50 percent, so any of those percentages are -- really double in effective -- efficiency?

A. Well, there's a range. Again, for a level of service D it goes from a 70.1 to 85 seconds and this is called -- again, it gets kind of technical -- percent time spent following in seconds, so that's how they do that. The range for a level of service C is 55 to 70 seconds, from D it's 70 to 85. When Peace Road and Illinois 38 -- when you add it on the 2013 traffic went to a D. They were at the lower end

of that D. They were actually on Peace Road. It was about 75 seconds and on Illinois 38 -- I'm sorry -- Illinois 38 was at 75 seconds, Peace Road was at 73.9, so it was just over that threshold of going from a level of service C to a D. There still was quite a bit to go before it would, say, drop to a level of service E.

Q. If there was -- let's say the percentages you used yesterday were 30 percent or 40 percent, those would really be 60 percent or 80 percent of what would be minimally acceptable?

A. I'm sorry. I'm not sure I follow that.

Q. If Rating D is 50 percent of capacity and that is what is minimally acceptable, if the percentages of capacity that you stated yesterday were an example of 30 percent or 40 percent or 45 percent then to be a percentage of minimally acceptable that's actually 60, 80 or 90?

A. Well, you're doing that on a lower threshold. If you were doing that on -- as a percentage of what -- the higher end of the level of service D you could go up to, as I said, 85 percent -- not of capacity, but of this other rating in terms

of seconds of delay on the road. As I said, we go through this process all the time to try to put things in perspective of what is a given roadway or what is an intersection operating so you can see what its effective utilization of that volume is and capacity at an intersection, so I'm not sure that I can quite follow the math the way you were doing it, but the point is --

Q. All I did was double the percentages because you said that it was 50 percent of capacity, so all I did was double it. The math was very simple.

A. The numbers are what they come out to be and it's -- we could have added even more traffic on Peace Road or on Illinois 38 and it would still be in a level of service D. What happened -- and again, I think it was -- and it was primarily due to adding this background traffic of the growth of the 2 percent per year plus the effect of these other developments is what changed it from a level of service C to a D. If, in fact, we had only analyzed just this inner -- inner role of the new facility traffic on top of the existing both Peace Road and

Illinois 38 would still stay at a C and the intersection would stay the same they were. So what we were trying to do is take into account other factors that may add traffic on the road through the year 2013.

Q. Let me ask you just one last question on that topic. You know, if -- if your D is a 50 percent capacity and you're reaching the upper limits of D then that doesn't allow for any future growth in the community and the traffic that results from that, is that correct, without future improvements to all roadways?

A. No. As I said, this was the percent of capacity and again, I would have to see what volume that either Peace Road or Illinois 38 would have to go to before it then would hit that threshold of D to move into a level of service E. I think I also mentioned that it is programmed, not by 2013, but the City of DeKalb is planning to upgrade Peace Road through the intersection of Route 38 from a point south of 38 to north of that to a four-lane road. Obviously when that road gets widened the available capacity for that road will increase.

Maybe not double, but it will definitely increase. So it's -- you really have to -- in order to be able to say what is that threshold -- how much additional traffic can a road handle before it goes into the next threshold you have to look at what that volume would be and what that roadway's geometrics are in order to calculate that. So at this point I can't say what -- what increase would be on Peace Road or Route 38 that would ultimately kick that in to the next level which would be as an E. It would have to be a fair amount, because as I said, right now we're at the very low end I guess of the D and you have to go up to -- a substantial amount of additional traffic before it would change.

Q. You stated yesterday that a hundred percent capacity is forced flow and that is considered stop and go traffic?

A. Yeah.

Q. So needless to say, we don't want to have stop and go traffic in this community; is that correct?

A. That's correct.

Q. Your garbage trucks would never get to where -- they make one trip a day, they'd never get to doing business; is that correct?

A. Under those conditions, that's correct.

Q. So really for this analysis capacity isn't important, it's what is considered to be minimally acceptable which is about your 50 percent rating; is that correct?

A. The minimal acceptable is level of service D. It doesn't mean -- 50 percent of capacity is one level of that. You can go up to a road -- and again, I've not run the calculation -- you could potentially be at 65 or 70 percent of capacity and still be at a level of service D. It really is the numbers, as I said. So just because it's at 50 percent capacity with -- with the 2013 and the facility traffic, that does not mean that if you add a little bit of additional traffic that that's going to make it substantially worse.

Q. Let me move to a different question. Why were no counts done at the intersection of Fairview and Somonauk Road?

A. Well, the intersections that were identified and that we did, our biggest concern was the

effect of -- of the transfer trailers and the route we're talking about going on Peace Road to Route 38 to Somonauk south. When they're on Somonauk Road heading for the site they're not turning to and from Fairview Drive. This is -- and also looking at the daily traffic --

Q. What is not turning on Fairview Drive?

A. We have no transfer trailers that are turning to or from Fairview Drive. They're heading either northbound or southbound to the site. The daily traffic on Somonauk just south of 38 I believe was around 4,900. As you got south of the site it dropped down to 3,000 and I indicated that equated into a level of service A. So Somonauk Road even with the 2013 traffic, even with the facility traffic is operating still at a very good level of service. I did not feel because we wouldn't have any transfer trailers that would be turning to or from Fairview Drive that we needed to count that intersection.

Q. So only -- your concern with this traffic study -- at the intersections is only concerned with transfer trailers?

A. No. I mean, that was -- that's the issue that most people are concerned because those are the heavier vehicles, but obviously -- especially on Somonauk Road and even on 38 you have the additional collection vehicles, whether they're the packers or the rolloffs, that are also on those roadways in addition to you have your vehicles, passenger cars or vendors or things such as that. But clearly what we wanted to make sure was that for the transfer trailers and the route -- and the designated route that we've analyzed it enough to feel comfortable that we can accommodate those. But it does also take into account any of the other packers and rolloffs that may be on those routes heading to the site.

Q. Is the traffic flow different with an intersection with a traffic light versus an intersection as Fairview and Somonauk is with a T with the one stop sign?

A. Yes.

Q. How would you characterize that difference?

A. Well, in terms of doing the capacity it's handled different and the percent of capacity

and the level of service is different. As an example, at a signalized intersection level of service C would -- again, this is what they call average control delay seconds per vehicle, so this is over the course of an hour, you know, what was the average delay that a vehicle could incur at an intersection. There's different criteria. For a level of service C for a signalized intersection that ranges from 20.1 to 35 seconds. With a D it's 35.1 to 55 seconds. For a unsignalized intersection it's a different range. It's -- for a C it's 15.1 to 25 and for a D 25.1 to 35, so it's a lower range. Obviously if you had a signal -- traffic signal you have automated through part of the signal cycle where one side or the other has a designated time to exit the intersection. At a unsignalized intersection, say at the intersection of -- Fairview and Somonauk are for that matter and Somonauk at our access drive, which is similar, it's a unsignalized intersection, you never stop the flow. You then have to look at things such as we did, you know, the sight distance and see how efficiently can

vehicles enter or exit that side road.

Q. And to have the efficiency, the ability to do that there has to be gaps -- sufficient gaps in that traffic because you're coming from a stop sign onto a highway that's traveling 55 plus miles an hour; is that correct?

A. Yes.

Q. And obviously the traffic at Fairview Drive is -- the intersection would be much heavier -- is much heavier than the traffic coming out of your service driveway; is that correct?

A. I don't know.

Q. You don't know?

A. The volume of traffic on and off Fairview onto Somonauk?

Q. At that intersection.

A. Yes.

Q. If your count was taken south of the landfill and that count is 3,000 and the count on the north part of Somonauk Road was 4,900 -- is that correct?

A. I believe so.

Q. Then you can't say that the 4,900 is more than 3,000?

A. Well, it is, but you have traffic in and out of the existing facility throughout the course of a day, so yes, obviously there is traffic that is coming on and off of Fairview Drive. The gaps that we looked at at -- at the access drive, this is not that far removed from Fairview Drive. As you saw yesterday, it wasn't even close in terms of the -- the available gaps versus the amount of the vehicles that are turning on or off of Somonauk Road, so in our feeling that should not be an issue at Fairview and Somonauk.

Q. Well, from experience, Mr. Miller, pulling out from Fairview onto Somonauk, that peak time, probably in the morning with schools, kids, teachers and buses are traveling not only to DeKalb High School but to the middle school, to the grade school, especially this fall, you know, trying to pull loads of corn out of the field at that intersection becomes very difficult and it will become even more difficult -- extremely difficult with the number of transfer trailers and other additional trucks that are proposed to travel down that way for

your facility. Does that sound logical?

A. I'm not sure I agree with that. There is going to be some increase in the traffic on Somonauk Road with the expansion of the facility. That doesn't mean that it is now going to be such a situation where vehicles are not going to be able to enter or exit Somonauk Road.

Q. Well, each fall I look for labor to help drive a grain truck. I'd be more than willing to have you drive a grain truck for me this fall and you can experience that yourself.

MR. MORAN: Objection.

HEARING OFFICER MCCARTHY: Sustained.

Q. How familiar are you, Mr. Miller, with farm traffic -- how familiar with farm traffic are you, Mr. Miller?

A. In what way.

Q. Are you familiar with farm traffic in any way?

A. Yes.

Q. And could you explain to me your experience with that?

A. When I've driven either as it relates to a particular project or just in general you have different kinds of farm vehicles that may be on

a roadway.

Q. What is your county of residence?

A. Pardon?

Q. What is your county of residence?

A. McHenry County.

Q. What consideration was given to farm traffic in your study?

A. We look at it in a general way. When we did our counts in April and May I'm not aware that there was any specific farm vehicles that were counted specifically on Somonauk Road. Typically you see more of those in the fall during harvest season, so we look at the roadway, as I said, from a capacity standpoint, from a sight distance standpoint, from a gap standpoint and in my opinion that -- that was adequate.

Q. When is farm traffic the heaviest during the time of year in your opinion?

A. At least from what I've been aware of it appears to be in the fall potentially whenever the harvest is, late October -- September, October.

Q. Well, I would ask to be willing to submit to

you that probably April, May, June, September October, November and this year December would be the heaviest times of farm traffic in this area. Do you know what speed a farm tractor travels at generally?

A. Not specifically. It's typically slower than the speed limit.

Q. Please take a guesstimate of what you think it travels at.

A. Again, it's a guess, maybe 15, 20 miles per hour.

Q. That's a very fair average estimate. And that's significantly different than the 55 mile-an-hour speed limit that the traffic -- that your vehicles would maintain on these roads?

A. Yes.

Q. Are those compatible?

A. In what way?

Q. Do they mix well on these roads if --

A. I think you have to take a bunch of factors into account. What's the volume -- the existing volume on the road, sight distance and other things. If vehicles can adequately see slower

vehicles in front of them they can adjust.

Q. I'm going to ask you for a moment to move to a different topic and review some of the types of trucks and their capacities that are using the facility. You mentioned yesterday packers and rolloffs. Now, the only Packers I know are from Green Bay and I don't prefer to talk about them. Sorry, Mr. Nickodem, if you're here. But packers I'm understanding -- are those the trucks that we see on residential streets picking up our garbage daily?

A. I believe the other term is called a rear-end loader. That is your typical vehicle that you would see collect municipal waste through neighborhoods.

Q. And what is the capacity of those trucks in tonnage?

A. I believe I mentioned that yesterday. An average load is about eight tons. Full weight those vehicles could be from 45 to 56,000 pounds.

Q. And the rolloff trucks, are those small dump trucks or how would you characterize those?

A. Well, not necessarily dump trucks. They're --

we see those more when they're collecting -- where somebody is moving and they got a lot of trash or other things they might order a rolloff where they can put that in that bin and then that bin is put on a truck. So it's different from your typical rear-end loader, so they are smaller. The full weight of a rolloff, again, depends on the density or the weight of the material that's in it. At full weight it can go from as low as 22,000 pounds up to 50,000, but the average load that we used for this was 4 tons, so about half of the packers.

Q. Okay, and I believe the transfer trailer semis you testified were roughly 22 to 23 tons?

A. The average load is 22 tons and the full weight could be -- the maximum full weight of that facility or that truck is 80,000 pounds.

Q. And you talked yesterday a little bit about the breakdown of each of these individual types of trucks that are currently and under the new landfill application. And if we could go -- just go through that breakdown again briefly.

A. Sure. For the existing facility -- and these are trips, so again --

Q. That's correct, you had mentioned it is trips.

A. For the existing facility there's 62 packer trips per day and 22 rolloff for a total of 84 trips. For the yard waste there's 20 packer trips and ten semi trips and for the employee, visitor, vendor combo there's 64 trips per day. A total of all of that is a hundred and seventy-eight. With the new facility, the expansion, including the existing you have a hundred and twelve packer trips, a hundred and twelve rolloff trips for a total of 224. You now have a hundred transfer trailer trips. The yard waste of the packers and the semis stay the same, so you have 20 packer trips, 10 semi trips and then the employee, visitor, vendors does go up and it's estimated to be a hundred and twenty. So the total of all of those is 474 which was that -- the difference between the existing number of trips per day and the expansion with the existing is 296 trips per day spread out over a 13-hour period.

Q. And so when we talk about under this application there being an increase of -- I think Mr. Hoekstra said currently they were

doing about 250 ton a day and going up to 2,000 ton a day, that extra 1,750 ton a day will be coming from out of the County for the most part and some of that will be coming in the semi transfer trailers, you mentioned 50 trucks or a hundred trips. So that leaves a lot of room and I think it's shown in your numbers for a lot of -- an increase in packers and rolloff trucks. Those trucks are all going to be coming in on I-88 as well?

A. No. The -- what's spelled out in the host agreement is specifically for the transfer trailers. That routing as I mentioned which was I-88 to Peace Road to 38 to Somonauk specifically relates to all of the transfer trailers. The packers, rolloffs, obviously employees and visitors and vendors come from different directions as they do now and so, yes, some may be on the interstate, but probably not likely. Most of those would be collecting from -- from the surrounding area.

Q. So the additional packers and rolloffs, where will -- what routes will they be coming towards the landfill?

A. I'm not sure of the existing routes that they would take. I think this -- this would be over a period of time as the area grows --

Q. No, we're not talking about growth in the area. These are all going to be coming from out of the County, so where will these additional packers and rolloffs be coming from out of the County which are not happening now, which routes will they be coming down to the landfill?

A. I think it depends on where they're collecting from. If they're relatively close to the interstate then they may follow it. Some of these -- maybe a larger percent may follow that same route as indicated, I-88 to Peace to 38 to Somonauk. If they're from a closer-in area they may take other state routes or things to get to it. So at this point it's very difficult to say what the exact routes are that those additional packers and rolloffs will take.

Q. It wouldn't be efficient for these small tonnage packers and rolloffs to use the tollway from the Chicago suburban area; would it be?

A. It depends on where they're located. If it's a larger distance it may not be.

Q. So most of these packers and rolloffs coming from the counties to the east will be traveling most likely on Route 38, Route 23, Somonauk Road down through Cortland from Sycamore, Route 64 or from the south Route 30. Any roads that would permit the weight of those trucks; is that correct?

A. Correct.

Q. And so is there any consideration given to the areas outside of the areas that you presented here to minimize the impact on the surrounding areas of that traffic?

A. Well, we've actually taken that into account in our traffic study. We did distribute the packers and rolloffs -- the additional ones in addition to the existing ones to surrounding roadways such as from Illinois 38 east and so the analyses that were taken into account at the surrounding intersections with the facility traffic has already assumed some of that distribution.

Q. You mentioned yesterday that all the transfer trailers will -- well, all Waste Management trucks whether they're transfer trailers,

packers, rolloffs, whatever they are, they're required to go on designated routes to get to the landfill; is that correct?

A. I think I said it specifically is related to transfer trailers because I think that's where the line of questions was a concern that some transfer trailers might take other roadways to get to the site. In terms of the packers and the rolloffs, while Waste Management trucks, they know where the collection areas are and they follow designated routes, you know, as long as they're within the acceptable limits of the roads that can handle it, I'm not sure if that would vary. Waste Management obviously for their trucks is very concerned whether they are transfer trailers or collection vehicles and if any of their vehicles do go on roads that are not -- can't accommodate the weight of those vehicles whether they're packers or the transfer trailers, they want to be aware of that so they can deal with that appropriately. My experience with them over the years has been that this is something that they are very adamant about in ensuring that their vehicles will follow the

rules.

Q. Do you know where Keslinger Road is in this vicinity?

A. Yes. Here. East/west road.

Q. I'm sorry. Could you please point to -- that's Keslinger Road?

A. I believe that is.

Q. Yes, it is.

A. This is Gurler and I believe this is Keslinger.

Q. Would it be a surprise if you were to hear that Keslinger Road is quite an east/west thoroughfare for people heading into the western suburbs?

A. I'm not aware of that.

Q. So if your additional amount of packers and rolloffs are coming from most likely the county to the east of us then a lot of that traffic could go on Keslinger Road as a shortcut to the landfill?

A. I'm not aware of that. Obviously this facility is located about central to the designated sprawl area, so they have some to the east, some to the west, but we did assign, again, some collection vehicles coming from the south on

Somonauk Road to the site and whether they're coming via Keslinger or other roads further to the south --

Q. It sounds to me that, you know, the depth and the detail in your study was done on the designated Route of 88, Peace Road, 38 and Somonauk Road as it pertains to transfer trailers, but it was not real detailed as it permits to the additional amount of packers, rolloffs and other vehicles in the study; is that correct?

A. No. We -- we looked at the existing traffic. We did a projection of future traffic. We looked at where we think that some of these other vehicles would be coming from at full build-out and we assigned that traffic to the surrounding roads. We did the capacities for existing conditions and with the 2013 and facility traffic, so I think that we have taken into account -- have we done every detail on every road within five miles of the site? No.

Q. Are you concerned about every road within five miles of this site?

A. No.

Q. You're only concerned with the roads that are going to have Waste Management transfer trailer trucks headed to the landfill; is that correct?

A. No, it's --

Q. Well, you can't be concerned about -- I mean, you either are or you're not concerned about the roads?

A. The business concern most people have for a landfill or even a transfer station is the effect of the transfer trailers. So we did put a lot of effort into analyzing that -- that route and the intersections and the facility access drive that accommodates that, but in addition to that we do take into account -- we analyze the additional traffic in general as to where it's coming from. Do we know where every single packer or rolloff is turning to get onto one of these roads? No. And that could change over the years, I mean, as conditions change, the service area or the municipalities or other things, so the routes of given packers or rolloffs in the future could be different than what it is right now.

Q. Well, I would submit to you, Mr. Miller, that I

am concerned every time I pull out into the road with farm machinery as to where the traffic is coming from and how much is on the road.

You just stated just a minute ago that Waste Management trucks are required to go on regulated routes. Are Waste Management trucks required to stay at or below the speed limit posted on those roadways?

A. I don't know for sure. I'm assuming they would be. That's not something that -- if any of their vehicles are exceeding the speed limit it's just like any other vehicle, they're subject to a ticket for that. So to be consistent with their other policies I would be surprised if that's not something else that they either directly or indirectly relay to their drivers.

Q. When doing your study a detailed part of your study was the gap study and the gap study would be based somewhat on speed -- the speed of vehicles traveling on that road; is that not correct?

A. Yes.

Q. Do you know of any ways that Waste Management

controls whether or not their trucks exceed the speed limit on given roadways?

A. How they control it?

Q. Yes.

A. I do not know specifically, no.

Q. In your detailed discussion with Waste Management developing this extensive and detailed study on the traffic was speed limit and speed of traffic ever concerned -- or discussed?

A. Well, obviously we're aware of what the speed limits are on the surrounding roads. I'm not sure if there was a specific discussion about speeds other than what is the speed limit on the surrounding roads.

Q. Well, when I'm traveling at 15 miles an hour in my tractor and implement and this transfer trailer is traveling at 55 plus and I think it's a joke when we talk about 55, it's more like 60 or 65 and that is a concern.

A. There are mechanisms -- Somonauk Road is an example as a county road and there are mechanisms to -- if there was a concern relative to the speed limit to do -- they can do what

they call a spot speed study and that can be submitted to a county to make a request for a reduction in the speed limit. So that's done -- whether it's a county road, state road, there is a mechanism at least to address if there is a concern relative to speed. That is a mechanism that can at least be discussed.

DAN STEIMEL: Thank you, Mr. Miller. That's the last question I have, Mr. Hearing Officer.

HEARING OFFICER MCCARTHY: Thank you. Ms. Cipriano, do you have questions of this witness?

MS. CIPRIANO: Yes, just a couple, please.

CROSS-EXAMINATION

BY MS. CIPRIANO:

Q. You had indicated, Mr. Miller, on what was I think the second to last slide and including the last slide the recommended improvements to particularly Somonauk Road and I just want to confirm with you that those improvements will be made before heavy traffic and heavy vehicles are allowed to travel on that road -- that that upgrading to a Class 2 truck route will be

completed first?

A. Absolutely.

Q. I then wanted to just turn your attention -- and I think we can just use this diagram as well -- to the exit of the facility onto Somonauk Road.

A. Are you talking about the new?

Q. Yes, the new heading northbound.

A. Yes.

Q. Was there any consideration given to -- well, first can you describe what an acceleration lane is?

A. Well, an acceleration lane and to use this example, would be actually widening of the roadway so that the vehicle that is making the turn could actually enter into that -- that additional lane and then merge into the through lane at some point further north.

Q. And what's the benefit generally of acceleration lanes?

A. Well, you see them at ramps getting onto express -- personally I've been involved in many studies over the years and I do not recommend acceleration lanes. My concern with the

acceleration lane is once a vehicle makes that turn then it's very difficult to look back to see where the approaching traffic is coming from and then you have to merge into that. Normally -- and that was part of the reason we did both the sight distance study and the gap study. If you have a vehicle that is exiting from the site and they can adequately see traffic and in this case the northbound traffic and there's adequate gaps I think in the long run it's safer to -- to wait until you have that adequate gap and then move into the lane. You're not having to merge, you're not having to look back. And a lot of the projects that we've worked on with both the Illinois Department of Transportation and the counties -- I'm trying to recall in 42 years how many of them I've been involved with, but it's a very minimal amount for those reasons. I have seen them put in. I'm -- personally when I drive I'm not comfortable with getting into that acceleration lane and then having to look back and then trying to merge. You're looking back and then you're trying to merge at the same time, so --

Q. So you in part predicted sort of my question, but if you could just -- just with respect to this particular route here if you can tell me whether you considered an acceleration and if you did and discounted it what the specific reasons relative to Somonauk Road would be?

A. I did not consider that because, as I said, I don't normally recommend that. I think when you're dealing with transfer trailers, the larger vehicles, it is safer in the long run for them not to try to come into a parallel lane and then try to merge and be looking back. So I did not really look at that as a particular recommendation. If this is something that the County feels would be important, that's -- that's ultimately their call because that's their road, but personally as a traffic engineer and having worked on many projects that's not something that I would recommend.

MS. CIPRIANO: Okay. Thank you. That was all.

HEARING OFFICER MCCARTHY: Any members of the Committee have questions? Yes, sir?

CROSS-EXAMINATION

BY MR. HAINES:

Q. Hi there. I'm Michael Haines, District 2, Genoa-Kingston. Sorry for being late. I had other obligations, so if you have covered the thing I have questions about you can tell me that and I can just look in the record and get my answers. But I have two questions. One concerns the current traffic that we have in the County relative to transfer trailers and other waste haulers going through the County. In our area Route 72 has a daily traffic flow of transfer trailers that run east/west through Genoa and through Kingston and on towards Davis Junction is what everybody tells me and I'm aware of a similar flow through Sycamore on Route 64 and certainly through DeKalb on Route 23 towards Rochelle and I'm not personally aware, but I assume there must be something similar running through Hinckley and Waterman and Shabbona going west as well because it's my understanding that these are transfer trailers taking waste from the east through DeKalb County to the west where the landfills are located. Do you anticipate or has your study anticipated or

can you hazard a guess as to whether that traffic flow will stay the same, increase or decrease if this facility is built?

A. Well, I think as I mentioned -- Bruce, can you bring that back up again -- the routing. As it relates to this particular facility and the expansion, as I mentioned and maybe you weren't here, is that all transfer trailers for the site have a very defined route spelled out in the host agreement and there's really not going to be any variations of that which is taking Interstate 88 whether they're coming from the west or from the east, so they will get to that. It could be coming down Route -- Interstate 39 to I-88, it could be 355 to the east or wherever. Once they get to Peace Road they will go north on Peace Road to 38, 38 east to Somonauk and Somonauk to the site. What other transfer trailers are doing in the area whether they're on Route 72 or 64 or any of the other east/west routes going -- my gut is that's not going to change. We're not going to be adding to that as it relates to this facility. Will any of it go down? If any of those were -- were

planning to come to this facility they would be forced to go to I-88 over to the site, so could it go down? Possibly if some of those existing transfer trailers wind up going to the site. But for those that are passing through and going to other landfills further west I really don't think it will change.

Q. Okay. The other question I have is I know it's in the host agreement the route that's prescribed on Peace Road to 38 and Somonauk and that's due to the road weight levels I imagine. If -- if Fairview Drive was improved or Gurler Road was improved to handle the weight would it be a safer route to take the trailers -- the transfer trucks Peace Road to Fairview to Somonauk or Peace Road to Gurler to Somonauk? It's certainly shorter.

A. It would be shorter. That's not something that was really looked at in any detail. There is -- a lot of it is obviously those roads would have to be upgraded substantially to be able to accommodate the 80,000 pounds. Especially Gurler Road, it's in very bad shape right now. So I guess to answer your question directly, no,

we did not -- we did not look at that. When we got involved that designated route was pretty much the way it was set it was going to be as part of the host agreement, so we focussed our attention on those particular roads and intersections to accommodate that traffic.

Q. But if those roads were improved with somebody's money, ours, yours, somebody's to accommodate that traffic would that be a preferred and safer route -- either of those two?

A. I'd have to look at the -- obviously we'd need to do additional analyses of those intersections at Fairview and Peace and Fairview and Somonauk. Similar type of sight and gap studies that we did at the site drive to ensure that that's not going to present any further problems. You know, is that something that could be done in the future? Possibly. If -- at that point then the preferred routing that's designated now, that would obviously have to change, but at this stage and at this point that was not something that was really discussed in any detail as it relates to the transfer trucks.

MR. HAINES: Thank you.

CROSS-EXAMINATION

BY MR. ANDERSEN:

Q. Good morning. Ken Andersen, District 3. Most of my questions have been answered from you and I heard those questions from various participants. I do have a couple, however. One of them is these studies were conducted in April and May of '09 so schools would have been open at that time, so school buses would have been part of this count?

A. Yes.

Q. And is there any particular notations made on the number of school bus trips or anything like that when you do traffic studies?

A. Well, first of all, we specifically made sure that when we were doing our counts in April or May that school was in during those times. So that it wasn't something that was -- there was a week off from school or something like that, so that was the first point. Secondly, I would have to go back and double-check whether there was specific counts on school buses. I know we did -- and it's included in our report --

identify where the surrounding schools are, contacted the school districts, found out where the school bus routes are, basically what times that those operate so that at least we were aware of any of those kind of potential routing things that -- as it relates to the site.

Q. Okay. Thank you. Traffic is a big concern of mine as others. I heard some comments yesterday about Somonauk Road since the County improved it last year with another layer of asphalt and the shouldering. Can you comment a little further on that shouldering process? Is that in your field of -- or would that be more --

A. Well --

Q. -- to the county engineer?

A. I would think it would be more for the county engineer. It's -- I guess it's unfortunate -- I don't know about all the circumstances that went into when they upgraded that road, why there wasn't more consideration made for -- for the shoulders. That design was in and built. It did upgrade the weight limit on the road per se and -- but that's not something that typically we would get into. We're more concerned about

the street widths, the number of lanes and things such as that. As I mentioned relative to speed limits, things such as that, whether it's the design of the road or whatever, this is something that individuals, representatives have the right to contact the County and try to get a better clarification is there any plan to further upgrade those shoulders. I don't know what the right-of-way constraints are there or if there were some other things that led into what that design is of those shoulders.

Q. Okay. On Page 14 on our books the recommended improvements, if you can bring that picture up please -- or the last slide. My question on that and maybe you can just do it without the slide. You say there's no acceleration lane going out of it, but there is a turn lane coming into it?

A. Yes.

Q. Okay.

A. You can see it on here. Southbound on Somonauk Road we've recommended a separate southbound left turn lane to turn into the site so that it would not impact the southbound through traffic.

Actually in doing -- and I mentioned this yesterday, in doing the analysis based on IDOT's criteria for adding additional turn lanes this was not warranted given the relatively low volume on Somonauk in this area. We felt that, again, in trying to get back to minimize the impact on existing traffic flows that -- and this is -- this is where all of our transfer trailers are going to be turning -- that it was important to put this southbound left turn lane in.

Q. Okay, because I live over my Sycamore and experience the Jewel store entrance over there and it's just -- I still don't understand that, but -- so I don't want that to happen here, so I'm glad to see that you have these turn-in lanes, so -- all right. That -- that answers all my questions. Thank you.

CROSS-EXAMINATION

BY MR. STODDARD:

Q. Good morning. I have several questions. Where will the transfer trucks be coming from?

A. They could be from different facilities. There's transfer stations that recently opened

up in Crystal Lake, one in Elgin. I think there was another one maybe Elburn, I'm not sure, but they will -- Waste Management would be looking at where those transfers stations -- where you will be getting the transfer trailers coming from, but those are a couple that might be utilized and come to the site.

Q. Crystal Lake and Elgin both being considerably north of 88, why would they -- why would those drivers drive all the way down to 88?

A. Well, that's more of a -- I think --

Q. Well, you're testifying that the --

A. Well, they need to get to 88 to follow this route to get to the site. So if -- you know, whether they will continue -- whether they would go west to 39 and then south to 88 or whether they would take 355, whatever the specific routings would be back in those areas, but ultimately they can get to other interstates that will feed into I-88 to get to this location.

Q. And that's going to be dictated by Waste Management?

A. Yes.

Q. Okay, and you said that -- I mean, when I look at the map that's a very indirect way to go and if I were driving -- now, granted I don't drive 80,000 pound transfer trailers, but I certainly would not take an interstate to get from here to Elgin or to Crystal Lake, but -- so I'm worried that even though that might be the prescribed route that drivers don't have a strong incentive to do that and would therefore not do that. And I'd like to get back to the enforcement of that route. What is the mechanism by which it is ensured that the drivers will take the prescribed route?

A. I believe I mentioned some of that yesterday, but -- and it's my understanding that this is -- this is how Waste Management operates. They want to work with the local sheriff and police department. If there is any reports of transfer trailers on routes other than that prescribed route presumably the sheriff or whoever the local agency is will give a ticket and the idea is that then that agency will contact Waste Management directly. Waste Management then will be made aware of that. It's my understanding of

their policy that they may give one warning to that driver and the second time they may bar them from --

Q. Okay, so --

A. They're very strict. I mean, this is something that they want to make sure that this is being adhered to. If it's not then it puts their whole reputation and everything in jeopardy.

Q. I'm willing to stipulate to Waste Management's desire to make sure that their drivers stay on prescribed routes and do what they can to do that. I'm more concerned with how they know that the drivers have strayed. And if a driver is obeying all the traffic laws on a route that is not part of the prescribed route is that -- can he then be cited?

A. Yes. I think there was a question if they're over the speed limit or doing anything that's not --

Q. No, that's not the question. The question is if they are doing the speed limit, if they are stopping at stop signs and red lights and not making illegal turns, if they do everything legal can they be cited just because they're on

the wrong road?

A. Yes.

Q. Not -- not -- I mean --

A. If it's a transfer trailer.

Q. Yeah, not a road that -- I mean, they could be on a wrong -- that's not permitted for that weight and that's not what I mean by not being on the right road. I mean if they're taking a legal route that the current traffic laws permit them to take can they be cited because they're on Route 23 instead of Route 88?

A. Yes.

Q. Okay, and would it be --

A. Excuse me. If they're coming to this facility. If they're going to some other facility that's not this facility, that's a different story. But if they're on a route in this immediate area -- a transfer trailer and they're not on Route -- Interstate 88 or Peace Road or 38 or Somonauk in that immediate area, yes, they could be cited for that.

Q. So if the sheriff or the local police see a transfer trailer in the County that's not on Route 88 or on the prescribed roads we've been

talking about they should pull that trailer over?

A. They could pull them over to see where their destination is.

Q. They could?

A. They could. I mean, that's more of an operation issues. It's not something I normally --

Q. Well, I know, but we are talking about --

A. But it is something that is very important and I know Waste Management and they operate obviously lots of facilities and this issue of how the transfer trailers get to their facility is always something that comes up and how do they try to ensure that that's going to be in compliance.

Q. This might be outside of your area of expertise, but would it be possible to put a GPS unit in each truck so that their progress towards the facility could be monitored which would also -- would that be a possible way to monitor?

A. That is outside my -- what Waste Management -- how they handle that with their people, that's

really their call what they think is the most efficient way for compliance of that routing.

Q. Okay. While we have this picture up here, you were talking about the sight line criteria and there was a figure of something a little over a thousand feet I believe. Could you just explain that to me a bit more clearly?

A. Sure. When we do a sight distance study we typically would have somebody that would in this case be located right here. We assume the eye of the height of a car which is about 3 and a half, 4 feet and then we have people that will keep going -- let's say we're going to the north, so they would -- they would go to a point where you no longer could see that. Sometimes we'll have a rod or we'll have something at a marked level so that we can see how far -- that point before it disappears out of sight and we would do the same thing to the south. As I said, the criteria here is you've got a speed limit of 55 miles an hour. What the State does is they want five miles an hour over the speed limit and so we did it at 60 miles an hour and the design vehicle was the semi trailer, so

obviously you need more sight distance for a larger vehicle and that was a thousand and fifteen feet. We also assume that same dimension to the south where in reality we're really not going to have any transfer trailers from the south. The next vehicle -- design vehicle is what's called a single unit and that for 60 miles an hour is actually 840 feet, but in both cases in doing that physical sight distance analysis both north and south we did exceed the thousand fifteen feet intersection sight distance.

Q. Okay, and you said you did that for a person driving a car. Am I correct in assuming that a driver of a trailer would be sitting rather higher?

A. Higher. He would actually have -- the sight distance would be greater.

Q. Now, are there trees along here that might obscure a tractor trailer driver's view that a car driver would see under?

A. No. But we did recommend as part of the improvement of this intersection to ensure that any vegetation, anything that might be put in as

part of an entry feature would be low enough so that it would not create any sight distance problems either looking north or looking south.

Q. So they'd have to -- you'd have to mow that grass frequently then?

A. Well, it's grass or if they're putting any shrubs or things like that then it would have to be at a point where it would not affect sight distance either direction.

Q. Right, okay. And could you -- yesterday Mr. Steimel, the older, talked about the S curve. Could you talk a little bit about that and how that factors into your sight -- line sight issue?

A. Well, it's not physically shown on here. But when you do a sight distance there's two things that can affect the sight distance. One is a vertical curve or you could have a horizontal curve.

Q. Right.

A. And a vertical curve as you have further to the north when Somonauk goes up and over I-88 and so then you do have a point where it goes up and over and -- a little further north and you do

have a vertical issue there. The horizontal curve can or cannot be potentially a problem. It depends on vegetation. It's really how far and how good is the sight line that way. It can be a potential issue or not depending and so when we had our person here when they were looking south they had -- even though there is a horizontal curve there, they did have adequate sight distance looking to the south. So there was nothing either physically in terms of growth along the road or whatever that was physically inhibiting them to see a vehicle from the south.

Q. Okay. Did you do any sight distance measurements coming over the overpass?

A. Well, that is -- that's more than a thousand and fifteen from this point here, so not specifically. As you're heading south or even north as you go up and over you do lose sight for a short distance and then -- and then it's flat from there on up to 38.

Q. Do you have a feel for how many trucks would have to be backed up waiting to turn into the facility before you got below that sight distance?

A. I'm not sure I follow you.

Q. If you have trucks waiting to make the left turn into the facility --

A. Heading south?

Q. Correct, and they were backed up so that you might have three, four, five trailers waiting to get in due to traffic coming northbound perhaps, do you have a feel for how -- I mean, how many of those given their length and so forth could you fit into that turn lane before you got under the thousand plus feet sight distance minimum?

A. I'm not -- I think there's two different things -- two different issues here. The storage length I believe that we have here is 265 feet for the left turn lane, so that's -- at about 60 feet you've got potentially four semis that could be sitting there. Based on our gap study there's more than sufficient gaps for vehicles because the northbound traffic, you know, on Somonauk is fairly light. From the sight distance standpoint that's -- that's not really affecting looking up this way, so I think your concern is would -- would these back out of there into the through lane and at some point

anybody that's heading south coming past are they going to have a problem. You still have a considerable amount of distance. I mean, this is 265 feet. Our sight distance was good up in excess of a thousand and fifteen, so you still have, you know, almost 800 feet of sight distance over and above it. And I don't know what -- all the way up to the point where it goes over what that distance is, but it's in excess of a thousand feet. But No. 1, the situation of having four semis waiting to come in and turn here is -- I won't say it never could happen, but it's a very low probability based on the gaps and the things that we've analyzed. And that's really one of the reasons that we do a gap study here is to make sure that -- that vehicles can adequately get in and out of the site, so I think the issue or the concern that you raised my feeling is that's really not going to be an issue at all.

Q. Okay. Thank you. You talked about comparing the background normal traffic peak hours and saying they did not overlap with the facility peak hours. How did you determine what the

facility peak hours would be?

THE WITNESS: Bruce, can you pull up the -- the facility peak hours.

It's really when you have a combination of all of the vehicles that will be coming in and out of the site, at what hour do you have a maximum amount of activity in and out of the site for any types of vehicles. As you can see from 9 to 10 it was at a 55 and again, this is trips, this is two-way. The next hour from 10 to 11 was close, this was at 54. But typically when we look at facility peak hours we look at one hour in the morning and one in the afternoon, so in the afternoon the peak for the facility was from 1 to 2, again, at 54, so very similar to the morning. So these are designed. This is what -- not only based on existing activity that's coming into the existing landfill, but then with the projection of the additional vehicles and you can see how for the different types of collection vehicles and transfer trailers and that how some of these do vary throughout the course of the day. This part of it. And even with the yard waste you

can see that they're not every single hour. What's important why we do this and it's interesting how this comes up in every type of landfill we work because typically you have your collection vehicles go out in the morning and then they're coming back later in the morning and so that's why typically you have a peak later in the morning and then they go out and you'll have one again in the afternoon. The street peak hours when you have the highest concentration of traffic on the surrounding roads was, as I said, from 7:15 to 8:15, so you're down in this area and in the afternoon was from 3:30 to 4:30, so actually this is from 3 to 4, so you're kind of in this area here and clearly, again, it is not at the same hours, because that's really something that we're -- we try to make a big part of it. If the facility peaks were at the same time as the street peak hours then you've got, you know, more of an issue here, so we always feel that this is -- this is important. And during those facility peak hours we actually check the volume of traffic on the surrounding roads and during

those times it's only at about 60 percent of what it is during the street peak hours.

Q. What does the street traffic look like between 6 and 7 when the solid waste transfer trailers are leaving?

A. Again, it's lower. That's why we do these hourly and we have two counts out there, so we have what the traffic is every hour --

Q. Right.

A. -- and so that -- you know, again, the highest concentration of traffic was from 7:15 to 8:15, prior to that from 6 to 7 it is -- it is less.

Q. Can you say how much?

A. Percentage I'd have to -- we looked at it from the facility peak hours. I'd have to go back and try and determine that, but I know it is -- it's less. It's some percentage of what it is during the street peak hours.

Q. Well, I can appreciate that, but I mean, as you pointed out, the peak at 9 to 10 for the facility is only very slightly higher than the peak from 10 to 11. I mean, I would be concerned if we had a near peak at 6 to 7 when we have most of the transfer trailer traffic or

the largest single section of transfer trailer traffic happening, so -- and that would be a good number to know is what the street traffic is between 6 and 7 compared to 7:15 to 8:15.

Road degradation came up. You said you didn't feel that on the road surfaces in general that would be an issue, but you did suggest I believe that at intersections where the trucks were braking and accelerating that that might be an area of increased wear on the roadway; is that correct?

A. Sometimes that can be. I've seen this where especially if you have an asphalt pavement and as trucks were braking as they're coming to a stop at an intersection sometimes you can get some ripples. That doesn't occur at all intersections, but I have seen that.

Q. Have you consulted with the county engineer at all as to that potential effect?

A. Not that particularly. We have talked to the county engineer's office on, I believe two occasions.

Q. Okay, and what did you cover on those two occasions?

A. Well, one was to see about the roads in general, is there -- is there any improvements that are being proposed for any of the county roads in the immediate area so we can be aware of that. We did talk to one of the other departments in the County about future development and we wanted them to be aware of the traffic study and what they were proposing and it was submitted to them and they did have a chance to review our traffic study.

Q. Okay. Thank you. Could you remind us what this Criterion 6 actually states; do you know?

A. Well, the definition is that the traffic patterns to and from the proposed facility have been so designed as to minimize the impact on existing traffic flows. Obviously written by a lawyer. But the key point here -- and we find this in a lot of the hearings. The last part of that says to minimize the impact on existing traffic flows. When we did our analysis of the roadways and the intersections we factored up, as I mentioned, from 2009 to 2013. If we would have just taken the incremental impact of the facility traffic to the existing traffic there

would not have been any change at all. On a couple of occasions when we added in that background traffic it did go from a level of service of C to a D and that was not really related to the facility, it was more of this additional traffic. So while the criteria specifically talks about the impact on existing traffic flows, we have tried to take into account some of this other traffic.

Q. I appreciate that. I think that's a diligent way to approach the problem. Did you consider what the impact on existing traffic or projected 2013 traffic would be were you to route trailers and other vehicles down Fairview or Gurler? I believe you already testified to this.

A. No, we didn't look at this.

Q. So you don't know that going down one of those two routes would actually be -- have less impact on traffic than what has been suggested?

A. That's correct.

Q. Ruth Anne Tobias e-mailed me and asked if I could ask you did you -- could you -- do you know the cost of upgrading either Fairview or Gurler to allow for the weight of these trailers

so you could use those routes?

A. We did not look at that. I'm not sure if anybody has looked at that from that standpoint.

Q. Okay.

A. I don't know that answer.

Q. Specifically then what in this plan has been done to assure that -- that you will have minimal impact? You have demonstrated I believe that the impact won't be great, that's what your numbers seem to suggest, but what have you done to assure that that is indeed the minimum impact that could possibly happen?

A. Well, I think starting at Somonauk Road and the access drive, as I mentioned, we are adding southbound left turn lanes. That was not warranted, but I felt that that was something that would be important to put in to minimize the existing southbound through traffic and separating that from the turn, so at the site drive we've obviously done that. At the other surrounding intersections, again, we tried to put that into perspective of looking at what the incremental facility traffic is, how does that play out on these surrounding roads and I think

what you could visually see was a very small percentage. In some cases it was like 1 percent additional traffic. It's important to note when you talk about these numbers, as I mentioned before, they're spread out, this is over a 13-hour period as you saw on that one graph, so this isn't something that's all being concentrated in one or two hours, it is spread out and while there is additional transfer trailers and packers and rolloffs, it is being spread out over that period of time. At the surrounding intersections, again, we analyzed at both the ramps on I-88 and at the others and that's part of this analysis to at least indicate what effect does this additional traffic have on surrounding areas. One of the things that's important and I think I mentioned it was at the intersection of Peace Road and 38 as you're heading northbound there is a separate right turn lane so that any of these vehicles, especially transfer trailers, they are outside of the flow and are a part of that right turn. Likewise on Route 38 as you're heading east at Somonauk there is a separate right turn lane at

that point, so again, it's separating -- that's not something that we're recommending, that's something that was there, but it does help to move some of that traffic, specifically the transfer trailers out of the flow of the through traffic at those intersections. That's -- really our job is to try to take this additional development of traffic and to analyze it and in our opinion how -- how does it operate and do we need to make any additional improvements. What we do for this development is the same as we do for all of our things. We analyze it and determine if there's any improvements that need to be done to adequately accommodate the additional traffic safely and efficiently.

Q. Okay. In response to Mr. Steimel, the younger, you mentioned that this prescribed route is really only for the transfer trailers, that it would not apply to the packers and rolloffs coming from out of the County?

A. Well, some may use it, but in terms of for the transfer trailers that is the prescribed route. Could some other packers or rolloffs that are relatively close to I-88 that are coming to this

facility, could they use that? There's nothing that would prohibit them from doing that.

Q. Right, but you don't know that they will or you don't know that they won't?

A. Right.

Q. I think you testified that there would be a hundred additional trips of trailers?

A. Yes.

Q. And a hundred and forty additional trips of the packers and rolloffs?

A. Correct.

Q. So out of the --

A. I'm sorry. That's total. That's the incremental increase.

Q. Right, that's the increase, right, thank you. So out of an increase of 240 trips by the waste-hauling vehicles you have analyzed for a hundred of those, would that be correct, since you did not include presumably in your analysis the trips that would be made by the packers and rolloffs?

A. No, we did.

Q. But you said you don't know where they're coming from, so how did you include for those?

A. Well, we -- again, in discussions with Waste Management and in looking at the existing travel patterns to the facility it was determined what directions they were coming from. So that was the traffic assignment from the surrounding roads. So then using that percent distribution whether it was from the east and west on Route 38 or from the north on Somonauk or whatever, from the south on Somonauk and then assign all of the traffic to that -- the surrounding roadways, in our report we actually broke it out by all the different types of vehicles, the yard waste, the transfer trailers, everything by percent of how they're getting to the site, so when we did our assignments and all the analyses and those projections and capacity, that was taken into account, the full -- full amount of the traffic.

Q. Okay, but then -- but you did not consider roads other than the ones you've just highlighted, Peace Road, 38 and Somonauk, you did not include Keslinger, you did not include Route 23 or other likely avenues of access that would be used?

A. Well, traffic from the south could be using Keslinger. We did not assign traffic specifically to that road. We did take traffic from the south on Somonauk, so that could be from Keslinger. It could be from areas further south on Somonauk. So we assigned it just as it was approaching the site and saying, okay -- okay, this was X amount of traffic from the south on Somonauk by these different types of vehicles. Did we assign it to every intersection as we went further south? No.

Q. Okay, so I mean, in the case of Keslinger, for example, that does tend to be a frequently used east/west corridor. Somonauk is a north/south corridor. So would it be fair to assume that the flow patterns on Somonauk might differ from those on Keslinger and so that by assuming, you know, what's going on on Somonauk, you know, what's going on on Keslinger, I mean --

A. Well, we know from our traffic counts that the volume of traffic on Somonauk south of the site is only 3,000 vehicles a day. That's a very low number, as you saw it, at a level of service A. It was the best you can have. So using the

assumption that if people are coming off of Keslinger south of Somonauk Road they're going to have adequate gaps. I mean, it's similar to what we're seeing at our site drive. So while we did not study that and all the turns that might be on and off of that road, when I looked at the existing volume of traffic on Somonauk Road given that -- that low volume, it does not appear that there's, you know, some specific problems, that there should be adequate gaps for people to get on and off of Somonauk Road.

Q. Right, but you have no feel for how increased packer, rolloff truck traffic on Keslinger would affect east/west traffic on Keslinger?

A. Not specifically.

MR. STODDARD: Okay. I believe that's all I have. Thank you.

HEARING OFFICER MCCARTHY: Thank you very much. Yes?

MR. ANDERSEN: I have a couple more questions, please. Ken Andersen.

CONTINUED CROSS-EXAMINATION

BY MR. ANDERSEN:

Q. Could our highway department use your traffic

study to determine if the speed limit needs to be changed on that portion of Somonauk Road between the entrance?

A. They could have it from the volume standpoint. Typically when we've done some of these -- the spot speed studies you actually have a radar gun and you're getting -- you're looking for the 85th percentile of how much the traffic is, you take into account any new curb cuts. This is basically considered a new curb cut and there's increased traffic, so some of the information that's in here could be definitely applicable, but you still need to do a speed study on the existing situation. But as I said, anybody is free to submit that and then the County can make a determination on that.

Q. So we could use part of it?

A. Sure.

Q. Slide No. 7, please, the one with the facility trip generator. The question is -- or whatever number it is. Okay. That's the one. Thank you. You have a group in there that -- the rust color that identifies it as yard waste transfer trailers and perhaps you won't be able to answer

this, but if you can please, are these brand new because it says yard waste?

A. No.

Q. These are not new, so these transfer trailers bringing in yard waste --

A. -- are current right mow.

Q. Some of them are current.

A. And they will not change. Right now there's ten trips per day, five in, five out --

Q. Oh, okay.

A. -- during those -- basically those five hours and it's my understanding in our traffic study we did not change that. The only thing that's going to change is potentially their routing, but in terms of the volume of the yard waste transfer trailers that does not change. That's what's happening now. That's what would happen in the future.

Q. Okay, so is that going to the composting area? Perhaps you can't answer that.

A. I'm not sure exactly where on-site they're going to, but that's -- that's --

Q. But that seems to generate the compost.

A. -- used to generate the compost, yes.

Q. So is that part of the tipping fee, do you know that or --

A. I don't know that.

Q. Somebody else will have to answer that, all right.

Did your traffic study consider any road postings in the spring? We typically have a bunch of road postings on some of the roads especially to the south where the packers or rolloffs could be coming up from are going to be -- those roads will be posted for a period of time, sometimes for quite a long period of time.

A. From the information we got the maximum amount of the time that they can be posted for is 90 days and it's the spring thaw and I think the last couple of years they've been posted less than that depending on the conditions, but -- but -- so we're aware of that. I'm not sure it's on the county roads -- obviously that's not going to be affected by the routing of the transfer trailers because those roads are all set for the 80,000 pounds. For the other county roads where you have the collection vehicles on it's my understanding they're working around

that now and that's something that all of the drivers need to be aware of that because that is something that you can get a ticket for if you're overweight. I believe it's 33,000 pounds. I'm not sure of the exact amount, but if you have a collection vehicle, a rolloff or packer that the loaded weight is in excess of that and they use that route obviously they can be ticketed.

Q. Okay. Okay. And then one last question. Your traffic study or typically any traffic study, does it take in the human factor such as driver distraction, talking on cell phones, texting?

A. That's --

Q. Do you try to attempt to do that or --

A. That's --

Q. I know that's kind of a loaded question.

A. That's a tough one and obviously that does enter in at some point. People in some counties and others are trying to deal with that and municipalities, but typically that's not something that we can -- it's very difficult to -- to try and determine, you know, what percentage of the people are doing this or that.

So to answer your question I -- I -- I guess, no, we don't take that into account.

MR. ANDERSEN: Okay. Thank you.

MR. CAMPBELL: Mr. Hearing Officer, I just had a few more questions. I didn't know if you were going to take a break now or --

HEARING OFFICER MCCARTHY: Well, we've been at this quite a while.

MR. CHARVAT: What about the public?

HEARING OFFICER MCCARTHY: Well, I'm going to get to that, but I'm wondering, you know, how many more questions we might have of this witness.

MR. CHARVAT: That's what -- I want to ask this witness a question.

HEARING OFFICER MCCARTHY: Well, how much time do you think you're talking about?

MR. CHARVAT: Me, probably not a minute.

HEARING OFFICER MCCARTHY: Any other members of the public?

MR. CAMPBELL: I only have a few questions too.

HEARING OFFICER MCCARTHY: You, sir, how much time are you looking at?

MR. MELLOTT: Five minutes.

HEARING OFFICER MCCARTHY: Well, maybe we'll take a short break here. She's been at it for, you know, two hours at this point, so -- and then attempt to finish up with Mr. Miller before lunch.

(A recess was taken at 11:46 a.m. and proceedings resumed at 12:00 p.m.)

HEARING OFFICER MCCARTHY: Okay. Let's resume the public hearing. During a break there was at least one member of the County Board that approached me that indicated that he has some questions of this witness and it's the gentleman in the back. If you want to come forward maybe and use the microphone that may help. And state your name for the record so that we have it.

MR. NEWPORT: Scott Newport. Is that on?

HEARING OFFICER MCCARTHY: No.

MR. NEWPORT: Scott Newport, DeKalb County Board, District 8. Good morning, Mr. Miller.

MR. MILLER: Morning.

MR. NEWPORT: Yesterday afternoon I think in one of your responses to a question by

Mr. Steimel you indicated that agricultural vehicles are not different than other vehicles and Mr. Miller, I'm paraphrasing, I apologize if I misquoted you. Please correct me if I have. Was that the substance of your response?

MR. MILLER: I'm sorry. I don't recall that response.

MR. NEWPORT: Would you say that agricultural equipment traffic is different than other traffic?

MR. MILLER: It is different. Typically they're wider, they move at a slower speed, so from those characteristics they would be different.

MR. NEWPORT: Are there any other differences that you would see with respect to agricultural vehicles?

MR. MILLER: I think those would be the two that I would think would be the most important.

MR. NEWPORT: Are you aware that often the operators of agricultural equipment attempt to travel at non-peak times in order to avoid other traffic to the extent possible?

MR. MILLER: I have seen that, yes.

MR. NEWPORT: Are you aware that typically agricultural equipment takes more time to stop when traveling at those -- even when traveling at those slower speeds than other equipment, are you aware of that?

MR. MILLER: No, I'm not.

MR. NEWPORT: Would it surprise you to learn that agricultural equipment takes more time to stop when traveling at those -- at those speeds?

MR. MILLER: I've not personally observed that, so I can't -- I can't answer that.

MR. NEWPORT: In your response to another question relating to your evaluation of the agricultural equipment traffic you stated that you indirectly evaluated those agricultural equipment traffic flows; is that correct?

MR. MILLER: Yes.

MR. NEWPORT: Could you expand on that?

MR. MILLER: Well, from a volume standpoint they're taken into account when we do our counts. In terms of the specific number unless during the time they were doing that

count we observed some and then took note of that, if we did not, if there was none that were on the roads or at the intersections at the time they were doing those counts they would not enter into our counts, but we do look at the daily counts on roads, we look at historical information from the State and so I guess indirectly we're taking those into account from a volume standpoint, not necessarily a specific number standpoint.

MR. NEWPORT: So is it fair to say then that your evaluation of agricultural equipment traffic is limited to casual observance of that traffic on those proposed routes?

MR. MILLER: That's part of it and we -- we do -- we know that they do occur during certain times of the year on a road. Part of what we do in looking at sight distance and gaps and volumes and capacities is to see how those roadways are operating under regular conditions. If there is some farm vehicles on a roadway, it depends on what hours they're there or the number of vehicles there, there can be some -- for those time periods there might be some

affect on the traffic flow during those times.

MR. NEWPORT: On the days that you observed and measured traffic flows on those routes do you know whether or not the field conditions in the area would have allowed field operations from that agricultural equipment?

MR. MILLER: No.

MR. NEWPORT: Are you aware that Somonauk Road is a primary route for agricultural equipment moving north and south in the eastern part of DeKalb County?

MR. MILLER: No, I'm not aware of that.

MR. NEWPORT: Would it surprise you to learn that that is, in fact, the case?

MR. MILLER: Looking at the -- where that road goes through especially to the south and the farmland, that's -- that's a possibility, yes.

MR. NEWPORT: But is it, in fact, the case that you don't have any specific data on the volume or the timing of agricultural equipment traffic flows on those proposed roads?

MR. MILLER: That's correct.

MR. NEWPORT: Now, you -- you stated

Criterion No. 6 which is the traffic patterns to or from the facility are so designed as to minimize the impact on existing traffic flows. Now, Mr. Miller, how do you know if you've minimized the impact on existing traffic flows if you don't know what those traffic flows are, speaking specifically about agricultural equipment traffic?

MR. MILLER: Well, I think as I mentioned, part of it is when we do the volume counts and the capacities without quantifying how many vehicles -- agricultural vehicles may be involved, what times, are they during the peak hours, either the facility or the street peak hours. We've been involved in other landfills throughout the state where there has been some agricultural vehicles. We need to note those, be aware of those, but as part of our overall analyses we do look at the broader picture which is the total volumes or the peak hour volumes, the capacity, sight distance, gaps, so I -- I feel that we do, in fact, take that into account. It may not be the very specifics of that, but in looking at all the information in

terms of the roadway characteristics and all of the volumes and everything else that we do take into account in my opinion that -- that does satisfy that requirement.

MR. NEWPORT: So is it fair to say though that your understanding of the agricultural equipment flows is limited to your casual observations of those flows which may have occurred on days when the field conditions didn't allow field operations in that area; is that correct?

MR. MILLER: That's possible, yes.

MR. NEWPORT: Aside from the left turn lane that you've identified for Somonauk Road, what other improvements or changes have been considered to minimize the impact on existing traffic flows.

MR. MILLER: Well, at the other intersections, specifically the two ramp intersections, Peace Road and I-88 and -- and Peace and 38, 38 and Somonauk, doing our analysis, looking at the capacities and -- it was my opinion that -- and the volumes that we're adding to those intersections during those

time periods was so small that there was not a need for any additional improvements over and above what is currently at those intersections.

MR. NEWPORT: Okay. To your knowledge, Mr. Miller, has Waste Management considered working with the tollway authority to develop a direct access to the tollway -- its eastbound lanes?

MR. MILLER: I'm not aware of those discussions. Anything about new interchanges is strictly the tollways authority's analysis and decisions. I do know that there's a very strict analysis that needs to be done about any future interchanges. The tollway operates a little bit different than IDOT. It's all revenue-driven in terms of any future interchanges or ramps. As an example in the Chicago area Interstate 94 and 176 is right now a half interchange. There was consideration of making them a full interchange to have ramps to and from the north. An analysis was done, it was not going to generate the kind of revenue that they expected, so that project was discarded. So any future interchange obviously would need to be driven by

the tollway, but as far as I'm aware of there's not been any specific discussion between Waste Management and the tollway.

MR. NEWPORT: If a direct access from the landfill site to the eastbound tollway were developed would that minimize the impact on existing traffic flows?

MR. MILLER: I can't say. I haven't looked at that. There's so many factors that would go into that. As you probably are aware of, I think it's -- the County is looking at an eastern north/south roadway with a potential interchange just further to the east so there would be spacing of interchanges that -- there's a lot of factors that go into that. And since we've not looked at that in any detail at this point other than be aware of what was being thought about for this eastern north/south road, I can't -- I can't render an opinion of whether that would be beneficial or not.

MR. NEWPORT: If an interchange was developed at Hinckley Road that offered direct access from that interchange to the landfill site would that minimize the impact on existing

traffic flows?

MR. MILLER: Again, I've not -- I've not looked at that so I can't -- I can't make an opinion as to whether that would or not.

MR. NEWPORT: Okay. That's all the questions I have. Thank you.

HEARING OFFICER MCCARTHY: Thank you. Any other members of the County Board have questions of this witness? Yes, sir?

MR. MELLOTT: Mr. Hearing Officer, we have a member of the DeKalb District 428 School Board here that needs to leave soon. Could I request that he be allowed to ask questions at this point in time?

HEARING OFFICER MCCARTHY: Of this witness?

MR. MELLOTT: Of this witness.

HEARING OFFICER MCCARTHY: Sure.

MR. FURBIG: Good afternoon. Mike Furbig, board president, School District 428. Our concern and question relates to the number of trucks entering and leaving the site from the standpoint -- you may not be able to comment on this -- but the amount of carcinogens that come

off of increased truck traffic. We have an elementary school very close to the site and are just concerned about the amount of carcinogens increased from the increased amount of truck traffic. Thank you. Any comment?

HEARING OFFICER MCCARTHY: Is that a question or a comment?

MR. FURBIG: It's a question. Is there data related to the amount of carcinogens expected to be increased due to the truck traffic? And if so, what would the effect or what could be the negative effect on the enrollment and staff at Cortland Elementary School?

MR. MORAN: Objection, relevance. It goes beyond the appropriate inquiry under Criterion 6.

HEARING OFFICER MCCARTHY: Well, I don't think this particular witness would be able to answer that question. He's a traffic engineer. If you're directing that question to him, I mean, if he knows he can answer it.

MR. FURBIG: Any information or the person that we could be directed to find that

information would be appreciated. Thank you.

MR. MILLER: I don't have any particular knowledge of that and that's beyond my expertise, so I'm sorry, I will not be able to give you any specific information on that.

MR. FURBIG: That's okay. Thank you very much.

HEARING OFFICER MCCARTHY: Okay. Thank you. Okay. Any other questions of this witness? Yes, sir?

MR. CHARVAT: Mark Charvat, DeKalb. The topic of the traffic -- let me just find out -- the traffic study was conducted specifically during what months?

MR. MILLER: Well, it was over a longer period of time. As I said, we did some traffic counts initially. We do our traffic counts at the beginning of the study and those were done in April and May. Then we did some follow-up studies, our sight distance study, our gap studies. We look at the traffic patterns that -- of the vehicles going to and from the site. We do our capacity analysis. So it was -- the study itself was done probably over a -- about a

six -- six-month period, April to October.

MR. CHARVAT: Okay, so it was done during harvest time, so the months of October, November and September, your peak harvest time, that was included in the study and the traffic count for farm vehicles during that time?

MR. MILLER: No. The traffic counts, as I mentioned, were done in April and May.

MR. CHARVAT: Okay, so this study would appear to me to be somewhat incomplete if we're not counting all the farm traffic at harvest time when the vehicles are on the roadways, they're filled with their harvest, they're moving slower, so I maintain that this study doesn't appear to be complete to me, so I just want to point that out.

Mr. Miller, what's the name of the firm you represent again?

MR. MILLER: Metro Transportation Group.

MR. CHARVAT: And you were hired by whom to be here today?

MR. MILLER: By Waste Management.

MR. CHARVAT: Okay. Are you receiving compensation for being here today by Waste

Management?

MR. MILLER: Yes.

MR. CHARVAT: Okay, and the amount of that compensation is?

MR. MILLER: My billing rate is about $295 an hour.

MR. CHARVAT: Okay. I want to find out since you were hired by Waste Management, did the County hire anybody else to conduct a traffic study based on the landfill that we're talking about expanding here to get another point of view? I do maintain that perhaps the traffic study could be skewed toward one side as opposed to the other side.

MR. MILLER: As far as I'm aware of the County has retained the engineering firm of Patrick Engineering and they have reviewed most, if not all, of the criteria including Criterion 6.

MR. CHARVAT: Will they be testifying here at this hearing -- Patrick Engineering, will they be testifying?

HEARING OFFICER MCCARTHY: Are you asking that question --

MR. CHARVAT: I'm going to ask Ms. Cipriano about that.

MS. CIPRIANO: No.

HEARING OFFICER MCCARTHY: Well, she's not a witness.

MR. CHARVAT: Okay. Perhaps during public comment you can comment on that. I'm going to find out if they're going to be part of the procedure to get another point of view regarding the traffic study.

HEARING OFFICER MCCARTHY: Well, typically what would happen is that the County's experts would submit a report during the public comment period.

MR. CHARVAT: Okay. All right. That's all I have. Thank you.

HEARING OFFICER MCCARTHY: Okay. Yes, ma'am, do you have a question of this witness?

ROSEMARIE DIETZ-SLAVENAS: Yes, I do. Thank you. We've had a lot of information going by and I haven't been able to be here during a certain amount of time, so please excuse me if I am replicating anything that has gone while I was not here. I think I understood you to be

relating to the expressway, 88 and its exit in the immediate vicinity of the proposed landfill expansion, is that correct? You -- did you present information on that or did you have no information on using 88 rather than 38 to come into the County with at least some of the trucks that would be coming in from Waste Management who is paying you 200 and -- how much an hour to be here?

MR. MILLER: About $295 an hour.

ROSEMARIE DIETZ-SLAVENAS: About $295. Okay. I will call it just three, I can remember that easier, 300. Okay. $300 and you're being paid to being here. Okay. Thank you. That's very helpful. I wish the County or someone were paying for my gas to get here. Anyway, my question is about 88 -- using 88 instead of 38. Did you study that or did you say you did not study that or there hadn't been enough time to study that? Somehow I got lost in that dialogue and I might have missed something, but to what extent have you studied using 88 instead of 38?

MR. MILLER: Okay. I think I mentioned this, but I will do it again. Bruce, put up the

route. For transfer trailers, the larger vehicles that are coming to the site the route -- and this is spelled out --

ROSEMARIE DIETZ-SLAVENAS: I'm sorry. What are transfer trailers?

MR. MILLER: These are the larger vehicles that can go up to 80,000 pounds. You've seen them, they call them the semi transfer trailers. These are the larger vehicles. The largest vehicles that are taking waste to the site.

ROSEMARIE DIETZ-SLAVENAS: Oh, I'm not sure I know anything about those, but semi, I have looked up that word and it's a detachable trailer, so you have trucks coming that have detachable trailers?

MR. MILLER: Yes.

ROSEMARIE DIETZ-SLAVENAS: Intriguing word. Semi, why is there a semi? Semi what? But anyway, you will be having semis which are much larger than anything I have seen on my street, of course and they will be bringing trash here from where?

MR. MILLER: From other transfer stations and I mentioned some, maybe not all, some

transfer stations in Crystal Lake, one in Elgin, maybe from other locations, but to get to your first point, Interstate 88 is the route that these transfer trailer semis will be taking to get to the site whether they're coming from the east or from the west. They will exit at Peace Road. Peace Road is a Class 2 route that can handle 80,000 pounds. They will extend north to Route 38, turn right, go east on Route 38, 38 is also designated a Class 2 route which can handle 80,000 pounds. They will turn right again, head south on Somonauk Road to the access point. Somonauk Road was upgraded last year to a Class 2 or 80,000 pound limit road. They will then when they're leaving the facility make the reverse movement, turn right and go north on Somonauk, west on 38, south on Peace to I-88, so I-88, yes, it was analyzed specifically as it relates to the two intersections, the ramps with I-88 and Peace Road. So this -- this is the route that will -- the larger transfer trailers will be taking. There could be other collection vehicles that may be -- find convenient to use I-88 also, but for the transfer trailers, the

larger vehicles, that is the route that they will be taking.

ROSEMARIE DIETZ-SLAVENAS: And according to whom -- is this in process that we can't have -- that we must have this loop going on 38? Isn't it possible for them -- I mean, it's possible, of course. I don't know what the logistics would be for the trucks to just get off of 88, have an interchange there -- being as we're collecting trash from 17 counties here and -- and -- and putting out a lot of money to do that, wouldn't it just be possible to just -- it looks to me like, you know, it would be possible somewhere on that scheme to just go off 88 and being as it goes right by the proposed landfill expansion it looks like it would be possible to -- to have arrangements made to get off of 88 and go straight to the -- let's see, what is it now -- pollution control facility -- the pollution control facility, wouldn't that be possible and then we wouldn't have all these, you know, unnecessary trips around on 38? Wouldn't that be possible to just -- is that -- are you a civil engineer, sir?

MR. MILLER: Yes.

ROSEMARIE DIETZ-SLAVENAS: Okay. It looks to me like from here like it would be possible to just get off 88 and just dump 17 counties worth of garbage for the next 50 years right there smack dabaroo (phonetic) on 88 which is going right by the proposed enlarged pollution control facility.

MR. MILLER: Well, I think I mentioned earlier that's not my decision or Waste Management. This is something that the tollway authority who has control over I-88 would need to be -- to analyze that. I could tell you even -- probably even without looking at the numbers -- as I said earlier, any new interchange is driven by the tollway by revenue which is the amount of traffic they would anticipate coming on and off of a facility. I could tell you just what is being generated by this facility there would be no way that there would be enough volume to justify a new interchange. But ultimately that's the tollway's decision. They have to look at so many different factors. As you might be aware

of, they're constantly bombarded about potential new interchanges or expanding an existing half interchange to a full interchange, so they do very rigorous analyses and revenue potential generating analyses to see if a facility can be justified on that point. Second part is the geometrics. Can it physically work on a given road? What are the characteristics of the road that would be interchanged? So there's many factors. You can't just look at it on a map and say this would be a good spot. There's things -- but ultimately that decision lies with the toll highway authority and what they would ultimately decide.

ROSEMARIE DIETZ-SLAVENAS: I appreciate that very much. Thank you very much. We are fortunate that we do have in the Fourteenth District an absolute, for sure expert on entrance and exits to the tollway and his name is Dennis Hastert and he kept the money in his wife's name for doing that, but anyway, he's still getting a hundred thousand dollars a year from us and -- for having privileges and everything and so maybe, you know, in this world

of -- of -- which is very puzzling to some of us, maybe he can consult with us about getting a -- getting an exit right there in his former district with his son running for office out here. So maybe -- maybe we're on target here after all. Maybe it's the best of all possible worlds. Thank you very much.

MR. MILLER: Thank you.

HEARING OFFICER MCCARTHY: Yes, ma'am?

MS. WILCOX: Lisa Wilcox, DeKalb. My question is one of weight. It's my understanding that as of January 1st the -- on some of the roads the weight limit was increased to 80,000 pounds maximum for some of these trailers that are going to be traveling on our roads. It's my understanding from your testimony that some of these solid waste trailers are going to be maximum 80,000 pounds; is that correct, sir?

MR. MILLER: Yes.

MS. WILCOX: My question is then with the incremental increase of traffic that is expected to occur with the waste coming in what is that impact going to be potentially on our roads?

There was an article in the March 3rd edition of the Daily Chronicle where the -- excuse me -- the DeKalb County Highway Department Director, Bill Lawrence, said that in some parts of the County they are decreasing the weight limits back down to 73,280 pound limits versus the 80,000 because the roads can't take it. He said -- and I quote, the difference may seem small, but the damage becomes exponential with each additional pound. And this is quoted in March 3rd Daily Chronicle and it's on the website. So I just wanted to get your opinion on how that was going to impact. And then my question was if we're going to have this increased traffic coming through and wear and tear on our roads who's going to pay for that resurfacing? Is that going to come out of the County's highway budget or is it going to come out of the taxpayers' pockets? So that would be a question I would pose.

HEARING OFFICER MCCARTHY: Thank you.

MR. MILLER: Okay. Let me see, I think there was multiple questions there. If I can -- the last one as it relates to the effect on the

roads, first of all, while 80,000 pounds is the maximum limit that these transfer trailers can handle, that doesn't mean that each and every one will be maxed out. It really depends on how much they're taking from the transfer stations, but that is the maximum. It is my understanding and I haven't clarified, on Somonauk Road itself which as they said was just recently last year upgraded to 80,000 pounds from Route 38 to the site drive and as part of this application would be extended down to the new access drive. That Waste Management in addition to ensuring that they -- they would have sweepers out there and handle anything that might occur on the road, that might be dragged out from the facility. Not that they're anticipating that, but they would do that. But also that they would be working with the County if -- if Somonauk Road does get deteriorated because of the additional trucks that they would be working with the County to help upgrade that. Now, for the other two roads, Route 38 which is a state route and Peace Road which is a city route, it really would be up to those two entities. Obviously

there's truck traffic on those roads right now going to industrial areas and others, so what happens to future upgrades of the road -- those roads would be up to those jurisdictions to evaluate that. I know with the State they've got their normal maintenance budget. Over a period of time they do have things to upgrade the road. So that there is -- there is mechanisms to handle that. But to the point obviously as we have larger vehicles that are carrying more weight over a period of time they can have an impact on roads.

HEARING OFFICER MCCARTHY: Okay. I think you indicated you -- yes.

MS. TOLENE: My name is Paulette Tolene from DeKalb. I just had a quick question regarding the grading systems that you used on the roads. If you could pull that slide up real quick that shows the 2013 increase as well as what you'd be adding.

THE REPORTER: Could you spell your last name for me?

MS. TOLENE: T-O-L-E-N-E. My question actually is the grading system. Now -- let's

say 38 with the increased traffic in 2013 would be graded a D. Now, does that mean that that is the -- during peak hours that's the height of the traffic or that as an average over that 14-hour period I think you said it was that it - actually is graded as a D?

MR. MILLER: This is really based on the highest hour during the day. So we looked at it in the a.m. and p.m. peak hour and determined which of those two were the highest on those roadways and that's what we based our analysis on. So in essence, that's the worst for one hour. Every other hour is going to be less than that, so if anything, we're being conservative when we have identified the capacity. It was really based on that one peak hour for the day. So if anything, the other remaining hours that volume would be less and probably in most of the rest of the hours of the day it would be less than that level of service D.

MS. TOLENE: Okay, and then I just have one more question. As far as your bar graphs -- I actually took quite a bit of stats courses so I always have to ask when you actually -- what's

represented there, could you actually state what the real percentages are for 2009, 2013 as well as the new facility?

MR. MILLER: Sure. I think we tried to do this to be accurate from a scale standpoint.

MS. TOLENE: I just wanted to make sure because sometimes they're not.

MR. MILLER: On Peace Road this represents 37 percent of the capacity. When we add in the 2013 traffic this went from 37 to 48 percent, so an 11 percent increase. And then when we add in the new facility traffic it went from 48 to 49, so a 1 percent increase.

MS. TOLENE: Just one other question. Does that include only the semi trucks or would that also include the -- I'm sorry, what was the name of them -- the packers as well.

MR. MILLERS: Packers and rolloffs. Yes, these numbers here represent the new facility traffic which is a combination of transfer trailers and the packers and rolloffs, so this is all of the additional traffic that was identified.

MS. TOLENE: So when you distributed then

the packer and rolloff traffic among all of the major arteries kind of converging on the -- on the facility did you sort of evenly distribute them, did you assume less would be coming from, you know, areas like Lee County and more could be coming from perhaps like DuPage and Cook? I mean how did you guys really do that? Do you have any numbers?

MR. MILLER: Some of it was from existing patterns. We know it because we counted it, so we know the patterns that are coming from the rolloffs and packers on the surrounding roads. For the additional traffic we did consult with Waste Management in looking at the service area and determined whether those existing travel patterns of the packers and rolloffs at the site were applicable, in some cases there was some modifications of that, so yes, we looked at existing travel patterns, we looked at the future draw area and then made decisions on what we thought was the appropriate distribution of that traffic on the surrounding roadways.

MS. TOLENE: Do you have any empirical analyses of how the packers and -- rolloffs was

it or --

MR. MILLER: Rolloffs.

MS. TOLENE: -- yes, will be affecting any roads outside of Peace -- that small section of Peace, 38 and Somonauk?

MR. MILLER: Well, as I mentioned, their weight limits are quite a bit less than the transfer trailers. They're in the 40 to 50 ton range versus the -- or 40 to 50,000 pounds versus the 80,000 pounds for the transfer trailers. Obviously they need to be traveling on roads that have that -- that weight limit that can accommodate that. Sometimes it will be on Class 2 routes which are up to the 80,000 pounds or maybe on Class 1 routes which are the 73,280, so it's really -- part of it is driven by the drivers being aware of what the weight limits are on the roads and ensuring that they're following the appropriate route.

MS. TOLENE: So do you have any empirical analyses on how the additional 140 trips made by packers and rolloffs will be affecting the roads outside of the small section of Peace, 38 and Somonauk?

MR. MILLER: Did we do counts on all those surrounding roads --

MS. TOLENE: Any sort of numerical data.

MR. MILLER: -- no. Again, we tried to put it in perspective how much are they adding during peak hours, how much are they adding on a daily basis and you take that hundred and forty trips distributed throughout all these roads over the course of a day it's a smaller number, over the course of a given peak hour it's a very small number. So based on my experience in having dealt with these kind of issues all the time it was my feeling that this is something that's within acceptable limits of the surrounding roads.

MS. TOLENE: So you conducted an analysis on an additional 100 trips made by tractor trailers going to the facility, but not on the 140 packers and rolloffs going into the facility?

MR. MILLER: We did analyze those as part of the traffic study. As I mentioned, we looked at as those vehicles ultimately get to the Peace Road or 38 or Somonauk Road. They ultimately

wind up getting to those roads because those are the ones in the immediate vicinity of the site. As you go out three miles, five miles, ten miles that distribution of that traffic on another road becomes extremely small. You may be looking at potentially one or two additional vehicles in an hour, if that much, so it's -- you know, how far do you go out in terms of looking at this ripple.

MS. TOLENE: So you have no idea then the increase on traffic on 38 let's say east of Somonauk Road that would be caused by the packers and rolloffs?

MR. MILLER: Yes. We looked at that. That was taken into account -- at least at the intersection we know how much traffic, we assigned traffic to Route 38 and east of Somonauk Road for vehicles other than transfer trailers because the transfer trailers would be going east of there, but we have additional -- the additional packers, rolloffs and vendors, passenger cars, others that are coming from that, so that was taken into account in looking at the -- as it gets to the intersection of

Somonauk and 38. We could compare that traffic coming from the east on 38 versus the existing traffic and it's a relatively small percentage, but yes, we have taken that into account as part of our analysis.

MS. TOLENE: And where are the numbers that reflect that?

MR. MILLER: Well, in our study. Again, we looked at -- if you have the one with the daily traffic, we did a daily traffic count on 38 east of Somonauk Road and I believe -- do you got that -- can you pull that one up? You can see we did count on Route 38 in a couple locations west of Peace Road and then in two locations between Peace Road and Somonauk Road and then east of Somonauk Road it dropped off to about 7,500 vehicles a day. So we have taken that into account and then we looked at -- specifically at the intersection of Somonauk and Route 38 and we know how much traffic is coming into that intersection based on our distribution of the site graphic and we analyzed that. So I feel that we have taken that into account. This is the procedure that we do for all these types

of studies. Whether they're pollution control facility studies or other traffic studies this is the procedure that we typically go through and in my opinion we have accounted for that.

MS. TOLENE: Okay. Thank you.

HEARING OFFICER MCCARTHY: Anyone else? Yes, sir?

MR. MELLOTT: Mr. Miller, in your methodology when you add traffic counts and determine whether or not the percentage of the capacity of roadway is used do you weight the traffic counts, for instance, is a car considered to be more or less an impact than a truck, farm equipment compared to a car and that sort of thing?

MR. MILLER: I think as I had mentioned before, when we do that especially on the roadways we not only take the -- we start with what the actual raw count was, but then we look at other factors, how many lanes you have, the width of those lanes, that can affect the capacity if you've got a narrower road than a normal 12-foot road, the percent of trucks, so yes, in fact, we take that into account, is

there any other vertical issues, so there's a series of factors that keep reducing down what that capacity -- the theoretical capacity of that road is. So in fact, when we do the roadway capacities as we did for these surrounding roads we did take into account the percent of trucks for those roadways and compare that to the volumes that we -- that we used.

MR. MELLOTT: For instance, when a road segment goes from C to D --

MR. MILLER: Yes.

MR. MELLOTT: -- to the point of almost not being acceptable and you mentioned earlier that in the -- in the technical aspects of this classification, A, B, C and so on that there are delays, times involved in that, right and as I understood it there was a range apparently?

MR. MILLER: Yes.

MR. MELLOTT: So when you go from C to D or whatever, A to B or whatever it might be, does that indicate, that change -- the specific additive count, does that indicate anything about whether that traffic that's been added is a car or a truck?

MR. MILLER: I'm not sure I'm following you. I'm sorry.

MR. MELLOTT: How do you actually go from C to D, is it not by adding one more car or two more cars?

MR. MILLER: It was a combination. It was -- when we added that what I call background traffic, 2013 traffic which was -- as I said, was a combination of the annual growth rate plus the effect of some other developments, that increased the volume of traffic let's say on Peace Road from what it was by X amount. We also can factor in of that additional traffic what percent of the trucks it is. So yes to go from one level of service to another most -- it's really a factor of how much additional vehicles are on that road and what the makeup of that additional traffic is. So that's -- that's what kicked it over there. As I said earlier, if we had not included the 2013 traffic and just basically took our facility traffic and added that on to the existing traffic, those surrounding roadways, Peace Road, Illinois 38 would not have gone from a level of service C to

a D.

MR. MELLOTT: If you were near the edge of switching from a C to a D and you added, let's say, 100 cars to that segment versus 100 trucks would it be possible that you might not change from the C to the D comparing the trucks added versus the cars added?

MR. MILLER: Unless I ran those numbers -- it's possible, but unless I run the numbers I couldn't tell you for sure.

MR. MELLOTT: Okay. Now, another thing that I've noticed in your testimony is that gaps seem to be a big deal here. You know, gaps relating to the time essentially and I'm thinking about these segments that you say are the preferred roadway that there are fairly short segments of roadway between traffic control devices. Now, would it be true that if we added a certain number of cars to the existing traffic volume that because of the acceleration of the car is more rapid than the acceleration of a truck that that segment between traffic control devices could handle more cars than it could handle trucks?

MR. MILLER: Yes.

MR. MELLOTT: So the acceleration -- or the mass of the vehicle has a big impact then on the flow of traffic providing that there are traffic control devices involved?

MR. MILLER: Well, again, there's a lot of different factors. Do trucks take longer than a passenger car? Yes. But that's why we take into account -- and that's what we did here -- what not only the incremental increase in traffic was on those roads, but what the incremental increase in the percent of trucks was, so we have tried to take that into account. So -- and that's why at our site drive it was very important. We wanted to make sure can these larger vehicles be able to safely enter and exit the site drive from Somonauk Road, so that's why we focussed on the gap study at that location.

MR. MELLOTT: That reminds me of a question I wanted to ask you. It's interesting, you mention the T gap program that you used with a laptop computer to determine the amount of time that people have as they pass by the

landfill entrance. I believe you mentioned that the operator of the computer actually looks and then pushes the button on the computer to start the program; is that correct?

MR. MILLER: I don't know if to start the program. Once the program is up and running as a vehicle passes his fixed reference point they hit a key on the -- on the computer and then when the next one comes they hit it again, so it's that time difference between those vehicles is what is measured. That is the duration and then over the course of the hour how many of those occur in that -- in those different blocks of time either the minimum one which for the transfer trailers was 13 and a half seconds to -- I'm sorry -- yeah, 13 and a half to -- 11 and a half to 13 or 23, so it's an 11 and a half gap and then it's 11 and a half after that, so there's multiple gaps. Some of the gaps that we found were -- might have been, you know, 30, 40 seconds or more, so you can accommodate more vehicles in there. So when the operator does that every time a vehicle passes that fixed reference point whether they're going one

direction or another, they hit that button and based on the frequency and duration of those gaps during a time period we can determine how many vehicles really could be accommodated.

MR. MELLOTT: But the program that actually counts on the computer is activated by the human that pushes the button; is that correct?

MR. MILLER: Yes.

MR. MELLOTT: His visual siting of the traffic and then he pushes the button?

MR. MILLER: Yes.

MR. MELLOTT: So then the program is somewhat susceptible to the response time, the reaction time of the technician that's doing the work?

MR. MILLER: I guess. Our people have been doing -- we've done numerous of these kind of gap studies and as with anything there's some I guess error that could be in there, but we feel very confident that this is one way of trying to really get an understanding of how many breaks are in the traffic and can vehicles safely go from a side street, you know, to or

from the facility.

MR. MELLOTT: I was just curious because it seemed to me -- it reminded me of a reaction time, you know, when you have to stop quickly, you see something and how much time do you use to determine what to do and of course, your technician -- it's a different situation, but the reaction time is the same and that's why I was curious.

MR. MILLER: Well, they're not looking at the keyboard. They're looking at this fixed reference point and hitting.

MR. MELLOTT: But there's --

MR. MILLER: It's very similar to when we do our manual traffic counts. We're counting every vehicle that is turning at an intersection or going through and occasionally we may miss one, but I've got enough confidence in our people and we do so many counts that I feel that that is very accurate and so it's a similar type thing in using this gap program. They're visually looking at it and every time a vehicle passes that point they're hitting something on the computer.

MR. MELLOTT: Mr. Miller, how many feet per second are traveled at the speed limit, do you know?

MR. MILLER: How many feet per second what?

MR. MELLOTT: How far does a car progress in number of feet per second at, say, 55 or 60 miles an hour?

MR. MILLER: I'd have to calculate that. I don't know that number right offhand.

MR. MELLOTT: I did the calculation and it turns out to be about 80 feet per second at the speed limit at 55 miles per hour. I also looked at the number that you gave us which if you could refresh my memory, I think it was a thousand feet or so that's required for the visual line of sight when you pull out onto a street.

MR. MILLER: Yes.

MR. MELLOTT: And I calculated about 12 and a half seconds or so is what that is equivalent to in time and distance and I'm concerned about the approach into the landfill and the hill, the vertical curve over the

tollway and whether -- for instance, take an example here, there are a line of trucks in the left-hand turn lane into the -- waiting to turn into the landfill, somebody is coming from the south proceeding north on Somonauk Road, someone turns out from the landfill to go north and is in the acceleration lane that you told us about earlier and then as that person traveling north -- a car perhaps traveling north just south of the landfill sees the truck that pulls out, but yet, there's also a line of trucks in the left-hand turn lane waiting to go into the landfill you mentioned that it's hard to see you believe when someone pulls into that acceleration lane going north. Could there be a case where someone is traveling north and is squeezed between the two -- the line of trucks waiting to turn in and the truck that's coming out or decides then -- the person heading to the north -- to go around the line of trucks waiting in that turn lane but doesn't see the person that's coming quickly over the top of the hill, could that be a scenario that might be possible?

MR. MILLER: Wow, that's a lot of

different things. First of all, as I mentioned before, I think the potential of having more than one transfer trailer waiting in that southbound left turn lane at any one time is very low based on the gaps that we identified and the low number of trucks that are actually turning into the site in that left turn lane. If you ever got beyond -- maybe occasionally you might get two, but I think nine times out of ten there will be one vehicle and in most cases there will be a sufficient gap that they can turn into the site. So to have three, four trucks waiting in that southbound left turn lane I think the probability of that is extremely low. Earlier -- I am not a proponent of adding an acceleration lane coming out of the site in addition to the northbound through lane for the reasons I mentioned. There is adequate sight distance -- more than adequate sight distance for somebody exiting from the site looking north, anybody coming over the hill. There still is more than a thousand feet and that's for the transfer trailers that are coming down and obviously for smaller vehicles that sight

distance is less. So I'm not sure all the different pieces that you had in that scenario would ever come into play, but I've looked at that and I am very confident in the numbers and what we've come up with that what is going to occur at the site drive and Somonauk Road will be a very safe intersection and a very efficient intersection.

MR. MELLOTT: I'd like to ask you if you have a slide that shows an overlay of the peak times for the various kinds of landfill traffic with school bus stops? Have you looked into that?

MR. MILLER: We did look at schools. We contacted all of the school districts.

MR. MELLOTT: While you're looking, I spoke to Mr. Furbig, the school board president who was here questioning about a half an hour ago and it's his understanding from the school board superintendent that they were not asked specific questions regarding school bus stops and traffic situations like that.

MR. MILLER: That's not correct. Our engineer contacted -- I'll just go through this

and paraphrase that we contacted School District 428. There's two bus stops in the surrounding area that serve School District 428. Both stops are located along Webster Road, one north and one south of I-88. There are a maximum of 12 school bus routes serving DeKalb School District 428 that use the study area roadways. Generally these school buses travel between 6:30 and 8:45 a.m. and 2:30 and 4:15 p.m. Also they serve after-school activities at the Huntley middle school and the DeKalb High School. There are two bus routes that use the study area roadways. In general the bus routes operate between 4 and 6:30 p.m. And then there's some information on the private schools. So typically when we do a study such as this we will as a courtesy contact the school district. We want to find out what kind of activity, where the school bus routes are and more specifically is there school bus stops near the access to our facility. The best information we can find out there is no school bus stops on Somonauk Road in the vicinity of the site. There are some on Webster Road, so we're only given whatever we can get from the

school district.

MR. MELLOTT: Can you tell me who the contact person at the school district was that your people talked to.

MR. MILLER: I've got that here somewhere. From School District 428 it was a Brenda Jergens and they touched base with her on three occasions, May 22, June 1st and June 22nd.

MR. MELLOTT: Is it possible that that contact person is from the bus company rather than the school district?

AUDIENCE MEMBER: She's the transportation manager for the school district.

MR. MILLER: They were knowledgeable enough to give us the information that we were looking for so I can't -- I can't say much more than that.

MR. MELLOTT: Okay. Now, you told me about the -- this possible -- or the known school bus stops along the preferred route for the transfer trailers. Have you looked at the school bus stops on the other roads that could be used by landfill traffic?

MR. MILLER: Other than the information we

have, that's -- that's as much as we got.

MR. MELLOTT: So if someone came down Somonauk Road from the south, for instance, a rolloff truck, for example, you would not know whether or not that truck would -- and the peak times of those kinds of deliveries to the landfill whether or not that would overlay with the school bus schedules?

MR. MILLER: Well, we know when the school bus routes are, I mentioned those and there is some overlap between when the peak times of the facility are and some of those school bus routes. This is not any different than any other vehicles or trucks that are on the road during those same times.

MR. MELLOTT: Well, if you could put the slide back up that showed the peak times, I'd like to point something out on that slide. Thank you. The peak times -- you have four very -- relatively high peaks there. The first one is 6 to 7 a.m. That happens to fall during the time when school buses are picking up children to go to the high schools. In the afternoon you have a peak time at 1 to 2 p.m. which in some

cases, depending on the locations, might be during the peak times for school buses as well. So I would love to see an overlay with this bar chart to have the school bus stops that perhaps could be impacted by the landfill traffic -- not necessarily only on the preferred route for the transfer trailers, but on all of the routes within District 428 at least and that would include Malta, DeKalb and Cortland, those communities and the surrounding highways. I'd love to see an overlay that shows where those school bus stops are and where the potential would be for traffic that is ending at the landfill site. I think you've addressed the issue about the segments of -- Route 88 is not an issue for school buses, but Peace Road, Route 38 and then south on Somonauk you did address that -- Webster, for instance, was one of the streets where there's a bus stop, but there are many other highways and county roads that could very likely be used by landfill traffic that, in fact, will have school buses stopping and starting during your peak generation times.

MR. MILLER: Well, first of all, we would

have to know what the volume of traffic is on each and every one of these surrounding roads, which we don't. As you get further away from the site the volume of site traffic gets dispersed even more. So the volume of traffic on any given road as you move out from the facility becomes less, but I guess the bottom line on this issue regarding school buses comes up -- or gets addressed sometimes. The landfill trucks whether they're the transfer trailers or the packers or rolloffs or any other vehicles coming to and from the site have to obey the laws just like every other vehicle. And so if a school bus stops and puts out the sign, they have to stop and so there really is no difference whether there's landfill traffic there or other traffic that's on these roads. They have to obey those same conditions if a school bus stops for a stop whether it's to pick up or drop any students off, so you know, it's -- it tends to sometimes be an emotional issue, but the fact is there is the -- landfill traffic has to stop just as if there's any -- so if there is some overlap on -- with some of the

vehicles coming to or from the site when the school bus routes and stops are in effect, in my opinion it's no different than it would be with other regular traffic.

MR. MELLOTT: Well, in my opinion it is different and I would submit that I -- I drove Keslinger Road from DeKalb County, the western part of DeKalb County into the Kane County area for eight years and several folks have testified that Keslinger is an alternate route --

MR. MORAN: Objection, Mr. Hearing Officer, we're now hearing testimony from these questioners. I know we've heard a lot of it throughout and we've tolerated a lot of it, but at this point it really needs to stop. The questions can be posed appropriately, but the time for testimony and providing comments comes later or it actually came before, it will come again. I have to object to the continuing testimony.

HEARING OFFICER MCCARTHY: Yeah, I have to agree at this point. I mean, we -- you know, there's a time for public comment. We've had one time. I've allowed it throughout the

hearing. I will allow additional time obviously for public comment. If you have questions, that's fine. If you have comment we're going to cut that off and have you do it at a later time.

MR. MELLOTT: I accept that. Thank you. Let me rephrase the question for you then. On Route 38 it's a two-lane highway; is that correct?

MR. MILLER: East of Peace Road, yes.

MR. MELLOTT: Yes. If there is a school bus stopping or any vehicle stopping on Route 38 and there's a heavy flow of traffic will it be more difficult or less difficult for the traffic to continue its flow to get around that stopped and start vehicle if it's a heavy vehicle versus a lightweight vehicle?

MR. MORAN: Objection, relevance.

HEARING OFFICER MCCARTHY: How is that relevant?

MR. MELLOTT: Well, it's relevant because, again, traffic flow -- the physics of traffic flow depend on the velocity, the acceleration rates, the number of gaps in the traffic flow. There's quite a number of variables here. If --

if vehicles are stopping and starting and not just flowing then the gaps will be larger or smaller according to the acceleration rates of the vehicles, so if we have, for instance, a school bus stopped or any vehicle for that matter stopped and there's a string of traffic and that string of traffic is composed of heavier vehicles rather than lighter vehicles it will take more time for that flow to begin to move again. So I would maintain and I'm asking Mr. Miller if this is true from his expert ability if -- if we have a two-lane highway where you do have to pass in order to maintain the flow of traffic and there are heavier vehicles that need to pass and they've already stopped, will it take more time and thereby reduce the flow of traffic and the capacity of the road if those vehicles are heavy vehicles.

HEARING OFFICER MCCARTHY: He can answer if he knows.

MR. MILLER: Well, when you say to pass are you talking about just a two-lane road or are you talking about pulling around into the opposite lane to pass that vehicle?

MR. MELLOTT: Yes, I am.

MR. MILLER: Well, again, they have to look at and see the gaps and see if that's something that they can do. Does it take a little bit longer for a larger vehicle to accelerate and get back to the speed limit than a passenger car? The answer is yes. I think again you have to put some of this in perspective. I think we're talking about the transfer trailers. We're adding over the course of an 11-hour -- 11 hours for the transfer trailers 50 trucks that are heading in one direction or another, so that's an average of about one every -- or five an hour and so how many of those are going to occur? How much is that going to affect -- is there going to be some minimal amount that it could affect the flow of traffic? Yes, but that's -- that occurs anytime. I'm not aware of any school bus stops on Illinois Route 38 or at least from the information we got. Is there something else -- could there be an accident or something that occurs? That's possible, but we have to look at the bigger picture and the frequency of how

often do those kind of events occur and going back to our analysis and how we've gone about this and we do it in every other traffic study, it's my opinion that that has a very minimal impact.

MR. MELLOTT: Okay. That's all the questions I have. Thank you.

HEARING OFFICER MCCARTHY: Thank you. I'd like to try to finish this. Do you have a question, sir? No. I'd like to -- yes, ma'am?

ROSEMARIE DIETZ-SLAVENAS: I have a question. You'll all have to help me to sort out if it's appropriate for this particular witness at $300 an hour, but in many engineering projects, as I understand it, industrial engineers coordinate the engineering of the specific areas, mechanical engineers, in this case civil engineers, etcetera; is that correct?

MR. MORAN: Objection, relevance.

ROSEMARIE DIETZ-SLAVENAS: I would like to have an opportunity to ask the question and then I will -- I think I can explain the relevance.

HEARING OFFICER MCCARTHY: Well, ask the question then.

ROSEMARIE DIETZ-SLAVENAS: I think I just did ask a question as I recollect.

HEARING OFFICER MCCARTHY: Rephrase the question because I don't know what you asked.

ROSEMARIE DIETZ-SLAVENAS: Oh. I asked if there were industrial engineers in this particular project as industrial engineers are frequently super-orbital to the other engineering -- okay, here, all right, let me rephrase this in a -- maybe what would be better for lawyers. How to talk to lawyers, I don't know that they have a course in that yet, but anyway, how to talk to lawyers. Okay. Industrial engineering, let me see, who do you give your report to when you finish your civil engineering report about stopping and starting and weights and asphalt, etcetera and exit ramps and entrance ramps and all that stuff? You figure all this stuff out and then who do you give it to?

MR. MILLER: We submit it to Waste Management for their review.

ROSEMARIE DIETZ-SLAVENAS: Okay, and you don't know who you submit it to at Waste

Management? Is there a particular person with a particular degree or title?

MR. MILLER: I don't know of their particular degree or title, but it's submitted to Waste Management, they distribute it, they have their own people within the company that review it. The -- the civil engineering company that's also hired as part of this project also has a review on it, so there's several people that do get involved in the review of -- of this traffic report.

ROSEMARIE DIETZ-SLAVENAS: Okay. I am really interested in this process, as I have mentioned before. The process is really I think extremely important. So when you finish your report you take an envelope and write Waste Management on it?

MR. MORAN: Objection, relevance. This is going nowhere.

ROSEMARIE DIETZ-SLAVENAS: It's relevant. I want to know where the report goes. I want to know the procedure that this gentleman follows for $300 an hour.

HEARING OFFICER MCCARTHY: Well, I think

he's answered that question.

ROSEMARIE DIETZ-SLAVENAS: No, he hasn't.

HEARING OFFICER MCCARTHY: It's directed to Waste Management.

ROSEMARIE DIETZ-SLAVENAS: And directed to whom at Waste Management? There's got to be a person that coordinates this.

HEARING OFFICER MCCARTHY: Do you know who you direct it to? Do you know who it's sent to?

MR. MILLER: Yes, Chris Rubak.

THE REPORTER: I'm sorry. Repeat that.

MR. MILLER: Chris Rubak.

ROSEMARIE DIETZ-SLAVENAS: Who? I'm sorry, I didn't hear it, I'm old, I'm 66.

MR. MILLER: Chris Rubak.

ROSEMARIE DIETZ-SLAVENAS: Chris R-U-B-E-C-K?

MR. MILLER: No, R-U-B-A-K.

ROSEMARIE DIETZ-SLAVENAS: R-U-B-A-K. And do you know what his -- does he have a title at Waste Management?

MR. MILLER: He's an engineer with the company. I don't know his specific title.

ROSEMARIE DIETZ-SLAVENAS: He's an

engineer. Okay. That helps. There are lots of kinds of engineers. Would you believe the physics department at University of Illinois -- would you agree that the University of Illinois has a well-established and well thought out engineering department?

MR. MORAN: Objection. Relevance. We're going nowhere with this.

ROSEMARIE DIETZ-SLAVENAS: Oh, I'm going somewhere with this. It's relevant.

HEARING OFFICER MCCARTHY: Let's get there. We've put up with --

ROSEMARIE DIETZ-SLAVENAS: I'm really trying. You're telling me you're putting up with me, okay.

MR. CAMPBELL: Mr. Hearing Officer, ma'am, I spoke to you a little outside. I have a few questions. If you wouldn't mind just giving me a chance and maybe we can have some lunch here. I'm afraid some of the parties here are going to lose patience and we're not going to get to some good questions we might ask. I'm not saying that you're not asking good questions, but would you mind if -- if you'd defer to me a little bit

to have the limited time that we have?

ROSEMARIE DIETZ-SLAVENAS: I will defer to Mr. Campbell.

MR. CAMPBELL: Thank you very much, ma'am.

HEARING OFFICER MCCARTHY: Let me do this first. Do you have any redirect, Mr. Moran? I think we've been through everyone at this point. Do you have many questions?

MR. CAMPBELL: No, sir. No, sir.

HEARING OFFICER MCCARTHY: Does it make sense to break for lunch and come back at -- take a shorter period and come back at 2 o'clock.

MR. MORAN: Let him finish. If he just has a few questions why don't we see if we can finish.

HEARING OFFICER MCCARTHY: Well, I'm thinking if you want to redirect first that may -- because if I go to him and then I go back to you then I'm going to have to go back to him again.

MR. MORAN: I would just as soon have Mr. Campbell ask whatever questions he has and then we can determine whether there will be any

redirect.

HEARING OFFICER MCCARTHY: All right. Mr. Campbell.

MR. CAMPBELL: Thank you, Mr. Hearing Officer.

CONTINUED CROSS-EXAMINATION

BY MR. CAMPBELL:

Q. Mr. Miller, I guarantee you I just have a few questions. You mentioned earlier and I think Mr. Stoddard was asking you questions about -- and again, I don't want to put thoughts in his mind, but I think he was trying to get to how we verify that the packers and the rolloffs, the hundred and forty additional trips how -- how we can really verify exactly how they travel or if we're talking about the transfer trailers themselves, how we verify that they -- that they travel and it's my understanding I think you said that the host agreement dictated that the transfer trailers themselves have to come in on that route that you've gone through at length here. At one point, sir, you indicated that it was your opinion that the sheriff's department or local law enforcement could actually stop

these vehicles if the particular officer thought that they were outside of the parameters of what they're supposed to be doing and my question to you -- and I probably misheard you, but my question is if they're within the law as Mr. Stoddard stated and they're on a route that's acceptable for their particular load, in other words, they're in compliance with the law, sir, you're not suggesting that they would be the independent verifier for Waste Management?

A. Actually I -- in consultation with Waste Management they would not be issuing citations to those type of vehicles if they're within the law -- specifically transfer trailers that may be not even going to the site, that may be going somewhere else. There is -- and they have -- there's a good example at the Prairie View facility that you may be aware of in Joliet. They have a very specific routing plan as far as transfer trailers to get there and -- and that has been in place and has been enforced and they do have -- they do coordinate with the local police and sheriff's office and they do get feedback that way and so I may have misspoke

when I was talking about the citations of that, but there is examples of how they have enforced that.

Q. And I'm not trying -- I'm actually a lawyer and I'm not trying to catch you up in the law, but I'm trying to get to my understanding of the role of the -- our local law enforcement works hard, they have a lot of responsibilities. I want to make sure that in my own mind that we're not putting any additional responsibilities on local law enforcement. It would be my understanding that Waste Management would be responsible for insuring that these trucks are going where they're supposed to go.

A. That is correct and they instruct their drivers and that's how that's handled.

Q. Sir, I wanted to ask you another question that the criteria states that this -- the patterns to and from the facility are designed to minimize the impact of existing traffic flows. We've spent an awful lot of time on this particular area, the 88, Peace Road, 38, Somonauk. Myself, I live in Sycamore, so my office is actually on 64 right in downtown Sycamore. We get an awful

lot of semis coming through town, a lot of big traffic like that. When you talk about patterns to and from the facility surely the northern counties that are within the service area, Boone County, McHenry County, it would be fair to assume that some of the traffic would come from those northern counties; is that correct?

A. Correct.

Q. Okay. Are you able -- did you give opinion or are you able to give an opinion on, you know, whether that -- the traffic patterns up there are minimized as well? It seems to me you focussed an awful lot of attention on here and I haven't heard about -- I can think of six or eight -- we talked about Keslinger a little bit, but if you go up north, Route 23, Route 72, in fact, if you just take Peace Road all the way up you're going to run into Peace Road and 23. I'm thinking of all these other arteries that are -- even though they're not right there they're going to -- would it be fair to say they're going to be affected by this?

A. They will be affected, but it's a matter of degree. We focussed on this immediate area

because that's where the traffic ultimately comes down to these few routes surrounding the site and that's where we put our most emphasis. As you move further away, as I mentioned, the distribution of those vehicles on all the multiple routes now all the sudden you're dealing with very small numbers. Yes, you may have a couple of vehicles on a route to the north that are coming down, but that number compared to the existing traffic winds up being a very small number.

Q. I guess what I'm trying to get at -- actually Mr. Andersen talked about the entrance to a new Jewel here that's caused some problems. Did you endeavor to find out any particular pressure points definitely north of this area where the traffic is particularly bad and determine impact on these additional hundred and forty trips, did you have any --

A. No.

Q. Okay. One more question, kind of a follow-up to what Mr. Steimel asked yesterday. He's a local farmer that lives right near the site and he asked specifically about the size of farm

implements and the size of the tractor -- transfer trailers. Did you ever take the width of each one of those two trucks and determine whether they could actually pass at the same time on that southern road -- I mean going right into the facility there?

A. You mean on Somonauk Road?

Q. Yes, sir.

A. Yes. The typical width of a transfer trailer is eight feet, roads are 12 feet --

Q. Okay.

A. -- each lane.

Q. Each lane is 12 feet. And the reason I'm asking is I think Mr. Newport asked you about farm implements and it didn't seem like that really went into your calculation here. Did the size of farm implements go into your calculation?

A. I'm aware of that. Again, it's something that isn't occurring every day every hour, so there are those situations. The farm vehicles that I'm aware of, many of them can be greater than 12 feet and tend to overhang possibly on part of the shoulder.

Q. Can you kind of see the tenor of my question? I mean, if that Somonauk is a thoroughfare for farmers moving up and down especially at harvest time and you can imagine if we're having, you know, a hundred trips of the tractor trailers can you envision some -- can you envision some times there where there's going to have to be some serious cooperation between the farmers and the semi drivers?

A. During those times it's possible, yes.

MR. CAMPBELL: That's all I have.

HEARING OFFICER MCCARTHY: Okay. Thank you. Mr. Moran, any redirect?

MR. MORAN: No redirect.

HEARING OFFICER MCCARTHY: Any other questions of this witness?

ROSEMARIE DIETZ-SLAVENAS: I have an engineering question. I don't know if it goes to this witness or how many engineers or who else Waste Management is bringing here, but I do have an engineering question.

HEARING OFFICER MCCARTHY: State your question.

ROSEMARIE DIETZ-SLAVENAS: No. I will

wait so I don't exhaust your patience. I'll exhaust your patience later, okay?

HEARING OFFICER MCCARTHY: Well, I think, ma'am, this is the last engineer as I understand it.

ROSEMARIE DIETZ-SLAVENAS: Well, you have told me that my questions are not relevant, so I'm not able to formulate questions in the appropriate manner for this forum, that's very obvious. I am not an attorney and I don't have one. I can't afford one.

HEARING OFFICER MCCARTHY: Okay. Any other questions before we adjourn for lunch? Yes, ma'am?

MS. VOTAW: I live right off of Peace Road.

HEARING OFFICER MCCARTHY: State your name, please.

MS. VOTAW: I'm sorry. Barbara Votaw.

THE REPORTER: Spell your last name.

MS. VOTAW: V as in victory O-T-A-W. All right. I live right off of Peace Road in the segment that's between Route 64 and when it connects again with Route 23 by the Jewel. That

little segment has a weight limit on it so trucks cannot use that segment. So anybody that's coming from the north down 23 or some other route has to go through downtown Sycamore and use Route 64. So my question is how many extra trucks are we going to have coming through Sycamore on Route 64?

MR. MILLER: Well, first of all, there will be no transfer trailers coming to this site that will be using that route, so none of the larger vehicles would be coming that route to get to the site. Of the other packers and rolloffs, there could be some additional ones as I was trying to explain several times, that is distributed throughout the area. We have taken into account approximately how much is going to be coming from different areas, but for a given intersection to the north or east I can't quantify exactly how many that's going to be in a given hour or a given day, but I do -- we have taken into account at, say, the intersection of Peace and Route 38. We have accounted for vehicles that will be entering that intersection from various directions, so to answer your

question specifically how many packers or rolloffs might be going through that intersection I can't say at this point, I don't know.

MS. VOTAW: Well, I know, an awful lot of trucks -- MBI trucks bringing waste out go through Sycamore already on Route 64, so are they going -- my question is will they be subcontracted to you or will there be additional trucks of yours?

MR. MILLER: Well, I don't own any trucks, but --

MR. VOTAW: The company you're representing.

MR. MILLER: The additional trucks -- and again, we're talking about the smaller trucks, that is -- some of those may be Waste Management, some of those may be a third-party contractor, so I can't tell you how many trucks there's going to be of Waste Management versus others. So would there be some additional trucks using that route? Possibly.

MS. VOTAW: What are you considering a smaller truck, what weight limit?

MR. MILLER: Well, it was the --

MS. VOTAW: 73,280.

MR. MILLER: No, it's -- the packers and rolloffs tend to be maximum weight of about 40,000 to 50,000 pounds. Quite a bit less than the semi.

MS. VOTAW: That doesn't seem like it's very economically feasible for Waste Management to use smaller trucks.

MR. MILLER: Well, you don't -- you don't have transfer trailers driving through residential areas to pick up the trash. You need smaller vehicles to pick up the municipal waste. You have the rolloffs to collect from industrial areas where they may be dumping building -- a building or just refuse such as that, so again, you get a combination of those. The transfer trailers are coming from other transfer stations where the municipal waste has been dumped, it's collected, put in the transfer trailers and then those trailers are the ones that will come to the site. So it's a combination of those and that's what makes up the numbers that we have.

MS. VOTAW: I know. I'm sorry that I've asked that, but you've concentrated on Route 38 and there are many other routes that can be taken as Clay has -- has said. Our streets on Route 64 in Sycamore is not in the best condition, so I just have a concern that we're going to be stuck with the bad road and the State has no money to fix it. So that's my last, you know, comment. I'm sorry.

HEARING OFFICER MCCARTHY: Okay. Any additional questions of this witness? Seeing none, let's take a -- can we be back at 2:15? Oh, I'm sorry. Do you have a question?

MS. LARSON: Yes, I do.

HEARING OFFICER MCCARTHY: Okay.

MS. LARSON: The question is --

THE REPORTER: I need your name, ma'am.

MS. LARSON: Elaine Larson. L-A-R-S-O-N. My question is when you did your study of the traffic on 38 at Somonauk it was in March and April -- or April to May, I'm sorry.

MR. MILLER: Yes.

MS. LARSON: The Cortland school was not open until September. Would the school opening

in September -- or if you redid your statistics in your opinion traffic-wise would it make a difference as the amount of traffic right there with the school being there now as opposed to it being off of 38?

MR. MILLER: Well, when we did our counts in April and May school was not open, obviously it did reflect that. We did take into account -- when I did the 2013 traffic that was one of the seven sites that we did take into account, so it was added to our additional traffic. So when we did our total traffic which included the existing plus the 2013 plus the facility traffic it was accounted for at that point. So while it was not part of the existing counts we did account for it as part of the additional --

MS. LARSON: The next little group, okay. Thank you. Thanks a lot.

HEARING OFFICER MCCARTHY: Okay. We'll take a lunch break and reconvene at 2:15.

(A recess was taken at 1:25 p.m. and proceedings resumed at 2:15 p.m.)

HEARING OFFICER MCCARTHY: Let's reconvene

the public hearing.

Let's start with a little housekeeping matter. Yesterday Mr. Stoddard, I believe, from the Committee asked for a more complete resumT from Joan Underwood, and I think the Applicant now has that. So let's deal with that first.

MR. MORAN: Yes.

(Petitioner's Exhibit No. 11 marked for identification.)

MR. MORAN: So, Mr. Hearing Officer, we have submitted Petitioner's Exhibit No. 11, which is the amended -- well, not amended -- supplemented resumT of Joan Underwood which contains additional information regarding her publications, presentations and past work experience beyond that as presented in Petitioner's Exhibit 9.

And I would offer this exhibit, as well as Petitioner's Exhibit 10, which I don't -- I'm sorry, 9 and 10 -- I don't think we had offered those into evidence -- but Ms. Underwood's initial resumT, Mr. Miller's resumT and Ms. Underwood's complete resumT.

HEARING OFFICER MCCARTHY: Any objection

to the admission of those exhibits?

MS. CIPRIANO: None, Mr. Hearing Officer.

(Petitioner's Exhibits No. 9, 10 and 11 admitted into evidence.)

HEARING OFFICER MCCARTHY: Okay. I noticed that Mr. Campbell is not yet here. I suppose if there are any additional questions that may be as a result of this we can take those up later.

Mr. Stoddard, I don't know whether you had any questions?

MR. STODDARD: No.

HEARING OFFICER MCCARTHY: Okay. That will give you an opportunity to look at it.

So with that, would you call your next witness.

MR. MORAN: Yes, Mr. Hearing Officer, our next witness would be Mr. David Yocca.

HEARING OFFICER MCCARTHY: Mr. Yocca, would you come forward and would you have the court reporter swear you.

MR. MORAN: Let him just get set first, he's trying to get the mic on.

HEARING OFFICER MCCARTHY: Oh, okay.

DAVID YOCCA,

being first duly sworn, was examined and testified as follows:

HEARING OFFICER MCCARTHY: You may proceed.

MR. MORAN: Thank you, Mr. Hearing Officer.

DIRECT EXAMINATION

BY MR. MORAN:

Q. What is your name?

A. David Yocca.

Q. Could you spell your name -- last name for the court reporter, please.

A. Yes, it's Yocca, Y-O-C-C-A.

Q. Mr. Yocca, what is your occupation?

A. I am a landscape architect and land planner.

Q. Are you employed?

A. Yes.

Q. By whom?

A. Conservation Design Forum.

Q. What is the nature of the business of Conversation Design Forum?

A. Conservation Design Forum is a planning, engineering and consulting firm. Our main

office is in Elmhurst, Illinois. Our focus is entirely on promoting sustainable practices. We do a variety of projects, both from a planning and engineering standpoint, as well as applied -- applied work in built projects.

Q. What is your position with Conservation Design Forum?

A. I am principal landscape architect and planner and one of the three senior partners in the firm.

Q. And how long have you been with the firm?

A. A little over 13 years.

Q. Mr. Yocca, you're going to talk to us today about the first part of Criterion 3, which asks the question whether the expansion is located so as to minimize incompatibility with the character of the surrounding area; would that be correct?

A. Yes, that's correct.

Q. Before we go into that testimony let me just cover your background. What is your education?

A. I have a Bachelor's of Landscape Architecture Degree from Michigan State University.

Q. Can you describe for us your professional

experience as a landscape architect?

A. Yes, I have been employed as a landscape architect since I got my degree in 1985. I have been employed in the Chicago area since that time. I have performed a wide variety of planning and landscape architecture design efforts in a variety of locations and contexts. I have provided land use studies and feasibility studies and land analysises (sic) for various proposed projects. I have done the planning and processing and permitting for different land use and zoning projects in the applications for a variety of uses: residential, office, open space, park development, and have been part of the design -- the actual design of projects that include all of those land uses. I have worked in Illinois and other states, primarily the Midwest and a few other locations throughout the country.

Q. And you have worked on sustainable and ecologically-based design projects?

A. Yes, that's correct.

Q. The term sustainable, could you define that for us, please.

A. Well, sustainable is a term that is used oftentimes to describe the concept of something that is done in a way to provide for the needs of today without compromising the needs of people to meet their needs in the future. And the way that we apply that concept in our work, focused on land and water and those elements, is to plan, design, engineer and manage land and landscapes in a way that maintain or improve water quality and habitat and ecology so that they're stable, healthy systems that provide healthy context. And this is kind of a general philosophy behind all of our work.

Like I said, our application of that concept comes in a variety of ways depending on if we're working on new building and site construction or a regional greenway plan or a land use policy for a municipality.

Q. Do you have experience in the planning, design and implementation of sustainable strategies?

A. Yes, I do. That's really been the focus of my career. It's been -- it's what I started to develop to -- before joining Conservation Design Forum, and that's the reason I joined as partner

13 years ago. And that work has included the planning and design that I have just been explaining for a variety of sustainably focused developments and land use practices. This includes new planned communities; retrofitting existing communities with sustainable practices; new building and site projects for a variety of uses, schools, hospitals, residential, commercial endeavors; and then also helping to author codes and guidelines and ordinances that promote sustainable practices in different communities.

Q. Have you given presentations on sustainable strategies?

A. Yes, I have.

Q. Can you describe those for us?

A. Well, I've had the chance to present to a variety of groups at conferences and workshops on sustainable topics. I have spoken at a number of national conferences: the American Society of Landscape Architects annual meeting, the American Planning Association, US Green Building Council and several others.

I have also had the chance to lecture at

universities and -- primarily in the schools of landscape architecture at Michigan State, my alma mater, at Michigan, Purdue, University of Illinois. Right now I am teaching a design studio on sustainable land planning at the Illinois Institute of Technology in their landscape architecture -- their graduate program.

Q. Do you hold any professional certifications?

A. Yes, I do.

Q. Would you describe those for us?

A. Yes. I'm a registered landscape architect and am registered in the states of Illinois, as well as Indiana, Michigan -- or not Michigan, I'm sorry -- Indiana, Wisconsin and Iowa, with limited practice in New York. And I am a certified planner through the American Institute of Certified Planning, and I'm also a LEED accredited professional.

Q. What is LEED?

A. LEED is an acronym, L-E-E-D, that stands for Leadership in Energy and Environmental Design. And it is the program that is sponsored by -- administered by the US Green Building Council,

and it is the most widely used, widely accepted standard for high performance green building in development projects.

Q. Is it a national standard?

A. It's a national standard. In fact, there are some LEED rated projects outside of the country.

Q. Have you obtained LEED certification for various projects you have worked on?

A. Yes, I have. I have worked on and achieved LEED certification for about a dozen projects over the last five years.

Q. Have you won any awards for these projects?

A. Yes, a number of our projects have been recognized with various awards. Some of them are for excellence in design and planning considerations, such as through the American Society of Landscape Architects, American Planning Association, American Institute of Architects, Committee on Environments has a program. And then we have also received recognition awards through environmental -- environmentally focused studies like the Conservation Foundation for Chicago Wilderness.

My firm that I'm one of the principals of

was also recognized last year as one of the Chicago's green leaders by the Chicago Chapter of the US Green Building Council.

Q. Mr. Yocca, could you describe for us your land use planning experience?

A. Yes. As -- all throughout my career I have practiced land planning, in addition to the landscape architecture profession. And as I mentioned before, I have had the chance to work on the analysis and planning and feasibility on a variety of projects in different locations throughout the Midwest and other parts of the country. I have been part of developing land use master plans. I have helped to write codes and ordinances of different municipalities, and I have also been part of the comprehensive land use planning process and have written several comprehensive land use plans.

Q. Are you the member of any professional societies?

A. Yes. I am a member of the American Society of Landscape Architects; I'm a member of the American Planning Association; I'm a member of the Congress for New Urbanism; member of the US

Green Building Council; a member of the Urban Land Institute.

And I also served on the technical committee for Sites, which is the Sustainable Sites Initiative, an emerging green building site design tool that is based on LEED and working with some of those same partners.

MR. MORAN: Mr. Hearing Officer, may I approach the witness?

HEARING OFFICER MCCARTHY: You may.

(Petitioner's Exhibit No. 12 marked for identification.)

Q. Mr. Yocca, I'm handing you what we have marked as Petitioner's Exhibit 12. I'd ask you to take a look at that, if you would please. Do you recognize Exhibit 12?

A. Yes, I do.

Q. What is it?

A. It is my current updated resumT.

Q. Does it truly and accurately reflect your educational background, employment history and professional experience?

A. Yes, it does.

Q. Mr. Yocca, is there a written report that sets

forth your evaluation of Criterion 3 for the DeKalb County Landfill expansion?

A. Yes, there is.

Q. And that written report is contained in the siting application?

A. That's correct.

Q. In Volume 2 of the application, correct?

A. Yes.

Q. Mr. Yocca, could you situate the expansion for us again, please?

A. Yes. Up on the screen is an aerial photograph of the site and surrounding area. And the subject property is the area outlined in this black line that I'm tracing with the pointer.

Just to reorient you all, I-88 is the north boundary of the site that I'm pointing to right now. The southern boundary is Gurler Road. Somonauk Road runs north and south on the western border of the site here. And then the eastern border is just a little bit west of Hinckley Road, which crosses the tollway in this location.

Q. And, Mr. Yocca, what was the nature of the evaluation that you performed here?

A. Couple of things. First was to evaluate the site and its location and the surrounding area relative to the proposed use. And then second, to develop as part of the design of this proposed facility a plan for screening and various landscape treatments and setbacks of the facility. And then third, as part of this we developed a set of sustainable landscape principals to guide, or direct, that design.

Q. What are those sustainable landscape design principals?

A. There are four principals that we developed. First, the idea of context-sensitive landscape. This is the idea that the landscape is done in a way that is reflective of and compatible with the adjacent land uses and character. Secondly, the use of ecologically-based landscape systems within that landscape treatment. Third, the idea of biodiversity, or more diverse ecosystems as a component of the landscape approach. And then fourth, to develop the landscape plan in a way that would be supportive of local green or sustainable policies.

And one of those policies or one of those

initiatives is DeKalb County's go green! initiative, and this is something that we looked at and actually has a number of things that our plan addresses in some ways. First, the idea of conservation leadership and providing a demonstration that encourages -- or doing things in a way to encourage sustainment development practices here in the County; the use of ecologically friendly practices and materials; and conservation strategies that are becoming more widely known and applied throughout the country; and then last, to take advantage of educational opportunities to promote these ideas to everyone in the County.

Q. Mr. Yocca, could you describe for us now the land uses surrounding the proposed expansion?

A. Yes. So here's that same aerial photograph with an overlay. And one of the things that you'll see, there's a dashed line that goes around the image and that's a dimension of one mile from our property boundary in all directions. And we analyzed the land use within that one-mile area. And different colors represent different land uses. The most

predominant land use within that area, 92 and a half percent of the land, is in agricultural land use at the top of the chart here you can see, and that's what's shown in green.

The next most prevalent land use, at 5.2 percent, is residential. And the residential land use within that study area are primarily small scattered farmsteads, which I'm pointing out here. There is one -- one area that is a neighborhood, that's the new Chestnut Grove development that is in the town of Cortland north of I-88 and that's -- I'm pointing to that right here.

The next land use -- land uses on the chart, retail, there are a few small scattered retail or commercial uses. They are shown in a red or orange color. And then institutional use is in this light blue color, and this square represents the new elementary school site that is at Chestnut Grove.

Q. Mr. Yocca, what is the character of the area?

A. The character of the area is primarily agricultural in nature. It's -- the vast majority of the land area is in agricultural

uses. Much of this is in production farming, corn and soybean production. The character of the land and the landscape is generally fairly flat with roll and some topography to it, gently rolling topography, and marked by hedgerows and landscape trees and fence rows around some of the farm -- farmsteads and on some of the property lines.

Q. Did you consider the character of the area from various vantage points looking toward the subject site?

A. Yes. So we wanted to look at what would be a potential perception of the site from different locations in the public realm. And this is, again, that same aerial photograph. Here's our site and here's our one-mile boundary, so it's the same area. And these little symbols indicate where we took images from, took photographs from of the site in the direction of the site.

And I'm going to show you those photographs. Each one of them is a view, like I said, from different points around this area. And it's looking to the center of this little

red symbol, so the way I'm tracing my pointer here that would be the direction of this particular set of photographs.

And View No. 1 -- and in each of these I have got a map that shows where the view was taken from and then the photographs. So View No. 1 is up at the corner of Route 38 and Somonauk Road looking south and east towards the site. So here is that view. We're standing in the intersection looking in this direction, south and east, towards the site. And you can make out the existing landfill on the horizon line behind this tree line right here.

Here's that same view -- we took these photographs both in the spring in April and also in September so we get a sense of what those views would look like when the corn was the highest in the fields. So here you can see that same view in September. You can also see that the road has been repaved.

The next view is little further south on Somonauk Road looking east down towards the landfill. Here we are on Somonauk Road. Here's the bridge over the highway. Here is the

existing landfill on the horizon in this location. Then here's that same view in September. Now, you can see with the corn up in the field that the top of the landfill is just barely visible above the crop line.

The third view is looking east from the bridge at Somonauk Road. Here we are on the map, looking east. And here you can see the facilities, the existing operations, and then here's the landfill footprint itself behind that looking down the highway. And, again, that same view in September.

Now we're moving further south on Somonauk Road. Here we are down at the southwest corner of the site, and here we are standing on the road looking north and east. Here's the existing landfill area right here with an open field in the foreground. Here's union ditch as it comes underneath Somonauk Road. Then here's that same view in the fall, in September.

Now, our next view is again further south down near the corner of Somonauk and Keslinger Road looking north and east. And you can see there's an agricultural field in our foreground

here. Here's the wood lot that's on Somonauk Road that I'm pointing to right here that is between where we're standing and the landfill -- the existing landfill itself. And then here's that same view with the corn crop in the field.

Now, this next view we've moved back further north. We're in the middle of the Chestnut Grove development on one of the grading portions of the site looking south towards the existing landfill, which I'm pointing to here. And them that same view in September.

And a little bit further south on the site but still on the north side of I-88 looking south here you can see we're standing right next to the detention pond that is part of Chestnut Grove development. And here's the existing landfill on the right side of the image. And then here is where union ditch comes through the site, and then just to the left to the image is where it comes underneath I-88 and comes north.

Q. And, Mr. Yocca, in this photograph, the photograph on the left, you see the existing land form. Is that the 80 foot height that we have referred to before?

A. Yes. And that's that same view in September.

Now, this next view is a little further south. We are now just standing on the north side of Gurler Road looking due north. You can see the homes in the Chestnut Grove development here that are on the north side of the highway.

Then the next view we're back up north again just south of Route 38 looking south on Chase Road in this direction. You can see the existing landfill on the horizon towards the right of the image here. Just for reference, there's a farmstead here and then a couple of cell towers, two of which are on the north side of I-88, one of which is on the south side of I-88 on the subject property in this location. Then that same view in September.

And our next view we're back down on Gurler Road towards the southeast part of the site looking due north. And so here is the field that is part of the subject site. And you can see the two -- barely make out, you may not see this in the back, but there's a cell tower here which is on the subject property and then there are two here that are on the north side of

I-88.

Q. How high are those cell towers, Mr. Yocca?

A. 170, 171 feet to the top. They're all the same size.

Now, this view is from Hinckley Road looking south and west across towards the site. You can see there's this open farm field in the foreground which is here, and then you can make out just at the horizon line the existing landfill. And the horizon is tucked down into the grade, you can't really see it in this view. Then here's that same view in September.

Our next view is further south just off of Hinckley Road looking west across the site. And I-88 is coming around here and then -- and then behind. The existing landfill is barely visible above the horizon line over in this part of the image. And then here we are in that same view in September.

Q. Now, Mr. Yocca, in the field of land use planning and landscape design are there strategies that can be taken to minimize any impact of a proposed land use?

A. Yes.

Q. And what are those strategies?

A. Well, generally to develop a landscape that helps the facility to fit and blend into the surrounding context, so -- and to utilize different practices as part of that design. I am going to talk about those concepts and then go into them in a little bit more detail.

First, the idea of a multi-functional landscape approach, which is to have the landscape perform multiple functions and have various qualities to it. Second, this idea of context-sensitive screening, which I'll illustrate for you a little bit more. Third, the use of green site development practices as part of the development of any component of facility building or site improvements. And then last, as I mentioned before, to do it in a way that is supportive of local green policies.

Q. Mr. Yocca, could you describe for us now each of these elements or strategies?

A. Yes. So the first one, multiple-functional landscape approach. What do I mean by that? Well, first, that the landscape be done in a way that is integrated with the surface water

management strategy. And others have testified to this aspect of the landscape, that by using a certain type of landscape and certain approach to soil and plants that it helps to slow and cleanse that rainwater that's falling on the surface of the ground -- all the ground and be part of the natural water cycle.

Secondly, to develop a natural and cultural landscape. And what I mean by this is to develop a landscape that is in harmony with the natural conditions and climate in this part of DeKalb County, but to also take clues and references from the cultural landscapes that are in the area.

And then third, establish native landscapes. Primarily prairie but also emergent wetland and Savanna. The use of the native plants is part of the native ecosystem strategy or approach.

This is an image of the proposed landscape plan. And just to get you situated, here's I-88 on the north side, Gurler Road on the south side, Somonauk Road, and this shows the complete anticipated build out of the facility at

completion. And so you can see the entrance over on Somonauk Road, the service road that's on-site that will eventually come all the way over to the east part of the site, and then here is the western expansion and overlay area generally in this location. Here's union ditch as it runs through the site. These blue areas are the sedimentation basins that have been described earlier. And then here's the east portion of the expansion site area and the sedimentation basins that are associated with that part of the site.

And the colors, this sort of yellowish-brownish-greenish color indicate a prairie landscape. And the design is to restore or recreate prairie throughout the vast majority of that land area.

And I'd like to talk just a little bit -- I know that others have talked about the prairie from a standpoint of how it works with the surface water management system. I'd like to talk a little bit about the appearance of the prairie and how it would -- how it would look both during establishment and then over time.

One of the things about prairie is that because these are perennial plants, they take a number of growing seasons to get established. The way that we establish prairie is to do an initial seeding of prairie grasses and flowers and then incorporate in that a cover crop of an annual grass that is very quick growing. Here you can see just in three to four weeks we have this germination of grass. This is all annual rye. The native prairie plants take longer than this to get established.

In the first one or two years we get a flush of the initial grasses and a few of the less conservative flowers, so it looks more like this which you'll see all of the same yellow flower in this image. And then over time more and more diversity comes in, more different plants get established and show up. And so here you can see after three to five years and beyond a much more diverse looking situation.

And it's also a landscape that changes through the seasons. This is a set of four photographs of the same location of prairie that show in the spring you have got this bright

green initial flush of grasses coming up in the springtime after wintertime and some of the spring flowers. In the summertime the grasses are getting taller, we have a different pallet of flowers that come out. In the fall some of the grasses start to turn color, we get seed heads and some of them start going dormant. And then in the wintertime all of the vegetation is dormant until the next year. So a change in the way it looks throughout the year.

And this type of landscape has been used in this application before as part of landfill facilities. And this is a photograph of the Settler's Hill Landfill in Geneva operated by Waste Management, a place where they have used native prairies here as part of the final cover of parts of the -- the active part of the landfill. You can see in this image the end use of this part of the landfill is a golf course. You can see the golf course mowed grass and contrasting that with what is native prairie on the rest of the site.

Now, the next point that I made is the idea of context-sensitive screening. The idea

that the screening around the site will be done in a way that is complimentary to or compatible with the character of the surrounding land uses. And the way that we do this is to identify and replicate elements of the rural landscape within that screening. Part of that has to do with the scale of the planted elements, and so having groupings of plants and mimicking the scale of groupings of the plants that you see elsewhere in the surrounding landscape within this area. And these are multi-seasonal plantings, the kind of plantings that would have been done intentionally as part of the farmsteads, wind breaks and so forth.

And then last, setbacks and buffers. And having the landfill itself set back from the perimeter roadway and then how that setback is treated with the landscape.

And I'm going to explain this a little bit more and share some images with you to give you a better idea what I'm talking about. This is a drawing of the completed proposed landfill. And it's the same site area we have been talking about. And these light black lines are the

topographic lines that are proposed as part of the completed facility. So you can see this is the slope -- these lines indicate the slope -- of the western portion of the expansion area.

And just to give you a point of reference, the top -- the topmost point I'm pointing to here, the top circle of this topographic line is proposed to be at elevation 945. That is, I think as has been testified earlier, 80 feet above the grade of the elevation here at the intersection of Somonauk and Gurler Road. So that -- that elevation when completed will be 80 feet above the elevation of the road. And that -- just to give you a sense of scale, that's about 1500 feet, maybe a quarter of a mile, a 10-minute walk to get to -- to get to that highest point.

Then to get you oriented over on the east side, here's the eastern expansion area. These black lines, they again indicate the topography of the proposed final land form. It's an undulating -- you know, you can see these are not straight lines, they're sort of curved. And we have got a couple of places that are the

highest point on this eastern part, and those are proposed at elevation 980, which is 113 feet higher than the elevation if you're standing out here at Gurler Road at the corner of the site. About -- again, that's about -- oh, depends on where you're standing but about 1500 feet, same quarter of mile distance to that -- to that high point in those couple locations, and then the rest of it slopes down.

So that is the context, and then as part of this perimeter screening and buffer approach we plan to do a combination of landscape treatment and screening berms around the perimeter. This diagram shows this light green sort of blob or undulating line that goes around most of the perimeter of the site, and that light green color indicates areas where new landscape screenings are proposed: trees, shrubs and other vegetation. I'll show you pictures of that in a moment.

The darker dashed line that's in the middle of that through the entire eastern portion and a little bit along Gurler and Somonauk Road here indicate where we have

earthen berms in addition to that planting.

There are a couple of spots where you'll notice that there are neither of these two symbols, and those are areas where there's already existing trees and shrubs that are at a density that they already provide the screening. And rather than disturb that and take it away and put something else there, felt that that was providing a better level of screening right now. So that describes in a sort of diagram way what we have proposed.

Now, I'd like to show you a typical cross section through that treatment right here at Gurler Road, and here is that cross section. We're looking from the left side of the image to the right from -- which will be from the south side of Gurler Road up to the north. And just off the imagine here is where Gurler Road is, and there's about a hundred feet of setback and that would be planted with prairie. Then from that point up, an area of woody shrubs and trees and then also an earthen bedroom that is 8 to 12 feet in height. And this is not a -- it's a more undulating land form at a minimum of 8 foot

up to 12 foot height everywhere we have got the dashed line. Then that slopes back down, and then the actual footprint of the landfill itself starts to come up from that point and beyond. And this whole distance here is about 200 feet to the edge where the actual landfill footprint starts. So that should give you a little sense of the scale.

Now, as I mentioned, we vary the landfill treatment depending on where we are on the site. And I have got a couple of photographs of different conditions that are similar to what we have planned. These little dots that you can barely make out around the perimeter indicate each one of those is a tree or a shrub that is planted as part of this design, and that treatment varies as we go around that site.

So along the north side, along this stretch of the -- adjacent to the highway it's more of a layering of trees and shrubs, lower understory trees. Here's a photograph. This, just in case it looks familiar, is out at Morton Arboretum on Lisle. And you can see an understory of Bruce or Sumac. This happens to

be in brilliant fall colors, so this is -- you'll see this is in the fall. That's a medium height of deciduous trees and then taller trees in the back. That's indicative of the density and arrangement of the plantings that we have along this stretch.

On some of our property lines, especially along Gurler Road here, we have taken inspiration from fence rows and hedgerows around the area. Here's a photograph showing a hedgerow. You can see the variety of deciduous trees, evergreen trees, understory shrubs. And it's a very random mix of trees. It's not a regular mix, it's very random, but in general a fairly linear form. And that is the plan for like along the property lines here and stretches of Gurler Road.

We have also added an element that mimics the fence rows you might find around a typical house or a farmstead like as shown here. Again, it's a fairly linear form but very random mix of different trees and shrubs. And in some cases we have done that sort of planting perpendicular to the berm so that it's coming out towards the

road like it would along the property line. So this is just another technique we have used to have this context-sensitive approach.

Then this last image here shows more of an aquatic or wetland condition that has a very gradual shallow shoreline, planted with native emergent wetland plants. And that's the sort of approach we have around our sedimentation basins. This one here on the southeast corner of the site would be visible from Gurler Road.

Now, the next strategy that I mentioned is the use of green practices at the actual facility; and the idea of native prairie once again in this context, green roof, permeable pavement systems, bioretention rain gardens. So practices -- and, again, I think these have been described to you earlier from their water management benefits. I'm going to talk a little bit about the aesthetic characteristics.

And this is an enlargement of our proposed entrance facility. You can see the entrance off of Somonauk at the north and then coming down, the divided median with the ticket administrative office is shown with a green

roof. Rain garden is in the center of the island. Here's the sedimentation basin that's in that part of the site as shown in this sort of bluish color. This is the parking area for the ticket administrative office that is shown in permeable pavement.

And the idea from -- of all this is that every square foot of landscape is performing multiple functions: it's part of the water management system, it also has an aesthetic function and an operations function.

And I mentioned prairie landscape. An important characteristic for the facility to -- is to look cared for and maintained. And some people may look at the taller grasses and perennial flowers of the prairie and think that that's just grass that hasn't been mowed. And so the way that we address that is to give it an intentional look with a mowed edge. Here is another place where again Waste Management is using prairie landscape as part of the entrance facility in a similar context at the Prairie Hill landfill facility. With this mowed edge around the perimeter and adjacent to all the

turf areas, it sets off the prairie landscaping and has it look intentional and cared for.

I mentioned green roof. This is an example of Waste Management's transfer station. That is a green building. It follows the criteria of the US Green Building Council that I was describing earlier. It's a LEED goal graded building. It has a green roof as a part of it. The green roof is providing a number of functions. Aesthetically it's a green -- you know, it's a green, growing, living thing.

Here's a cross section or enlargement of that. You can see the kind of plants that are adapted to the conditions you have on the roof. And what I mean to say by adapted to, this is really the concept of all the landscape that there are plants that are adapted to the conditions that we have on-site and therefore it's a healthier, more viable and more robust system.

I mentioned porous pavement and bioretention of rain gardens. Here is an image, a photograph of porous pavement in a parking lot next to a rain garden. It is a more durable,

resilient paving surface. It provides these water cleansing and water infiltration characteristics.

The rain garden is part of that system as well. It is also an ornamental landscape. As you can see from in the next image, the rain gardens can be done in a very ornamental way. You can put plants that are adaptive to this habitat but also arrange them in ways that look very intentional and cared for.

And the reason I'm describing all this to you is part of the idea here is that it is a demonstration -- can be done as a demonstration of these green practices that are emerging in our area, and there needs to be more information about how to do these kinds of things as been stated in some of DeKalb County's policies.

I mentioned go green!. There is also the Greenways Plan, the County's Greenways Plan. It talks about the major waterways of the County being multi-purpose greenways for trails and habitat and the importance of restoring and maintaining healthy water volume for habitat. One of these greenways happens to be union ditch

on our site here. So the same sort of goals of water quality and habitat are written into this plan as well.

So I know there's a lot of aspects of the landscape plan. I'd like to just restate or summarize those strategies that are a part of our landscape approach as part of this landscaping screen. First, the -- do we have the -- I'm thinking about a slide that will come up again later with some words on it.

Basically, to summarize, the strategies are to adapt a landscape to the site -- the entirety of the site, which will be primarily prairie, that fits into this more rural context by using the prairie landscape, to have that landscaping be done in a way that provides multiple benefits and multiple functions, and then to design and develop the plantings in a way that mimic the character of surrounding land uses.

Q. Mr. Yocca, did you also consider views of the final land form from various vantage points in the surrounding area?

A. Yes, I did.

Q. And could you tell us what you considered in that regard?

A. Yes. As part of my analysis I wanted to look at what the -- what the landfill would look like in its full build-out condition, and so we took the photographs that I shared with you earlier from these different vantage points and superimposed a version of the completed land form.

I'm going to go through those same set of images. And so you -- again, the existing conditions like I shared before, in this case that location at 38 and Somonauk Road looking southeast across towards the site. And then here's that same image with the expanded portion of the landfill superimposed on the horizon line here. So here's the existing landfill. Then here's the proposed expansion in this location.

The next view is the view from Somonauk Road further south, just north of the bridge looking towards the existing landfill there. And here's that same view. And this has now been reworked, and I think this has been described by others as how that's being done.

The -- it's still the same location in the horizon line. It's still the same height, it doesn't get any higher. You can see the addition of some of the landscape screening in a few places along the northern edge here along the highway.

Here's the view from the bridge on Somonauk Road looking down east along the highway. This is the existing landfill. Here's that same view after completion with our landscape screening along that edge. And again, the same horizon line.

Here's a view from Somonauk and Gurler Road looking northeast. Existing landfill. Union ditch. Here's that same view, and this shows the limitation of the landscape screening, trees and vegetation and prairie along that perimeter and then the top of the land form in the background here.

Here's the image from Chestnut Grove looking south across the retention basis. There is the existing landfill you can see there. Now here's that same view. You can see the expansion that comes over to the east towards

union ditch, which is over in this location here.

Here's the view down Chase Road in this image here. And then here is that same view. You can see the full build out of the proposed eastern portion of the landfill in this image.

Here's the view from Gurler Road looking north there looking across the farm field. Here's the view looking at our screening berm with -- tracing the line in the back is the landfill. The top of that landfill remember I said is about a quarter of a mile away behind us. The reason why this looks the way it does is because this is in the foreground, so this is right up next to a hundred foot of prairie and then the screening berm and then the land form is set well beyond that.

Then here's the view from Hinckley Road looking to the west. And then here you can see the -- along the horizon line the landfill in this location.

Then again looking west from Hinckley Road. And then here you can see the land form. This is a good image to also point out just the

general character of the trees and hedgerows that you see in the area. And then this is actually representative of the trees and shrubs and landscape screening that we have proposed. And it's that same sort of density, same sort of randomness that is part of the design.

Q. Mr. Yocca, were the cell towers on that View 12?

A. Let's see, I think it should be. I'm trying to make it out.

Q. Maybe we can go back to View 10, that might have had the cell towers on them.

A. Yeah, it's easier to see from No. 10. Yes, here's that cell tower, 171 feet tall, that's on-site. Here's the cell tower that's off-site north of I-88. And -- well, it's probably hidden behind this tree, but you get a sense of where that -- the land form and final form is relative to -- relative to that.

This one I think we covered.

Then here we are on Hinckley Road bridge. Existing view here, and then with the expansion you can see here.

Q. Now, Mr. Yocca, based upon your expertise,

experience and review of this proposed expansion, do you have an opinion as to whether the expansion is located so as to minimize incompatibility with the surrounding area?

A. Yes, I do.

Q. And what is your opinion?

A. Well, my opinion that -- is that it has been so located as to minimize the impact of the facility on the character of the surrounding area.

Q. And what are the reasons for your opinion?

A. A couple of reasons. First, the location is in a primarily rural area away from population and in an area that is primarily in agricultural land use. Then, secondly, that a variety of screening strategies have been incorporated into the design. This idea of context-sensitive screening that is replicating conditions that are on landscapes nearby, and for the use of setbacks and berms and the perimeter adjacent to surrounding property.

Then lastly, the overall theme or concept of a native prairie approach to the landscape that performs a variety of functions and

benefits and is part of the aesthetic character of a proposed facility.

MR. MORAN: Thank you very much, Mr. Yocca.

I have no further questions, Mr. Hearing Officer.

HEARING OFFICER MCCARTHY: Thank you, Mr. Moran.

Mr. McIntyre?

MR. MCINTYRE: Thank you.

CROSS-EXAMINATION

BY MR. MCINTYRE:

Q. And good afternoon, Mr. Yocca. When you have your renditions that are marked final, is that 46 years from now?

A. Yes.

Q. Do we have any renditions of what it will look like five years from now?

A. I don't have any renditions that show increments between now and the completion.

Q. Okay, so what we have is what -- what it looks like today and what it will look like 46 years from now?

A. In the -- yes, in the images I have just

shared. One thing that I probably should have explained a little bit more is the strategy for the development of the screening berms, which is planned to happen before the development of the landfill on each portion of the site.

So -- and because this is -- this is something that's going to evolve between now and over this 46-year time frame there's many interim steps. But generally the strategy is to have the screening berm and landscape installed before a particular part of the site is being constructed or developed.

So as part of the development of the expansion of the east area, all of the screening berms and landscape would be installed around that portion of the site as part of the initial operations. And then as that area is completed and as the next phases are started over on the eastern side, all of this screening would happen on both the north and the south side and they would be done and completed in advance of that particular cell.

You may recall from others testimony that this would be done in cells. And the portion of

the screening berm adjacent to that cell and at least 500 feet beyond that would be installed before that cell was developed so that there would always be this screening berm and landscape installed adjacent to and ahead of that part of the construction.

So it's a phased approach just like the development of a landfill is a phased approach.

Q. Okay, and I'm wondering if -- well, I know Bruce can do it. The picture that has the tower in it.

A. The one from the north or the one from the south?

Q. At the 170-foot tower.

A. There's the tower right there.

Q. It just doesn't look right to me. If that's 170 foot, 113 foot would be about three-quarters of the way up there, and yet if you'll go to the slide that shows the full completed 46 years from now all of the sudden the 118 or 13 feet doesn't look that high.

A. I thought the same thing when -- as we were developing and I was reviewing these images too. And one of the things that's a factor is that

the location of this tower is way at the north -- towards the north side of the site, and so this is actually -- the screening berm is very much in your foreground and then the landfill -- the highest point of the landfill, the 113-feet height, is sort of midpoint and then the tower is back of that. So it's -- so it is accurately represented in this.

Q. So the tower is further away from us than the landfill?

A. Correct. It's further away than the highest point of the landfill that you can see on the horizon line of the landfill formed behind the screening berm here.

It's -- it's right about in here, and the highest point is roughly in the middle here, so it's beyond that.

Q. Okay, and then we don't have any -- obviously there's no photographs taken from the approach to DeKalb on I-88 looking at the landfill, if you're approaching from the east? That's over the bridge?

A. Right. We didn't take a shot from the highway itself, if that's what you're asking.

Q. Okay, and how many times have you testified as to whether the location was visually compatible?

A. How many times -- I'm sorry?

Q. Yes, for this -- for this criterion, location being compatible to the surrounding area.

A. You mean on a similar sort of project?

Q. Yes.

A. I have provided expert testimony in a similar sort of context one other time.

Q. One other time. And were -- what was your opinion then? Was that project visually compatible?

A. In that case, yes. And it was actually a similar sort of context, the landscape was different and design was different, but it was a series of techniques that was integrated in the design similar to what I have described here.

Q. Were you an agent for the applicant in that case?

A. Yes, I was.

MR. MCINTYRE: I have no further questions.

HEARING OFFICER MCCARTHY: Mr. Campbell?

MR. CAMPBELL: I have no questions,

Mr. Hearing Officer.

HEARING OFFICER MCCARTHY: Mr. Roger Steimel?

ROGER STEIMEL: I have none.

HEARING OFFICER MCCARTHY: Mr. Dan Steimel?

CROSS-EXAMINATION

BY MR. D. STEIMEL:

Q. Mr. Yocca, I noticed that in those photographs, the pictures that you took from all the different vantage points that at least half of the -- the pictures were taken from the back side of the road and at least half of the pictures consisted of the road. Was that an accidental view or was that done on purpose?

A. Well, they are all taken from vantage points that we chose, so I guess you would say it was done on purpose. The -- so.

Q. So it was done on purpose to make the landfill look in as best a light as possible?

A. Well, no, I wouldn't say that. I would say trying to get a representative sense of the way the landfill would look both the way the site looks today in the current condition and the way

that it would look at full completion.

Q. The previous witness Mr. Miller, I would have loved to have seen if he's done any traffic counts on I-88. I would be curious what those numbers are.

But in this region with NIU, DeKalb, Sycamore, you know, a huge amount of the traffic in this whole county goes on I-88. How come no views were taken from the vantage point of the side of the road on the tollway?

A. Well, we felt that having the views that we took from vantage points on the east and west side would give a sense of what that -- what you would see from different vantage points.

Q. Since the road is probably 40 feet lower than when you took it on the bridge of the tollway, wouldn't a viewpoint from the side of the road of the tollway show the landfill in a much higher elevation than any other view that is shown?

A. If I think I understand your question, I believe the answer would be yes, the landfill -- the top of the landfill would be higher from where you are down at the elevation of the

highway, which is lower than, for example, where you are on Somonauk Road.

Q. And that would be the viewpoint of anyone coming from the east, including all NIU students which I think the enrollment at NIU is 25,000, but a majority of NIU students and all others that are coming through the DeKalb County area from the east; is that correct?

A. Let me see if I understand what -- I think you're asking me the views that I show to be different than someone driving on the highway, and the answer to that is yes. The focus of my study was really looking at the potential impact on the character of the land use and surrounding area, and we attempted to address those potential impacts to the landscape plan, landscape screening. Of course you'll have different views from a variety of vantage points. I tried to share what the character is from different points around the site.

Q. You showed your cross section that included a mix of trees and shrubs, and is that -- and I'm thinking of on the west side along Somonauk and on the south side along Gurler. Is that

continuous the full length of the landfill property or just in short stretches?

A. The screening -- I'm going to show you two images to answer that. First of all, the screening berm, 8- to 12-foot berm, is continuous but undulating along the entire stretch of Gurler on the eastern portion, and then along the portion where -- the southernmost portion of the landfill footprint down towards the intersection of Gurler and Somonauk here. And the landscape plan to put in shrubs and trees of different characteristics would be continuous along that entire edge and along the prior property line. And the -- Bruce, if you go to the actual landscape plan, this is representative of the plan.

Q. So if it's continuous with those tall trees you're saying that there won't be any real gaps where you can see through it and see the landfill itself?

A. I'm not sure I would exactly say that. It depends on the time of the year. Much of the eastern portion of the landfill will be screened from a certain elevation up to the top of the

berm and then it will be filter screening with all this plant material. Now, the reason we have layers is that the filter gets thicker and thicker the more layers we have, so it's a fairly dense screen even above the 8 to 12 foot height.

Q. Those tall trees that you're proposing in your plan here that -- what size trees are put in, and then at what height, and at what height are they at their majority?

A. We haven't specified a planting size. Generally these will be planted in a -- in a fairly young age which gives them a better chance to get established in their new condition. So the smaller the tree, the better it gets established, the less water use and so forth.

I would say that these would likely be installed in an 8 to 10 foot height to begin with, and then the deciduous shrubs and understory would be -- probably get upwards of 8, 10, 12 foot in height; the overstory trees, 30 feet, 40 feet in height.

Q. And how long does it take for them -- from

planting time how many years does it take to -- for them to get at their full height of tree?

A. Well, it depends on the species. Some of the faster growing trees probably in the 10 to 15 year time frame, some of them may be longer than that.

Q. And I know you recognize that the evergreen trees are the only real trees that provide visual screening year-round. Are there to be evergreen trees the full length of that dashed line as well?

MR. YOCCA: If we go back, Bruce, to the landscape plan.

I think -- well, you really can't see. The answer is that there are evergreen trees planted within that whole stretch but it's not a continuous row of evergreen trees, it's a variety.

Q. Scattered a hundred feet apart or what, roughly?

A. Actually they're more -- I would say more clustered. So we would have a whole hedgerow that would have maybe 30 percent or 40 percent evergreens and then 70 percent deciduous within

that, and that would be represented along this stretch. So maybe in that 20 -- 20 to 30 percent hedgerow.

Q. So there would be numerous gaps during the seasons where there's not leaves on the trees will there be considerable gaps that the landfill will be visible between the branches?

A. I don't think so, and the reason why -- and, Bruce, if you can pull up a couple of hedgerow photographs -- by getting this layer, even with the deciduous trees the leaves come off and you still get a pretty -- here we go -- I mean, yeah, you can make out of things behind that but because this is in the foreground it's mostly what you see. So, yes, if you studied it you may be able to pick out between trees and branches, but it's providing a fairly dense screen even in the wintertime.

Q. These are your proposals for landscaping for this allocation. Do these proposals have to be followed?

A. Yes, they are part of the application and are part of the plans.

Q. What happens if they are not followed?

A. I'm not sure what -- I believe the County would have a mechanism to ensure any aspect of the plan would be completed. I'm not sure exactly what that procedure is.

Q. I'll wait to hear from Ms. Cipriano on that. Are you familiar, Mr. Yocca, with the Noxious Weed Law of Illinois?

A. Yes.

Q. What does that law state in general terms?

A. In general terms it prohibits allowing noxious weeds to thrive on your property -- noxious weeds or weeds that could spread.

Q. Why wouldn't you want those weeds to spread?

A. Well, there are some weed plants that will spread or invade into natural areas and actually out compete the native plants or more desirable plants, so.

Q. Would it also be that you don't want those weeds to spread onto neighboring properties, such as farm fields?

A. That too, yes.

Q. Because it would be very difficult to grow crops with these weeds in those fields?

A. Yes.

Q. What steps are planned to be taken in your landscaping plan here that no noxious weeds are able to stabilize themselves in some of these areas, such as your native areas?

A. Well, part of the development of this kind of landscaping includes a maintenance and management operations plan that uses several tools to manage the landscape in a way that prevents noxious weeds from thriving and so -- and that goes from establishment all the way through long-term maintenance.

In establishment there are certain practices that are done with the soil preparation to minimize the potential for weed growth and then weeds are managed during the establishment.

I showed you that picture of the initial cover crop of annual rye on a site that was planted with prairie. Generally we will recommend mowing that a few times during the growing season and that will help keep the weeds in check, help them from going to seed while the native plants are getting healthy and getting situated.

Once the prairie is well established then there are other practices that take over that are more about maintaining a healthy condition for the prairie that will -- healthy prairie will actually out compete the weeds.

Q. So during the entire lifetime of this landfill there will be practices taken on the property of the landfill to make sure that there aren't any of these weeds that become situated there?

A. Yes, sir.

DAN STEIMEL: Okay. Thank you. I have no further questions.

HEARING OFFICER MCCARTHY: Okay. Ms. Cipriano?

MS. CIPRIANO: And, Mr. Steimel, if it's okay if I can just get through my questions and then I'll come back to your point that you made?

DAN STEIMEL: Sure.

CROSS-EXAMINATION

BY MS. CIPRIANO:

Q. A number of questions of mine have already been addressed, but I think you hear a lot of concern particularly with respect to the screening and the screening from the I-88 perspective. So if

we could perhaps just do two things, pull up the perimeter screening and setback -- yes, Bruce, you're amazing -- and also within the report that was filed as part of the application there is an encaptive visual from I-88, and I have that in front of me.

And the question -- series of questions I have relate to that berm that's along the northern side of the landfill. So just to sort of go through again, there's an earthen berm, correct?

A. Yes.

Q. And what is the height that is being proposed for that berm?

A. 8 to 10 feet, a minimum of 8 feet and a maximum of 12 feet.

Q. And that will -- meaning that it's 12 feet at certain locations and 8 feet at others, or it might be as high as 12 feet? Do you understand what I'm asking?

A. It will be a minimum of 8 feet from the existing ground to the top of the berm and a maximum of 12 feet, so basically undulating from existing grade along that perimeter up to a

height of 12 feet.

Q. And I'm particularly more concerned about the east unit but, you know, if you can help me as well with describing the screening of the west unit from that -- from the north side well. So there will be an earthem (sic) -- or earthen berm on the east side of the unit, correct?

A. Yes, that comes all the way to this point here, which is where we pick up the dense vegetation of existing trees just on the east side of union ditch.

Q. Then the green depicts generally landscaping?

A. Right.

Q. And so the land -- so when you consider the landscaping -- let's go back to the east unit. When you consider the berm and the landscaping, what height are we talking about in terms of the screening?

A. The total height -- and I'll talk in terms of establishment, because this is something that evolves over time. Initial establishment, we have got trees that are -- and part of this is this layering. So we have -- you bring them out horizontally down to existing grade and then up

on top of the berm. So the maximum height that we'll get upon establishment is probably about 20, 22 feet when you put a 10-foot tree on top of a 12-foot berm. So that will be the highest. Then because that will have a stem we have got understory vegetation in front of it that will be more leafy and bushy, you know, below that. So continuous screening from ground elevation all the way up to initially 20 feet, eventually more like 40 or eventually 50 foot tall will get -- well, on top of the 8- to 12-foot berm. So the whole thing in 25 years could be, you know, in the 60 foot range.

Q. Could the berm be built taller, and would that help with better screening from that perspective?

A. I guess it depends on what you think would be better. The height of the berm really screens the ground plane beyond. And so the -- one of the purposes is to screen the operations during the construction of the landfill. The height of this 8- to 12-foot continuous berm that you can't see the other side of is screening the ground -- this ground plane before the land form

gets built up and as it starts to get built up. Over time this vegetation that is put in is providing that screening.

The -- we could make this a little bit higher in some places. It's not going to do anything to screen, you know, the majority of the operations during establishment. And by the time we get to here and the highest points of the landfill, this would be much more densely filled out. So I guess it's a little bit subjective.

Q. With respect to the filling of the landfill, are you familiar with the company's operational screening berm details?

A. Uh-huh.

Q. So you're familiar with what they proposed in the application to screen ongoing operations. So we're really talking more about the perimeter berm and -- and taking into consideration, as you could appreciate, the location of the school, location of residents, as well as the future land use plan that was also included as part of the application to make that as, you know, visually positive as possible.

And that was the reason for my question is whether you thought that berm could be built higher to provide even more screening from that perspective?

A. Well, there -- I'll answer that in a couple ways.

Q. Okay.

A. First there --

Q. There's lots of questions in there too, sorry.

A. I see what you're getting at.

Q. Yeah.

A. Part of it -- there are some parts where because of the grade difference between on-site and basically the swale along the highway and you know that's up higher in some places, as we get further west we have more of a differential. That's one of the reasons why we don't have berms along this edge, because it's basically on a side slope and so it's not practical to build a berm on that condition. As it gets flatter as we get over east we have got more room and have the berms. There are some places where we get up higher.

Part of our plan was to find this balance

with a combination of the earthen berm and the vegetative screening and getting a healthy suitable soil condition and habitat for the plants. One of the things is as you get higher in elevation on berms it's a very dry condition. And one of the things that we potentially have done with the design is to do it in a way that doesn't require permanent irrigation. It's more from a water conservation strategy. It's pretty tough, because it's so dry on top of this berm once you get above a certain height, to get enough soil moisture in there to have a healthy stand of trees on top of it. So what you tend to do is find that balance between these two things.

Q. And then Mr. Steimel had mentioned the concern that he had regarding the change in seasons and the effectiveness of the screening just because of our fabulous seasons here in the Chicagoland area. So will Waste Management be sensitive to trying to select trees that will provide the longest term screening possible?

A. Yes, and -- in general yes. Now I'll say how I think that we have addressed that. It gets back

to having a landscape -- a vertical landscape that blends into the character of the landscapes which you see elsewhere in the area so that it's not something that stands out just when you're on-site. And so the clustering, the grouping and characteristics of color and texture of the different tree masses and the way that species are massed together is part of that strategy. So rather than having one continuous treatment along the entire edge, by breaking it up into different conditions it is not just visually screened but it's a way of blending in that provides maybe a different type of screening.

So it -- so our landscape strategy is really a combination, it's physical screening but it's also this idea of a screening that fits into the context of the surrounding area.

And the -- so we have got a combination of evergreen trees and deciduous trees, some of which are native, some of which are ornamental that are more hardy but would have been planted in the area historically because they are good windbreaks or good durable species, and that combination is what makes up the totality of our

screening berms. So part of it is the physical screening itself and part of it is the character of the screening so that it fits in.

Q. Now, in selecting the landscaping did you also consider the benefits that landscape screening can have from a noise perspective as well?

A. Well, yes, and we know that the screening will provide some level of sound discontinuation, as does the prairie cover itself. And actually the more surfaces upon which sound has to be stopped it will provide some level of sound discontinuation, both the vertical screening berm as well as also the horizontal landscape.

Q. And with respect to traffic, I believe you were here when Mr. Miller was testifying and he had also expressed concern that landscaping needed to be sensitive to traffic flows and visibility. Did you take that into consideration in your design as well?

A. Yes, and so having ample setbacks where the on-site drive interfaces Somonauk Road and the site distances, yes.

Q. And is -- and just back on your experience very quickly, have you been involved in projects

wherein -- no offense to Waste Management, but where your job was essentially to provide a landscape design to screen a particular project or site that might not be in and of itself very attractive?

A. Yes, I --

Q. So your understanding that -- so you have experience with understanding the -- you know, the challenges of not just landscaping to make something look -- you know, a building look more attractive or trying to address green initiatives, but also understanding that you are trying to make this more compatible and visually acceptable to the community?

A. Yes, and that -- that's very much the spirit of this plan is exactly that. And just by way of experience, for example, I'm working right now in the City of Houston and looking at screening and beautification in a primarily industrial area, the whole east bay.

And so a lot of these initiatives are using a combination of strategies that provide the screening of unsightly sites as well as -- as well as a sense of place or a sense of local

character at the same time is behind a lot of our work.

MS. CIPRIANO: Thank you.

And if I may, Mr. Hearing Officer, would this be a good time to respond to Mr. Steimel?

HEARING OFFICER MCCARTHY: Yes.

MS. CIPRIANO: Essentially, should the County Board decide to approve the local siting application, they are able to attach conditions to that approval. That could include conditions requiring that the landscape plan be as stringent as what was presented in the application. So that is all dependent on whether the County Board chooses to approve a -- approve the siting application.

DAN STEIMEL: And that also pertains to any of the other parts of the application or the host agreement that they're required to follow?

MS. CIPRIANO: Where -- and again, it is -- you know, it will be a decision that the County Board will render at the time that they choose whether they're going to grant the application or not that those special conditions can -- you know, can address issues where we

believe it's necessary for there to be a condition for any enforceability type of issue.

HEARING OFFICER MCCARTHY: Okay. Members of the Committee have questions of this witness?

MR. HAINES: I don't. Thank you.

HEARING OFFICER MCCARTHY: Mr. Andersen?

MR. ANDERSEN: Yes. Ken Andersen, District 3.

CROSS-EXAMINATION

BY MR. ANDERSEN:

Q. Are there ways that we can make the final design -- can we incorporate some energy saving things into this? I'm not sure what, maybe some solar panels? Can we place them into the side of the south hill or anything that can help produce some other types of energy?

A. Are you talking about using the creation of this in some way to provide renewable energy as a source?

Q. Yes.

A. And I would have to say that's not really my area of expertise. I do work with others that look at renewable energy and opportunities for that. I know one thing that's being

contemplated here is the gas recovery to energy system that is part of I know other landfill facilities that Waste Management operates.

Whether or not the facility itself would be -- provide any better opportunity for solar collection, I suppose it could. I don't know enough about those systems to know if the transmission line -- you know, if there would be a deficiency there at this site versus other sites where it's being used or not.

Q. Okay, thank you. Can any of this -- when this is all finished and all the contours are in and everything -- I think I know the answer to the question because it looks fairly steep, but could any of this be conventionally farmed such as row crops, or is it too much of a slope?

A. It's probably too much of a slope to effectively do row crop agriculture, and part of that is because, you know, the site that's being tilled is exposed for a period of time and a large part of the whole landscape strategy here is to do it in a way that stabilizes that soil, keeps the water on-site.

Q. The row crop farming would probably allow too

much erosion, correct?

A. Certainly there are areas that are of similar topography that are row cropped using contour farming and kinds of things. Whether or not it would be practical here, I'm not real sure.

Q. Looking at this berming plan, setback plan, there's an area right here on Gurler and along the south side of union ditch. The dashed line is the berms or the plantings?

A. The dashed line is the berm, and then the green is the plantings.

Q. Why is there no berming in that little area along Gurler and then going along the ditch?

A. This here, well, the footprint of the landfill is north of union ditch. There's quite a bit of vegetation along union ditch itself, and we didn't think that it would really add anything to the screening by adding a berm there.

Q. Okay. What effect would that type of a setback here -- I think you said it's like a hundred foot from the edge of the road?

A. Right.

Q. What effect will that have with the snowplowing? Will it create more drifting on

the road or will these act as natural snow fences and keep the snow from drifting onto the road?

A. It would probably have more of a tendency on the latter, because this -- this vegetation will be left -- likely be left dormant in the winter and have less capability for snow blowing off of these surfaces.

There would be -- and it doesn't show up in this photograph or this drawing, but there would be a mowed edge next to the road, you know, a narrow path.

Q. Okay, and what types of uses can we expect to use this site for during closure and post closure?

A. Well, that's -- that's a good question and one that we contemplated some in the development of this and trying to anticipate that knowing that that's something that will be considered over the development of the landfill.

One is tying into the recommendations of the Greenway Plan and actually having an extension of the union ditch greenway come through the site and could link with other

trails or other more passive type of open space uses on or around the completed land form.

There will be open water ponds with naturalized edges that will provide habitat for birds and fish and other things, so there could be fishing, hiking, bird watching, those types of things without really doing much. Then there's other sorts of recreational uses if those facilities were developed.

Q. Okay, and this might be for somebody for management of Waste Management, but let's say the west end is done, it's all reached its final contours, we have got all the dirt on, the grass is growing, everything's looking pretty, what type of -- you mentioned that there would be site observation of the facility or looking at it, but what type of human activities could take place on there, or would that not be allowed because of the people getting in the way of the continued activity of going down there to the east end?

A. You're saying in terms of the public use of this project site?

Q. Yes.

A. I think that there could be potential public use. How -- and this is not my area necessarily, it's more of an operational issue, but maintaining access for the ongoing use here and still getting public access here, I think there's a way that could be worked out, but we haven't really looked into that.

Q. Okay.

A. But I think that would be primarily the issue.

MR. ANDERSEN: Okay. Thank you.

CROSS-EXAMINATION

BY MR. STODDARD:

Q. Good afternoon.

A. Good afternoon.

Q. I don't know if this is your -- I suspect it's not your area of expertise, but could we amend the host agreement to get Bruce's raise in there?

A. You're correct, that's not my --

Q. Okay. Well, they didn't object.

All right. Perhaps more seriously, can we talk, let's see, about the berming, you say you were familiar with the operational procedure regarding the berming relative to the active

areas of the fill?

A. Yes, sir.

Q. And I believe it was testified earlier that the berms would be built in advance of the fill a certain distance, 500 feet. Can you say what that corresponds to in years, how long is it going to take them to move that -- and what I'm getting at is you said it's going to take, you know, 10 to 15 years for these trees to reach maturity.

A. Right.

Q. Will there be active work being done in areas that are just at the edge of the berm as the trees are still reaching maturity?

A. The answer to that question is yes. The trees will not reach their mature heights before the landfill area adjacent to them is being worked on. The area of operations is largely screened through a combination of the earth berm and the vegetation, and a lot of this vegetation even at 12 to 20 feet high is going to provide a significant level of screening.

Q. Okay. Can we talk about that for a bit. My geometry isn't what it used to be, but if you

have got, let's say, a 30-foot tree and 12-foot berm -- or 10-foot berm on average, and 1300 feet away, 1500 feet away you have got the 113-foot tall hill. How far away would you have to be standing in the other direction in order to be able to see the top of that over the top of the trees?

A. I'm afraid I don't know the answer of how far away you would need to be. I think maybe we can get a little bit of a sense -- Bruce, if you go back to the one image of -- looking from Gurler Road to the screening berm, simulation of the screening berm from Gurler Road. Yeah, No. 54 here.

So here's -- this is going to show you how we created that image. And so here's -- these lines indicate the topography lines of the proposed landfill. So they are farther apart -- this is the lines of the screening berm, so this is going from grade up one, two, three, four, five, six, seven, eight, nine, 10, 11, 12 feet. This red line is the top of the screening berm. Then this is the top of the finished landfill from that view on Gurler Road.

MR. MORAN: Mr. Yocca, just to interrupt you, but that land form is showing peak heights at various points of the 113 feet that we talked about, correct?

MR. YOCCA. That's correct. So this is the highest condition that will happen.

And so you can -- actually could you step back, Bruce, for a second?

So here you can see existing grade, and then we add the land forms.

MR. MORAN: Can you point the cell towers out, Mr. Yocca, if you can just see those as well?

MR. YOCCA: Yes. Here's the cell tower that's on the north side of the site south of 88, and then here are the two that are north of I-88. So then you can see here's the -- and all of this -- basically all this dimension is the full landfill. The bottom part of it is screened with the screening berm. Then here you can see the cell tower and it -- because it's beyond, as I was explaining before, it's lower than if it were closer to you in this photograph.

Then this red line comes up that shows the top of the screening berm. And then when we layer in the vegetation you can see the vegetation both on the screening berm in front and then on the land form behind. And then here are the trees, and so you can see these are about, oh, 15, 20 feet in height, so not full maturity and, you know, they will get -- they will get taller than this. But this is kind of a -- maybe a 10-year window.

Q. (BY MR. STODDARD) Okay, so this is from Gurler, so we are 1500 feet from the top of the --

A. 1500 feet from the top of the highest point of the landfill.

Q. Okay, and if we were on I-88 we would be about the -- due north of this point on 88 this would be basically the view as well?

A. Similar.

Q. The same distance?

A. You're a little bit lower on 88 but similar at this point of the east part of the landfill.

Q. Okay. Now, some mention was made of the approach to the landfill as you come in on 88. And as 88 works its way north you would be

looking due west into the active area of the landfill. Is there any plan to build that berm before they begin operations in the west end -- that eastern most berm, the north/south berm on the east side of the facility to block the view of the active area of the fill from 88?

A. This?

Q. That.

A. This part here?

Q. Yes.

A. I'm not sure the answer to that question. I know that there will be from -- starting from about the middle this way, this sedimentation basin and likely this berm would be created at that point because this sedimentation basin takes -- is part of the surface water management system for the whole eastern part of the landfill.

Q. Would it be possible, do you think -- I don't know the logistics of building that berm before they get too far out in that direction, but would it be possible to build that berm at the beginning of operations so we don't have to have our guests view the active area?

A. I think it -- I think it would be possible, and the only reason I'm not being a hundred percent firm is that part of it has to do with balancing the earth work and the material for the berm is coming from materials on-site and so, you know, having -- moving from here to there, that's why I think that in the integration of this that much of this probably would be done.

Q. Okay. Let's see, I think Ken asked you already about possible end use, you listed a few. Would community gardens up on top of these things be possible as well?

A. Well, it certainly would be possible. It may be a bit remote for people that want to do active gardening, so it's more of a problematic issue. I think there are lots of things with a -- really a broad, you know, nearly one square mile ultimately of -- and one of the things that we pointed out in the -- in our report is that this would be one of the larger prairie recreations of this sort in the County and would probably be pretty interesting from that standpoint, more of a passive end scale.

Certainly these are some of the other

things that we did anticipate as part of the end use or after use of the entrance facility and the structure. And potentially even some of the farm buildings that are on-site now that that could be some sort of community use center there. We talked internally about that being a -- this idea of a sustainable demonstration for, you know, more of the public scale.

Q. Are there any uses -- and, you know, the golf course you showed from Settler's Hill comes to mind immediately -- where in order to maximize the appeal of that type of facility some minor tweaking to the final topography might be desirable; and if so, would that be something that could be done, and if that's true is there a point in time when we need to be thinking about that?

A. Certainly there could be a more active end use such as a golf course integrated into the land use plan, and the land area is there and there's certainly opportunities to integrate a golf course into the end uses of a landfill like this. And it probably -- well, not probably. It needs to be decided as a direction before

getting into the construction of this part of it (indicating) and could be worked into the plan.

So physically, yes, it could be done. There are certainly operational issues and other sorts of things that go along with a golf course to evaluate whether or not it makes sense from a need standpoint. But yes, there are -- it could be integrated in the plan.

Q. And you say that really should -- whatever that's going to be, it should pretty much be thought of by the time you start construction there. Do you have any feel for what that's going to be when they open up that area? I don't know if they have said.

A. I wouldn't want to contradict one of my colleagues who specifically -- I know there's a number of years to complete this part before coming over here. I can't recall exactly when that is.

MR. STODDARD: Okay. Yeah, it just -- you don't want to make plans too far in advance because we're not the ones that are going to be using whatever's up there.

I think that's all I have, so thank you

very much.

HEARING OFFICER MCCARTHY: Okay. Do you have a question?

MR. ANDERSEN: No.

HEARING OFFICER MCCARTHY: Let's take -- I know there may be other questions, but we have been at this again for almost two hours so let's take a break and we'll continue.

(A recess was taken at 4:12 p.m. and proceedings resumed at 4:29 p.m.)

HEARING OFFICER MCCARTHY: Okay. Let's continue the public hearing.

I think we heard from all the members of the Committee. Is there any member of the County Board that may be present that would have a question of this witness?

Okay. Members of the public have any questions of this witness?

Yes, sir.

MR. MELLOTT: Good afternoon, Mr. Yocca.

HEARING OFFICER MCCARTHY: Would you state your name again, please.

MR. MELLOTT: My name is Kerry Mellott.

I have several questions for you, sir. You stated that green practices are emerging. Could you characterize why you believe green practices are emerging? What does that mean to you.

MR. YOCCA: Well, in general emerging -- we're at a point where a number of these green factors have been in place in a variety of locations throughout the state and other parts of the country, still not entirely widespread. So we're on a trajectory with some of the techniques that I have been describing here. For example, a strong focus on integrated water and landscape and sustainable landscapes, low input landscapes, water conservation, those kinds of things. Those are emerging practices that are every year becoming more widespread.

MR. MELLOTT: So they are emerging in the sense that more and more folks are using these practices?

MR. YOCCA: Yes.

MR. MELLOTT: Would they also be emerging in the sense that perhaps the techniques are changing?

MR. YOCCA: Well, in some ways no. The techniques are really a fundamental approach towards water and building soil health and adapting local ecology in a way that's appropriate for that land use. There are new specific products and materials. For example, I share with you the porous paving example, and that is a technology that has been in place really for 10 years in this country and 30 years in Europe.

The -- so the technology is the same. The products -- the specific products come out every year and are new project products that have these qualities that come out every year. So it's a combination.

MR. MELLOTT: Okay. I think you said you're 13 years with your firm; is that correct?

MR. YOCCA: Yes, sir.

MR. MELLOTT: Did you have previous experience in this field before you were with the Conservation Design Forum?

MR. YOCCA: My whole career is on -- is planning and landscape architecture.

MR. MELLOTT: And that began with your

bachelor's degree in 1985?

MR. YOCCA: Yes, sir.

MR. MELLOTT: Okay, thank you. Are you familiar with the history -- the ecological history of good soil conservation practices and other sustainable practices for the ecology?

MR. YOCCA: I'm sorry, say the first part again.

MR. MELLOTT: In a historic sense, that is -- let me put it this way: Before 1985 are you familiar with practices that were accomplished and considered good practice, you know historically going back from 1985?

MR. YOCCA: Generally, yes.

MR. MELLOTT: Generally.

MR. YOCCA: I'm not a specialist in the soil area, I work with other colleagues that are, but generally.

MR. MELLOTT: Would you say that those practices -- you know, let's say over the last century that those practices have changed markedly from then until now.

MR. YOCCA: Practices for --

MR. MELLOTT: Regarding soil conservation,

erosion, different sorts of materials that are used in landscape design and farming and other ecological purposes?

MR. YOCCA: In general, yes, I would say so.

MR. MELLOTT: So then I'm wondering if the concept of green as an emerging concept will continue to emerge in the sense as it has historically, that what's considered best practice today may or may not be best practice in, say, 10 years, 20 years. Would there be a chance that emergent could be defined as such?

MR. YOCCA: Well, there -- I'm confident that there will be new ideas, new approaches to address the issue of sustainable practice, healthy, local ecology and some other things as we continue to apply these concepts.

MR. MELLOTT: So you would agree that change could come, that what's sustainable and best practice today might be somewhat modified in the future?

MR. YOCCA: That's a possibility, sure.

MR. MELLOTT: And what is the length of the term of this landfill proposal?

MR. YOCCA: It's 46 years.

MR. MELLOTT: Do you think that during that 46-year period there could be some sort of change regarding the landscape design that would be more beneficial than the one that is proposed in the siting application?

MR. YOCCA: Well, the sort of change that's likely to occur or potentially going to occur over this next period of time is probably more to do with what I was mentioning earlier, specific products and materials that are supportive of the idea. What's not going to change is the overall aggregate landscape approach or the benefits of adapting a native DeKalb County landscape to this landscape. And the -- because the native plants and the native ecosystem are thousands of years old and it's replicating those conditions and those qualities, that's really the inspiration behind the larger-scale landscape approach that is part of this proposal, so that isn't going to change because that predates even the hundred year time frame that you were referencing.

MR. MELLOTT: Are you familiar with the

Mallard Lake landfill in Bloomingdale, Illinois?

MR. YOCCA: I'm -- very little. I'm familiar with the name and where it is. I have not actually been out there.

MR. MELLOTT: So then you would not be familiar with the land use prior to the landfill commenced subsequent to the beginning operation of the landfill?

MR. YOCCA: No, I am not familiar with that.

MR. MELLOTT: Okay. With respect to the DeKalb Landfill, the proposed expansion. 46 years, would you say that's a fairly long time in history?

MR. YOCCA: I would say it's a fairly short time.

MR. MELLOTT: In our local experience history?

MR. YOCCA: It's relative. I mean, it's long from a person's lifetime standpoint but it's a short time in the ecological standpoint.

MR. MELLOTT: I believe on one of your slides you showed the subdivision that is called Chestnut something or other?

MR. YOCCA: Chestnut Grove.

MR. MELLOTT: Chestnut Grove, thank you. Just north of the proposed site. Do you know that Mallard Lake, Shick Road, Bloomingdale Road and the surrounding area of Mallard Lake landfill was once farm fields and didn't take very long, less than 46 years, much less than 46 years for it to change from farm land to subdivisions surrounding that landfill? Are you familiar with that?

MR. YOCCA: I know that area, I have been through there before and have certainly seen development.

MR. MELLOTT: Do you believe that for the DeKalb Landfill expansion project this same thing could happen; that is, that the farm use now that surrounds -- mostly surrounds the landfill site could, in fact, begin to be used in a more residential mode, perhaps turn into subdivisions?

MR. YOCCA: Well, I'm not really sure. I know that there is the Chestnut Grove development north of I-88 that was planned and started. I'm not aware of any plans for most of

the surrounding land around the landfill to be anything in the foreseeable future.

MR. MELLOTT: In your experience since 1985 in this kind of work have you seen other project sites develop from open space or agricultural use more toward residential or institutional commercial use in the period of, say, 20 years?

MR. YOCCA: I have witnessed that sort of development in certain locations, yes.

MR. MELLOTT: If that were to happen in DeKalb how would that impact your design for a sustainable landscape and screening strategy?

MR. YOCCA: If there were other land uses adjacent to or in the proximity of that agricultural in certain locations, is that what you're -- I'm not sure I'm following exactly what you're asking.

MR. MELLOTT: I'm asking that do you believe that in, say, 20 years the area around this proposed site could change from what it is now to subdivisions? And the second stage of that question was how would that impact your design, the design that's been presented for the

siting authority?

MR. YOCCA: Well, if there were plans and they were acted upon to change land use and to develop other land uses, including residential as you're suggesting, then the landscape screening approach would still be the same, what we have proposed here. In fact, we have a residential neighborhood that is north of I-88 that we considered in looking at the landscaping and screening strategies.

MR. MELLOTT: So you believe there would be little impact or no impact on your design in, say, 20 years if it were residential surrounding the landfill site?

MR. YOCCA: I don't believe so.

MR. MELLOTT: Let me ask a question about materials and design. I presume -- or I'll just ask you, are they compatible with the surrounding area as far as their ability to be long-lived?

MR. MORAN: Objection, relevance. It misstates the standard. We're not talking about compatibility.

HEARING OFFICER MCCARTHY: Overruled.

MR. MELLOTT: I believe the relevant -- the concept here is to screen the large hill from the surrounding views. Longevity of your plants and your other design materials certainly will impact whether or not they will screen over the long run and fulfill their purpose.

So the materials that you have come up with in the plan, are they long-lived and how will they be impacted by the site?

MR. YOCCA: Well, the plan for all the landscape materials are that they are ongoing systems -- ongoing landscape systems. So the prairie, for example, is one that has a perennial system. The top part goes dormant, it dies off every year, and then the roots stay in and it generates new material every year. The trees and shrubs that are planned are perennial plants as well and are intended to be permanent, long-term -- long-term fixtures as part of the landscape.

And part of -- well, really the key to long-lived landscapes is with the -- creating a habitat that is suitable for those plants, and so the preparation of the soil, the -- how --

where they're located and all that is all part of -- is all part of that, so that is the intent of this design, if I understand your question correctly.

MR. MELLOTT: Could we have the slide back that shows the aerial view schematic and where the screening is around the site, please?

A good part of the screening on the south side of the site happens to follow the road that will bring the trucks back to the new section of the landfill, the proposed section. It looks to me like the road is very close to the screening. It's little hard to get a sense of scale here. But is that the case, is the road close to the screening for a good length of the distance of the berm and the screen?

MR. YOCCA: I can trace -- here's the road here (indicating) to there.

MR. MELLOTT: What would the distance be between the road and the edge of the screening approximately?

MR. YOCCA: Here it's about a hundred feet. Here it's a little bit closer than that. I'm not sure the exact -- exact distance.

MR. MELLOTT: Okay. Does there need to be some separation between the screening and the truck traffic and other vehicular traffic in order to provide for the health of the screening, the shrubbery and so on?

MR. YOCCA: No. The access road won't impact the viability of the landscape screening.

MR. MELLOTT: Are you familiar with the condition of American arbor vitae and how they apparently respond to the fumes, smogs, whatever you would like to characterize it as, the emissions from automobiles and how they typically turn brown along roadways?

MR. YOCCA: I have seen that in some cases, yes.

MR. MELLOTT: How does that occur?

MR. YOCCA: I'm not really sure what the plant physics are. Some of the -- some of the impact that I have seen on plants like arbor vitaes and others is with impact from deicing salt, sometimes it is with surface water runoff that has sediments in it, so forth. I know that part of our design here is to look at the surface water management very closely and

integrate that into a system of management strategies that deal with that sort of water element.

MR. MELLOTT: Thank you. That leads into another question I have. Is part of your green designs and use of the landscape, the screenings and so on for remedial capture for any runoff from surface water from the landfill itself? Would that be considered good design as a green design?

MR. YOCCA: Well, the landscape is intended and designed to receive rain and keep it very locally on-site, which is part of the characteristic of the prairie. And its interface with the soil in that condition is that it does intercept that rain and infiltrate that water close to where it falls and then take some of that rain and put it back into the atmosphere.

MR. MELLOTT: Okay, so back to the separation again between the roadway on-site and the plantings, you mentioned there is a distance of some hundred feet or less, perhaps much less in some areas. Are there provisions within your

design to manage or handle with regard to longevity of the plantings from things like calcium chloride that might be thrown down to control dust or other chemicals, salt as you mentioned a minute ago that we talked about an arbor vitae problem? What sort of conditions or management plan do you have in your design to handle those sorts of elements that might be present at the landfill?

MR. YOCCA: Well, as I said, the majority of the -- well, the surface water management system and taking those elements off of the paved surfaces are directed into bioretention areas, and the -- if there is any other constituents, there's also a turf fringe adjacent to that pavement. So there -- you know, there's several elements of buffer or landscape elements, you know, adjacent to roadways that are going to manage those elements.

MR. MELLOTT: Okay, thank you. Is there any sort of concern for fire resistance in your plan with regard to the shrubbery, the growing plants through the seasons? Could you

characterize what the fire resistance is?

MR. YOCCA: Well, I'm not sure I'm following your --

MR. MELLOTT: Well, part of your plan shows a natural prairie; is that correct?

MR. YOCCA: Yes.

MR. MELLOTT: Is fire part of the life cycle of natural prairie?

MR. YOCCA: Fire is a stewardship and management tool of native prairie that is oftentimes and we often -- or usually recommend that be part of the management of a true native ecosystem.

So if your question is how would you manage the prairie with fire adjacent to these shrubs that may not be tolerant of fire, there -- if that was the case we would have a turf edge that would be a fire break and so it would keep the fire from coming to parts that we don't want to have managed that way.

MR. MELLOTT: And if the site, which is really quite large, were subject to an inadvertent prairie fire, how would that prairie fire be managed?

MR. YOCCA: Well, the best way to manage the prairie is to be proactive, and that's one of the many benefits of a berm management -- manage or control berm is that it prevents the possibility of an uncontrolled burn. But regardless, the landscape would be designed with breaks that would not -- that would contain that into smaller polygons. That's part of -- the designing the berm into the plan is part of the design of the native landscape system.

MR. MELLOTT: So then you would recommend controlled burns as a part of your design?

MR. YOCCA: Yes.

MR. MELLOTT: How does that fit -- perhaps you're not the one to answer, but let me ask it anyway because you might know. How does that fit with the management of the site itself with operations at a landfill?

MR. YOCCA: Well, I do know that burn management -- controlled burn management in landfill settings is a compatible thing. I know that it's done in landfills. In general the concepts are quite compatible. It's like -- it's like any aspect of the landscape, it's

needs to be considered, integrate into the design, planned for and implemented as part of that.

MR. MELLOTT: In the planning for your design did you interface with the Waste Management folks with regard to ignition sources for prairie fires or any sorts of fires with respect to the landscape; for instance, their methane flare, truck traffic, lightning strikes? Was there any discussion of that in your plan.

MR. YOCCA: We did discuss the idea of prairie management through controlled burning, and yes, we have talked about if there were any things that would be incompatible with the prairie landscape, and all of those things have been addressed. There's the -- you know, the things that you just mentioned, the -- where there is any sort of methane gas component then that's kept away from -- you know, from the native landscape that would be intended to be burned.

So there is -- this is what I was referring to earlier in terms of the design is done in a way to have all these things work

together.

MR. MELLOTT: So you're comfortable with your design as far as its compatibility with the landfill operation?

MR. YOCCA: Yes, sir.

MR. MELLOTT: Okay. Thank you. One other thing, in the schematic here it shows an inset area which is not apparently part of the site. Is that privately owned?

MR. YOCCA: This site right here?

MR. MELLOTT: Yes.

MR. YOCCA: Yes.

MR. MELLOTT: Do you know what the use is of that site?

MR. YOCCA: It's farming.

MR. MELLOTT: It's being farmed, all right. In your work as a landscape architect are you also familiar with the potential uses of this site as a result of your landscape architecture for habitat for wildlife? Could you make any comments on how that might or might not become or is a wildlife habitat area?

MR. YOCCA: Well, I think I was discussing this earlier in answer to one of the other

questions that a native prairie ecosystem, as its intent here, would be habitat for some birds, beneficial insects, butterflies, other types of fawn and animals.

MR. MELLOTT: Could this perhaps become a wildlife habitat for deer considering that you have water in the union ditch, you have corn in the area that's being farmed, you have a wonderful looking screening area that would make for refuge? What would be your opinion on that?

MR. YOCCA: There could be deer inside, sure. I don't know if they would choose this over other areas where they're feeding and nesting now.

MR. MELLOTT: I believe you showed on one of your other schematics -- I think it was your testimony, I'm not quite sure, it might have been the previous witness -- a wood lot to the south of the previous site along Somonauk Road, a fairly extensive lot it looks like from the aerial view. In your experience having worked with these kinds of habitats, do the deer travel back and forth sometimes between these different habitats?

MR. YOCCA: Yes.

MR. MELLOTT: Would you envision the possibility that because this site is very large and there apparently is a great deal of cover that there could be, in fact, at some point in time in seasons a very large number of large wildlife in the area?

MR. YOCCA: I'm not really sure if that would be the case.

MR. MELLOTT: Has the Waste Management company discussed with you any of the possibilities that this might become a wildlife habitat in any way?

MR. YOCCA: Well, yes, we have talked about part of the -- part of the approach for this native landscape is that it's -- it does provide wildlife habitat as the way I have described to you.

MR. MELLOTT: Well, was there any discussion regarding the screenings with respect to how far set back from the roadway they might be in order to provide drivers time to respond to, say, deer or other fairly large wildlife that might be moving back and forth in this

area?

MR. YOCCA: Well, as I think I mentioned before, we did address setback of the vegetation from the roadways for sight visibility. I'm not sure if that's your --

MR. MELLOTT: In those conversations was wildlife a part of those conversations?

MR. YOCCA: No, I don't think we really talked about that.

MR. MELLOTT: Not that you can recall?

MR. YOCCA: Not so much that I can recall.

MR. MELLOTT: Thank you. Okay. I think that's all my questions. Thank you very much.

Thank you, Mr. Hearing Officer.

HEARING OFFICER MCCARTHY: Yes, ma'am.

MS. MOTT: Gracie Mott. A couple of quick questions. Can you bring up Slide View 2?

Can you describe where we are in this picture?

MR. YOCCA: Yes, this is taken from Somonauk Road just north of the bridge. Here's the bridge over I-88, so we're standing up just north here looking south and east in this direction. So that's south and east, and here's

the outbuildings that are on the landfill site now at -- right at -- near the entrance on Somonauk Road on the other side of the highway, and then here's the existing landfill here. And the highway is down set below grade.

MS. MOTT: On the right in the center one?

MR. YOCCA: This is exactly the same view, just with the corn crops.

MS. MOTT: Perhaps it was View 3. Could you bring up View 3?

MR. YOCCA: So here we are on the bridge on Somonauk Road looking east along I-88 there.

MS. MOTT: During this area I had written down that you had said that the -- on the before and after things that the height is the same but it goes -- it extends on further. I was under the impression that right now our height is 50 feet and it was going to go up to 113. Is that not correct?

MR. YOCCA: The height of the western portion is at elevation 945, and the highest part of the western portion will be up to elevation 945. So I think that's what I was referring to, that this whole western portion

would expand horizontally but the highest point would not be any higher than it is now.

MS. MOTT: Of the western portion? The western portion isn't built yet -- no, western portion is built. The eastern portion.

MR. YOCCA: Right.

MS. MOTT: And your 935 (sic) elevation is 113 feet height, correct?

MR. MORAN: Objection. It's not 935, he said 945 --

MS. MOTT: 935.

MR. MORAN: -- that's on the west side.

MR. YOCCA: 945 is the elevation at the highest point on the western portion, and that is 80 feet above the nearest road elevation at Somonauk and Gurler Road. It's the eastern portion --

MS. MOTT: Eastern portion.

MR. YOCCA: -- that is actually the highest point is elevation 980, 113 foot higher than the nearest road elevation down on Gurler Road.

MS. MOTT: What's confusing is is your pictures are often very far away.

You had stated that it was your job to design the landscaping so that the potential impact on the surrounding area was reduced; is that correct?

MR. YOCCA: Yes.

MS. MOTT: Are you aware that people have brought up that Northern Illinois University is our largest employer, as well as what brings in the most money to this community?

MR. YOCCA: I know that they're a significant part of the community, yes.

MS. MOTT: Then wouldn't the view from I-88 be one of your biggest potential impacts? If that view is so different than it is now, would not that impact our community greatly?

MR. YOCCA: That -- that view is important, and I didn't mean to imply that it wasn't. It's just we don't have a characterization from the roadway looking on any part of it.

MS. MOTT: And why is that?

MR. YOCCA: The design is addressing both views from along the highway as well as the views further away.

MS. MOTT: Would you say that the view from I-88 would be much different than the view from two miles away or a mile away on Somonauk Road?

MR. YOCCA: Well, different from the standpoint is if you're next to -- next to -- actually the screening berm will be more visible, the screening -- landscape screening and screening berm where we have got those different trees that I have described and the landfill behind. So actually the screening berm is more visible obviously when you're adjacent or along the highway.

MS. MOTT: So that was a yes?

MR. YOCCA: I think so.

MS. MOTT: I still am having trouble figuring out how an 8- to 12-foot berm, even with the trees that bring it up to 50 feet, will cover 113 feet, especially when you're up that close onto 88.

MR. YOCCA: Well, this is the point that I was explaining earlier, that because the 113-feet maximum elevation is a quarter of a mile away from you, and the screening berm and

the landscape that's associated with that is right adjacent to you that's really what's in your view shed. So the -- I don't know, Bruce, if you want to go to the cross section.

MS. MOTT: How about if you're going to be the -- see the map on the lower left, if you're coming in from -- on I-88 on the bottom right corner --

MR. YOCCA: (Indicating.)

MS. MOTT: Farther down.

MR. YOCCA: (Indicating.)

MS. MOTT: You're coming in there, you're going to be seeing that 113-foot pile from farther away, are you not?

MR. YOCCA: Well, we have a view from here, and you'll be able to start making -- making it out on the horizon line above the -- but much further away from here, and the roll of the topography and other things that are in the view shed really make it harder to see.

MS. MOTT: I suggest it would have been much more helpful had you taken a picture from I-88 where all of our traffic comes in, because that's what we're most afraid of that this will

affect our enrollment here at Northern Illinois University.

In that vein, if -- I have been around some developments. You had talked about the berm that was built, the higher you built it the drier it is on top, making sustainability of trees an issue, that's why you didn't want to make the berm higher. If trees on -- that are planted along that berm on 88 don't make it because the ground was too dry or whatever reason and die, will Waste Management replace those trees?

MR. YOCCA: Yes, part of the landscape plan is to maintain that landscape, and that includes replacing of any material that does die.

MS. MOTT: They will replace it?

MR. YOCCA: Yes.

MS. MOTT: That was it. Thank you.

HEARING OFFICER MCCARTHY: Okay. Anyone else of this witness?

Mr. Moran, any redirect?

MR. MORAN: No redirect.

HEARING OFFICER MCCARTHY: You are

excused.

MR. YOCCA: Thank you very much.

MR. MORAN: Mr. Hearing Officer, we would offer Exhibit 12 into evidence.

HEARING OFFICER MCCARTHY: Any objection?

MS. CIPRIANO: None.

HEARING OFFICER MCCARTHY: Okay. Hearing no objection, it will be admitted.

(Petitioner's Exhibit No. 12 admitted into evidence.)

HEARING OFFICER MCCARTHY: Do you have any further witnesses, Mr. Moran?

MR. MORAN: We do not. We rest.

HEARING OFFICER MCCARTHY: Mr. McIntyre, do you have any witnesses?

MR. MCINTYRE: Yes, we do.

HEARING OFFICER MCCARTHY: Call your first witness.

MR. CAMPBELL: Mr. Hearing Officer, our first and only witness is Aubrey Serewicz.

MR. SEREWICZ: Do you want me to just try to just speak orally with the microphone?

HEARING OFFICER MCCARTHY: I think they'll let you use the microphone there.

MR. CAMPBELL: She's going to swear you in.

HEARING OFFICER MCCARTHY: Do you want to raise your right hand?

AUBREY SEREWICZ,

being first duly sworn, was examined and testified as follows:

MR. SEREWICZ: All right. I am Aubrey J. Serewicz.

MR. CAMPBELL: Sir. Let me start.

DIRECT EXAMINATION

BY MR. CAMPBELL:

Q. Could you please state your name, sir.

A. Aubrey J. Serewicz.

Q. Mr. Serewicz, where do you currently reside?

A. Pardon?

Q. Where do you currently live?

A. 403 South Second Street in DeKalb.

Q. You are a resident of DeKalb County?

A. Yes.

MR. CAMPBELL: Mr. Hearing Officer, may I approach the witness?

HEARING OFFICER MCCARTHY: You may.

(Exhibit No. 1 marked for

identification.)

Q. Mr. Serewicz, I show you a document entitled, Vitae, Aubrey J. Serewicz. Do you recognize that document?

A. Yes, I do.

Q. Could you tell the Ladies and Gentlemen present here today what exactly that document is?

A. Pardon?

Q. What is that document?

A. Oh, it's a vitae of my professional history and it enumerates my education, my publications and some of the things I have done.

Q. If we could take some time --

HEARING OFFICER MCCARTHY: Mr. Campbell.

MR. CAMPBELL: Yes, sir?

HEARING OFFICER MCCARTHY: May I suggest you also use a microphone? That may help your witness.

Q. Mr. Serewicz, if we might take some time and review the credentials that you have set forth on your curriculum vitae. Could you briefly, sir, take us through your educational background.

A. Yes. I obtained my chemistry degree in

Indiana, St. Joseph's College, and went on to a Master's Degree at Loyola in Chicago. I went to the University of Rochester where I did two years of work, and then transferred with my research professor to Texas, where I finished up at Texas A&M.

Q. So as you stand here today you have a Bachelor's Degree of Science in Chemistry, a Master's Degree of Science in Chemistry, you also have a PhD in Chemistry; is that correct?

A. That's correct.

Q. Sir, you make reference in addition to doing a post-doctoral fellowship at Ames Laboratory at Iowa State. Could you describe for me briefly what you did in that particular capacity?

A. Well, all of my history has been in material science. I am not an organic person; I am a material science person. I have worked mainly with gases, because in the structure of matter it's much easier to determine what's happened in a gas state.

I also did work with photolysis in the atmosphere of the vapor at the University of Rochester; was cited 40 times. It concerns the

change of nitrogen in the air. And this work was very important in terms of at the time the changes that were going on in the atmosphere.

I have also done work in rare gases, working with people on the atomic energy there at Iowa State. And since then I have gone on into industry and worked in process control solving problems, working with plants mainly in terms of their pollution control. I came in the era of before the waste water systems came in, the clean air, the Clean Water Act.

And so, would you like to add in here?

Q. What was your final occupation? Are you retired now?

A. Unofficially I am.

Q. I never assume anything, sir. You're retired now?

A. I retired since 1998 from AHP, which is Wyeth Laboratories. But I became interested then in sulfur compounds, and so I did research work with the College of Health of Human Sciences at Northern on sulfur compounds, and I presented that at Oregon State last May.

Now, when I say sulfur compounds, it might

surprise you, they have something to do with nutrition. It concerns, first of all, diabetes, which is insulin. Insulin has two atoms of sulfur in it. Glutathione, which was a treatment, along with alpha lipoic acid, both of these have sulfur compounds in them.

So, you see, my experience with sulfur is quite extensive. In fact, when you go into chemistry laboratory, the second year of chemistry is analysis with H2S. In a laboratory you're dealing with small little quantities in a test tube, shake it up, metals come down.

My first introduction to H2S on a real scale was when I went into industry, and I wasn't party to it but I witnessed a very, very serious accident with H2S. When I arrived in the afternoon on the second shift there were ambulances all around the plant.

Q. Where specifically are you speaking of, sir?

A. This took place at Morton Grove, Illinois, Baxter Laboratory. It was a 4-foot tank of liquid H2S. And the staff there was A, number one, first-class reaction room. An individual happened to open up the field side of it and

millions and millions of parts of -- per million of H2S went into that. 12 people went down. And it was only with the American-type of person who went in there, picked up that cylinder, stuck it into a powerful exhaust and he went down, but everybody dragged everybody out. Now --

Q. Mr. Serewicz --

A. -- luckily everyone survived. I don't know whatever happened to them later on, but they survived.

A few years later the same thing happened in Mexico. 24 people died. 243 were permanently injured.

It shows you how toxic H2S is in terms of whether you have a first-class operation or you have something that's very primitive.

Q. Mr. Serewicz, to be fair to Mr. Moran it's best if I ask you questions, you answer, and we keep doing it question and answer.

A. Pardon?

Q. Can you hear me? I said to be fair to everybody it's best if I ask you specific questions and we can kind of have questions and

answers, in case there's something he would like to object to. Okay?

A. Yes.

Q. Just getting back briefly, I just want to finish up your education. At some point you were a chemistry professor at Northern Illinois University; is that correct?

A. Yes.

Q. And that's right up the road here?

A. Yes.

Q. How long were you a professor at Northern?

A. Seven years.

Q. Would it be fair to say then that you have spent your entire career in issues dealing with chemistry, and more specifically issues dealing with gases?

A. Yes.

Q. Okay, and, sir, you just made some reference to your experience with H2S. Would it be fair to say that you've had extensive experience with H2S? Would that be a fair statement?

A. Yes.

Q. And if I can back up just a moment, Professor. Have you testified previously as an expert

witness?

A. Have I testified?

Q. Previously in any other hearings as an expert.

A. Oh, yes, yes.

Q. And your curriculum vitae specifically mentions that you have provided expert witness testimony to the FDA and other regulatory bodies; is that a fair statement?

A. Yes.

Q. And just to be clear about your testimony here today, sir. Isn't it true that you're not being compensated for your testimony?

A. That is correct.

Q. In fact, we actually had the privilege of -- or the enjoyment of being introduced to one another earlier this week; is that a fair statement?

A. Yes.

Q. And, in fact, you have attended each and every session of this hearing; is that correct?

A. Yes, I did.

Q. Now, if I could direct your attention, Professor Serewicz, to the issue of gases, and more specifically to the issue of H2S. Could you tell the Ladies and Gentlemen that are

present here today what exactly, sir, is H2S?

A. Well, first of all, let me put this down. And I would like to mention briefly that my first encounter with Waste Management left me a little souvenir, and I have it here. And I would like to say that this encounter was an excellent experience. There was a missed collection, I called up immediately, and the gentleman, Thomas D. Sundstrom, took care of it exquisitely. And I have had this on my bulletin board wanting to call him a second time in case something happened; it never did.

And I would like to take the time now to express my appreciation that this presentation has been so exquisite. This is a top-rated situation. And I think that Waste Management has put on a program that is open and is direct.

And the only reason I'm here is because I came because I was interested in what was happening to the democratic process in relationship to this presentation, and I stayed and I was fairly assured that it was going. But then I heard the questions and comments of the Board, and I was amazed at the confusion and the

lack of understanding of what was going on here in terms of the process.

So I volunteered my services to them to try to help not only to elucidate and bring openness and truth to it but perhaps even to help Waste Management, because they are busy with their business and I am busy with my business, in terms of looking at what's going on in the chemistry.

So I'd like to talk about odors and where they come from. You know, people have a strange idea of odors. For instance, this is what sulfur looks like, and you can take a smell.

(Whereupon Mr. Serewicz produces to the Committee members an opened container.)

MR. SEREWICZ: It does not smell like H2S. It's a very benign compound. I use it for my rose bushes. It's a good compound against fungus. You can also use it on your face for acne. It's inoffensive. Kills bacteria. A good antiseptic.

However, if you heat it it turns to a compound called sulfur dioxide. Now, it's not

bad. When they burn sulfur out in the furnaces that's what you get. It does kill trees. It's caustic. Now, when you do not burn it but put it in a confined area with moisture, that sulfur turns into hydrogen sulfide. Very toxic.

So you get sulfur, which is benign, oxidize it and, yes, it is caustic. When you confine it and keep it from reacting it is reduced, it becomes hydrogen sulfide, extremely toxic.

Now, you have also structures out there. Creative carbon, as you know, trees, wood. Nitrogen, animals. The amino acids that we have. And phosphorus, phosphorus in our bones and whatnot. These are the structures.

When you put them in confined areas there are two ways they can go. They can be oxidized outside. The carbon goes to carbon dioxide, air, water. You have the nitrogen, which when oxidized gives you perhaps nitrous oxide, laughing gas is what it's called.

However, when you confine nitrogen it turns to something like ammonia, not a very good compound. When you confine carbon it goes in --

as you know, trees underground form petroleum.

When you confine phosphorus one of the compounds you get is phosgene. It smells a lot like straw that is wet if you recognize that, decomposing. When you oxidize phosphorus you get phosphates. You can use them.

So you see, you can see the pattern with what happens to the structure matters.

Now, I have told you what happens to sulfur. We have sulfur in our body because protein is connected to sulfur.

You have something like calcium sulfate. Excellent compound, benign. When you put calcium sulfate in a confined area and reverse it then it becomes H2S and other compounds.

So the whole idea of how we can coexist with these compounds is quite open.

You take a look at some of the other things that take place in the confined areas of chemistry and you can realize that we have to coexist with these situations.

And one of the things that I consulted on was the irradiation of food. We were studying the irradiation of fish. We took a look at it

and, lo and behold, turned out that fish had 50 parts per billion of benzine. Now, one part per billion of benzine in the level will cause leukemia. And here, a thousand times less is the same compound in fish. And it grows more as that fish is getting old and starting to age. So here we have the situation that people live with for centuries eating fish and yet there was benzine.

So we can coexist with these things, but we have to be very careful at the level at which we will work. And the only way to do that is to be able to test and analyze where you are so that you know where you're going.

Now, the solution to that was as soon as you catch the fish you freeze it solid, you stop everything, so that there was a solution. We can live with carcinogens like benzine, but we have to be able to treat it as it is. And use science to actually work our way out of these situations.

Now, the idea that hydrogen sulfide is easily detectable is a misnomer. I looked through the literature because I heard the

discussions, and when you read things on the internet you'll find out that, oh, yes, it claims that you can detect hydrogen sulfide down to 0.5 parts per billion. But there's no work to that, there is I heard it somewhere, it is claimed, it is stated. If you look at the actual research work you'll find that the individual has different perceptions of the amount, simply through their structure and their bases.

So on an average in studies that I looked at you find that 0.2 parts per million is the point at which the average person can detect it, and it figures out because the gas company puts in a sulfur compound at 1 part per million. So everyone should be able to detect gas coming in at that count. So you see, here we are, the average person able to detect it at 0.2 parts per million. That's 200 parts per billion. So that is the level of the average.

Now, there's also another aspect to that. Within seconds the perception of smell of hydrogen sulfide diminishes. You can no longer smell it with the exactness. And this has been

shown by people in studies who use scratch tests where they have a little capsule and they scratch it, take a whiff, and they have placebos and placebos which are double blind so they don't know which one is the real one. These are the real tests of what is available and what is not.

So the human nose is not an acceptable means for determining the amount of hydrogen sulfide. It is, in fact, a problem because you become insensitive to any higher amounts over 10 parts per million, and that's what the badges are set at because if it gets over it you don't know it. And the maximum allowed 20 parts per million is very close.

So you have that situation, but you also have a situation where we are looking now at what is happening to that hydrogen sulfide when it comes in. This regulation is 70 years old. 70 years ago they didn't even know about enzymes. And hydrogen sulfide has a characteristic that it affects metal. And it is a most unusual compound, that's why we use it in analytical chemistry.

You know about water being soluble in glass, and you think, no, I keep water in my glass, it isn't soluble. Yes, it is in part -- one part in a million soluble in glass. So ordinary glass that we know is soluble in water to one part in a million.

If you combine hydrogen sulfide with silver, so you get silver sulfide, that dissolves only to the extent of one part in five hundred, hundred, hundred million, 50 zeros. Basically when silver comes in contact with hydrogen sulfide it is done. It cannot be recovered.

Now, our enzyme systems in our body, there are 10,000 of them, 30 percent are metals. And of these metals, the hydrogen sulfide will precipitate to a tremendous extent the metal that's in them. One of the metals is cobalt, cobalt sulfide, 49 zeros between that and the dissolution.

Now, where does cobalt occur? Cyanocobalamin is Vitamin B12. So if you take in hydrogen sulfide, you are essentially precipitating the cobalt in Vitamin B12. B12 is

gone.

Now, you'll -- look at the literature, look on the internet and you see people say, gosh, I had an experience of ingesting hydrogen sulfide, I got symptoms. 25 years later I have the same symptoms. The physician tells me I am deficient in Vitamin B12. Now there are, as I say, 21 other metals, half of those which can be attacked by hydrogen sulfide.

The plant I was working in was actually using the hydrogen sulfide for precipitating iron out of blood protein. We were making protein hydrolysate. We bubbled the hydrogen sulfide in, precipitates the iron, filters the iron out. You have iron hemoglobin in your system. It will attack that.

Now, what are the limits to which this occur? The limits have been studied. In fact, in recent literature -- and I want to mention it. I have to pick it up, because I tried to print it out last night and it didn't print very well. So two professors, one from the University of Texas at Galveston, Marvin Legator, and Kay Kilium, UCLA Medicine, have

studied the reaction of low concentrations of hydrogen sulfide on rats. They can't experiment on humans. They found 40 different ailments that are produced in rats at a concentration of 30 parts per billion. Now, this has set in effect the EPA, and their latest regs, which have come out this last year, have set the minimum at 5 parts per billion.

This paper I have here, which the people who studied it have said that, well, we studied the difference between rats and humans and the rats have a little different nose function and so there's a different amount of blood vessels in the nose and therefore they'll have to alter that, and the amount actually that goes into the body is different than in the rats. So it still works the same in there but does -- so they increased it 10 times, up to 20 parts per billion. So that is -- and I can give you the reference here in terms of www.epa.gov/mcva/IRIS/subst/0061. So it's readily obtained from the literature.

Now, when you look at the people's work there at Galveston and UCLA you find what did

they say. It attacks, first of all, the entire body, mainly in the brain, in the blood and other organs that have metals, enzymes connected with them. Who are most susceptible? Fetuses -- they didn't test fetuses, they tested animal fetuses -- fetuses, children, people with asthmatic problems, people with cardiovascular problems, people with -- who are Asian.

Q. Professor --

A. Here we have --

Q. Professor Serewicz.

A. Pardon?

Q. Professor Serewicz, I'm right here, over here.

A. Oh.

Q. Why are children more susceptible to toxicity from H2S?

MR. MORAN: Objection. Mr. Hearing Officer, I think it's somewhat clear from what we have heard from Dr. Serewicz that he has no background, no expertise, no experience in assessing or discussing or evaluating the health effects of H2S. He is certainly well qualified, very knowledgeable about H2S, but clearly all we have heard is his reading articles that have

evaluated certain health effects. He's simply not qualified to direct that issue.

HEARING OFFICER MCCARTHY: Mr. Campbell?

MR. CAMPBELL: I'll go through his background a little more, Mr. Hearing Officer.

MR. SEREWICZ: Let me --

MR. CAMPBELL: Professor Serewicz, if we could do a question and answer here.

HEARING OFFICER MCCARTHY: I'll assume for the moment that you're laying a foundation?

MR. CAMPBELL: Yes, sir.

HEARING OFFICER MCCARTHY: All right.

Q. (BY MR. CAMPBELL) Professor Serewicz, I want to take you back a little bit. What exactly creates the H2S in the landfill itself? Explain that to me. What exactly creates the H2S in the landfill itself?

MR. MORAN: Objection. There's no basis, no foundation for him to be able to address anything relating to a landfill. He has no experience -- or he hasn't identified for us what that is.

Q. Sir, as a professor --

HEARING OFFICER MCCARTHY: Provide a

foundation.

MR. CAMPBELL: Yes, sir.

As a professor of chemistry are you familiar with how H2S is created?

A. Yes, I am.

Q. And could you -- and your knowledge of how H2S is created, is that based on your educational background and your work in the chemical industry?

A. Yes, it is.

Q. And could you illuminate for us, sir, precisely how H2S is created?

A. H2S is a reduction compound, and it is formed by moisture with sulfur and without the area of oxygen. You take wine and you -- or you take sugar and you put it in there as grapes and if the particular mold, the particular yeast has a propensity for working in anaerobic conditions, that is without air, it will produce hydrogen sulfide from the sulfur.

So the conditions for hydrogen sulfide protection are for a sulfur compound to be heated with water in the absence of air, which is in a confined space.

Q. Sir, you heard a couple of witnesses testify, particularly the manager of this particular site, that in 2008 and 2009 they had H2S emissions from this particular landfill. Did you hear that testimony?

A. Yes.

Q. And did you also hear him say that in their investigation they determined that the probable cause of this emission of H2S was gypsum that had been ground up and put in the landfill unbeknownst to Waste Management? Did you hear that?

A. Yes, I heard that.

Q. Could you explain to the Ladies and Gentlemen here how gypsum would create H2S?

A. Calcium sulfate is sulfur in the fully oxidized form; you know, calcium sulfur with four oxygens on it. Now, when that is put in a confined space with heat and with water without air there is a chemical reaction called reduction in which the sulfur then changes from an oxidized form, and the hydrogen that is being produced from water takes the oxygen. Sulfur then tends to grab hold of the hydrogen, forming H2S. So it

is a reduction compound where a chemical is allowed to become hot and moist without air.

That is the whole purpose, a whole structure of landfills, to put something underground without the contact with air.

Q. And when that H2S is emitted from -- you heard him say it had been emitted from this particular landfill, is that H2S that's coming out of that landfill, is that toxic?

A. Yes.

Q. And just so we can stop there for a minute. What is meant when a chemistry professor or a chemist like yourself talks about toxic? What is toxicity?

A. Toxic means that there is a reaction which is permanent in that it cannot be reversed simply by taking the reactants apart. There has been a permanent change. In terms of our own bodies, we have chemicals that will injure us, and they can injure us from the outside.

Now, hydrogen sulfide can exist in us. You can live with it. But the body works to protect against it. It was stated that we have internal gas. These people that have internal

gas are living under an unhealthy condition. Your gut is supposed to function without gas. It's supposed to be an anaerobic digestive. If you have gas, you have a problem. The body fights against it, the same way that it fights against hydrogen sulfide.

In fact, one of the papers I have here is a paper which shows that down syndrome starts with a healthy child and a high concentration of hydrogen sulfide. There is a mechanism in the body for treating the sulfur. Instead of oxidizing it out, it tends to reduce it. There's an enzyme problem. As the child who was born normal starts to develop, the amount of hydrogen sulfide increases and the down syndrome increases with it. So in down syndrome you have the active ingredient of hydrogen sulfide increasing and the symptoms of downs increasing at the same time.

Q. Professor Serewicz, could you tell us what RFCs are in regards to the EPA?

A. It's a reference standard for low level work where they consider below that level that there is no toxicity.

Q. So would it be fair to say that it is an attempt by the regulatory agencies to set safe exposure levels of toxic chemicals?

A. That's correct.

Q. And getting back to the emission at this particular dump site of H2S, if you smell -- there was a lot of testimony about a rotten egg smell. Is that indicative of the presence of H2S in your expert opinion?

A. Yes, it's one of the few things that is an indication of. Now, I must say that there are similar odors. All sulfides have a similar egg odor. H2S is the most pronounced. You can distinguish between the two. Like the one in the gas company's gas is actually phytophene (phonetic), an organic compound with one sulfur. But H2S has a much more rotten egg odor.

Q. So you have heard these various people talk this week, and specifically Mr. Hoekstra talked about them getting complaints and smelling the rotten egg smell and that was when they became, you know, alerted to the fact that it might be H2S. Does that make sense, you know, chemistry wise that, you know, once they smelled that that

they were probably getting H2S emissions?

A. Yes.

Q. And if you can smell H2S are you breathing it in as well?

A. It is a how -- it is a million times more toxic if you breathe it in than if you eat it.

Q. Okay.

A. Because 20 grams of a -- of a sulfide, like sodium sulfide, is toxic. And only several hundred parts per million is toxic for breathing it in through the lungs. The reason is the sulfide goes into the gut, there are protective elements there to keep it from getting into the body. Breathing it in through the lungs immediately goes to the bloodstream.

Q. So if we were to try to determine the level of H2S that's in the air at a particular time, could you explain to us how that would be done?

A. Well, there are instruments that are very easy to utilize for this. And you can imagine, if it reacts so irreversibly with metals all you need to do is put a metal solution there, have a pump which is pumping air into that, and as it reacts with the solution, it's formed, it's insoluble,

turn it, you can shake it up, use a turbidimeter and you can tell exactly how much you have.

Q. So we have the scientific ability to determine the level of H2S in the air?

A. Anywhere.

Q. So we could, you know, if we wanted to circle any landfill site with monitors and we could tell exactly how much H2S is in the air at that particular time?

A. Yes. In fact, one of the prominent things now is the work that was done at -- in the State of Maine. They never had any landfills so they had the need for it. They set one up and they studied it, and with that they found these new regulations and they established things for them. And what they have for each landfill is four detectors for each corner with a wind detector so you know which way the wind is blowing, and as -- and this is recorded along with the detectors. They have this even though it's next to a highway, because of the fact that diesel fuel also has sulfur in it and also generates H2S because it is not a good combustion. Once again, not enough air going

in. So that also generates H2S.

Q. Since we're on the issue of emissions and you just mentioned trucks emit exhaust that have H2S in it. In your opinion would the truck traffic on 88 and the truck traffic that's bringing their trash to and from this particular landfill, generally speaking can the truck exhaust emit H2S? Is it contained in truck exhaust as well?

A. I'm not sure where you're going with that.

Q. I'll rephrase the question. You indicated that H2S was created by the chemical processes that go on generally inside a landfill?

A. Yes.

Q. And that H2S is emitted, that gas escapes into the air?

A. Yes.

Q. And you indicated that in Maine they, you know, put these indicators right next to the landfill even though they knew there was the truck traffic there. Is that because they -- they wanted to make sure they could distinguish between the exhaust from the truck traffic and the H2S?

MR. MORAN: Objection, leading.

HEARING OFFICER MCCARTHY: Sustained.

MR. CAMPBELL: I'll withdraw that.

So if we wanted to ensure ourselves that we were able to measure the level of H2S around this particular landfill, might something like what's done in the State of Maine be done here in this particular site?

MR. MORAN: Objection, foundation. Again, we have no basis to determine this witness has any expertise in determining what type of monitoring system would be appropriate to monitor or detect emissions of any kind from a landfill. He's reporting on things he read. He's simply repeating those things to us. That doesn't establish any expertise.

HEARING OFFICER MCCARTHY: Lay some foundation.

MR. CAMPBELL: I'll provide some foundation.

MR. SEREWICZ: Allow me to --

MR. CAMPBELL: Professor Serewicz, hold on a second.

You have tested gases?

A. Yes.

Q. And you have tested gases that flowed out into the air?

A. Yes.

Q. And you have actually used devices that allow you to test those gases?

A. Yes.

Q. You have personally participated in the testing of air?

A. Yes.

Q. You have actually scientifically taken samples of air and broken those down chemically so you could tell exactly what is inside that particular sample of air?

A. Yes.

Q. And you're -- not only have you done that, but you're familiar with the science behind how that particular mechanism tests that sample of air?

A. Yes.

MR. MORAN: Objection, leading.

HEARING OFFICER MCCARTHY: Overruled. He can answer the question.

A. I would like to retrogress and explain a little more, because I didn't have an opportunity to

tell about my experience in the industry.

As I say, I worked for a number of corporations, even though they were pharmaceutical corporations. My job was mainly process engineering and environmental control. So under those conditions I had charge of water testing, air testing and environmental conditions in which I directed other people and instrumentation. I have run -- in fact, I have run some of the first gas chromatographs that were built by Perkin-Elmer. So I have run that.

I have run all sorts of instrumentation from infrared to other forms of analysis. I have directed laboratories. I have been a research director in the industry, both quality control and in terms of being able to have analytical laboratories.

Q. Professor Serewicz, is it fair to say, sir, that this is fairly basic chemistry?

A. Yes.

Q. That actually trying to determine the level of H2S in the air at anytime for a person of your educational eminence, that's a fairly simplistic process?

A. Yes.

Q. You are well qualified enough to render an opinion, you feel, on how to test a sample of air for the presence of H2S?

MR. MORAN: Objection.

HEARING OFFICER MCCARTHY: Overruled.

Q. You have --

A. Yes.

Q. These devices that you might place around any -- any facility to determine what exactly is in the air, how long have these been -- these types of devices been available to mankind?

A. They have used them for 50 years.

Q. So, again, we're talking science here that is not cutting edge or anything, we actually for a half a century have been able to take an air sample and determine whether H2S is present within that particular sample?

A. That's correct.

Q. Is our ability to test samples of air more sophisticated now, sir, than it was back 50 years ago?

A. What they have done is automated the system. The principle is still the same. In 1921 a Yale

professor studied hydrogen sulfide, determined that it attacks the blood and the brain cells, and he used the same method as the Italian chemists in 1821 who were trying to prevent the sewer workers from sewer gas which they knew had sulfur in it. So this is not a new technique. It has simply been automated to the highest extent so that you can get readings along with wind direction and know exactly where the affluent is going.

Q. During your presence here this week as an observer in the crowd did you hear any testimony in regards to any sort of testing that you have described in regards to this particular landfill?

A. Oh yes.

Q. Could you talk about what you heard and what you think about what you heard?

A. I have testified in court in relationship to exposure from materials being decomposed in fires where there was evidence that was destroyed, and I also testified according to how metals behave under high stress conditions; I testified in terms of injuries from chemicals,

in terms of how it affected the body and what to expect and what chemicals were involved. So I am familiar with the medical aspects of chemical applications and the medical aspects of chemical accidents.

Q. Did you hear Mr. Hoekstra testify, the lead -- the manager of this particular site, did you hear him testify?

A. Yes.

Q. Did you hear Ms. Underwood testify?

A. Yes.

Q. And was there anything in those two witnesses' testimony that led you to believe that there was adequate testing of H2S in this particular facility?

A. Their testimony included H2S testing in the working sites.

Q. In your opinion, is that the only area that should be tested for H2S?

A. The entire process is one that is not in control.

Q. Explain that.

A. I had some stock in Eastman Chemical, and the stock went down and the stock went down because

Eastman Chemical, along with all other chemical and petroleum manufacturers, were busy trying to keep the small leaks that occur around valves from affecting their employees. Now, you pass by Eastman Laboratories, Eastman production facility, the oil refinery, you will smell something.

These should be only the affluent coming from the top, not from affluent at the process floor where the employees are working. That is not the condition for the landfill.

Q. Describe the condition in this particular landfill and why it's not under control.

A. Okay. You have a gas reaction of heterogenous product, you don't know what's in there exactly. And so you have some products that are high in sulfur, others that are low. You have heat generating products that are creating hot spots. You have unlicensed materials that come in because they are subterfuge entries. And so with these conditions and without actually mixing them together, you have no idea what reaction is going to take place at what spot.

One of the easiest way for chemical

reactions to take place is in gases, because there is a molecular force that is driving them to mix. The second most difficult point is in liquids where you have currents that heat that move it. The most difficult is in solids. And when you go from laboratory to massive fields, that is when the problem begins.

There is a lagoon on the other side of Freeport, two-acre lagoon, in which they have been treating cyanide waste for five years. The people who own that thought that it works in a test tube here, decomposing the cyanide, and therefore, hey, it should work out there. They couldn't mix it. The cyanide is still present as the solid cyanide. The lagoon is there. That reaction cannot work because it is not in a contained reactor. So that was a total failure from inexperience.

Now, added to that is the difficulty of trying to control a solid reaction, and that is the problem there. Also, the container is not a viable container. You have a great attempt at it of putting a base and then to seal it off with a membrane, but you still have to take and

set a valve where the affluent comes out. And this is the crux of the problem, how do you make an adequate seal.

Q. What happens if you didn't have that valve on there? What happens if you just sealed it? What would happen to the gases inside?

A. You will get a huge bubble which you cannot control. You will have a typical trinoble reaction, out of control.

Q. So the experts that testified here were very detailed about all the different valves around this site. Are they to actually allow the gas to dissipate and come out through the valve?

A. Yes, they're trying to control it by setting it up in cells and taking the affluent that comes out and working with it as it comes.

Q. Now, they described flares that, in my lay understanding, allow a flame to actually burn off the emission that's coming out of the --

A. A flare.

Q. -- particular site?

A. Yes.

Q. How effective are flares in eliminating the methane or the H2S that's going up in the air?

A. Well, it's as effective as if you would put water in your gasoline and try to run your car. You have a flammable substance, methane, mixed with an inflammable material, carbon dioxide, trying to burn off a nonreactive lazy compound like hydrogen sulfide without actually mixing it. So what you get is a heterogenous stream of some methane, because it's the lightest thing and the fastest thing, going along and trying to mix with carbon dioxide, which is inflammable and heavier, and equally heavy, hydrogen sulfide, moving along with that.

And so what hits the burner are these pulses. That's why the burner has to have an igniter constantly there, because otherwise the flame would go out. And to tell how efficient that burner is you have to simply look and see if the carbon is even burning, and you'll notice that the flare is black because carbon is not burning. If carbon isn't burning, neither is the hydrogen sulfide burning.

Q. So if you have a black flare, if you can see a carbon on that flare, that is scientific evidence that H2S is not being burned off?

A. That some.

Q. Some.

A. In other words, you do get some burning, because the temperature around the bottom of the flare is at a lower temperature, up at the top is a higher temperature; perhaps like 800 degrees Farenheit here, 1200 up there. The fact that the color is blue indicates nitrogen is there, which means it's a cool temperature. You have a simple flare which is using the pressure of the gas generation itself.

Now, in Maine where they have set this up they had also set up specifications for flares that can efficiently burn the affluent. That is, it has to have a flow of, say, 3 feet per minute, it has to have a certain design of the burner, it has to have all these features to try to efficiently as much as possible eliminate the partial burning of the hydrogen sulfide.

Q. Why are they so concerned about trying to prevent that hydrogen sulfide from going into the air? Why are they so concerned about stopping it there at the flare?

A. Well, that's the cheapest way of being able to

handle the affluent.

Q. When this hydrogen sulfide goes up into the air is it a gas that actually can travel?

A. Hydrogen sulfide, no matter where it is, is still a heavy gas. It has a molecular weight of 34. Air has a molecular weight of 28. Carbon dioxide has a molecular weight of 44. Those are the relative weights there.

Q. So would it be fair to say -- if I'm understanding your testimony correctly, since it's heavier than air does it follow along the ground as it comes out of a hill?

A. Exactly. The accident that happened in Mexico was just that, somebody had opened the valve improperly and it flowed down the hill, not into the air, it flowed down the hill and killed those people who did not have time to get away.

That's what happened at Bophol. There was a leak and it -- the engineers ran away, they didn't fix the leak, and all night long that flowed down there and killed 20,000 people.

Q. And does it just keep flowing, sir, until it stops? What actually makes the hydrogen sulfide stop its movement? How far does it go away from

the source of emissions?

A. Until the quantity dissipates so that it will not form a cohesive area.

Q. So if citizens in DeKalb testified during the public hearing that they had actually smelled this odor smell, is that actually the result of H2S, partially anyway?

A. It's call a plume.

Q. Describe that.

A. A plume is the area which the mixture goes until it dissipates and it forms like a teardrop. As it dissipates the concentration gets low so that it actually does mix with the air, because it only mixes with the air by molecular collisions. The lowest molecules go faster. For instance, hydrogen goes at a speed of 1200 feet a minute -- feet a second, 1200 feet a second, and heavier ones then go at a lower rate.

So you see, if you had hydrogen mixed with the methane it would mix it very well. But you have methane, which is a gas that is heavier and probably has a speed of around a hundred feet a second, and then you have the -- that has a

molecular weight of -- let's see, 12 and 4 -- 16 and you have it twice as heavy there with hydrogen sulfide, and that probably is maybe a hundred feet a second just in terms of collisions, and carbon dioxide maybe 50 feet a second. So these are the collisions that are going on. The lighter ones, like air, are up here. The other ones are hovering along the ground.

Q. If you had monitors -- you know, for instance there was testimony that there is an elementary school a half a mile from this site. If you had a monitor at that particular location would that be able to give you accurate readings of H2S?

A. Yes, it would.

Q. So is it your --

A. I personally set up testing apparatus around plants for measuring, not that particular thing, but chromic oxide.

Q. Are these types of devices that you're describing, are they particularly expensive? You just told me that the technology has been around for awhile. Give us your expert opinion on what one of these devices might cost.

A. All it needs is a small pump, we call them Gorman-Rupp pumps, which are billows run from a motor at a steady speed with a counter. So every time it goes it pumps maybe 10 cc's of air, it bubbles through a solution which precipitates it out. So knowing the amount of time and the volume there, you know what air went through it. Looking at the solution, concentration in there you'd know how much. So you know the concentration, you know the volume. That's it.

Q. Are these expensive?

A. Probably 2, $300.

Q. As a resident of DeKalb County, sir, and as a scientist, and more specifically as a chemist that's spent a career dealing with gases, why would you want to know the level of H2S that's emitted around this particular landfill site? Why would you want to know that?

A. Well, I would want to protect the citizens, I would want to protect myself. I happen to be very sensitive to odors. I mean, I will awaken in the middle of the night if there's a strange odor if somebody's cooking down the street.

One night I woke up in the middle of the night and smelled diesel fuel. I got up, got dressed, went over to the train station and there was a diesel truck idling that traveled in the wind six blocks, my window was open in the summertime, and I was getting diesel fumes.

Q. Have you ever smelled this landfill site?

A. Pardon?

Q. Have you ever smelled this actual landfill site?

A. Yes.

Q. And when was that?

A. When I drive by, I roll down the windows.

Q. And when you're driving by and you roll down the windows and that smell hits your nose, in your expert opinion are you smelling H2S?

A. Yes, I am.

Q. And you heard the system that was designed, you heard the -- Mr. Hoekstra testify and I believe you heard the engineer that testified before him in regards to this H2S issue at this particular landfill site. Are you satisfied as a scientist that we have enough information on the levels of H2S around this particular landfill site?

A. More than enough.

Q. That we do not have enough --

A. Right.

Q. -- protection?

A. Right.

Q. Specifically, you mentioned earlier that you had experience -- I think that Mr. Moran objected earlier, but I think you said you had experience dealing with the effects of gases on human beings; is that a fair statement?

A. Yes.

Q. Would it make a lot of sense -- I realize you're not a doctor, but if these -- if these children at this Cortland Elementary School are smelling a gas in the air, and in your opinion they're smelling H2S, is that a good idea just in general for us as the public?

A. I think it's imperative, imperative that it be tested immediately.

Q. If you're smelling the gas?

A. Even without smelling it. Because anything between 20 parts per billion and the perception level -- 20 parts per billion and the perception level of 20 parts per billion is dangerous.

Q. Did it alarm you when Mr. Hoekstra testified that in 2008 and 2009 when they got reports of a rotten egg smell in the air and realized they had an H2S problem, did it surprise you that they didn't make an effort to test that air?

MR. MORAN: Objection. It's leading.

HEARING OFFICER MCCARTHY: Sustained.

Q. Did you hear the testimony of Mr. Hoekstra?

A. Yes.

Q. Did you hear his testimony when he indicated that in 2008 and 2009 there was a rotten egg smell that was being reported?

A. Yes.

Q. Had you been the advisor scientifically at the time -- asking you a hypothetical question here -- what would have been your advice to Waste Management at the time in regards to how to handle that particular situation?

A. Well, I am here not to advise. I am here to give an evaluation of the situation as I see it. That's what we have the Board here for as our representatives, to act as in terms of the values of the community.

Q. Should that air have been tested at that time?

A. Pardon?

Q. Should that air have been tested at that time?

A. (Indicating.)

Q. Should that air have been tested at that time in 2008 and 2009 when they were smelling that odor?

A. Yeah.

Q. Okay.

A. I have a Medical Handbook of Poisons that I bought in 1964, because of the fact that I did -- was aware that these odors were present. And I have underlined two points in there: one, the toxicity of cyanide, and the other the toxicity of hydrogen sulfide. I have experience with both of those. I worked in plants, I designed a plant that treated and used cyanide. I designed a waste treatment that treated and used cyanide. I designed a waste treatment that treated and used sulfide. So I know the dangers and I know the conditions that were here.

Q. Do you have experience in actually designing facilities to ensure that danger is --

A. That's correct.

Q. -- mitigated?

A. Yeah.

Q. Professor Serewicz, the standard that Waste Management must meet is -- in regard to Criterion 2 is that the facility is so designed, located and proposed to be operated that the public health, safety and welfare will be protected.

Sir, in your expert opinion do you believe that that particular standard has been met?

A. No.

MR. CAMPBELL: That's all I have.

MR. SEREWICZ: Okay. I'd like to add just one thing.

MR. CAMPBELL: Mr. Serewicz, I'm done. They're going to ask you other questions. I'm done. You have to wait for the other questions.

HEARING OFFICER MCCARTHY: Let's -- again, it's about two hours, let's give the court reporter a break and see where we're at.

MR. SEREWICZ: I just want to add one little feature. In the last six years I have been working with a group of interns, the North Shore Group associated with St. Francis Hospital, and I have been working with these

physicians in medical problems concerned with failing healths. And I find that these medical problems concerned with failing health happen to be involved with the affluent with which they are -- people are now living. There is too much toxicity in the air or -- happens to be older people, for these people to have optimal health.

So yes, I have not had formal education in it, but I have had experience in terms of working with physicians on conditions of failing health. And the absorption of hydrogen sulfide in small amounts from 200 -- from 200 parts per billion to 2 -- to 20 parts per million is the area in which adults, children, will exhibit conditions of failing health.

MR. CAMPBELL: Thank you, Professor.

MR. SEREWICZ: I would be open to questions.

HEARING OFFICER MCCARTHY: Well, we're going to take a little short break now. We have had this young lady typing now for two hours.

(A recess was taken at 6:13 p.m. and proceedings resumed at 6:29 p.m.)

HEARING OFFICER MCCARTHY: Let's reconvene the public hearing.

Before we go on with more questioning of this witness, I have been told by the Objectors that this is the only witness they will have; is that correct?

MR. CAMPBELL: Yes, sir.

MR. MCINTYRE: Correct.

HEARING OFFICER MCCARTHY: It is getting rather late, it's been a long day, it's been a long week. What we, I think, have agreed to is that we would continue the direct examination of this witness, and that would be Mr. McIntyre, Mr. Roger Steimel, Mr. Dan Steimel, any members of the public who may have questions of this witness, possibly members of the Board would have questions --

MR. SEREWICZ: I hope so.

HEARING OFFICER MCCARTHY: -- then we would come back next Thursday at 1 o'clock for the cross-examination of this witness, any rebuttal testimony that the Applicant may have, and public comment because I'm certain that there's still going to be some public comment.

Is that a fair statement?

So instead of trying to cram all of that in tonight, we'll continue for a little while with the direct examination of this witness, and then we'll conclude and reconvene next Thursday, which is the 11th, I think, at 1 o'clock. Okay. Everybody agrees? All right.

With that, Mr. McIntyre, do you have any questions of this witness?

MR. MCINTYRE: Actually, I do not. I really appreciate your efforts, but I know that there's some other questions from other people, and I think Mr. Campbell covered the ground very well. Thank you.

HEARING OFFICER MCCARTHY: All right. Mr. Roger Steimel, do you have questions of this witness?

ROGER STEIMEL: No, I do not.

HEARING OFFICER MCCARTHY: Mr. Dan Steimel?

DAN STEIMEL: No, I do not.

HEARING OFFICER MCCARTHY: Does the County have any questions of this witness.

MS. CIPRIANO: We do not. Thank you, sir.

HEARING OFFICER MCCARTHY: Members of the Committee have questions of this witness?

CROSS-EXAMINATION

BY MR. STODDARD:

Q. Good evening.

A. Hi.

Q. Thank you for sitting through all of this and your interest and your input. I had just a few questions I think. First off, on your vitae you list several titles here. Are those journal articles?

A. Yes.

Q. And they were all in refereed journals?

A. Yes.

Q. Is this a comprehensive list or just a selection?

A. It is those which were refereed. I have others but they were just industrial.

Q. Right. Okay. None of those actually dealt specifically with H2S; is that correct?

A. That's correct.

Q. Okay. Fair enough. You have one in here called "Gas Diffusion, Hydrogen, Oxygen and Water Vapor". I'm going to skip the question

about whether or not gas and vapor are the same thing. But was that about the ability of these various gases to diffuse through the atmosphere?

A. No, within a contained vessel, because that's the only way we could measure how readily they did diffuse.

Q. Okay.

A. So it was from three sources -- actually two sources and one main one to see how these gases mix as they interdiffused.

Q. I see, okay, and so from that you would get a rate of diffusion?

A. Correct, for each component.

Q. Okay. Would you, based upon that study, be able to extrapolate to how quickly gases such as methane and H2S would diffuse in the atmosphere?

A. Oh yes -- well, in the atmosphere. You can make an estimate, but the atmosphere is a nonuniform mixture.

Q. Fair enough.

A. You were -- you can make an estimate of it, but the validity of it can -- is hard to test it.

Q. Okay. Would you be prepared to make that estimate?

A. It's a mathematical calculation. They have programs that do that, that's what the weather people are in business for, and they have massive programs for just doing that. This was basically in terms of a chemical study in preparation to the burning of gases, and so it was a preliminary study to see how well gases burn and eject. And so that's why you did the simple ones first and then the complex ones later.

Q. Okay. Makes sense. You talked -- you mentioned that the number that had been testified to earlier in terms of the lower limit for perception by humans of H2S, and we have been talking about 0.5 parts per billion, and you said that a better estimate would be 0.2 parts per million?

A. Correct.

Q. And then you said that that wasn't your own work but that was a study you had read?

A. Yes.

Q. What was that study?

A. I have got the reference up there. I can find it for you later though.

Q. Okay.

A. I have it written down.

MR. CAMPBELL: Professor, is it the one you gave me? Is this it?

MR. SEREWICZ: No.

MR. CAMPBELL: It was a different one, okay. I just have that one.

Q. All right. You also referred to a study that said smells -- that smell diminishes within seconds -- the ability to smell H2S diminishes within seconds?

A. Mentioned?

Q. Diminishes, wanes.

A. Oh. Yes, yes.

Q. Okay.

A. This was part of the study that we had there where they examined the rat, that's part of that one. They examined the rat and then made a hydro -- hydraulic study as to how the two different noses differ and therefore the extra factors that should be added into come -- get a good comparison. That's where they increased the level by tenfold in order to account for that difference.

Q. But there was, I think, another study you referred to which said that human beings -- the ability of human beings to smell H2S quickly diminishes after the -- you referred to a scratch test and that within seconds --

A. That's accepted by everyone.

Q. Could you cite a source for me, please?

A. What these people did was actually take the rat apart and they could see the deterioration that was --

Q. That's --

A. That's why it was diminished, because there was neuro deterioration.

Q. Is that permanent?

A. Yes.

Q. So once you have smelled H2S you'll never smell it again?

A. No, because they have many sites, and so with the rat the first ones were going.

Q. Okay.

A. With people, however, what you have is it's not necessarily the sensation, because it goes past, see, and so they're not just sniffing it, they're at a lower level where they're breathing

it. If you have got a big dose, now that's where destruction takes place.

Q. All right. Lets talk for a moment. You were saying that adverse effects, toxicity begins not at the 10 parts per million that OSHA claims should be the alarm level for detectors for workers, you said actually a better estimate would be 200 parts per billion?

A. Correct. That's EPA.

Q. That's EPA.

A. That's in this paper here.

Q. And that would also be --

A. Second page.

Q. That would also be the 200 parts per million -- 0.2 parts per million is 200 parts per billion?

A. Yes.

Q. So you're saying that the detection limit is also the limit for toxicity, that if you're beginning to smell it then you're in trouble is what you're saying?

A. Yes. In fact, if it's below that you can't smell it but you still are in trouble, and that's the point that I would like to emphasize.

Q. Okay.

A. The infective level is below 200 parts per million and above 20 parts per billion. That's the area.

Q. All right. Are there other sources of H2S besides landfills?

A. Are there other?

Q. Sources of H2S gas besides landfills?

A. Yes. We have H2S in poor sewers, anywhere from sulfur compounds are allowed to react in a closed system. You can have a manure pile which is not taken care of in a big pile, down there H2S is being formed. If you spread it out it wouldn't form, it would decompose in an oxidited (sic) way.

So if you have an improper site that is not well cared for where air doesn't move, that's the case. If you have -- are down in your basement and you get a -- your system has a backflow and you have dry traps, that is going to be short of air; it will form there. So it's something that isn't on purpose there but can be formed if you don't take proper care.

Plumbing isn't just a lower level act, it is an actual engineering fete to have good

plumbing.

Q. Okay, so you mentioned manure. So if somebody smells a hog farm, their health is in danger?

A. Yes.

Q. If -- do diesel trucks -- I was confused by your testimony earlier. Do diesel trucks produce H2S?

A. Do they what?

Q. Do diesel trucks --

A. Yes.

Q. -- produce H2S?

A. Yes.

Q. And do most --

A. Diesel trucks, particularly, in conditions where they're starting up and starting (sic) down where they do not have that hot combustion with good fuel.

Q. Okay, so we have potential toxic sources of landfills, trucks, hog farms, sewers, all sorts of places?

A. Well, you have instances of all sorts of places, but they shouldn't be continuing. You can go through the city and you can sniff at various sewer openings, and you won't always

smell H2S.

Q. Right.

A. If the -- you know, particularly if there is a liner in there, plastic liner that the city's been putting in there, you won't smell H2S. You will where there are stagnant pools and where there's a situation where the sewer -- look, the sewers are not open, the waste water treatment is open, but the sewers are sealed, that's a way you form H2S. If it isn't flowing it isn't being treated. But when you have adequate flow and -- air is the important thing. If you can get air to decompose any substance, you won't get H2S.

MR. STODDARD: Okay. I think that's all I have.

MR. SEREWICZ: Okay.

MR. STODDARD: Thank you.

HEARING OFFICER MCCARTHY: Okay. You indicated you had a number of questions.

MR. MELLOTT: Okay. Professor, Mr. Stoddard didn't want to ask the vapor/gas question again, but I will.

You may recall from earlier testimony by

Waste Management the Applicant's expert witness, Joan Underwood, I asked her the question whether or not vapor and gas are the same, and she responded yes, they are. I'd like to put the same question to you.

MR. SEREWICZ: It apparently looks the same, but it depends upon the condition and relationship to the triple point. Now, the triple point is where solids, liquids and gases come together. If you're in a certain condition -- take dry ice, there's no vapor to dry ice because the triple point is such that it can't get to the liquid state.

Water vapor is -- you do have water vapor, but if it is such that there is more water than will support then you will get condensation. That's why we have this so-called dew point apparatus, it tells you where the water vapor will condense.

So water is an unstable gas. Water vapor is an unstable gas, and therefore it differs from gases which are stable, stable to temperature change.

MR. MELLOTT: This difference in vapor or

gas, does it have an application? Is there importance regarding this difference with respect to the landfill?

MR. SEREWICZ: Well, it has to be taken into consideration, because if you don't want condensation somewhere then you have to protect it with a vapor barrier, and that -- that is a gas with liquid, with water vapor, moving through a membrane and then going to a lower temperature on the other side.

MR. MELLOTT: Is it important to understand the difference between a vapor or a gas in order --

MR. SEREWICZ: It is for people who work with the landfill, oh yes.

MR. MELLOTT: Is it important in order to understand the transport mechanisms involved in the gases or the vapors at the landfill?

MR. SEREWICZ: I think so.

MR. MELLOTT: Do you believe that if you didn't fully understand the properties of the gas transport or of the vapor transport mechanisms that it could have an impact on the design or the operation --

MR. SEREWICZ: Of course.

MR. MELLOTT: -- of any part of the landfill?

MR. SEREWICZ: Yes.

MR. MELLOTT: In particular, would it have an effect on the permeability -- the gas permeability or the vapor permeability of the cells, the liners, the parts of the landfill that contain the --

MR. SEREWICZ: I don't know the construction -- intimate construction of these vapor barriers.

MR. MELLOTT: But it would be an important thing to understand, the thermodynamics of gas or vapor, in order to properly design and operate --

MR. SEREWICZ: Specify -- yes, to properly specify you have to understand the distinction.

MR. MELLOTT: Okay, thank you. Could you give us a little bit more understanding about how a plume develops in air with regard to the potential constituents that are emitted from the landfill?

MR. SEREWICZ: It is a function of the

ability of gases to mix. If the gas is a different temperature then it will not mix, because mixing is on the basis and gas is on the basis of molecular collisions. And so those collisions are based on weight, molecular weight, and temperature. And so if you have a cold gas that is coming in, it will not have a high temperature and therefore it will not readily mix.

That's why you get cold when you take a shower and get out. What leaves is the active hot molecules and you're left with the cold ones and so you get cold.

And it's important to understand that when you consider something such as a flame or a flare and an ability to have control over toxic materials. You look at oil well refineries, they discuss the plume that comes with the prevailing wind. Why? Because so much of the things that go down are the heavy hydrocarbons and therefore follow the plume down. The light ones go up.

So they are concerned about -- you go to Shreveport, Louisiana and you will smell

hydrogen sulfide. I don't know how the people there live. They don't complain I guess.

MR. MELLOTT: For long.

If the properties of the atmosphere, such as rain, humidity, wind direction, turbulence versus more lineal flow, if those kinds of things change from time to time would that be an impact on the ability to measure a plume?

MR. SEREWICZ: Of course. You try to do this as simultaneously as you can. In other words, if you have multiple indicators, multiple collections then you can easily determine the plume. That's why in the landfill in Maine they set up four collection sites with a wind indicator to give them the idea whether wind was responsible for it or whether it was coming in from the highway or whether it was actually coming from the landfill.

MR. MELLOTT: So --

MR. SEREWICZ: That's hard to measure down near parts per billion, so they need all the help they can get.

MR. MELLOTT: Do you believe a good measurement system could be devised for the

landfill in order to measure these airborne gases?

MR. SEREWICZ: That's the only way it has a feasibility of ever working is to measure it and know what you are doing. Otherwise you're playing with something that is unstable. If you don't know what your speed is, if your speedometer is broken, you're in trouble.

MR. MELLOTT: On a slightly different topic, the landfill has a different elevation. I'm not fully aware of how the cell's constructed, I didn't hear all of Mr. Nickodem's testimony. But as I understand it, there are different levels. It goes from the surrounding grade to a hundred some odd feet tall.

Did you hear the testimony of the previous witness when he suggested that -- or stated that the shrubbery would be perhaps less easily maintained at the higher elevations because of the dehydration?

MR. SEREWICZ: I did hear that part of it, but I would say that looking at capillary actions and the distance that water has to travel by capillaries it is difficult to get

water to go a great distance simply by capillary action. The tree, you know, theoretically you could only -- should only have a tree that is 32 feet tall, because that's the extent of capillary force. But trees do grow tall, so there has to be other mechanisms.

But if that's what he said, I agree, capillary action is something that is very difficult to maintain over long distances.

MR. MELLOTT: Would it then be likely that the amount of water available to the landfill material would be lower at higher elevations?

MR. SEREWICZ: Yes.

MR. MELLOTT: Would then that perhaps be a problem with regard to the various clays that are used to absorb the groundwater and thereby remain flexible and expand and stop the leachate from --

MR. MORAN: Objection.

MR. SEREWICZ: I think you have to look at the soil.

MR. MORAN: Objection. Lack of foundation. There's no basis for this witness to opine on this issue.

HEARING OFFICER MCCARTHY: He hasn't --

MR. SEREWICZ: Okay.

HEARING OFFICER MCCARTHY: You know, can you qualify him as an expert?

MR. MELLOTT: Yes, I can. It's my opinion that the doctor's arguing from the first principle. He has an extensive knowledge of research-based level understanding of thermodynamics, of chemistry, of a number of things.

I understand he's not a hydrogeologist; however, he does understand the process which he just described regarding capillary action.

HEARING OFFICER MCCARTHY: Well, ask him about his background in that field. At least attempt to qualify him as an expert.

MR. MELLOTT: Okay.

Doctor, have you in any of your work been involved with the understanding of the process operation of these kinds of principles that would describe how water is found or how it moves among various elevations in earth or other material?

MR. SEREWICZ: No, I have no direct

research of that, no.

MR. MELLOTT: So then you would be unable to respond?

MR. SEREWICZ: I understand the principle --

MR. MORAN: Objection.

MR. SEREWICZ: -- but like anything else, you have to study the conditions.

MR. MORAN: Objection.

HEARING OFFICER MCCARTHY: He's indicated that he doesn't have any knowledge of that.

MR. MELLOTT: All right, then I'll withdraw the question.

Let me move on to another aspect of this. As a chemist, Professor, are you familiar with various household chemicals?

MR. SEREWICZ: With very what?

MR. MELLOTT: Various household chemicals, the chemicals that we use in our homes?

MR. SEREWICZ: Yes.

MR. MELLOTT: Cleaners and detergents?

MR. SEREWICZ: Intimately familiar.

MR. MELLOTT: So those you have worked with, as well as your laboratory chemicals, you

do understand and are fully knowledgeable about the chemicals that we use in our homes?

MR. SEREWICZ: I won't put them in there unless I understand them.

MR. MELLOTT: All right. Do you believe that these household chemicals, I'll call them, find their way into the waste stream and eventually into the landfills?

MR. SEREWICZ: Theoretically, yes.

MR. MELLOTT: Okay. Could any of these household chemicals that perhaps by way of the garbage pickup, the local collection, become part of the landfill, could they become part of a problem? You mentioned hot zones earlier. You know, could those chemicals become a problem in a landfill?

MR. MORAN: Objection, calls for speculation.

HEARING OFFICER MCCARTHY: Overruled.

MR. SEREWICZ: I can't think of any in particular that would be that sensitive that it would -- for a small amount would precipitate something.

MR. MELLOTT: Do you believe that any of

those household chemicals could be a problem in transit?

MR. MORAN: Objection, leading. Calls for speculation additionally.

HEARING OFFICER MCCARTHY: Overruled.

MR. SEREWICZ: Give me the question again.

MR. MELLOTT: Okay. Do you believe that any of the household chemicals that can possibly be picked up by the local garbage truck, could those become a problem in the truck on their way to the landfill?

MR. SEREWICZ: They are so varied in composition that there would have to be a massive marketing effort to get them out there and have everybody throw away the same chemical at the same time.

MR. MELLOTT: Okay. I believe that's all the questions I have.

HEARING OFFICER MCCARTHY: Okay. Thank you.

Anybody else have any questions of this witness before we conclude this evening?

We'll continue this next Thursday at 1 o'clock with Mr. Moran's cross-examination of

this witness.

Anyone else?

And, again, it's my understanding this is the only witness that you intend to call. We'll pick it up Thursday, and we'll also have time then for any additional public comment that there may be. So we would meet Thursday afternoon, and if necessary Thursday evening. Is that okay?

MS. CIPRIANO: Mr. Hearing Officer, can you state the location?

HEARING OFFICER MCCARTHY: The location would be here. Good point. We have spoken to the college and this room is available, and this room is, as I understand it, better than the alternative at the -- with the County.

So we're going to meet here next Thursday, March 11th, at 1 o'clock.

MR. CAMPBELL: Mr. Hearing Officer?

HEARING OFFICER MCCARTHY: Yes.

MR. CAMPBELL: May I offer Exhibits 1 and 2 into the record, specifically his curriculum vitae as 1, and he made reference to another article entitled "Advances In Toxicity Testing",

which I provided a copy to everybody.

HEARING OFFICER MCCARTHY: I don't have a copy. I only have --

MR. CAMPBELL: I'll get it to you.

HEARING OFFICER MCCARTHY: Objections?

MR. MORAN: Yes.

HEARING OFFICER MCCARTHY: We'll deal with it next Thursday.

Mr. Campbell, he's objecting.

MR. CAMPBELL: I heard him.

To both or just one?

MR. MORAN: Both.

MR. CAMPBELL: Both, okay.

(Exhibit No. 2 marked for identification.)

(The hearing recessed for the day at 6:58 p.m.)

STATE OF ILLINOIS

IN RE: THE APPLICATION	)
FOR APPROVAL OF THE DEKALB	)
COUNTY LANDFILL EXPANSION,	)
	) Kishwaukee Community
	) College
	) DeKalb, IL
	) March 5, 2010

We, Julie K. Edeus and Callie S. Bodmer, hereby certify that we are Certified Shorthand Reporters of the State of Illinois; that we are the ones who, by order and at the direction of the Hearing Officer, JOHN J. McCARTHY, reported in shorthand the proceedings had or required to be kept in the above-entitled case; and that the above and foregoing is a full, true and complete transcript of our said shorthand notes so taken.

Dated at Dixon, Illinois, this 5th day of March, 2010.

Julie K. Edeus
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Callie S. Bodmer
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