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KELLY RESTORATION ADVISORY BOARD (RAB)

TECHNICAL REVIEW SUBCOMMITTEE (TRS)

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COMMITTEE MEETING AND PRESENTATIONS

AUGUST 10, 2004

6:30 - 9:06 p.m.

ENVIRONMENTAL HEALTH & WELLNESS CENTER

911 CASTROVILLE ROAD

SAN ANTONIO, TEXAS

APPEARANCES:

Dr. David Smith;	Ms. Maria Teran-MacIver;
Mr. Joel Michalek;	Ms. Norma Landez;
Mr. Don Buelter;	Ms. Larisa Dawkins;
Mr. Ashley Allinder;	Ms. Robyn Thompson;
Mr. Tim Sueltenfuss;	Ms. Rose Campos;
Mr. Rodrigo Garcia;	Ms. Tanya Huerta;
Mr. Armando Quintanilla;	Ms. Esmeralda Galvan;
Mr. Gary Martin;	Ms. Abbi Power;
Mr. Gary Miller;	Ms. Coriene Hannapel;

And others in attendance who were not identified.

(6:30 p.m.)

DR. DAVID SMITH: With your permission, we'll get started. Of course, this is the August meeting of the RAB/TRS Review Subcommittee.

And TRS members, if you have packets let me quickly tell you what's in those packets. On the left side, of course, you have the agenda and the action item statement. On the right side you'll have a copy of the Agent Orange presentation, the presentation on Building 301 and 360 and the PRB, and you'll have a copy of the June TRS minutes. We'll touch on those as we go through the process.

As you will notice, based on requests from the RAB, we have brought a court reporter to the meeting tonight to give a good solid reporting of what is in fact said and asked to make sure we gather all the information that you want. The only thing that that would do to our process is two things. One is them is as you ask a question -- if you want to ask a question, if you'll give your name so that she will know who to credit that question to. And, of course, it can be real hard to get more than one person talking at a time and for her to keep up with that. We'll try to monitor those things. If she misses the name or part of the question, she's going to waive at me and I'm going to ask you to repeat it so she can get it. She's good. She'll get most of it. I won't have to ask you to do that much.

If an effort to gather as much of the questions as

possible, we're going to try to do things a little bit different this time. I think that you'll find it pretty workable. As we move to each presentation, before we start that presentation -- we know that you've seen, heard, read, things about it before -- if have you some questions that you know you want to ask, we're going to try to gather those before the presentation starts and hopefully we can get those addressed during the presentation. Tim and Robyn have consented to jotting those down on the board so we can make certain that we're gathering them.

We're going to ask you to hold your questions during the presentation. In other words, not interrupt the presentation with questions. Please jot them down and write yourself a note or whatever you need to do in order to hold on to that question that you have. It may get answered further along the line. If it doesn't, we're going to come back at the end and pick up those questions. And then we'll have a formal question and answer period where can you gather and ask your questions.

So, those items and that strategy process is the way we'll try to work through this. It's the first time for it, we'll see how it works, see if it works well for you.

Part of the effort, of course, is going to be to try to get as much information as we can and to move through the meeting as efficiently as we can. Sometimes we do better than we do others. Linda has asked us to please not keep her here all evening, so we'll try to do as well as we can at that, but we do

want to get the information out for you.

Having said all that, the first real item on the agenda is the Agent Orange presentation by Joel Michalek. Before we move to that presentation, let us start that format and see if there are some questions that you're aware of that you want us to get up on the board right now. Is there anything that comes to mind for you?

RODRIGO GARCIA: I'm writing them down, but I request that he gives us his title and where he works and where we can get in contact with him. I'd also wold like to see him present research data on Agent Orange at Kelly and how it effected workers in the community.

DR. DAVID SMITH: All right. You guys capturing that all right?

All right. Other questions that you sort of know are there? All right.

ARMANDO QUINTANILLA: The agenda's pretty well fixed? There's no way to put somebody else ahead of something else?

DR. DAVID SMITH: What do you need?

ARMANDO QUINTANILLA: Well, I talked to a couple of members here and there and they came just specifically listen to the ATSDR reports and they have to leave. And I'm just asking you if the agenda is fixed and locked in concrete, that sort of thing.

DR. DAVID SMITH: Well, I guess nothing's locked in

concrete.

ARMANDO QUINTANILLA: How many RAB members are here, by the way?

DR. DAVID SMITH: Not very many.

ARMANDO QUINTANILLA: Three or four. It's perfectly agreeable if -- for that suggestion, if it's okay with the other RAB members here, to do that.

FEMALE SPEAKER: It's due to your schedule?

DR. DAVID SMITH: We'll ask -- let me ask our presenters. Would that fowl up your schedule, Joel?

MR. JOEL MICHALEK: Actually, it would help me out if ATSDR presented first.

DR. DAVID SMITH: Oh, okay. So that's -- Don, do you have a preference?

MR. DON BUELTER: No.

DR. DAVID SMITH: Okay. So, I guess the person we really need to ask -- Maria, are you all right with that?

MS. TERAN-MACIVER: I'm fine with that.

DR. DAVID SMITH: Okay. Well, with your permission, we'll make that change in the schedule. Is that all right folks?

ARMANDO QUINTANILLA: We're going to start with ATSDR?

DR. DAVID SMITH: We'll start with ATSDR, yes, sir. Okay. Let me set down my notes for Agent Orange and do the ATSDR.

The presenter for the ATSDR is Maria Teran-MacIver.

She is a community involvement specialist through ATSDR who's been involved with Kelly community since '99, so she has some background and experience with this.

Maria, my understanding is that you are willing to kind of work with the same format; if there's prequestions, we'll do those, and then have people to jot down their questions as they go through, and have questions and answers at the end of it.

MS. TERAN-MACIVER: That's fine.

DR. DAVID SMITH: Okay. Let's then ask you that question, again, in reference to ATSDR. Are there some specific questions that you have mind that you want us to have written down right now?

RODRIGO GARCIA: A list of all the issues and a presentation of each of the issues that she wants to discuss.

DR. DAVID SMITH: A list of the issues and presentation?

FEMALE SPEAKER: So make a copy of what she's going to discuss tonight.

RODRIGO GARCIA: All the issues that she's going to cover, a list, and then a brief one- or two-page report on all the issues that she covers in writing submitted to RAB members.

ESMERALDA GALVAN: The minutes from the last RAB meeting, are they going to address the written responses?

DR. DAVID SMITH: The ATSDR?

ESMERALDA GALVAN: No, the RAB minutes.

DR. DAVID SMITH: I'm going to ask you to hold that

question. We're going to start with ATSDR.

Any more questions about ATSDR?

Okay. Ma'am, we are going to turn this to you. Do you need something to work off of?

RODRIGO GARCIA: We can ask questions after she finishes?

DR. DAVID SMITH: After she finishes. We prefer to do it that way Sure can. Jot them down so you can remember them.

MS. TERAN-MACIVER: It's a pleasure to be here tonight. I thank you for giving me the time and address this group. I'm Maria Teran-MacIver and I work for ATSDR in Atlanta. For those of you that are not informed about ATSDR, we're a public health agency and are a sister agency to the CDC. We work primarily with communities where there are toxic substances in the community, and we work to see if whether or not those substances have a pathway to reach a community member either through the air, the water, or the soil.

I have a fact sheet that she's passed out that has a summary of all the things that I was going to talk about, and also there's a questionnaire. I would appreciate it if you would fill out that questionnaire on the fact sheet. If you do, all you have to do is fold it, put a piece of tape on it and mail it. It's already got a postage paid on it. So if you wouldn't mind doing that for me, I'd appreciate that very much.

ARMANDO QUINTANILLA: We didn't get that questionnaire.

TIM SUELTENFUSS: I'm passing that out.

MS. TERAN-MACIVER: Okay. It's coming around.

My reason for coming tonight is to announce that we are going to release three documents as final documents. In our agency, we have a document that we produce for public comment, and we put all the data together and we do the evaluation and we come up with conclusions and then we put it out for public comment and let everybody respond to them. And then we put out a final version, which is with answers to all those questions or comments that the community and other people have given us. And so, that's what we've done with these documents. That the final process in each document.

And the documents are, first, the first public health assessment that we did in 1999 that went over all the media on the -- related to the Air Force base and the community. And we had quite a few comments on that. We had comments from Dr. Squib (sp) and from community members and from scientific groups, and we have answered those questions and that document is going to be released tomorrow.

If you're on our mailing list, you will be getting a copy of it. If you're not on our mailing list and would like to be, let me know at the end of the meeting and I will take your names and make sure that you get copies of those documents.

That's the first document. And what we found in that document is that we did not expect any adverse health effects to

be present in the community based on the air, soil, and water near Kelly Air Force Base.

In regards to the water, we did discover that the shallow aquifer is very highly contaminated and that Kelly Air Force Base is probably the main contributor to that contamination. But the people of San Antonio don't get their drinking water from that aquifer; they get it from the Edwards aquifer, which is 800 to 1000 feet deep so that it's protected from different things getting into it by layers of rock and sand and whatever. So that's the part about the water, the drinking water.

And Leon Creek, when we did the assessment of the data in 1996, we found that the fish in Leon Creek were not contaminated. But in 2002, the Texas Department of health put out an advisory on the fish in Leon Creek, saying that they had PCBs in them. And it's ATSDR's contention that that would be from a different source and that it should be looked into by the appropriate authorities, which I understand is being done.

Is right, Sam?

It's being looked at by Texas Department of Health and San Antonio Metro Health Department to see where that's coming from.

The chemicals in the soil -- there was a concern in the community about lead, and lead is a concern in all of San Antonio. And so, we didn't find any levels of lead in the area

that were expected to cause health effects in people. But if people had questions or worry about their children, they could go to the San Antonio Metro Health Department and have them tested for lead. So that's that.

The other document -- that's the first document, the Public Health Assessment. The second document is the potential current air exposure. And that was looking at pollutant release in the air after 1995 from Kelly Air Force Base. And we found that on-base personnel are not expected to experience an increase illness from exposure to current air emissions.

So that's the findings of that document.

And then we have the past drinking water exposure. There were two wells, wells 313 and 334, that we tested to see if people drinking from those wells could be expected to have health effects. And we found that they were not; that they were not at levels that would cause health effects.

So that's the third document that we're releasing as final documents.

Now, in the fall -- and I told a group this morning that we would be here in October, but I've found out since then that because money hasn't been allocated for translation, it might not be at the October RAB that we'll be able to present the findings of the past air emissions, but it will be in the fall. As soon as we get the document translated so what we have a Spanish and English version, we'll be releasing it. And when we

do, we're going to have a public meeting so that people can come and ask questions. That document of past air emissions is for public comments. So they'll have 30 to 45 days or 60 days to answer -- ask us any questions that they want to on that document, and then we'll answer those questions.

So, that's for the fall.

We also have two documents that haven't been rereleased, the Health Outcome Data Consultation. That's where we went and looked at all the health outcome data of that community and made some decisions about what kind of health effects were out there. And that's where we found that there was some leukemia, some liver cancer and things like that in the community.

And since we put that out for health for public comment, we got a lot of questions and comments, and we're answering those questions and comments and we hope to release that document in the fall also.

And then we have the East Kelly Public Health Assessment. That's the community in East Kelly wanted to know if there was problems in the groundwater or the soil or the air that would cause them to have health effects. And we released it in 2001 for public comment and we're going to rerelease it in the fall after answering all the public comments and as soon as they get translated too.

So that's in a nut shell what I had to announce

tonight. If you'd like, I'll take questions.

MS. HUERTA: Didn't you say that health --

DR. DAVID SMITH: Would you give a name first.

MS. HUERTA: Sure. My name's Tanya Huerta. When did you say the health outcome data would be released? In the fall?

MS. TERAN-MACIVER: In the fall.

MS. HUERTA: But it's not a definitely?

MS. TERAN-MACIVER: No, it's is not a definitely. I was hoping for October, but I've been told that we can't do it by October because there's no funds for translation right now.

RODRIGO GARCIA: Rodrigo Garcia, RAB member. You said in your public health assessment of 1999 that you did studies on air contamination and it had no effect on humans. Did you do an extensive review of take-off and landings and emissions from all the types of aircraft that have polluted the air since 1917, which started through the years by B-17s, C-5s, C-130s, and all these planes for years and years and years of pollution?

MS. TERAN-MACIVER: We did that for past air emissions. The past air emissions that we're going to release in the fall for public comment, we looked back at all the landings and take-offs that happened at Kelly Air Force Base during that time. So that will be answered in a past air emissions document.

RODRIGO GARCIA: Did you explain the physical properties and what kind of pollutants these aircraft put out and all that?

MS. TERAN-MACIVER: Yes.

RODRIGO GARCIA: I'll give you my name so you can send me all those brochures.

MS. TERAN-MACIVER: Okay.

ARMANDO QUINTANILLA: I have four questions. The first one is on the public health assessment. That was done in 1999; is that correct?

MS. TERAN-MACIVER: Yes.

ARMANDO QUINTANILLA: And five years later you're saying that it's unlikely that any health effects could result in current exposure. How come it took so long to do that?

MS. TERAN-MACIVER: We had a lot of different things that happened that stumbled us on getting it rereleased. One of those was 9/11. We had a lot of our group that went away from ATSDR to 9/11 to the World Trade Center to work, and so that put a big pause in it. And then we've just had trouble with getting -- we had staff movement and changes and things like that. So we're very sorry that it took that long, but it has taken very long.

ARMANDO QUINTANILLA: The second one is on-base air. That came out in 2001 and you're just barely answering all the questions that we made on that and reporting them tomorrow.

MS. TERAN-MACIVER: Yes.

ARMANDO QUINTANILLA: Releasing them tomorrow. Again, what has taken so long on that?

MS. TERAN-MACIVER: I wish I had a good answer for you. It just has been a staff problem, of having the people available to work on the documents.

ARMANDO QUINTANILLA: You also say on that particular one that on-base personnel are not expected to experience an illness from exposures to current air. This is what you're little fact sheet says. The current air. What about the past air? What studies were made there?

MS. TERAN-MACIVER: The past air is going to be released in the fall, that document of the past air.

ARMANDO QUINTANILLA: And it goes back to what year?

MS. TERAN-MACIVER: I can't say, but if you'll write that down for me, I'll make sure I find out.

ARMANDO QUINTANILLA: And my last question is on-base drinking water. That report was also released in 2001, three years ago, approximately. And you're -- but this sheet says that we're not drinking the water so we don't have a problem. Again, what -- how come it took three years to tell us that?

MS. TERAN-MACIVER: I wish I had a good answer for you, but it's just a staff problem. We've just had different staff that have been out and not being able work on the document.

ARMANDO QUINTANILLA: My last question is: You've working these reports on Kelly Air Force Base since about 1995 when we went to the Congressman -- we had that Congressmen who went to your office. Can you tell us how much money has been

expended by ATSDR, including of all these reports for this period of time?

MS. TERAN-MACIVER: I don't know. But I will ask that question and find out for you.

ARMANDO QUINTANILLA: And you'll give us an answer on that?

MS. TERAN-MACIVER: Yes.

ARMANDO QUINTANILLA: That's nine years you've been working on that. For the information that you give us here, it's very little. Nine years of study for such a little amount of information. I don't know if we're being given enough bang for our tax dollar. That's my main question.

MS. TERAN-MACIVER: I'll find out what that cost is for you.

ESMERALDA GALVAN: My name is Esmeralda Galvan. I'm also a community member on RAB. Are other RABs having problems with cleanups like Kelly Air Force Base?

MS. TERAN-MACIVER: I don't know that answer.

ESMERALDA GALVAN: If the air emissions presently are being monitored, what are those studies showing? You're saying they're only present -- the past two are completed. What are the present air emissions studies showing? And what does it mean on these companies disposing contaminate chemicals? What kinds are being used? Are they the same as Kelly used? And how often are the employees trained on chemical use, awareness, safety,

training?

MS. TERAN-MACIVER: I'll have to get answers to those questions for you because I don't know the answers.

FEMALE SPEAKER: I'm sorry. Are these the ones at Kelly USA or the past --

MS. TERAN-MACIVER: Yes, the ones at Kelly USA.

ESMERALDA GALVAN: Are they being systematically trained on a scheduled time or is it once --

MS. TERAN-MACIVER: I can find that out for you.

ESMERALDA GALVAN: -- once they're employed and that's it, or do they continuously get, you know, training on safety and --

MS. TERAN-MACIVER: That's an OSHA requirement. I don't know.

GARY MARTIN: I can probably quickly address that. I'm Gary Martin with GKDA. Any training that's required on the OSHA side, OSHA administrates that just like (inaudible) and the rest of their group administrative things on the admission side. A lot of it depends on exactly what types of chemicals and being used and who's using them.

The office workers don't need the same training as employees that actually use those chemicals. Employees that actually use those chemicals have to be been trained in the proper use of them. There's a general -- it's called the Community Right to Know, which any company that handles any

chemicals that are on the list, they have to have the material safety data sheets in their office for that, and environmental people handle that. And so it depends on what level you are in the company and what you actually do as to what training that you receive. All of that is really administered through OSHA.

ESMERALDA GALVAN: I understand from the open house that Lockheed Martin is going to use the same chemicals that Kelly used in plating.

GARY MARTIN: No. I don't think -- no, they're doing a different process.

ABBI POWER: No. The Martin consortium is not using the coordinated solids.

ESMERALDA GALVAN: Because I asked the engineer when we doing the tour, and I said, Are you going to use the same chemicals that Kelly Air Force Base did, and he said yes. And I was like, okay, and I just walked away. I'm concerned with the safety of the employees as well as my own family, you know, working there.

GARY MARTIN: Lockheed uses a very different process in emissions. The entire cleaning line -- the plating shops and cleaning solvents are completely different.

ESMERALDA GALVAN: They are putting a plating shop there. You are aware of that.

ABBI POWER: A plating shop?

ESMERALDA GALVAN: Yeah, they showed us that area.

GARY MARTIN: They use a different --

ABBI POWER: They do plating, but it's not electroplating like Kelly was using. It's a different process.

ESMERALDA GALVAN: Because I asked that question and they said yes.

ABBI POWER: Yeah, it is plating, but it's not electroplating. It's a different kind of process. And the cleaning solvents they use are different.

ESMERALDA GALVAN: How often are they trained?

GARY MARTIN: Whatever the requirements are. Like I said, it depends on what level of your involvement is and where you work and what you do as to what training you're required to have.

ESMERALDA GALVAN: And how are disposing of chemicals at the present time?

GARY MARTIN: That I don't specifically know the answer to. Generally speaking, what most of them have gone though is a waste minimization plan where they recycle and reuse that and that reduces the amount of waste they have to dispose of. And according to the regulations, they have to classify that waste, and then depending how it's classified whether it's hazardous Class One or Class Two, then it goes to the corporate disposal facility.

ESMERALDA GALVAN: But the last gentleman that came to our meeting told us that he had dumped at a some site in Dallas

from Kelly Air Force Base.

GARY MARTIN: There are permitted hazardous materials disposal sites permitted throughout the State of Texas and the United States. All that stuff has to have some place to go. Generally it goes into old oil fields areas where it's --

ABBI POWER: A lot of it's incinerated.

GARY MARTIN: Some of it's burned. Deer Park in Houston.

ARMANDO QUINTANILLA: It's burned where?

ESMERALDA GALVAN: It's burned in the air?

GARY MARTIN: Deer Park. Yeah.

ABBI POWER: No. Well, there's several incinerators across the state, and it's not an incinerator like what you think it is. These are specifically designed to have zero emissions of the chemicals of concern. There are injection well facilities. Different wastes have to be handled in different ways. Some wastes have to be solidified, and then they're land disposed. Some wastes have to be treated prior to injection or incineration. I mean, there's -- you've seen the list of chemicals. I'd be more than happy to provide you with information, but it would be a large volume of information because each specific chemical has a specific treatment.

ARMANDO QUINTANILLA: At one time Kelly did have an incinerator site.

ABBI POWER: I'm aware of it.

ARMANDO QUINTANILLA: It was burning 100 gallons per hour.

ABBI POWER: That's not what's happening anymore. I mean, technology has changed drastically.

MALE SPEAKER: That incinerator doesn't even exist anymore.

ARMANDO QUINTANILLA: No, but it did. The site is still there. I don't know if there's any sign of it on the ground or not, but it was burning that and those cyanide emissions went out over the area.

DR. DAVID SMITH: Let me try to bring it back to the issue in front of us.

FEMALE SPEAKER: I just wanted to ask, there's been some concerns with leukemia and cancers. With the report that's coming out, are we going to expect to see the data still specific by zip codes or is it going to be looking at like averages or -- are we going to see the format --

MS. TERAN-MACIVER: We're supposed to be looking at it by zip codes.

FEMALE SPEAKER: Okay. And currently -- since the report sort ended in a final report, Sam Houston charged that the Department of Health at the Texas level -- that's still monitoring for birth defects, and I'm assuming still using the birth defects registry and tumor and cancer registry.

MALE SPEAKER: I think the difference on this coming

report is going to be using data that's most current. In 1999 when they did the first health outcome data, they used information that they had available, because I think up to 1997 --

FEMALE SPEAKER: There are families that didn't have an official birth defect registry --

MALE SPEAKER: What we're going to see in this one is more current, up-to-date data for birth defects. At least what they can. In that sense -- I don't know. I haven't seen it, but it might be different from what we saw before.

The other thing that they're going to do, from my understanding, that the health outcome data report is that -- the first criticism of the first report in 1999 was that they compared many of those rates with somewhat similar population and a rate in California. Is that right?

MS. TERAN-MACIVER: Yes.

MALE SPEAKER: And this time they're going to use a more population of Texas, based in Texas.

FEMALE SPEAKER: Near an industrial site?

MALE SPEAKER: I don't know.

MS. TERAN-MACIVER: I don't know how they chose.

FEMALE SPEAKER: But they'll say it in the report?

MS. TERAN-MACIVER: Yes, they'll say it in the report.

FEMALE SPEAKER: Can we expect some recommendations as to what Texas needs to be doing in Metropolitan areas to monitor

the status?

MS. TERAN-MACIVER: Yes. There will be some recommendations on that, yes.

ROSE CAMPOS: Rose Campos. I have a question. You keep saying there's staffing problems. How many people do you actually have working on the side of research?

MS. TERAN-MACIVER: There's 400 people that work for ATSDR, and we have sites across the country and Puerto Rico and Guam.

ROSE CAMPOS: Well, how many people do you have working on, say, this project?

MS. TERAN-MACIVER: There's about seven people working on this site.

FEMALE SPEAKER: I have a question on the (inaudible) study. Was the testing of the air that you did in '97 and '96, is that same kind of testing that was done by the Texas Department of Health?

MS. TERAN-MACIVER: I don't know what Texas Department of Health did. Do you know?

MALE SPEAKER: Obviously, I don't know. I know a lot of the testing that usually is done, is not done with fish but actually done on sediment samples. But the testing that was done by the Texas Department of Health were the actual fish filets themselves. So I don't know what the comparison is.

MS. TERAN-MACIVER: I'll have to get you that

information.

DR. DAVID SMITH: Rodrigo, do you have a question?

RODRIGO GARCIA: I just want to make a comment. No illness due to past air pollution, we don't believe that. I want to see the data from all your air monitoring past and present that justifies you making that statement. Where did you get the data from that the air hasn't been contaminated starting back in 1977?

MS. TERAN-MACIVER: That's going to be in the past air emissions document.

RODRIGO GARCIA: Did you do EPA data on who did the air monitoring for the past 70 something years since Kelly was open? I want to know that.

MALE SPEAKER: Perhaps I can clarify that one up. I think what Maria's saying is there are two area of sites that you're looking at. One of them being current, one being past, one being released now. The current one, the one being released in October, addresses those questions that you're asking.

MS. TERAN-MACIVER: Yes, that's the past air emissions.

MALE SPEAKER: So there's two areas.

MS. TERAN-MACIVER: And to answer your question, they did it by modeling. They did -- because they didn't have the exact data, they did a model to tell whether or not it was enough pollution to hurt people's health. So that will come out in the report.

RODRIGO GARCIA: That's hard to believe. I grew up there on 38th Street next to the runway and I could see B-52s coming in and dumping soot and black when they would come back here from Vietnam. And I remember the B-17s and all those things when I was a little boy growing up. I remember those planes from the 50s and 60s, how they came off, the C-130s and all that. And they dumped pollution all over the air for years and years and years. And I don't believe that none of that has had little or no effect on that, so that's why I'm very doubtful of what you're telling me.

MS. TERAN-MACIVER: Well, when that document comes out, you'll be able to look at the data that they came up with and also to make your comments on that.

ARMANDO QUINTANILLA: You're coming back again in October. Will you ask your bosses, whoever they may be -- Susan Moore, I believe, is now in charge -- to come in. Maybe she can come in and answer some of our questions that are being left unanswered now. Perhaps some of the staff that developed those reports, I think they're needed in order --

MS. TERAN-MACIVER: They're coming in the fall. I say October, but it's in the fall. They're going to be here.

ARMANDO QUINTANILLA: They will be here?

MS. TERAN-MACIVER: The scientists that actually wrote the reports will be here.

ARMANDO QUINTANILLA: Because too many questions have

been left unanswered.

The second part that I would like to ask is -- Tanya testified, people are sick in this community. We have high levels of birth defects and low birth weigh babies, leukemia, and cancers. We want some recommendations from ATSDR as to what's going to be done about this. Who is going to do it? And you know, perhaps even give us some ideas as to where the money is going to come from to do this. We need to know.

MS. TERAN-MACIVER: There will be recommendations in the in the final document.

FEMALE SPEAKER: Our concern is not only for the people that live here now, but the people that lived here and who may be carrying that great health risk of disease away with them and not even know. It seems like Kelly is still a real local issue, but it's a CDC issue. Those of us that live here and even lived 60 miles away 20 years ago may not even know. So will they address that in the recommendation? You know, those of us that lived here and just moved --

MS. TERAN-MACIVER: That will be answered in the document.

FEMALE SPEAKER: That will be?

MALE SPEAKER: Will those reports be available on the Internet?

MS. TERAN-MACIVER: Yes, they will. ATSDR.CDC.gov.

MALE SPEAKER: If I search on Kelly Air Force Base, will

I find it?

MS. TERAN-MACIVER: Yes.

FEMALE SPEAKER: How difficult is it to get in there? It seems like a maze to get into ATSDR as a public person. You know, it seems like a web going in there.

MS. TERAN-MACIVER: I don't know.

MALE SPEAKER: I think when you go to the ATSDR on one column it specifically says "assessments." You click on "assessments" and go down to Kelly, and then you got all the documents. There's a lot of them in there.

FEMALE SPEAKER: It's just hard to figure out which document is which.

MS. TERAN-MACIVER: What was that?

FEMALE SPEAKER: It's real hard to figure out which document is which on the web. It used to be easier than it is right now.

MS. TERAN-MACIVER: I don't know what to tell you on that. I'll have to find out.

FEMALE SPEAKER: Yeah, try it. I mean, they're all there, but it's just hard to recognize.

DR. DAVID SMITH: Okay. Obviously there's lots of questions that have gotten picked up here to be carried back and responded to.

FEMALE SPEAKER: I have some question information sheets if you want to see those.

MALE SPEAKER: You got the questions, that's all I need.

FEMALE SPEAKER: If you have general questions that you have, you might want to be more specific.

DR. DAVID SMITH: Okay.

MS. TERAN-MACIVER: Thank you very much. And please don't forget to fill out the questionnaire and mail it back to me.

RODRIGO GARCIA: Thank you for coming.

MS. TERAN-MACIVER: Thank you.

DR. DAVID SMITH: Than you so much, Maria. That was a great job. I appreciate it.

The next item on the agenda, I guess, is Joel Michalek. Joel got his Ph.D in mathematical sciences at Wayne State University in Detroit. He's employed by the Air Force Health Study Laboratory, Brooks City Base as principle investigator of the Air Force Health Study for neurological study of Vietnam veterans exposed to Agent Orange and other dioxins containing herbicides.

He is a professor at the University of Texas, Houston School of Public Health and the University of Texas in San Antonio. Joel serves as a consultant with the University Clinical Research Center here at University Health Texas Science Center here in San Antonio and the Health and Medical Research Foundation in San Antonio.

He has co-authored 120 papers in statistical

methodology and epidemiology in clinical trials. He's served as a review of scientific journals and an expert witness in Congressional hearings.

Joel's presentation today obviously has to do with the Agent Orange questions that you've asked.

Once again, I would ask you to follow the same format we asked once before. If there are any prequestions -- I think we captured one. If there are no other prequestions that pop up, we'll ask Joel to make his presentation in the same format we did before and then ask more questions.

MR. JOEL MICHALEK: Well, good evening. First, I'm right here, Joel Michalek. I'm the principal investigator of a large long-term, follow-up study of Vietnam veterans who sprayed Agent Orange in Vietnam from 1961 to 1971.

This study has been going on for a long time. This is long talk and I'm only going to give you part of it. If you want to hear the rest, if you want to hear more details, I can do that at any time.

Of course, many of the questions I've heard here tonight are parallel to those that we heard from Vietnam veterans in 60s and 70s as they came back from the war. And the reason for it was, of course, this chemical, which was one of several used in Vietnam and stored in those barrels with orange stripes. It a herbicide. It was intend to be used protect our troops from ambush and harm working in combat environment jungles.

It was used throughout the war, and my understanding is it went straight off the shelf. It was not made for Vietnam. It was made to be used by you and I in our back yards. It was a mixture of 2, 4 and 5 T and 2, 4 D, which were commonly used herbicides at the time.

The herbicide was used widely in United States and Canada and around the world, in fact. And some of the components of the herbicide are still in use today. Although, it wasn't known at the time, the herbicide itself was contaminated with a poison called dioxin, which is a very highly resistant organic pollutant that once it gets into your body, it will stay there and reside in your body's fat lipids for years and years.

The purpose of this study is to determine whether we hurt any of our own troops by their exposure to Agent Orange.

From the period 1961 to 1971, the United States Air Force sprayed about 19 million gallons of herbicides in the country of South Vietnam. They sprayed those herbicides over jungles, rights-of-way, railroads, and farmland as part of our combat effort during that war. The used C-123 airplanes.

This is a picture of a jungle area before spraying and after spraying.

This is a long talk and I'm not going to show you nearly all the slides, but I'll give you a little overview. The talk is about 115 slides. I will show you some of those slides. What you can do is think about it, think of your questions, talk

to me, we'll write your questions down and I'll respond in writing or in any way you'd like.

Obviously, to be clear, the Agent Orange experience in the dioxin contaminate is sort of a role model kind for the story that I've heard unfold here regarding Kelly Air Force Base. This is an example of your government pursuing an issue to the very end without fail until today. In fact, this study will end in the year 2006. It began in 1980. I was on board in 1977. I helped write the protocol.

These are some of the topics covered in the talk. I'll give you some of them tonight, but not all.

Scientific terminology. We're trying to find out whether we hurt any of our troops. Means, we hurt them regarding their health, regarding the health of their children, and regarding their mortality.

The study has three arms. It has a physical examine or medical arm, with the physical examinations of the study of participants. It has a reproductive outcome arm involving the retrievable of records on all of their children and conceptions. And it has a mortality arm which analyzes mortality data derived form death certificates on veterans themselves.

The program was launched in 1980 by a letter from White House and Secretary of Defense. I was brought in to work on the study in 1977 before its official launched. I helped write the protocol. The study been funded through a teleline

audit in the federal budget. The reason we're here today and we're able to talk about this is that fact, the fact that the money for the study was written by Congress into law and the money is protected from use by other agencies or by the Air Force for other purposes.

It's been protected along the way from interference or even the perception of interference through two public laws. One of which established a peer review process for all Agent Orange related research, and that is that every two years the National Academy of Science Review reviews all animal and human studies regarding any aspect of herbicide exposure, including dioxins and components of the herbicides themselves. Those reviews began in 1989 and have continued to the present. Every two years the National Academy writes a book rendering their opinion about the three components of health that I've already mentioned -- health, reproductive, and mortality and how they relate to exposure to herbicides in Vietnam veterans.

The Department of Veterans Affairs and the United States Congress used those opinions to determine health policy regarding Vietnam veterans. Those books and those opinions review all studies ever done in the United States and around the wonder on the issue, including the study I'm telling you about tonight. Our study has been reviewed by the National Academy, and our results have been presented by myself primarily to the Academy several times in the previous years.

We have a structure at Books Air Force Base, now called Brooks City Base with a split structure of one part handling the funding and contracts on the other part handling science investigator of the science component in this study.

My branch chief is Julie Robinson and the manager for the contracts and funding is Mr. Richard Ogershok.

The permanent staff consists of about 38, 39 people consisting of PhD epidemiologists and statisticians like myself, statisticians, computer programmers, medical coders, database managers, student aids, and we've been doing this since the beginning of 19 -- of the 80's.

Here is that two tier management system I was telling you about. The program management is handling the funding and the scientific operations are right here. That's where I'm located.

This chart attempts to show you the level of activity of the study and how it relates to other agencies in our country. We have an advisory committee, which is a panel of independently appointed scientists, medical doctors, toxicologists, statisticians appointed by the Food and Drug Administration to oversee and critique our work every year. We meet with them once a year. That panel is scheduled to meet with us in September of this year, for example. We've been meeting with them and they've been reviewing our work since the beginning of the study.

In addition to that, of course, is the National

Academy of Science Review, which occurs every two years.

Periodically I'm called to testify at Congress and defend our work. The last time was two years ago to the House Government Reform Committee.

We interact with CDC, as you'll see in a minute. The CDC has been instrumental in our assessment of exposure and the effects of the pseudo measurement of a dioxin contaminant in the blood.

And we have contractors who have conducted the extensive periodic physical examinations in these troops and these Air Force veterans since the beginning. Particular science applications at our national corporation and as prime contractor as overseeing the operation at Scrips Clinic where physical exams are conducted. We had people come to the National Research Center at the University of Chicago and interview each veteran fir up to two hours prior to physical examination. And all of our reports go directly to the Air Force Surgeon General on the Air Force Base.

So here we have the time line, the pattern of -- period of exposure that took place between 1961 and 1971, that was Ranch Hand -- the Ranch Hand Unit as it was called -- was spraying those 19 million gallons of herbicides in the Vietnam War. That spraying stopped in 1971 after a presidential order because in the late 60s it was discovered that mice that had been dosed -- female mice that had been dosed with this contaminant

could be caused to produce birth defects in offspring and could cause -- the chemical could be shown to induce cancer in mice. And that lead to the cessation to spray. The chemical was contaminated and no one knew it until very late in the war.

That lead to -- during that period, between 1971 or '72 and 1980, veterans expressed complaints at VA hospitals around the country regarding their health. Somewhere in 1975 a claims clerk at a VA hospital in Chicago called newspapers and that lead to increased publicity, it lead to Congressional hearings, some of which I attended and briefed in the late '70. And that lead to a national effort to address the Agent Orange issue. The study I'm telling you about tonight is one of many funded by the federal government to address this particular subject.

Others have been done or have been started and have been concluded by the Center for Disease Control and the National Institute for Occupational Safety and Health, an arm of the CDC.

The triangles indicate physical examinations. These are three-day physicals that were done. The first one at Kelsey-Cibol Clinic in Houston and the remaining physicals were done at Scrips Clinic in La Jolla, California. Each of 2300 veterans were flown out there over a 13-month period, 60 a week, and they were physically examined regarding their health, dermatology, immunology, neurology, and blood was drawn. The blood was used to produce a panel of chemistries, and the

chemistries together with the dioxin measurement in the blood, as well as they asked and answered questions about their health and how high was their exposure.

The study is scheduled to conclude on October 1, 2006. Congress has recently passed a law in December of last year authorizing -- directing the Department of Veterans Affairs to task the National Academy of Sciences to study the issue as to what should happen to the Air Force study; should it stop or should it continue? To this day I cannot tell you the answer to that question. We'll find out in a few months as to whether or not the study will actually stop or not.

So, we're talking about a unit that existed in the 60s to spray herbicide. The actual number was 1262, of which 1209 were alive and eligible for participation in the study in 1981. The difference in the numbers between 1262 and 1209 are, roughly 25 individuals killed in combat and the others died of natural causes, which have been shown to be unrelated to their exposures at the end of the war and the beginning of the study.

The control group consists of all Air Force personnel who were involved in any way with flying or servicing C-130 aircraft, which is a different airplane than used by the Ranch Hand group, and anywhere in Southeast Asia during the Spring period from 1961 to 1971. Those number 19,000 people. They're all men. They were selected because they had the same training, same background that the Ranch Hand veterans did through C-130s

rather than C-23's.

These 19,000 are used derive death rates to compare mortality experience of the Ranch Hand Unit with standard, the standard being the mortality experience of the 19,000 controls.

Within the 19,000 we've selected a matched cohort around 1600 controls that have been repeatedly invited to be physically examined along with the Ranch Hand veterans at Kelsey-Cibol Clinic and Scrips Clinic over the past 20 years.

So, the two cohorts together, the Ranch Hand veterans together with their matched physically examined controls formed the basis for that component of the study that we call the morbidity component, the health component.

Separately, those same individuals formed the basis for the reproductive outcome on this study. We have identified all live births fathered by these men over their entire life time, roughly numbering 8,500 children. They've identified through medical record review of all conceptions fathered by those children, numbering about 10,000 conceptions. All those live births and conceptions are documented by records. All those records have been coded. All the coded records have been linked to the body burden measurement of the dioxin in the father at the time of the conception, and articles have been written describing the relationship between the father's exposure and the outcome of the birth of that child. And those articles have been published in periodic scientific journals and they have been used as a

basis for compensation decisions by the Department of Veterans Affairs in Vietnam veterans. And I'll show you some about of those results.

So, the number one issue for any scientist facing a question like this -- as any scientist would face in your situation at Kelly Air Force Base is who was exposed and how much and for how long?

Fortunately with this particular chemical there's a technological solution, whereas there may not be for other chemicals. The fortunate aspect of Agent Orange is the contaminant dioxin being highly persistent. Meaning it has a very long path life. Once it gets into your body, it binds to your lipids and your blood, cholesterol, and it passes into your fat through cell membranes.

In fact, the CDC has shown that the coefficient -- the participating coefficient between the circulating lipids in your blood and the heart tissue was 1.0. Meaning, the dioxin can't tell the difference between cholesterol and body fat. It just moves freely back and forth and it stabilizes in the various parts of your body, seeking out fat. Once it finds fat, it binds to it and stays there a long time. The half life, which is a measure, a scientific measure, of how long a chemical remains in the body, this chemical is about eight years as opposed to the half light of a hydrophilic chemical that you take routinely when you have a headache, aspirin, that might have a half life of

about 20 minutes. This stuff has a half life of about eight years. Meaning, if you get a big dose of it in your body, you may not live long enough to get rid of it. It stays with you a long time.

Well, what's a high dose? All of us in this room have about four picograms per gram lipid of dioxin in our body simply because we live here in the United States. We get it from smoke from burning trash, from styrofoam cups, from bleached paper, shell fish, all kinds sources. We can get it from fatty fish that we buy at HEB. We can get it from tuna, we can get it from salmon, we can get it from shellfish. All of us are exposed. I've got it in my body and so do you. We've got about four picograms, and that's expressed in parts per trillion as four parts per trillion. This is a small dose, a small amount. A part per trillion.

A part per trillion, in scientific terms, is 10 to the minus 12. In real terms, if you imagine a stack of dimes from here to the sun, it's one dime in the stack. That is one part per trillion.

The CDC, in their mass (inaudible) gas from metrography analysis on serum from our study subject measured that level of contamination in the serum of these men. We believe that the initial dose received by the Ranch Hand veterans in Vietnam, the highest dose received was on the order of 4-, 5-, 6000 six parts per trillion, more than a thousand times what you

and I have in our bodies today. And they got it because at that time we believed the chemical to be safe. We told them it was safe. We said, here it is, straight off the shelf. Ace Hardware. Don't worry about it. It's safe. They got inside the tank. They got down it their hands and knees and greased the valve. The tank was never empty. They used it as a hand cleaner. Why? We told them it was safe. They had it all over their skin. Why? It was a tropical area. It was a jungle. It was the tropics. It was 100 degrees outside. They were not told to wear special clothing or any kind of protection like we have today with all the regulations they have about chemical exposure. Those things didn't exist back in the 60's.

There was no dosimeter. They didn't have a badge on their flight jacket or their fatigues telling them how much exposure they were getting. There was none of that. We gave them a chemical that we thought was safe and we told them to use it and they did. We didn't find out until later -- and this is the tragedy of Vietnam -- we didn't find later that it was contaminated. It was contaminated with a highly persistent organic pollutant named dioxin.

The issue is, did we hurt them? Did we hurt any of our troops with that exposure? That's why we're here. That's why we're still doing this today. It takes a lot of time and a lot of effort to answer the questions and we're still attempting to do that.

So, we have an issue here of exposure that must be faced in 1980. We knew we had no known treatment, we knew we had no way to know exactly who got exposed and how much. But nevertheless, the mandate was there to launch a study. We applied the standard epidemiologic samples to a problem of unprecedented complications. Unprecedented because the veterans' complaints were not isolated to a single issue, such as cancer. They covered the entire spectrum of medicine, including birth defects in new children, cancer, heart disease, skin conditions, gastric conditions, immunological conditions, neurological conditions. There was a lot of these across the board.

So, this was a study of unprecedented scope and unprecedented complications launched by our government to answer the question. The mandate was there. The study was launched in 1980. It involves, like I said, at multiple in points. That's why we have a three-day physical examination. These men are seen by board certified physicians. They are examined for probably more intensively than any of us have ever been examined, at a cost of about $4,000 per person.

We have repeated physical exams that you saw in the previous slide. Each person is questioned for up to two hours by a National Academy Research Center interviewer from the University of Chicago, asking about exposures to other risk factors for disease, such as smoking, other chemical exposures on the job here in the states, family history of disease, their

history of disease, their reproductive outcome history. An entire panel of questions that were derived from peer review critique for protocol back in the 70s by the National Academy of Sciences and the Armed Forces Neurology board and the Air Force Scientific Neurology Board and the University of Texas School of Public Health.

So here's a picture of the compliance to the study in the 20 years of the physical examine process from the beginning of about 80 percent or so of the Ranch Hand veterans that participated in physical examinations and about 75 percent of the comparison veterans that have complied to examinations.

The entire study is purely voluntarily. Each person is eligible or not, depending on own record review. Eligible individuals are called by us or by our contractors and invited to participate. If they are compliant, they are flown to La Jolla, California, and a physical exam is performed.

They live all over the United States. Only about one or 2 percent live outside the Continental U.S. Physical exams are performed here at Scrips Center in Southern California. Here are we at Brooks at San Antonio, Texas. National Science and Research Center, University of Chicago did the interviewing, and our prime contractor signed an international corporation for a four-year investigation from Virginia. They oversaw the entire physical exam process, and the collection of data and the production of major reports for each physical.

Separately, the group that I work with at Brooks City Base, analyze the data and write articles for scientific journals, and those are review by the National Academy of Sciences. The scientific journals articles form the basis for the NAS conclusions regarding Agent Orange. The big reports that come out of our physical examinations are written by Science Application International Corporation are available online at our web page.

So, I've already mentioned these concepts and the scope -- I've run out of time. It's 7:30. Should I do it quickly? I am talking too much?

ARMANDO QUINTANILLA: No. These are the type of questions --

MR. JOEL MICHALEK: Let me just go another five minutes, okay, and then I can respond to questions.

Right from the beginning credibility was an issue. Why is the Air Force studying itself? After all, the Air Force created this problem in the first place, why isn't some other agency doing this study? In 1976, '77 the President created the Agent Orange Working Group International. They're an inner agency panel to advise the President regarding this issue. And all the agencies were represent on that panel, including the Center for Disease Control, the Department Health and Human Services, the Defense Department, and the Department of Veterans Affairs.

This was before my time. This was certainly not my decision. At that time I was here with you at Brooks in San Antonio. The decision was made by them that the Air Force should do the study. Probably because they needed answers quickly and they realized the Air Force is in the best position to do that because we knew where the records where and we knew where it was in terms of the operation of Ranch Hands.

So, now we're getting into things that are going to take too long to talk about. So I want you to keep hitting slides until I tell you to stop. Stop. Back up.

This probably the last part I'll show you and then I'll talk about results.

Just to give you an idea of the relative exposure of the Ranch Hand veterans. Here is a picture of their exposure. Across the bottom is the serum dioxin, which I already talked about, the chemical in their bodies, the contaminate, ranging up to over 20,000 parts per trillion in people in a town called Seveso that were exposed due to an explosion at a chemical plant there in 1976. A chemical factory blew up and exposed the entire town to large quantities of dioxin and some of those people had up to 20- or 30,000 parts per trillion in their bodies, and that included a lot of children who were outside playing on a Saturday at lunch time when the factory blew up.

So that cohort has been studied ever since and has been a major contributor to the knowledge regarding health in the

dioxin exposure. And here are the Ranch Hand veterans over here. Their current levels vary up to 600 parts per trillion, but because of Vietnam it's somewhere around 4- or 5- to 6000 ppt.

This yellow bar indicates men who worked in chemical factories here in the United States that made Agent Orange and other herbicides. They had exposures too and to a greater extent even than the Ranch Hand veterans had. They're up to about 10- or 20,000 ppt during their exposure period in factories in the U.S.

Up here is the CDC Vietnam Experience Study. These are Army troops who were stationed in Vietnam the same time the Ranch Hands were spraying the herbicides and have only background levels.

Okay. Now we're going to have to move really fast because we can't talk about all this. Keep moving. I'll tell you when to stop. Stop. Back up.

This is a thumbnail sketch of about 20,000 pages of reports, 65 peer review scientific journal articles and many years of work. And here it is on just a couple slides. I'm only going to touch on the highlights.

General health. We have an adverse relation between how they felt about themselves, the reported health condition in their exposure. Which is a clue that there might be some deeper biologically based process going on in their bodies to cause them to do that. It's simply a flag, that's all. There's nothing

extremely compelling about that, except that it was put into the questionnaire for a specific purpose and we found a positive association.

And by the way, I use the word "association." You should realize that these large studies and many epidemiologic studies can never establish causation. It can only establish whether or not there's an association. There's certainly not enough to prove causation. Causation can only be established in toxicology studies in animals or tissue samples.

We've seen a positive association between exposure and cancer. That was published just in February of this year on dioxin levels versus cancer. Neurology, we have a positive association between dioxin exposure and peripheral neuropathy, which was published in the Journal of Neurotoxicology in the year of 2001.

In psychology there are few findings, but we did see an adverse association between exposure and memory loss, short-term memory lose that's measured by the Western Memory Scale, which was given in 1982 but only analyzed recently.

In the gastrointestinal these are basically studies of liver function. We found associations, adverse association, between measures of liver function through liver enzymes and dioxin level, but no association between dioxin level and liver disease.

Cardiovascular, we have a set of mixed results with

an increased risk of cardiovascular death among the Ranch Hand enlisted ground crew. These are the men that actually got into the spray tanks and we think got the worse exposure. However, when we look at their health measurements at Scrips Clinic we find no association at all. We're still trying to understand why we would see a mortality, but not a morbidity.

In hematology we see a mixed collection of results, some positive, some negative relating of measures of the blood, including platelet count, for example, which increased with increased dioxin level, but there's no clear indication of any blood related disease and dioxin exposure.

In endocrinology we found a positive and significant association between exposure and Type II or Adult Onset Diabetes. That was published in 1995, and it was a basis for a decision by the Department of Veterans Affairs to compensate all Vietnam veterans for Type II Diabetes in connection with exposure to Agent Orange.

Immunology, we've never seen any association between any measure of immune function and dioxin or Agent Orange exposure.

We see a collection of positive and negative findings for pulmonary that are not biologically reasonable. We only have a clear interpretation for them.

Dermatology, we found no association between dioxin and any -- and the primary input of dermatology was a condition

called chloracne (sp), which is a very disfiguring kind acne, which is only gotten through chemical exposure to persistent organic (inaudible) in front of a very acute nature kind of exposure. We didn't see any evidence of that in this cohort.

And no evidence pertaining to any measure of renal function and dioxin exposure.

This is a summary of the birth defect and reproductive study which involves measurements of sexual hormones in the men themselves due to testosterone at this age, TSH -- I mean LH, and sperm counts, sperm abnormalities as you see here on the list. We found no positive or adverse association between any measure of reproductive outcomes in these areas with dioxin.

In the area of birth defects overall, we found no association; however, in one particular area we did see a trend of increased risk and that with regard to spina bifida. That data of spina bifida was very sparse, the counts were very small, which prevented us from doing a characteristical analysis.

That date and a combination with two or three other studies caused the National Academy of Sciences to conclude that there was a plausible association between dioxin exposure and spina bifida, and that led the Department of Veterans Affairs to compensate all Vietnam veterans with spina bifida in their children.

FEMALE SPEAKER: What year was that done?

MR. JOEL MICHALEK: That was probably within the last

three or four years. If you send me an E-mail, I'll give you the specifics. We can probably get that from the sponsor.

In hormones we see an association between testosterone mean -- testosterone decrease with increased dioxin levels, which is a plausible direction of how there is no association between abnormal testosterone levels and exposure.

And we use the records on the children themselves to ask whether there was a connection between the father's exposure to Agent Orange and delays in development or hyperkinetic syndrome and we found no association.

So, what we've got in summary are associations to cardiovascular mortality that have published, been reviewed, but not understood because we found no association between that and of health in living individuals.

Hematologic findings, no clear pattern of adverse impact on health. And the same is true in thyroid.

We found an adverse relationship between exposure and diabetes and that's been recognized by the Department of Veterans Affairs.

We've recently found an adverse reaction to cognitive function, that is memory, and dioxin exposure. That has not been recognized by either the National Academy or the Department of Veterans Affairs.

The same is true of peripheral neuropathy. We found an association which has not been recognized by the National

Academy. And we've recently found an association of cancer, which is just now being reviewed.

My conclusions now should point out to you that the level of review on this study is intense. It's probably got more levels of review on a single issue that has ever done been in any human health issue ever in the United States. We have two-level peer review processes with our own advisory panel, and then a separate review by the National Academy. And that's why the material here takes a long time to get written up, published, and reviewed and to be considered for action in terms of public health.

Thank you very much.

DR. DAVID SMITH: Okay. We are at that point to begin to field some questions. Once again, we'll try to use the same process to jot them down.

FEMALE SPEAKER: Do you have research data on Agent Orange and how it effects the community?

MR. JOEL MICHALEK: Well, I think that you have to look at these data from these veterans to -- actually the data collected from these veterans is the source of information or one of the major sources of information about dioxin exposure and health.

If you want to understand the relationship, if any, between exposure gasoline and health, you would go look at gasoline station attendants, which we don't have very many of any

more like we used to have back in the 50s and 60s. You'd look at the people that pumped gasoline, you'd look at the people that filled the tanks. These are the people. These are the people that filled the tanks and sprayed Agent Orange. Our country spend a lot of time and effort to understand their health and how it relates to this chemical exposure, this particular chemical only, dioxin, and the carrier of it in the herbicides.

So, what you can learn from this is that it's probably unlikely that exposure to dioxin is going to have any effect on immune health in people. These men have received very heavy doses and we haven't found any association. It doesn't mean there isn't one, it just means we haven't been able to find it.

The conclusion is that with -- in combination with animal studies the National Academy has concluded it's not plausible that at these doses and these kinds of scenarios that we would see how it effects humans. So in other words, by reading what's available and what's known about exposures to men like this and men who worked in the factories, you can reach conclusions about your own health and what you'd expect to see here in San Antonio.

ARMANDO QUINTANILLA: The reason for the question on community, Kelly stored these drums -- that first picture that you saw there, I don't where it was made, but we had a similar situation here at Kelly where they were stored like that at East

Kelly and they leaked there. And when it rained, the Agent Orange went into the neighborhoods.

MR. JOEL MICHALEK: Well, sir, like I say, all I know about that is what I read in the newspaper. Rodney Stinson wrote a column on that over a year ago. I saw that. That's about all I know about that.

ARMANDO QUINTANILLA: But is there anything being done about the -- is there a connection between -- or have some of the illnesses in the community as a result of those hundreds or thousands of barrels in there and some of them leaking and some of that contamination --

MR. JOEL MICHALEK: You're asking a question I can't answer. In order to answer that, I'd have to speculate and I'm not going to speculate because I don't know those details.

ARMANDO QUINTANILLA: I understand. Who can we go to to get that question answered? Did it effect the community?

MR. JOEL MICHALEK: ATSDR or the CDC or you can go locally, go to the health department. You can go find a epidemiologist or toxicologist at the University of Texas School of Public Health. You can find somebody like me who knows the literature and is willing to talk to you and listen to you. And there's probably many ways to find out more of the kind of things you'd like to know. I can't help you personally.

ARMANDO QUINTANILLA: I was thinking of someone in the Air Force because the drums were on the Air Force property. They

did leak while they were on the Air Force property. It rained on them and the contaminants went into those communities.

FEMALE SPEAKER: I had a question. When you were talking about the men that you brought into the physical, the two hours, when you talk about the past exposure and the occupational use of chemicals, does that conclude (inaudible) the fact that there could be going on? Does that even look at dioxin and all the other chemicals people are exposed to or is that pretty much way out there?

MR. JOEL MICHALEK: The focus of this study is dioxin in herbicides. We asked them about exposure to heavy metals, pesticides, other chemicals around the home, around their work place. That's information that's used for adjustments on our statistical analysis to make sure that we're comparing controls who had the same kind of exposure as the Ranch Hands so that the study isn't unbalanced. It's not detailed enough to draw any conclusions about those other exposures, what you were, how much they were. Just as I don't know the details of this experience you just described.

And I know that answer frustrates you, but I'm sorry, I'm telling it you the truth. I don't know.

ARMANDO QUINTANILLA: Yeah, well, who should?

MR. JOEL MICHALEK: Who should we found out?

ARMANDO QUINTANILLA: The Air Force -- you know, going to approach the air base and ask them it look into it. Is that a

possibility?

MR. JOEL MICHALEK: You can come and talk to me, but I'll have to give you a different variation on the same answer because I didn't see any exposures, I didn't see the -- I don't have any data. I don't have any information except what you're telling me. It was exposed --

ARMANDO QUINTANILLA: If the people did get exposed and did become sick, that's fine, you know, because nobody wants to look at that.

MR. JOEL MICHALEK: The way people that do studies like that, the way that it's described by ATSDR is that they'll isolate an area, a zip code area, they'll use medical records to count up cases of disease such as cancer, they'll compare that with standard rate derived from other surrounding area of the city. If the rate is higher, they'll conclude there might be a problem. I guess that's just what the ATSDR reports. I haven't seen them yet, but that's generally how that's done. I haven't seen their reports yet.

If you'd like, after I read their reports -- I'll read them myself and maybe I can help you with that.

FEMALE SPEAKER: What kinds of a cancer is associated with Agent Orange?

MR. JOEL MICHALEK: Dioxin is an unusual carcinogen in that is not specific to a particular site, such as liver. It seems to be an off site, what's called a promotor. Which means

dioxin will assist other chemicals that are initiators to cause cancer to happen. And so dioxin by itself is not thought to cause cancer, it's thought to promote cancer. Which means there has to be another chemical exposure called an initiator that launches the malignant process to dioxin and gives it a boost.

ARMANDO QUINTANILLA: Can you name some of those initiators?

MR. JOEL MICHALEK: Oh, probably some of the chemicals that are in the soils around here. TCBs might be one. Other polychlorinated dibenzyl contaminates such as furans and chlorinated hydrocarbons. TCB, I don't know about the toxicology of TCB. I know that it was widely used as a decontaminate in the soil. I don't know the toxicology of TCB, but I can find out.

RODRIGO GARCIA: I need to talk about two issues here. One, what -- the best way to put it is, will you give us any assistance in investigating where that Agent Orange was at Kelly, how long was it stored there, who's handled it, how much did it leak, and what kind of Air Force records are there that explains all these incidents that happened here.

We need to find out what adverse they have, conditions they have. How can you help us? How can you track down the Air Force villains and get them to answer our questions on this issue because we're not going to let it rest. We need to find and drag somebody here that's going to tell us why they had it here, why did they let it be, what the environmental concerns

is, and the properties of the Agent Orange and the properties of what it did when it leaked around here. And that's the first question.

Second -- if you can help us do that, we need to do that. Second, I am very disappointed that they only touched the people of Operation Ranch Hand. There's a lot more to it than this. There's other contamination. When they did that, it got into the padding water, it got into the streams, it got into the vegetation. And when they did that, it spread all over the place. There were are a lot of ground troops -- Marines, Force Recon, Army patrols, everything. Even the guys in the Navy that used to go up the river and all these rivers in the plastic patrol boats, there's what happening there. When they ran out of water, what'd you do? You had to drink the padding water. They did that to all the troops. How can you study that? You interview troops. You go back and find out every place that the Air Force spread that stuff and dumped it, then you go back and study all the battle records -- Operation This and Operation That -- and find out where the exposure that people that had to drink contaminated water. That wasn't covered on all of this.

And there's a lot more to it than that. I'm going to write to my Congressman that 2006 isn't enough. Now Vietnam veterans are in their 50s and a lot of them are in their 60's. The older guys that served from '65 back on are in their 60s, and the younger guys, like me, that went in '68 and '69, we're

getting into our middle 50s, and we're all these old age effects and diseases. Some of them -- like my doctor tells me, I don't know how you got this, you know, but you have this thing wrong with this, this, and this.

You know, so the only reason I can say is, Hey, they sprayed it on us while we were on the base. They sprayed it all around us. That stuff got into the water. When we didn't have fresh water, we drank padding water, and all that. Did you all study the bad effects it had not only on the people at Ranch Hand that handled it, but all the troops on the ground that it either indirectly or directly got sprayed on? Because there are a lot of troops that got sprayed on and they got it on their skin.

Plus there were those that had to pick up padding water while on patrol while on force recon or something that went through that also. You all didn't study all of that. You need to get into all that and study the health effect of all the veterans now that they're getting older and wondering what some of things I'm feeling now in old age happened because I drank padding water when I was an 18, 19 year old kid who wanted to rock and roll and ended up fighting for my country.

You need to expand all of this because this isn't enough.

MR. JOEL MICHALEK: I'm only getting one slice of the picture. There are other studies that have been done on the on-the-ground-troops in Vietnam. The issues you talked about

have been studied by the Center of Disease Control and they've been studied by universities.

The men who sprayed Agent Orange and other herbicides here in the States have been studied. The men who sprayed herbicides from airplanes over the farmlands in the U.S., the men who worked in the factories that made the herbicides, the men who sprayed herbicides in Canada for farmlands in Canadian farms, the men who sprayed herbicides and put railroads along rights-of-way and the men who sprayed herbicides along rights-of-way of power lines.

The way studies like this are done is the cohort is identified and thorough examinations are done and measurements are made, just like I described here. There's not only one such study. Hundreds of studies have been done. They've all been summarized by the National Academy of Science in a series of books called Veterans and Agent Orange. All the questions you addressed have been mentioned in those books and have been talked about. Everything you talked about has been mentioned and thought about and considered by the National Academy and their opinions to Congress and the Department of Veterans Affairs.

This study is one part of the picture. It's not all of it. It's one example of how such things are done and what it takes to get it done right. I don't have the answers for you on Kelly. I don't know anything about Kelly. I was at Brooks working on this study during all that period. I don't know

anything about Kelly. But I can at least read reports and I'm looking forward to the ATSDR report and I will read it as soon as I see it.

ARMANDO QUINTANILLA: Just one more connection between Kelly and Agent Orange. We had an excess after the Vietnam War was over of thousands of barrels. Can you tell us about them?

MR. JOEL MICHALEK: Yes, sir. They were incinerated.

ARMANDO QUINTANILLA: And did that contaminate from the air, the smoke or whatever it is, effect the fish?

MR. JOEL MICHALEK: I'm not aware of anything like that. All I know is Johnson Island had an incinerator. Now only did they incinerate Agent Orange, they incinerated a lot of other things. And there are very few people that worked on that island, a handful. So it's not a place to go to see a large cohort of exposed people.

FEMALE SPEAKER: Could you explain what you called about being (inaudible) dose dosimetry and you don't know -- was that --

MR. JOEL MICHALEK: I'll give you an example of dosimetry related to the Air Force. Sometimes where there's -- not anywhere. When a chemical is thought to be potentially harmful, individuals will sometimes wear a badge that changes color when exposure occurs, and that can be used to extrapolate or measure dose. There was no such thing in Vietnam because at that time nobody knew the chemical was potentially dangerous. So

we had to way to measure how much each person got by way of dose from day-to-day on the job. We don't know that.

FEMALE SPEAKER: Is there any modeling?

MR. JOEL MICHALEK: That's what we do, we use modeling. We use something called pharmacokinetic modeling to estimate the initial dose they received in Vietnam. When we do that, we determined that the dioxin was pretty nicely eliminated following a first order -- what's called first order of pharmacokinetic model. That allow us to estimate the initial dose they received in Vietnam. That's where I got the number 5000 ppt from. It was from those models. Because obviously we didn't have a measurement in Vietnam. We didn't start the study until 1981. The war ended in 1969, 1970. It wasn't until like 15 years after the war ended that the study started. It's because of the long, persistent half life of dioxin in the pharmacokinetic modeling that we can get an idea of what they actually see in Vietnam.

FEMALE SPEAKER: I know you said that you found an association, but did you say not a causation?

MR. JOEL MICHALEK: We can never establish causation in any epidemiological study. Any scientist can tell you that. The only established causation is in a scenario where you are able to control the dose. You increase the dose and you watch the effect increase. You decrease the dose and you watch the effect go away. Those are the kinds of conditions that have to be satisfied to establish causation. And you have understand the

biology of the process. So those things can be done with a study of people.

FEMALE SPEAKER: When you said that it showed up in the mice --

MR. JOEL MICHALEK: Birth defects and cancer.

FEMALE SPEAKER: But then it didn't show up with other people.

MR. JOEL MICHALEK: That's a complication of all chemical exposures. There's never a nice connection between animals and people. Life is complicated. Things are not as simple as you'd like them to be; where we'd see a dose in animals and automatically we'd expect to see it in people. Of course we do; we worry that there is such a dose effecting people, but we don't always see it. Life is more complicated than that.

FEMALE SPEAKER: The reason why they use laboratory animals is so they can get a high dose in there and look quickly than they would find in people.

MR. JOEL MICHALEK: Exactly. You can't expect to wait 30 years to find out if there's a health effect. You want to study animals that have a short life time. Such as a mouse is two years. You want to use a dose that's high enough so that you can see an effect in a short period of time and draw conclusions so you can move on to the next question. That's why people do toxicology studies on mice.

ESMERALDA GALVAN: What are the skin conditions or the

symptoms on that?

MR. JOEL MICHALEK: We expected to see chloracne, which is the acute chloracne -- acne-type condition of acute exposure. We went back to the records collected during the war and found no evidence of chloracne that's experienced by this group. The conclusion is they didn't receive a heavy enough dose to cause chloracne. Chloracne was seen in the victims of the Seveso accident, the factory that blew up. They saw it in people there, but they had it in the order of 20 -- 10- to 20,000 parts per trillion, which is 100s of magnitude greater than what the Ranch Hands had.

FEMALE SPEAKER: What year was that?

MR. JOEL MICHALEK: 1976.

FEMALE SPEAKER: Were there any first symptoms that the veterans showed that they were exposed to Agent Orange?

MR. JOEL MICHALEK: They were complaining of many symptoms which I mentioned.

FEMALE SPEAKER: Like what?

MR. JOEL MICHALEK: Heart disease; headaches; PTSD, post traumatic stress disorder; cancer, birth defects in their children, skin rashes.

It's all that list of conditions that was given to us by the VA in 1978 that formed the basis of this study.

FEMALE SPEAKER: Are veterans still going to that medical center?

MR. JOEL MICHALEK: Yes, they are. The VA is still getting an Agent Orange history.

FEMALE SPEAKER: With skin rashes and all the symptoms you're talking about?

MR. JOEL MICHALEK: Yes. And that's why we're still here doing this Agent Orange study.

FEMALE SPEAKER: Possibly it could go to 2010?

MR. JOEL MICHALEK: If Congress decides that that's the case, yes. If Congress says it's not going to continue, they'll stop in October 2006. If you think it should continue, contact your congressman.

FEMALE SPEAKER: How much money?

MR. JOEL MICHALEK: How much money? I would guess about $140 million.

To give you an idea, it costs about $20 million to send 2300 men to Scrips Clinic this last year. We have to fly them there, put them up in a motel, et cetera.

FEMALE SPEAKER: When you talk about the endocrinology effects, you're talking about Type II Diabetes, right?

MR. JOEL MICHALEK: Yes. Type II Diabetes, adult onset.

Everything I've told you is available on the literature on the Internet. Everything I've told you has been well known for several years. Everything I've told you has been peer reviewed by the National Academy of Sciences and reviewed and reported to the VA and Congress.

FEMALE SPEAKER: So, if the barrels that contained the Agent Orange leaked into the community and exposed the people -- I know there's no cause and effect. You've said it over and everybody says it over and over. The people who either have had cancer or -- I mean, there's no way that right now unless we have more futuristic type of tests to prove that causation.

MR. JOEL MICHALEK: I don't think anyone has ever proved dioxin causes cancer. What they've shown is that dioxin is associated with cancer. The actual mechanism relating dioxin and cancer is unknown. It's known that dioxin induces something called Cyclone (sp) 3450, which is a drug catalyzing enzyme. That enzyme has been shown to correlate with dioxin with cancer in animals.

Humans have Cyclone 3450. Cyclone 3450 is elevated in humans that are exposed. It doesn't mean that dioxin causes cancer in humans. It just means that it may be associated with cancer.

FEMALE SPEAKER: So it triggers it off?

MR. JOEL MICHALEK: Yeah. The root causation is an entirely different ball game, which is far beyond research that needs to be done.

I know these answers frustrate you, but it is the truth.

FEMALE SPEAKER: Yeah. I know.

MR. JOEL MICHALEK: Thanks very much.

DR. DAVID SMITH: It's about five after 8:00.

Before we take a break, let us run real quickly through the questions that we gathered here to see if we got the right things.

Tim and Robyn will you write the charts?

ROBYN THOMPSON: We had a question from Mr. Quintanilla about the history of Agent Orange as it relates to Kelly.

TIM SUELTENFUSS: I have one from Mr. Garcia, will you assist us in investigating Agent Orange at Kelly?

ROBYN THOMPSON: Does anyone else have any other questions they wanted answered?

RODRIGO GARCIA: The exposure and how it effects the community. That's one. And the parts around Kelly, the cause of the exposure.

ROBYN THOMPSON: Could I get you to fill out a form here?

RODRIGO GARCIA: I'll fill out another one.

MR. JOEL MICHALEK: And, sir, if you want additional information on this, we would assist you.

Any others what we missed?

DR. DAVID SMITH: Okay. It's about five after 8:00. Can we take 10 minutes and come back?

Thank you, guys. You've done a great job.

(BREAK 8:05 TO 8:11 P.M.)

DR. DAVID SMITH: If you have any questions on the PRB

data, we'd like to follow the same format that we did in the past. If there are any prequestions that you want to ask about, this would certainly be the time to get some of them on the board. We'll see if we can get them answered in the presentation, otherwise we'll pick them up at the end.

ARMANDO QUINTANILLA: Just one question. Are any of those PRBs installed leaking or are they doing the job that they're supposed to? I heard some of them had the same amount of contaminates.

RODRIGO GARCIA: The status report on PRB. That's a good way to put it. A status report. How are they working? What are the conditions of them? Are they doing -- are they working properly? What is their life expectancy? How old are they? How much longer are they going to be there? How much contaminants are they removing? And what happens to the contaminates after you take them out? How do you clean that stuff out of the PRBs afterwards?

DR. DAVID SMITH: Okay. I guess you've gotten introduced informally in the process here.

I'm sorry. One more question.

ROSE CAMPOS: Will it be possible to -- in the next mail out to the public to have more visual diagrams like you have for the buildings here with, you know, the measurements for the walls, the barriers, to the public?

DR. DAVID SMITH: We'll check that see if we can answer

that.

DON BUELTER: Okay. I'm Don Buelter, I'm the Environmental Restoration Chief for Kelly. I've been working at Kelly's restoration area and I also worked the waste water treatment plant. I started at Kelly in November of 1991, and I'm still here today.

The talk tonight is primarily -- at the last TRS meeting we had a presentation talk about data that's collected in one other wall. We haven't collected any recent data since that presentation, so tonight we'll look at walls built at Building 301 and 360. The last slide kind of highlights a sampling protocol that we're doing as far as long term -- beginning the monitoring along the walls.

This is just going to be a real brief chemistry lesson. It will help explain some of the data a little bit later. This top equation is -- don't worry about it too much. This is how an iron reactive wall works. And this chemical here is this TCE, and I think you all got the slide on those and iron. We have to use iron. This it TCE. In the reaction that takes place, there's a slight chemical transplant of iron to what's called an ion in a solution. And then this will make the reaction balance out.

OH -- you've heard of PH. We develop more OH ions that raise the PH in water. And then the last one is chloride ions, and those come from the TCE.

The other couple important -- they're important and the data will help me show a little later. The reaction that takes place in the iron is basically the iron generates electrons. And what breaks down the chemical solvents are the these electrons. They're very important in that process. You need electrons to do that. And so when the iron basically rusts, elemental iron, and it generates the 70 plus two, it generates electrons, and these electrons are what break down chemicals and eventually produce less toxic chemicals.

When we built these walls, 301 and 360, from previous presentations of TRS and RAB, we used a process where we used a track hoe, a big back hoe, to dig a trench, add the iron. To keep the trench walls open, we used a guar gum. It's just a simple organic viscosity of water that keeps the trench open so we can add the iron to the bottom of the trench.

Simple organics like that act like this iron and it begins to break down. When they break down, they also produce electrons. So, we've done -- used vegetable oil on some of our source areas to keep solvents in the ground water. And it's this basic same reaction to increase electrons and then the electrons attack coordinated solvents and give you other chemicals, less toxic.

And what's different is when you use a guar gum in this case and you get a certain conditions, reducing conditions, you produce methane here. You've all heard of methane gas rather

than iron plus two.

So when we talk about Building 301, we're going to look at methane that was collected along with the groundwater. And there's a measure in the chart that's called -- it's simply in our charts. It's redox -- reduction, potential. There's a whole bunch of names for it, but it's a measure of how many electrons in the system. And so we get to that Building 301 chart, the greater -- the larger the negative number, the more electrons there are. So if you have more negative number, there's more electrons in the system.

In the case of Building 301 and 360 and the Zone 5 PRB, we have both reactions taking place. We have iron producing electrons break down to chemical, and also the break down of guar gum by the bacteria in the area is also impacting break down in chemicals. And we see that in the chemical make up, especially Building 301.

And this I'll go through real quickly. There are two reactions or ways that TC breaks down. And biologically this is what happens. You have electrons, again, the break, TCE, the DCE, the vinyl chloride. And that's -- we've seen that in some of our handouts on natural situation that's what happens when these chemicals break down biologically.

Some of the more recent signs -- and I'm not sure I'm the chemical person on mechanisms -- say that the wall actually takes this approach, the iron wall, that you break TCE into other

chemicals that break down very quickly throughout there so there are two different types of reactions that take place. So, what I think you'll see is we have both of these probably taking place, especially in Building 301.

Building 301 is -- there's a picture of it, the demolition, what stands there now, on the wall over here -- was a plating shop, a large plating shop. Groundwater -- PCE was the primary contaminate that we found at the site. This was the degreaser that was used prior to plating.

In the groundwater, prior to the insulation wall, there was PCE, one was DCE, in fairly large concentrations and smaller amounts of vinyl chloride. We went back and looked at some of our semi-annual compliance plan reports and the current vinyl chloride in that area was up and down.

We completed installation of this wall in June 2003. It's just under 700 feet in length. We've collected two ground samples, in December of 2003 and June of 2004. And in your packet you also have this figure here so you don't have to try to read if from the back of the room.

PRB -- here's where Building 301 -- footprint of the former building. In the medial investigation of the site, we found high groundwater concentration of PCE in this area and in this area here. So, we put permanent reactive barriers along this line here. Groundwater flow is basically in this direction, and this will be bottom right of your figure. This arrow in here

shows the groundwater direction.

We have a series of transect wells. The well upgradient, the well within the wall; and one downgradient in the wall, just downgradient in the wall. At three locations.

What we see pretty much within the wall is not the pattern of most chemicals. There's some -- we'll show one area of vinyl chloride that we had.

Let's go to the next chart. This figure focuses on this area down here, the south end of the wall or Building 301. And we present the upgradient in the wall and then downgradient in the wall in the November 2003 sample and the sample that was collected in June 2004.

So upgradient we see the PCE, TCE, DCE and vinyl chloride, all the chemicals that are present upgradient of the wall. They're still detected. Concentrations are a little higher and there's going to be some fluctuations in the groundwater source areas in the samples that are collected. Part could be that the groundwater flow in that area is finally beginning to become more normal after this big trench was dug through the ground. So that may be part of the reason we have higher of PCE, TCE. These are more normal for this particular area from what we saw prior to the wall being installed.

I mentioned a methane in break down of the organic concentration. Those aren't -- just kind of look at the relative amounts of methane. And then Redox -- again, this is how many

electrons are in the system. And kind of similar amounts prior to the wall being installed and then after.

And the last thing is this groundwater elevation. It shows there has been some recovery of groundwater elevation in the area and you'll see that when you look in the wall.

Couple things to point out, the amount of methane is in order of magnitude higher than what it is upgradient of the wall and it has increased since June -- or November to June.

Redox has gone up. A sign that there's more electrons in the system.

Groundwater is much higher within the wall in June and it's back down to the levels at the other sides. So what that is telling me is that water is flowing more freely through that wall than maybe it was back in June.

So within the wall PCE and TCE are being broken down. DCE was technical at times with relatively low concentrations. We are seeing a fair amount of monochloride within the wall, and this is probably due to the biological reaction of the guar gum breaking down and that mechanism that is breaking down the TCE and PCE via bacteria, which will produce vinyl chloride.

Downgrading the wall -- Ashley, how far downgradient do you know?

MR. ASHLEY ALLINDER: Three feet.

MR. DON BUELTER: Three feet. So, our downgradient wells are 3 feet downgradient in the wall, so they're not very

far downgradient.

We're still seeing large -- or methane in the Redox. There's biological action probably still taking place there, so there's probably migration of methane from the wall. And downgradient in PCE and vinyl chloride are still being produced, and that's probably from that organic break down. This is very similar to that (inaudible) study in Fort Worth, putting the walls into guar gum, and that was a very heavily sampled and studied the wall and they found these type of organic reactions took place.

The DCE and vinyl chloride both spiked, and at this point have decreased. So once this guar gum works its way through, it won't -- gathered bacteria won't be produced into vinyl chloride. The other aspect is there are, at Kelly, organisms that break down vinyl chloride and it's a slower type of -- it takes longer for that bacteria to begin to work than the bacteria that produces the DC and the vinyl chloride.

So, we're seeing a break down within the wall. I think with this sample there's certainly nothing here -- this shows that the water is flowing through or at least creating conditions that are breaking down solvents, probably a mix of biological and iron doing that. We'll see this in the sample.

Building 360 is a engine repair shop. The primary contaminant, again, that we found was PCE. And then, again, looking back through compliance plan reports, TCE and DCE and

vinyl chloride have been found in that area. Installation was completed in March of this year on this wall. The PRB was completed in December or January.

MALE SPEAKER: December.

MR. DON BUELTER: December. And then the slurry wall was completed in March. The slurry wall is on the west side of Building 360. PRB reentered the courtyard, it looks familiar with the base. Building 360 is in the shape of a U so the courtyard is south of the building.

Thickness of the wall. There's a 10-foot thick wall, a seven and-a-half foot thick (inaudible) then 2 1/2 half foot thick for the rest of the courtyard. PRB length was 800 feet.

We collected our first round of samples in May. There were some VOCs detected but not very much. We're kind of scratching our heads trying to figure out what's going on here. If you look at your charts, you'll see a bunch of upgradient within the wall and downgradient within the wall.

Time frame may be a little short. One of the problems in this area is ground water flow is really slow. And we know we have, in this area here, a monitoring well that reads as high as 1000 parts per billion of groundwater of PCE. There's some here that's kind of downgradient the wall (inaudible) well you see here there's 154 feet deep. This is really the only spot we had detection. In this kind of remanent prior to the wall being installed.

We did do a biological study here in the courtyard. It's very possible we haven't -- the researchers who were doing that project, their funding ran out. Back here it may still be active here breaking down the solvent before it gets to the wall.

So, we don't have a lot to show here outside of -- and I don't have a chart showing this. The groundwater levels look good. There's not -- it appears the water is flowing through the water. It's not bounding behind the wall or within the wall like we saw in the first samples of Building 301.

There's methane within the wall and downgradient in the wall. Not as high 301, but certainly an order of magnitude higher than upgradient.

Interesting, in the thicker areas of the wall, we've actually higher PH readings that are expected from that very first equation. You have PH going up with wall systems. So, then that -- there may be -- actually the iron may be working better here because it's organic, but we just don't have the solvent to show it.

What we're going to do is really get all of our PRB's on a sampling six-month cycle initially. And the next sampling will be in November 2004, followed by May 2005, November 2005, and so on. What we're trying to do -- this May event will coincide with the base wide groundwater samples that are collected as part of our compliance package. So, it will give us at least current information to the rest of the area.

And really what we want to do is start building snapshot pictures of -- in November 2004 we'll have a similar map with data format, point, but also start to build trend charts for PCE contaminate -- or concentration and monitoring (inaudible) et cetera. It would be an easy thing to look at and just get the data points and collect them.

We will do this -- right now we have four PRB's completed. Building 301, 360, Building 1530 is the Zone 5 wall and then the one on 34th street. As mentioned in prior meetings that this PRB on 34th Street was not under an alternative contract, but it was a performance contract. We've talked to the contracting officer about -- the contractor doing this hasn't stepped out and collected his samples and we're going sample here in November whether he has or not so we can start getting data because we need that and you want it here.

We're currently working on PRBs on Commercial Street. Malone Street is on UPRR property, and the last PRB is in Zone 3. (inaudible) PRB being installed down at the southern part of the base, Zone 2, to replace (inaudible) system. All these should be done by the end of the calender year. If they're ready, if they're complete, we will grab a sample in November. It may be very early and very preliminary, but at least we can start seeing what's going on.

So, that's what we're going to do. Part of -- as far as we know right now, a lot of the data is preliminary. We don't

see any indication that the walls are failing or not working.

How long they'll work. What the industry has found, initially they thought these things may last 5 to 10 years before the iron ran out and needed to be replaced. The earliest walls that were put in in early 1990's, researchers have gone back and studied them and they're still working fine. So last summer -- about a year ago, I saw a presentation -- and we can get the gentleman's name and where he worked from -- but they've been studying these walls and they're now looking at like a 30-year life line potentially.

The good thing about reactive barriers is that you're actually destroying the containment. The solvent is being destroyed. So what's left when these systems are done is just the iron in the ground. That's it. There's no residual solvent not absorbed through the iron. It's actually destroyed. So, there's no residual. And that's one of the reasons why it's pretty promising. The other is, there's no moving parts. It's just water moving through.

Are there any other questions?

ARMANDO QUINTANILLA: I have some questions. You mentioned in your presentation that you ran out of money for Building 360. Why?

MR. DON BUELTER: That was a biological study that was done by -- it wasn't using Air Force money, it was RTDF, and they were looking for a site. They had the money, start-up money, to

do a project. We offered up our area for them do that.

ARMANDO QUINTANILLA: Can you give us a cost, perhaps not today, of these PRBs for Building 301, Building 360, Building 1520, 34th Street, Commercial Street, and Malone Street?

What's the status of Commercial Street? I understand you're breaking up the ground and disturbing the business people.

MR. JOEL MICHALEK: What we're doing there is a different technique. They're drilling injection wells, and we're going to inject iron into the ground.

ARMANDO QUINTANILLA: Now, what is this disturbance that the people are talking about?

MR. DON BUELTER: I haven't heard anything about that.

ARMANDO QUINTANILLA: Is Sam here? He was the one that got the complaint.

FEMALE SPEAKER: Sam left already.

ARMANDO QUINTANILLA: He's already left?

LARISA DAWKINS: There was one incident of one owner that made a complaint, but we talked to the gentleman who is over that particular area right now on Commercial Street. He said that the neighbors themselves have been very cooperative, very nice to them. And they made every accommodation for the community that they're in, but there is -- has been one complaint by a -- I think it was a restaurant right there at the end.

ESMERALDA GALVAN: There's also an elementary school that will be opening school on Monday the 16th.

LARISA DAWKINS: Yes. And we -- the contactor had started working on Saturdays to try to be complete -- have the project done, before school starts.

ARMANDO QUINTANILLA: Now, on Malone Street, that PRB is going to go onto railroad property. How much are you paying the railroad for the right-of-way to install that?

MR. DON BUELTER: We'll still working the access agreement.

ARMANDO QUINTANILLA: What about the city?

MR. DON BUELTER: The city, we're still working on that. We have access. There's a fee for the dig permit process with the city, to break the concrete. We've been working with the city on -- William Ryan and Adam Antwine on --

ARMANDO QUINTANILLA: See, none of those things have been brought up before the RAB. What was the motivation for putting the PRB there on the railroad property? And what was the motivation for putting it on Commercial Street, or what was the rationale for that?

MR. DON BUELTER: They were based on access first.

ARMANDO QUINTANILLA: But you already got the access, but you haven't paid for the right-a-way of either one of them?

MR. DON BUELTER: We have -- railroads we're close. The lawyers are working the language. It's not -- we don't have --

ARMANDO QUINTANILLA: So the residents haven't been advised of this at all.

MR. DON BUELTER: It's a -- well, the location of the wall has yet to be worked out. The agreement with the railroad is a very small dollar figure compared to this.

ARMANDO QUINTANILLA: How much from the city?

MR. DON BUELTER: The city, again, is not access agreements. We're working with our -- again, very small amounts. It's more of an easement utility.

ARMANDO QUINTANILLA: The reason I'm asking this is because in Memphis, Tennessee, they put something similar to that wall up there because of the -- to clean it up. And it was in a park. And they charged the Army $300,000 just to put an easement.

MR. DON BUELTER: We're less than that. Should be.

ARMANDO QUINTANILLA: And I think it's -- you know, you're using the people's property. You know, you should pay for that. The Air Force is --

MR. DON BUELTER: We're working on that. That's being worked. And we're also -- part of what we're going to do is work with the city on Commercial and on 34th street. And when we're finished we will install --

ARMANDO QUINTANILLA: There was 300 or 400 wells dug on city streets, city right-of-way. Now, what did you pay the city?

GARY MILLER: I'm sorry. May I clarify -- I want to make sure you get an answer to your question. Are you asking why the RAB has not been invited to negotiations with the city and

the railroads? This doesn't speed up the response or any additional information...

ARMANDO QUINTANILLA: No, the RAB is supposed part of the advisory. It's supposed to advise. They say, Hey, this is not a good deal. It's going to effect the schools. We were never talked -- mention that.

GARY MILLER: And I'm not sure you mentioned the location of the PRB to the RAB. But it sounds like you want more specific information.

ARMANDO QUINTANILLA: Yeah, I just want it brought up to the RAB before it happens, before people start complaining, What are you doing on my street.

ABBI POWER: One of these -- the locations of these PRBs were discussed even prior to these particular locations being selected. And these particular locations were presented to the RAB more than six months ago.

I think some of the other people present may remember those conversations and those presentation.

ARMANDO QUINTANILLA: I don't remember it. I don't remember any conversation that we're going to give the city so much for right-of-way or the railroad so much right-of-way, do you?

ABBI POWER: No. I don't remember a conversation -- I don't know the specifics of the conversation of right-of-way negotiations or anything, but you mentioned, you know, the

placement of these things. They were -- it was mentioned that they were going to be put on city streets so that they wouldn't have to disrupt people's businesses or their homes or this, that, and the other thing. That I remember being discussed.

FEMALE SPEAKER: Would you like to make a suggestion that that be (inaudible)

FEMALE SPEAKER: I remember questions over all these years about the school being so close to the slurry wall.

ABBI POWER: Well, this -- and they were talking about -- it's a PRB, it's a not a slurry wall.

FEMALE SPEAKER: Yeah.

ABBI POWER: I think Ms. Dawkins mentioned they were going to try to do the stuff in the summertime when the kids weren't in school. And that was talked about in the RAB.

LARISA DAWKINS: They are trying to have it done prior to the start of school. One of the reasons why they chose this particular method is because of the residential area and the school being right there. Because this particular method is not obtrusive as the other method they were talking about.

So as far as the access agreement and right-of-way and things like that, those things are not molded in terms of (inaudible). When those types of things are negotiated, those are negotiated by (inaudible). That's what Mr. Buelter is trying to say, that those particular languages concerning those agreements are trying to get worked out now.

It would be inadequate for us to bring that to you without having something definite you can decide. Do you see what I'm saying? So that's why those kinds of things are not brought up.

FEMALE SPEAKER: My next question would be, you said that solvents are being destroyed. What about the other chemicals? Will they be destroyed as well? Or what's going to happen to the other chemicals that are running in the groundwater that are not being destroyed? All the other chemicals that cannot be broken up by the barrier walls --

MR. DON BUELTER: Chemicals of -- what the Air Force --

FEMALE SPEAKER: Not all of them will be destroyed.

MR. DON BUELTER: The ones that are sourced by the Air Force, that the Air Force is treating those chemicals.

FEMALE SPEAKER: What will we do with the other chemicals?

MALE SPEAKER: That hasn't been brought up before the RAB either.

ABBI POWER: There are no other chemicals. The coordinated solvents pass through the wall and when they come out other end they're elements that are known -- they're reaction --

FEMALE SPEAKER: Let me ask the question. He said it would not clean up the Mercury that runs there.

ABBI POWER: There's not -- these walls are placed in areas where those things are --

MALE SPEAKER: There's no -- we don't find Mercury in those locations.

ABBI POWER: It's not there.

FEMALE SPEAKER: Not in those locations, but it's not there? He said only -- this would only take care of certain --

MR. DON BUELTER: The reactive walls won't spill. We'll treat anything that will be treated under these conditions.

FEMALE SPEAKER: The site on Malone Street, are you actually building a wall or are you just going to be using wells to inject metals into the water?

MR. DON BUELTER: Inward, yeah. It's -- and we use Malone Street. It's just the general area of Malone Street. It's actually the direction south with the railroad crossing. It's south of Malone. We're starting on Malone Street and going south. We're not going to disrupt Malone Street at all.

FEMALE SPEAKER: That's a good site because I believe you have that Monterey Steel Company that also, I think, has contaminants and you have the railroad. To me that would be a good spot to work on.

CORIENE HANNAPEL: My name is Coriene Hannapel. How are (inaudible).

MR. DON BUELTER: Okay. What we have seen on base and -- two things are going to happen. It will either -- especially vinyl chloride where we have had higher concentrations (inaudible), it doesn't migrate very far.

When you start to get back into where more oxygen is present, there's probably a bacteria available that degrades that very quickly. We haven't tested that it's just we haven't seen migration of vinyl chloride.

The other aspect, even if it continues to migrate, the groundwater (inaudible) sites are captured by pump systems along the base the boundry. So that groundwater wouldn't extend beyond the boundaries.

CORIENE HANNAPEL: Okay. But as for the vinyl chloride that's still coming out of the PRB, you're not going to test that specifically?

MR. DON BUELTER: We're going to continue the sample as always. We're not going to quit testing for DCE. We will continue to test for all of those/

FEMALE SPEAKER: Can you clarify -- correct me if I'm wrong. Can you go back to the chart. That one. Those results that you have that are considered downgradient, the DCE and the vinyl chloride that you show present in November and June, some of that is remnants of stuff that was already there before the wall was constructed, correct?

MR. DON BUELTER: Yeah. It's a little bit of both. I think some of this that we see is the PC being broken down biologically. But this area --

FEMALE SPEAKER: Some of it may have been remnants of stuff that was there before the wall was put in.

MR. DON BUELTER: Right. Probably a little bit of both. The wall -- when you have concentrations like this in the groundwater in the area, it's put in an area where there are high concentrations. So you have a mix of a lot of things.

FEMALE SPEAKER: How do you know, for instance, that's 4190? How do you know that was broken down to 121? How do you know you're not testing a different area or do you know that?

MR. DON BUELTER: We have the three wells going across, that is the best proximation. We don't -- I mean, the flow paths and time -- what we expect to see -- and hopefully in the samples at the end of this November -- it took a little while, probably a year and-a-half before they really started to see the break with the DCE and PC.

FEMALE SPEAKER: That 2190, is that one well or more?

MR. DON BUELTER: It's one well.

FEMALE SPEAKER: One well. So when you test next time will we able to see it?

MR. DON BUELTER: Yeah, we'll be sampling the same ones.

FEMALE SPEAKER: You'll be sampling the same ones, that 121?

MR. DON BUELTER: Yes. Yes.

FEMALE SPEAKER: Now, if you put tracer in 2490 -- have you ever tested that to see if that is the same water coming in?

MR. DON BUELTER: No, we haven't. Potentially, we could do that, but I don't know how much it really shows. The problem

is -- I mean, we're looking at an area of water that's passing through this whole area. The goal is that any water passing through is part of this and we'll start to see our downgradient wells decrease.

FEMALE SPEAKER: Do you know what the velocity is in that area? I know you said 360 and involvement is exceptionally slow, but this is a little bit faster? Are we talking feet per year? I mean roughly.

MR. DON BUELTER: I don't know off the top of my head.

MALE SPEAKER: The groundwater model shows it to be moving at one foot per day.

MR. DON BUELTER: That's the groundwater flow. The contaminant flow is a little slower. We'd have to look. I don't know off the top of my head where the flow is.

RODRIGO GARCIA: Let me make a comment. You've given us a lot of high-end technical stuff on all of this. First of all, I need to know you've given us a restoration sheet. Do you work for the U.S. Air Force?

MR. DON BUELTER: Yes, I work for the Air Force.

RODRIGO GARCIA: Okay. So, we can go through you and request some of these Air Force records on Agent Orange and the storage analysis. Where can we contact you?

FEMALE SPEAKER: 925-0956.

MR. DON BUELTER: 925-0956.

RODRIGO GARCIA: Okay. Now, I've got that out of the

way, let me ask you, you've given us a lot of highly scientific stuff, but a lot of people want to know how long are these walls? What are the chemicals that you've detected? Which ones are being caught by the wall? Which are ones are passing through? What happens to the ones that are passing through?

There's a lot of plain questions besides highly technical stuff. I wrote them all down. Maybe you can send a letter to RAB and answer all these little simple questions as to how they work. What are the chemicals being detected. How many are caught. Do you have to clean the wall. What happens to chemicals that go through the wall and go on through where ever it's flowing. How long is the wall going to last. How much will it cost. And all of these questions.

You know, there are a lot of plain questions that need to be explained, besides the highly technical stuff that you just told us about.

FEMALE SPEAKER: You're not saying that the PRBs are taking all the contaminations out, are you?

MR. DON BUELTER: They are -- they're cleaning the -- they were put in to treat --

FEMALE SPEAKER: Those specific, but you're not saying that --

MALE SPEAKER: That's the only ones we're concerned with. Let's make that clear.

MR. DON BUELTER: As far as these chemicals are

concerned, these are what are moved forward from the remedial investigation to correct the measure study of what's being treated.

FEMALE SPEAKER: Have all your questions been answered?

RODRIGO GARCIA: Well, I'm just giving all those because like I explained to him, there's a lot of technical stuff in here. A lot of people want the plain English stuff in layman's terms about how they're working and all these chemicals and all of this and explain to them they were built primarily for these, these and these chemicals, but we also got these, these, and these. These ones are there. These ones don't come out. You know, we want something to -- not only for us in writing, but to show the other RAB members you're going to get this fancy, technical, scientific stuff. We need something more in plain English that explains everything from a point of view that anybody can understand it.

DR. DAVID SMITH: Okay. You have that list?

RODRIGO GARCIA: You've got it.

CORIENE HANNAPEL: I have a question on your break down, the break down you have. I have seen those on several websites. Is water a possible break down product or carbon dioxide?

MR. DON BUELTER: Okay. Water is a chemical mechanism. It probably is part the reaction that you need to have -- it's a source of hydrogen. And any water you have, there a rehydrogen and ions in there and (inaudible).

So, the hydrogen in the water is what's being added to -- the chlorides are moved from the TCE. That's where the hydrogen comes from in the water.

FEMALE SPEAKER: The reason I ask that is there are two fact sheets on Kelly Air Force website saying what when PRB reacts that break down products and water carbon dioxide and mineral chloride. I don't know if there's a -- that's the wording that's used. I just don't see that.

MR. DON BUELTER: Well, break down -- eventually that thing is going to break down to carbon dioxide. It's going to be degraded very rapidly.

FEMALE SPEAKER: Well, eventually everything will be degraded to some degree.

MR. DON BUELTER: Well, that will very quickly break in carbon dioxide. Chloride is just an ion.

DR. DAVID SMITH: Okay, Don, I'm going to cut you off. Any other questions that you would like to have answers to, I'm going to ask you to jot those down and submit them to Leigh-Ann and she'll that they get put on the list.

We have covered the presentation topics. We have a couple of administrative topics to cover before we move ahead. One of them is a BRAC cleanup update, the BCT update.

NORMA LANDEZ: On the BRAC Cleanup Team, we did not have a meeting today. We decided last month that we didn't have enough items to discuss this month. Our meeting next month will

be on the 14th. So I'll give you update at the special RAB meeting next month.

DR. DAVID SMITH: Next item is Spill Summary Report.

LARISA DAWKINS: There have been no spills that have been reported.

DR. DAVID SMITH: Very good.

LARISA DAWKINS: Then we have three items that are being placed in the admission depository. The first item number is 354-B, it's the industrial waste water collection system revised final closure report.

And the second item is 664-B, and it's a semi annual compliance report for July 2004 for the RCRA Regulated units and LC.

And then we also have a RAB meeting minute audio tapes from every RAB meeting this year that are also available. We have had several requests for those audio tapes from RAB committee members, so we decided to make them available for any other community member that would like to have access to those tapes as well.

DR. DAVID SMITH: Those are here?

LARISA DAWKINS: Those are here. We can provide a recorder if it's necessary. If the person doesn't have access to one, if they'll let us know in advance, we'll be more than happy to loan them one.

DR. DAVID SMITH: Thank you, ma'am. Appreciate it.

Final item in that administrative section is Action Items. I guess most of those are reflected in the questions that have been gathered here. There were no action items from the previous meetings to address. Obviously a lot of work on this one.

Are we aware of any other action items?

ARMANDO QUINTANILLA: I have an action item, sir. How many TRS meetings have we had this year? This the third one. Is this correct? We had the one in June, the one in January.

DR. DAVID SMITH: I don't know the answer right off.

ARMANDO QUINTANILLA: Is the second one for the year. I would like to make a recommendation to the RAB. This is important, this TRS subcommittee meeting. We get a lot of good reports and we're able to talk to the community and tell them what's going on. We've we got to have these meetings once a month the way they were before. And I think the reason for this is because don't have a community chairman. And I think this should be brought to the attention of Mr. Antwine and the rest of RAB members. We definitely need some guidance on this and we definitely need a meeting every month. There are lots of questions that come up.

RODRIGO GARCIA: There's a lot of volume of content of issues that we haven't dealt with and we need to deal with. And we need to have more TRS meetings.

FEMALE SPEAKER: What happened to Mr. Pena? Did he say

why he couldn't make the meeting tonight?

DR. DAVID SMITH: I don't know the details. He has been an active part in TRS meetings.

ARMANDO QUINTANILLA: Well, we need some action on this particular thing. If we have an item that should be an agenda item for the next RAB meeting or, you know, to that effect.

ROBYN THOMPSON: And that's typically how it's been done in the past. I think as you remember earlier this year we were working on the charter and some other things.

ARMANDO QUINTANILLA: But there's lots of things -- we got some -- the ATSDR reports are coming out. We've got to provide money to bring in a consultant or a specialist to break that thing down and tell us this is what they didn't do.

ROBYN THOMPSON: We actually have a contractor assigned for that.

ARMANDO QUINTANILLA: When will he be here and tell us this so that we can -- and how much money do we have so we can get someone?

ROBYN THOMPSON: Well, he's actually -- it's already in place and as soon as the report is released he'll be able to start looking at that.

ARMANDO QUINTANILLA: Well, the reports are being released tomorrow.

ROBYN THOMPSON: No, no, no. Are you talking about the past air emissions?

ARMANDO QUINTANILLA: Well, the ones that are being released tomorrow. Three reports are being released tomorrow.

ROBYN THOMPSON: Some of those are actually drafts.

TIM SUELTENFUSS: And just for the point of clarification for the rest of the audience, on the months that we don't have a Restoration Advisory Board meeting, it's a typical process to hold a Technical Review Subcommittee meeting, which we're having tonight.

We have been planning for a September TRS meeting as well, but at the last RAB meeting Mr. Garcia made a motion and the RAB decided to set up a special RAB meeting. So we're going to have the special RAB meeting instead of the TRS meeting in September.

RODRIGO GARCIA: Well, I didn't mean to cancel the TRS meeting. I said we needed a special meeting to deal with the semi-annual compliance report. I didn't mean to cancel the TRS meeting and chose one over the other. We need more TRS meetings. And I didn't mean to have the TRS meeting cancelled by calling a special meeting to deal with the semi-annual compliance report. I wanted them both.

TIM SUELTENFUSS: Okay.

RODRIGO GARCIA: It was not my intention to cancel the TRS.

TIM SUELTENFUSS: And I would just suggest that maybe we bring that up at the September RAB meeting as well.

LARISA DAWKINS: We can bring that up in the special RAB meeting. When something's called for that's out of the ordinary like a special RAB meeting and the committee voted to that, we only have certain dates that we are able to formulate and put a meeting together because people have to be notified. So the easiest thing is to have it on the same day as the TRS because people are already aware that that particular date has already been set aside.

RODRIGO GARCIA: But if you put a TRS meeting with a special board meeting, they all want specific issues, like I said with the semi-annual compliance report. Then we're going to have a meeting that starts around 5:00, 6:00 o'clock and it will last until 11:00 o'clock at night if we try to put everything into one basket.

ARMANDO QUINTANILLA: The thing is, we don't have a chairman for this thing.

ABBI POWER: That's one of your issues for the next meeting. And you don't even have as many of your members here so...

ARMANDO QUINTANILLA: Because there's no leadership.

ABBI POWER: Well, then at the next meeting that needs to be discussed. I mean, I don't think -- there's only four of you all in here to deal with that today.

TIM SUELTENFUSS: We have captured that, so we appreciate your bringing it up.

ROBYN THOMPSON: Were there any other questions or --

ARMANDO QUINTANILLA: I think this was a good meeting. There are a lot of things that were brought up we should have been dealing with in the past, and we haven't been dealing with it in the past because of lack of leadership, I guess, is the best way to put it.

FEMALE SPEAKER: I really found it insightful, the gentleman from the veterans gave us that presentation. I felt that we got a lot of questions answered. We still have lots of answers, but a lot of them were answered.

ARMANDO QUINTANILLA: It's a good start.

FEMALE SPEAKER: It's a good beginning. This is the first meeting where the TRS feels -- I feel comfortable with the community being involved. This it the very first meeting I've felt this way and I've been here three years already. It's the first time because of the gentleman who just came.

ROBYN THOMPSON: Do you all like this format?

ARMANDO QUINTANILLA: Much better.

FEMALE SPEAKER: It's organized.

ROBYN THOMPSON: Great.

DR. DAVID SMITH: Okay. We've mentioned a special RAB meeting is scheduled for Wednesday, September 14, at 6:00. That is scheduled here.

ABBI POWER: Tuesday. That's Tuesday the 14th.

DR. DAVID SMITH: Did I say Wednesday? I'm sorry. I

just made that up. Wednesday, September 14th, 6:30 in this building.

The next RAB meeting after that is scheduled for October 19th at Kennedy High School.

The next TRS meeting is scheduled for November 9 at 6:30 in this building.

Those with the meeting announcements, these are the action items, et cetera.

Are we ready to adjourn?

ARMANDO QUINTANILLA: Also think about what we're going to have whenever we have the next TRS meeting, some agenda items to be presented.

RODRIGO GARCIA: Notify us in advance of the agenda -- possible agenda items. Notify us in advance of possible agenda items for the TRS meetings. Also, put for sure a report on TAPP funding because I want to know how much money's left in the TAPP funds, what are the TAPP projects, and how much money is still there. And I also want advance notice on TRS items to consider.

GARY MARTIN: The report was given on the TAPP funding. We're right -- something like $3500 is what's remaining, I think.

ARMANDO QUINTANILLA: I thought it was $8000.

RODRIGO GARCIA: I thought it was $8000 from the last meeting.

GARY MARTIN: No, but you missed that meeting where they gave the update. I may be wrong.

ARMANDO QUINTANILLA: Well, if we don't have it, we got to get it because of the ATSDR reports that's coming out.

GARY MARTIN: Well, back -- either last year or early this year, a lot of what was discussed was how much TAPP funding was there and what did those funds want to be used on. And everybody wanted to wait until we found out when the ATSDR reports were released so they can decide which of those they wanted.

FEMALE SPEAKER: I think you guys have already chosen to review the past air emission study, just like you chose early on who was going to review the Zone 2.

GARY MARTIN: I think that's why it's $3500 or something in that neighborhood.

LARISA DAWKINS: We'll will certainly get that information for you, but the TAPP contractor already has the Zone 2 and 3.

RODRIGO GARCIA: What's left over and how much more money can we get?

LARISA DAWKINS: Yes, sir. We will get that information for you.

RODRIGO GARCIA: On the TAPP, how much is left over and how much money can we get and what can we use it for?

DR. DAVID SMITH: I'm still looking for that adjournment.

Thank you so much. We're done. (9:06 p.m.)

STATE OF TEXAS)

COUNTY OF BEXAR)

I, VICKIE-LEE GARZA, Certified Shorthand Reporter, do certify that the foregoing is a correct transcript, to the best of my ability, of the proceedings held in this matter.

9/9/04

DATE

Vickie Lee Garza

VICKIE-LEE GARZA, CSR

NOTARY PUBLIC STATE OF TEXAS

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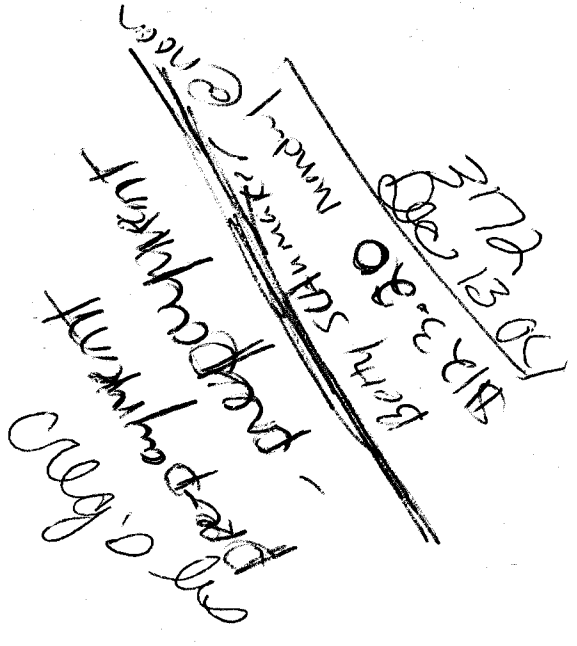

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