BEFORE THE

ENVIRONMENTAL PROTECTION AGENCY

In the Matter of:)
)
PUBLIC HEARING ON)
CRYSTAL CITY AIRPORT)
SUPERFUND SITE)
)

Fry Junior High Cafetorium
Crystal City, Texas

Thursday,
August 20, 1987

The above-entitled matter came on for hearing, pursuant to notice, at 7:05 p.m.

APPEARANCES:

For the Environmental Protection Agency:

Lynda D. Brownlow
Stan Hitt
Bob Chapin
Jim McGuire
Greg Tipple

For the Texas Water Commission:

Sherril Thompson
Martyn Turner

For the Agency for Toxic Substances and Disease Registry:

Carl Nickham

For the Texas Department of Health:

Richard Beauchamp

For the Texas Aeronautics Commission:

Alan Schmidt

Speakers:

Mayor Jose Mata
Ezequiel Guzman
Alejandro Nieri
Marilu Massigrani
Ninfa Moncada
Rudy Rodriguez
Henry Daly
Dorothy Galvan
Polly Lopez
Charles Carr

P R O C E E D I N G S

MS. BROWNLOW: Good evening. I am Lynda Brownlow. I work for the United States Environmental Protection Agency out of their Region 6 office in Dallas, Texas. We are here tonight to talk to you about your Crystal City Airport Superfund site.

I want to welcome you. We are very glad you are here. We had a wonderful meeting this afternoon with your Mayor, your City Manager and a number of other people. It was just excellent. They greeted us warmly and we are glad to see a lot of them here tonight, and a lot of you, too.

I would like to take just a minute to explain how we would like to proceed, if it is all right with you all. First of all, when you came in we gave you a white card. That white card helps several ways.

First of all, it allows us a record of who was here; it allows us to add your name to a mailing list so we are certain that you remain involved. And at the bottom portion of that card, there was a place where you could indicate -- and you still may indicate -- whether you would like to speak or not. You don't have to make up your mind about speaking right now. But when you do, if you should, pass your card to Roberta Hirt -- Robbie, would you raise your hand, so they know who you are -- to Robbie Hirt and she will get those cards to me.

We would like to begin tonight with an overview of Superfund: what it means, when it came about, and what not -- and then go on to some technical presentations, and then turn it over to questions and answers.

Before we do that, however, I want to recognize, first of all, Ezequiel Guzman, your City Manager, and thank him very much for the help that he has given me -- given all of us. Secondly, Gracie Rodriguez from Congressman Bustamente's office, would you wave at us please? Thank you, Gracie.

And I would like to introduce to you the EPA staff and Texas Water Commission staff who aren't up here, and I will save these people to last. First of all, there is Sherril Thompson with Texas Water Commission: she does community relations. And then there is Greg Tipple, who works for Superfund: and Bob Chapin, who is the assistant chief of the Superfund's section for the state of Texas.

Up here with me are Stan Hitt -- Stan is the section chief for the remedial section concerned with Texas, in our office. This is -- I am going to do this without looking -- this is Martyn Turner, and Martyn has been responsible as the project officer for the Texas Water Commission.

Jim McGuire -- he works for EPA in Dallas with me. He has been responsible also as project officer. Next

is Carl Hickham. Carl is with the Agency for Toxic Substances and Disease Registry, and they are a sister agency to the Environmental Protection Agency. They remain independent, and they provide health information to us.

And last but certainly not least is Dr. Richard Beauchamp; he is with the Texas Department of Health.

If there are no questions at this point, I will turn the program over to Stan Hitt, who will begin.

MR. HITT: Thank you, Linda. Briefly, I just want to give you a little background on how we got here and where we are going from here.

We are here tonight to discuss with you the recent remedial investigation of feasibility studies that were conducted; to accept public comment on the remedial alternative that we are recommending to the public for dealing with the site out of Crystal City; and, then, also, at that point in time to accept that public comment and [illegible] that in our final determination as to the remedies selected for Crystal City.

Now, Crystal City is one of 957 sites that are on the national priorities list, and the national priorities list is nothing more than a list of sites which are eligible for Superfund funding.

Superfund came about back in 1980 with the passage of a $1.6 billion bill. That lasted five years; we

had another year of trying to figure out where we were going to go from there, and then Congress passed a new bill for $8.5 billion in 1986 to renew the program for another five years.

Crystal City came in in October of 1984, I believe, and was added to the list at that point in time. And basically, the process that we follow with Crystal City is a process that we follow on all of our sites; which is that we do a remedial investigation -- where you go out and collect information to determine the extent, the kind and the distribution of waste at a particular site -- and then also the threats that are posed at that particular site.

You then go into a feasibility study, where you develop alternatives; you look at those remedial alternatives or alternatives for cleanup, and then you go to the public, as we are doing tonight, with a recommended alternative for public comment.

If that comment is perceived as being appropriate, then we go into the design phase for that particular project. And that is where you are actually putting the drawings on the paper as to how that is going to look out there on the ground.

And then finally is the construction, where you are actually out doing the remedial work that it takes to get the cleanup done. I might add, there is one other

phase that comes after that; it is an operation and maintenance period. Those usually last for, like, 30 years or so, where we are just maintaining that particular remedy to make sure that it is performing according to how we designed it.

So, with just that short synopsis, I will turn it over to Martyn, and let her talk to you a little bit specifically about what was found at Crystal City.

MS. TURNER: Thank you, Stan.

MS. BROWNLOW: Martyn, excuse me.

MS. TURNER: Oh, sure.

MS. BROWNLOW: I, naturally, forgot something. Ninfa Moncada has offered that if anyone needs a further explanation of some of the presentation in Spanish, please wave your hand and let us know, and, bless you, you will help us. Thank you. I am sorry.

MS. TURNER: That is fine. Hello. Again, my name is Martyn Turner, and I represent the Texas Water Commission.

Stan gave you a brief overview of the Superfund program, and I might elaborate a little bit on what he just said. I would like to talk a little bit about the history of the site, to bring everybody up to speed.

In April, 1983 we were notified by the officials of Crystal City that there was a problem at the site.

After that time we went to the site, saw the problems, and we did a little investigation at that time; samples were taken.

As a result of us going out there to the site, there are two immediate removal actions performed by the EPA. One was done in the fall of 1983, and the other was done in the spring of 1984.

During these removal actions, the EPA removed drums and contaminated soil to an on-site containment cell at the Crystal City airport. In addition to that, they built a fence around the site to limit access.

The site was added to the national priorities list, and that made us eligible for funds so we could do the remedial investigation. Let me explain a little bit about the remedial investigation that we performed.

The remedial investigation determined the nature and extent of the problem at the site, including characterizing the site in terms of the waste present, and the lateral extent of contamination. We looked at the contamination of surface water, in the ground water, in the sediments and soils; and we also looked at the rate and direction of waste migration.

We looked at the population at risk. And we also looked to see if there were any threatened resources. The remedial investigation supplied data for the feasibility

study. And the feasibility study is designed to look at remedies for the site. Let me tell you a little bit about the samples that were taken at the site that helped in the feasibility study.

We took air samples. These samples were designed to check the airflow across the site: to look at public housing, which is located around the site; and the air samples also showed us what was on the site, to protect the workers which may be involved in the activity on the site.

We took building wipe samples from the structures on the site, from Frank's hanger, and also from the hangers located on the south side of the airport. These building wipe samples were taken just to determine only if there was contamination on or in the buildings.

We took surficial soil samples, and these were very important because it showed us the contamination across the site -- how laterally extensive the contamination was or is.

In order to look at the vertical depth of contamination, we took borings. We took 15 five-foot borings; we drilled one ten-foot boring. We drilled six 50-foot borings, and one 180-foot boring.

The 180-foot boring was very significant and gave us a lot of data. It showed that, for one thing, there is no ground water below the surface at the site to a

depth of 180 feet. It also showed us that there are very dense, thick clays beneath the surface. This is significant because it does not allow -- clays do not allow downward migration of water. Thus, it protected the Carrizo-Wilcox aquifer, which is your source of drinking water.

In addition to the borings, we took ground water samples from your wells which you get your water from. We sampled the West Kinney Well, the Hossenback [phonetic] Well, and the Airport Well, which is right adjacent to the airport.

We took surface water and sediment samples in the streams around Crystal City, and we also took three runoff samples from the airport itself right after a rainfall event.

From all these samples, we did a lot of analyses. We analyzed for pesticides, herbicides, inorganics, volatile organic compounds, acid-based neutrals and arsenic. With these samples, for instance the air, we found no pesticide contamination coming from the airport site itself. We did find a trace of volatile organic compounds in both the upwind and downwind samples.

Volatile organic compounds are things that can be found in automobile emissions, so these really couldn't be attributed to the site itself.

In the buildings, we found traces of pesticide

contamination of Frank's building, and this is to be expected because Frank did apply pesticides, and he also stored pesticides in his hanger.

In the storm runoff samples that we took, we found arsenic -- mino. amounts, trace amounts if you will -- going off the south end.

In the surface water sediment samples, we found trace amounts of both herbicides and pesticides, both upstream and downstream.

Getting back to the surficial soil samples and the borings: this is a map showing -- this is probably one of the most important pieces of information we got from the investigation, other than the fact that, of course, the ground water appears to have no contamination and the air is clean around the site -- but this is probably what it all comes down to. And this is the contamination at the site itself.

The yellow -- I hope you all can see this indicates total contamination at 100 milligrams per kilogram at the site. If you will note, the majority of contamination is located near these hangers, which are indicated by boxes, and they go down [illegible] of the drainage patterns.

The other line, the blue line, is a ten milligram per kilogram contour. Material within the blue line and

outside the yellow represents those contaminants at ten milligrams per kilogram.

In conclusion, the contamination found at the site is mainly contained on the site itself. One important item is that contamination extends to a depth of approximately one foot. We found very little to no contamination below the one-foot level.

If you have any questions, I would be glad to answer them. Yes, sir?

MR. RODRIGUEZ: My name is Rudy Rodriguez. I need to ask you, when were the air tests taken?

MR. HITT: I tell you what; if we could, let's go ahead and talk about the feasibility study, and then we will try and take questions and answers after the presentation on the feasibility study.

MR. RODRIGUEZ: The lady asked if I had a question.

MR. HITT: The thing we are concerned about is that we want to make sure that your question is put on the record, and we would like for you to come and speak into the microphone if you would do so, please, sir.

MS. TURNER: I might add, any specific questions about when things were taken, dates and, I guess, amounts of contamination -- those are not really available off the top of my head. If you will get with me -- I have the data

with me. If you will get with me, I will look it up for you.

I would like to introduce Jim McGuire, and he will talk with you -- he is with the EPA, and he will talk to you about the feasibility study.

MR. McGUIRE: As Martyn just discussed, the pesticide contamination at the airport is generally limited to the upper soil, and in order to develop alternatives to clean up the site, we conducted a feasibility study. And before we actually started developing the alternatives, we also conducted what is called a risk assessment.

And the risk assessment, basically, comes up with the cleanup level for the soil. The first step in the risk assessment was to narrow down the list of contaminants at the site. We -- the actual number of contaminants detected at the site is pretty great; I am not sure of the number. But we narrowed it down to what are known as indicator contaminants. And that -- indicator contaminants are based on the toxicity of the contaminants, the relative concentration of the contaminants at the site, and the distribution over the site.

From the information collected there in the investigation, it was determined that DDT, toxaphene and arsenic would serve as the indicator contaminants.

The second step of the assessment included using

the indicator contaminants to develop the cleanup criteria. Based on the current usage of the airport, the cleanup level of 100 parts per million of the total indicator contaminants was developed. This is considered an acceptable level for exposure up to 220 days per year. This means that access to the airport after cleanup would not need to be restricted.

(Pause)

MR. McGUIRE: The first slide is basically just the site; it is an aerial photograph similar to what Martyn has. The contamination -- I am not sure if you can see what she has got -- but it is basically limited to around the hangers here and down from those taxiways.

Next one. To clean up the site, in our feasibility study we developed eight alternatives, and all of the alternatives we developed cleaned up to 100 parts per million level, except, of course, for the no action.

We include the no action under our investigation only to serve as a base line for comparison with the other remedies. The no action here included environmental monitoring and the cost was just above half a million dollars for that.

Second alternative we developed was an asphalt cap. And what we would do there would leave the contamination where it sits now, which is the yellow area

Martyn has, and put an asphalt layer over the contamination. The cost for that remedy was estimated at $2 million, and it would take approximately three months for construction.

The third remedy we developed was to move the contaminated material into a single area at the airport, and place a five-foot protective cap over that area. The cost of that remedy was $1.6 million, and it was estimated to take about four months to complete, once construction began.

The fourth alternative was to place the contamination -- again, to pick it up, move it to a single area on the site, and place it in a lined landfill. The cost of that remedy was $2.1 million, and again it was estimated to take about four months for construction.

The fifth alternative was again a lined landfill, but we were going to treat the soil to reduce the mobility. But we really had trouble coming up with something that would reduce its mobility significantly. The cost of that remedy we estimated at $3.8 million, and it would take about five months to complete that option.

The sixth alternative was to dig all the waste up above the 100 parts per million level, take it off-site to a commercial landfill. The cost of that remedy was $7 million, and a lot of that was transportation costs. There is a hazard with picking it up and moving it to offsite

just because you have a transportation hazard. You are dealing with contaminated materials driving through neighborhoods.

The seventh alternative was to incinerate or burn the soil. And that would rid it of the pesticides, but we still have arsenic out there, and you can't burn off arsenic. So you would have arsenic ash to deal with at the end of that process. That one, it was estimated to cost $11.4 million and it had a bad side, because it would take two years to complete that remedy. We would be out there with an incinerator for two years.

The eighth alternative is what is called solvent extraction. And what we would basically be doing is flushing the contaminants from the soil. Again, it was estimated that that remedy would take two years, and the cost of it was $16.1 million. And that one has a problem in that it is an innovative technology; it is not well proven. So it would have problems. Theoretically it should work, but in reality it hasn't been proven all that well.

Other problems with some of the remedies is -- option number five, treating the waste to reduce its mobility would increase its volume by at least 25 percent. And therefore you would have a handling problem.

Based on the factors, we are recommending

alternative number three, which is consolidating the waste. And what we are proposing to do on this remedy is -- we have approximately 12,000 cubic yards of waste, contaminated soil, we have to dig up -- that is approximately 900 truck loads of soil -- place it in a pit which would be 190 by 190 by 17 feet, and place a protective layer on top of that material.

The covering that we are going to put over it -- there is your waste, your contaminated soil -- we are talking two feet of compacted soil, 12 inches of sand, two feet of top soil, and then we cover it with grass. And underneath, we also have a synthetic liner, here, that protects rain from coming through and getting into the waste. Theoretically this is supposed to keep the forces which might move the waste, the contaminants in the waste, to keep it out of there.

Next one. Where we propose to put the landfill was south of the taxiways, in this area here. And in the meeting with the council members, there are some questions as to whether or not we want to do that. But again, this is a proposed location, and we will work it out in design.

But the thought there was to move the landfill as far away from the runways as possible so that you can use your runways out there. And again, this hash mark here is the areas we are talking about digging up.

That is all I have. I will turn it over to Carl Hickham, who is with the Agency for Toxic Substance and Disease Registry.

MR. HICKHAM: Thank you. Again, my name is Carl Hickham. I am with the Agency for Toxic Substances and Disease Registry. Currently the agency has representatives in the ten national regional EPA offices around the country. Primarily our job is to provide health recommendations to the EPA, to state health departments, to state environmental agencies, to the general public and private medical community.

We have, at this time, received data on the Crystal City airport site. We are in the process of performing a comprehensive health assessment for this particular site.

We have in the past commented on this site a couple of times, most recently regarding the level that was set, 100 parts per million at cleanup. We do concur with this particular cleanup level. This report -- this assessment was provided to EPA and it is included, as I understand, in the repository of information that is here in Crystal City.

Let me turn it over to Stan.

MR. HITT: Thank you, Carl. Once again, the recommended alternative is alternative number 3, which is

an on-site cap, consolidation of the waste on-site. And that is what we are recommending and proposing to the public for public comment.

Let me say a little bit about where we go after this night. As you can see, all this hearing is being taped; it is going on the record. Your questions will be received and we will attempt to answer them the best that we can tonight.

Some of them may require a written follow-up, which we will try to get to you. Or you -- any information that you may need. At that point in time, correct me if I am wrong, Jim, but I believe the public comment period ends the 30 of this --

MS. BROWNLOW: Thirty-first.

MR. HITT: Thirty-first of this month. So if you have got -- if you want to send in written comments, please do so, by all means.

We will take the questions tonight and any written questions, and write up a responsiveness summary to those questions which will also go into the repositories as did the investigation feasibility studies and the -- as well as the record of decision, which is the document which chooses the alternative.

So with that, what we would like for you to do is that we would like for you to come up to the microphone,

if you have got a question, please. We want to make sure -- it is not to intimidate you, it is just that we want to get it on the tape so that we make sure that we hear it and we can respond to it accordingly. Like I said, if we don't -- if we are not able to do it in person, then what we will try to do is respond to it in our responsiveness summary. Okay? We appreciate it.

And I am sorry -- I didn't really mean to cut you off a while ago, but we want to try to collect all of these at one point in time, if we could.

MS. BROWNLOW: Thank you. I see the mayor has joined us; welcome. Thank you for having us here. Stan is correct. The comment period does close the 31st of August. On the back page of your fact sheet there is an address where written comments can be mailed. You will see the name Carl Edlund; Carl is the branch chief for Superfund and therefore responsible for Superfund activities in the five-state region.

Without further ado we will proceed with the people who have indicated that they want to make a statement or ask a question.

Mayor Jose O. Mata. The microphone is there in the center, sir.

MR. HITT: Could we also, if you would please spell your last name for the court reporter when you come

up?

MS. BROWNLOW: Excuse me; we don't need to do that. I will pass these cards to him later, and he can get the proper spelling.

MAYOR MATA: Good evening, ladies and gentlemen. I didn't mean to be the first one tonight. Anyway, I think that -- first of all, I would like to thank you ladies and gentlemen for being here tonight with us and thank you for the tremendous amount of work that has been done with this analysis.

And I would encourage each and every one of you here tonight to make your public comment, which we have the opportunity to do so here tonight, because it will affect our living standards here in Crystal City in so many different ways. So it is advisable that we each voice our opinion here tonight.

I, for one, am sure that these ladies and gentlemen will make their best recommendation to us. However, it is not with the intention that we do not wish to cooperate with them, but we are here to make our comments.

I have a particular comment on the location that is being recommended right now. And I would appreciate if you could turn on the aerial photo of the site so that I could more correctly identify what I am trying to say.

There; that one there. Okay, to my right you will see the circle, and to the right of the circle is the location that is being proposed to be dug out and the waste material be located in that particular area.

Right into the left of the airport ground is the housing authority, and almost to the front is the school district elementary schools.

I think that when we met earlier today, someone voiced an opinion that what we wanted to do was, rather than the location of the site being right in front of the airport and almost also in front of the school district, that it be to the rear of the airport, where it could be excavated and dug in deep and put away, and it would not be visible to the rest of the community.

One of my concerns is that, of course, we as citizens of Crystal City, live here. We intend to make Crystal City grow. Whatever we have to do, we will try and keep doing it so that one day we will see Crystal City grow. And this, ladies and gentlemen, we feel, is an area of potential development in our area. It is a potential neighborhood development, it is a potential school development area, and it is a potential business development area.

We have already had minor problems as far as development, and we would like to diminish whatever problems

we would have in that area, to conserve it as a potential development area.

Another thing is, if we can get it -- if we know there is a hazard there, and we can get it farther away from our residential area and our school district area, from our elementary-level area, I think we stand to gain.

However, I know that you will go back and study this situation and make another recommendation to our community. And I hope you do so, and I am hoping that you make the best recommendation possible.

Another issue that has been brought up is the issue of what dangers do we face with the air control -- or air quality that we will be receiving in that area. And I am sorry, and I apologize for not being able to distinguish who to ask the question to, but I don't know if this is the proper time to ask, and I would like to get an answer to that so that it would go be on record.

MR. NITT: Absolutely. Let me first just kind of respond to your first question about placement of where the landfill would be.

It was correct that we had proposed to put the landfill back in this area in the feasibility report. However, that, we feel like, is a design-type question that has to be answered that we will look at more closely in the design. We do know that the FAA is going to require us to

keep the landfill at least 150 feet away from any runway.

So it kind of puts a little bit of a damper on where we can put the landfill. But I would say that we would have to go back and check it out and make sure that it could fit within that area, what kind of costs would be involved for transporting waste from here back over here, because, again, you are talking about a significant amount of waste, and this will come out in the design.

But we can go back and definitely look and see if there is area over here to put the landfill on, and what the cost differentiation would be between, say, sticking it over here and sticking it back here.

Let me ask you a question. Are you talking basically within this area right in here?

MAYOR MATA: Correct. Now, another thing is that it was brought to our attention -- this place, once it is situated in front over here, it will be fenced; correct?

MR. HITT: Right; that is correct.

MAYOR MATA: It will be fenced and it will be identified as a waste area with toxic chemicals.

MR. HITT: That is correct.

MAYOR MATA: That I asked, or I questioned that it would be a sore thumb sticking out in that particular area because, you know, potential developers that come into an area and run into a place where it says Danger, you

know, don't get close: stay away. That is not a very good sign for our community. So if we can keep it, that danger, as far away from the city limits, we would be ahead.

MR. HITT: Okay. I agree with you. With respect to your air question, are you talking specifically of what kind of air quality we would have during construction, and what the threats of air releases during construction would be?

MAYOR MATA: Both. What the potential hazard we have right now, and what potential hazard we would have once construction starts.

MR. HITT: Okay. And I will allude a little bit back to Martyn, and Martyn may want to help me out here, if I get out of bounds with this, because I am not real up to speed on the investigation study.

But she alluded to the fact that they took air samples during the investigation study. And what these air samples essentially said was, they took downwind and upwind air samples -- is that we cannot detect any air releases from that site. They did detect some minor amounts of other contaminants, but it is not directly associated with that site.

So, as the site exists, in an undisturbed state -- because basically you are not talking about the same level of disturbance as it sits out there right now,

versus as what will go on during construction. We know that we are going to be disturbing that waste during construction. But as that site sits out there right now, there is essentially very little, if none, fugitive dust release coming from that site as it exists right now.

Now, that is not to say that if a person goes out there and mows the grass or kicks up the dirt or rides his motorcycle up and down these contaminated areas that he is not getting some exposure to that. He probably is. But that is all on-site exposure. There is no exposure off-site that we have detected coming from away from that site. Okay?

Now, during construction, we will be definitely disturbing that waste, yet there are mechanisms to put in place where we also try to safeguard the public during construction; mechanisms such as -- construction things such as keeping the soil wet during excavation, or adding foams or doing other mechanisms. Also there is monitoring; there will be air monitoring done through the whole process during construction, so that if it does appear that there is a fugitive dust release during construction, then we will just have to stop, either wait until the conditions get better or find some other way to proceed before we would go on with that.

MAYOR MATA: Thank you. One other question: I

forget who mentioned this, but during rainy season, the runoff water was also analyzed to have moderate some type of chemical. What is moderate type chemical? What danger does it pose to us?

MS. TURNER: Right. What I indicated was that there were trace amounts of arsenic leaving the site during a rainstorm event, going off the south end in this direction. Now, as far as health implications, I would have to refer that to the Department of Health or Mr. Hickham. Dr. Beauchamp, would you like to respond to that?

DR. BEAUCHAMP: Well, is that the one where you said the concentration was .09 milligrams per liter?

MS. BROWNLOW: That is correct.

MR. HITT: Dr. Beauchamp -- could anybody that responds, I would appreciate it if they could come back and speak into the microphone; it would sure be a help.

MR. HITT: Could you give me an example, Dr. Beauchamp, please?

DR. BEAUCHAMP: All right. The concentrations that they measured in the rainwater, as I understand, was about .09 milligrams per liter of water, which converts to -- the concentration is a little bit less than twice what would be accepted as a drinking water standard. The drinking water standard is .05 milligrams, and the levels that were measured there, I understand, were .095 milligrams

per liter. So it is a little bit less than twice what would be accepted as drinking water for that one particular contaminant arsenic.

MAYOR MATA: So what you are saying, in your opinion, it doesn't pose a great danger to us?

DR. BEAUCHAMP: Well, at that level, unless somebody were out there drinking the rainwater running off the site, there would be no hazard just being in the water.

In order for arsenic or any other toxic substance to be of any harm to someone, it has to get into their body somehow. There are three ways it can get into the body. It can get in through inhalation of a vapor or dust or something like that; that is through the lungs; it can get in through ingestion, such as drinking water or eating food that is contaminated with the toxic substance; or it can get in through absorption through the skin, dermal absorption. In other words, if a person got out there and got dust all over them that was contaminated with pesticide, some of it would undoubtedly be inhaled, but some of it would be on the skin and some types of pesticides can be absorbed through the skin. And different pesticides are absorbed into the skin at different rates, so it would depend on the type involved as to how much the exposure would be.

MAYOR MATA: Thank you, Dr. Beauchamp. Another

question just for the record: I know you answered this question before for me. But I asked earlier whether these chemicals, whichever they might be, posed any dangers to our pregnant women in our community. I also noted that we a large amount of children that are Mongoloid. Could any of these diseases be attributable to what we have in that area?

DR. BEAUCHAMP: The first question, with regard to the possible adverse affects on pregnant women, if there were a significant exposure to that pregnant woman -- and this would probably have to come through ingestion of something, you know, soil or dirt or something from the site in order to get enough to be in the level where there would be a potential adverse effect on the fetus the women was carrying. So it is extremely unlikely that there would be any type of adverse health effects in pregnant women, given the situation we have here, because we really have not identified anything which would constitute an exposure pathway. In other words, those three pathways that I mentioned, not one of those has been identified as a likely source of exposure to pregnant women in the area.

The second question, with regard to the Down's Syndrome children in the area: there have been numerous studies done on Down's Syndrome, looking at hundreds and hundreds of affected children. And they have looked at all

types of different things: maternal occupational history, paternal -- mother's work history, father's work history, any exposures in the household, you know, types of hobbies or anything that involve use of chemicals or toxic substances or use of pesticides in the home or type of diet or -- just all types of different factors that may be involved. And after all those studies, they have never really been able to identify any single environmental factor which has been linked to Down's Syndrome.

Generally the things that keep coming up are the older the mother is the higher the risk for bearing a child with Down's Syndrome. Also the older the father is, to a lesser extent, is also an important in whether or not there is a high likelihood of a Down's child.

MAYOR MATA: Has Down's Syndrome ever been linked to these chemicals, any type of these chemicals we have here?

DR. BEAUCHAMP: No. Down's Syndrome has not been linked to any environmental chemicals or poisons that we have discovered to date.

MAYOR MATA: I will let somebody else have the microphone. Thank you very much.

MS. BROWNLOW: Thank you, Mr. Mayor. I apologize to everybody for this game of musical chairs; it has to do with too many microphones, and I am very, very sorry.

Our second speaker, Esequiel Guzman, your city manager.

MR. GUZMAN: I have two questions, or maybe one comment on the health related issue, and the question on the selected alternative.

(Pause)

MS. BROWNLOW: I will tell you --

MR. GUZMAN: Is it working now?

MS. BROWNLOW: This one is off.

MR. HITT: I will tell you what. We will just try to talk loud enough so you can hear us. If you can't, please raise your hand and say, I can't hear you and we will try to talk louder. Okay?

MR. GUZMAN: Related to the health issues, I would just like to point out that, in the earlier meeting, it was brought out that none of these opinions on the affected health of local people is based on any study that was made on the history of anybody here; that it is just an opinion based on what we have there.

And on the question of the selection that was made on the remedy, I was just wondering if you could give us an explanation of how that was reached. When that selection was made, why do 100 parts per million? Is it a cost-related factor, or -- you know, what the reasoning behind that is?

MR. HITT: Let me get this first correct, as far as -- your first question was -- well, let me address the second question, as far how clean was clean at that particular site.

That is a very difficult question that we often deal with on every site. As a matter of fact, it is probably the most difficult question that we have to deal with at every site.

Our primary consideration factor is one of public health. I think that is paramount in everybody's mind, as far as when we go into these things in determining what kind of cleanup levels we want to establish.

After we in ATSDR and the other health agencies that are involved are comfortable with that, there are other factors that we have also got to consider. And that is in the fact that, is it technically practical to try to clean up to that level?

And oftentimes -- let me give an example about that. With the Crystal City airport, if you selected another cleanup level, essentially what you would be doing is increasing your volume substantially over a level that is -- well, we can get into the health related aspects of it a little bit later. But you would be increasing your volume substantially. The more we increase our volume, the harder we are going to have a time of fitting that in with

the area that we for that site, to dispose of it in.

So what I am saying is, that there are other things out there that we have to consider during the cleanup levels. But the 100 parts per million was basically derived from what we call a risk assessment model. And if you have ever dealt much with any kind of models, you know that they are very precarious; and this is no different.

There is a lot of assumptions that are made. And we try to confine those assumptions, and know what they are, but it is a very difficult model to work with. And you have got make assumptions. And the assumptions that were made were that this was operating as an airport in the past; we want to keep it operating as an airport in the future.

And we tried to select those people that we thought might be exposed to that kind of waste out there -- and again, the exposure is to on-site people working at the site -- and based on that, and based on the data that we have which are primarily -- and Dr. Beauchamp related this to you earlier today -- is primarily animal toxicity studies. You extrapolate that to human exposure levels, and you get what you think is an acceptable risk level. And we say, or our thinking is that 100 parts per million is an acceptable risk level.

MR. GUZMAN: Okay. One more question I just

thought about. You are recommending that we keep the airport closed until such time as you do the cleanup?

MR. HITT: That is correct. Until we get the airport cleaned up, that is our recommendation.

MR. GUZMAN: Can it be used at all?

MR. McGUIRE: I think -- we met with the FAA on that, and it was finally decided -- and I will have them get in touch with you to tell you officially -- that you should keep the gate locked at the airport and that they would put a NOTAN out that says to contact you all before somebody lands there so that you can have somebody come unlock the gate for them.

So the FAA still wants it kind of kept closed, but kind of open, because evidently there is a regulation that says it has to stay open, I guess, for emergencies.

MR. GUZMAN: Limited use in other words.

MR. HITT: Yes. For emergency situations.

MR. McGUIRE: So we worked out with him, and he said that that would be acceptable to him. We felt it should be closed; FAA requires that it be open. So we kind of met in the middle and said let's leave the gate locked and somebody can contact you prior to landing to have the gate opened for them.

MR. GUZMAN: Okay. Thank you.

MR. McGUIRE: I will have the FAA get in touch

with you on that.

MR. GUZMAN: Thank you.

MS. BROWNLOW: Our next speaker, Alexandro Nieri.

While Mr. Nieri is walking up, I want to recognize also that Alan Schmidt of the Texas Aeronautics Commission is in the audience, too. Thank you for being here.

MR. NIERI: I was also part of the previous meeting, and it was quite extensive, so I want to be frugal. I have some questions that maybe we can answer with -- pardon?

MR. HITT: Can you not hear?

MR. NIERI: Okay. I will ask questions that could possibly be answered with a yes or no. I have one for the gentleman from the CDC.

Are any of the contaminant cancer producing, the ones that we have found at the airport?

MR. NICKHAM: They are classified, I believe they are -- based on the animal studies, again, there have been some links to cancer with one of -- yes, sir; they are.

MR. NIERI: Anybody exposed to those contaminants at the airport for any length of time, could we assume that they have a high risk of contracting cancer?

MR. HICKHAM: The way this particular cancer issue is derived -- and again, there are many chemicals that have a higher potency index for cancer than the two or three that we are talking about here. But the way this is evaluated is the exposure time that a person would be on the site, based on a 70-year lifetime average for the development of cancer.

It would not be, you know, someone that gets random exposure for one day a year, two days a year, anything as such. They are usually based on daily exposures for a 70-year lifetime average.

MR. NIERI: Thank you. I have a question the gentleman from the TAC, the Texas Aeronautic Commission. I understand we have grant right now allocated to the city to do some lighting work at the airport. Will this problem of the site present any problems in carrying out the grant or the grant conditions?

MR. SCHMIDT: The city does have a grant from the Aeronautics Commission to replace the lights, or to install lighting. We put that on hold when we found out about the Superfund evaluation. The grant is established for a four-year period, which means it will expire August of 1989.

It is possible for those to be extended; however that is not up to me; that is up to the Commission itself,

that could meet at some time. Right now, we are not going to -- we are not interested in doing the cleanup right now. The information that has been developed has given us some information we can use and rethink whether we can go ahead with the construction. And right now I am just not sure.

We have identified the contaminated areas near the intersection of the taxiway and the runway, where we do have to do some trenching -- or we might have to do some trenching. And I don't really think we want to be doing trenching in that area now. So, maybe I have gone beyond what you asked. Yes, you do have a grant. It is set to expire in August of 1989. The possibility of it being extended -- we still have to look at the possibility of whether we can do the construction between now and 1989.

MR. NIERI: Thank you. This question is for the EPA representation. Are cleanup funds restricted for any reason, or can we use funds for a total and thorough cleanup, whatever alternative that falls under?

MR. HITT: I am not sure I am following your question as far as that goes. But I guess, if you are talking about level of funding for the whole program, you know, it is tough to say. But right now, basically, we are already seeing some resource limitations as far as Superfund goes, because we have just got so many sites on the list right now.

But with respect to Crystal City, we have already got the funding, more or less -- I mean, the funding set aside that we think may be necessary for that cleanup. So I -- to answer your question, I don't see any problem with regards to funding.

MR. NIERI: How much is that, sir? How much money has been allocated?

MR. HITT: Well, it hasn't been allocated yet, to tell you the truth. We have long-range planning that we try to do so that we try and set aside an amount of money that we know that the agency can go to Congress and say -- every year we have got to go to Congress, and I am sure it is like you go to the city council and say, Please release this amount of money to me. And based on that, usually what we try to do is give a very conservative estimate.

Way back when, when we didn't know exactly what was going to be done -- 05 or 010 million of what that planning money needs to be -- and essentially it is nothing more than planning, but the agency will go to Congress at the end of each year and say I need this amount of money in my budget to cover this amount of sites.

MR. NIERI: Thank you. I had a question for the Texas Water Commission. We have two landfill sites. One is in the process of being closed officially, and the present landfill site, about 4-1/2 miles from the city.

Could it be possible to -- I know we have some areas in the old landfill site that were not used to bury trash, so that could be available. I don't know to what extent, but we can look into that.

The new landfill site has a substantial amount of land right now. And could that be used for this kind of operation?

MS. TURNER: That landfill that you are speaking of was intended for municipal waste? What we have here is a hazardous waste. And to take that off-site, the landfill would have to be designed for hazardous waste, which it is not at this time.

MR. NIERI: So what we are saying is that the hazardous material will remain here anyway, wherever we put it. Right?

MS. TURNER: Yes. But you can't move it to a non-hazardous facility. Congress has passed these laws.

MR. NIERI: Okay. Will people or children living near the toxic site be affected -- that question was for anybody -- in the future, even though we take precautions to bury the toxic waste contaminants.

DR. BEAUCHAMP: Well, assuming that the remedial investigation and the cleanup plans are all implemented as planned, at that point the site should be totally safe, I mean, because all the contaminated material will be safely

either disposed of, or buried, or whatever the final alternative is. And there should be no concern at that time.

Even as it is now, as I alluded to a little while ago, there really has been no identified exposure mechanism which would put children or people living in the neighborhoods nearby the airport at a real risk of developing anything, because it has to have some way of getting from the airport, from down in the ground at the airport there, over to -- into a person's system, either through inhalation or ingestion or absorption through the skin.

And as long as none of those mechanisms are in operation, then there is no risk. Just the fact that a hazardous chemical is there does not mean it is a real threat to you unless it can get into your system.

MR. NIERI: Thank you. I don't have any more questions.

MS. BROWNLOW: Thank you very much.

Next speaker, Marilu Massignani.

MR. GUZMAN: Could I have an appendix to my last question?

MS. BROWNLOW: Sure.

MR. GUZMAN: Is the situation very serious right now, that we should take any kind of precautions before any

kind of removal is done, or any kind of actions taken of the removal of the toxic waste? Are we under some kind of a "scare?"

DR. BEAUCHAMP: Well, I think that, you know, completely adequate precautions have already been taken with restricting access to the airport now, which would really eliminate most of the possible exposure routes. This would be someone going on to the site and stirring up a lot of dust, doing something where they would be exposing skin or something, or ingesting dust or something from the site. So those precautions are completely adequate right now to protect the residents of the city.

MR. GUZMAN: Thank you, Doctor.

MR. HICKHAM: Sir, if I might just follow up with one of your comments -- I have, as I mentioned to you today, a print on toxaphene, which I will provide to Mr. Guzman, which will also provide you with some references for the various lengths between a carcinogenic item with toxaphene in animal studies. And I will have that for Mr. Guzman at the completion of this meeting.

MS. BROWNLOW: Thank you, Carl.

Marilu Massignani. And thanks again for all your help with the facility.

MS. MASSIGNANI: You are welcome. A couple of these questions I have asked earlier in the day; some

others I haven't.

If there should be some additional information compiled at the local level, could the community call for another meeting of this type? Like tonight, you called the meeting. Could we call a meeting?

MS. BROWNLOW: Absolutely. We would be glad --

MS. MASSIGNANI: And the three agencies would come down?

MS. BROWNLOW: Absolutely.

MS. MASSIGNANI: Thank you. The second question is, did the study determine the longevity of the contaminants?

MR. HITT: We know quite a bit about those constituents. We know that the organics there, the pesticides, have half-lives. In other words, they deteriorate with time. Even DDT, which is a very persistent chemical in the environment, deteriorates over a period of time. It breaks down into other products.

Toxephene has a relatively short persistence time; DDT has longer. I think you are probably talking about -- and I may be out of bounds here, because I am not real up to speed on this stuff -- but toxephene has, I think, like a ten or 15 year half-life, or something like that. DDT is probably about 40 or 50 years.

Now, the problem where you get into it is arsenic. Arsenic is an inorganic; it is an element, and basically it will not biodegrade. It will stay in the environment, as will all arsenic, because it is just a very stable type element.

So, yes; some of them do biodegrade. Some of them will not persist; others will be around for a long time.

MS. MASSIGNANI: I guess my question was retroactive in time. Given that the organic substances deteriorate with time, does the study determine how long the organic substances have been at the airport site?

MR. HITT: Well, I guess you would have to go back to the point in time when they were originally disposed of, and I am not really sure when that was, to tell you the truth. Early '60s? I don't know. You all would probably know that much better than I would.

I would think, probably, what you have already seen, although we cannot document it, is that you probably have already seen a lot of biodegradation or breakdown of those chemicals out at the site. I heard one person reference the other day in the meeting that when they first went out there, it was a very strong odor, that emanated from that site and also that there was yellow stains and everything. It was real evident that you could see that

material.

Good old Mother Nature, in her infinite wisdom, does do something for these chemicals, believe it or not. So, yes, I think -- we have not gone back and actually documented how much we have had, because we have only had this kind of time interval to check it. And that has been only a relatively short period of time.

We have not checked it, but from studies known -- scientific studies -- they do biodegrade. Some of them do; some of them don't.

MS. MASSIGNANI: You have just mentioned, though, that toxaphene degrades much faster than the other one, and that was found in considerable amounts. So maybe it hasn't been there for ten or 15 years?

MR. HITT: It probably hasn't.

MS. MASSIGNANI: Maybe it was there more recently.

MR. HITT: Right. Well, when I say half-life, it is like half of the concentration from the initial concentration. We don't know what initial concentrations -- I imagine it was almost pure toxaphene that was dumped out there. And so we really don't know what the initial concentrations of that chemical were that were disposed at that site. So it is tough for us to say yes, it has degraded or no, it hasn't. But we know, from

scientific studies that -- on toxaphene itself -- that it does biodegrade.

MS. MASSIGNANI: So are there -- herbicides and pesticides were made of pure toxaphene?

MR. HITT: I don't know. I guess that is a good -- I think there is. I mean, nothing -- like, in pesticides, there are a lot of different ingredients, and nothing is a pure chemical itself. I mean, you add water to it or whatever. But you are talking percentages, five, six, seven, eight, maybe seven percent toxaphene in a solution. Whereas, where you are talking about it now, you are only talking in relatively minor amounts over what was probably originally disposed of there.

MR. McGUIRE: Also, the crop dusters, from our records, ceased operations out there in '83. So it hasn't been that long since they quit. So even if it is biodegraded, whatever the rate is, it hasn't been long enough for it to be gone naturally yet.

MS. MASSIGNANI: So can we deduct that very conveniently the operation went bankrupt as soon as we found out that there was the chemical waste dump?

MR. McGUIRE: We -- like I said, from our records, we are not sure when it got started out there. We never were able to get a handle on that from our literature search we did, but we do know that it ceased operation in

'83. Now, whether or not -- how the two coincide --

MS. MASSIGNANI: April to fall. Number 3 solution, which is the one that you are proposing to the public tonight, talks to the effect of that it would impose hazards to landing aircraft. I think that probably we would have felt more comfortable if you could have read, poses no hazard to human beings.

You know, I know we all want Crystal City to be valuable, but like you say, public health is a first priority. So that was quite dissatisfactory in the wording.

Another question: you have repeatedly stated this afternoon that the way the contaminants appear at the airport site do not constitute a public health hazard. It seems that you are over and over again implying that as long as they stay there, as long as someone doesn't come into direct contact it does not pose a hazard.

I have two questions. One, if that is true, why did we get so fast on the Superfund list? Because I know that at the time that we got on the Superfund list, Senator Florio [phonetic] from New Jersey stated that there were at least 13,000 other sites who were waiting to get on the Superfund list for at least five years. So what was the rush?

MR. HITT: Again, we use a model -- it is called the HRS Ranking Model -- to get sites put on the national

priorities list. And basically, that model operates off potential hazards; hazards that you don't actually have, in a lot of cases, documentation that they are there. You have to make some assumptions.

If you don't have data that says I have a groundwater threat there, I have a surface water threat there, I have an air threat there, you go through another mechanism where you try to make assumptions as to whether you think you do. And the case with Crystal City and a lot of other sites, is that even though it may get on the national priorities list, the first thing that we have to do is go back and do the more extensive investigation as we did here; actually documenting, is that correct.

And probably, if we re-ranked the site out right now, based on what we know, I am not sure the site would rank out, to be truthful; if it would make the national priorities list. But we don't have to worry about that. It is on the priorities list, and we are going to try to deal with it. But it is a model, just as the risk assessment was a model.

This is Bob Chapin with the Texas Water Commission.

MR. CHAPIN: I have been with the Water Commission long enough to see this site develop all the way through the system. And when we first were called out here

by the city and took some samples and found very high levels of toxaphone -- in the 1 and 2 percent range, which were very high levels -- we were very concerned about it, and it became a very high priority for the Texas Water Commission to see that it got on the national priorities list as fast as possible.

Now, I don't know exactly where Representative Florio gets his 13,000 sites from, and I am not sure that that is a real number to begin with. But we developed as much data as we needed to get the site into the national priorities list system as quickly as we could, because we considered it a very serious problem. And the EPA was responsive to our concerns about that, which is one reason why it moved through the system as fast as it did.

As to the difference between that concern and our present level of concern, one of the reasons for that is there have been two removal actions. The stuff that was out there that was such high percentage has already been picked up and temporarily buried to the side of the runway, so that what was left out there now, that we sampled, is of much lower concentration than what was originally there, and so the stuff that was out there that was of the highest concentration has been removed from direct contact where somebody could actually touch it. And that was what was driving the system at the time.

MR. HITT: Thank you, Bob.

MS. BROWNLOW: Thank you, Bob.

MS. MASSIGNANI: Once again, going back to the fact that -- Carl Hickham is not here -- he is coming back now. This afternoon he said I can look at this straight in the eyes and say there is no hazard to public health.

If that is true -- and I don't mean to be facetious -- why do we have to cap, why do we have to go through all these procedures to eliminate it, or to safeguard the public against -- why couldn't we just build like a cement wall, and then the kids could paint some murals or something like that?

MS. BROWNLOW: Carl, or Stan --

MR. HITT: Yes. Let me qualify that, because I think the situation is that the site is a health threat as it exists right now, for people who come on that site and are exposed to that waste. In other words, those concentrations as they exist at the site right now are of health concern. However, after the remediation is complete, and after we have consolidated -- if we consolidate and put it under a cap, then the material left at that site, we are saying, will not pose a health threat. And that site can be used for the intention it was set up for it to be used, and that is as an airport.

MR. HICKHAM: I caught the tail end of that; I

apologize to you. When I made the statement to you today that I would look you in the eye and make a statement, what I said to you was this: that after reviewing the data that we had, in my opinion -- and my recommendation was that we not do testing in the community. That was my statement to you. And I had promised the city planner and the mayor that I would certainly go on record with that particular statement tonight.

Again, in my opinion, based on what I have seen thus far, I cannot in all truth recommend that we do community blood testing or such.

Now, there are a couple of things that you mentioned in your first statement I thought was very important, the first being that if new information is provided, certainly -- and our agency, as I indicated in my introduction, we accept citizens' petitions. If there is new data, if there are data available that has not been reviewed, we would be most happy to do that, either through a citizens' petition, through the local medical community, through a private physician, or through a citizen himself.

So there are a number of routes that can be taken if new or existing data is available that we have not factored into our health assessment. But again, I say to you in all fairness that my statement was that based on what I have seen thus far, knowing that if it is on-site

and the sampling that has been done off-site -- if there is no route of exposure, in my opinion I don't see a need to go in and test the community. And I stand by that until such time that we have additional data that might sway us to feel like maybe we should or should not.

But again, I would be very happy to have the agency -- our scientists look at any data you might have, and certainly to have that evaluated and factored into the health assessment.

MS. MASSIGNANI: I also believe, sir, that this afternoon you admitted yourself that this is such a new field, the field of contaminants, that really, you know, it is very difficult to predict or to project things in the future.

MR. NICKHAM: I think you are absolutely right, and I did make that particular statement. It is just like toxaphene. Toxaphene -- I think it is like 177 components that make up toxaphene. And when you mix toxaphene with other chemicals -- and some chemicals by themselves -- we really don't have the science base that we know exactly what is going to fall in line. And I think that is one thing Mr. Hitt commented on earlier today, when we are trying to set the levels for cleanup at sites.

What we are giving you, folks, and giving the country, is our best scientific knowledge at the time.

That may change ten years from now. And let's hope that it does, because our knowledge base can certainly be increased in these areas.

But you are absolutely right. I did make the statement and I stand by it. We certainly don't have all the science that is necessary sometimes. But we are giving you the best scientific call that we have at that particular time.

MS. MASSIGNANI: Thank you. This is last comment that I want to make; and it is not a question, it is a statement. That, exactly because of the reason that we do not know what it is -- going to happen, hopefully absolutely nothing -- but we do not know what is going to be down the road ten, 15 or 20 years from now. And as an assistant for the public school district assistant superintendent, I know that we have close to 1500 children two blocks away from the site. The children who come to our school district remain there, in that area, for seven years. We have faculty who have been there for ten to 15 years. And in light of these statistics, I would like to go on the record asking for the Department of Public Health to come in jointly with the city, school and county governments to do periodic sample blood testing, with -- and in order of priority, city workers who are being in direct contact at the site of the contamination, residents

for the public housing, and children in our school district and especially their faculty. Thank you.

MR. HITT: Thank you.

MS. BROWNLOW: Thank you very much.

Ninfa Moncada, Crystal City Housing Authority. And thank you especially, for your help to me, and help getting the word out on this meeting; appreciate it.

MS. MONCADA: Sure thing. I concur 100 percent with Ms. Massignani's concern, and I don't think we are overreacting or being -- going to an extreme here for our concern.

As you know, I am the director of the Housing Authority. We have 116 families living right next to the site. I have some questions, because it is not real clear in my mind as to how it was determined that these families that live so close to the site and have been there for many years during, especially, the time that the dumping was going on and so on -- what kind of procedures did you use in ensuring that those families and their environment is not currently contaminated?

MR. HITT: Okay, well, it really kind of gets back to what we did, I guess, with respect to the investigation. And I will tell you what we really try to do when we go out and look at these investigations and try to define what threats are posed at a particular site.

You always concentrate on the site to start out with, to determine exactly where the contamination has gone. And that is exactly what we did with Crystal City. We took a bunch of surface borings, we took -- I mean surface samples. We took a bunch of soil samples, we took air samples, we took runoff samples -- you collect all these different samples that are primarily concentrated on the site.

If, at that point in time, you find that you have significant off-site contamination, which was not the case with Crystal City, then you may be required to go back out and say I have got a ground water problem here. I have got to put in many more monitoring wells.

And if there is a route -- again, exposure is everything. If there is a route of exposure, whereby people are actually coming into contact with it or drinking contaminated water or inhaling air that is contaminated, then you; we would be very much concerned about anybody that would live in that surrounding area, that there is a mechanism for them for route of exposure.

But again, with Crystal City, we saw no route of exposure off-site. On-site, we have got a problem. Off-site, we do not have a problem.

MS. MONCADA: So you did not do any surveys of the soil or the buildings there at the Housing Authority?

Is that correct?

MR. HITT: No. Is that correct? Did we?

MS. BROWNLOW: Martyn, you want to take that one?

MS. TURNER: My name is Martyn Turner. We did a five-foot boring near the housing development. We also did another boring in the baseball field. We found minor amounts of contaminants that may or may not be associated with the site.

We found some DDE, I believe, in the baseball field, which could be attributed to regular pest maintenance back in the old days when they used it as a pesticide.

The levels that were found were way below the 10 milligram per kilogram level seen on this map; and much, much less -- several orders of magnitude less than the 100 milligram per kilogram cleanup level recommended for the site.

MS. MONCADA: Why weren't any personal interviews done of the families there, or other groups of families in that vicinity?

MS. TURNER: I personally called -- after the last public meeting, concern was made about dead dogs on the site. And I personally called a veterinarian and asked him about dead animals found in and around the area. They could not report any deaths due to the site.

They also called a doctor. He did not report any increased incidence of illness, that he could see, that could be attributed to the site.

There were no other surveys done along those lines.

MS. MONCADA: You know that most of the doctors that are in the community right now have not been here very long. Or were you just asking about, what, the last 12 months, or what was your inquiry?

MS. TURNER: I did this almost a year and a half ago, before we went out and did the investigation; right after the public meeting that we did before we did the remedial investigation.

I am not a health specialist. I am a geologist. And I would refer that type of question to the health specialists.

DR. BEAUCHAMP: I also addressed the issue of whether or not, you know, a health study is warranted in a situation like this.

Generally, unless there has been some identified exposure route or pathway, such as one of the ones that I mentioned earlier, whether it is inhalation of dust or ingestion of, you know, contaminated materials, whether it is dust or food or something like that that somehow came in contact with the waste from the site; or, you know, direct

skin contact with one of these contaminants on the site.

If you can't demonstrate even a hypothetical sort of exposure pathway, then it is going to be -- you can almost guarantee that it is going to be non-productive to do some sort of a health survey, because if the substances can't get into the body to cause any harm in the body, then you just cannot demonstrate a problem.

Now, let me sort of relate to you a situation somewhat similar to this that took place down in Mission, which is fairly close down here, I guess; down in the Valley around McAllen. And in that situation, there was a pesticide formulation plant which had worked with DDT and lindane and a number of other pesticides; and there, too, they had been careless with pesticides and they had had some spillage around the property.

And in this situation, there were noticeable odors coming from the site, and there were -- parents in the area were concerned because of the history of the site being a pesticide formulation plant, that there may be some effect to neighborhood children.

In that case, the site was directly across the street, and I mean a very small street, so we are talking about the site property being within 50 feet to 75 feet of the surrounding property. Also across one of the streets from that site was a school bus parking lot, where buses

were kept permanently, plus they did maintenance on buses in that area. And there were school shop classes being held right directly across the street.

And there was a lot of concern about the possibility of blowing dust carrying contaminants over to the bus parking lot area.

So we went out and -- the Health Department went out and did a -- as you suggested -- a health survey, a seral survey. In other words, we went out and drew blood from children -- everywhere from small children through very old adults in the area. We obtained about a total of 80 or 90 different samples.

Some of those samples came from what we call a control neighborhood, which is a different neighborhood of similar socioeconomic status about two miles distant from the site, which would not have any possible contamination from the site.

So we did these comparisons, and measured the levels of these pesticides in people's blood from the area. And in the final analysis, even though they lived right across the street from the site, and even though children were playing out on the site -- in fact, they did play baseball on the site, and that is about as close a contact as you can get without getting down and eating the dirt -- even in those situations, we did not find any significant

elevation of these pesticides in children of the exposed neighborhood compared with children of the same age groups in the control neighborhood.

What we did see in both groups, both the control group and the "exposed" group, was that there was sort of an increase in these levels with the age of the person. And that just alludes to the fact that the pesticides like DDT and lindane, which are organic chlorine pesticides, are absorbed into the body and they are stored. And they are very fat soluble, so they are stored in body fat tissues and stay around for a long period of time and actually accumulate as -- sort of concentrated as people ingest or inhale or whatever small amounts of those pesticides over the years from food products or whatever other sources. It gradually builds up.

But we could not demonstrate any effect associated with site. I looked at it and broke the neighborhood down into those who lived immediately adjacent to it and those who lived on the streets about a block away; and I couldn't see any differences in those groups either as far as the levels of pesticides.

There were no differences in health effects, reported illnesses of any type, or birth defects or spontaneous abortions or low birth weight infants in the two different groups.

So with those results, you sort of have to decide whether or not there has been a valid exposure pathway before you go in and do a very extensive, long drawn out serial survey.

And even after you do the survey like that -- and maybe you did, say, demonstrate a slight elevated increase in pesticide levels in the blood -- that in itself does not necessarily mean that they are going to have any adverse effects associated with that.

It is really a situation where we really don't thoroughly understand what the levels mean in the body. You know, whether or not there is going to be any adverse effects associated with it.

The studies that have been done that have demonstrated cancer effect, at least for DDT and toxaphene, have been strictly in animal studies. In other words, they give very high doses of these pesticides to the animals over a very controlled period of time, usually a year or two years, and then they examine each animal in detail and look for cancers all over the body.

And some laboratory animals, you know, mice and rats, have developed cancer as a result of the exposures to these pesticides.

However, DDT has been used extensively for several decades prior to the time it was banned a few

years -- or a decade or so ago. It was used very extensively for a long period of time and applied directly to people as a 1 percent delousing powder. It was very effective killing the lice and had a very low toxic effect on the people. There was -- it had very low acute effects.

And it is practically impossible to commit suicide with DDT. I mean, you really have to ingest very large quantities for it, but usually, if you ingest a very large quantity you are going to vomit anyway, so it a sort of self-protecting mechanism.

So it is very rare that enough of this pesticide can be absorbed from the gastrointestinal tract in order to cause any acute toxic effects.

Now, no one has ever demonstrated a cancer in humans associated with DDT or toxaphene. They have demonstrated certain types of cancers in humans associated with drinking water that had levels of arsenic that were ten or more times the drinking water standards for arsenic, which is .05 milligrams per liter.

So in those situations -- there are a couple of studies have been done; one of them in Taiwan where the natural drinking water -- there is a natural contaminant from ground formations containing arsenic -- where these individuals developed elevated incidence of skin cancer and lung cancer associated with that.

So -- but for the other compounds, though, it is really -- we have no hard evidence that these compounds cause any long term effects in humans.

MS. MONCADA: Well, I think that our concern as public officials and people in responsible positions, as I feel the responsibility for those families that are there so very close to that situation -- I think besides the threat of danger, whether it is real or not, to their health -- and if it is not there, I think that probably like the people in Mission, Texas -- since you went one step further and did more extensive study, it had an appeasing effect on the families and the community and the public officials, so that years down the road they are not going to say why didn't we insist on further studies if something comes up.

And I think that that would be the benefit, if nothing else, to do a little bit more extensive study so that families in the community see that we are interested in their situation, their health situation, with surveys or questionnaires or some indication of some interest or concern by your group or the public officials in this community.

I think that, at this point, that your study shows some information that does show that the level of contamination is contained to the area. But I think that

it would certainly help and not hurt to go a step further and do something a little bit more extensive, perhaps, as Ms. Massignani suggested. And that is my statement.

DR. BEAUCHAMP: I will certainly agree with you that that often does have a very comforting effect, if it turns out that you can't measure anything in the blood. However, if you do measure something -- and I will guarantee you that if you go anywhere in the Valley and look for these pesticides in people's blood you are going to find it -- so in this situation it may not have a reassuring effect, because, you know, it is going to be there in certain levels.

We have been exposed to these pesticides for years and years, and as I say, they do accumulate in the body. And it is just something that has never been demonstrated as to whether or not these elevated levels in the body cause any adverse health effects. And there is no really good thing that you can do to get rid of this burden of pesticides in the body, once it has been built up.

So there would be nothing that we could offer as far as saying, well, go and take this pill for two months, or something like that, and it will get rid of the pesticides in your body. We just don't have anything like that that would help out.

MS. BROWNLOW: Thank you, Ninfa. We have three

more people that have indicated that they want to speak.

If anybody failed to receive a card or wishes to add themselves to the list, let us know.

In the meantime, Rudy Rodriguez from the Crystal City Independent School District.

I don't know if we can answer your air question.

MR. RODRIGUEZ: I had quite a few questions, but they have been answered by questions that came from Miss Marilu and Ninfa. Mainly, the question was when were the tests taken for the air samples?

There are times in this town, or rather around Texas, when the -- like during the winter time, it starts, the dirt -- or the humidity starts going up from the ground. I live in Highland Circle, which is a mile away from the place, and you can get a smell where you can't even breath. That -- well, your nose gets stuffy during that time. And it is only for, let's say, a month or two when it gets real bad.

I can't assure you, like saying it is the month of September, the month of October; but I know it is during that time when you can see the fog starting to come up, and you start going out and you can get that smell of pesticides. And I mean it is heavy.

MS. TURNER: Okay. We did conduct air sampling at the site on October 18, 1988 and October 30, 1988. What

they found in the air at that time were no pesticides, no herbicides. They did find some trace amounts of volatile organic compounds, which could or could not be attributed to the site because they found these compounds in both the upwind and downwind samples. Looks like it was on both occasions.

MR. RODRIGUEZ: Like I said, I am not sure it was during October, maybe November, but it is in that time.

And I agree with Marilu and Ninfa about saying we would be concerned about having the people around the area -- I have lived there for 20 years, and I have people that has lived around that area that have died. And you can't say, you know, they died due to the pesticides around here; but there is always a big question.

Is it possible that -- true, we have been hearing some of the gentlemen say there is no danger, we have done studies. But have the studies been done here in Crystal City? That is the question.

Would you consider taking samples from the people at least, maybe, the area close to that particular area? And especially now that we have all these housing projects there where people are getting more toward that area to where maybe we can be, as citizens, say, okay those people living close around there are safe. Well, let's say the ones living a little further away from there are safe.

I personally would like to say that even the water would get -- there are some times that the water, when you are getting drinking water, it gets a smell. The only thing is that sometimes, if you don't get involved in politics around here, you are not going to go to the city and complain every time you get a smell when you are drinking water; and say, well, we are having problems. You just say don't drink the water right now; it seems like we are getting a smell from the water.

But there -- for a fact you can get a drink -- when you are drinking water or you open your water faucet you do get a smell. I don't know whether the rest of the people will get it, but I do get that smell.

DR. BEAUCHAMP: What sort of smell?

MR. RODRIGUEZ: It gets a -- it is not a chlorine smell. It gets another -- let's say it gets a -- like mold. Whenever -- like for instance when you get too close where there is mold and there is water and there is mold, you get a smell of -- I don't know. I could relate to saying it is the tanks are getting too low and it is pumping out the water that is way down on the bottom of the tank. That is the only psychological thing I --

DR. BEAUCHAMP: I think you probably put your finger right on it right there. At certain times of the year where the water tank will drop down, after a long

draught, you may well be getting down into an area that has sort of a sediment in it that has a lot more odor than you ordinarily have.

I think, however, that they have adequately demonstrated that this water table is very -- you know, where you get the city water is down 900 or 1000 feet. And they have adequately demonstrated that the pesticides are very well prevented from going down there by the -- any much deeper than a foot by the very dense clay layer.

They went down 180 feet and still didn't find any water, so you know that there is no connection down to 180 feet. And you have 180 compared to one foot for these pesticides to attenuate, and you are going to be down to virtually a zero levels by the time you get down a very few feet.

MR. RODRIGUEZ: If this project comes through, more or less, would you know when it would be coming through?

MR. HITT: We talked a little bit about that today, and the limitations that we may have as far as trying to get it through before the grant -- the possibility of the grant money from the Texas Aeronautical Commission ran out. And I said at that meeting -- and I will also say it here -- we get very apprehensive when we start talking about schedules, because it is an awfully difficult

situation that we deal with, as you realize, in hazardous waste, or else we wouldn't be up here talking at length about it.

Oftentimes when you think you have got the best control of the situation something else happens whereby you miss some time. However, we are very much concerned about trying to do this as expeditiously as possible. Given that fact, the next stage -- if the preferred remedy is selected, the next stage would be one of design, as I mentioned earlier, which could take as long as -- help me, Bob, if I am wrong here -- five or six months.

And then we would be going out and procuring contracting services to actually do the cleanup, which could take another four to five months, possibly. And you are talking about three months or so to do the actual -- three or four or five months maybe to do the construction.

If everything went extremely well, we could be out there maybe next summer, but I think that is being very, very optimistic. And I wouldn't sit here and ever say that we would be out there next summer cleaning up that site. We would like to be, but I don't know if that will happen.

MR. RODRIGUEZ: My question was, due to -- I think you mentioned it would take about four months or five months to get the job done. And being a school board

member, I was hoping that if the project would be done, it would be done when the school wasn't in operation, so we wouldn't have the students or the young kids in the community around the school there, due to the blowing of the dust, to where they could be around there and get some of that pesticide.

MR. HITT: I agree totally with you. We would like very much to get it done in the summer. And Bob brought up an interesting fact today, is that it is a possibility that we could even do the cleanup at night, so that -- and by all means, I tell you the workers would much more rather be out there at night when it is cooler doing the work than during the heat of the day.

So we will definitely keep that in mind. And if there is any way, we will try to proceed with the cleanup by next summer; but it is often very difficult to do. Thank you.

MR. RODRIGUEZ: Okay. Thank you.

MS. BROWNLOW: Thank you, Mr. Rodriguez.

Henry Daly, Airport Commission. Hi, Mr. Daly.

DR. DALY: Hi. My name is Henry Daly, and I am chairman of the non-functioning airport committee. Of course, my interest is in flying, and from what I have heard here tonight, it seems that most of you have already more or less decided to go with the number three, the

consolidation, where you cover up the waste with some kind of film.

And for myself, as chairman of the -- this is my personal opinion -- I would like to see the number two option, where you would cover the entire area with an asphalt covering, because that would benefit the airport tremendously, while the other would not do anything for the airport except get rid of some of these concerns that most people are concerned about.

MR. HITT: Jim might want to address that. We did look long and hard at that one, but it has got a major limitation to it. Jim?

MR. McGUIRL: The problem that we found with the asphalt cap is a regulatory one. We -- when we cap it -- that is what is called covering something -- we are under a kind of a requirement to do it by using the two foot and the one foot, then the two foot that is on the other remedy; the number three remedy.

And so the asphalt cap is not regulatorially compliant with our laws. We preferred a -- the cap is called a RCRA cap -- two, one, two: two feet, then one foot of drainage and then two more feet of soil. And that was what we preferred out at the site, was to do a cap over the entire area; leave it in place, because then you wouldn't have the problem of digging the stuff up and moving

it. But by doing that, you would have this five-foot mound right next to your runway.

DR. DALY: Well, it seems that with the low level of toxicity that you are talking about, that an asphalt covering should be sufficient to cover all of that.

MR. McGUIRE: Oh, it definitely covers it. But it is -- the maintenance on it would be higher than the -- you would have to come back every time that asphalt cracked. You would have to have someone come back and fill it in every time.

DR. DALY: Well, the asphalt might crack; the caliche underneath would not. I presume you would put some caliche under there.

MR. NITT: We may very well do it. I think it really borders back to what the FAA was telling us about within 150 feet. We would have to add -- I don't think there is any way we could get around it -- have to add some elevation to that asphalt cap.

In other words, we couldn't just go in and make it level with the runways. So that you would have maybe an existing six inches, 12 inches -- I don't know -- if we just elected to do a capping alternative, which really doesn't comply with what our rules and regulations say -- but anyway, you would have an aboveground elevation over the existing runway. And what the FAA has told us is that

that is unacceptable.

DR. DALY: Well, of course I was just going by what the letter said. But again I would stress that I would prefer to see the paving because it would help the airport.

MR. HITT: Okay; thank you.

MS. HROWNLOW: Thank you. That will be in the record, Mr. Daly.

Last but not least, Dorothy L. Galvan, Crystal City Independent School District trustee.

MS. GALVAN: Good evening. I didn't really intend to make a statement tonight, but on leaving home tonight my son asked me where I was going. I told him I was coming and he sai, Are you going to go find out if my children are going to have four heads? So here I am. And I am very concerned, and I do have some question.. to the gentleman from the Water Commission.

I know that you are as concerned as we are here. I don't know how it works, but I know things filter underground, and the Nueces River is real, real close. What are the possibilities of this getting into our rivers?

MS. TURNER: The possibilities of it getting into your river -- you have the possibility of it infiltrating from agricultural activities in and around this community probably much more than you have the

possibility of it coming from the site.

We did find minor amounts of arsenic leaving the site at the south end at .095 milligrams per kilogram. That is a very low level. So what I would say to you is that it may be in your rivers. I don't think that this site is contributing to the contamination in the Nueces River.

MS. GALVAN: Well, some of the other concerns that I had Ms. Massignani did -- she seemed to be reading all our minds, because she has expressed very much what we are thinking. And amongst them, of course, is item three, where you refer to the aircraft or the landing, instead of the human beings, and I will take it a step further.

Our children, who are in such close proximity -- and we certainly don't resent you being here. If we are a little nervous or a little angry it is definitely not at you, it is because of the situation; and we do appreciate your being here. And I did have -- the question that Mr. Rodriguez asked, about when you do start actually doing the work; and then I will go a step further then Dr. Daly did

He prefers step two because of the landing place, and I prefer step four because it is a little bit safer, you know. And I want to know, what can you tell us, again referring back to my son that asked me that question in jest, and at first, you know -- I have been reading

about this and we have been discussing it and it was, you know, like there is a possibility. But tonight when he made that comment, I mean it really struck home. And I would like to know what ca you tell us about our children's children.

DR. DEAUCHAMP: Well, there again it comes back to the -- whether or not there has been what we would consider a real exposure pathway. And all the data we have looked at so far would indicate that there has been no mechanism that has really been in any extensive effect, whereby the pesticides from the site could get from where they are out there in the dirt, into pregnant mothers or whatever that would pass this on to their children.

So, when there really has been no defined exposure pathway, there is just no way that we can hypothesize any adverse health effects in you or your children or their children that would result from this.

MS. GALVAN: Thank you. On the blood testing, I also feel like we would be, you know, we would be more comfortable in the knowledge that something more was done.

And some time ago there used to be a little league field out in that area. And besides the little league field, like our schools, like we have told you before and I know you are aware of -- when our children were little ones and were out there, they rolled in the

dirt and did everything else out there. So therefore the possibility of this getting into their system is quite strong that it could happen.

And therefore, I would feel more comfortable, and I know our community would feel more comfortable, if more precautions were taken; or at least an effort to see if there isn't something -- not just in the close proximity. Because some of these kids live on the other side of town but the went to school over here and they were there.

And I would also like to know who is -- you know, whose fault it is is beside the point. What is the point is who is ultimately responsible, who will assume the responsibility if there are adverse consequences in not choosing the right option, or if not enough is done -- like the blood testing -- further or down the line. If not enough has been done, who assumes that responsibility?

MR. NITT: I would like to say we can pass the buck, to tell you the truth, but we probably can't, with respect to that. I think there are safeguards built into the system, though, whereby that will not happen, in the fact that we just don't walk away from these sites after we get through. The state has to assure us that they will undertake operation and maintenance of any facility that we leave behind.

And that will be the case with Crystal City.

also; is that there will be a long period of operation and maintenance that will undergo that will do it.

But by coming to you with this recommended alternative, I guess we are sticking our neck out in saying to you that we think this is a safe remedy. And if it is not, then I guess we were just wrong and we will have to make recompense later on. But we think it is a safe remedy.

MS. GALVAN: Well, is there a possibility that you will do the blood testing, or whatever testing is necessary, because, as your ancestors and mine have said in the past, an ounce of prevention is worth a pound of cure. So I would like to have a little assurance that you will give it some consideration, and that more will be done. Thank you.

MS. BROWNLOW: Thank you very much. Carl, you want to answer?

MR. NICKHAM: I think in light of the public interest that we have had today, earlier and certainly tonight, your comments while they are on record will certainly be taken to heart by myself and will be carried back to our scientists at the Center; certainly will be factored into our health assessment.

Again, I ask the attendees here tonight and certainly any member of the medical community that might

step forward that has any data or any type of evaluation that has been made to assist us in this endeavor. We would certainly -- we have not shut the door.

And as I said earlier, what I have looked at at this point, in my opinion, I cannot in all good conscience recommend a health study. But if there is a medical finding in the community that would warrent that, then certainly we can open that option as well. So I leave you with this, that the door is not slammed shut. But I ask for your assistance with this as well.

MS. BROWNLOW: Thank you, Carl.

Lady in the back, I will get your card later, but if you come to the microphone and say your name, please. Thank you.

MS. LOPEZ: My name is Polly Lopez, and I work for the Center Salud here in town. I am also a school board member and I also live very close to the area. So, as you can see, I am very interested in what is going here tonight.

The other people that spoke before me pretty well asked some of the questions that I had in mind. But there were a few that I would like to address again, and maybe I would like to hear some feedback.

First, I would like to know how long can you check and find these traces in someone's blood: for how

long afterwards from the time of exposure?

DR. BEAUCHAMP: Well, for DDT, DDT accumulates in the body so the exposures that you have, you know, now will stay around for a considerable period of time. And exposures you get tomorrow will also add on top of that. And we found in the study that we did down in Mission that virtually everyone, whether they were in a distant control neighborhood or in the neighborhood that was right across the street from the pesticide plant, virtually everybody had levels that would indicate that they increased with time. So that a 70-year-old would be apt to have maybe ten times the level of a 2-year-old.

MS. LOPEZ: I understand that. But I guess my real concern stems from the fact that years back there used to be about four or five houses that were situated right next to the runway. And these houses were occupied with families that are still living in our community. And just because I know some of these people, I know that they have had physical problems.

And somehow I am sitting here wondering how much of those physical problems were related to the fact that they lived next to the runway. And they were there at the time there was crop dusting going on, because I remember doing home visits and being covered with dust.

DR. BEAUCHAMP: Well, we would certainly be very

happy to look at any information that you can provide as regards to the individuals, the types of medical problems that they had, and make some evaluation as to whether or not we think there is any possibility that there could be a relation between the pesticides on the site and those physical problems.

MS. LOPEZ: I realize that money is always a limitation as to what are the options that you chose to put into effect in a certain community. And I take deep offense, also, that the statement said that it is hazardous to the landing aircraft but not to us. I would like that for the record, that I do not like that at all.

Also, there is something else that I would like to ask is -- once you alluded to the question a little bit, but I don't think you gave a time as to when you would do this. Once the capping is in place and you say that you check this, is it periodic checks? Is it once a year that you will come out to make sure that there is no leakage? Is it every two years, every three years? And then, really, for how long are you going to come out here to check these?

Because it is understood that the capping is going to protect against rainfall infiltration and rainfall erosion, but for how many years? Hopefully I am not going to leave Crystal City, and I am planning on staying here

for the next 20 years. And I am wondering, is this going to protect us 20 years from now?

DR. BEAUCHAMP: I will refer that question either to the Water Commission or the EPA. They are more directly responsible for doing follow-up.

MR. HITT: It varies on particular sites as far as when the actual inspection will occur. And that is -- we have got to determine that through an operations and maintenance plan once we have got the design and the remedial action complete. But let me say what we have done in the past may give you an idea of what we may try to do at Crystal City.

Basically, it is fairly intensive at the front end of it, because -- or, right after the remedial action, because we want to make sure that the action is performing adequately. And so we will have probably some monitor wells around it again, even though we didn't detect any ground water. We will also be taking any runoff samples or something like that. Those are possibilities.

But after that, and the EPA as far as funding is responsible for one year of O&M, and then the state has to assure us -- and in most instances that lasts for 10 years -- they have to assure us they will take over that operation and maintenance. So you are looking at a long term commitment from the state, for long term operation and

maintenance.

I don't know, Bob, give me a -- maybe quarterly, every semi-year -- I don't know, as far as -- but I would say something on that level.

MR. CHAPIN: As Stan said, we would have to come up with an operations and maintenance plan as part of the design work. At the front end, as Stan said, we would probably want to inspect the site on a quarterly basis -- every three, four months -- and then slack off as we are sure that the remedy is working.

As I mentioned earlier this afternoon, one possibility is that the state could contract with the city to provide the maintenance for the facility: either maintaining the cap or the grass, and make sure the grass is cut and watered, or maintaining the fence and the signs and that kind of thing. So that there would be somebody out there on a regular basis, and then somebody from the state may come down only once a year under a circumstance like that.

But we would be assuring that for the next 30 years we would have a presence there in one form or another.

MS. BROWNLOW: Thanks, Bob.

MS. LOPEZ: I guess this question is also for the gentleman from the Water Commission. You said that you took some samples when you first started testing the

waters, and I am wondering where you took the samples from?

MS. TURNER: We took ground water samples from your wells in Crystal City that supplied the public drinking water. We took two sets of samples from the Rossenbeck Well, the Airport Well, and the West Kinney Well.

MS. LOPEZ: Were these different from what the Water Commission did? Those are the same?

MS. BROWNLOW: She is with the Water Commission.

MS. LOPEZ: Okay. The reason I was asking this is because, like Mr. Rodriguez said, sometimes our water does have a very strong odor to it. And it is not a fluoride type of odor. And because I wear white uniforms, I am very aware that it stains my uniforms yellow. I am very aware of it. And if it drips on my white uniforms, they need to be redone a few times because the stain won't come out.

MS. TURNER: I cannot answer that question. I don't know what it could be that could be causing your uniforms to be stained.

MS. LOPEZ: Well, there was just an observation that I made while the conversation was going on.

VOICE: And it is not a rusty sort of color is it; brown?

MS. BROWNLOW: Do you know --

MR. CARR: May I make a comment while she is on

that point?

MS. BROWNLOW: Sure, if it is all right with her; sure.

MS. LOPEZ: That is fine with me.

MR. CARR: Are the wells that we have in Crystal City, are they water lubricated or oil lubricated? And is an oil lubricated pump permissible for a town to have?

MS. BROWNLOW: And what is your name, sir?

MR. CARR: Charles Carr.

MS. BROWNLOW: Thank you, Mr. Carr.

MS. TURNER: The city would answer that question.

MS. BROWNLOW: It had to do with whether the wells were water lubricated or oil lubricated, the indication being --

MR. CARR: That if they are oil lubricated --

MS. BROWNLOW: It could be oil?

MR. CARR: -- it could be oil.

MS. BROWNLOW: Okay.

MR. CARR: And the health man could answer that, if oil lubricated pumps are acceptable for a community to have.

MAYOR MATA: Probably the answer is that we have some rust in the pipes, and sometimes you use fire hydrants because you have fire in the vicinity or the fire hoses are being cleaned out. An amount of sediment will go through

the pipes, because some of my T-shirts that were white aren't white no more, probably because of that. But I don't think it is because of contamination.

MS. BROWNLOW: Thank you, Mr. Mayor.

MS. LOPEZ: Thank you very much. I think that covers --

MS. BROWNLOW: Thank you. Is there anyone else who has a comment or a question?

Ms. Massignani.

MS. MASSIGNANI: I don't know if you ladies and gentlemen are acquainted with the Toxic Waste and Race in the United States study. It is a 1987 study from the Commission for Racial Justice, from the United Church of Christ.

And I would like to cite a portion of the study that addresses the topic of toxic waste and race, indicating that the burden of toxic waste falls most heavily on minority low-income communities and that, because those communities are often unable to assemble professional expertise to help evaluate the recommended treatment, they often have to settle for the least expensive and less thorough plan for treatment.

In looking over the price tag for the recommendation that your body has offered tonight to our community, the cheapest solution, save the do-nothing

plan -- we wonder if you are not on that situation.

Muchas gracias y buenas noches.

MS. BROWNLOW: Thank you, Ms. Massignani. There have been several reports like that, and it will be a note in the record that you have referred to it, and thank you very much for bringing it to our attention. Do you have an extra copy of that? Why don't you let us have one to take back. Thank you.

Bob?

MR. CHAPIN: I would like to make one point in reference to that. We have sites all over the state; some of them are in middle-class neighborhoods; some of them are in poorer neighborhoods. As far as the Water Commission is concerned, we go through the same process to reach the decision for all the sites. And we have treated this site absolutely no differently than we have treated any other site.

For your information, there is a new program in the new law that EPA is still in the process of putting into effect, that would give technical assistance grants to community groups to hire a consultant or expert to do their own independent evaluation of the government's reports.

Now, the rules and regulations as to how to get those grants are not yet in place; the EPA is still working on those. But the law did mandate that communities which

are concerned can be eligible for up to $50,000 for technical assistance to do their own independent evaluations. The time frames are something like six months to a year, I think, until the --

MS. BROWNLOW: We have just published a -- believe it or not; you will love this -- a proposed interim final rule. And then we are going to have an interim final rule. And then we are going to look at that for a year and have a final rule.

So I wish I could -- thank you, Bob, for bringing it up -- I really wish I could be optimistic and say to you that it looks like this community would be eligible, because it is difficult to assess. But I suspect that you are going to have your Crystal City airport situation completely solved --

MR. CHAPIN: That would not preclude them from doing that anyway.

MS. BROWNLOW: Absolutely not. But as far as $50,000, we will make sure that when the rule making is finished -- and it is due out in November, was the last that I heard -- that you know about it in case you all do want to apply. Probably at the stage that you will be, the whole 50,000 wouldn't be available: that is one of the things up in the air. But we will sure let you know.

MR. RODRIGUEZ: Just in case, who is the person

there to be contacted?

MS. BROWNLOW: Moi.

MR. RODRIGUEZ: Okay, thank you.

MS. BROWNLOW: You are welcome. And thank you for bringing that up. Anyone else?

Yes.

VOICE: I have a question I failed to ask a moment ago.

MS. BROWNLOW: Would you mind terribly coming to the microphone so that we can capture it for the record?

VOICE: I will make my voice carry.

MS. BROWNLOW: All right; fine.

VOICE: Is there a ceiling on the amount of money that could be allowed for our problem here, from your agency?

MS. BROWNLOW: No.

MR. HITT: No. There is no ceiling.

VOICE: What criteria is used in determining how much, or what option? Ideally, we would like this option -- which is what, option seven, eight --

MS. BROWNLOW: Our best is --

VOICE: -- is very expensive.

MR. HITT: Well, we really don't think it is the best option, to tell you the truth. Because we would have recommended that option to you, had we thought it was the

best. Just because you associate money -- more money with the remedy doesn't necessarily make it the best remedy. You have got to go and look at other factors besides what the dollars are there to tell you what is the best remedy.

I would tell you, the things that we look at in selecting a remedy is, first, they must protect public health and the environment; second, we must follow all applicable and appropriate or relevant regulations; third, it must be cost effective. And cost effective implies not only cost, but implies the technical practicability of implying that remedy at that site.

So there are other factors other than just cost, and cost is one of the least preferred under the new Superfund bill of all things. But because of the situation, the site conditions that we -- I am sorry. The fourth thing is that it must be a permanent-type remedy. They are looking for permanents.

One of the least preferred things - and one of the things that you saw there as far as cost-wise -- was off-site disposal. Under the new Superfund bill, off-site disposal is very, very much discouraged, because the problem with hazardous waste in this country as it exists today is because people didn't treat their waste adequately on-site and elected to not treat it at all or treat it somewhere or take it somewhere else and say, Out of sight,

out of mind.

VOICE: Well, I appreciate that. I would like also to know -- I mean, I agree with out of sight, out of mind. But I would also like to know who makes that final decision as to --

MR. HITT: The agency itself makes that final decision. And that is why we are here tonight with the proposed remedy, taking it to the public. Once we receive all public comment, then we go back and we will brief the necessary folks, that being the regional administrator of EPA will be the person who decides whether this remedy gets enacted or not.

VOICE: Again, I want to say thank you for being here: we do appreciate it.

MR. HITT: Thank you: I appreciate it.

MS. BROWNLOW: Thank you. Have we missed anyone?

Mayor?

MAYOR MATA: One final comment.

MS. BROWNLOW: Please.

MAYOR MATA: I also want to thank you for coming over. I also want to add that no action has already cost 8.6 million. The recommended action is going to cost us 1.6: this no action has already cost us about one-third.

The major issue here is making our community

safe. I think that a couple thousand dollars more in making us mentally healthy also, by securing us additionally by saying okay, we are going to go a step further -- I think that everybody has made a legitimate -- or voiced a legitimate concern here. And I would ask -- no, let me go a little bit further -- I would demand that you all try to make the community happy mentally by saying, Okey, we will go a step further by trying to satisfy you.

And I am sure you will try to accomplish that. Thank you.

MS. BROWNLOW: Thank you, Mr. Mayor. And again we appreciate your hospitality having us here.

Anyone else?

(No response.)

Call it a day?

MR. HITT: Thank you for attending.

MS. BROWNLOW: Thank you very much.

(Whereupon, at 9:05 p.m., the hearing was concluded.)

REPORTER'S CERTIFICATE

DOCKET NUMBER:

CASE TITLE: Crystal City Airport Superfund Site

HEARING DATE: August 20, 1987

LOCATION: Crystal City, Texas

I hereby certify that the proceedings and evidence herein are contained fully and accurately on the tapes and notes reported by me at the hearing in the above case before the United States Environmental Protection Agency and that this is a true and correct transcript of the same.

Date: September 8, 1987

W Palmer

Official Reporter
on the record reporting
9101-B West Terrace Dr.
Austin, Texas 78731