ALBUQUERQUE BERNALILLO COUNTY
WATER UTILITY AUTHORITY
WEDNESDAY, JUNE 20, 2012

ALBUQUERQUE BERNALILLO COUNTY GOVERNMENT CENTER
ONE CIVIC PLAZA, NW
ALBUQUERQUE, NM 87102

Before: Kelli A. Gallegos
PAUL BACA PROFESSIONAL COURT REPORTERS
500 Fourth Street, NW, Suite 105
Albuquerque, New Mexico 87102

A P P E A R A N C E S

COUNCILLOR KEN SANCHEZ, Chairman

COMMISSIONER WAYNE A. JOHNSON, Vice Chairman

MAYOR RICHARD BERRY, Member (Excused)

COUNCILLOR REY GARDUNO, Member

COMMISSIONER ART DE LA CRUZ, Member

COUNCILLOR TRUDY E. JONES, Member

COMMISSION MAGGIE HART STEBBINS, Member

TRUSTEE PABLO RAEL, Ex-officio Member

MR. ROB PERRY, Admin. Officer, Alternate Member

CHAIRMAN SANCHEZ: I will call the June 20, 2012 meeting of the Albuquerque Bernalillo County Water Utility Authority to order. Let the record reflect that all members are present. Council President Jones will be a few minutes late.

We will begin with a silent invocation, followed by the Pledge of Allegiance, which will be lead by Trustee Rael.

(Whereupon, there was a moment of silence.)

(Whereupon, the Pledge of Allegiance was led by Trustee Pablo Rael.)

CHAIRMAN SANCHEZ: The next item on the agenda is the approval of the minutes. I make a motion to approve the May 23rd, 2012, minutes.

COMMISSIONER DE LA CRUZ: Second.

CHAIRMAN SANCHEZ: We have a motion, and a second by Commissioner De La Cruz.

Councillor Garduno.

COUNCILLOR GARDUNO: In reading through the minutes, I found that on Page 35, Line 6, there was a response by Executive Director Mark Sanchez to a question that was asked as to whether or not the water authority was doing anything, or something like that. And I think Mr. Sanchez thought that maybe I had asked that question. And in no way did I ask that question

and no way did I mean to impugn that the water authority has not done anything and would like to correct that. The report was correct; it's just the intent I think was wrong. And I certainly don't think that the water authority nor Mr. Sanchez has sat on his hands, and I wanted to correct that.

CHAIRMAN SANCHEZ: Okay. That has been -- the intent will be corrected in the motion. All those in favor, signify by saying yes.

ALL MEMBERS: Yes.

CHAIRMAN SANCHEZ: Opposed, no?

That carries unanimously.

(7-0 vote. Agenda Item 3 approved.)

CHAIRMAN SANCHEZ: We have no proclamations and awards this evening.

The next item on the agenda is public comment.

Ms. Jenkins, how many do we have signed up?

MS. JENKINS: We have 15.

CHAIRMAN SANCHEZ: Once your name has been called, you will be given two minutes. I shall call two names at a time. Once your name has been called, please come to the front and be prepared to speak.

Ms. Jenkins, would you please announce the first speaker.

MS. JENKINS: Max McCauley followed by Dwight Peterson (sic).

CHAIRMAN SANCHEZ: Mr. McCauley, welcome. Go ahead and proceed. Thank you.

MR. MCCAULEY: I just want to comment that I live out by the base and I've been a resident of a condo community there for about seven years now. It will be seven years after this coming 4th of July.

And I attended a couple meetings about this aviation fuel leak problem out there at the base. And one of the things than irritates me, as I do a morning walk, is the water waste that -- goes on in this town. There are lawns being watered -- as far as I'm concerned, I don't know understand why, since we live in a desert area, why we even have lawns. Green lawns are wasting our water. Because as the population of this area increases and the polluted water increases as well, you're going to run out of water for people to eat, drink and bake with.

So I'd like to see some kind of conservation measures enacted, where there's multi-family housing places and office parks and places like that that have green lawns, et cetera, are mandated to get rid of all of that and change over to ground cover that doesn't need any watering. I think over a period of time,

that's going to make a difference.

CHAIRMAN SANCHEZ: Thank you.

MS. JENKINS: Dwight Peterson (sic), followed by Willard Hunter.

CHAIRMAN SANCHEZ: Welcome, Mr. Peterson.

MR. PATTERSON: Thank you. That's good. I wanted to thank you for the opportunity to talk with you this evening, all the board members. And it's good to see Rey and Commissioner Stebbins here. We met briefly before.

My name is Dwight Patterson. I'm the president of Xitech Instruments, which is an environment manufacturing firm here in New Mexico. David McCoy of Citizen Action has asked me to come this evening in his stead because he was pulled out of town on family business. David has asked me to share with the board tonight three recent important developments regarding the Kirtland jet fuel spill.

The first development that I'll brief here has to do with a public meeting that occurred last week where the Air Force had a public meeting with regard to the jet fuel spill, and David had attended that. And the -- but he had just passed on to me an important piece of information he wanted me to share with you.

And that was that he had gotten up and asked the members of -- the people holding the meeting, which was the Air Force, if they believed that the EDB contamination plume would not or never impact the Ridgecrest wells. And the -- my understanding is that the impact would be, yes, it's going to impact the wells someday. It didn't talk about time.

The second one was was that David and I recently were contacted by CDC, which is the center for disease control prevention in Atlanta, to discuss and they were trying better understand what was going on with the spill.

The third development was in the Albuquerque Journal today, which talked about the idea of water containment.

And if I may just give this last point, and that was that they had talked about a possibility considering shutting down the Ridgecrest wells. What I'm asking you to consider is not to have that happen. We do not want the Ridgecrest wells shut down, because if we do shut them down --

CHAIRMAN SANCHEZ: Sir, thank you. You've used you extended time. Your time has expired.

MR. PATTERSON: Oh, okay. Thank you.

CHAIRMAN SANCHEZ: Thank you.

MS. JENKINS: Willard Hunter, followed by Janet Greenwald.

CHAIRMAN SANCHEZ: Welcome, Mr. Hunter.

MR. HUNTER: Okay, good.

Thank you. I wanted to show you this graphic to give you a little bit of an idea. Okay. The fuel spill 24 million gallons over roughly 40 years is about 1640 gallons a day. That represents about one 29,000-gallon tank which this fuel would come in, roughly one every 18 days. The Air Force is talking about three forms of -- there's three areas of problems here. One is the vapor in the soil. The second is the liquid fuel on the top of the aquifer. The liquid fuel has kerosene, benzine, tolulene, xylene, those kind on chemicals. The aquifer has ethylene dibromide and other additives from the fuel.

Right now the only thing that the Air Forces is talking about in terms of remediation is soil vapor extraction. They have nothing serious about the liquid fuel and they have nothing series proposed for the EDB. And this is just a serious problem. The Air Force talks about vapor -- soil vapor extraction and they've got to do more.

I mean, the Air Force says, "This is our problem." They say two things. One is "This is our

problem," and the second, "Trust us." They've said that for 15 years and they're still coming up with proposals. This body needs to do something.

Thank you.

CHAIRMAN SANCHEZ: Thank you.

MS. JENKINS: January Greenwald, followed by Judy Powell.

CHAIRMAN SANCHEZ: Again, once your name has been called, could you please come to the front and be prepared to speak.

MS. GREENWALD: Hi. I'm Janet Greenwald. I'm co-coordinator of citizens for alternatives to radioactive dumping, a member of AVAT and also a member of a group that was formed this year in Albuquerque called Our Endangered Aquifer Working Group. This group's focus is contamination from Kirtland Air Force Base and Sandia National Laboratories.

We believe that the nuclear age is fading into the age of water. And that water will become more preeminent in our thoughts and our actions. What we would like from this body is a very proactive attitude toward protecting the aquifer. We all know about the Kirtland spill, but there's also a spill from Tijeras Arroyo site at Sandia National Labs

that's only a quarter mile, full of carcinogens -- that's only a quarter mile now from the Eubank well field. So our aquifer is really under siege.

And I just want to -- I know each person on this board is very conscientious. I want you each to think carefully about how you can protect this aquifer and the population. Throughout the United States now, community groups, city groups, county groups are a taking proactive stance as far as protecting water is concerned, because the EPA is behind in their regs.

Thank you very much our attention.

CHAIRMAN SANCHEZ: Thank you, Ms. Greenwald.

MS. JENKINS: Judy Powell, followed by John Holley.

MS. POWELL: Thank you so much for this opportunity and for your work. There's a new resolution by Rey Garduno for consideration that would -- in which this board would actively approach Kirtland Air Force and deal with them, because it's our city and it's our water. And I would like to say that actions speak louder than words.

Kirtland and to some extent Sandia have been talking since the last century and the actions haven't be there. Cleaning up fumes isn't getting to the point. And monitoring wells that are in the wrong

place isn't getting to the point.

So I would appreciate if you would defend us citizens and require the actions behind the words. Thank you so much.

CHAIRMAN SANCHEZ: Thank you, Judy.

MS. JENKINS: John Holley followed by Tom Valdez.

MR. HOLLEY: Thank you very much for allowing me to make a couple of remarks. I'm John Holley. I'm an emeritus senior environmental geologist with the Office of State Geologist at New Mexico Tech, and I'm presently a senior hydrogeologist with the State Water Resources Research Institute, also a consulting geologist here.

This is not to point any fingers or anything. There is a very robust model of the aquifer system that was actually developed at the -- by the then water Albuquerque Public Works Department, Bob Gurule, Norm Cowan, John Stomp, through the years. And this is public a document available. It's been published since 1968. I personally was on site when Ridgecrest 5 was being drilled, were geologists John Schumacher & Associates, and when Kirtland Air Force Base 16 was being drilled.

And so there is a robust, like I say,

scientific model that in the plume activity as verified that model. And we're out there to offer public assistance pro bono if anybody ever asked for it.

CHAIRMAN SANCHEZ: Councillor Garduno.

Mr. Holley, Councillor Garduno would like to ask you a question.

COUNCILLOR GARDUNO: Mr. Holley, am I to understand that you think we have a good enough model that we can go off of without having to characterize and recharacterize the aquifer as it exists.

MR. HOLLEY: Basically yes.

COUNCILLOR GARDUNO: And so from that model --

MR. HOLLEY: But that doesn't mean we don't have to do a lot of work to characterize the actual area of the plume and that thing. Okay. Sorry.

COUNCILLOR GARDUNO: Well, that's all right. No. And I was just going to thank you for offering your services. I'm sure that there are many people who have different information, other information and we'd love to have your information. So if I could ask staff to contact you and if you would help us --

MR. HOLLEY: Well, this is -- I'm onboard with presently with John Stomp and his staff and with various private sectors, the ED, and they know where

the can find me.

COUNCILLOR GARDUNO: Wonderful. Thank you.

MR. HOLLEY: I live here, about two blocks north of your house.

CHAIRMAN SANCHEZ: Next speaker.

MS. JENKINS: Tom Valdez, followed by Reina Juarez.

CHAIRMAN SANCHEZ: Welcome, Mr. Valdez.

MR. VALDEZ: Thank you. Good evening, Commissioners. I live in the South San Pedro Neighborhood. I am a member of the South San Pedro Neighborhood Association. My concern, is the air force doing everything possible. In my opinion, no. The SVE, soil vapor extraction, is okay for the liquid plume, but the EDB is not a vapor or a liquid. Hoping some of it comes up with the vapor extraction is okay, but the risks that EDB can cause are greater.

The Air Force found this spill in 1997. Here we are 15 years later, still trying to fix this. In the SVE process, what is the time frame, 15, 25 years from now to be complete?

My biggest concern is EDB, a carcinogen that can cause cancer when taken in higher level than the EPA standards. Other possibilities, cause liver, kidney, stomach damage, reproductive system damage,

can even cause death in higher concentrations.

The EPA standard for EDB is 0.00005 milligrams per liter, almost zero. And I'll be quoting from the EPA website. EPA has set the level of protection based on the best available science to prevent potential health problems. The EPA has set an enforceable regulation for ethylene dibromide called a maximum contaminant level at what I just mentioned.

MCLs are set as close to the health goals as possible, considering cost benefits and the ability of public water systems to detect and remove contaminants using suitable treatment technologies.

EDB is released during the use, storage and transport of leaded gasoline. When soil and climate conditions are favorable, EDB may get into drinking water by runoff into surface water or by leaching into groundwater. When routine monitoring indicates that ethylene dibromide levels are above the MCL. Your supplier must take steps to reduce the amount of ethylene dibromide that is below the level.

CHAIRMAN SANCHEZ: Mr. Valdez, your time is expired. Thank you very much.

MR. VALDEZ: Okay. Thank you.

MS. JENKINS: Reina Juarez, followed by Marion Jordan.

MS. JUAREZ: Good evening. My name is Reina Juarez, and I am the president of South San Pedro Neighborhood Association. And forgive me, I get really nervous standing here talking to you guys. But I'm here, and I'm here because I had want to educate myself. I want to start doing what I have to do to educate myself and my community so that we can better advocate and help those of you who are trying to help deal with this problem.

Because I'm becoming more and more concerned. I go to the Kirtland meetings and I'm get increasingly worried about their attitude towards the problems that they've created. I hear -- like the last meeting that we went to, the main guy gets up and he says, "Well, I don't really care" -- you know, I care, I'm like dramatic, but, you know, we basically says, "I don't care how many gallons is down there." Because the question was asked, well, how much is there. Eight million to 24 million gallons; that's a huge disparity. And so he says, "Well, I don't really care. What I care is what's in there."

Well, to me, I'm not scientist, but logically, you know, 8 million gallons is going to contaminate a large area, but 24 million gallons, that extends the size of the plume. So it's seems to me

that they should care. You know, it's just logic.

And then one of the advisory board members at this other meeting, the citizen advisory board, the guy gets up and says, "Well, it's not that important to me because I'm going to be dead in a couple years." And it's like, you know what, what about the legacy that we're leaving to our children. The way I was raised, you're supposed to be concerned and the seven generations to come and what we're doing to our earth.

And so this nonchalant kind of attitude that I'm beginning to hear more and more is just very disturbing to me. And so I want to support -- I don't know if we're going to be around, but I want to support the resolution that Rey is putting forward.

And I want to ask also that you ask the Kirtland people to put monitoring wells closer to Ridgecrest well. They gave us -- they really didn't give us a reason why, they just said, "Oh, we're putting it here, and, you know, we're kind of chasing the plume to determine how far it extends."

So thank you.

CHAIRMAN SANCHEZ: Ms. Juarez, thank you for coming down, and you did well.

MS. JENKINS: Marion Jordan, followed Floy Baucet (sic).

MS. JORDAN: My name is Marion Jordan and I'm the president of Elder Homestead Neighborhood Association, and also the treasurer for District 6 coalition.

I'm getting e-mails and phone calls every day from people that very worried, very concerned about the fuel spill. And we go to the meetings and we hear the same thing over and over, and usually, it's in technical terms. We'd like to have something that we can understand, that we -- so we'll know what's being done and when it's going to be done.

And I also would like to commend Rey Garduno for his work.

CHAIRMAN SANCHEZ: Thank you, Ms. Jordan.

Next speaker.

MS. JENKINS: Floy Baucet, followed by Leslie Weinstock.

Last name is Baucet, B-a-u-c-e-t (sic).

CHAIRMAN SANCHEZ: Next speaker.

MS. JENKINS: Leslie Weinstock, followed by Elaine Hebbard.

MS. WEINSTOCK: Hi. My name is Leslie Weinstock. I'm the coordinator of Aqua es Vida Action Team, and I'm like to ditto what Janet Greenwald said, and several other speakers, and support Councillor

Garduno's resolution and ask you and urge you to be more proactive, not only about the jet fuel spill but for the Sandia contamination plumes.

And also to bring up another issue that hasn't been brought up yet tonight, the aquifer storage and recovery project. And there are questions about the cost benefit, and since the water authority is great debt right now and they are critical infrastructure repairs that are needed, I would like to ask you to reconsider this project and put the money towards the critical infrastructure repairs. And perhaps this project is not as significant and maybe even frivolous compared to the critical infrastructure repairs.

There's also the issue of potential contamination of the aquifer by injecting treated river water in to the aquifer, since there are many outdated standards and less than 1 percent of the industrial chemicals are regulated by the EPA. So I just wanted to add that issue and reiterate what other speakers have said, to ask you to be proactive to protect our aquifer and to add the Sandia contamination plumes to the jet fuel spill for consideration and proactive work.

CHAIRMAN SANCHEZ: Thanks, Leslie.

Next speaker.

MS. JENKINS: Elaine Hebbard followed by Floy Barrett.

MS. HEBBARD: Good evening. My name is Elaine Hebbard. I have three comments. One is with regard to the rate increases on the agenda tonight. My fear is that they may not be enough. They only deal with closing the annual gap between the renewal spending and the infrastructure needs, and that gap right now is 35 million. So every year, in 3 million increments out to 2026, that will be closed. That doesn't deal with the current infrastructure backlog of 355 million. What happens when more bonds are perhaps needed to be purchased in 2020, 2021. As the budget says, they are not on that slide that you will be presented later.

What about if water conservation reduces revenues substantially? What about climate variation and how is that going to be built into the budget? So I'm afraid that you might be revisiting this issue faster than you might otherwise think to be.

My second comment is regarding the computer version of the water budget, and I would requests that it be placed on the website, along with current and updated data for water quantity and water quality.

Policy M of the water resources management strategy says that: An informed public contributes to the successful implementation of water resources management solution. Is it the public that defines the values of the region upon which the policies are based.

So such a water budget could be used to help track the plumes and help people understand what's happening. It could be used for water conservation reductions and seeing how those might be implemented. It might be used for rate increases.

My third -- and also for looking at climate variation, my third one, very quickly, is that I would ask that the water utility have some sort of mechanism to get involved when actions such as paving over public lands or currently farmlands. And I'm thinking right now of a -- that's it, isn't it?

CHAIRMAN SANCHEZ: That's it, Elaine. Thank you very much.

MS. JENKINS: Floy Barrett.

CHAIRMAN SANCHEZ: Welcome, Ms. Barrett.

MS. BARRETT: My name is Floy Barrett and I just want to support Rey Garduno's opposition to take care of our water. Thank you.

CHAIRMAN SANCHEZ: Thank you very much. I've

got one individual that his hand up. Go ahead and come to the podium and state your name for the record, please. Welcome.

MR. CARTER: My name a Roland Carter. I'm retired Air Force. And I came here to Kirtland in 1954. I retired from the Air Force. And then retired in '73 from the Air Force, and I keep hearing all this talk about all this contamination since 1950. And I was stationed here till 1972, when I retired from Civil Service, and right here at Kirtland, same spot.

We never had no contamination till now, and I never -- I got interested till somebody said that Kirtland was at fault for all this contamination. And I'd like to get into some of these meeting when they go to the storage section and when they restore that deal where the deal was broken, the lines were broken. We didn't have none of that here since -- in 1973 when I retired. Those weren't broken. I was here.

And I'd like to hear more information, get involved in it, now that we can. And that water that's contaminated and all that, like she said about cement, they won't be able to cement that till it's cleared, period, everything cleared out before they do anything to the water.

CHAIRMAN SANCHEZ: Well, thank you for coming

down, Mr. Carter, and for your service to this country. Appreciate your time.

That concludes our public comments. We will be move on to announcements and communications. The next scheduled meeting is August 22nd of 2012 at 5:00 p.m. in the Vincent E. Griego Chambers.

The next item on the agenda is introductions. And it's the first read of legislation. It's WUR-12-13, authorizing and agreement with the Kirtland Air Force Base for water protection.

And, Commissioner De La Cruz.

COMMISSIONER DE LA CRUZ: Thank you, Mr. Chairman. I will first read the resolution for introduction -- introduction of the resolution, and then I will follow with come comments that I'd like to make in relation to why I think this particular resolution is important.

This resolution authorizing an agreement with the Kirtland Air Force Base for contingency plan coordination.

Whereas, the Albuquerque Bernalillo County Water Utility Authority was established to provide safe and sustainable water supply for the Albuquerque metropolitan area; and

Whereas, the water authority has worked diligently to conserve water usage and invested more than 500 million in the drinking water project to preserve and protect the aquifer and the regional water supply; and

Whereas, the Kirtland Air Force Base, KAFB, jet fuel plum represents a significant threat and may be the largest plume of this type in the history of the United States; and

Whereas, the jet fuel plume has and continues to migrate from the source towards existing water supply wells; and

Whereas, KAFB and water authority must cooperate to protect the water supply in conjunction with the New Mexico Environment Department; and

Whereas, KAFB is investigating and actively remediating a fuel spill originating from the base's former bulk fuel facility, which has entered the subsurface soil and aquifer below both the base and the City of Albuquerque; and

Whereas, the water authority has two drinking water production well fields within a mile of the currently known extent of the fuel plume; and

Whereas, the water authority, KAFB and the New Mexico Environment Department have been working

cooperatively and productively towards ensuring that the drinking water supply for the City of Albuquerque and Bernalillo County is safe for consumption; and

Whereas, the U.S. Air Force has pledged to fund contingency projects in the event a water well or wells are impacted by the fuel plume; and

Whereas, a water authority and KAFB have executed an existing memorandum of agreement providing the water authority the provision to receive reimbursements for costs related to additional well sampling, related to the KAFB bulk fuel facility spill.

Be it resolved by the water authority, Section 1, water authority will revise the memorandum of agreement with KAFB to include activities related to monitoring, contingency planning and implementation in the event that a water authority production well or wells are affected by the KAFB bulk fuel facility spill.

Section 2, water authority will work with KAFB on the placement of additional monitoring wells to assist with the protection of the dissolve phase plum towards the water utility's Ridgecrest well field.

Section 3, water authority will determine

the cost of wellhead treatment, well replacement and related infrastructure costs to be considered in the contingency and implementation plan.

Section 4, the executive director is authorized to revise the existing agreement with KAFB to provide funding by KAFB for costs related to contingency planning and implementation costs.

Mr. Chairman, this resolution I think is important for the reasons that are self-evident in the resolution itself, but I'd like to add and clarify that the mixed aviation gas and jet fuel spill at the Kirtland Air Force Base may be the largest spill in the country and it endangers the water supply in the region.

No contamination from the spill, including EDB, has been detected in any of the Ridgecrest wells to date. We need to work with KAFB and continue to monitor the situation. Water authority and Kirtland Air Force Base personnel have began to work on individual contingency plans in the event a drinking water production well or wells are wells have contamination, and, in the alternative water supply has to be provided.

Kirtland Air Force Base has taken responsibility for the spill, appropriated $50 million

to investigate and install a final cleanup system at the site, and ahs also pledged to fund the water authority's alternate water supply and event, as well as -- in the event the well is contaminated.

Contingency planning efforts between the water authority and the Kirtland Air Force Base need to be coordinated, and the roles and costs of the plan implementation need to be determined and assigned to Kirtland Air Force Base now. This resolution allows the water authority to amend an existing memorandum of agreement with Kirtland to cover the costs of contingency planning before it becomes an emergency situation and funding for the implementation at the time of need.

The point of this resolution is for the water authority to step up the contingency planning efforts and for KAFB to reimburse them for that work, because the rate payers should not be financially or otherwise burdened with the remediation effort.

Thank you, Mr. Chairman.

CHAIRMAN SANCHEZ: Thank you.

Are there any questions for Commissioner De La Cruz.

Councillor Garduno.

COUNCILLOR GARDUNO: Thank you, Mr. Chair. And

I guess this would go to Commissioner De La Cruz, but also to staff.

There are probably was an opportunity to look at both of these resolutions that have been moved forward both by Mr. De La Cruz and myself.

And I was wondering -- Mr. De La Cruz, I had not seen this resolution till just now, or with the packet. And I don't want to get into a dueling, you know, resolutions here. I want to get to the point where we get some work done. A lot of what was said in this was, I think, to the point that I want to make. The only problem I have that this a memorandum of -- MOU of understanding and it's not -- doesn't have, I don't think, the force that a resolution asking Kirtland Air Force Base to move forward and not put any limitation on the amount of money that would be expended, or that there would be any wells that are not identified as specific to what needs to be remediated, and that we make sure that we protect the water before we get back to the staff deciding whether or not that's happened.

So when I have the opportunity to read my resolution, I would like to have the board look at this and make sure that we understand what each one of the resolutions is trying to accomplish.

CHAIRMAN SANCHEZ: And, Councillor Garduno, these both bills are just for introduction tonight, so go ahead and proceed with your bill, WUA R-12-14.

COUNCILLOR GARDUNO: Thank you, Mr. Chair.

This resolution directs the water authority staff to immediately enter into negotiations with Kirtland Air Force Base for an agreement that will save Albuquerque's drinking water.

That's main thing.

The agreement shall include requirements for Kirtland Air Force Base to place groundwater monitoring equipment as close as possible to the Ridgecrest municipal wells. The agreement should include the requirement for Kirtland Air Force Base to begin the investigation for technologies and installation of water treatment facilities for the wells, including financial assurance and to halt the further movement of the liquid -- LNAPL -- or liquid jet fuel and to plan for and implement remediation technology to address the long term contamination or soils and aquifer.

I would hope that everybody has a copy of this. I don't know that it's to the best interest of everyone for me to sit here and read the whole thing, but I will if people need me to.

And resolution just states: Protecting Albuquerque's Drinking Water.

Whereas, Albuquerque has the largest underground contamination threatening any city's drinking water aquifer in the history of the U.S., now estimated at 24 million gallons, more than twice the Exxon Valdez spill; and

Whereas, Kirtland Air Force Base, New Mexico Environmental Department and other experts do not deny that a dissolve plume of the toxic chemical contamination from ethylene dibromide, EDB, may arrive at the Albuquerque Bernalillo County water utility Authority 5 -- Ridgecrest Well Number 5 within five years.

And that's been discussed in many venues.

And, whereas, the agency for toxic substance and disease registry characterizes ethylene dibromide broken down in groundwater as hardly at all; and

Whereas, a liquid plume of jet fuel, LNAPL, containing benzine tolulene, ethyl benzine, xylene and other toxic components is dissolving into groundwater and extends to a mile long and a half mile wide.

That is, completely under the three neighborhood associations that have been here to testify.

Whereas, a liquid plume of jet fuel containing benzine, toluene; and

Whereas, soil vapor extraction technology cannot remove the LNAPL to keep it from moving forward, again, towards the municipal drinking waters wells;

Whereas, although the Air Force recognized the spill in 1997, there is still only poor understanding of the size, depth and rate of the expansion of the plume and contamination;

Whereas, there is no approved containment plan, no remediation plan or ongoing effort to remove the liquid portion of the jet and the dissolve plume of EDB from Albuquerque's drinking water aquifer;

Whereas, the full size of the dissolved EDB plume in unknown, and there are no monitoring wells close to the city wells; and

Whereas, the City of Albuquerque and the County of Bernalillo through its water authority is the only government entity that can demand that the air force take action to implement treatment technology to save the city's highly productive Ridgecrest and other drinking water wells from the dissolved EDB plume.

Be it resolved by the water authority,

Section 1, that in order to protect the public health and environment the City of Albuquerque and Bernalillo County, through its water utility authority act immediately to enter into negotiations with the Air Force for emergency measures, A, to save Albuquerque's drinking water source; B, to place groundwater monitoring as close as possible to the Ridgecrest municipal wells; C, to begin the investigation for technologies and installation of water treatment facilities for the wells, including financial assurance, more than the 50 million that has been touted; D, to halt the further movement of the liquid NAPL jet fuel; and E, to plan for the implementation remediation technology to address the long term contamination of soils in the aquifer.

That is the resolution. Thank you, Mr. Chair.

CHAIRMAN SANCHEZ: Thank you. And I think that Commissioner Maggie Hart Stebbins has a question.

COMMISSIONER HART STEBBINS: And I just want to start by saying I think the intent of both of these is very good. I support them both.

I have a first about and first one, though. On the first page, Line 17, it refers to active remediation. To what does that refer? Is there

active remediation under way right now?

CHAIRMAN SANCHEZ: Commissioner De La Cruz.

COMMISSIONER DE LA CRUZ: Well, what we're talking about isn't actually the remediation in the sense that there's extraction of the fuel, but that -- the understanding of what's happening in the subsurface is occurring actively now.

COMMISSIONER HART STEBBINS: Thank you. That answers my question.

CHAIRMAN SANCHEZ: Commissioner Johnson.

COMMISSIONER JOHNSON: Thank you, Mr. Chair.

I believe, and we have some folks from the Air Force here as well, and either that or water authority staff, I believe they're undertaking soil vapor extraction at this point, so that is a form of remediation. Even if it's not the solids and the liquids, it is a form of remediation that the Air Force has been engaged in for some time, I believe.

And there was a gap earlier this year that I understand took place, but they have since begun removing the vapors again. Thank you.

CHAIRMAN SANCHEZ: Councillor Garduno.

COUNCILLOR GARDUNO: Thank you, Mr. Chair. And, again, at the risk of sounding like we're having dueling resolution, I think the intent, and I'm sure

it's true of Commissioner De La Cruz, is that we move forward and forward as quickly as possible.

The concern I have is that the vapor soil extraction method has proven not to be very effective from the viewpoint of especially now that we are talking about 24 million gallons. And the numbers, are not mine, these are numbers that have been moved forward by Kirtland Air Force Base, is in the half a million gallons per year. That will be 48 years before anything gets done, even if that were the only way that that could be remediated. And it's not.

Not all of the contaminants will vaporize, will become a vapor source, and a lot of these things are moving in a way that I think will contaminate, by the estimation, again, of some of the folks that have been looking at this, in five years. We don't have that kind of time.

And I think what this -- my resolution was asking for is that we look at every possible, bar any kind of cost, any possible remediation that is out there or by someone else. And I think there are some folks who are ready to talk about that. Mr. Patterson, I believe -- Mr. Peterson, rather, and Mr. -- I can't remember the other gentleman, but there are plenty of folks around that I think are able to do

that kind of work, and I would like to encourage us to move forward as quickly as possible.

CHAIRMAN SANCHEZ: Thank you, Councillor Garduno.

Commissioner De La Cruz.

COMMISSIONER DE LA CRUZ: Thank you, Mr. Chairman. One of the areas that needs to be explored I think a little more vigorously, and neither of the resolutions really addresses it, and I appreciate that some of our federal delegation or Congressmen and Senators have visited the site and are aware of what's going on, but I really think it needs to be done more aggressively at our level to ensure that at a variety of levels, at the federal level, that there's awareness and that the appropriate appropriations start to occur.

Because the base has finite resources. It isn't that different from ourselves in the sense that it only has that capital to work with that it's allocated. But if we can get greater attention in Washington, I think that's going to be really where it's going to take place. Because we don't have the resources, obviously, the base, by itself, doesn't have any resources, and so it's really going to have to come from that higher federal level. And I think

we need to start heading in that direction, Mr. Chairman. Thank you.

CHAIRMAN SANCHEZ: Thank you. And, myself, I support both resolutions. I think that both resolutions have some great merits in them. And I'm not sure if the two sponsors want to get together and come up with one resolution in working together. We have until August to this get done, so I would suggest that if you want to maybe get together and try to get that --

COUNCILLOR GARDUNO: Mr. Chair, I would be amenable to that. Not only that, but I would take to heart what Commissioner De La Cruz has just mentioned and not only take it to a federal level -- because they have in fact intimated that they would help or they would at least -- and are aware. They have written letters to the issue, and that we get more funding. And I think we can't say that the Air Force can't expend money for this, because -- and I don't know the numbers exactly, but I'm sure that a jet fighter is a lot more than $50 million. So I know that there's resources somewhere. So I would like to be able to at least mention that in our resolution.

CHAIRMAN SANCHEZ: Thank you.

Let's go ahead and proceed. There are

consent agenda items this evening.

The next item on the approvals is approvals. That is Item A, WUA -- floor substitute O-12-1, amending the Albuquerque Bernalillo County Water Utility Authority water and sewer rate ordinance to to add a 5 percent rate adjustment for FY16 and '18, establish irrigation budget surcharges consistent with other accounts, establish consistency in the procedures for establishing irrigation budgets, changing definitions, add the utility expansion charge and water supply charges by Engineering News Report Index and clerical updates.

And to make that presentation will be Mr. Sanchez.

MR. SANCHEZ: Thank you, Mr. Chairman, Members of the Authority. This is the second reading. I went through this presentation at your last meet. I'll try to brief and answer any questions.

Very quickly, as you mentioned, it is proposed for 5 percent rate adjustment in fiscal year '16 and fiscal year '18, incrementally to increase capital spending by $3 million annually, upgrade our reclamation facility and achieve our fund balance of one-twelfth of budgeted expenditures.

It also adjusts our utility expansion charge

by the Engineering News Report Index by 2.7 percent that's currently required by the ordinance.

It also reconciles the irrigation budget surcharges and procedures that occur in policy. There were some inconsistencies. As I mentioned at the last meeting, what it's really driving is the understanding and the dialogue with the city, the county and APS about large turf areas and irrigation budgets attached to those, to the point where we aggregate those and focus less oh collecting surcharges and focus more on having them reinvest on upgrading the infrastructure to use water wisely and conserve.

It also adjusts dates and definitions. And the floor substitute simply represents additional clerical errors that were not caught previously. There are no substantive change in the floor substitute.

Specifically what's driving the need for these out-year rate adjustments, if we look at our current finance plan that was presented during the budget process, our goal and our target to get to one-twelfth reserves, you can tell the bottom line resources over expenditures, the yellow starts to show we're dipping far below the one-twelfth.

Additionally, Dave Price, in a previous

meeting, talked about our asset management plan, where over a two-year period we literally touched and evaluated over 200,000 assets that we own and operate. And what we found as we costed out there was there's $355 million of backlog, literally of infrastructure that either needs to be rehabbed or replaced, including our reclamation facility.

So if we go on the path we're on, the backlog continues well beyond 2032. With the rate adjustments in 2016 and 2018, we're able to begin incrementally investing $3 million a year in our capital program, get a reclamation facility ramped up sooner, and get our one-twelfth reserve where it needs to be.

Our backlog starts to look like this graph. What it's tells us is, with that investment plan, by 2027, which is 15 years away, our backlog has disappeared, and going forward, we're able to maintain a spending level of $76 million a year adjusted for inflation going forward, which will help us remain current.

Elaine Hebbard earlier mentioned that may not be enough, what if we have to borrow more. In fact, our projection is we do not, because of this graph. Our debt service is declining substantially,

and it's declining at about that same time. Around 2027 and the out years, you can see that chart, and our debt literally is going down substantially to the point where I feel comfortable standing before you saying we feel very confident that after 2018, four or five years out, we'd don't see a need for a rate adjustment. And our finance plan does factor in nominal growth, 2 percent increase in expenses, mainly power and chemicals, and resources going up roughly about a half a percent. And conservation is built into that forecast.

Dave Price also mentioned in a previous presentation, if you look at all of our assets, they're valued at about $5 million, if we had to replace them today, and that does not include water rights. You'd have to add about another billion and a half to that asset figure.

If you look at how our rate adjustments have compared to peers across the country in water/wastewater utilities, there's been about an 80 percent increase in rates over the last 12 years. Out rates have gone up just about under 20 percent, so we're about one-fourth of the trend across the country.

In terms of how we compare for a low water

user, we're about in the middle. Santa Fe, Rio Rancho, and Colorado Springs are above us, Santa Fe being the highest and about just shy of $80. And El Paso, Denver and Phoenix are below us.

If you go to a higher water user, we're about in the same thing; it just changes who is above us and who's below. Santa Fe is far above. Colorado Springs comes in second; Rio Rancho, third, and the order of Phoenix, Denver and El Paso switches as well.

In terms of the average impact to customers, we're currently at about $45 for the average customer exclusive of solid waste charges. So that $45 would go to about $48 in 2014. With the proposal before you, in 2016 that $48 would go to 51. And in 2018, the 51 would go to 54. And we feel very strongly that that we can sustain that for at least four to five years beyond 2018.

At this point, I'd be happy to answer any questions.

CHAIRMAN SANCHEZ: Let's go ahead and move the bill. I will move WUA floor substitute 0-12-1.

COMMI9SSIONER HART STEBBINS: Second.

CHAIRMAN SANCHEZ: We have a motion and three seconds. And let's open it up for discussion. Any questions for Mr. Sanchez?

COUNCILLOR GARDUNO: I have.

CHAIRMAN SANCHEZ: Councillor Garduno.

COUNCILLOR GARDUNO: One quick question. How are we looking at expansion? I know that there's been some folks that have come to us, the city council, for sure, and asked for special assessment districts, other areas that would like to grow. How are they factored in or ca you even factor those things in, and how are we going to be able to afford a resource that has, you know, finiteness to it? How do we tell these folks, "Go ahead, just apply, on we'll go ahead on okay"?

MR. SANCHEZ: Mr. Chairman, Councillor Garduno, first, the policy that is adopted by this body with regard to growth is, if you are expanding outside of what we would consider the fully built area, the developer must pay 100 percent of all the infrastructure, any upgrades to our infrastructure required to serve it, and a water supply charge. So there is no subsidy built into the system.

In terms of water consumption, if that's your point, ironically and historically, we consume less water today than we did 20 years ago with a 30 percent growth in our customer base. So with conservation, our consumption is actually going down.

COUNCILLOR GARDUNO: Mr. Chair, if I may.

Mr. Sanchez, but we all know that conservation will take us to a place but will not answer all the questions that are coming up, such as, if we let our service area grow, we will exponentially start using more water, never mind the fact that people are being conscientious about conservation. When we have drought and we have to keep our trees alive, there's no way you can conserve to the level that if we had good rain or more of a moist climate.

So I'm concerned that we're not looking at those areas we're not tying land and water in a zoning sense, and we're going to find ourselves in real, real trouble real soon.

MR. SANCHEZ: Mr. Chairman, Councillor Garduno, the other policy I failed to mention is that growth is restricted to the consumption of 180 gallons per day per household, which is almost half of our target of 150 per capita per day. And any subdivision, any residential development outside our service area must be certified to meet that standard by an engineer or someone with some certification, and we review those conservation plans. So that further guarantees a significantly reduced consumption.

Now, 50, a hundred years down the road,

climate change, droughts, certainly those are causes for concerns. And we are planning around that. Ms. Hebbard has talked exclusively about a water budget and a model; we're developing that. One of the reasons we talk about aquifer storage and recovery is, we should not send water down to Elephant Butte and let it evaporate. There's a much more efficient way of storing that water.

So we're looking at all those eventualities and trying to optimize any source we have access to.

COUNCILLOR GARDUNO: And, Mr. Chair.

Mr. Sanchez, climate change was not even a discussion five, seven years ago, yet today, although there's folks that agree and disagree, there's certainly a science that tells us that climate change is a reality and it's something that we're going to have to deal with. That, exponentially, will change things just by, as you described, as we grow, we are -- as someone said one time, humans are an invasive species, you know. We take over places that we don't belong in, and that's one thing that we've failed to factor into this whole system. So I'm concerned, I really am.

Thank you, Mr. Chair.

Thank you, Mr. Sanchez.

CHAIRMAN SANCHEZ: Thank you.

Any other questions?

I have one statement. Mr. Sanchez, there will not be a rate increase, and we've got to let the public know that, because people are in a panic that there's going to be another increase today. It's not going to be until 2014, and then 2016 with this new ordinance, then 2018; is that correct?

MR. SANCHEZ: Mr. Chairman, that's correct, however, that's fiscal year. So 2014 would actually be July of 2013, fiscal years '16 would be July of 2015, and fiscal year '18 would be July of 2017, but these rate increases would not take effect until that time.

CHAIRMAN SANCHEZ: Commissioner Johnson.

COMMISSIONER JOHNSON: Thank you.

Mr. Sanchez, you 2014 -- or 2013 for FY 2014? We're only making changes to the FY 2016 and 2018?

MR. SANCHEZ: That is correct.

COMMISSIONER JOHNSON: Okay. I thought I misunderstood you for a moment.

MR. SANCHEZ: But I should point out that the board has preapproved a rate judgment for 2014.

COMMISSIONER JOHNSON: Okay. Thank you very

much.

CHAIRMAN SANCHEZ: Any other questions?

We have a motion and a second on the floor to adopt WUA floor substitute O-12-1.

All those in favor, signify by saying yes.

SIX MEMBERS: Yes.

CHAIRMAN SANCHEZ: Opposed, no?

ONE MEMBER: No.

CHAIRMAN SANCHEZ: That passes on -- raise your hands. All those in favor, say yes.

SIX MEMBERS: Yes.

CHAIRMAN SANCHEZ: Passes on a 6-to-1 vote.

(6-1 vote. Agenda Item 9A approved, as amended, with Commissioner Johnson voting no.)

MR. SANCHEZ: Okay. Let's move on to the next bill. It's Item B, WUA C-12-9. That approving recommendation of award, water resources education, River Day programs, classroom presentation and public events.

I move a do pass.

COMMISSIONER DE LA CRUZ: Second.

CHAIRMAN SANCHEZ: We have a motion and a second.

To make that presentation will be Sharon

Sivinski.

MS. SIVINSKI: Thank you. I'm requesting that we continue providing education for the K through 12 students in Albuquerque. The four-year contractor will provide in-class water resource education for approximately 600 K through 12 classrooms and full day field trips to the Rio Grande Nature Center and the Rio Grande for approximately 60 classes of fourth graders.

The fiscal impact would be 147,180, which is what we have been spending for the last your years.

CHAIRMAN SANCHEZ: Are there any questions?

Seeing none, we have a motion and a second on the floor. All those in favor, signify by saying yes.

ALL MEMBERS: Yes.

CHAIRMAN SANCHEZ: Opposed, no.

That carries unanimously.

(7-0 vote. Agenda Item 9B approved.)

CHAIRMAN SANCHEZ: Next item is Item C, WUA C-12-10, that is approving recommendation of award, media and public relations. And David Morris will be making that presentation.

MR. MORRIS: Mr. Chair, Members of the Board, David Morris, public affairs manager for the water

authority. We are recommending the award of our PR and media relations contract, which came up for renewal this year, to the incumbent agency, Cooney, Watson & Associates. They have a long track record with the water authority, have been in our corner for some time on such major initiatives and San Juan Chama public acceptance, the New Mexico Utilities acquisition, among a lot of other things. And we don't want to lost the background and experience that they bring to the table.

The contract amount is about $450,000. We're still in negotiations on the final contract. About 75 percent of that sum is essentially pass-through money for hard costs such as TV and radio air time and outdoor advertising, mostly related to conservation. The budget in this area has remained steady over the last four years at least. And I would be happy answer any questions your might have.

CHAIRMAN SANCHEZ: Are there any questions?

Councillor Garduno.

COUNCILLOR GARDUNO: Thank you, Mr. Chair.

I was looking at the scoring of all of them, but primarily the two that came to the top. And Griffin & Associates had 2805 -- excuse me, 2891, Cooney, Watson & Associate had 2803, but then there

was a re- -- or an interview process where the positions were reversed, and in fact, one of the offerers, Griffin & Associates, dropped points.

How do you drop points.

MR. MORRIS: Mr. Chair, Councillor Garduno, the rescoring process starts from ground zero and it's a completely rescoring process once you rescore. After the initial printed proposal was submitted, we ask both of those offerers, the top two, to come in and give a formal, in-person presentation, and we scored -- we gave a new score based completely on that presentation, not the previous one.

COUNCILLOR GARDUNO: So the previous one was thrown out, not factored in at all.

MR. MORRIS: That's essentially correct. The new rescore is a completely new process in terms of the scoring.

COUNCILLOR GARDUNO: And based primarily on the interview or another process of scoring each individual area, as the first one was done.

MR. MORRIS: It's essentially the same areas of criteria are gone over again, but they are rescored during the in-person interview process.

COUNCILLOR GARDUNO: Because there was no -- at least from what I saw, none of the printed material

had that reprocess. It just talked about an interview. And I agree with you that history, corporate knowledge is important, but I was surprised to see that it would have that much sway over this interview.

MR. MORRIS: Yes, sir. And, in fact, we were so impressed with the other offerer that we are establishing another contract with them to share some of this work around, but the larger contract, which requires your approval, that has all of the media purchasing money in it is going to Cooney, Watson, and so that's why it requires your approval. The other one is a smaller contract.

COUNCILLOR GARDUNO: Well, Mr. Chair, just very -- not to belabor it, but just to make sure that I understand this.

The swing was, as I say, from 2891 to versus 2803 top 2805 to 2848, which is a swing of about 142 points. And that's a substantial swing when, to begin where, there was only like 60.

MR. MORRIS: Yes, sir. And, as I indicated, it's a completely fresh scoring process. And also, some of the variables change a little bit because of the percentage that is being allowed for the cost proposal, because there's only -- there are now only

two instead of four being analyzed.

COUNCILLOR GARDUNO: Thank you.

MR. MORRIS: Yes, sir.

COUNCILLOR GARDUNO: And thank you for that clarification.

CHAIRMAN SANCHEZ: Commissioner Johnson.

COMMISSIONER JOHNSON: Thank you, Mr. Chair.

And I'm kind of following down the same road as Councillor Garduno on this. Are we -- was there any presentation from any offerer prior to the rescore at all.

MR. MORRIS: When you -- Commissioner Johnson, Mr. Chair, when you say "presentation," no, there was no -- there was no in-person presentation given to the committee by anyone prior to that. It was all printed submission.

COMMISSIONER JOHNSON: It seems to me, and, you know, maybe I'm just a little crazy and new at this procurement stuff, and it is a little baffling from time to time, but it's seems a little odd to rescore as opposed to have the -- you know, you've got a cutoff and a contiguous store that would become cumulative over time. Because the rescoring process gives you an opportunity to play them against each other if there's a preferred vendor. And I think that

just kind of looks bad overall.

If there's a percentage of this that is based on a presentation and the top two offerers prior to that presentation come in to make their presentation, it seems more logical to me, and probably more fair, to not reset the score and then regrade the score going forward. It just seems like an odd way to approach this. Again, it's just looks like if you've got a preferred vendor in this, you can make the numbers dance and 2 between the end of the first process and the end of the presentation. So I would caution against that going forward.

Thank you, Mr. Chair.

CHAIRMAN SANCHEZ: And I have one question regarding the vendors that were not awarded the contract. Did any of those vendors file an official protest.

MR. MORRIS: Mr. Chair, I am not aware of the any official protests.

CHAIRMAN SANCHEZ: Thank you.

Any other questions? I will move approval OF WUA C-12-10.

COMMISSIONER HART STEBBINS: Second.

CHAIRMAN SANCHEZ: We have a motion and a second. All those in favor, signify by saying yes.

ALL MEMBERS: Yes.

CHAIRMAN SANCHEZ: Opposed, no?

That carries unanimously.

(6-0 vote. Agenda Item 9C approved.)

CHAIRMAN SANCHEZ: Next item is Item D, that's WUA C-12-11. That is approving recommendation of award, legal service.

Mr. Sanchez.

MR. SANCHEZ: Mr. Chairman, Members of the Authority, and RFP was issued for legal service, outside legal services. We had two respondents. The recommendation is the Stelzner, Winter firm. I'd be happy to answer any questions.

CHAIRMAN SANCHEZ: Are there any questions?

COUNCILLOR GARDUNO: I have.

CHAIRMAN SANCHEZ: Councillor Garduno.

COUNCILLOR GARDUNO: They've had a contract with us prior, haven't they.

MR. SANCHEZ: Mr. Chairman, Councillor Garduno, that's correct.

COUNCILLOR GARDUNO: And so this was, again, based on a criteria that --

MR. SANCHEZ: The contract expired. There is a requirement to RFP it out again.

COUNCILLOR GARDUNO: Okay. So and then you only

had the two --

MR. SANCHEZ: Correct.

COUNCILLOR GARDUNO: -- offers? Okay.

And what we see here is the scoring that ended up...

MR. SANCHEZ: Mr. Chairman, Councillor Garduno, that's correct. And you should have the score sheets and the committee members. There were three: Charles Kolberg, Stan Allred, and Tom Martinez.

COUNCILLOR GARDUNO: Okay. Thank you.

Thank you, Mr. Chair.

CHAIRMAN SANCHEZ: Thank you.

I move approval of WUA C-12-11.

COMMISSIONER DE LA CRUZ: Second.

CHAIRMAN SANCHEZ: We have a motion and a second. Any questions?

Seeing none, all those in favor, signify by saying yes.

ALL MEMBERS: Yes.

CHAIRMAN SANCHEZ: Opposed, no?

That carries unanimously.

(6-0 vote. Agenda Item 9D approved.)

CHAIRMAN SANCHEZ: Next item is Item E, WUA C-12-12. And making that presentation is Mr. Framel.

MR. FRAMEL: Mr. Chairman, Members of the Board,

we have a network and software that does video voice and data communications. This is an agreement with INX to help us start using those tools over the network and ensure that the network can handle the bandwidth in the future and just strategically plan for that.

CHAIRMAN SANCHEZ: Any questions?

I move approval WUA C-12-12.

COUNCILLOR JONES: Second.

CHAIRMAN SANCHEZ: We have a motion and a second by Council President Jones. Any questions?

Seeing none, all those in favor, signify by saying yes.

SIX MEMBERS: Yes.

CHAIRMAN SANCHEZ: Opposed, no?

That carries unanimously.

(6-0 vote. Agenda Item 9E approved. Commissioner Johnson not present.)

CHAIRMAN SANCHEZ: Next item is Item F, WUA C-12-13. Mr. Framel.

MR. FRAMEL: Yes. This agreement is -- at times we have emergency services we need for either software hardware or database. This agreement is approving it with TEKSystems, who is local here, so when we need those services -- and at times if it's billing or

something related, we need them right away, we can go to them and bring those services in where we don't have the expertise.

CHAIRMAN SANCHEZ: Are there any questions?

I move approval of WUA C-12-13.

COMMISSIONER JOHNSON: Second.

CHAIRMAN SANCHEZ: We have a motion and a second any questions.

CHAIRMAN SANCHEZ? Any questions? Seeing none, all those in favor, signify by saying yes.

ALL MEMBERS: Yes.

CHAIRMAN SANCHEZ: Opposed, no?

That carries unanimously.

(7-0 vote. Agenda Item 9F approved.)

CHAIRMAN SANCHEZ: We are now under other business. And the next item is New Mexico Environmental Department update on jet fuel spill. Dr. Jim Davis will be making that presentation.

Well, Doctor, and you may -- do you want to introduce your colleagues that are here with you also?

DR. DAVIS: Yes. Thank you, Mr. Chairman, Members of the Board. My name is Jim Davis. I'm director or the resource protection division with the New Mexico Environment Department.

With me tonight I John Keeling, who is

bureau chief of the hazardous waste bureau, which is the bureau that's overseeing this project for us. I also have Steve Roiter, who is a geologist and a manager in petroleum storage tank bureau here in our Albuquerque office.

I brought him and the petroleum storage tank bureau is involved in this because we have perhaps not -- it's not a good thing to state, but we have quite a bit of institutional experience dealing with petroleum contamination and the subsurface.

I appreciate the invitation tonight, Mr. Chairman, we were asked to talk to you, as I understand it, about our long term regulatory an compliance oversight of this fuel spill.

I did that correctly; that's pretty good. Our regulatory authority stems from Federal Resource Conservation Recovery Act and the New Mexico Hazardous Waste Act. This slide gives you a little bit of history of that regulatory statutory authority. The New Mexico Hazardous Waste Act was passed in 1978 by the legislature, and it includes requirements for corrective action, including releases extending beyond a facility's boundaries, which is the circumstance we have here. It was an amended again in -- RCRA was amended in 1996 and grants administrative authority

for corrective action.

The permit that the Kirtland Air Force Base currently has was renewed on June 15th of 2010 and became effective July 16th of 2010. Part 6 of the permit contains extensive provisions for corrective action as required pursuant to the New Mexico administrative code, which incorporates the code of federal regulations, 40 CFR 264.101.

It is the primary driver for corrective action at the facility. It must protect human health and the environment for all releases of hazardous waste or constituents from any solid waste management unit at the facility.

Solid waste management unit is a term of art, Mr. Chairman, that encompasses the circumstances we're dealing with here.

It also includes schedules of compliance. And, again, as I indicated earlier, if the contamination extends beyond the boundaries of the facility, the facility is required to take corrective action.

So, collectively, what everyone refers to as the bulk fuels facility spill is made up of two solid waste management units, the bulk fuel facility former fuel offloading rack, itself, as well as what's

referred to a LNAPL, or light nonaqueous phase liquid plume. And these are listed in the permit as being is subject to this corrective action.

Many meetings, Mr. Chairman, we've been at. And, in fact, tonight you've heard reference to what are known to maximum contaminant levels, MCLs, and I want to go through these for the constituents that we know to be in this contaminant plume.

Ethylene dibromide, the EPA MCL is .05 micrograms per liter; that's parts were billion .05 parts were billion. The New Mexico Water Quality Control Commission standard is .1 micrograms per liter.

Accordingly, our regulatory oversight will require that EDB be remediated to the more stringent of these two numbers. In other words, .05 micrograms per liter.

Benzine, in a similar way, has different numbers adopted by EPA, 5 micrograms per liter. The New Mexico standard is 10 micrograms per liter. Accordingly, our regulatory oversight will require the Air Force to achieve the 5 micrograms per liter.

Tolulene, 1 milligram per liter; that's parts per million. In this case, the New Mexico standard is more stringent, the New Mexico standard

will be met.

Total xylenes, the EPA MCL, 10 milligrams. The New Mexico WQCC, .62 milligrams. The more stringent requirement will be met.

Current status, it is not possible, Mr. Chairman, to determine or decide on a final remedy until the investigation of this circumstance is complete. But what's important to understand is that interim measures can and are being implemented right now. We know enough and in the presentation I believe that you'll see from the Air Force, they will demonstrate the level of knowledge they have that is sufficient to allow cleanup to begin. That doesn't mean that that level of understanding is sufficient for a final remedy. But it is sufficient to begin cleanup.

We have requested the Air Force to work on a remedial action plan as soon as possible in order to treat any groundwater that may be generated by what, again, I'm sure you have heard referred to as an LNAPL containment system. But, again, parenthetically on this slide, I'm indicating should that system be actually deployed.

Corrective measures evaluation report, CME, this is a regulatory requirement. It's required 180

days after we approve the site characterization. Obviously this had not happened yet.

And then, to revise the remedial action plan to incorporate the final remedy, based on the corrective measures evaluation report and public input, we follow a public participation process. These actions will go out under public notice and it may be, if requested, that we will hold a public hearing.

Finally, we will approve a corrective measures implementation plan, and that will be implemented and complete the final remedy. I want to go back to the -- I want to spend a little bit more time on this slide, Mr. Chairman.

I apologize because this is at exactly the wrong distance for me to see it with my glasses on, so I have to take my glasses off to be able to read it.

In the public comment period tonight, and at public meetings that have been held over the last several months that I have participated in, we have focused on the technology known as soil vapor extraction. There's been a lot said tonight. I'm going to let the Air Force make their own presentation, but I want to make it clear, Mr. Chairman, to you and to the members of the board that

soil vapor extraction technology is only one tool in our tool kit. There are many technologies in addition to soil vapor extraction that can be used, and, quite frankly, most likely, will be used to remediate this plume, this contaminant plume.

Soil vapor extraction is the first technology that we're directing the Air Force to employ; is it not the only technology. We will do this in an iterative way. We will see what results we get as the soil vapor extraction process occurs over some period of months. And those data will inform the next step or series of steps in the process. We have in fact directed the Air Force to install an interceptor well -- my term, other people will call it different things -- at the toe of the -- well, approximately the toe of the BTEX plume right now in order to, if we feel it necessary, to achieve what's known as hydraulic control over the plume.

But one of the things we don't want to do is make this situation worse than it already is by taking action before we understand the consequences of those actions. We do have experience institutionally at other places in the state where it is possible by utilizing an inappropriate approach to literally cut a contaminant plume in two and make it much more

difficult to remediate. So one of the things I have said in previous public meetings, is we -- I point to the first principle of the Hippocratic Oath, which is first do not harm. What we want to do is have the Air Force move rapidly but thoughtfully in the remediation of this plume so that we actually achieve what we all want without running the potential of making the situation much works than it already is.

That concludes my prepared remarks, Mr. Chairman. I'm happy to stand for questions now at the pleasure of the board. I would make a suggestion that perhaps it would be better to let the Air Force make their presentation and then we can both be available for questions and answers, but it is the pleasure of the board.

COUNCILLOR GARDUNO: I have one question I'd like to ask.

CHAIRMAN SANCHEZ: Well, do you want to wait until the next presentation is made, or does it -- go ahead and proceed, Councillor Garduno.

COUNCILLOR GARDUNO: Thank you, Mr. Chair.

I just have this one question. You mentioned at the very outset that NMED has dealt with a lot of fuel spills throughout the state, I assume. What is the largest one that you know of that NMED has

dealt with.

DR. DAVIS: Mr. Chair, Representative Garduno, I don't have a number memorized of a volume of a spill. I can tell you that I have personal knowledge -- we had a -- we had a -- in fact, I think we're still remediating it, a spill in Milan, next to Grants, with a water supply well that had I believe about 50 feet of gasoline in the water supply well. And the person who owned the land was pumping the gasoline out and putting it in his pickup truck; thought that he'd found gold.

We have dealt with a spill called the Hobbs City Wells, which contaminated the Ogallala Aquifer. This was discovered in 1995. I believe it was given a no-further-action status about two and a half years ago. It did cause the city of Hobbs to have to shut down one of their water production well fields. They are now back up and using those wells. But that took about 17 years or so to remediate. I don't know what the volume lost was.

COUNCILLOR GARDUNO: And, Mr. Chair, I wanted to establish whether or not we've had anything to the magnitude that we're talking about right now, which is -- I assume 24 million is an optimal number or 8 million. My -- what I've heard -- I also don't have

this on necessarily good terms, but 75,000 was the largest that NMED has ever dealt with.

DR. DAVIS: Mr. Chair, Councillor Garduno, I'm going to ask Steve Roiter, but I think that number is very low.

COUNCILLOR GARDUNO: And I guess the accompanying question would be is it to the extent of 8 million or 24.

MR. ROITER: Mr. Chairman, Members of the Board, I'm Steve Roiter. I'm a 35-year professional geologist, with 22 years in petroleum remediation and investigation. And I've been with the State of New Mexico for 16 years ago.

And that 75,000-gallon number is low. We have dealt with releases of up to 2 million gallons. And the bottom line, sir, is, once you're over a million gallons, you've got a mess on your hands and your decision tree doesn't really change. The length of time you're going to be at work on something and the scale of what you're going to be attempting to do changes, but your decision about how you go about solving the problem does not change.

COUNCILLOR GARDUNO: And, Mr. Chair.

And thank you for clarifying that. And up to 2 million is still somewhat less than eight

million, and certainly very much less than 24 million. And I guess the point that people have pointed out, too, is that when you have that volume not only in gallons but also in weight and activity, that that 24 million pushes out a lot faster just for sheer volume, if no other reason. So I wanted to establish that, if I could. And thank you very much. Thank you for classifying that.

CHAIRMAN SANCHEZ: Commissioner Johnson and then Mr. Perry.

COMMISSIONER JOHNSON: Thank you, Mr. Chair. And I'm going to get back to the volume as well here.

Do we have a good estimate that the state feels comfortable with, as far as is it 8 million, is it 24 million? I've heard 24 million thrown around a lot lately. Perhaps it is, I don't know. But what is your official position on the volume of this spill at this point?

DR. DAVIS: Mr. Chair, Commissioner Johnson, our official positio is that there's a lot of it.

COMMISSIONER JOHNSON: And does it matter I guess should be the next question.

DR. DAVIS: It matters in the sense -- Mr. Chair, Commissioner Johnson, it matters in the sense of he scale of the remediation system that you employ,

because you want to have a robust system that will accomplish the remediation over a reasonable time frame. And by "reasonable," that would be ten years or so.

So the size of the remediation system will be informed by the data that we collect initially that tells us what are we seeing, how are we seeing the plume respond to SVE? We should see within six months or so, after an aggressive soil vapor extraction system is put in place, we should begin to see changes in the subsurface, the data from the monitoring wells will begin to change, concentrations will begin to go down. By how much, we can't predict; how rapidly, we also can't predict. So those data will be very important in informing the next step in this process.

And what we ultimately end up with I feel absolutely confident will have soil vapor extraction as one of its primary technologies, but we also will probably have other technologies that we will employ. We may in fact do -- utilize an interceptor well to pump contaminated water and then clean that at the surface. We may well use or direct the Air Force to use downhole technologies, like downhole sparging, and I'm not going to try and explain that. If the board wants it explained, I'll refer again to Steve Roiter.

But there are a variety of technologies in our tool kit, and we will use those as needed to accomplish the task. So I want to assure the members of the board that if you have heard the only thing that will happen is soil vapor extraction, that that is simply not true. That is the first step in this process. It is not the last step.

COMMISSIONER JOHNSON: Mr. Davis, have you reviewed the plans for SVE that the Air Force has provided? Is the environment department confident that their plan and their technology meets with your approval?

DR. DAVIS: Mr. Chair, Commissioner Johnson, yes we have. We just sent a letter June 11th, nine days ago, approving a modification to their SVE system. We also asked them to do a number of other things in that letter. But yes, we're confident -- we have experience with SVE around the state, we know that it does work. It does not create another contaminant stream or waste stream. The vapor are burned. There's a need for an air quality permit because the furnaces will burn the vapors and will have an exhaust of CO2 and hydrocarbons.

At the beginning -- in the late 1980s -- from the late 1980s until now, with the storage tank

program that the environment department administers. There have been approximately 3,000 around the state of New Mexico contaminated with petroleum in the subsurface. The vast majority of them are very small. There's some significant number of them that are quite large. Of those 3,000, approximately 2,000 of them have been remediated to the point where you cannot detect the petroleum in the subsurface with the analytical techniques we currently have available to use. There's about 900 sites that are still on the books.

That gives you an indication of the amount of experience collectively, institutional experience, that the environment has in dealing with these things.

COMMISSIONER JOHNSON: And then lastly, you hear a lot of folks, and I happen to be one of them, that would like to see this done now, or yesterday would have been a lot better if we could have had that plume and the remediation in process and getting to the point where that water is drinkable right now.

In comparison to other spills around the country or around the state that you're aware of, is this an unusually long timeline, or is this kind of the amount of time it takes to characterize a spill of this size? Where are we on the timeline, and are we

way behind schedule or are we on schedule or -- you know, where are we?

DR. DAVIS: Mr. Chair, Commissioner Johnson, that's a really good question. We are not satisfied, quite frankly. We want the Air Force to move faster. We are urging them to do that. But it does take time. You first have to have at least some reasonable idea of what you're dealing with. We now have that. That actually became available last fall, less than a year ago, after the Air Force completed the aggressive well drilling campaign that established the monitoring wells that are currently available for us.

But that in fact is not yet complete, because we still do not know where the northeast corner of EDB plume is. We have not found the edge of it. We have directed the Air Force to put in more monitoring wells and we believe, but we won't know until the data come back, but we believe that those monitoring wells most likely will tell us where that northeastern edge of the plume is.

The location of placing these wells, when our technical staff looks at the data with the Air Force, we may very well informed, educated estimates of where to put the wells. And I don't want to sound too glib, Mr. Chairman, but the main problem is you

can't see underground. You don't know what you're going to find until you drill a well, and it may be that that well brings back data that don't tell you anything of value. Alternatively, a well may bring back data that tells you and enormous amount. You don't know that, however, until you can examine those data.

So this is a -- by its nature, it's an iterative process. You drill a well or a number of wells you look at data and then you make a decision on what you need to do next. You can't do that in advance. And, again, that's why what we don't want to see is any uninformed or poorly informed action end up making the situation worse than it already is.

COMMISSIONER JOHNSON: Thank you.

Thank you, Mr. Chair.

CHAIRMAN SANCHEZ: Mr. Perry.

MR. PERRY: Mr. Davis, I'd like to express my appreciation to you and your staff for coming down here tonight and giving this presentation. We've been dealing with this issue for quite some time, and it's been difficult to separate the science from some of the mischaracterizations that are related to this debate. I personally have found it very help and I think many of the other members would agree with me.

It's also been helpful to recognize what the authority is for what has to be done to begin corrective action and remediation of this plume. And it appears to me that the New Mexico Environmental Department is the chief regulatory authority for this particular incident; is that correct?

DR. DAVIS: Mr. Chairman -- I was about to call you Representative Perry. I apologize.

Commissioner Perry, that is correct. The state does have the regulatory authority.

MR. PERRY: And, you know, in explaining to us the matter of process, that's been very helpful, too. And as I look at the particular slide "Current Status and Looking Ahead," that answers a lot of questions for me as far as what has to take place as a matter of process. So it seems to me that on that slide, you folks will ultimately issue the remediation action plan, is that correct, you'll have to approve that?

DR. DAVIS: We approve the plan. The Air Force or any permittees submits the plan to us, we approve it. That also can be an iterative process back and forth. We oftentimes find deficiencies, we remand it, we tell them to do something different.

MR. PERRY: Sure. And then there's a corrective measure evaluation report that's required 180 days, so

six months after you approve the initial site characterization; is that right?

DR. DAVIS: Mr. Chairman, Repre- -- Commissioner Perry.

MR. PERRY: It's actually CAO Perry.

CHAIRMAN SANCHEZ: CAO Perry.

MR. PERRY: Yeah, yeah. I know that gets complicated.

DR. DAVIS: I've been in front of the legislature way too many times. So I apologize.

MR. PERRY: That's quite okay. You're doing a real good job, Mr. Davis.

And then the revise of the remedial action plans and final remedy, and it looks like there's a public notice to be issued to seek public input and a public hearing may be held. So Councillor Garduno and some of the other folks can go to that public hearing and have their opportunity to submit what they believe to be the facts and other -- what the corrective action should be and what should be taking place; is that right?

DR. DAVIS: Mr. Chair, Commissioner Perry, yes. I'm going to ask John Keeling to explain it to you in a little bit more detail because I think this is an important point.

MR. KEELING: Mr. -- Commissioner Perry --

MR. PERRY: Mr. Perry will be fine. I think that's probably the easiest thing.

MR. KEELING: I'm John Keeling --

MR. PERRY: We're confusing you.

MR. KEELING: -- bureau chief, and I've been with the department for about 18 years, been working in the Resource Conservation Recovery Act in both solid waste and hazardous waste areas for that time.

The process regarding the corrective measures evaluation is process where the Air Force and their contractor will develop a scheme of various alternatives for a remedy. It may be some elements that are already captured, such as the soil vapor extraction, or other remedies, and it will probably be some number of remedies that will be proposed.

And then the environment department will put forth their proposal of the remedies, you know, to capture this contaminated plume, and then put that forth in a public comment period. The folks out there in the public, you folks here on the commission can comment on that at two different levels. As kind of a common public level to provide testimony, or also as technical testimony, too, to put forth what you believe may be the appropriate remedy or remedies.

And then that will potentially end up in a hearing, if there is one requested, and I imagine that will most likely be the case because this is a significant issue for all of us. And then it will go through the hearing process, and then eventually it end up before the department secretary of the environment, and then he will issue a final order. And then there is some period of time after that that will be implemented.

MR. PERRY: Mr. Keeling, that sounds like a rather, you know --

MR. KEELING: It's fairly lengthy process --

MR. PERRY: -- lengthy process --

MR. KEELING: -- and --

MR. PERRY: -- right.

MR. KEELING: Yeah.

MR. PERRY: And in something of this magnitude, do you have any estimate at all of what we're looking at as it relates to the length of that process?

KEELING: That really depends on what we find out from these new monitoring wells that are going to be in place here in the next, you know, two to three months. And if we have to go, you know, continue with additional wells, really, that's the key to understanding that final characterization, again,

because we need to know the final characterization and, you know, kind of look, you know, again, subsurface, we don't know what's down there, so we have a more complete understanding. And once that is completed, then we'll be moving forth from there.

MR. PERRY: And, again, to get the point that Mr. Davis had made, if we were to move prematurely, we could cause more harm than good, basically, if we didn't have accurate characterization and quantitative, qualitative assessment of this particular incident and the plume?

MR. KEELING: That's correct.

MR. PERRY: Thank you, sir.

Thank you, Mr. Chairman.

CHAIRMAN SANCHEZ: Thank you, CAO Perry.

And we could pay you commissioner's salary and save the City of Albuquerque some money.

Councillor Garduno.

COUNCILLOR GARDUNO: Thank you, Mr. Davis. And maybe it's Mr. Keeling that needs to address this, but I think there's been some misunderstanding. I don't suggest that the water authority grab a gun and go and put it to the Air Force's head, if that's what people are thinking. But we are not a potted plant, right? I mean, we don't just sort of sit around and think,

hey, whatever they want is all right with us? We do have standing.

So if we have standing, you would pay attention to what the water authority would desire? I take that as a yes.

DR. DAVIS: I'm not sure there was a question, but I'll answer it anyway.

Mr. Chair, Representative Gar- -- I'm just going to say I'm going to give up. I'm going to call everybody Representative. I apologize.

COUNCILLOR GARDUNO: You can just answer the question. You don't have to --

DR. DAVIS: Yeah, what -- we -- I mean, this is the incredibly serious problem.

COUNCILLOR GARDUNO: And saying we don't care what the --

DR. DAVIS: -- it's an incredibly --

COUNCILLOR GARDUNO: -- numbers are --

DR. DAVIS: -- serious.

COUNCILLOR GARDUNO: -- is not helping.

DR. DAVIS: We are -- we are pushing the Air Force, we are going to require actions. Actions are already being taken. They are not yet adequate. Over the next several months it is our expectation that significant progress will be made. And we going to

stay on this like -- pick whatever metaphor you want.

In the meantime, we are actively engaged with members of your staff. They participate in meetings with us and the Air Force. We do listen to them. We have held what I guess the Air Force would characterize as senior leadership meetings where Commissioner Hart Stebbins has attended, John Stomp has attended, other persons on your staff have attended.

We actively seek their input. We actively listen, exchange ideas. Yes, you -- the expertise that your staff brings, the concern that you bring as elected officials is incredibly important here because it helps the process continue to move forward.

COUNCILLOR GARDUNO: Thank you.

DR. DAVIS: So yes, you do have standing in that sense and we look forward to continuing to work with you.

COUNCILLOR GARDUNO: And more so than just being invited to a public meeting and sit in the audience and raise our hands and say, "What's happening?" We must have standing that's further than that and statutory standing.

DR. DAVIS: Mr. Chair, Representative Garduno, I can't speaker to your statutory standing. I can speak

to, as a practical matter, what you have been doing. And, again, I have participated in meetings with Commissioner Hart Stebbins. She has been at the table, the assistant secretary of the Air Force has been at that same table, as well as cabinet secretary from the environment department. Your input is sought, it is listened to that and process will continue.

COUNCILLOR GARDUNO: So, Mr. Chair, I guess I just want to dispel the thought or the concept that some people have intimated that we have no authority that we have no standing and we should acquiesce to NMED anything that has to do with the remediation of this problem. And I take umbrage at that. I mean, if that's the case, then let's dissolve this charade here and, you know, have somebody else do the water distribution. Why have a water authority.

So, you know, I just don't like the fact that the water authority has been placed in a -- at a level that it's insignificant and I just don't think that's true. And I certainty don't appreciate it when members of the same body have that attitude. And I don't have that attitude and I'm not going to wait to go to a public meeting and wait till I get called on when I raise my hand. I'm going to raise cain

wherever and whenever I think I need to.

Thank you, Mr. Chair.

CHAIRMAN SANCHEZ: Thank you, Councillor.

Thank you, Dr. Davis, for you time.

Let's go ahead and proceed to the next item, and that's going to be the Kirtland Air Force Base update on the jet fuel spill. And the individual that will be making that presentation will be Tom Berardinelli.

Welcome, sir.

MR. BERARDINELLI: Mr. Chair, Members of Board, we appreciate the invitation to be here tonight to update you and address questions or concerns that you may have.

These are the areas that, at least in my presentation that I'll address. But if there are other questions that the board has, I'll be glad to address those as well.

I wanted to step back, and I think it would be helpful, and we haven't done this really in long time, and I think this would be helpful to the board and to those that are present in terms of seeing how we have evolved in where we have gone and also to address where we are going.

So we'll start with a timeline. There's a

key along the bottom, so as I start to build this, you'll be able to see what some of those items mean and then I will talk through them with some callouts.

It's always good to know where are you. We're here. That yellow line, that and light yellow line that comes down through 20 June 2012 is where we are today in the grand scheme of this, you can see. And I'll explain. There are question marks at both the beginning and the ends of this timeline, and a reason for that.

1999 is when the plume -- or, I'm sorry, when the leak was discovered. It was detected and stopped at the former fuel offloading rack in 1999. Personnel that worked in the fuel yard reported stained soil to the base. Upon further investigation, soil was found to be saturated and it was reported to the regulatory authority, the New Mexico Environment Department, in November of 1999. The leaking portion of the system was taken out of service upon discovery. Line leak testing was performed in late 1999 and system deficiencies were noted and corrected.

Results from the investigation were used to determine this fuel was the result of a leak over a relatively long period of time. The initial investigation plan was submitted to the New Mexico

Environment Department Groundwater Quality Bureau in January of 2000.

So the first point I want to make with this slide is that I think sometimes as we made presentations there's still some confusion as to whether there's still leaking. The leak was stopped in 1999, so there has not been any additional contribution to the plume that exists in the soil and on the water table and in the dissolve phase since 1999.

Although we don't know exactly when the leak began, we know it had to be prior to the late 1970s because that's when the Air Force switched from a lead-based aviation fuel to an unleaded JP-4. If the leak had started after the switch so JP-4, we wouldn't be discussing EDB at all. EDB is common to leaded gas, it is a lead scavenger, and is unique, just aviation gas. So we do know that, as a marker, it has to occur -- the leak had to have begun sometime before the late '70s.

As we began installing the first monitoring wells, we essentially began what I would call the characterization and evaluation of plume, which you can see in that gold bar which will continue from the moment we began that until there is no further action

required by the state.

The first soil borings were started in April of 2000 and the first groundwater and soil vapor monitoring wells were installed in late 2000 in accordance with the investigative work plan that was submitted and approved by the New Mexico Environment Department.

In 2004, we began operation of the first internal combustion engine soil vapor extraction unit which was put into operation in the immediate vicinity of the original leak, and, essentially, if you look at that green bar, was the beginning of interim remediation. With the installation of that soil vapor extraction system, we began to extract fuel through the vapor from the ground. And that has continued with one small break that I will explain in a moment. So interim remediation began in 2004.

After operation of the first soil vapor extraction unit investigative data depicted a persistence of vapor concentrations in certain portions of the bulk fuel facility, unlike others where the vapor plume was appearing to decrease.

Kirtland Air Force Base then made proposals to the New Mexico Environment Department to install additional monitoring wells to determine the cause of

this in January 2007, and that resulted in the first measure LNAPL on the water table, in February 2007. In late 2007 addition will a monitoring wells were added to the north and the east of the former fuel offloading rack, which were the first monitoring wells that were installed off the installation on the aquifer. This prompted the addition of -- and detected, was the first detection of fuel on the aquifer. This prompted the addition of more monitoring wells and the addition of three more internal combustion engine soil vapor extraction units to the existing one for a total of four in operation distributed to various monitoring wells on the information, based on the information we knew at the time, which was not nearly what we have now but what we knew based on those monitoring wells.

A total of 100 monitoring wells were installed as part of the initial investigation. That included 29 groundwater monitoring wells, and 71 soil vapor monitoring wells. All initial groundwater monitoring wells were what we would now term shallow wells that were screened at the water table in a 15- to 25-foot screen.

In 2010, New Mexico Environment Department transferred your restriction of the fuel plume

characterization remediation from the groundwater quality bureau to the hazardous waste bureau. In April and August of 2010, hazardous waster bureau issued direction to the Air Force to install a network of 113 additional monitoring wells. These included 35 soil vapor monitoring and 78 groundwater monitoring wells.

In September 2010, the Air Force awarded a performance-based contract to Shaw Environmental that would address the specific requirements of the April and August NMED letters, complete characterization, attempt to contain the LNAPL and have a proposed remedy in place within five years. Initial work plan were submitted in November of 2010.

On the soil vapor monitoring wells, this time the well cluster is screened at six different depths through the soil from approximately 25 feet to 450 feet below the surface, and each screen length is about 10 feet. With these new wells, this camp -- with the wells that were installed during this campaign, wells were installed at both shallow, intermediate and deep levels in a cluster of three wells at the required location.

Shallow wells are at between 5 feet above to 15 feet below the groundwater surface. Intermediate

wells are screened at 15 to 30 feet. Below groundwater surface -- or below the water surface, and deep wells are screened 40 to 55 feet below the groundwater. Wells screened across the LNAPL plume do have various in screening and specifically the deep wells may be as deep as 100 feet below the groundwater surface.

One very important aspect of responding to a situation such as this is that not only that the leak be stopped and the characterization initiated, it's also to ensure that we have measures and infrastructure in place to prevent it from ever happening again. To ensure that, the Air Force funded and completed a $12 million fuel infrastructure replacement military construction project that now includes state of the art storage tanks, aboveground and vaulted piping, and spill capture area that would not allow a situation that occurred in the past under the older infrastructure to occur again. So the ability for this to happen again or for the plume to receive any continued contribution of the plume has been addressed in this project that was completed in March of 2011.

This brings us to our most recent events and where we are today. In December of 2011, we published

our first quarterly report that included data from all 113 additional monitoring wells. This was the first quarterly report that we had data from all of those wells. And it allowed us to then determine the best placement for both the larger scale thermal oxidation SVE system that we've been referring to, that has been referred to this evening, and wells and LNAPL containment wells. Those locations have been approved by NMED and the wells are come complete, both the soil vapor extraction wells and the -- as we call it, the containment well, which is located at the toe of the LNAPL approximately plume.

As you'll see, there's a gap in our green treatment bar on this slide. During this time, the four SVE were taken out of the service on the 2nd of October 2011 to perform three different tests: Radius of influence test; new log testing and a vacuum test.

Units did resume minimal operation during this period, which was no more than a few days at a time. And so we didn't -- we show that gap. After we completed the new SVE wells for the new system, which is under design and construction now, or is under design, we relocated the internal combustion SVE units to those wells and also monitoring wells closer to the thickest area of the plume where their operation

resumed on the 23rd of April 2012. At these location they are operating much more effectively, and we know that because they're taking much, much less propane to operation than in the previous locations, which means they're operating principally off the fuel in vapor form that they are extracting.

We also have one unit that remains in operation where the source area is for the soil, and we moved on of the units to a monitoring well, although not with the same capability as the SVE extraction, closer to the thickest portion of the vapor concentrations, and it also is operating more effectively.

Shaw has not performed any numerical comparisons of the improvement of the SVE performance other than to recognize, as I mentioned, the propane consumption is down dramatically from previous consumption. The focus has really been on reduction in contaminant concentrations, which, at this point, is not quantifiable.

I'm shifting now to -- the color you'll see on here, the blue, are planned future actions and are both approved actions. We have received NMED approval to drill three clusters of three wells downgradient in the northeast direction of the known areas of the

plume to further characterize the dissolve phase of the plume. Drilling will being in July, subject to availability of drill rigs, and should be -- and is -- should be complete by September. Again, subject to the availability of the drill rigs.

Similar to our previous drilling campaign, we'll make at least three visits to the affected neighborhoods. In this case, one of the wells is -- one of the clusters is on base, one of the clusters is in Elder Homestead, and one of the clusters is in Trumbull. We'll go door to door in the vicinity of the drilling and provide information to the residents at we did in the last campaign.

The new wells, actually nine total, in three clusters, are to be screened at shallow, intermediate and deep depths. We'll continue to collect samples from the new wells two weeks after development is completed and place a rush to turn results. However, definitive information will demand at least two to three quarters of sampling before data is considered fully useable. This is based on the positions previously noted, that one data point is not a mark to make a decision on EDB concentrations.

Based on the results of sample testing from these wells, we will determine if we need to propose

additional monitoring wells and their locations to NMED or approval. We will continue this iterative approach to completing the characterization of the plume until we have sufficiently identified the extent of contamination necessary for the full remediation.

The new thermal oxidation soil vapor extraction system is expected to be operating by late November. It is important to note that this is only the first step in the interim process and that further installations may be required dependent on performance of the new system and data that we continue to receive from the monitoring wells, and any new monitoring wells that may be installed.

The measurable effectiveness of the new system will not be understood will a period of performance has been recognized. However, rough estimates of performance would suggest that the airflow rates with this new system would reach ten times that of a single SVE unit.

We need to emphasize again that this is only the first step in developing the interim measure of the therm ox SAVE and will likely recognize various iterative adjustments in the future as we gain more knowledge on its effectiveness and its ensuing results on the contaminant concentrations.

As you may be aware, the agency for toxic substances and disease registry, a division of the CDC at Air Force request began a health risk assessment of plume earlier this year. This is an independent assessment with an estimated completion date of December 2012. ATSDR will hold separate public meetings as part of this assessment, which will be announced the public, and Kirtland Air Force Base will post it on its public website.

We still believe it is possible to complete our characterization and evaluation of the plume and recommend a final remedy in place not later than December 2015. Once that proposal is made to the New Mexico Environment Department, it will evaluate the proposal and hold public meetings in the process that Dr. Davis explained and will either disapprove or modify the proposal to direct the final remedy in place, and likely it will be an iterative process as well.

The Air Force's intent is that we would have those methods in place, that we will meet the requirements of final remedy, which is to remediate the plume such that is it not a threat to production wells and human health and welfare when we propose that remedy to the New Mexico Environment Department.

Finally, when the Air Force believes it has achieved concentration levels below the maximum contaminant level such that the plume is no longer a threat to the production wells, we will request a determination of no further action from the New Mexico Environment Department. NMED will evaluate that proposal, hold public meetings, once again, before making its final determination. At this time, it's not possible to estimate when that may be. It will be data driven, and depend on concentration levels that meet and ensure legal requirements for safe drinking water.

On this bill of the side I've added some notional in gray milestone and what these represent are placeholders, they represent actions that may be taken based on data to assist in remediation efforts, to expand in remediation efforts and what we may do additional based on the data that we receive. The monitoring wells I think although some think all they do is look at where the plume is, and they do, they're the only way for us to know where the plume is, but they will receive arrest secondary purpose in the remediation process, and that is they will tell us how effective the actions that were implementing are working. And based on what the concentrations look

like and the reading that we get from those monitoring wells, we'll just as necessary to ensure that the remediation is effective.

It could include various technologies, many of which Dr. Davis mentioned, to include additional SVE wells, additions to the SVE system, LNAPL containment strategies which are hydraulic or pump and treat, and other possible technologies that might not be available today but may become available as we move further.

Any -- and anything that will -- that would address the efficiency and effectiveness of the effort will be evaluated. And so we're not done based on what you see today or even what has been proposed.

I think many of you have seen this before this is an iterative process. What we do in terms off characterization and evaluation, interim remediation all create a feedback loop that help us adjust in terms of hold we approach te characterization, what we do with that information and place what systems we put in place, so that we ensure that we're getting the most effective result from anything that we put into place either as an interim remedy, which is what we're talking about right now. Anything that we do prior to proposal of the final remedy is only an interim

remedy. Is it not necessarily all that we will do. It may be part of what the final remedy is but is not necessarily everything.

The check marks are required items that we've completed. Where you see the round circles, those are ongoing things that will continue throughout the characterization. And were you see the dash marks are those areas that remain to be done but are scheduled to happen within the next several months.

This map indicates the location of the three -- the nine monitoring wells that we're installing in the three clusters of three. Those are based on the best advice of the staff, of the -- of Shaw Environmental. They were presented to the New Mexico Environment Department and approved for those locations. Again, those are not necessarily the last of the monitoring wells that we install. Everything that we do will be data driven, and so based on what information we gather from those monitoring wells, will determine whether we need additional monitoring well and in what direction those monitoring wells should be installed so that they are placed in the most effective locations.

There's been quite a bit of discussion on volume of the plume, and so I just wanted to spend a

minute to address at least our perspective on that. Kirtland and the Air Force will be dispute really any amount that is postulated for the plume, and the reason we won't dispute it is because it's not possible to prove definitely. There are estimates and they're based on a variety of assumptions. It's not to say that we don't take it seriously or that we don't believe this is a serious thing. There's -- I've said this before as other meetings and I'll repeat it again today, there's nothing good about having any amount of jet fuel on the aquifer or in the ground, and so it's not our intent to make light of this in any way or by suggesting that the volume is not a critical planning factor for us to suggest that we don't police believe that this is serious.

The challenge is, is that it's not a primary factor that assists us in characterizing, evaluating or treating the contaminants, and it's also on a safe indicator -- it's not an indicator of safe drinking water. We won't put a gauge on our extraction methods, whether that's SVE or pump and treat, and when ir reaches a certain amount, 24 million gallons or whatever that may be say, "We're done," because we can't. Because the final remedy and the safe drink water is not dependent on volume; it's dependent on a

measured legal concentration level. And so although we certainly understand the seriousness that goes with a large volume of the fuel being underground, the Rio Bravo we're not dwelling on the volume is it does not assist us in the remediation in any way. It's the concentration of contaminants in the vadose soil, which is essentially the soil from the surface to the ground water. The LNAPL and the dissolve phase that can be directly measured. Those contaminant levels can be measured, they are measured in all of our what amounts to now 213 monitoring wells, both soil and groundwater.

These concentration measurements are what are necessary to characterize, evaluate and treat the contaminants. Specific maximum contaminant levels that you've seen presented in the NMED briefing are established by law. It is those levels that will determine no further action, not an estimate of what fuel has been removed because those are the only things that can be measured and that is what the legal requirement is.

And so, again, we're not making light of the amount of fuel that may have leaked. The challenge for us is that that does not -- it doesn't assist us in any way in speeding this up or providing

characterization information that's necessary for how we take action. It's the concentration of the contaminants, and so that's where our focus will always be and it is the only thing that we can actually measure. We can't measure the volume.

Regarding contingency planning, we plan an expect interim and final remedy to ensure continued safe drinking water for Ridgecrest, Kirtland and VA wells. Nonetheless, water providers, which is the water utility authority, Kirtland Air Force Base and the VA should conduct what-if contingency planning, we should share that discussion that addresses potential worst-case scenarios what I've put in quotes in italics there is the direct quote from -- this is the secretary of the Air Force, Yonkers, regarding the Air Force commitment. If the contaminants from the plume enter the drinking water and make it unsafe, the Air Force will assist the city and the water utility authority in providing safe drinking water until the situation can be remedied.

Again, our intent is never to be there. It is also difficult to speak about specifics when we don't know yet what may be required for contingency. It's also not possible under law and the anti-deficient act for any federal employee to make an

open-ended commitment for funding other than to say that we making the commit to ensure that there's safe drinking water. So it's difficult to say what the required funding is because we don't know yet what the contingency planning requirements will be either for the water utility authority or for Kirtland Air Force Base or the VA, and those are the discussions that we're beginning.

Colonel Kubinic, the installation Mark Sanchez, your executive director. I've met with a John Stomp recently. We plan to begin or continue those discussions in earnest so that we have a contingency plan that ensures the health and human welfare of those that will -- that drink from these production wells. And they are Kirtland Air Force Base, residents and employees also drink from the well that is actually the closest downgradient from the contamination, and so we are certainly motivated and most of us live in the community and drink the water utility authority water that is provided.

We fully agree, and I think most would -- I would hope would agree that we've been sincere about public participation. We think it's a necessary part of the contingency planning. We believe it's a necessary part of how we move forward in this. We'll

continue to be work with all the stakeholders, and there are many. Yes, the New Mexico Department Environment is the regulatory authority but we have always recognized and is the reason that we initiated the stakeholder task force which includes six other entities, which include the water utility authority. We recognize the importance of the water utility authority, we are recognize your obligation to provide clean water, safe water to your ratepayers, and we understand the threat that the plume can cause it it's not properly remediated. So we do not underestimate or minimalize the water utility authority participation, we have not, since the beginning, and we will continue to do that modify it as necessary.

There's one -- I'm going to go to one backup slide, if you'll indulge me, on SVEs, because it may help a little bit in understanding I think sometimes what's said about an SVE can't remove fuel from the ground. Now, I'm not an engineer, I'm not a geologist, I'm not a hydrologist, so the good news is I can't get too technical on this. So I'll do my best and then Tom or Jim will rush up here and save me from myself if I say something that's not correct.

What happens is that the LNAPL, just as if you had a can ol gas in your garage and left the cap

off, the LNAPL something volatilizes. The fuel is a volatile substance, so it evaporates. That means it's losing volume from the LNAPL as it turns into vapor. SVE system then extracts and burns that vapor. The placement -- knowing where the thickest part of the plume was important because we needed to ensure that we got these initial soil vapor extraction wells owe the thickest participant of the plume so that you have the greatest saturation of vapors from the greatest concentration and thickness of fuel.

And so it is sucking liquid LNAPL out of the ground through some sort of piping and burning it? No. What it's doing is taking the vapor that's coming off that LNAPL and burning it. And as -- it will continue to volatilize. The fuel will not stop volatilizing. It will continue to be evaporate, and so by burning the vapors, and as you do that at a larger volume in critical places, you do remove LNAPL through the SVE system.

And I guess maybe the best analogy, as least for me to understand that is, when you operate your car, there's not liquid fuel going into the cylinder that's running your car. It vaporizes and volatilizes in the cylinder, it burns and the car runs. But unless your put more fuel in your tank, your fuel gage

is going to go down. And so the same principle applies to soil vapor extraction in terms of its ability to extract LNAPL. So soil vapor extraction will remove LNAPL, that vapor does not replenish itself in the LNAPL. It's burned off and so the volume can be brought down.

So soil vapor extraction is, and that's a simple -- did I get it right? Okay. From a very lay mind in understanding what this does. Subject to your questions, that's the end of my presentation.

CHAIRMAN SANCHEZ: Commissioner Hart Stebbins and then Councillor Garduno.

COMMISSIONER HART STEBBINS: Thank you, Mr. Chairman.

And I want to thank both the representatives of Air Force and NMED for being here tonight. Both of you have come to talk to this body more than once in the past, but we've never had you here at the same time, so this is particularly helpful. And I think it's -- and it will be helpful I think in answer this question because you have said a couple times that the Air Force engaged Shaw Environmental on a performance-based contract. And I guess the only thing I've been able to find is a draft of that contract and the performance matrix that are contained

in that. And one of those performance measures is within a year from notice to proceed, which would be September of 2010, was complete installation of an interim measure. And it's very specific, that interim measure to contain the LNAPL footprint so it does expand or move.

And I'm wondering, so we're now nearly nine months past that deadline, that benchmark, and I know Mr. Berardinelli you and I have talked about this, it has something to do with the interplay between environment department and Kirtland. Can you explain -- so we're nine months past that benchmark, how close are we to meeting that?

MR. BERARDINELLI: As far as the contractual requirement that the performance-based contractor has, they net the requirement because they made the proposal for that LNAPL containment system is December of 2010. We can't proceed with anything in this remediation, whether it's a method of characterization, an interim remediation without the approval of the New Mexico Environment. And it's a checks and balance.

I think what you're getting at, and as more information becomes available, there are differences of opinion on what will work and what will not work

and whether something like the LNAPL containment will be effective as a containment system. The Air Force believes so. We proposed it. The New Mexico Environment approved the drilling of the well, but stopped short there. And I won't speak for them on their motivation for that, Jim can do that, but it does amount to a difference of opinion. In the end, differences of opinion are solved in this matter by the regulatory authority. And so if the regulatory authority directs us to do something or not to do something, regardless of what the contract says, that must be what we comply with. So in the end, we are going to comply with the direction of the New Mexico Environment Department. The contractual measure really becomes more of an internal Air Force mechanism that determines whether a certain action is part of the initial contract or requires a task -- a separate task for modification.

What we do isn't really dependent on that mechanism. We will propose through that mechanism, but we will do that ultimately is approved by the New Mexico Environment Department. And Mr. Chair and Commissioner Hart Stebbins, as you're aware in the many venues that we present this, and I've been there where we have five highly qualified Ph.D. hydrologists

and they will each give five different opinions on how to approach this, we have our contractor so that's the opinion we begin with. We listen to the rest of the stakeholders, we listen to the public. The contractor is with us when they're there. They factor that into what they provide, but then ultimately we execute what is approved by the New Mexico Environment Department.

I'll let Jim speak to that.

DR. DAVIS: Thank you. It's a really good question. I really appreciate it Mr. Chair and Commissioner Hart Stebbins.

What Tom just said is in fact true. There is a difference off opinion. What I said earlier during my presentation is we don't want to make the situation worse. I'm going to use my hands, Mr. Chairman. I don't have a graphic to help visualize this.

You've heard us talk of the toe of the plume. Consider my wrist to be the heel, my fingers to be the toe. The thickest part of the plume -- it doesn't show thickness. The thickest part of the plume is towards the heel. The extraction well is placed approximately here. We've learned in the past, unfortunately, quite frankly, by if you put an extraction well at the toe of the plume and you begin

to vigorously pump the extraction well, you have the potential of changing the dynamic, the movement of the plume and causing it to move much more rapidly in that direction and smear that contamination through the subsurface.

Currently, the only effect that is operating on the plume other than the remediation strategies is the movement of the regional groundwater aquifer and potentially the cone of depression created by pumping at the Ridgecrest well field, as well as Kirtland and VA wells. So our concern is, we know where the thickest portion of the plume is, that's target, if you will, the center of the target, that's where you want to remove the contamination from, that's where the soil vapor extraction wells are placed. If you pump vigorously at the front of the plume, there is the potential that you will cause that to flatten out and move through the subsurface much more rapidly than it otherwise would. Which is an example of making it worse that it currently is.

Now, having said that, we have approved, the well has been drilled, it's not yet been developed, it needs to be developed, we want that in place so that as the data come in from the soil vapor extraction effort, if those data demonstrate that we're not

achieving what we think we are going to achieve, then we already have this interceptor well -- again, my term, no one else's -- in place so that if we need to use it, we can. But initially, we do not want to use it because we're concerned about making the situation worse rather than improving it.

COMMISSIONER HART STEBBINS: Thank you, Mr. Davis. I appreciable that.

And I think that this is part of the frustration that I think some of us feel. You know, we look at the contract. You can assume that those performance measures were established with some sense that they were realistic, and yet, we see months go by without those standards having been met. And understand, but I hope you understand from our perspective, too, that when those benchmarks are not met, we feel pressure from the public and the community to explain.

MR. BERARDINELLI: Mr. Chair, Commissioner Hart Stebbins, I will say that I share in your frustration. At the proposal of the contract, that was based on the best information we knew at the time, which was prior to the extensive data that we have today from the 113 monitoring wells that were installed as part of the contractual requirement. I think that the contractual

requirements in terms of the performance-based contract are open enough that we respond to new data and new information. And as Dr. Davis said, the decision has been made at this point to hold off on an actual pump and treat system at the toe of the plume. The good news I think in terms of our collaboration and discussion -- and this also included the other stakeholders, including the water utility authority, was okay, but let's be ready. Even, you know -- and we have to agree to disagree with the regulator once they make the decision because that is the last word regardless of what the contract says.

But what I think was good out of this situation is we said, well, okay, we're not going to pump, but there's no harm in putting that well in, in developing that well and being prepared so that as we see the results of the initial operation of this thermal oxidation, this larger scale SVE unit, if -- it will become obvious, you know, who was right or who had a better estimate of this, and then we will react to that.

If the containment system is not needed, I think that's great, because we don't want to have to do pump and treat and have a waste stream if we don't have to. So that will be great. If the thought after

the we see the behavior of the plume, after this larger scale system is in operation, then we do have the option of doing that. And, again, those are interim measures. This doesn't preclude us from doing other measures that maybe we didn't plan on based on the information we had at the time that as we get these additional monitoring wells in and as we see the behavior of the plume to this interim remediation, it doesn't prevent us, under the performance-based contact -- in fact, under the performance-based contract, it allows us that flexibility to really do what is necessary based on the technology that's available and ultimately what the regulator will approve to respond to how the plume behaves.

However, there's no way -- there's just no way to do that other than this iterative process of to implement an action and then evaluate it and then respond to it. I certainly -- I understand the frustration of the public and the board on, you know, why can't this move faster, or, you know, I wish we knew everything we know today back in 1999 and we would have started that to begin with, but we didn't, and it has been through this iterative process. And we will continue to respond in that way to remediate the plume. But it stills leave us options.

COMMISSIONER HART STEBBINS: Thank you. And I guess -- let me just ask you about one other performance measure.

Benchmark was by September 2013, containment of the groundwater plume. Any possibility that that is realistic.

MR. BERARDINELLI: We'll know soon enough after the -- we can see the results of the soil vapor extraction system. Again, those dates are based on our best estimate of what we knew at the time that the contract was submitted, but it doesn't restrict the contract as we get new information.

COMMISSIONER HART STEBBINS: Because I'm assuming when it says containment of groundwater plume, that would the dissolve phase?

MR. BERARDINELLI: No. Essentially, the plume exists in three states: The LNAPL, which is a fuel that is on the water table; the vapor phase, which is throughout the vadose zone and above where that LNAPL phase the dissolve phase. The containment system refers to the LNAPL plume. It's the LNAPL plume which feeds the dissolve phase.

The only way that -- technologically today to address the dissolve phase is to go after those other two phases. It isn't possible to isolate the

dissolve -- it isn't possible to employ three different methods against those three different states. There's the dissolve phase is such small quantity, you would have to pump millions and millions of gallons and try to get after that dissolve phase and still may not be able to do that. So by remediating what is a vapor state and the LNAPL, you choke off the supply to that dissolve phase, and then it attenuates, dilutes, essentially, ultimately so that you are not over a maximum contaminant level. And so the containment was focused on just the LNAPL phase in an attempt to have is a cutoff to where it leaches into the dissolve phase.

COUNCILLOR O'MALLEY: All right. Thank you very much for being here tonight, for your answers. I hope it's possible if we have further questions, we can submit them in writing.

MR. BERARDINELLI: Absolutely.

COMMISSIONER HART STEBBINS: Okay. Thank you very much.

Thank you, Mr. Chairman.

CHAIRMAN SANCHEZ: Thank you.

Councillor Garduno.

COUNCILLOR GARDUNO: Thank you, Mr. Chair.

Mr. Berardinelli, it goes without saying,

I've told you in the past, thank you very much for all the openness that you've shown from the first day that we talked about it. But I'm sure that you understand that these questions need to be asked or else both neither you nor I would feel like progress is being made.

That said, I know a lot has been said both by yourself and Mr. Davis from NMED that vapor extraction is not the only method that will be employed or is contemplated, but I'm curious as to what other technologies have you looked at, are there other technologies that you have explored, or how imminent are we to the use of them so that we can start looking at those three phases, if you will, to ameliorated. And also how soon it's going to happen.

MR. BERARDINELLI: Well, soil vapor extraction is not the only technology that we have explored and is part of our, as I mentioned to Commissioner Hart Stebbins, the LNAPL containment system is a hydraulic pump and treat system. The challenge with a hydraulic pump and treat system is, you are generating a waste stream in terms of contaminated water that has to be treated, and then you have to find a way to discharge the water. That may be necessary, and if it's necessary, what we believe it is part of a containment

that's been proposed.

We've been asked to holed off on that until we see the effectiveness of the larger scale SVE system. But that pump and treat system can be put into effect relatively rapidly and reason we drill that well was to shorten that time span. You also heard Dr. Davis mention in well or in ground stripping or sparging, which is an another technology that we're looking at, the contractor is looking at right now, that could potentially be used as a containment system also, where it actually treats the contaminant in the well below the groundwater and there it doesn't create a waste stream.

So we are very interested in that, as well. And so at least those three technologies are the only ones right now that we are aware of that exists. In addition to those installed technologies, there is bioremediation. Although bioremediation is not as effective against EDB, it has been very effective against the BTEX compounds, and because of the effectiveness of that bioremediation, those compounds and have not migrated.

So while these manmade, if you will, remediation actions are occurring, there is also the bioremediation, and that is also enhanced when you're

pumping all that air into the ground with this larger scale SVE because you're getting more oxygen down there well. So you have those technologies and the potential for bioremediation or the continued use of bioremediation. So it's more than just SVE, it always has been more than SVE.

COUNCILLOR GARDUNO: And I understand that.

Mr. Chair.

Mr. Berardinelli, if we were to have to go to pump and treat, and I'm looking now at the quote -- statement made by Air Force -- is he a general -- Yonkers in assurance to Mayor Berry that things would be done so that safe water would be supplied to Albuquerque or the area or whatever. Who's paying for that?

MR. BERARDINELLI: Secretary Yonkers reiterated that in the recent letter that he send both to the board and to Senators Bingaman and Udall. Again, I have to be careful -- I can't make an open-ended commitment that says we'll pay for things that we don't know yet what's required. Once we know what the contingency plans specifically will be and we know what's required, we then will be able to determine what Air Force funding can be used for that.

I think somebody mentioned before that

Kirtland's, you know, money is going to run out on this. Well, this has been a Air Force effort from the beginning, so it's not just dependent on what the Kirtland budget is. The initial $50 million investment in the contract is the beginning. It's not necessarily the end if it takes more to complete the remediation.

As far as the contingency planning goes, I would say, Councillor Garduno, although there will certainly be an Air Force participation and contribution to that, it's premature to say exactly how much or what we would say until we know exactly what that contingency plan requires.

COUNCILLOR GARDUNO: Mr. Chair.

Mr. Berardinelli, but a good statement would be that the Albuquerque Water Authority rate payers would not be paying for it.

MR. BERARDINELLI: Mr. Chairman, Councillor Garduno, I can't speak to that. All I can say right now is the commitment which you have from the assistant secretary of the Air Force, which is on the slide that I have up now.

COUNCILLOR GARDUNO: And if I could, one other thing that came up in the discussion was -- or has come up in past is that since we know don't know

whether it's a million at the outset, 8 million sometime later and now 24 million that we shouldn't be talking about this because it's just going to unduly alarm the public, and that's been said a number of times by different folks.

Do you think that?

MR. BERARDINELLI: Well, I haven't said that, Mr. Chair, Councillor Garduno, and you heard me reiterate it tonight. The Air Force isn't going to dispute a specific amount. And we believe that this plume is serious. As I said before, there's nothing good about having jet fuel on the water table in proximity to production wells.

So I'm not making light of that at all; this is serious. My only point is that the volume discussion, although interesting, and is an estimate of what may be there, from our standpoint, it doesn't help us to remediate the plume. There's no data in terms operate 24 million, 8 million or whatever it may be that would then drive us to say, well, we'll, do A instead of B because it's 24 million versus 16 million. It just doesn't drive the decisions we make and how we measure success. Success will be measured on this by getting the contaminant levels low, the legal maximum contaminant levels. And so we don't

necessarily stop at a specific volume.

So I'm not making light of it. It's just from a -- contributing to what we do, it doesn't provide us any information that informs a technology, a method or a step that we take.

COUNCILLOR GARDUNO: And, Mr. Chair, if I may continue just for a second.

Mr. Davis, I don't know if you have the answer to this, but it seems like NMED was going at a certain rate of requiring, asking, working with the Kirtland Air Force Base back in 2008, '9 and then in 2010 there was a change. And I don't know if that was the time that you came in as director or --

DR. DAVIS: Mr. Chair, Commissioner Garduno, no I've been on this job for a little over a year.

COUNCILLOR GARDUNO: So there was a lag time. And I don't -- I hesitate to use the word lag, but there was a time where it seemed like NMED stepped back. And I don't know what the circumstance, and be that were there might be able to remember.

DR. DAVIS: Well, I can speak to it, Mr. Chairman, Commissioner Garduno, no, the environment has never stepped back. What we did in 2010 is we shifted this from the groundwater quality bureau, which did not have oversight of the permit, to the

hazardous waste bureau, because the enforcement action, the authority to do this is contained under the permit that they have, which is administered by the hazardous waste bureau. So the shift that the environment department made was from the groundwater quality bureau over to the hazardous waste bureau so that the regulatory authority was in line with the effort.

COUNCILLOR GARDUNO: And there was a qualitative change, taking it from groundwater protection to hazardous?

DR. DAVIS: Mr. Chair, Commissioner, I'm not quite sure I understand what you mean by "qualitative."

COUNCILLOR GARDUNO: Well, just the words, water protection --

DR. DAVIS: Yeah, the answer --

COUNCILLOR GARDUNO: -- as opposed to hazardous.

DR. DAVIS: The answer is no. There has been no change in terms of the approach that the environment department is using. What we did was shift from one bureau to another to align the effort with the regulatory authority that we have. So the regulator authority is expressed in the hazardous waste permit. Accordingly, the hazardous waste bureau, under the

authority they have to implement and require action by -- under that permit, that authority is now in line with the project. The groundwater quality bureau does not administer the hazardous waste permit, does not have the authority. They operate under a ditch set of regulations. So we aligned the action of the agency with the appropriate regulator authority.

COUNCILLOR GARDUNO: And now we -- or you fell comfortable that this is the right place for this investigation to be at, the hazardous?

DR. DAVIS: Yes, we do. Let me say something else. Approximately a year ago right now, we expanded the technical basis of our effort by including a petroleum storage tank bureau, which has regulatory authority or oversight in this circumstance whatsoever but they have technical and scientific expertise, and so we formed and interdisciplinary team that has people from the petroleum storage tank bureau, from the hazardous waste bureau, from the groundwater bureau, drinking water bureau, as needed, as well as other stakeholders, again, staff of this board, to help us address this in the best way possible. So we've actually got what I would characterize as an interdisciplinary team involved in this. But the regulatory authority, our authority to require action,

comes through the hazardous waste permit. Accordingly, the hazardous waste bureau is in charge of this.

COUNCILLOR GARDUNO: And --

CHAIRMAN SANCHEZ: Excuse me, Councillor Garduno, I'm going to invoke the ten-minute rule, because Commissioner De La Cruz wants to ask questions, then we can go back and ask any additional questions.

COUNCILLOR GARDUNO: That would be fine with me.

CHAIRMAN SANCHEZ: Commissioner De La Cruz.

COMMISSIONER DE LA CRUZ: Thank you, Mr. Chairman.

Mr. Berardinelli -- I hope I said that correctly.

MR. BERARDINELLI: Yes, sir.

COMMISSIONER DE LA CRUZ: This is rhetorical, but who do you work for.

MR. BERARDINELLI: General Harencak, he commander of the Air Force Nuclear Weapons Center is my commander.

COMMISSIONER DE LA CRUZ: Do you work for Kirtland Air Force Base.

MR. BERARDINELLI: I recently moved from working for the installation commander to the Air Force

Nuclear Weapons Center. But I've stayed involved in assisting with this effort.

COMMISSIONER DE LA CRUZ: And so the dialogue that you're involved in tonight and things that you hear from the public and from elected officials, you take back to your bos.

MR. BERARDINELLI: Oh, absolutely, sir. And more than just Kirtland Air Force Base. Every Friday -- to give you an idea of the interest in this by Air Force leadership, every Friday at 1 o'clock, I, my leadership, various agencies around the Air Force are engaged in a teleconference for about an hour with Secretary Yonkers' office, with the assistant secretary of the Air Force.

And we go over everything that we have done that week, what we are still doing. And so absolutely, Mr. Chair, Commissioner De La Cruz, Secretary Yonkers, all the way to Secretary Yonkers at the highest levels of the Air Force, they know exactly what's going on, the concern.

Secretary Yonkers also was here last November, and it won't be the last time that he's here and attended a leadership level meeting of our stakeholders and so he had the opportunity here directly from members of the executive staff of the

water utility authority, Commissioner Hart Stebbins was there. The mayor met individually with Secretary Yonkers in December.

So the message, I can assure you, Mr. Chair, Commissioner De La Cruz, gets to not only my leadership here at Kirtland Air Force Base but to the highest levels of the United States Air Force, and they are very much concerned and involved in what we're doing with this on a weekly basis at least.

COMMISSIONER DE LA CRUZ: Now, you know, every time we have one of these meetings, we have good people, members of the public that come, take time out of their day to encourage us, to go goad us, to prod us to some sort of action.

Now, that's been a bit of a discussion here at this dais. But how can we help you? Is there something that we need to do? We've talked about some resolutions this even. You're heard about that earlier. What can we do to help.

MR. BERARDINELLI: Mr. Chair, Commissioner De La Cruz, I think you already are. Your staff, your executive director, Mark Sanchez, John Stomp and other members of the staff have been part of our stakeholders task force. We've had some individual meetings with Mark and John and have offered to do

additional meetings specifically on the contingency planning.

We've been in discussions with each other recently on sharing with each other what the Kirtland contingency plans are, what the water utility authority contingency plans will be so that we can address some of the things that were addressed in the resolution.

So with or without the resolution, Kirtland Air Force Base will communicate and work with the waster utility authority and respond to the public's concern. We'll continue to do our multiple public venues and updates, meetings with the homeowners associations and neighborhood associations. So regardless of the resolutions -- I think the one aspect of the resolution that's possibly the most necessary is the empowerment of the executive director to be able to represent the board. And so I think that aspect of it I think would be necessary. But regardless of whether or which resolutions are passed, we will continue to work with you, your staff and the public and the environmental department as we move forward.

COMMISSIONER DE LA CRUZ: Now, it's clear to everyone I believe by this point that this is a

complex issue; that there's technology that is available, but where do you start, how soon do you start, where do you implement is still a big question. And that being said, it also seems that we have to absolutely understand the nature, scope of the problem, and that continues to move forward. That understanding is essential to the ultimate remediation or remedy.

And I believe that we have to have that contingency plan in place in the event that the plume moves towards those wells. And so I think that's absolutely critical and I appreciate the fact that Kirtland is willing to make sure that we're whole as we move forward in terms of providing water to the citizenry.

I do have a question for Mr. Davis.

Mr. Davis, this is going to sound rhetorical as well. Why are you involved?

DR. DAVIS: Mr. Chair, Commissioner De La Cruz, we are the regulatory authority. That's why we're involved.

COMMISSIONER DE LA CRUZ: Did somebody from this dais call you up on the phone and say, "Hey, Mr. Davis, can you come down here and" -- "we've got a problem. Can you check it out?"

DR. DAVIS: Mr. Chair, Commissioner De La Cruz, no, at least not to my knowledge. When the release was discovered, it was reported to us, that was the appropriate action, and we've been involved ever since.

COMMISSIONER DE LA CRUZ: Would you say that your efforts are vigorous?

DR. DAVIS: Mr. Chair, Commissioner De La Cruz, I would say that our efforts are vigorous, yes.

COMMISSIONER DE LA CRUZ: Are they made so more because we're talking to you tonight, or are they going to continue to be have vigorous regardless?

DR. DAVIS: Mr. Chair, Commissioner De La Cruz, they would continue to be vigorous regardless. But it is important for elected officials to be actively engaged in these processes because that's the way our system of government works.

And so we appreciate your involvement, we appreciate your concern, we quietly expect it's, that's what you're supposed to do. But that's what we're supposed to do also. So we would be on this, but I like the fact that we're also being pushed. I think that's way it's supposed to work.

COMMISSIONER DE LA CRUZ: Good. I'm glad to here that. Well, I can share with you, I know you're

not here for every meeting, but we're talking about it every meeting, and we're going to continue to.

DR. DAVIS: Good.

COMMISSIONER DE LA CRUZ: To point to all of this though is that much effort is being made. I think it's important for members of the public to understand that. And that's why I'm sounding a bit rhetorical in some of these questions.

We take it serious, we're going to continue to work towards that, we're going to make sure that we have contingency plans. We obviously appreciate what you have to do as part of your job that's necessary and as well as what the base is doing as well. And so we're going to continue to move forward and continue to take this as seriously as we have been. And hopefully, we will eventually get to the point where we have this problem fixed.

And so I appreciate also that staff has been working and has been in concert with all of the players involved so that I hope that the public can take away that the staff, state staff and the base staff and all the elected officials, including the mayor and the commissioners and councillors are very well engaged. Because sometimes I get the sense that the public thinks that isn't happening, and that's

unfortunate, because it is happening. We can't wave an magic wand and all of a sudden everything becomes okay. It just takes a lot of effort. This is a problem that was created over many, many years and it's problem that's going to take years to fix as well. But as Mr. Davis said earlier, you want to do it well, you want to be thoughtful about it and not make the problem worse.

And so I do ask for patience from the public, and not to unduly alarm the public, but that we are working toward it, but we need to do it in a way that's going to be a real solution and not something that's temporary.

Thank you, Mr. Chairman.

CHAIRMAN SANCHEZ: Thank you.

Councillor Garduno.

COUNCILLOR GARDUNO: Justice under nine minutes and 50 seconds. Somebody must have an internal timer.

Let me take 5 seconds of your time, Mr. Berardinelli again to thank you for all the work you do to let us know what's happening. And in no way has anybody tried to impugn the work that the Air Force has done. It is one of those things where we need work to be done, work to be completed, and I don't think anyone has intimated, at least that I've

heard, that the Air Force is evil, that Kirtland Air Force Base is out to get us, or anything like that. And that's I think what some people are trying to, you know, paint around this pick. If anything, people are worried. People need to be paid attention to.

And I know that a lot has been made about who people work for. Ultimately, all of us both the Air Force and up here, work for the public. And that's who's asking the questions. And for anybody to then try to make it sound like if you don't work for the general or the colonel or the commander, that you therefore have to reason to be making these -- or at least asking these questions. And I propose to you again, thank you. Thank you for your openness and I will continue asking questions.

Thank you, Mr. Chair.

CHAIRMAN SANCHEZ: Thank you.

Again, I want to thank the New Mexico Environmental Department for coming down this evening and also representative from Kirtland Air Force Base.

Are there any other questions?

If there's no further business, this meeting is adjourned.

(Proceedings adjourned at 7:54 p.m.)

STATE OF NEW MEXICO

COUNTY OF BERNALILLO

REPORTER'S CERTIFICATE

I, Kelli Gallegos, New Mexico Provisional Reporter, No. P-409, working under the direct supervision of Paul Baca, NM CCR #112, do hereby certify that I reported the foregoing proceedings in stenographic shorthand and the pages are a true and correct transcript of those proceedings and were reduced to printed form under my direct supervision.

I FURTHER CERTIFY that I am neither employed by nor related to any of the parties or attorneys in this matter and that I have no interest in the final disposition of this matter.

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KELLI GALLEGOS
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