MEETING TRANSCRIPT

The Former Memphis Depot

Restoration Advisory Board

October 9, 2008

2240 Democrat Road

Memphis, Tennessee

The Restoration Advisory Board (RAB) meeting was held at 6:00 p.m. on October 9, 2008 at the Holiday Inn Select located at 2240 Democrat Road, Memphis, Tennessee.

The attendance list is attached.

WELCOME AND INTRODUCTIONS:

MR. DOBBS: Good evening. My name is Mike Dobbs, Chief of the Environment and Safety for DLA, and I'm representing the DDC on behalf of the agency. I would like to welcome you to this evening's meeting.

One of the things I want to do is I want to

introduce Mr. Winford. He's a new member. He's replacing Torrence Myers, who is I guess retired.

MR. WINFORD: Retired.

MR. DOBBS: So he's representing MLGW. So welcome. Good to have you.

I don't think we have - tonight's presentation is by Mr. Holmes from e^2M. He's going to give us an overview of what's been going on with e^2M on the installation in Dunn Field.

I would also like to go ahead and say something here. We're getting a little closer to the end, but this is going to be I think one of Dave Nelson's last meetings here. He's sort of getting ready to complete things. He'll be back for a public meeting; but again, I just wanted to demonstrate that we're getting closer and closer to the end, we'll start seeing people leave the team and move on. It's a good day and it's a sad day. So, I just wanted to get it out there for everyone.

As we go on with the meeting, remember, if you can hold your questions until after Tom's presentation, we will appreciate it and we'll get to those. So, with that, I will turn it over to

Mondell.

MR. WILLIAMS: And I would like to say good evening. I would like to welcome everybody to the Restoration Advisory Meeting, October, and I just want to thank everyone that's here. And I've seen these four -- this one gentleman and these two ladies for the last ten years very diligently working toward the environmental effort that we have had at the Defense Depot, and I would like to thank y'all myself.

REVIEW AND APPROVE AGENDA:

MR. WILLIAMS: And I just want to know if everybody has reviewed the agenda and would like to approve it with everyone saying "aye." If you disapprove, say "nay."

(Brief pause.)

MR. WILLIAMS: So would someone like to make a motion to approve the agenda?

MR. TRUITT: Move it.

MS. PETERS: I'll let him.

MR. WILLIAMS: Okay.

MS. PETERS: Mr. Chairman, I move that we accept the agenda for today.

MR. WILLIAMS: All in favor?

MR. TRUITT: Second.

MS. PETERS: Yes.

MR. WILLIAMS: None opposed? So the agenda is so moved.

OLD BUSINESS:

MR. WILLIAMS: Old business, does anyone have any old business to discuss from the April meeting? Everyone has read the last minutes and are comfortable with it?

(Brief pause.)

MR. WILLIAMS: Okay. We'll move right along.

NEW BUSINESS; UPDATES:

MR. WILLIAMS: Mr. Tom Holmes has a presentation.

MR HOLMES: Hello. My name is Tom Holmes from e^2M. We had some technical difficulties

earlier, so I was a little concerned about that. But anyway, so I'm going to be going over the activities going on, the restoration at the Depot since our last meeting in April. We're going to cover all the areas of action there. That's the Main Installation Remedial Action, the Dunn Field Source Areas Remedial Action, the upcoming Dunn Field Revised Proposed Plan, and the Dunn Field Off-Depot Groundwater Remedial Design. And this is -- as Mr. Dobbs referred to, this is -- CH2M Hill has just completed the final Remedial Design for the environmental restoration at Dunn Field. So we're excited about that. And then we'll go through the next steps.

So the first of the Main Installation Remedial Actions, the components of that are the Enhanced Bioremediation Treatment of groundwater in two areas of the Main Installation where treatment has been ongoing since 2006. And we had planned to end in August of this year, but we've extended that to February of 2009. We're not quite at our remediation goals, so we're going to go a little bit longer there; and we're performing quarterly groundwater monitoring to monitor our progress

towards the remediation goals.

Also in the areas of the Main Installation where groundwater concentrations are lower, we use the Monitored Natural Attenuation, and that's -- we are collecting groundwater samples on a semi-annual basis to monitor the natural attenuation. That's just the sort of natural degradation and reduction of the concentrations in groundwater over time, and we monitor it to see if it's meeting the expectations.

And then the final component, Land Use Controls, basically consists of an annual site inspection to make sure that the activities at the site meet the restrictions and the Land Use Controls that are filed for the property.

These are the two areas. So here is the Main Installation, with Airways here. Treatment Area 2 over in the southwest -- or Treatment Area 1 in the southwest corner, Treatment Area 2 in the eastern portion, right behind the police station.

Now, this shows the groundwater. The colored lines you see, the green represents groundwater concentrations of perchlorethene, and the red are the concentrations of TCE. Those are the two

primary chlorinated volatile organic compounds in groundwater, and these are -- of course, the plumes are on the two treatment areas, and they've been reduced in size while we've been treating it, here and here.

And additional monitoring wells over the last couple of years, we've delineated the additional plumes at the site, and we're looking into whether there they have concentrations, a couple of them, that are similar to concentrations in the treatment areas, and we're looking at whether additional Remediation Action might be required, and we're performing a Soil Investigation to look at -- for potential source areas in the soil of these plumes, as we've done at Dunn Field recently.

And we're looking in the two treatment areas, Treatment Area 1 and Treatment Area 2, what we're calling the west central plume and the Building 835 plume. We're looking at the up-gradient portion to those plumes and the grids you see here are where we're performing what's called a Membrane Interface Probe Survey.

So the Source Area Soil Investigation is meant to

identify source areas for the groundwater plumes on the Main Installation. We've looked at past operations at the Depot and soil and groundwater sample results that have been collected over time to determine the areas requiring investigation. Membrane Interface Probe Surveys are being performed at the estimated 273 locations marked out initially in the five areas I showed on the map previously.

Now, the Membrane Interface Probe, you may recall, we used that technique on Dunn Field to identify the source areas for remediation there. It worked very well. Basically, a probe is pushed down into the ground about 30 feet and collects the measurement, sort of a semi-quantitative measurement, of the chlorinated volatile organics in the soil every tenth of a foot or so, all the way down. So you get a good picture over depth, and we're doing it over a grid to see what we can find.

We're collecting soil samples to confirm the results, as we did at Dunn Field. We began field work in August, and we'll be done in November. And then once we get the results, we will review

them and determine if additional Remedial Action is necessary.

So, with that, we'll move on to the Dunn Field Source Areas Remedial Action. Here is the northwestern portion of Dunn Field. Here is the railroad, MLGW substation on Menager and Regan there, and the four areas where we're performing Remedial Action.

So the components of the Remedial Action on Dunn Field are the Fluvial Soil Vapor Extraction system, limited areas for excavation, transportation and disposal, the loess Thermal-Enhanced SVE system, Zero-Valent Iron Injections in groundwater, and Land Use Controls. And we've talked about I think all of these over time. These were in the Source Areas Remedial Design that was briefed probably a year and a half ago. So, those are the actions, and I'll go through each of them.

So this is a cross section schematic for Dunn Field kind of indicating where the areas are. The ground surface is where the Land Use Controls take place. And the two shallow areas of soil excavation are occurring up there. And then as

far as the primary activities, we've got the Thermal-Enhanced SVE and the loess. The Loess is a clayey-type soil that doesn't transmit water or air very well. So we're using the heating of the soil that drives -- the heat drives the contaminants and vapors to our vapor extraction wells.

And then we've got the Fluvial sands SVE, which the sands are more coarse, and we put a vacuum on the wells that draws the contaminants in, and they go to a treatment system. And then the bottom of the blue indicates the groundwater above the clay at the base of the fluvial aquifer. These are the monitoring wells, and based on the results of monitoring after we've done the loess treatment, we have guidelines for performing ZVI injections in areas on Dunn Field.

So, the fluvial SVE system has been operating since July of 2007. We've removed almost 2800 pounds of chlorinated volatile organic compounds since August or as of August in the just slightly over a year of operations.

The system has prevented the migration of CVOCs through the fluvial deposits to groundwater, and

we've seen very significant reduction of concentrations in groundwater. The extracted vapors are below the discharge limits. We're expecting to operate the system for five years. I wanted to show you -- this is a little confusing slide, but just to give you an indication of the success, because we're real excited about the way the Fluvial SVE Systems worked. So these are just groundwater concentrations shown by the contours where the -- I think that's purple or red contours are the highest concentrations, then the orange, then light green I think or a dark green, light green, and I guess gray, black. And then the dots also, the more brightly colored dots, represent higher concentrations.

So we go October 2005 to April 2007, October 2007 and April of 2008. So, you can see in the first we had a concentration of about 19,000 parts per billion in a well that was just off of the -- to the west of Dunn Field. And then April 2007 about the same but a little bit lower. We've seen some ups and downs in concentrations over time. And then here, in October -- and these also you see are in the -- the highest concentrations we're

seeing in the same wells.

So, July of 2007 we began the Fluvial SVE system, and by October we had already seen the result, which was even quicker than we had really hoped for. But at that time, concentrations then were in -- this well a little further to the west was I think 8400 parts per billion or micrograms per liter. And you see there are few brightly colored wells along Dunn Field, and the well with the higher concentration has moved to the west. And that's not really because the plume is moving, but now that we're cleaning up the groundwater, clean groundwater is moving this way and diluting concentrations in the plume. The front end of the plume is staying about the same place, which is right at the corner of Regan and Menager, the far side of the substation.

And then by April of this past year, you can see all of the wells on Dunn Field, greatly reduced concentrations. Concentration in the well with the highest concentration is now even further to the west, and the concentration is almost -- just not too much more than a fourth of what it was in October. So it's been very successful there.

Now then, one of the other actions was excavation of soil in two shallow areas on Dunn Field, and we did that in November -- beginning in November of '07 through January of 2008. At completion of the planned excavation areas, we collected samples, and we met the remediation goals in some areas, most of the areas, but there were a few samples that were still above the guideline. But we needed to stop that portion of the Remedial Action to allow the Thermal-Enhanced SVE to get underway, which was a more critical step. And as soon as the Thermal-Enhanced SVE is complete, we'll go back and finish the excavations in these two areas.

Now, the Thermal-Enhanced SVE in the loess has been operating since May of 2008. It's removed almost 8400 pounds of CVOCs. Remember, the Fluvial SVE had removed 2500 or thereabouts since July. So just in the four months, since the end of May to end of September, it's 8400 pounds. In the ten years that the IRA system has been operating at Dunn Field, it's removed about 900 pounds. So, you see what a large mass has been removed, and we think we're getting most of the

mass that's there. So it's having a major impact. Temperatures, I think we've talked about the Thermal-Enhanced SVE before, and basically, we've got metal rods in the ground that heat the soil and heat it up to about the temperature of boiling, and then that steam drives the CVOCs towards the vacuum extraction wells.

So, soil temperatures are near our goal of 100 degrees Celsius in the treatment areas, which are from 5 feet to 30 feet below ground.

Extracted vapors and condensate are treated to remove the CVOCs, and the air condensate discharges meet the current limits.

Now we are to -- the basic way we're confirming that the cleanup goals are met are confirmation soil samples. So we're doing that in a phased approach. Forty-seven locations were specified in the Remedial Action Work Plan that was approved by EPA and TDEC, and we collected the first samples in August in areas where we had seen good progress toward meeting the goals. And then in September we did another round where we took samples at all of the plan locations where the remediation goals haven't been met. So, as of those samples in

September, we had met remediation goals at 33 of the locations. We're continuing to treat, and we'll be expecting the treatment and the sampling to be complete in November.

The final component was ZVI injections. We've done ZVI injections in the area near the substation a couple of years ago, and the injections, which we made in the source areas where concentrations in groundwater are above a thousand parts per billion. The highest pretreatment concentrations we've seen in Dunn Field over the number of years samples were collected -- were 49,000 parts per billion. I showed you the slides earlier with the groundwater concentrations on the map; and the recent samples we've taken on Dunn Field, we don't have any wells in those source areas that are above a hundred parts per billion.

So, based on that, we had thought that even with the soil treatment there would be some areas in groundwater where you would still have some source of CVOCs or high concentrations and that we would have to go in and treat that. Well, we weren't right in that, and so in sampling the wells in the

same locations, we've seen the reductions. We don't have any concentrations now, and ZVI injections will not be required on Dunn Field. Next I want to talk about the Revised Proposed Plan. We've mentioned changes in the remedy over time and the cause of a fundamental change to the Off-Depot remedy from where we plan to use air sparging and Soil Vapor Extraction, for the Off-Depot groundwater plume instead of a Permeable Reactive Barrier. Because of that fundamental change, we had to prepare a Revised Proposed Plan, and then we'll have to have a ROD -- an amendment to the Record of Decision.

So we're going to have a public meeting about that. We just wanted to go ahead and let you know what the changes were, and we'll provide a lot more information at the public briefing on that. So here, again, this is the latest concentrations in April. Again, the top of the lines represent the concentrations, with the green being the highest. I think that was 5,000 parts per billion. And then the orange, red, and then down here I think is 5 or 50 parts per billion. You can see back in April. So we didn't really have

very many high concentrations on Dunn Field anymore, but we do have this Off-Depot plume. This is the location, this plan for the air sparging and SVE system there. Of course, here is the substation, and this is the boundary of Dunn Field here.

In addition to that fundamental change, there are other changes in the remedy, some of which were planned and some of which have already been implemented that need to be documented. And so the other changes and just clarifications to the remedy are also put in the Revised Proposed Plan and will be in the ROD amendment, so just all the information is in one place. And those other changes are the length of treatment objectives for the air sparging SVE system, the area or extent of the SVE treatment in the subsurface soils in the source areas, the use of Thermal-Enhanced SVE instead of the conventional SVE in the loess, ZVI injections in the groundwater, the ROD stated it would be in the source areas but didn't really identify what the source areas are, and back in the spring we were planning the Remedial Actions or I guess even before then, back in last fall.

We clarified that that was a thousand ppb. The excavation in the two areas of shallow impacts, and then the sequencing of the remedy, soil treated for groundwater. So those will be other changes.

Now public comment period. The Revised Proposed Plan will be available October for review. It will be mailed to the RAB members, as other decision documents have been, and documents referenced in the Revised Proposed Plan and additional copies of the Revised Proposed Plan will be at the information repository.

We have a public meeting at the Senior Citizen's Center, our normal meeting place, on November 13th. All the comments received, whether at the public meeting, e-mail, letters received at the Depot or comments called in to the information line will all be addressed in the ROD amendment. The ROD amendment will include the comments and responses to those comments. And more information -- all this information will be in the Revised Proposed Plan that you will see, and the directions for giving in the comments will be. Of course, you're always welcome to call the community information

line if you have questions.

Finally, as I mentioned, the Remedial Actions are underway at all the areas, except the Off-Depot area. Even as we're moving forward with the Revised Proposed Plan and the ROD amendment, we wanted to keep things moving. So the Remedial Design for the Off-Depot groundwater has been completed, and it's just recently been approved by both EPA and TDEC.

We will conduct a public briefing on the final RD, as we have for the other Remedial Designs. We'll do that after the first of the year, in 2009, and we anticipate construction of the remedy, upon approval of the ROD amendment and Remedial Action Work Plan, to begin in late spring 2009.

So, that's sort of the update of the current activities.

The next steps, in 2009 we will complete the Main Installation EBT injections and the monitoring of that. We will complete the source area investigation that I went over and provide recommendations for additional Remedial Action if necessary.

We'll continue the long-term monitoring for

Monitored Natural Attenuation on the Main Installation. We'll continue the Fluvial SVE system operation on Dunn Field, and we will begin the Off-Depot groundwater Remedial Action, and we will continue our public involvement activities. Then in 2010, so we plan to complete the Main Installation and Dunn Field Interim Remedial Action Completion Reports and request Operating Properly and Successfully, the determinations by EPA on those documents.

We'll complete the Finding of Suitability to Transfer or FOST, Nos. 5 and 6, which FOST 5 will cover the remainder of the Main Installation, and FOST 6 will cover the remainder of Dunn Field. And for each of those documents there will be public comment periods and public briefings of the documents, as there have been for previous FOSTs. Once we've completed all our construction activities for the Remedial Action, we will complete a preliminary closeout report, and upon approval, receive construction complete status for Remedial Actions at the Depot, and we will continue our public involvement.

So that's the presentation. I will be happy to

answer questions or the other members of the technical team can.

MR. WILLIAMS: Any questions? Mr. Tyler.

MR. TYLER: Stanley Tyler. As you know, I've always been concerned about shifting remedies, you know, because we have a plan of action; and I've always said, "What's A, what's B, what's C?" Looks like we're getting down to D now.

MR HOLMES: I think we discussed the air sparging SVE I believe at the last RAB meeting, and that is the one we're -- so we're not changing going forward. I think we've got all the studies we've planned. We've got -- the implementation is already designed. So we're set to move forward with the air sparging, and that was basically -- we had the Permeable Reactive Barrier, and then we talked -- we thought for a while we might go with Enhanced Bio of the Off-Depot, but upon further looking, the team went with what would be I guess plan C, which was the air sparging, and we're moving forward with that.

MR. TYLER: You said you had -- the reading was high. Is that a high reading from that

lactose injection or something, that particular site that had a high reading?

MR HOLMES: Well, what I said -- I think we can go back to maybe slide four or something. Okay. I think what we said, now, these are the areas that were identified a long time ago, here and here. And this is where we're doing the lactate injections now.

What we had, we had a few wells outside those areas, here and here, where we had maybe one well with a little bit higher concentration than we -- we thought maybe it was an extension of this plume. So we wanted to find that out. So we put in additional wells, and we've talked about them over the last couple of years -- and put them in, and then we defined, basically, another plume out here, to the east of Treatment Area 1. And concentrations were similar to Treatment Area 2. So a lot of wells have been installed over the past two years. And so, based on those concentrations, we wanted to say, okay, well, what do we need to do about this? Are these concentrations something we need to do additional groundwater treatment in these areas? And we

said, well, before we do that, let's see if there is a source in the soil as there is on Dunn Field. Of course, the concentrations on the Main Installation are an order of magnitude less than they have been on Dunn Field, but we wanted to -- some soil investigation had been done before. We wanted to step back and do a more detailed review with new technology, and that's what we're doing on the Main Installation now.

MR. WILLIAMS: Any more questions?

(Brief pause.)

RAB COMMENT PERIOD:

MR. WILLIAMS: Okay. We're going to open the floor for the RAB comment period. Mondell Williams, Community Co-chair. I think the Restoration Advisory Board came into being in 1995. I'm not for sure. And during that time, I think I attended the meetings for a year before I joined the board. So I think the Restoration Advisory Board has been in place about 13 years, seeing that it's 2008.

And my question to you all is that has the

Restoration Advisory Board provided the information you have needed to share with your community to be a liaison for the board to your community, to keep them informed and aware of all the environmental things that are going on at the Defense Depot -- which was the Defense Depot? And I would like to know if you have become well seasoned from the information that you have gotten that will help you later on to prepare, you know, your community for what's coming up.

So, if I could just get you all to briefly comment on that. You can start -- I will start with you, Ms. Peters.

MS. PETERS: Johnnie Mae Peters. I think it was a good idea to have the advice of the council, because people in the community was very concerned when they first was getting the information about the Depot and what was going on then. From when my husband was working here 30 years, I know how -- the stuff that was put in there was like, you know, refrigerators, paint, all -- whatever they bought too much of and they decided to get rid of, they threw it in there. They didn't have to dig the hole. There was

already a hole at the Depot, and all they had to do was fill it in. And, you know, if you put ammonia and Clorox together, it will make another chemical. So, I feel like they have done a good job, and I was glad to be a part of the advisory council to inform people. Because people are very concerned when they hear of some contamination, because they want to know if it's going to affect their health; and that's one thing -- some people with asthma and, you know, different breathing problems, you know, they want to know how this is going to affect them so they won't just be going through life and feeling like so and so died from cancer because of this particular chemical that you inhaled or what went down.

So I think it was a blessing for us to be able to take back to the community what was going on, because people really want to know, and some people are not able to leave home to come to a meeting to be a part of.

MR. WILLIAMS: Ms. Brooks.

MS. BROOKS: Thank you. Peggy Brooks. Also, I concur with everything that Ms. Peters just stated. I think that the

Restoration Advisory Board has been a tremendous asset.

Communication -- and let me preface this by saying I live right across from Dunn Field. So I'm definitely a stakeholder; and the persons living on my street, you know, this impacts them on a daily basis.

I feel as though lines of communication have always been open. I have never had a problem in contacting whoever was in charge, and the response was always good, always positive.

I was there during the times of those -- I call them mounds -- and the diligence in getting those things taken away, diminished, moved. I loved it because there was a sense of professionalism exhibited.

Now, this is just my impression; and the people on my street, I think they've felt good about it because they knew they could call someone and they would get some feedback. So everything I have to say is positive, and I appreciate it.

My only desire is that we continue to have access to communication. As far as the technical part, my friend over here, he can do that. I'm not the

technical person. I can communicate, but as far as biology and chemistry, that is not my area. The presentations are of such that you do allow for questions and answering, and I appreciate that. I have nothing but positive things to say. Aesthetically, before we adjourn, I would love to know -- and I've spoken I think with you, Mr. Dobbs, in terms of keeping, you know, the grass cut inside. I know that's private property now, and I think I spoke with someone downtown, and they did -- they were good about coming inside the gates. My next concern -- and I did not do this. I was intending to do it, but someone in my neighborhood obviously did it. The sidewalk area, I know that has to belong to the City of Memphis. I don't know exactly to whom to speak or which number, which department or whatever, but it had gotten to be just ridiculous. But on last week they did come in and took care of, you know, cutting that area. Because a lot of the older people, that's -- our neighborhood does have a preponderance of elderly people, and they like to use that sidewalk for walking, and they don't -- they'll just walk out the door. It's a nice

length.

So I appreciate that, but I just need to know who is immediately responsible in the line of contact. Because that's really not your problem. This belongs to the City of Memphis. That's their problem.

So, should someone know, then let me know, and then I will try to help. But nothing but positives. Nothing -- it was necessary. This is necessary. Because people seeing things going on right across the street, they want to know what's going on, what's the progress, what's next, how am I affected. And the meetings have been open to everybody, and, you know, we've had communication strength down through the years as to when the meetings would be held and that everybody was invited to come. So it was open to those who were concerned and those who weren't concerned. There's people like Ms. Peters and I, we could go back and tell. So nothing but positives.

MR. WILLIAMS: Mr. Tyler.

MR. TYLER: Thank you for this opportunity. I'm sorry I missed the April 3rd meeting. My apologies for that. You know, I try

to do due diligence on this committee, and I try to take my time and read the documents and stuff in the documents so I know what I'm talking about, or if I don't know, at least I read the material.

I only have one problem with this RAB commission setup, it's that when I first got on this community in 1999, I proposed that we put all this information on the internet, because the repository is outdated, they're backwards. No one goes to the repository but maybe me, and a lot of people now do everything on line. At the public library you can do it on line. Almost all your stuff is on line. I don't know why this repository information is not on line so more people can have access to this information.

I started this journey in 1999 about getting this information on line. It's good to put it in the repository. For people who have to take off work, they have to schedule it, when you can put it on line and double click on whatever website you have it. It would have more impact on the community and more people would have opportunities to review these documents.

That's just a pet peeve I've had, and hopefully in

the future if there are anymore repositories, that they will think about putting this information on line. And more importantly, I thank you for bringing this information to us in a more timely manner so we can study and look at this. Because people in our community, they may seem like they're apathetic, but most of those people are hard working, home-owning individuals. And that neighborhood was built in 1949 or '50, and most people have owned the houses since the '40s and '50s. That's the biggest investment they've got, is their house.

And back in the good old, bad days, when the government had the mounds over there, they told you mind your business, ain't none of your business what's over there. And that's a terrible way to treat a community, put something over there and don't tell them what's there.

And the second thing is Dunn Field, let's call it what it is. It's a dump. It's not a field. It's Dunn Field dump. Why don't we put this on some of these documentations? Stuff that they didn't want, they took it to the field and disposed of it. It's not heresy saying it was a dump. So

let's start using the proper terminology. Because nobody can tell you historically what's buried over there because we're constantly finding new things that we didn't know was there, and that's my problem. We keep finding things. Somebody said we've got everything. Now, what, about a year ago we found some little specimen. Nobody knew where it was at. But according to historical records, we had a list of everything that was buried there. So that's the reason why sometimes I'm skeptical about people saying, well, we think we've got it all or what remedy is this or what remedy is what or what remedy is this. Because we keep finding so many parts per billion over and over again.

You're doing a good job working on the remedy. I just want people to know I'm not a critic. It's just that sometimes you just have to wonder when you try A, B, C and D -- you know, what information are we basing this on? Did we get all the contaminants in the ground? These are kind of high numbers here, these parts per billion. They're not little numbers, they're big numbers, and a lot of people don't understand -- everything

affects your health when it's in so many parts per billion.

And if Memphis is going to turn Dunn Field into a park, if I'm not mistaken for public -- it's going to be a park?

MR. WILLIAMS: That was shot down. The city did not want it.

MR. TYLER: Okay. I apologize. I was told that once -- at one of these meetings that they was thinking about making a park over there, and hopefully -- I said anywhere you have a dump, you don't want to put your children in a park on top of a dump. So that's why I'm very critical of what's going on in Dunn Field, very watchful. And I thank you for your hard work and due diligence, and thank you for (unintelligible). Have a nice day.

MR. WILLIAMS: Mr. Truitt.

MR. TRUITT: I'm going to try and be as brief as possible, but having served as deputy and eventually director of installation services in Environmental Protection, I have the advantage of living in a community of professionals who have -- they're all retired now. But my next door neighbor

was a chemical engineer, and I have been in discussions with him. I think Mike knows that the first Remedial Investigation and Feasibility Study for the Depot was initiated by me. I also, after the investigation, prevailed on Senator Gore, who was at that time on the Senate Arms Services Committee, to give us a recoup facility, as well as a state of the art chemical storage building; and I've never had any concerns, having been there for as many years as I was, about anything that went on there because I knew basically what was there, and I also had the advantage of the -- as I said, the next door neighbor.

But the progress that we made in the cleanup -- and I realize that cleanup is vitally important. The only thing I really have any concern about is -- and I'm not picking on you -- is my wife drinking up that dadgum bottled water in plastic bottles. But I think that we have -- you know, it's been -- and I've been on this board since whenever it was initiated, but I don't have any concerns, and my community doesn't have any concerns, because I think we've publicized all of the data; and, yeah, there's nothing but

compliments for the people who have been involved.

MR. WILLIAMS: I think those moundings that you were talking about, I think that was bauxite and fluorspar and what ---

MR. BALLARD: Fluorspar.

MR. WILLIAMS: Fluorspar. Well, what they did, I think they melted it down to make planes and parts.

MR. BALLARD: The bauxite aluminum ore. That was a strategic reserve or a supply of aluminum ore, and then I think the fluorspar was used in the manufacture of steel, but I'm not -- don't quote me on that.

MR. TRUITT: You were correct.

MR. WILLIAMS: But anyway, when I joined the board -- Mondell. When I joined the board, I think a lot of the information was so overwhelming to me, and I was just so glad that they could break it down and put it in laymen's terms, so that when I took it to my community, that I could explain it to them where they could understand it. And it was sort of overwhelming, like I said, with the information and not knowing the terms of certain words. And I've really

enjoyed being on this board myself, and it has broadened my horizon a great deal, and I just want everybody to know that I really thank myself and the people who allowed me to participate on this board.

PUBLIC COMMENT PERIOD:

MR. WILLIAMS: So with that done, I will open the floor for the public comment period. If anyone here would like to speak, make sure you give your name and speak clearly for the record so the transcribers can get your name.

(Brief pause.)

MR. WILLIAMS: Well, if there's not, I will turn it back over to Mr. Dobbs.

MR. DOBBS: Thanks, Mondell. Mike Dobbs.

(Presentation of certificate of appreciation to Mr. Torrence Myers not transcribed for the purposes of this record.)

MR. WILLIAMS: Would anyone like to make a motion to adjourn the meeting?

MR. TRUITT: So moved -- seconded.

MR. TYLER: Motion.

MR. WILLIAMS: All in favor.

THE BOARD: Aye.

(Whereupon, the meeting was adjourned at 6:52 p.m.)

(Next meeting to be announced.)

Attendance List

Restoration Advisory Board Members

Mr. Mondell Williams	Community Co-Chair
Mr. Mike Dobbs	Facility Co-Chair
Mr. Turpin Ballard	Environmental Protection Agency
Mr. Ulysses Truitt	Citizen Representative
Ms. Johnnie Mae Peters	Citizen Representative
Mr. Stanley Tyler	Citizen Representative
Ms. Peggy Brooks	Citizen Representative
Mr. Norm LaChapelle	Civic Representative Memphis/Shelby County Health Department
Mr. William Winford	Civic Rep, Memphis Light, Gas & Water Division
Mr. Jamie Woods	Tennessee Department of Environment & Conservation

Others in Attendance

Ms. JJ Goldman	The Vandiver Group, Inc.
Ms. Eileen MacLean	The Vandiver Group, Inc.

Mr. Tom Holmes	e^2M
Ms. Angela Clark	e^2M
Ms. Denise Cooper	e^2M
Mr. David Nelson	CH2M Hill
Ms. Stacy Umstead	Defense Logistics Agency
Ms. Karen Tyler	Community Member

C E R T I F I C A T E

STATE OF TENNESSEE:

COUNTY OF SHELBY:

I, DANETTE CROUCH, Court Reporter and Notary Public for the State of Tennessee at Large, do hereby certify that I reported in machine shorthand the above-captioned proceedings.

I HEREBY CERTIFY that the foregoing pages contain a full, true and correct transcript of my said Stenotype notes then and there taken.

I FURTHER CERTIFY that I am not an attorney or counsel of any of the parties, nor a relative or employee of any of the parties, nor am I a relative or employee of any attorney or counsel connected with the action, nor am I financially interested in the action.

I FURTHER CERTIFY that in order for this document to be authentic and genuine, it must bear my original signature and my embossed notarial seal and that any reproduction in whole or in part of this document is not allowed or condoned and that such reproductions should be deemed a forgery.

THEREFORE, witness my hand and my official seal in the State of Tennessee on October 23, 2008.

_____

DANETTE CROUCH
Court Reporter and
Notary Public at Large

My Commission Expires:

May 24, 2011

Memphis Depot
Environmental Restoration Program Update

Presented by:

Solutions Today for a Sustainable Tomorrow

Tom Holmes, Project Manager
engineering-environmental Management Inc.

Presentation Overview

Updates:

- Main Installation Remedial Action (RA)
- Dunn Field Source Areas RA
- Dunn Field Revised Proposed Plan
- Dunn Field Off-Depot Groundwater Remedial Design
- Next Steps

Main Installation

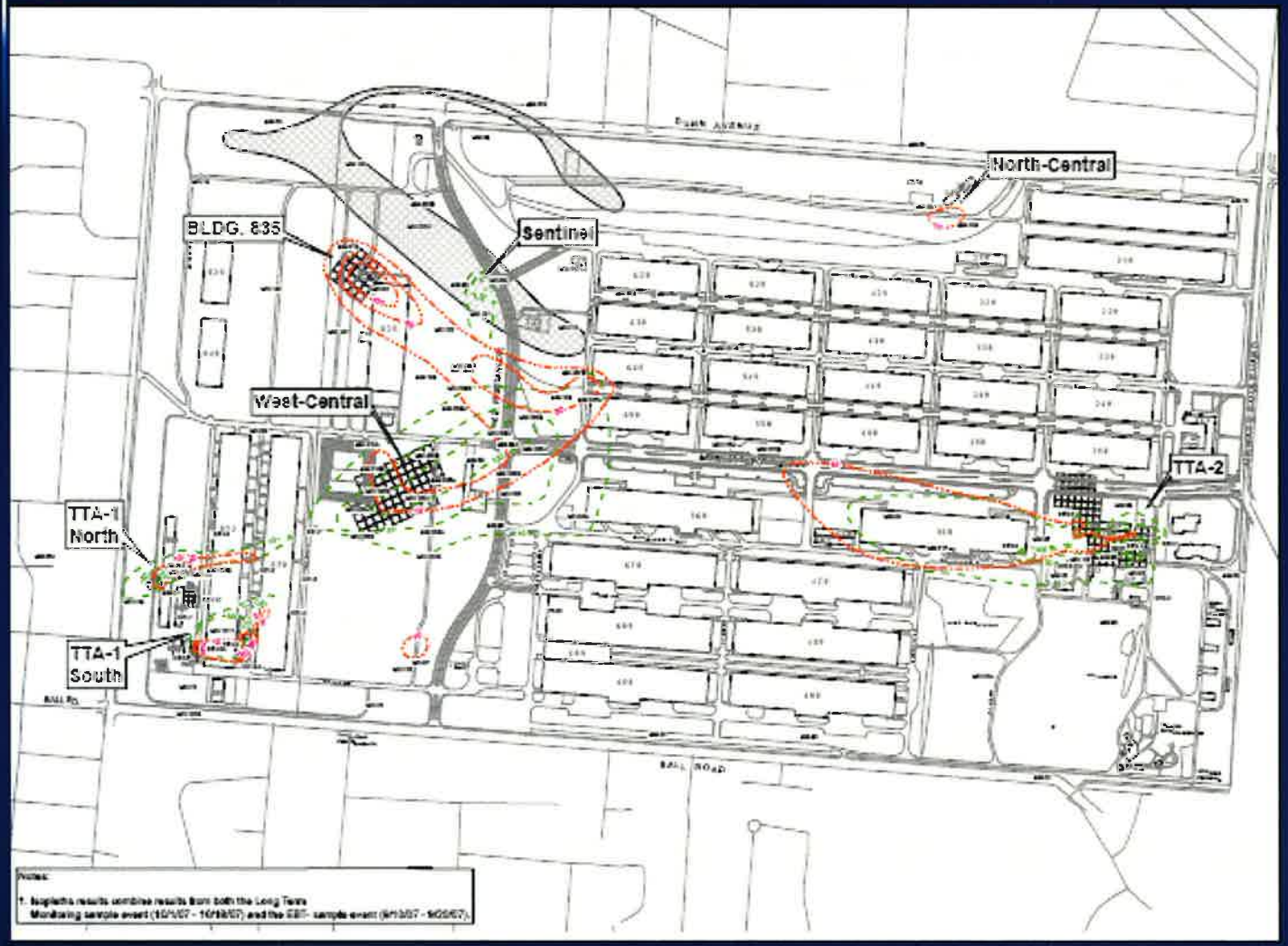
Remedial Action

- Enhanced Bioremediation Treatment (EBT) of Groundwater
  - Monthly lactate injections extended from August 2008 to February 2009.
  - Quarterly Groundwater Monitoring.
- Monitored Natural Attenuation (MNA)
  - Semiannual Groundwater Monitoring.
- Land Use Controls
  - Annual site inspections performed since 2005.

Main Installation

Remedial Action

Main Installation
Remedial Action



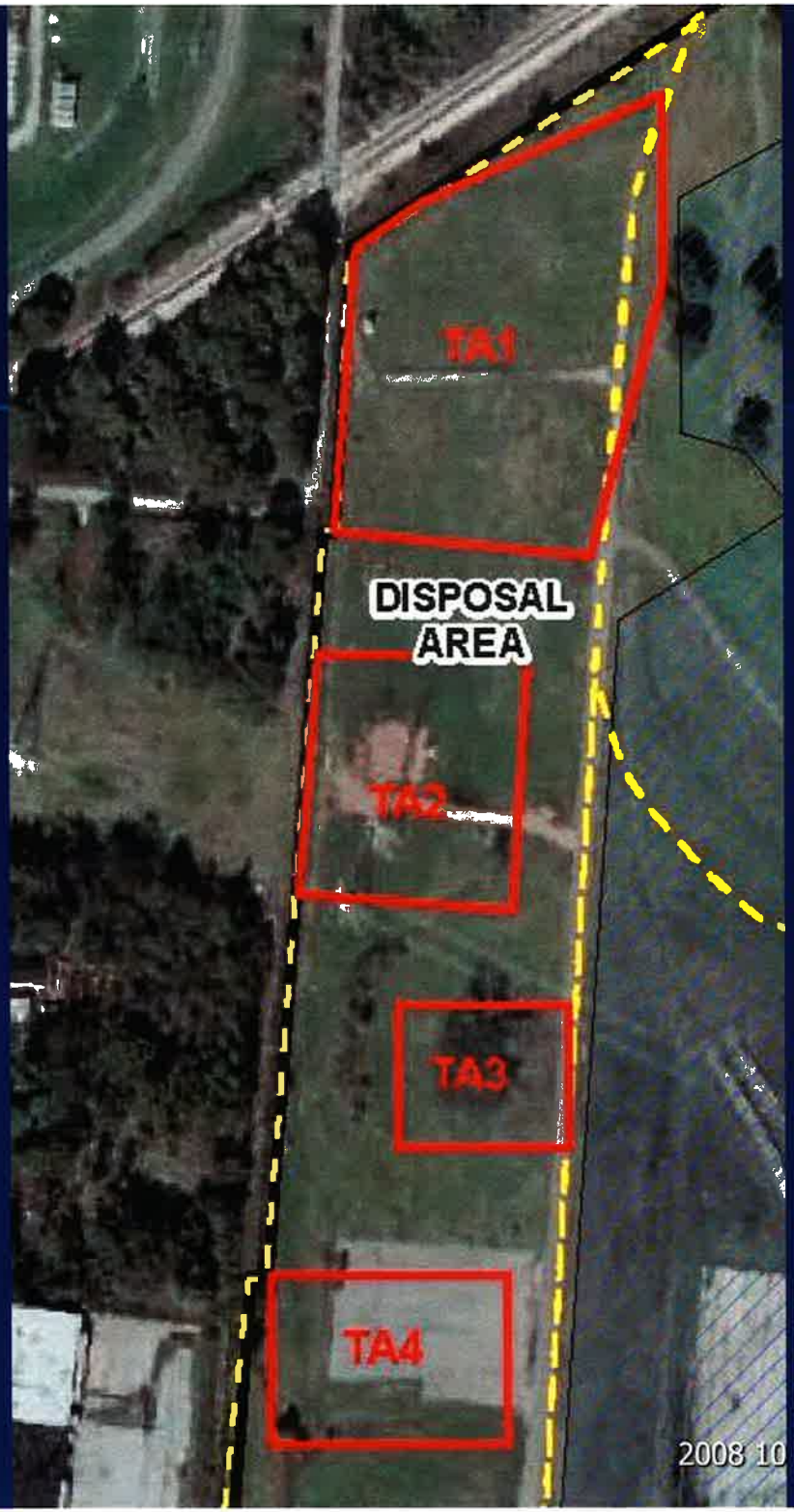
Main Installation Soil Investigation

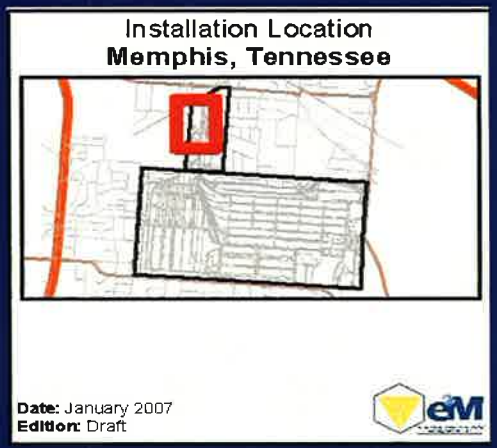
Main Installation

Remedial Action

- Source Area Soil Investigation
  - Identify soil source areas for MI groundwater plumes.
  - Past operations and soil/groundwater sample results reviewed to determine areas for investigation.
  - Membrane interface probe (MIP) survey at 273 locations on grids in five areas.
  - Soil samples to confirm MIP results.
  - Field work began August 2008 and will be completed by early November.
- Determine if additional RA necessary.

Dunn Field
Source Areas Remedial Action



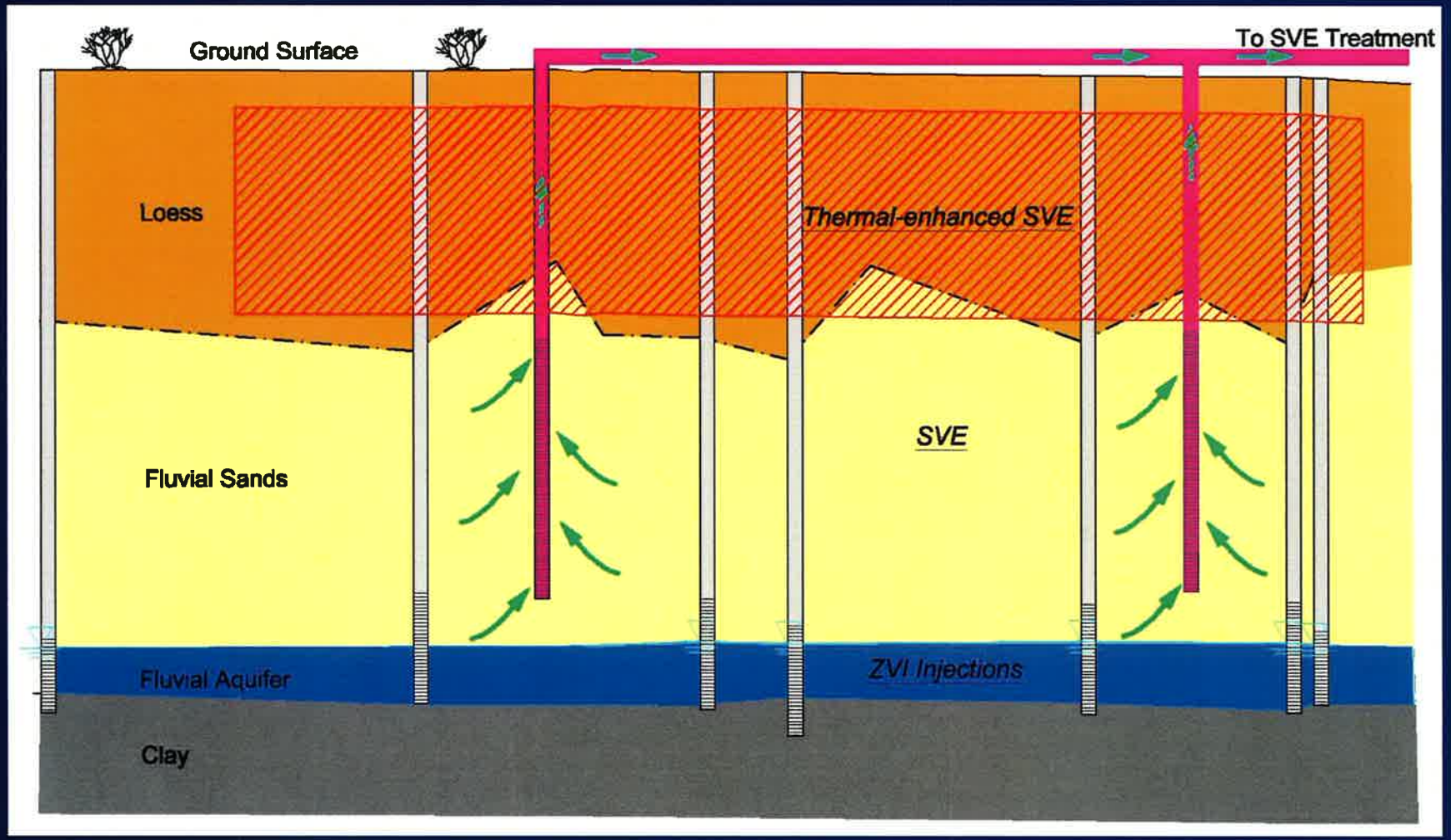


Dunn Field

Source Areas Remedial Action

- Fluvial Soil Vapor Extraction (SVE) system.
- Limited Excavation, Transportation and Disposal.
- Loess Thermal-enhanced SVE System.
- Zero-Valent Iron Injections in Groundwater.
- Land Use Controls.

Dunn Field
Source Areas Remedial Action

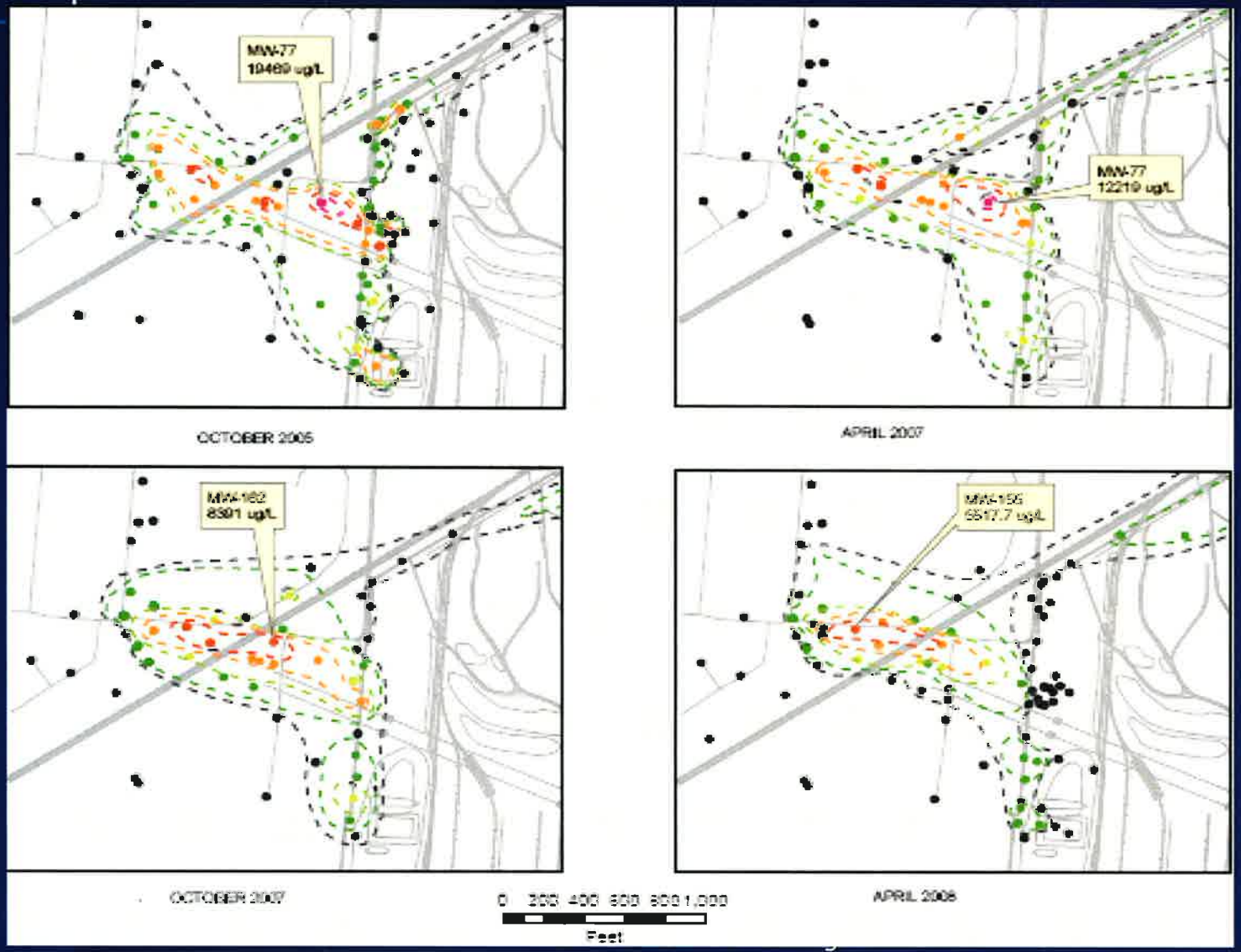


Dunn Field

Source Areas Remedial Action

- Fluvial Soil Vapor Extraction (SVE)
  - Fluvial SVE system has been operating since July 2007.
  - 2,748 pounds of CVOCs removed from fluvial deposits as of August 2008.
  - Migration of CVOCs through fluvial deposits to groundwater prevented.
  - CVOC concentrations in groundwater reduced.
  - Extracted vapors below discharge limits.
  - Fluvial SVE expected to operate for 5 years (2012).

Dunn Field
Source Areas Remedial Action



Total CVOC Time Trend

Dunn Field

Source Areas Remedial Action

- Excavation, Transportation and Disposal (ET&D)
  - Initial ET&D in two areas performed November 2007 through January 2008.
  - Soil remediation goals met in majority of excavated areas.
  - Additional ET&D to be completed following Thermal-enhanced SVE.

Dunn Field

Source Areas Remedial Action

- Thermal-enhanced SVE in Loess
  - Thermal-enhanced SVE system has been operating since May 2008.
  - 8,370 pounds of CVOCs removed from loess deposits as of September 2008.
  - Soil temperatures near goal of 100° C in treatment area (5 to 30 feet below ground).
  - Extracted vapor and condensate treated to safely remove CVOCs.
  - Air and condensate discharges meet operating permit limits.

Dunn Field

Source Areas Remedial Action

- Thermal-enhanced SVE in Loess (continued)
  - Confirmation samples being collected in phased approach.
  - 47 sample locations specified in RA work plan.
  - Remediation goals (RGs) met at 33 locations as of September 2008.
  - Thermal-enhanced SVE treatment and sampling will be completed by November 2008.

Dunn Field
Source Areas Remedial Action

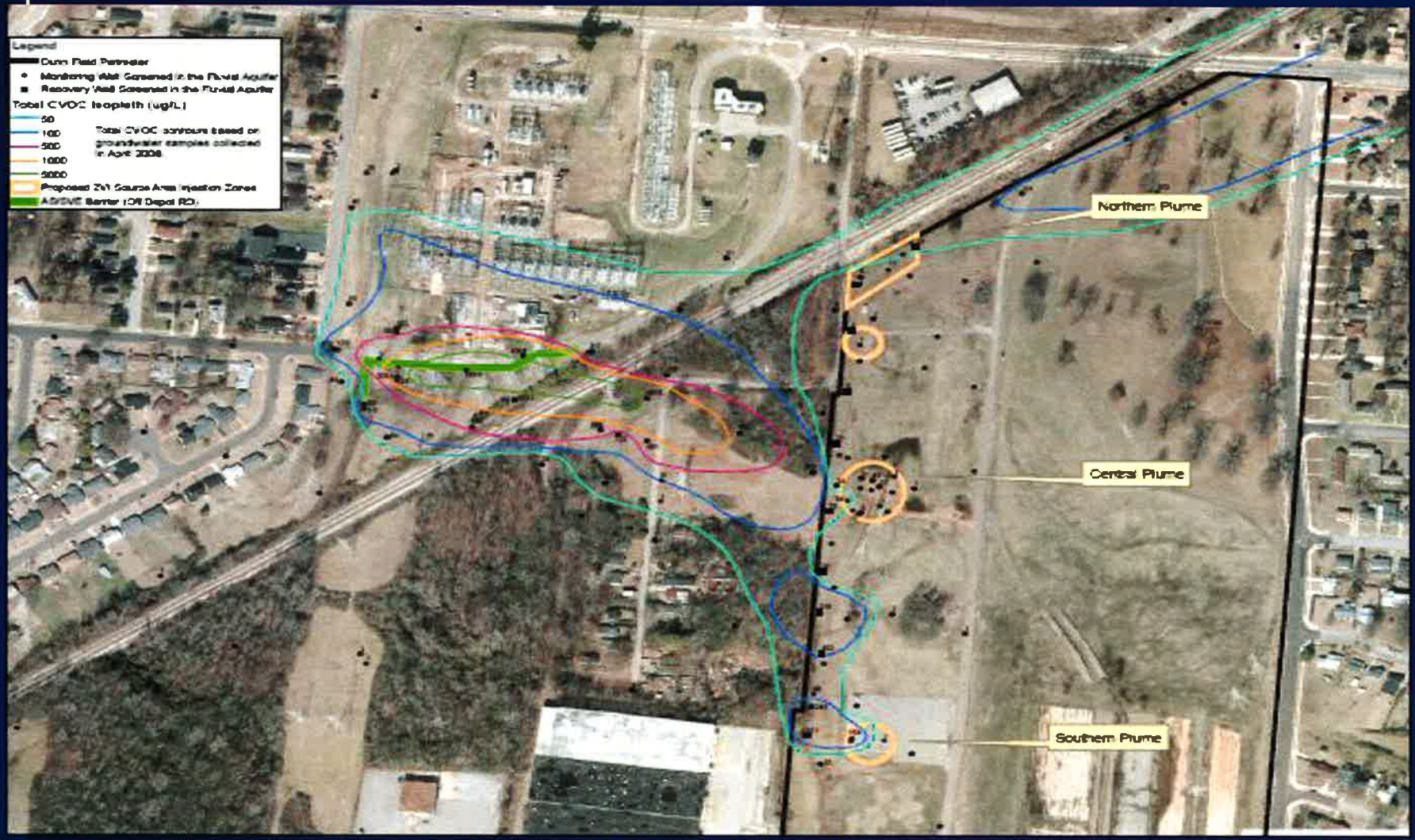
- Zero-Valent Iron Injection (ZVI)
  - Injections to be made in groundwater at Dunn Field Source Areas with CVOC concentrations above 1,000 parts per billion (ppb).
  - Highest pre-treatment concentrations on Dunn Field were 49,000 ppb.
  - Based on recent sampling, CVOC concentrations in groundwater at Dunn Field Source Areas are now below 100 ppb.
  - ZVI injections are not necessary.

Dunn Field

Revised Proposed Plan

- The Revised Proposed Plan (RPP) is required due to a fundamental change to the selected remedy in the 2004 Dunn Field Record of Decision (ROD):
  - Use of Air Sparging with SVE for the Off-Depot groundwater plume instead of a Permeable Reactive Barrier.

Dunn Field
Revised Proposed Plan



Dunn Field

Revised Proposed Plan

- The RPP also presents other changes and clarifications to the selected remedy:
  - Length and treatment objective for Air Sparging/SVE.
  - Areal extent of SVE treatment in subsurface soils at the Source Areas.
  - Thermal-enhanced SVE in loess instead of conventional SVE.

Dunn Field
Revised Proposed Plan

- The RPP also presents other changes and clarifications to the selected remedy (continued):
  - ZVI injections in groundwater at Dunn Field Source Areas with total CVOC concentrations above 1,000 ppb.
  - ET&D in two areas with shallow impacts.
  - Change in sequencing of remedy – soil treated before groundwater.

Dunn Field

Revised Proposed Plan

- Public Comment Period:
  - October 27, 2008 until November 25, 2008
- Public Meeting:
  - November 13, 2008, beginning at 6 p.m.
  - Ruth Tate Senior Citizens Center
  - 1620 Marjorie Street
  - Memphis, TN
- All comments received will be incorporated into the Dunn Field ROD Amendment.

Dunn Field

Off-Depot Groundwater Remedial Design (RD)

- Final Off-Depot Groundwater RD has been approved by Environmental Protection Agency (EPA) and Tennessee Department of Environment and Conservation (TDEC).
  - DLA will conduct a public briefing on the final RD in Winter 2008/2009.
  - The environmental team anticipates construction of the remedy to begin in late Spring 2009.

Next Steps

2009

- Complete Main Installation (MI) EBT Injections and monitoring.
- Complete MI Source Area Investigation and provide recommendations for additional RA, if necessary.
- Continue MI RA long-term monitoring.
- Continue Fluvial SVE system portion of Dunn Field Source Areas RA.
- Begin Off-Depot Groundwater RA.
- Continue public involvement.

**Projected schedule is based on current information and may be subject to change.*

Next Steps

2010

- Complete MI and Dunn Field Interim Remedial Action Completion Reports (IRACRs) and request Operating Properly and Successfully (OPS) determinations by EPA.
- Complete Finding of Suitability to Transfer (FOSTs) 5 & 6 for remainder of Main Installation and Dunn Field and hold Public Comment Periods and Public Briefings.
- Complete Preliminary Closeout Report and upon approval receive Construction Complete status.
- Continue public involvement.

**Projected schedule is based on current information and may be subject to change.*

Memphis Depot
Environmental Restoration Program Update

Presented by:

Tom Holmes, Project Manager
engineering-environmental Management Inc.