



PADUCAH GASEOUS DIFFUSION PLANT CITIZENS ADVISORY BOARD

111 Memorial Drive • Paducah, Kentucky 42001 • (270) 554-3004 • PaducahCAB@bellsouth.net • www.pgdpcab.org

Paducah Gaseous Diffusion Plant Citizens Advisory Board Meeting Minutes June 15, 2006

The Citizens Advisory Board (CAB) met at the CAB office in Paducah, Kentucky, June 15, 2006, at 6 p.m.

Board members present: John Anderson, Allen Burnett, Judy Clayton, Shirley Lanier, Bobby Lee, Linda Long, Elton Priddy, Jim Smart, Rhonda Smith and James Tidwell

Board member absent: Chad Kerley, Janet Miller and John Russell

Ex Officio members and related regulatory agency employees present: Brian Begley, Brian Baker and Bill Clark, Kentucky Division of Waste Management; Tim Kreher, Kentucky Department of Fish and Wildlife Resources; David Williams and Debbie Vaughn-Wright, Environmental Protection Agency

Deputy Designated Federal Official present: Rachel Blumenfeld

DOE Federal Coordinator present: Jeff Snook

DOE-related employees present: Rich Bonczek, Jeannie Brandstetter, Yvette Cantrell, Bryan Clayton, Kim Crenshaw, Ken Davis, Bruce Gardner, Guy Griswald, Steve Hampson, Steve Kay, Reinhard Knerr, Jim McVey, Lindell Ormsbee, Bruce Phillips, Pat Presley, Mike Spry, Joe Tarantino, Barry Tilden, and John Volpe

Four members of the public attended the meeting.

Introductions

Board facilitator Steve Kay called the meeting to order at 6 p.m. He introduced Priddy, a new member of the Board.

Agenda

Kay asked for proposed modifications to the agenda. He suggested Action Items be placed on the agenda before the break on a standing basis due to actions assigned to regulators. **The Board adopted the agenda as modified by consensus.**

Minutes

Kay asked for proposed modifications to the draft May minutes. There were none. **The Board approved the minutes as submitted by consensus.**

Deputy Designated Federal Official *Attachment 1*

Blumenfeld provided the project updates to the Board. Questions and answers (paraphrased) appear below.

Questions/Comments	Answers
Mr. Burnett – Are the 10 packaged intermodels of waste materials and debris still in the building or was it disposed with the scrap metal?	Mr. Knerr – The intermodels are still on site but they will be shipped to the landfill or Energy Solutions pending final characterization information.

Federal Coordinator Comments

There were none.

Ex-Officio Comments

There were none.

Public Comments

Johnson asked how much mixed legacy waste remains at the plant. Blumenfeld said she would answer his question to the extent possible at the next meeting.

Vanderboegh said he wanted to make a clarification from the May Board meeting. He said John Maybriar, Kentucky Department of Waste Management (KDWM), had asked him whom he had contacted at the state pertaining to the waste acceptance criteria at the C-746-U Landfill and it was Keith Sims, not Larry Hamilton.

Vanderboegh said Senator Mitch McConnell wanted him to bring forward some of the issues with the water discharges at the plant. He asked Blumenfeld if there are discharge limits at

some of the outfalls pertaining to uranium contamination going out of the outfall ditches into the commonwealth waters. Blumenfeld said outfall limits set on the outfalls fall under the Kentucky Pollutant Discharge Elimination System standards. She said she could bring the outfall limits to the next meeting. He said he had received documentation from the Kentucky Division of Water of samples that were taken by the regulators. He said the data shows the elevated uranium levels are 20 times what the surface water limits should be. He said he provided documentation to Williams and to Citizens Advisory Board (CAB) members and asked Blumenfeld to look at the data so questions could be asked later pertaining to the discharge levels being elevated. He said he has worked with the solid waste requirements for RAD going to the landfill under the Atomic Energy exclusions but he is uncertain of the discharge limits down to the waters of the Commonwealth. Volpe said if it is a state issue, the limits are set by Kentucky regulations and are compatible with the Nuclear Regulatory Commission agreement. He said the limit for uranium is 300 pCi/L, which is a federal permitted release limit. He said all release limits could be found in 902KAR 100:019.

Task Forces/Presentations

Summary of Results for the Southwest Plume Site Investigation *Attachment 2*

Clayton provided a presentation on the summary of results for the Southwest Plume Site Investigation. Questions and answers (paraphrased) appear below.

Questions/Comments	Answers
<p>Mr. Burnett – From the diagrams, those areas that are selected for drilling have shown high levels of concentrations, how do you know it would not be somewhere else?</p>	<p>Mr. Clayton – All of these areas have been previously investigated. Our focus was follow-up on the information that had already been done.</p> <p>Mr. Williams – We tried to have transport models of groundwater flow completed to determine if these are isolated hits. We are looking at that information right now.</p>
<p>Mr. Williams – Where are the boundaries on your maps imported from?</p>	<p>Mr. Clayton – It would have come from the geographic information system (GIS) database but I am uncertain of the specific file. I will try to find out which file was used.</p>
<p>Mr. Williams – On slide 17, are you implying that the dense nonaqueous-phase liquid (DNAPL) is below Solid Waste Management Unit (SWMU) 4 but the source is coming from a DNAPL associated with other areas?</p>	<p>Mr. Clayton – We are suggesting that there is DNAPL below SWMU 4 that is a result of SWMU 4. The concentrations in the groundwater are sufficient values to suspect that there is a DNAPL in that location. It cannot be verified, but based on the values found in the groundwater itself, that is what is being indicated.</p>

<p>Mr. Burnett – What is a DNAPL?</p>	<p>Mr. Clayton – The trichloroethylene (TCE) does not mix well with water. TCE is heavier than water so when you release it into the water from the bottom of a landfill, it will migrate until it cannot go any further. In this particular case, the indication due to the high concentration in that area, the TCE has come from the landfill and is in the upper portions of the Regional Gravel Aquifer (RGA) within the groundwater as a separate phase.</p> <p>Ms. Blumenfeld – DNAPL is an acronym for dense non-aqueous phase liquids. It means that it is not going to be present in a continuous level. That is what makes the DNAPL such a challenge because you can actually have little puddles of it in different places.</p>
<p>Mr. Burnett – It is predicted that the TCE concentration is at the property boundary. When you consider all of the sources as a whole, are they additive?</p>	<p>Mr. Clayton –A numeral addition cannot be done. If you modeled them as combined sources, the geographies would not combine because they may be in different areas of flow.</p>
<p>Ms. Lee – It looks like SWMU 4 is a major source and SWMU 1 is a borderline source.</p>	<p>Mr. Clayton – SWMU 1 does have a source area in the shallow soils and above the RGA. SWMU 4 is the major contributor of all of the areas looked at in this investigation to the Southwest Plume. SWMU 1 contributes some but is not the major component.</p>
<p>Ms. Lee – In your conclusions, you are suggesting that SWMU 4 needs to be cleaned up. What about SWMU 1?</p>	<p>Mr. Clayton – Based on the modeling, it is indicated that SWMU 1 is less than 1 ppb at the property boundary. Depending on if the model is acceptable and the action cleanup criteria, you might be able to make the call. At this point, all of the information has not been accepted.</p>

<p>Ms. Lee –At the task force meeting, there has been some question from the regulators on the model that has been used because of a degradation issue. What exactly is the issue between the regulators and the U. S. Department of Energy (DOE)? The TCE is slowly degrading by itself and if you make that assumption, nothing has to be done because it will degrade its half-life at 26 years. The CAB needs to be aware whether or not the TCE is staying there for hundreds of years or it is degrading. I think the model suggested that the TCE is degrading.</p>	<p>Mr. Williams – The issue is being reviewed. That used to be the assumption. Now there is a new assumption that there is a rapid degradation. This is the first time that it has been presented to them but it has been used at other DOE facilities.</p> <p>Ms. Blumenfeld - There has been analysis and scientific theory put forward for this and that is what Kentucky and EPA are looking at to see whether they agree with it. It is consistent with work that was done in Idaho that showed the same type of degradation occurring for TCE. The question is concerning degradation in aerobic environments versus anaerobic environments. The question is being analysis from a scientific perspective and it has not been used at the site before. That is why it is not being accepted.</p>
---	--

PGDP Property Acquisition Study Attachment 3

Ormsbee provided a presentation on the Paducah Gaseous Diffusion Plant Property Acquisition Study. Questions and answers (paraphrased) appear below.

Questions/comments	Answers
<p>Mr. Williams – In task #5, I interpret that to mean changing the points of compliance.</p>	<p>Mr. Ormsbee – We interpret that as looking at the remediation options that have been identified in the Feasibility Study for the Groundwater Operable Unit. For each option, we will be looking at what the concentration would be at specific points and what additional institutional controls would be necessary to protect the public if that option were to be implemented.</p>

<p>Mr. Williams – In the discussion of the point of compliance for the Southwest Plume, which was used for calculations of remedial action to reach the mcl of that point of compliance, you would be moving that point of compliance because you bring the property into the DOE. The people would be moved out of the area of the plume, therefore, they would not be exposed. In the discussions for reuse of the property, these points of compliance are only good if it remains DOE property. Once reuse is discussed, it is a whole new ballgame. People, industries and reuse are brought back in with the transfer of DOE property. It would be a short-term solution. For long-term to be achieved, the property would need to be acquisitioned to an entity such as for a golf course.</p>	<p>Mr. Ormsbee – We will be looking at analysis of concentrations at various points from the property to the fence and points beyond that. We are not considering moving the points of compliance. We are looking at cost breakdowns and analysis and the scope of the study is not related to the consideration of regulatory issues with regards of compliance or point movement. We are mainly looking at costing out institutional controls options with regard to remediation options that have been already laid out in the groundwater operable unit strategies.</p>
<p>Mr. Williams –I want to point out that the EPA HQ Federal Facilities Remediation Office, the Federal Facilities Enforcement Office, as well as our lawyers are digesting this. This issue is not new to EPA. It is an issue that we have gone around on with various federal facilities and projects for years. The question is if I never sell this property then that means I do not have to remediate the plume and the answer is no. You still have to remediate the plume. This is just a land use control.</p>	<p>Ms. Blumenfeld – We were directed by Congress to do the study. Mr. Ormsbee – We are looking to stay on the right side of the regulatory issue fence. We are not looking at that issue. We recognize there are implications here, but that is not KRCEE’s responsibility to address that.</p>
<p>Ms. Lee – Will potential future reuse of the site impact remediation strategies and are you going to make those considerations when you do the analysis? To the community, that is an important component.</p>	<p>Mr. Ormsbee – We do recognize that there could be some potential reuse of the property. We will look at the property acquisition options that might allow that to occur. We are going to try to look at a wide range of remediation options and different property acquisition options that will include information that will provide some insight to that answer but it is not finalized at this point. We are looking at different options to acquire the property.</p>

<p>Mr. Williams – As a case in point, for instance, with a private property holder, it is very difficult to enforce a restriction on drilling a well as it is right now. However, if DOE were to take possession of that property and then transfer it again, they could put in place in the deed of transfer longer restrictions.</p>	<p>Mr. Ormsbee – Yes, that would restrict that type of drilling to take place.</p>
<p>Ms. Smith – In task #1, on June 29, will you have a graphic depiction of what areas or property will be considered in the study.</p>	<p>Mr. Ormsbee – We do not intend on picking individual properties. We will be looking at clusters of properties. Based on the preliminary analysis, we are starting with the Water Policy area as a possible suite of properties that could be impacted. The plume is currently identified to be included in the study and that could move either direction east or west. It may pick up a buffer east of Metropolis Lake Road. We are looking at non-DOE property including TVA property and the Wildlife Management Area around 9,000 acres.</p>
<p>Ms. Smith – My concern is for the public to be knowledgeable and to generate interest. Will you be advertising the location, such as a one-page ad?</p>	<p>Mr. Ormsbee – It will be publicized but I do not know the size if the ad. Ms. Blumenfeld – It is not usually a full page.</p>
<p>Ms. Long – Some of the people that live around me do not take the paper. A letter needs to be mailed to all the people that could be affected.</p>	<p>Mr. Ormsbee – It is intended that all property owners that will be impacted by the results of the preliminary analysis will be contacted individually. Ms. Blumenfeld – The public property records will be used to obtain contact.</p>
<p>Ms. Smith – In addition to the possibility of a one-page ad, in there anything this Board can do to help publicize the meeting? We could share half of the expense for the ad.</p>	<p>Mr. Ormsbee – We would be glad to partner with the CAB to help publicize the meeting. Ms. Blumenfeld – She asked Bonczek to work with Smith, Ormsbee, and Snook to coordinate the publicity of the meeting.</p>

<p>Ms. Lee – Is there a way to get some of the information in GIS format for mapping that the CAB is doing in order to communicate with the public. Is the information and software available to the public?</p>	<p>Mr. Ormsbee – The maps will be generated by a GIS system. The product is being developed for DOE so it would be their call on who the maps would be shared with. Ms. Blumenfeld - We would look at sharing information. Sometimes there is proprietary information that has to do with the software license, but our intent is to support your mapping efforts. Mr. Ormsbee – All of the software used is GIS. Mr. Williams – It is my understanding that McCracken County does not currently have the property boundaries in GIS format. Ms. Ormsbee – We have some GIS coverages that identify all of the parcels from the Engineering Office. We already have a preliminary data set and are working on additional coverage to the east of Metropolis Lake Road. We are also communicating with the Property Valuation Administration (PVA) office to pull all of the information together.</p>
<p>Mr. Kreher – In task #3, what are the development of cost estimates based upon? Will they be based on the average value acre of farmland sold in Kentucky over the past year ?</p>	<p>Mr. Ormsbee – We are trying to be more geographically specific than that. That is why we are in contact with the PVA office to get an idea of property value specific to this locale around the facility and range of cost relative to specific land use issues.</p>
<p>Mr. Kreher – Acquiring a group of property is supposed to be a cost efficient practice. If you are assuming that the land could be purchased, for example, for \$2500 an acre but one of the property owners in that group will not accept \$10,000 an acre, the assumption made is worthless if that takes place. Ms. Long – I will not take \$10,000 an acre for my land.</p>	<p>Mr. Ormsbee – We will look at fair market value for the properties and conduct some sensitivity analysis on those perimeters to look at some ranges beyond that to get an idea of the potential impact of those types of variables.</p>
<p>Ms. Smith – In task #8, the CAB is scheduled to receive presentations in May, July, and September. Can a report be provided to the CAB after the final report?</p>	<p>Mr. Ormsbee – I will check on that.</p>

Waste Disposition/Water Quality Task Force

Lee said the Waste Disposition/Water Quality task force discussed concerns over the landfill regarding the waste acceptance criteria. Russell is preparing a recommendation on this issue but he was unable to attend the meeting this month.

Lee said the majority of the meeting was spent discussing the land use maps. She said she appreciated the participation and ideas from Snook, Williams, Begley, and Baker. She said Snook would discuss the requests with Blumenfeld. Lee said one of the requests regarding property location could be provided by the Kentucky Research Consortium for Energy and the Environment (KRCEE). She said Williams provided some insight on what other facilities have done and is scheduled to give a presentation to the task force next month. Snook suggesting tying the maps in with projects including how far along the project is and if a record of decision has been made. She said she hopes the task force can begin seeing some of the maps next month.

Public Comments

Johnson, former DOE contractor employee, asked if a DNAPL has ever been positively identified. Clayton said one has been identified in a monitoring well at C-400 during the Six-Phase Treatability Study. Johnson said DNAPL was the catch phase at the beginning of all of the projects and now it is used infrequently because it cannot be found. He said that twenty years ago there were levels of contamination that came out of monitoring wells in the Northwest Plume that were extremely high and if samples were taken today the levels would probably be much lower. He said that eventually there will not be a problem because the levels at the boundary will be much lower. Over time mother nature is doing a great job and the big key is controlling the source of the contamination. He said several years ago pure drums of TCE contaminated waste were put in SWMU 4 and some was highly rad. He said those materials are in the ground but additional drums have not been added due to RCRA laws. The levels will continue to drop because DNAPLs breathe the material up in the groundwater and it spreads out so sometimes there are high readings depending on when the reading is taken.

Vicki Jurka said when TCE is discussed in the Southwest Plume no one talks about the degradation products such as vinyl chloride that might be formed from TCE as it goes through the environment. TCE is a know carcinogen. The pump and treat operation, with regard to the Northeast Plume, takes the groundwater and pumps it through the cooling towers and whatever is in the groundwater is air stripped and sent back into the community. People need to be made aware that a lot of the clean up has adverse effect to the community. For instance, she was told during the Six-Phase study, the radioactivity levels were so high the regulators would not go into that area to see if they were in compliance with the filtration system because the filtration system that they were utilizing was not designed to take into account the levels of radiation that might be in the groundwater. She wanted to make everyone aware of that issue to be considered and if anyone cares to comment on the issue, that would be fine.

Jurka said on Mr. Ormsbee's presentation, Active Citizens for Truth has not notified the public regarding the property acquisition nor do they intend to. She said according to the Congressional Monetary Allocation verbiage, the area in consideration is specifically for property above the plume, it did not say potential deviation from the current course. It appears from the presentation that the property being identified for potential acquisition for the study is what has been rezoned a few years ago by McCracken County for heavy industrial use. If this property is intended for heavy industrial use, she suggested that the KRCEE take into consideration what the price of property that is now utilized as heavy industrial, such as the new industrial park, the value of that property when the buy out is considered. She said she is concerned with the most recent Supreme Court decisions, is the condemnation of people's private property. She asked as a direct question whether that type of action might be taken for some of the people. For instance, if Ms. Long decides she did not want to sell her property, could she find herself under a condemnation proceeding if she was the last holdout for this vast expanse of property. She said the Agency for Toxic Substances and Disease Registry Health Assessment says that the Water Policy people's wells on the west side are not contaminated. She said documents state that only four wells are actually contaminated.

Jurka said she had asked some questions in past meetings regarding mercury and asked if anyone was prepared to answer those questions at this meeting. Blumenfeld said she would address this issue under Action Items on the agenda.

Vanderboegh asked what kind of contaminants would the facility at the landfill treat. Snook said leachate treatment facility has a carbon filter to filter out volatile organic compounds.

Vanderboegh asked about the status of the rubble piles west of Outfall 001 on the rad waste that was identified by KDWM. Knerr said that after DOE was notified, a health physicist was sent out to survey and control the area. The rubble pile was removed and brought inside the fence and it will be sent off for disposal pending final characterization. The surrounding area was surveyed and no indication of additional contamination was found.

Action Items

Blumenfeld said she thought Jurka's question regarding mercury was directed to John Maybriar, KDWM. She said she would coordinate with Maybriar to provide an answer at the next meeting and apologized for the delay. Kay said the action concerning outstanding charges on the CAB budget could be answered when Dollins was present. Crenshaw said Paducah Remediation Services (PRS) is working to upload documents pertaining to the Paducah cleanup to their Website and will notify the CAB when the documents are available. Kay said to leave that action pending until the documents are available. Long said her pond was sampled but she has not received the results. Begley said KDWM is looking into information on radioactivity appearing in the leachate but they do not have an update at this time. Crenshaw said PRS would begin providing news clips to the CAB the week of July 3. She said PRS organizational charts are being finalized and will be presented to the CAB in July along with their presentation. Blumenfeld said updated schedules on the Land

Acquisition Study were presented to the CAB. Brandstetter said the action for the formal statement on the leachate concerns is still pending.

Administrative Issues

Review of Workplan and June Agenda

Blumenfeld said the Site Management Plan presentation could be ready for July. She would need to ensure EPA and the State are agreeable to allowing the presentation before the document was final and asked Snook to follow up with Dollins on the presentation. If Dollins believes the presentation will not be ready, he should notify Brandstetter. Kay said PRS is scheduled to provide their general overview presentation in July. Kay said according to the Land Acquisition Study schedule, a presentation should be added to the July agenda. Lee suggested postponing the presentation until August and schedule the following presentation in October before the report is finalized. Smith suggested an update when the document has been finalized in November. Blumenfeld said she was uncertain of the process for sharing the draft. She said she would discuss modifying the briefing schedule with Bonczek.

Lee said Williams had volunteered to give a presentation on land use software graphics used at other facilities. She asked if the whole CAB would like to the preview or keep it in the task force. Kay suggested the presentation be given at the task force and if they think it would be useful for the whole Board we can add it to a future agenda.

Kay said the CAB is still waiting for a letter from Mr. Murphie for the annual report. Blumenfeld said the letter would be provided before the July meeting.

Budget Review

Smith said the action item was left open for Dollins to contact Bechtel Jacobs Company for outstanding charges against the CAB budget. She said the Executive Committee has not met to discuss the proposed requests by Burnett to indicate on the spreadsheet how much of the budget is EHI's and how much is Board expenditures.

Subcommittee Report

Executive Committee

Kay said there were two letters composed at the chairs meeting to James Rispoli, Assistant Secretary for Environmental Management, that require a vote to authorize the chair's signature on behalf of the CAB. Smith said the first letter requests incorporation of lessons learned from Fernald and Rocky Flats in policies for future site closures. The second letter requests that EM SSABs input on future site environmental budgets. **Both letters were approved for Kerley's signature by consensus.**

Smith said the Executive Committee meeting is scheduled for June 20 at 2 p.m.

Smith said the Santa Fe Chairs Meeting would be held September 6-8. She asked the members to contact staff if any would like to attend.

Chairs Meeting Review

Smith provided a presentation on the April Chairs Meeting that was held in Oak Ridge.

Burnett asked how Fernald ended up on their end state vision with regard to industrialization and reuse of the land. Blumenfeld said a few Environment Management (EM) sites were not required to produce the End State Vision documents if they were deemed to be closure sites and close to the end. She said she knew that was the case with the Rocky Flats site but was uncertain about Fernald. She said they are under a Federal Facilities Agreement so those would have been identified. Blumenfeld asked if he was interested on the end states that have been identified. Smith said the slides showed before and after pictures. She said the Fernald speaker said he would make himself available for questions if Burnett would like to contact him. She said the presentation that they provided at the chairs meeting shows additional slides than what she has shown. Blumenfeld said DOE is splitting EM and Legacy Management (LM). The EM's mission is to cleanup the facility and it is then transitioned to LM. Smith requested that the presentation be added to the Website for review by all the members.

Smith said she had volunteered Paducah to host the Chairs Meeting in October 2007.

The meeting adjourned at 8:30 p.m.