



PADUCAH GASEOUS DIFFUSION PLANT CITIZENS ADVISORY BOARD

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Paducah Gaseous Diffusion Plant Citizens Advisory Board Meeting Minutes August 17, 2006

The Citizens Advisory Board (CAB) met at the CAB office in Paducah, Kentucky, August 17, 2006, at 6 p.m.

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

Board members absent: John Anderson, Judy Clayton, Chad Kerley, and Janet Miller

Ex Officio members and related regulatory agency employees present: Sarah Beard, Brian Begley, Nicole Burpo, Bill Clark, Mike Guffey, Jon Maybriar, Larry Sowder, and Erin Wright, Kentucky Division of Waste Management; Tim Kreher, Kentucky Department of Fish and Wildlife Resources; David Williams, Environmental Protection Agency

Deputy Designated Federal Official: Reinhard Knerr

DOE Federal Coordinator present: David Dollins

DOE-related employees present: Jeannie Brandstetter, Tracey Brindley, Kim Crenshaw, Butch Daniels, Bruce Gardner, Steve Kay, John Kelly, Steve Meiners, James Miller, John Morgan, Bruce Phillips, John Razor, Scott Smith, and Joe Tarantino

Eleven members of the public attended the meeting.

Introductions

Dollins introduced Knerr, new lead for the Department of Energy (DOE) Paducah Site Office.

Agenda

Kay asked for proposed modifications to the agenda. Dollins said the Site Management Plan (SMP) presentation has been postponed. **The Board adopted the agenda as modified by consensus.**

Minutes

Kay asked for proposed modifications to the draft July minutes. Maybriar said he had just received the minutes and would like time for review. **The Board approved the minutes as submitted by consensus with changes from Maybriar, if necessary.**

Deputy Designated Federal Official *Attachment 1*

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

Questions/Comments	Answers
Mr. Russell: How much additional information is being obtained from the new monitoring points taken around the C-400 Building and at what cost?	Mr. Knerr: Additional sampling activities are being performed to optimize the removal of the trichloroethylene (TCE) at different heights and depths. The old data was reviewed and new sampling locations were added where there were weaknesses. Mr. Dollins: The cost was around \$2 million, but in return, DOE can better define where the contamination is and fill in the gaps.
Mr. Russell: On the rail spur that is being built, what is being carried on the rail line and how often will the train run?	Mr. Knerr: The oxide that is generated as a result of the conversion operation will be shipped weekly to Energy Solutions in Utah.
Mr. Russell: The presentation indicated on the scrap metal project that several yards are 100% complete. It's my understanding that there may be buried materials in those areas. Has an investigation been done on those areas to check on that?	Mr. Knerr: That investigation is done under the Soils Operable Unit (OU) project. The scope of the scrap metal removal project just focuses on the removal. Knerr said DOE is looking in the scrap yards for scrap metal that has possibly subsided.
Mr. Russell: On the leachate system, there are two filters for solids treatment. Are those paper filters?	Mr. Tarantino: The two filters on that system are paper filters. One is 10 micron and the other 50 micron.

<p>Mr. Burnett: Why are 60 railcars on the scrap metal project pending shipment?</p>	<p>Mr. Knerr: The money to make the shipment for disposal will not be available until the beginning of the fiscal year (FY). The disposal cost is a little over \$5 million. In the Northwest scrap yard there has been a significant increase in removal activities. When the project was originally planned, a certain volume was planned for this fiscal year and additional volume for next fiscal year. The shipment will be held to line up with the funding profiles.</p>
<p>Ms. Smith: The drilling probe reduces the amount of waste. She asked what kind of cost saving is anticipated on changing the technology and not disposing of the waste?</p>	<p>Mr. Knerr: It saves 100 drums of waste at about \$175 per drum for disposal. That does not include transportation.</p>
<p>Ms. Lee: Will Blumenfeld attend future meetings?</p>	<p>Mr. Knerr: Blumenfeld and Murphie will continue to come to CAB meetings and provide support. They were unavailable to attend this meeting.</p>
<p>Mr. Smart: Something that might help the presentations for the benefit of the community is instead of reporting volume in cubic feet; possibly translate cubic feet to semi-trailer truck.</p>	

Federal Coordinator Comments

Dollins said due to budget shortfalls only one person may be able to attend the Chairs Meeting.

Dollins said the 2004 Annual Site Environmental Report is available. He asked the support staff to mail each Board member a copy. Brandstetter said the Citizens Advisory Board (CAB) has not yet received copies of the report.

Ex-Officio Comments

Williams said on the soils beneath the scrap yards, the Environmental Protection Agency (EPA) and Kentucky are concerned with the level of contamination of the soils that remain in place. Both agencies are keeping a close eye on the scrap yards to determine if surface water is causing contaminants to leach from the soil. The soil would not be left in place if risk based levels are exceeded. He said the Removal Action Completion Report is due in December 2007.

Williams said on the Burial Grounds OU document, EPA and Kentucky have received informal assurance from DOE that the comments have been addressed.

Williams said there were two primary concerns for EPA in the preliminary SMP. One issue was moving the Dissolved Phase Groundwater Plume to be addressed under GWOU rather than the Soils OU and DOE has agreed to that. He said the other issue was running out of enforceable milestones. Paducah is on the National Priority List (NPL), which comes under regulatory offices of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) in the National Contingency Plan. It states that all NPL sites must have a series of enforceable milestones in place to demonstrate progress toward clean up. DOE has replied that they are moving ahead with one enforceable milestone. EPA is asking for three and discussing increasing the number of milestones for the 2007 SMP which is due in November. Williams said the SMP for FY 2004 was the first signed SMP in five years by all parties. The SMP is an appendix to the Federal Facilities Agreement (FFA), which is the operating agreement for the entire site. Due to the number of changes in the SMP, there is a consideration whether the changes will be a major or a minor modification. If it is a major modification, it requires some public involvement. The FFA states that public involvement in a major modification must be addressed in the Community Relations Plan. The current Community Relations Plan has been out of date for a number of years. He said they have been working for the last year on putting together an active Community Relations Plan for the site. EPA, Kentucky and DOE have agreed on most of the issues but one outstanding issue is the degree of public involvement on major modifications. EPA and Kentucky believe there should be a period for public comment, and DOE is taking that in consideration. That issue should be resolved in the next couple of months and have a final Community Relations Plan in place for the site.

EPA reports to Congress on the Government Performance Results Act (GPRA). This requires government agencies to meet certain goals and measure environmental indicators. The indicators are whether human health exposure and groundwater contamination migration are under control. These indicators are being looked for all facilities including Paducah. EPA and Kentucky are working very closely with DOE and the Tennessee Valley Authority to reach resolution on the issue of whether human health exposure is under control. Russell said when the SMP was developed and approved it was an annual update to the FFA and due every November. We are looking at the 2006 SMP when the 2007 SMP is due in draft form in a couple of months. He said if enforceable milestones need to be developed, develop a SMP consistent with the fiscal year. Dollins said the program doesn't shut down while a SMP is being negotiated. The projects and everyday procedures continue. Smart asked what EPA means when discussing dissolved plumes brought back into the program. Williams said the previous SMP addressed the dissolved plumes with follow-up remedial actions taken care of in the Comprehensive Site Wide OU and the Soils OU. EPA and Kentucky believe that it was not a transparent type of program to address the Dissolved plumes and wanted to make a separate category for the dissolved phase in the GWOU. The previous strategy was to address it in the C-400 remedial action and take care of the source in spots but it was not clear how the Dissolved plumes would be handled in the long term after the C-400 action.

Maybriar said when the 2006 SMP was received on Nov. 15, the review was not completed until the beginning of the year and some issues were identified that would need to be resolved at a higher level. He said more enforceable milestones had to be brought back in and agreement on how to deal with the Dissolved phase since it was under the GWOU rather than

the Soils OU. The senior management met on this issue last month. Usually the SMPs are not delayed this long but the issues are still being resolved.

Maybriar said he received some questions from the CAB and Larry Sowder, KPDES permit writer, is available to answer those questions.

Public Comments

Vander Boegh said that on May 11, the Kentucky Division of Waste Management (KDWM) sent a letter to Jack Wray addressing kids swimming and playing in Little Bayou Creek (LBC). The letter warned that there are excessive levels of uranium in that creek. He asked how that would affect the GPRA status for DOE being a child recreator scenario, the second worst case situation that can be experienced. He said the worst scenario is the child drinking the water and if the kids were swimming in that water most likely one of them took a drink. Maybriar said an anonymous tip was received that a rope appeared to be used for swinging out into the water at LBC and a letter was sent from KDWM to Mr. Wray as well as DOE. The assumption was that it was kids but they never actually saw that. The most protective scenario for people that use the area is the child recreator scenario. KDWM located the area on April 13 and believe it to be on DOE-owned property. The letter was sent to the closest property owner in that area. Mr. Wray assured KDWM that neither he nor his family was swimming in the creek. The letter was sent to inform him of the postings upstream of Ogden Landing Road. The letter said KDWM has documented elevated levels of uranium in that stream and advised against anyone recreating in that area or stream. He said a copy of the letter could be made available to the CAB. Vander Boegh said he has heard of kids from the high school going out, swimming in the creek, and asked who is blocking that from happening. That is one of the most contaminated ditches that DOE has at the site with transuranics. It is DOE property and the second worst case scenario under risk assessment. He said someone should be sampling or fencing the creek. Maybriar said no one is stopping the kids. Kids are going to walk around a sign and get in the creek. He said there are no signs in that area at this point. All of the Oak Ridge Environmental Information System (OREIS) database was reviewed for transuranics, uranium, PCBs, and metals and was measured against risk-based numbers for that stream. The only risk based numbers that were above background levels were for uranium. That is why the letter was issued. The intent of what they want to do for environmental indicators for GPRA is to inform the public more if elevated levels of uranium are found and put out more signs to educate the public so they do not have this kind of situation occurring again. He said he was not accusing Mr. Wray of swimming in the creek; he just wanted to educate the people in the area if the signs are not being seen.

Russell said he is a recreational user for that area and his activities have been restricted because of the security concerns. He said the field trial participants would be the ones that suffer because of this incident. He said \$15 million dollars is being spent on security and the fence has been cut and there are kids swimming in the creek.

Smith said she is concerned that the water in that creek is contaminated and the children have access to it. There are signs posted but she believes there is a law stating that a sign is not

enough protection for a child and that it would require fencing. A child is not held accountable for the reading of a sign until 18 years of age. Maybriar said a study has not been conducted for the entire length of LBC but there have been sample points that are routinely collected by KDWM through the University of Kentucky as well as DOE. Elevated levels of uranium in the sediment have been seen that exceed 10^{-6} (1 in 1,000,000) risk level but it does not exceed 10^{-4} (1 in 100,000) risk level. A range is seen that Kentucky would allow risk management but there are some requirements that must be put in place and the path that Kentucky has chosen is to put signs up to inform the public. The sediment samples that have been looked at are five years old. More than likely if the sediment was sampled; the transuranics would have moved on downstream or would have been replaced with another level of uranium that could be a concern. There is not enough information to positively say the creek is contaminated so they are trying to be as protective as they can. He said he would like to hear more about the law that Smith mentioned. Smith said her mother had to fence a pond because neighboring children could not be kept out.

Vander Boegh asked why the State of Kentucky would supply signs or fencing instead of DOE. He said it is not known who the kids are that were swimming in the creek at this time but it be known when there are reports of various cancers called in. Kay said we do not need to speculate. Maybriar said the State of Kentucky would not provide the signs; DOE would be responsible for maintaining the signs and ensuring the signs stay in place. Kreher said that site that is being discussed is on DOE property and there is no fence between private property and where the swing is located. The only fence that exists is the fence on the private property side of the line. That boundary is currently marked with signs every 100 yards saying this property is closed. There is no fence on DOE property that has been cut at that location.

Vander Boegh said KDWM has supplied him with Freedom of Information Act (FOIA) requests for analytical data for Little and Big Bayou Creeks. Maybriar said the ten years of data includes 10,000 samples. He said he has looked at the data throughout the years and there are no samples above polychlorinated biphenyl (PCB) levels in the fish above FDA action levels in Little or Big Bayou Creeks. The action levels for PCBs is two parts per million (ppm). Some of the samples are above the Great Lakes Protocol for PCBs for consumption of fish for pregnant women and children. It is difficult the get the trophic levels for fish. Vander Boegh asked if that matched Dr. Birge's study of the PCB levels that was published. Maybriar said that was the information he was quoting.

Vander Boegh said that after the article in the Paducah Sun, he was called by several people asking about off-site contamination issues. They were referring to DOE maps that were passed out at Heath High School that identified areas where materials were trucked off-site and dumped into the community. Dollins said he did not recall that. Kreher said he does not remember a map that showed things being trucked out but he did remember a map that indicated any detects over background levels. Vander Boegh asked if that map could be shared with the CAB because it shows a large landfill well off DOE property. Knerr said DOE is not aware of any such landfill. Vander Boegh said it would not be called a landfill; it would be called an illegal dump because it would not be permitted. He said the map ended up on a DOE Web site and a party that was searching the Web site received a call from the Federal Bureau of Investigation to get off the Web site. Vander Boegh said requested a copy

of the map. Maybriar said Vander Boegh has contacted him and told him that there are private dumps outside of DOE property that contains material brought from the Paducah Gaseous Diffusion Plant (PGDP). He invited any person to bring information to him and KDWM would look at the area and it would be evaluated both visually and with rad meters. If KDWM feels there is merit, it will be investigated further. Vander Boegh said he is not sure if the area exists either. He is trying to find out if there is a map.

Vander Boegh said he understands that DOE sampled the leachate treatment facility on Monday. Knerr said DOE has not sampled the leachate at the new leachate treatment facility yet. Vander Boegh said Mr. Corpstein has the quarterly reports with analytical data, if needed.

Dr. Clinton Cook, practicing cancer surgeon, said he would like to discuss from a medical standpoint the hazards around this state and the hot spots, which are Eastern Kentucky and radiation exposure from Western Kentucky. Kay asked the Board if they would like to add Cook to the agenda or hear the comments at this time. The Board agreed to hear Cook's comments at this time. Cook said he is a member of the KMA State Cancer Committee that collects data from this area and all over the state and provides that data to the National Institute of Health data collection base. There are many cancers relating to chronic exposure of depleted uranium that is being monitored. When radiation gets into the body via depleted uranium it comes in orally and goes to the lungs and stomach. All of the radiation that comes in goes to the stomach and stored in the liver. The fastest growing cells are the ones that are affected the most and the slowest reproducing cells are least affected such as the brain. Being monitored are leukemia, brain cancers, thyroid cancers, bone cancers, skin cancers, stomach cancers, breast cancers, lung cancers and birth defects. If there are radioactive spills here and there are health risks it is very serious for the population of this area. Smith asked if there would be a report compiled on these results that could be presented to the CAB. Cook said the data is being collected and summarized by the Markey foundation at the University of Kentucky and by the Brown Foundation in Louisville. Smith asked what the timeframe would be. Cook said it could be available by next Spring. Russell said there was an article in the Courier Journal regarding the Gulf War and the Iraq War veterans who are reporting a high instance of health effects that are attributed to exposure to depleted uranium not necessarily from the radioactive aspect but the uranium aspect as an element. It has some health risks associated with it that are not well understood. He asked if this study would eliminate that aspect because it has been suggested that there is uranium as an element and radioactivity outside the security fence so the CAB is looking at both issues. Cook said there are some cancers, such as lung cancer, whose source/cause is difficult to identify, whether it is caused by cigarette smoking or whether there is a radiation effect. There are other cancers relating to radiation entry that have no effect from smoking, the most common of which affects bone marrow. Those cells are the ones reproducing themselves the fastest and the radiation activity is the highest and the leukemia rate will go up. There has been a suggestion that this is a hot spot for the chronic exposure. Russell asked if uranium as an element is carcinogenic and asked if Dr. Cook was going to look at that issue in addition to the radiation. Cook said no, their committee would not do that. Smith said there are some available spots on the Board and a great need for someone from the health care community. Cook said he appreciated that. Smith said an application would be sent to Cook. Maybriar

asked how Cook is getting out the message to the public for someone around the facility to contact him or obtain their medical records. Cook said he sends videotapes to all physicians in Kentucky and it is also sent to other states too. This gives physicians the knowledge on what to look for and how to report it to complete the database. That data is made available to the general public through state regulatory groups. Maybriar asked how Cook would have the information on individuals from this area traveling to out of state physicians. Cook said if the biopsy was done here it would be in the database in spite of treatment being carried out elsewhere.

Johnson said word will get back to Sen. McConnell on how Dr. Cook was treated and accepted at this meeting. He said a problem is this area is everyone wants to close their ears to real fact and interest on the health of this community. Smith said she appreciated Johnson's concern and reminded him that the Board voted to extend the time for public comments in order to hear Cook's comments. She said the Board has been looking for someone from the health care community for membership. All Board members are volunteers and even though McConnell may be interested in what the CAB is doing, she has never seen him at a meeting.

Meiners announced that the Board should be receiving a letter stating that Eric Scott has resigned from the Radiation Health Branch and would no longer be an ex-officio for the Board. Scott will be replaced by Steve Hampson as ex-officio.

Ron Fowler, citizen, said that the maps that Vander Boegh was discussing were handed out in 2002 at a DOE meeting at Heath High School at his request for a community meeting. It did not pinpoint only off-site radiological hazards, it was not dump sites, and it was different points of interest also showing TCE. Fowler said he told Don Seaborg, DOE Site Manager at that time, the map would be to the national terrorists a smorgasbord to pick up plutonium, of course it wouldn't be an atomic weapon, but could be a dirty bomb. Fowler said Jim Malone, Courier Journal, has explicit maps if referred to the archives. In reference to the postings, he asked if no one was trained on the postings, how could an individual be held responsible.

Task Forces/Presentations

Land Acquisition Study Update

Knerr said a draft report of the Land Acquisition Study has been sent to the Lexington office for review and a draft letter is being sent to the Congressional Committee specifying the project is moving forward on schedule. Russell asked when the CAB would be able to review the document. Smith said when the timeline was given to the CAB; they had requested a review period before the final report. Knerr noted the request.

Waste Disposition/Water Quality Task Force

Lee said she was disappointed that there has been no progress on the land use maps. She said the task force requested that DOE prepare Geographic Information System (GIS) data four months ago. She requested that a GIS person be made available at the task force meetings to have an ongoing working document in front of them for discussion. Lee said Williams has

provided a power point presentation to her for review on an economic development plan for a federal facility base. She said it is inspiring to see a community get together and have cooperation with different organizations and individuals and have a plan. Williams said with most of the federal facilities, one of the primary goals is reuse. Every facility is required to have a reuse plan by some entity, usually the controlling federal agency such as the Department of Defense or the Department of Energy. The Jacksonville Naval Base is going under partial closure and established the local reuse authority and the restoration advisory board, which is the same as the CAB. A long-term reuse plan was established in a GIS base format where the various properties are outlined and the the projected reuse of the property to be. That acted as a blueprint for how the property is cleaned up for the reuse of the facility.

Lee said the task force has discussed a recommendation to DOE requesting assurance that the Waste Acceptance Criteria is being met and that there is sufficient oversight from the regulators and DOE. She said they would like the CAB to review the following recommendation:

Recommendation:

The CAB recommends that strict adherence to the Waste Acceptance Criteria (WAC) be followed for waste streams coming to the U-Landfill for disposal. The Department of Energy should ensure this level of compliance by:

- a thorough review with all waste generators, landfill operators, and contractors of the importance and details of the WAC
- establishing an oversight program featuring reporting, inspection, and periodic review of waste operations under the WAC.

The CAB recommends that DOE set up a review committee to address recent issues and specific allegations. It is recommended that the review committee include a CAB member, DOE regulator, State regulator, and DOE contractor.

Maybriar said the recommendation asks that a state regulator serve on the review committee. He asked if the task force wanted someone from the Solid Waste Branch that writes the permit, someone that has the ability to do inspections at the landfill, or someone from the Division of Water that works on the Kentucky Pollutant Discharge Elimination System (KPDES) permit. He said he would need to get the approval from his management to have that person on the committee. Smart said this recommendation goes to DOE and it would be up to them to decide the appropriate office to be involved. Knerr asked the driver of the recommendation and the issue to be resolved. Lee said there have been a number of issues raised on what is going into the landfill, the leachate coming out of the landfill, and the CAB wants to fully understand whether there is merit to the allegations. Instead of month after month hearing a similar story, the task force would like to get the issues resolved. Knerr recommended a presentation on the waste generation and characterization process. He said DOE does not have generators throwing waste in the back of a pick up truck and hauling it to the C-746-U Landfill. It is a very controlled process. There are detailed characterization procedures, waste certification officials that review the packages, inspection and sampling activities for each of the containers for the on-site landfill, and landfill packages that are

developed that are based on sampling data. Lee said she did not believe the entire Board was interested in learning the procedure. That is why the task force is recommending having a committee set up to address the issues and allegations. Knerr said by reading the recommendation the task force is wanting more than that. He said by asking for strict adherence to the WAC is insinuating that DOE is not adhering to the WAC. The said there is a very robust oversight program that looks at waste characterization and disposal operations, not only for the U-Landfill, but for waste that goes off-site. When issues are identified in the field they are tracked and programmatic corrective actions are developed and documented in the QA program. He said he is concerned that a recommendation is being proposed without getting the information from DOE. Dollins asked that the recommendation wait until the next meeting and allow DOE to bring in a landfill person for a presentation. He said statements are being made and there are things that have come up in the newspaper. He said there are times he is not able to answer questions on the spot. He offered John Razor, and a landfill person make a presentation to the task force. He said if the task force does see deficiencies, follow up with the recommendation on that portion of the operation that they think needs to be enhanced. Burnett said having the program on paper is not sufficient and they need to see how it is implemented. Dollins said the presentation would cover that. He said there is a lack of knowledge on the daily operations of the landfill. Smart said the recommendation may need to be reworded but he thinks the CAB has confidence that DOE is adhering to the WAC. The CAB is not telling DOE how to do their job, but recommending that extra emphasis be given to that issue. The second part of the recommendation is that the presentation could be made but the CAB is the eyes and ears of the community and has the responsibility to address the issues that are being raised. It would be wise to list these concerns and address them specifically. Lee said the task force wants to review the recommendation for another month. She said the CAB does not want to get involved in oversight. Lee said Maybriar has offered to bring someone from the Solid Waste Division for a presentation at the task force to discuss the landfill procedures. She said Smart had an excellent recommendation for when a member of the public raises a specific concern at the CAB meeting; it needs to be addressed, not leave the question hanging and not be resolved. That is why a committee was suggested to look at the different issues. Russell said he understood in the task force meeting that the recommendation would be refined and reach a common ground on the recommendation before it was brought to the entire Board. Smart asked for comments on the recommendation. Lee said the task force would work on the recommendation for the next meeting. Knerr said DOE reiterates the offer to present the entire landfill process to the task force. Lee said they would let him know if they need further information after Maybriar's presentation.

Williams said the allegations that are coming in are from past problems. The recommendation is looking to take care of everything that could happen in the future. He assured the CAB that everything that he has received is going straight to EPA's enforcement authorities including Resource Conservation and Recovery Act (RCRA) oversight, landfill permit oversight, Kentucky liaison and everyone else associated with the whole program. It is being reviewed and there are active investigations currently going on to all aspects at the site. Knerr asked Maybriar if the state's presentation would cover regulatory oversight. Maybriar said he wanted to find out the scope of the discussion, whether the task force wants

the leachate aspect, alleged past concerns or the permit itself. He asked for questions to be submitted to him on exactly what the CAB specifically wants in the task force meeting.

Burnett put together questions for clarification to issues raised in previous meetings. Questions and answers (paraphrased) appear below.

Questions/Comments	Answers
<p>Clarify if the quarterly monitoring for KPDES permit compliance is a "point in time" sample taken once per quarter or if an exceedance at any time would be detected.</p>	<p>Sowder said that when conditions are established for the KPDES permit, limitation and monitoring requirements are determined. Those monitoring requirements determine a frequency of monitoring and a sample type. Quarterly monitoring by grab samples means once per quarter a sample of the discharge would be collected. A 24-hour composite means that a 24-hour composite sample is taken. Continuous monitoring is not usually required. It is an instantaneous snapshot in time from that discharge.</p>
	<p>Kay asked if it would be theoretically possible for there to be an exceedance between two snapshots and it would not be caught, but statistically he believed it is unlikely that all the exceedances are between the monitoring time and the frequency of monitoring. The time and frequency is meant to ensure that the appropriate compliance is met. Sowder said yes.</p>

<p>Maybriar clarified in the task force meeting the physical location of the leachate overflow in relation to the regulated outfalls.</p>	<p>Maybriar said the water coming out of C-613 and C-616 is the process water from the facility and the Northwest Pump and Treat. The C-616, which is a basin that contains all the storm water from the scrap metal yard whether it does an emergency overflow from exceeding its engineered capacity, discharge water through the pumps at the C-613 that are operated when full. All of the water flows through common ditches that goes to the 001 Outfall. Nothing is bypassed around Outfall 001 that comes from all of those sources. That does not mean it is monitored at that time. It is going through that outfall. Sowder said anytime there is a discharge from a facility, and it goes to the waters of the Commonwealth, a monitoring point is established. Anything that is contributory to that outfall is not individually monitored. The total outfall is monitored and addresses the combined waste streams as one discharge point. If something occurs within a facility such as an overflow as long as it passes through that outfall point, data is captured on it for the requirements of the permit. Maybriar clarified that is not leachate overflow, it is the sediment pond overflow.</p>
<p>Is it correct that the majority of the "20 pounds of uranium" discharged remained on site, contaminating soil on site with potential transport off site in the future? This appears to be supported by the outfall monitoring results. It may be from mixing. Is that uranium being diluted and going into what is being monitored or regulated or is that something that is contaminating on-site soils and waterways and drainage that remains and contaminates the soil?</p>	<p>Maybriar said the state believes that the source of uranium is the scrap metal area. The basin collects all of the storm water that runs off. It is safe to say that the source of the uranium is the scrap metal that DOE has been cleaning up. To clarify "the majority of the 20 pounds of uranium discharged remained on site," a water sample is being collected if it is being discharged from the C-613 pipe. The reason lower levels are being seen when Outfall 001 is sampled is because of the Northwest Pump and Treat and the C-613 basin does enter that area and further dilute the sample at the KPDES 001 Outfall. It is transported off-site by the surface water. Sowder said it is possible depending on the species of the uranium if it is suspended or dissolved. If it is suspended</p>

	<p>and there is sufficient distance between the lagoon and the outfall point, it could be depositing somewhere along the path. If it is dissolved, it could be going out the outfall so it all depends.</p>
<p>Permit limits appear based on concentration rather than total amount discharged. Does KDWM/Division of Water (KDOW) still consider this appropriate, or are any potential changes being considered when the expired permit is renewed?</p>	<p>Sowder said any permit developed has two sets of requirements that must be utilized in developing permit limits. One is effluent limitation guideline (ELG) that is developed by the federal government by EPA and established for particular type industries for certain criteria. Some criteria is based on loadings, which is the amount of production that goes on at the facility. The other type of requirement are State Water Quality Standards. In this situation, EPA has not developed an effluent guideline for this type of facility so KDOW relies on State Water Quality Standards. The standards are established on concentrations for protection of aquatic life both acute and chronic effects and human health both fish consumption and domestic water supply criteria. Those discharges are evaluated versus those criteria. Those criteria are concentration levels and that is what is utilized in the permits. There is no way to establish a loading level on these unless there is a total maximum daily load (TMDL), which is a process where the stream is studied and a stream specific criteria developed. At this time, most of the permit will be developed based on Water Quality criteria.</p>
<p>Are KDOW and the EPA moving towards a TMDL or loading standard?</p>	<p>Sowder said there are impaired waters throughout the state and KDOW is charged by the Clean Water Act to develop TMDLs for the impaired waters. As they are developed, there is public notice and EPA has to review and approve implementation. At this time, there is an approved TMDL for PCBs on LBC. That will be taken into consideration when the permit is developed for this facility.</p>

<p>Will the new permit contain any significant changes from the expired permit? Are there any risks to the public health and safety from continued operation on an expired permit?</p>	<p>Sowder said that on September 8, 2004, the new Water Quality Standards when into effect. There are significant changes that may impact this facility. He said he could not speak to the changes until it becomes a public document. It is still a preliminary document under development. He assured the CAB that it would comply with the Water Quality Standards and federal standards that are deemed appropriate. Whether it will cause future health problems, he cannot answer that because he is not a risk assessment person but the CAB will be able to comment on the permit and review it when it ready for public dissemination.</p>
<p>When will the permit would be issued for public review?</p>	<p>Sowder said KDOW is going to try to have the permit on public notice by next Thursday. A public hearing will be scheduled within 30 days. KDOW has committed to EPA to issue the permit in this fiscal year. The CAB can FOIA a copy of the permit through Ann Workman.</p>
<p>The adequacy of leachate treatment has been challenged, particularly with regard to radionuclides. What is the KDWM/KDOW position on leachate treatment prior to release? Are existing discharge monitoring and limits sufficient to detect and regulate the discharge of radionuclides to protect the public health and safety?</p>	<p>Sowder said KDOW does not evaluate the capability of the wastewater treatment plants. They are required to meet effluent limitations as they are established based on Water Quality Standards and the federal guidelines. If a facility has a discharge, it is their responsibility to comply with those conditions that are applied to the discharge. If the requirement can be met with that treatment system, that is fine. It is contingent for the facility to add additional treatment facilities to be in compliance with those conditions. KDOW does not proscribe the type of treatment necessary. That is the difference between waste management air pollution requirements and water requirements. DOE looks at the final product, not how it is treated.</p>

<p>Who has the agreement to do the one-time monitoring?</p>	<p>Sowder said he believes the agreement is with the Cabinet. Knerr said there is an agreement to do one time sampling with the leachate prior to operation but routinely the leachate is sampled with the leachate collection treatment process so it is not that DOE is doing a one time sampling event and then there is no additional sampling or monitoring of the leachate coming from the landfill.</p>
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Public Comments

Vander Boegh said he did not mean for anyone to misconstrue the difference between leachate overflowing and the C-613 basin. Any mention of potential leachate overflows that could occur at the wet well or other facilities have been checked by the state or are looking into the designs. There has never been a misunderstanding on his part. All the water that overflows does not go in to Big Bayou Creek, it goes down and crosses through the outfall, and it just is not monitored. Knerr said DOE does monitor the total suspended solids that are in the sedimentation basin. If there is an overflow event, there is a clear understanding of what the downstream impacts are. There were sampling events conducted at the time of the small overflow and a split sample is taken between Paducah Remediation Services (PRS) and the state. Additionally, there was samples collected at Outfall 001 during that event. He said DOE is very interested in ensuring protective health of the public and ensuring compliance with the outfall permit.

Sowder invited any interested party to come to the public hearing and make comments. The hearings that KDOW conducts are not in question and answer form. They are there to collect information. Questions will not be answered at that time; written questions will be taken back for review and finalized in a comment response document. He said the 30-day comment period would end at the close of the public meeting. A comment response document would be delivered to all interested parties.

Lee asked if the KDOW would be interested in having a representative serve on the Board. Sowder said David Morgan, Division Director, would need to be contacted on that issue.

Action Items

Dollins said there are no outstanding charges with Bechtel Jacobs on the CAB budget. That action item can be closed.

Crenshaw said PRS is working to upload documents to their Web site. At this time, the Web site is under construction. Kay said to leave the action pending until the Web site is accessible.

Lee said the formal statement to DOE on landfill concerns is pending.

Crenshaw said Tarantino provided the information to access the Southwest Plume figures that were presented at the June CAB meeting. Dollins said when asked to present information on the utilities at the PGDP, security issues have arisen. Dollins said he would review the issues with Steve Hampson and Rich Bonczek. Lee requested that DOE provide someone to work with the task force on a monthly basis to utilize the GIS database.

Lee said a presentation from the state on leachate treatment is scheduled for the September task force meeting.

Brandstetter said she received a sign-in sheet from the Land Acquisition Study public meeting that day.

Brandstetter said the action item for Board retreat date and location could be closed.

Dollins said he has the information that Jurka requested on what contaminants other than TCE and technetium-99 (Tc⁹⁹) might be in residential wells. Knerr asked the support staff to mail the data to Jurka. The data shows all of the historical sampling data for the 41 residential wells.

Dollins said there are 41 off-site residential wells in the Water Policy. He said there are nine that exceed mcls.

Dollins said there are 40 exemptions that relate to Privacy Act Exemption and the Geological Well Exception when requesting information on a private citizens well. This is to protect homeowners and the integrity of their well. The data he would provide Jurka would not show whom the well belonged to but would indicate the contaminant and the concentration level.

Dollins said he checked on Jurka's FOIA with DOE that she believed was never answered. He said the person he spoke with in Oak Ridge said the FOIA response was sent to Mary Hall in November 2002 because it was requested through Active Citizens for Truth in Mary Hall's name. The FOIA has been closed in Oak Ridge. Smart asked that the support staff notify Jurka of the status of the FOIA.

Administrative Issues

Review of Workplan and September Agenda

Lee recommended that Williams provide a presentation on the information that he had given her relating to economic development and producing blueprints for how the property is cleaned up for the reuse of other facilities.

Budget Review

Smith said there were no outstanding charges from Bechtel Jacobs against the CAB budget but the budget is in jeopardy of being overrun. She said Dollins informed her that there were

only funds for one person to attend the Chairs meeting. She said it is very important for all Board members to see other sites and understand the different technologies that could be available to Paducah, to understand what some of the locations are going through, how sites are being closed out and lessons learned. She said guidelines need to be reviewed in the future that only the Chair or Chair-Elect, and one other person attend Chairs Meetings. She said she would be reviewing the budget with EHI and Dollins on Tuesday to at least be able to send three people to the meeting. She said she would also be discussing the budget for the next fiscal year on how the CAB could cut back, such as rationing EHI visits down to quarterly instead of monthly. She said the CAB has to know the bottom dollar in order to prepare in advance. Dollins said the CAB is over budget and EHI would need to cut \$17,000 between now and September 30. He said the budget was separated out a few years ago so that the CAB could have responsibility and control over the budget to manage the money. He said it would need to be reassessed for the next year. He said money would be out of EHI's pocket if the budget goes over what was agreed in the scope. Smith said the bottom line has been in turmoil all year. Dollins said budgets are done two years in advance and the money that was being targeted was when Bechtel Jacobs was still the remediation contractor. DOE is now spending money from 2004 and working on money for 2008 so it is always two years in advance. At that time, there were BJC charges and now there is a new contract. There are things chopped out what was formally the clean up budget. Dollins said there are things in the budget that are nonessential and can be cut. He said he told EHI to be realistic in the upcoming proposal with CAB input. Brandstetter said she thought Murphie went to Washington D.C. to make a budget request and that included a request for the CAB. Dollins said the site gets a total budget two years in advance and there was a BJC factor. What is important is to get through the next month and when it is proposed, factor out all the things that would help for the next year. Smith said the CAB has undergone changes such as reduction in staff from two years ago. If the CAB is given one number and told midstream it has something else, it throws the numbers out. With DOE's help and EHI's help, the CAB can get through this years budget and accommodate the members going to the Chairs meeting.

Subcommittee Report

Executive Committee

Brandstetter said it has been proposed that the Annual Report would be posted on the Web site and will be printed in the next fiscal year for cost savings.

Smith read a resignation letter for Chad Kerley effective August 17, 2006.

Kay said the Moors Resort Lodge has November 10-11 open for the Annual Planning Retreat. October 27-28 is also open but it would be more expensive due to seasonal rates. Harrah's is completely booked. Lanier said she could not attend November 10-11. Kay said he would not be able to attend October 27-28 or November 3-4. Dollins said he preferred another weekend other than November 10-11 due to Veteran's Day being on the 10th. Brandstetter suggested a daylong meeting at the Environmental Information Center. Smith said she did not want to meet for an entire Saturday. Dollins asked if the retreat was

necessary. Smith asked if everyone agreed not to have the retreat at one of the resorts. Kay said the self-evaluation form would need to be done. Brandstetter said the Board's own operating procedures require a self-evaluation and retreat. Smart said the retreat is a bonding opportunity in a relaxed environment to talk about new issues and resolve old ones.

Smith said no nominations have been received for Chair-Elect. A vote will be taken at the September Board meeting. Please get nominations into her as soon as possible.

Brandstetter said press releases and letters will be issued now for Member Recruitment and the paid advertisements will be issued in the new fiscal year.

Smith said responses from two letters to Rispoli are in the miscellaneous section of the packet.

Smith said she is still looking for a volunteer to Chair the Community Outreach task force.

The meeting adjourned at 9:30 p.m.

Progress at the Paducah Project



DOE Portsmouth/Paducah Project Office

Update to the Paducah Citizens Advisory Board

August 17, 2006



C-402 Limehouse Demolition



Inactive Facilities D&D



- 402 Limehouse demolition completed
 - Rubble removal to be completed by August 18
- Completed sampling activities in C-405 Incinerator
 - Work instructions being written; waiting for approval of RAWP for work to start
- Sampling in C-746-A West End Smelter scheduled to start by week of August 21



DOE Material Storage Areas



DMSA materials are loaded into a container for shipment

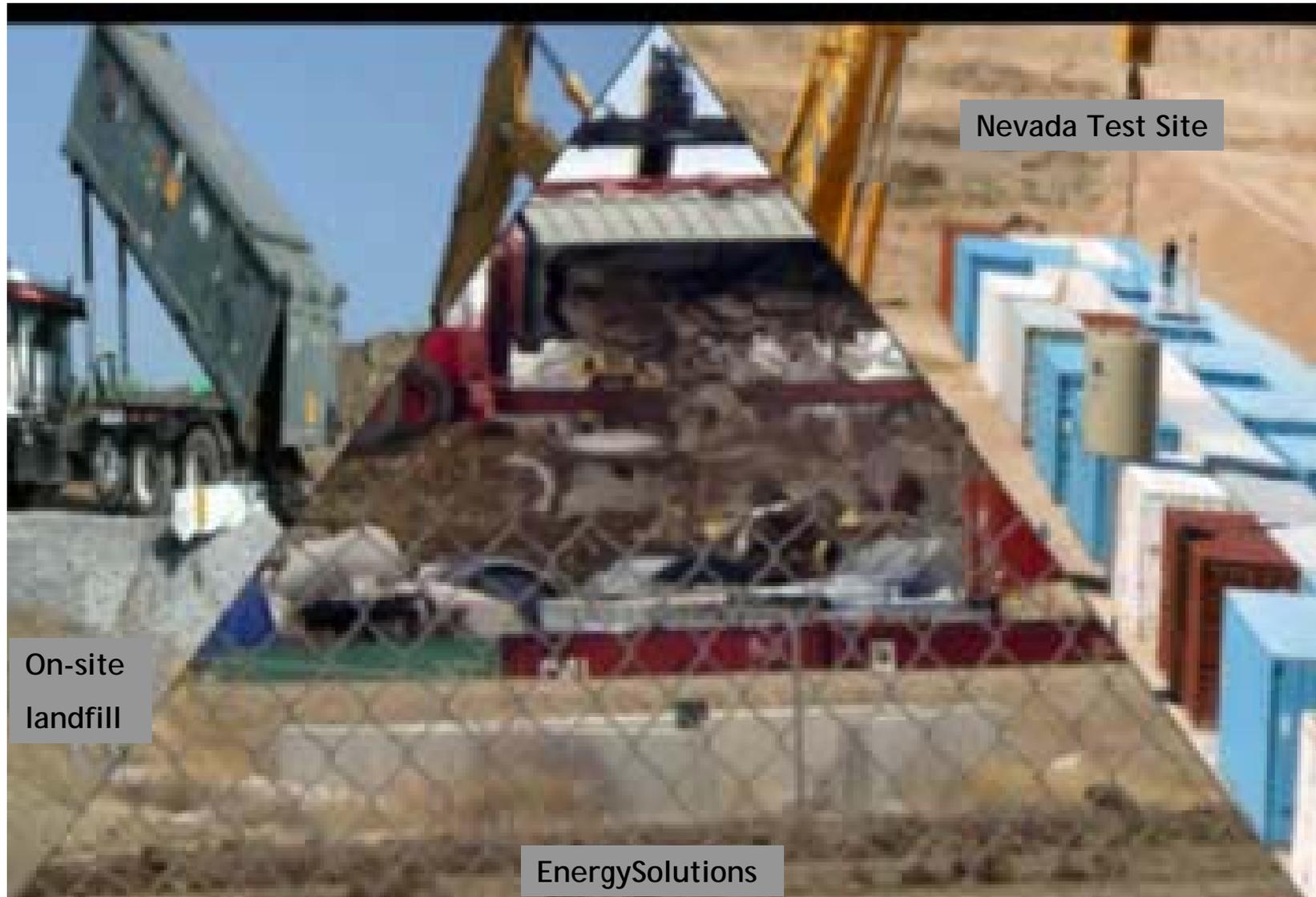
- On target to meet 9/30/06 milestone to complete characterization of "B" Priority DMSAs
 - 10 of 11 completed
- 73 of 160 original DMSAs now characterized



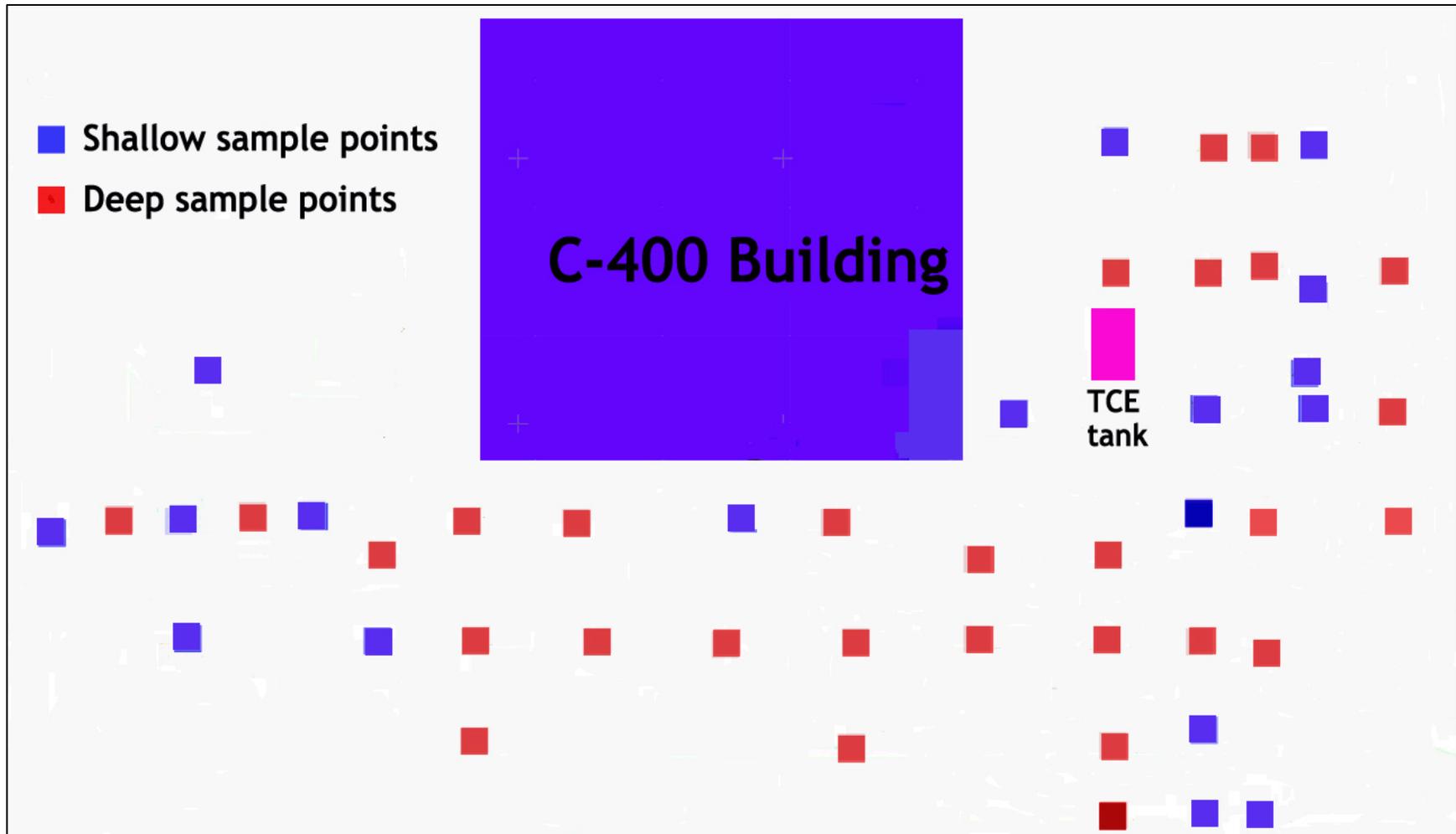
DMSA Characterization



DMSA Disposition



C-400 Interim Remedial Action



- Remedial Design Support Investigation sampling at 47 locations
 - 18 samples to 55 feet
 - 29 samples to 95-105 feet

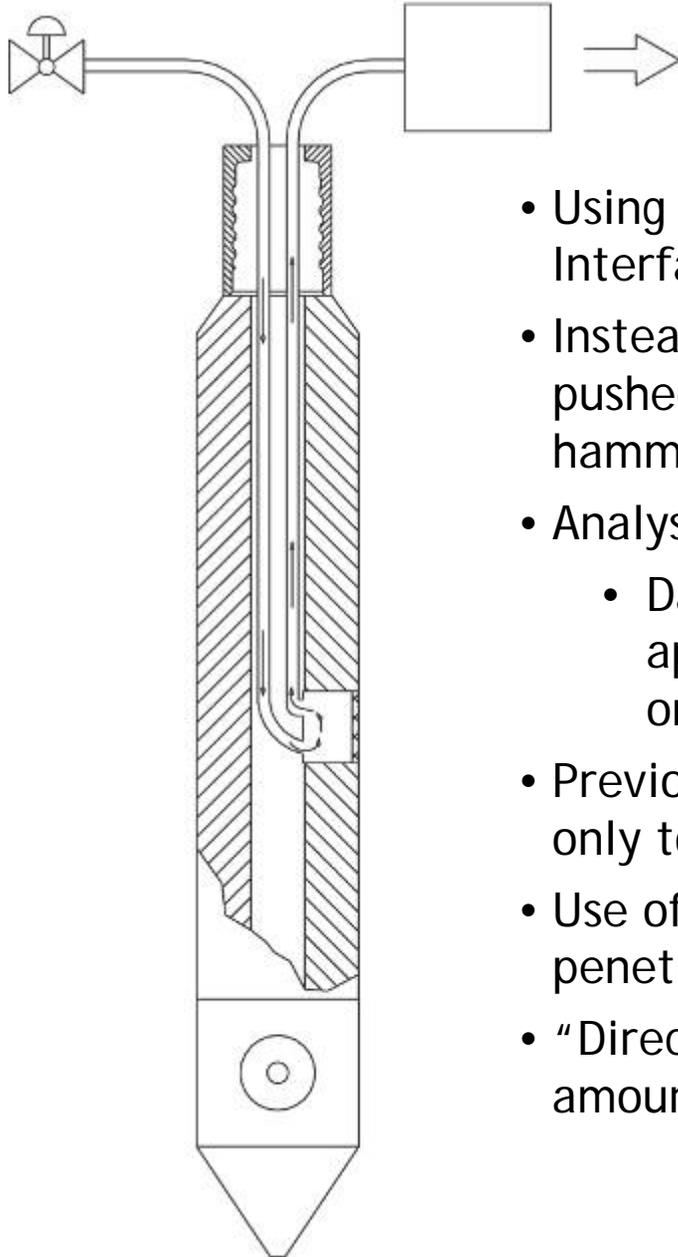
C-400 Interim Remedial Action



- Results will supplement data from earlier investigations
- Results will more precisely define TCE location and concentrations around the C-400 Building
- Final design of direct heating system will utilize investigation results
- Sampling completed by July 31 at 26 locations



C-400 Interim Remedial Action



- Using a device called a Membrane Interface Probe
- Instead of drilling, the probe is pushed to depth using a hydraulic hammer
- Analysis is performed every foot
 - Data provides information on approximate level of volatile organic compounds (TCE)
- Previously used at Paducah, but only to about 50 feet
- Use of a “pre-probe” allows for penetration from 50 to 100 feet
- “Direct push” technology reduces amount of waste



The Membrane Interface Probe

DUF6 Conversion Project



A panoramic view of the construction taken August 10

- Conversion Building concrete panels 40% complete with installation; projected completion by October 2006
- Warehouse building complete
- Continuing to finish interior of Administration Building; projected completion by October 2006
- Began construction of rail spur; projected completion by October 2006
- Bayou Creek rail bridge connected to site rail line

DUF6 Conversion Project



A concrete panel is lowered into place on August 10 in the Conversion Building

A worker drives spikes on the rail spur now under construction

Northwest Corner Scrap Metal Removal

- Project nearing completion
 - ~200 tons remain on the ground
 - Nearly 60 railcars loaded with more than 4,000 tons pending shipment
 - More than 23,000 tons shipped to date



Northwest Corner Scrap Metal Removal

Scrapyard Status – August 2006

Northwest scrapyards	A-Yard 100% finished 119 tons removed	E-Yard 100% finished 6,005 tons removed	C-Yard 100% finished 2,680 tons removed
	P1-Yard 100% finished 1,928 tons removed	P-Yard 100% finished 2,216 tons removed	E1-Yard 99% finished 4,618 tons removed <u>~20 tons remaining</u>
			C1-Yard 94% finished 2,642 tons removed <u>~180 tons remaining</u>
Classified Scrapyard (includes aluminum ingots)	D-Yard 100% finished 7,038 tons removed		



C-410/420 D&D

- Began removal of utility piping
- Completed bussbar removal (Zones 42 and 43 of Sector 2)
- Completed removal and shipment of 108 electrical switches to ToxCo for reuse
- Disposed of 20 intermodals of debris
- Packaged 19 intermodals with debris



Workers remove piping inside C-410

Legacy Waste Disposition



100-pound drums of asbestos waste are loaded into a container for shipment to Bear Creek for supercompacting prior to disposal.

- Continued disposal of ~30,500 ft³ of Low-Level waste stored outdoors
 - To date, ~20% disposed and another ~35% repackaged awaiting disposal
- In July, disposed of ~3,500 ft³ of wastes, including:
 - Mixed Low-Level to EnergySolutions
 - Mixed Low-Level to TSCA Incinerator
 - Legacy waste materials to C-746-U Landfill and EnergySolutions



C-746-U Landfill Leachate Treatment System

- For solids treatment, there are two parallel filter trains each with two filters in series
- For Volatile Organic Compound, leachate is filtered through two 55-gallon canisters each containing 180 pounds of granular activated carbon
 - Filters operate in series or parallel mode
- Incidental building and system solid waste disposed in C-746-U Landfill
- Filters will be sampled and analyzed prior to disposal



The leachate treatment system is shown above; at right, the building housing the system



Environmental Projects

Groundwater Operable Unit

- D2 Southwest Plume Site Investigation Report under regulatory review
- Discussions on the use of degradation factors used in groundwater modeling continue between DOE, Kentucky and EPA
- Completing D1 Proposed Remedial Action Plan for the Southwest Groundwater Plume Sources; scheduled for submission on 9/14/06

Surface Water Operable Unit

- Requesting milestone extension for submission of the Site Investigation/Risk Assessment to Kentucky and EPA

Burial Grounds Operable Unit

- The D2 Remedial Investigation/Feasibility Study Work Plan is scheduled for submission to Kentucky and EPA by August 29
 - Fieldwork scheduled to begin in October 2006





DOE Portsmouth/Paducah Project Office

Project Status Update for DOE Paducah Citizens Advisory Board

August 10, 2006

Project: Scrap Metal Removal Project

Contact Persons:

Paducah Remediation Services LLC: Chris Marshall

DOE Site Office: Reinhard Knerr

Commonwealth of Kentucky: Jon Maybriar

U.S. Environmental Protection Agency: David Williams

Citizens Advisory Board: Jim Smart/John Russell

Purpose: Environmental Cleanup/Waste Disposition

Description: About 31,000 tons of scrap metal exists at the PGDP, excluding nickel ingots. This project involves the removal of 21,700 tons of general scrap metal, 2,000 tons of aluminum ingots, and approximately 7,412 tons of classified scrap. The project does not include the recycling or disposal of the about 9,700 tons of nickel. Note the classified scrap total has been revised downward based on field experience.

Key documents:

- Engineering Evaluation and Cost Analysis
- Action Memorandum
- Removal Action Work Plans
- Agreed Order DWM-31434-042
- Documented Safety Analysis (DSA)

Recent accomplishments:

- On June 23, 2006, 3231 tons of scrap metal were shipped via rail to EnergySolutions
- Since January 1, 2006, 10,140 tons of scrap metal have been shipped via rail to EnergySolutions
- The final unit train carrying scrap metal in high sided gondola cars has been loaded and is scheduled to leave Paducah in October 2006

Activity over next 60 days:

- Complete disposition operations by inspecting, sorting, size-reducing and packaging scrap metal
- Begin demobilization activities under the EnergySolutions contract

**Project Status Update for DOE Paducah Citizens Advisory Board
August 10, 2006**

Project: Solid Waste Contained Landfill

Contact Persons:

Paducah Remediation Services LLC: Matt LaBarge

DOE Site Office: Jeff Snook

Commonwealth of Kentucky: Todd Hendricks

U.S. Environmental Protection Agency: David Williams

Citizens Advisory Board: John Russell

Purpose: Waste Disposition

Description: The operating landfill and support facilities are located on 60-acres of DOE property near Ogden Landing Road, operating under a permit from the Kentucky Division of Waste Management (KDWM). Landfill disposal operations began in 1997. DOE uses the landfill for disposal of solid waste generated from its operations at the Paducah site. Examples of wastes accepted include non-hazardous soil and debris from environmental cleanup and other DOE projects, protective clothing worn by workers, paper, packaging, and landfill office wastes. No waste classified as hazardous or radioactive is accepted.

Key documents:

- Environmental Assessment for the Construction, Operation and Closure of the Solid Waste Landfill at the Paducah Gaseous Diffusion Plant (DOE/EA-1046)
- Environmental Assessment on the Implementation of the Authorized Limits Process for Waste Acceptance at the C-746-U Landfill (DOE/EA-1414)
- Waste Acceptance Criteria for the Department of Energy Treatment, Storage, and Disposal Units at the Paducah Gaseous Diffusion Plant (BJC/PAD-111R4)
- C-746-U Landfill Solid Waste Disposal Facility Permit Number 073-00045

Recent accomplishments/activities:

- PRS is currently conducting start-up testing and training and preparing an Internal Field Review to document the leachate treatment facilities readiness to start leachate treatment
- In July, 29.39 tons of waste material were disposed in the landfill
- Evaluating leachate generation using updated HELP model and factoring in actual leachate generation

Activity over next 60 days:

- Complete testing and training of personnel for operation of the leachate treatment system
- Conduct an Internal Field Review to document readiness to operate the leachate treatment system
- Continue evaluation of leachate storage capacity
- Continue disposal of construction debris and other non-hazardous solid waste streams

Project Status Update for DOE Paducah Citizens Advisory Board

August 10, 2006

Project: Surface Water Operable Unit (On-Site)

Contact Persons:

Paducah Remediation Services LLC: Joe Tarantino, Kendall Holt and
Jana White

DOE Site Office: David Dollins

Commonwealth of Kentucky: Jon Maybriar/Brian Baker

U.S. Environmental Protection Agency: David Williams

Citizens Advisory Board: Jim Smart

Purpose: Environmental Cleanup

Description: The Surface Water Operable Unit (On-Site) Project includes a site investigation to identify hot spots in ditches and outfalls, including Sections 3, 4, and 5 of the North-South Diversion Ditch. The site investigation scope also includes an evaluation of whether additional sediment control measures are needed, as well as actions for potential legacy releases associated with the storm sewer system. The results of the site investigation will be documented in a Site Investigation/Baseline Risk Assessment Report.

Key documents:

- Sampling and Analysis Plan for Site Investigation and Risk Assessment of the Surface Water Operable Unit (On-Site), DOE/OR/07-2137&D2/R2
- Surface Water Operable Unit (On-site) Site Investigation and Baseline Risk Assessment Report at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-0001/D0

FFA Milestones:

- Issue Site Investigation/Risk Assessment Report by August 16, 2006
- Issue Removal Notification by October 12, 2006

Recent accomplishments:

- Issuance of the SWOU Technical Memorandum for Step 3 Storm Sewer Sampling to EPA and Kentucky

Activity over next 60 days:

- Complete DOE technical review of the SWOU SI/RA D0 and prepare document for submission to Kentucky and EPA
- Request milestone extension for submission of the D1 SWOU SI/RA report

Project Status Update for DOE Paducah Citizens Advisory Board
August 10, 2006
Project: Waste Disposition

Contact Persons:

Paducah Remediation Services LLC: Matt LaBarge/Greg Shaia

DOE Site Office: Reinhard Knerr

Commonwealth of Kentucky: Jon Maybriar

U.S. Environmental Protection Agency: David Williams

Citizens Advisory Board: John Russell

Purpose: Waste Disposition

Description: DOE is responsible for disposal and/or recycling of legacy wastes (wastes generated at the PGDP prior to establishment of USEC on July 1, 1993); wastes generated from ongoing DOE projects; and a limited amount of waste generated by USEC. After characterization to assure selection of the appropriate disposition method, non-hazardous and non-radioactive wastes are disposed of in the DOE Solid Waste Contained Landfill. *(Please see landfill update sheet.)* Hazardous and radioactive wastes are treated if necessary and shipped off-site to approved DOE or commercial disposal facilities. Wastewater (collected from sumps in diked areas in DOE waste storage facilities at PGDP) is treated and discharged in accordance with the Kentucky Pollutant Discharge Elimination System permit.

Key documents:

- Paducah Waste Acceptance Criteria (BJC/PAD-11, Revision 4)
- Final Environmental Assessment for Proposed Disposition of Waste from the Paducah Site (DOE/EA-1339 and Addendum DOE/EA-1339-A) (FONSI)
- Agreed Order DWM-31434-042
- Site Treatment Plan (STP) DWM-30039-042

Recent accomplishments/activities:

- Shipped 459 cubic feet of mixed low-level waste to EnergySolutions
- Shipped 760 cubic feet of mixed low-level waste to the TSCA Incinerator
- Disposed 1809 cubic feet outside legacy waste in C-746-U Landfill
- Disposed 1971.5 cubic feet of outside legacy waste metal debris via Scrap Metal Project
- Shipped 466 cubic feet of outside legacy waste to EnergySolutions

Activity over next 60 days:

- Overpack outside legacy waste for future shipment to EnergySolutions
- Complete shipments of solid waste to TSCA Incinerator (~6 trucks)
- Repackage low-level and mixed low-level waste for treatment/disposal at Energy Solutions and Perma-Fix facilities
- Dispose legacy waste stored in outside locations in C-746-U Landfill

**Project Status Update for DOE Paducah Citizens Advisory Board
August 10, 2006**

Project: Burial Grounds Operable Unit

Contact Persons:

Paducah Remediation Services LLC: Joe Tarantino/Kendall Holt

DOE Site Office: Jeff Snook

Commonwealth of Kentucky: Jon Maybriar

U.S. Environmental Protection Agency: David Williams

Citizens Advisory Board: John Russell

Purpose: Environmental Cleanup/Waste Disposition

Description: A Remedial Investigation/Feasibility Study (RI/FS) Scoping Document and the RI/FS Work Plan for the investigation of the Burial Ground Operable Unit (BGOU) at PGDP have been developed. The documents utilize a compilation of sampling information collected on and around the PGDP over the course of the last ten years. The BGOU includes Solid Waste Management Units (SWMUs) 2, 3, 4, 5, 6, 7, 30, and 145.

Key documents:

- Scoping Document for the Burial Grounds Operable Unit Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky
- Work Plan for the Burial Grounds Operable Unit Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/OR/07-2179

Recent accomplishments:

- Revisions to the BGOU D2 RI/FS Work Plan have been made and the document is under internal review prior to submission to Kentucky and EPA

Activity over next 60 days:

- Submit RI/FS Work Plan to Kentucky and EPA by 8/26/06

**Project Status Update for DOE Paducah Citizens Advisory Board
August 10, 2006**

Project: Decontamination & Decommissioning (D&D)

Contact Persons:

Paducah Remediation Services LLC: Don Ulrich/Brad Montgomery

DOE Site Office: Reinhard Knerr

Commonwealth of Kentucky: Jon Maybriar

U.S. Environmental Protection Agency: David Williams

Citizens Advisory Board: John Russell

Purpose: Environmental Cleanup/Waste Disposition

Description: The D&D project has completed development of Comprehensive Environmental Response, Compensation, and Liability Act regulatory documentation and has initiated actual D&D of the C-410/420 Feed Plant Complex. The current scope of D&D includes infrastructure removal on the C-410/C-420 complex, as well as ongoing surveillance and maintenance of the C-410/C-420 complex and the C-340 Metals Plant complex. Scope also included development of Safety Basis Documentation for the removal of equipment, piping, and stored material from the C-410 Complex. Operations at both complexes ended in 1977.

The Engineering Evaluation and Cost Analysis and the Action Memorandum for three inactive Facilities, the C402 Limehouse, the C-405 Contaminated Items Incinerator, and the C-746-A West End Smelter, have been completed and approved. The Removal Action Work Plan for the C-402 Limehouse has been approved by the regulatory agencies, and the C-405 and C-746-A West End Smelter RAWP was submitted to the regulatory agencies for review and approval.

Key documents (C-410 and Inactive Facilities):

- Engineering Evaluation/Cost Analysis (EE/CA)
- Action Memorandum
- Removal Action Work Plan (RAWP)
- Cultural Resources Assessment of C-410 Complex
- Agreed Order DWM-31434-042

C-410/420:

▪ **Recent accomplishments/activities**

- Completed buss work removal from Zones 42 and 43 of Sector 2, and completed removal of 108 large electrical switches from these two zones for shipment to ToxCo
- Continued packaging loose debris and waste; packaged 14,000 cubic feet (19 Intermodals and/or SeaLands) in July)
- Shipped 20 Intermodals of debris to Energy Solutions from C-410 for disposal in July
- Developed work packages to begin asbestos abatement and utility piping and equipment demolition in the C-410 Complex
- Initiated emptying, sorting, and segregating of material stored in SeaLands located outside the C-410 Complex, with three of the 16 emptied, sorted, and repackaged

- **Activity over next 60 days**
 - Continue packaging of loose materials in C-410 Complex
 - Continue fixative application to exterior painted metal surfaces of the building
 - Package demolition debris for shipment to EnergySolutions of Utah
 - Complete busswork removal in Sector 2 and 3 of C-410
 - Ship buss work and switches to ToxCo for reuse.
 - Initiate asbestos abatement activities in Sector 2 and 3 of C-410
 - Initiate removal of thousands of feet of piping in C-410, Sector 2 and 3

Inactive Facilities:

- **Recent accomplishments/activities**
 - Completed C-402 Lime House structure demolition
 - Completed sampling activities in C-405 to support waste characterization
- **Activity over next 60 days**
 - Complete removal of rubble and other demolition-related activities at the Limehouse
 - Perform sampling for waste characterization of C-746-A West End Smelter
 - Develop work instructions for C-405 incinerator work

Project Notes:

A UF6 release occurred inside C-410 Building on March 1, 2006, when a mechanic snagged an instrument line while routing an air line through the building, resulting in the line breaking. The line contained residual material that was not completely removed when the facility was shut down. Monitoring outside the building indicated no detectable HF outside the building. Implementation of the recovery process is continuing.

**Project Status Update for DOE Paducah Citizens Advisory Board
August 10, 2006**

Project: DOE Material Storage Areas (DMSAs)

Contact Persons:

Paducah Remediation Services LLC: John Samples

DOE Site Office: Reinhard Knerr

Commonwealth of Kentucky: Jon Maybriar/Mike Guffey

U.S. Environmental Protection Agency: David Williams

Citizens Advisory Board: John Russell

Purpose: Environmental Cleanup/Waste Disposition

Description: The 160 DMSAs are non-leased areas inside buildings, as well as outdoor areas. DOE accepted the return of the areas, and the material and equipment they contained from USEC on December 31, 1996, to facilitate NRC certification of the gaseous diffusion plants. At that time, most of the contents needed detailed inventory, characterization, and disposition. Since that time, DOE and contractors have been documenting contents, resolving environmental concerns such as draining and disposing of oils from old equipment, and segregating and disposing of wastes.

Key documents:

- PGDP Department of Energy Material Storage Area Characterization/Remediation Plan (BJC/PAD-186/R4), April 2001
- Agreed Order DWM-31434-042
- Documented Safety Analysis (DSA)

Recent accomplishments/activities:

- 2,596 ft³ of material characterized (including sampling) during July; approximately 664,000 ft³ of total estimated volume of 855,000 ft³ characterized
- 5,184 ft³ of material packaged for disposal during July
- 7,308 ft³ of material disposed during July; approximately 335,000 ft³ of total estimated disposition scope of 630,000 ft³ has now been dispositioned

Activity over next 60 days:

- Complete characterization of "Priority B" DMSAs under the Agreed Order
- Initiate final closure certification for approximately 20 DMSA RCRA Closures
- Transition to rail shipment to disposal sites

Project Notes:

Increased rigor in characterizing painted items for PCB content has impacted characterization, packaging, and disposal activities. Effort is under way to resolve different requirements and allowances between Kentucky and EPA regulations for solid waste disposal of painted items.

**Project Status Update for DOE Paducah Citizens Advisory Board
August 10, 2006**

Project: Groundwater Operable Unit

Contact Persons:

Paducah Remediation Services LLC: Joe Tarantino, Mike Clark, and
Bryan Clayton

DOE Site Office: David Dollins

Commonwealth of Kentucky: Jon Maybriar/Todd Mullins

U.S. Environmental Protection Agency: David Williams

Citizens Advisory Board: Jim Smart

Purpose: Environmental Cleanup

Description: This project addresses environmental remediation of groundwater contamination on a site-wide basis. The main contaminants of concern are trichloroethylene (TCE) and technetium-99 (⁹⁹Tc). Remedial actions will be designed and implemented after completion and signing of Records of Decision (RODs).

Key documents:

- Feasibility Study of the Groundwater Operable Unit at PGDP (DOE/OR/07-1857)
- Agreed Order DWM-31434-042
- Six-Phase Treatability Report (DOE/OR/07-2113)
- Proposed Remedial Action Plan for the Volatile Organic Compound Contamination at the C-400 Cleaning Building (DOE/OR/07-2114)
- Southwest Plume Site Investigation Work Plan (DOE/OR/07-2094)
- S&T Landfill Site Investigation Work Plan (DOE/OR/07-2098)
- Record of Decision for Interim Remedial Action for the Groundwater Operable Unit for the Volatile Organic Compound Contamination at the C-400 Cleaning Building (DOE/OR/07-2150&D2/R2)
- Remedial Design Work Plan for the Interim Remedial Action for the Volatile Organic Compound Contamination at the C-400 Cleaning Building (DOE/OR/07-2214&D2)
- Remedial Design Support Investigation Characterization Plan for the Interim Remedial Action for the Volatile Organic Compound Contamination at the C-400 Cleaning Building (DOE/OR/07-2211&D2)
- Site Investigation Report for the Southwest Groundwater Plume (DOE/OR/07-2180&D2)
- Site Investigation Report for the C-746-S&T Landfills (DOE/OR/07-2212&D2)
- Land Use Control Implementation Plan: Interim Remedial Action for the Groundwater Operable Unit for the Volatile Organic Contamination at the C-400 Cleaning Building (DOE/OR/07-2151&D1)

FFA Milestones:

- D1 Proposed Remedial Action Plan on Southwest Plume by 9/14/06 (Milestone being modified pending resolution of the degradation factor use in groundwater models)
- D1 Remedial Action Work Plan for C-400 by 11/22/06

- 90% Remedial Design Report for C-400 by 12/8/06

C-400 Remedial Action

- Recent accomplishments
 - Remedial Design Support Investigation fieldwork remains in progress. Membrane Interface Probe profiles completed at 26 of 47 locations at C-400
 - The D2 Land Use Control Implementation Plan (LUCIP) for the C-400 Interim Remedial Action will be included in the C-400 Remedial Design Report
- Activity over next 60 days
 - Continue design and design investigation activities for the implementation of the C-400 Interim Remedial Action
 - Continue with development of the C-400 Remedial Action Work Plan and Remedial Design Report

Groundwater Operable Unit

- Recent accomplishments
 - Provided assistance to the KRCEE in its task of reviewing the TCE degradation issue for the entire PGDP site
- Activity over next 60 days
 - Complete the development of the D1 Proposed Remedial Action Plan for the Southwest Groundwater Plume Sources

Project Notes:

- Discussions with the State of Kentucky and EPA are continuing concerning the use of degradation factors utilized in groundwater modeling to support risk assessment development
- The D2 Southwest Plume Site Investigation Report is under review; a meeting is planned for August 22 to discuss comment

**Project Status Update for DOE Paducah Citizens Advisory Board
August 10, 2006**

**Project: Depleted Uranium Hexafluoride (DUF₆) Project Surveillance
& Maintenance**

Contact Persons:

DOE Site Office: John Sheppard

Uranium Disposition Services: Barry Tilden

Commonwealth of Kentucky:

U.S. Environmental Protection Agency:

Citizens Advisory Board:

Purpose: Maintain safe storage of DOE DUF₆ cylinder inventory pending disposition.

Description: The Atomic Energy Act, as amended, gives DOE responsibility for the DUF₆ inventory, which is a by-product from enriching uranium for nuclear fuel. At Paducah, approximately 36,700 cylinders contain approximately 442,790 metric tons of DUF₆. There are also 182 cylinders of low-enriched UF₆, about 900 cylinders of "normal" UF₆ (which has not gone through the enrichment process), and 276 empty cylinders. The DOE inventory at Paducah includes the material generated from 1952 until the establishment of USEC in July 1993, and material transferred from USEC to DOE since that time.

Surveillance and maintenance involves safely storing DUF₆. Most of the 60-acre DOE cylinder yard complex now consists of concrete yards, which provide for improved storage and inspection. In recent years, DOE cleaned and painted 3,368 cylinders that had surface corrosion. DOE continually monitors and inspects its cylinder inventory to assure safe storage.

Key Documents for surveillance/maintenance:

- Handling and Inspection of DOE 48-Inch Diameter UF₆ Cylinders at Paducah (UDS-PA-2400)
- Agreed Order DWM-31434-030
- Final Environmental Impact Statement for the Construction and Operation of the DUF₆ Conversion Facility at the Paducah Site (DOE/EIS-0359)
- Record of Decision for Construction and Operation of the DUF₆ Conversion Facility
- Documented Safety Analysis for the DOE Cylinder Yards, BJC/PAD-459
- Technical Safety Requirements for the DOE Cylinder Yards, UDS-C-TSR-001

Recent accomplishments/activities:

- An agreement with the Bonneville Power Administration (BPA) has been approved to transfer 672 cylinders of DUF₆ to BPA to supply power reactor fuel; 606 cylinders have been transferred through July 2006
- Transferring off-spec "normal" UF₆ cylinders to USEC to fulfill an agreement between USEC and DOE for USEC to remove Tc-99 contamination from the cylinders and provide DOE with "clean" UF₆ feed material
- As of the end of July, UDS has completed 91% of the annual cylinder inspections, 90% of the quadrennial cylinder inspections and 90% of the

radiological surveys required for the fiscal year that ends September 30, 2006

Activity over next 60 days for surveillance/maintenance:

- Continue transferring cylinders as per the two previously mentioned agreements
- Perform annual cylinder inventory
- Begin removing cylinders from C-745-C cylinder storage yard so all DOE UF₆ cylinder will be located near the conversion facility

**Project Status Update for DOE Paducah Citizens Advisory Board
August 10, 2006**

Project: Depleted Uranium Hexafluoride (DUF₆) Conversion Facility

Contact Persons:

DOE Site Office: John Sheppard

Uranium Disposition Services: Guy Griswold

Commonwealth of Kentucky:

U.S. Environmental Protection Agency:

Citizens Advisory Board:

Purpose: Design, build, and operate the DOE DUF₆ Conversion Facility.

Description: The Atomic Energy Act, as amended, gives DOE responsibility for the DUF₆ inventory, which is a by-product from enriching uranium for nuclear fuel. At Paducah, approximately 36,200 cylinders contain approximately 436,400 metric tons of DUF₆. DOE selected Uranium Disposition Services LLC to design, build, and operate facilities in Paducah and Portsmouth to convert DUF₆ to a more stable form for disposal or recycling.

The project site occupies approximately 11 acres immediately adjacent to DOE's DUF₆ cylinder storage yards. The completed capital costs for the facility at Paducah are estimated to be ≈ \$91,000,000. The major facilities on the DUF₆ project include the Conversion Building, Administration Building, Warehouse and Maintenance Building, KOH Regeneration Building, and the HF Neutralization Building. The project work also includes a railroad connection, rail sidings, load out facilities, roads, storage areas for full and empty cylinders, and all utilities.

Groundbreaking occurred in July 2004 and construction has continued since that time. At the conclusion of construction, all systems will be tested and the plant will undergo an Operational Readiness Review. The facility construction is to be complete in 2007. Following Readiness Reviews, facility operations are scheduled to commence in 2008.

Key Documents for the Conversion Project:

- Final Environmental Impact Statement for the Construction and Operation of the DUF₆ Conversion Facility at the Paducah Site (DOE/EIS-0359)
- Record of Decision for Construction and Operation of the DUF₆ Conversion Facility
- Paducah Conversion Facility Preliminary Documented Safety Analysis, DUF6-C-G-PSA-001, Rev. F

Recent accomplishments/activities:

- Conversion Building – ~40% pre-cast structural components erected
- Warehouse Building – Work complete except for lightning protection. Punch list prepared and being cleared
- Administration Building – Continued to install HVAC duct, sheetrock, conduit, fire sprinklers and paint walls

- Construction on Bayou Creek Railroad Bridge – Installed surge rock, geotextile fabric, sub-ballast and made switch connection to USEC rail line. Graded, seeded and mulched side slopes. Installed all rip rap at Bayou Creek Bridge and placed flowable fill
- Construction of the rail spur was initiated
- BOP Foundations – Placed 980 cubic yards of concrete for empty cylinder storage area, 760 cubic yards concrete for full cylinder storage area pad and 720 cubic yards concrete for HF foundation. Placed concrete switchgear pad, 4 transformer pads and 820 cubic yards concrete for oxide crane foundation. Placed 500 cubic yards concrete for rail foundations North and South of HF load out, 500 cubic yards for KOH Building foundation, 100 cubic yards for Cooling Tower and Vehicle Access Building foundation
- Continued receiving equipment at site (material received on 75 packages)
- Updated and issued Interface Control Document for USEC utilities

Construction activity scheduled over next 60 days:

- Complete Administration Building
- Complete rail spur to Hobbs Road
- Continue construction of balance of plant foundations S-39
- Complete erection of Conversion Building panels and columns
- Mobilize S-44 Power to Facilities and commence duct cleaning
- USEC to connect 2nd Fire Water connection to UDS
- Mobilize S-33 exterior steel subcontractor
- Continue pre-mobilization work on the HVAC Package S-42
- Continue pre-mobilization of Conversion Building Roof S-23
- Continue pre-mobilization of Piping/Mechanical Equipment package S-40
- Continue pre-mobilization of Electrical Distribution and Instrumentation S-43
- Turn Fire water and Potable water on for DUF₆ Site
- Begin pre-mobilization of KOH Building S-31

Procurement activity planned next 60 days:

- Award KOH – S-31
- Re-bid and award Fire Protection – S-41
- Bid Architectural Finishes – S-32
- Continue to Bid and Procure Major Equipment RFPs

Project Notes:

- Project schedule modified to reflect Conversion Building delay