Paducah Gaseous Diffusion Plant
Site Specific Advisory Board
Meeting Minutes

June 18, 1998

The June 18, 1998, Site Specific Advisory Board (SSAB) meeting took place at the Executive Inn in Paducah at 5:00 p.m.

The following board members were present: Nola Courtney, Mark Donham, Edward Duff, Vicki Jones, Ronald Lamb, Ray McLennan, Craig Rhodes, and Greg Waldrop. The ex officio member present was John Volpe. Sitting in for Tuss Taylor was Jack Stickney with AIP. The facilitator present was Steve Kay. The United States Department of Energy (DOE) federal coordinator present was Myrna Redfield. Also present were the following members of the public and contractors and subcontractors of the DOE: Jeannie Brandstetter, Bryan Clayton, Shelley Hawkins, Dennis Hill, Debora Jolly, Stan Knaus, and Bob Pratt.

Steve Kay called the meeting to order and asked if there were any modifications to the agenda. Nola Courtney proposed adding a discussion of the depleted uranium hexafluoride workshop in Cincinnati. Kay suggested adding this section to the administrative issues and Courtney agreed. Myrna Redfield asked if a discussion about a visit to the SSAB meeting by a survey group could be included in the review of the draft work plan. The proposed meeting agenda was adopted by consensus. The approval of meeting minutes was postponed until a quorum was reached.

The next item on the agenda was an information update. Jeannie Brandstetter stated that she had attached a press release, a news story, and an advertisement to the Environmental Management and Enrichment Facilities (EMEF) project updates. There were no comments from the board on the EMEF project updates.

The DOE's response to SSAB recommendations was the next item on the agenda. Redfield gave an update on the status of the Vortec Environmental Assessment (EA) comments. She said the responses still were not final at this point; however, there is a person from Paducah working in Chicago, Ill., finalizing the responses. Redfield said that from her discussions with the project team, the responses should be finished by the end of June. She said the Vortec EA has been completed and all of the responses to comments will come directly to the commentors, so the board members will receive a formal response.

Cost information on the Northwest Plume Pump and Treat Facility was the next item on the agenda. Debora Jolly, Bechtel Jacobs Company LLC facility operator, distributed roll-up costs for each of the three years of the facility's operations. She said the data show a continued drop in cost for operations. Ray McLennan asked Jolly if she expects the costs to level off. Jolly said probably they would, and that next year's budget will be very close to what it was this year. John Volpe asked how long the pump and treat operations would continue. He asked if there was some sort of trend that was being analyzed subjectively or if there was objective data æ specifically, what is being used to make judgments. Redfield said that the pump and treat operation was considered an interim action because there is no final action for ground water in place. She said that as environmental restoration activities move along, other alter-

natives for remediation will be considered. However, because there is a high concentration of trichloroethene (TCE) leaving the site, some sort of remedial action has to be done. Volpe said that from the data available, he has not seen any decrease in technetium-99 (99Tc) levels. He said the operation needed reevaluation or goal setting to determine if it is functioning as designed. Redfield said the Five-Year Review of the Northwest Plume, which is due in July, might help with the reevaluation. McLennan said that the operation needs a better analysis because seasonal fluctuations and other factors tend to hinder the analysis. Redfield said that there are plans to take ground-water samples around the fence perimeter of the plant. She said at this point, the process is not being changed but evaluated. Bryan Clayton, Bechtel Jacobs Company project manager, said that the Sampling and Analysis Plan, released June 17, 1998, helps to close any type of data gaps. He said the Feasibility Study (FS), which will be released in December 1999 to regulators, will address further the action of the plume and address several alternatives. Ronnie Lamb asked about the barrier wall. Clayton said the barrier wall will be revisited along with other options. He said that source areas actually are determined through remedial investigations.

Approval of the May 21, 1998, minutes was the next item on the agenda since a quorum had been reached. Redfield suggested revising the section on the DOE's response to SSAB recommendations on Page 3, Paragraph 1. She proposed adding "Vortec EA" in reference to the comments that have been received. In addition, Redfield suggested revising text on Page 6, Paragraph 1, concerning the 2006 Plan, in order to clarify the parts of the budget covered by the plan as well clarification of the document as a strategy. At this point, Redfield asked if the SSAB wanted to change the format of the minutes since not every detail is recorded and the minutes can sometimes be confusing. Mark Donham said maybe the board should do a transcript of the meeting. Redfield asked the board to consider the purpose of the minutes. Donham said he liked the minutes as they were. Kay said he thought the intention of the minutes was to provide enough information for anyone who was not present to have an overview of the meeting and capture the essence of what was said. Kay said his preference was keep the current format of the minutes, but reserve a time in the agenda to make amendments. A discussion of the format of the minutes was added to the administrative issues section of the agenda. The May 21, 1998, minutes were adopted as amended.

The next item on the agenda was the review of National Environmental Policy Act (NEPA) categorical exclusions (CXs). Vicki Jones suggested going through the different CXs and deciding which ones the board wanted to analyze. Jones said that at the last meeting, it was suggested that generic CXs and the bursting barrel CX be evaluated. Jones read a list of CXs for Paducah, which was distributed at a previous meeting. Donham asked which category was used for the cleanup of the bursting barrel. Stan Knaus, Bechtel Jacobs Company NEPA specialist, said that it was a removal action under the Resource Conservation and Recover Act and the Atomic Energy Act. In this case, Knaus said a quick removal action was needed to stop the spread of contamination. He said the CX went to David Allen in Oak Ridge for approval of the removal action. Donham asked about the CX for storage tank removal and polychlorinated biphenyl (PCB) removal and what the circumstances are that disqualify them for an EA. Knaus said you have to look at what the CX is to include. In the case of the storage tank removal, Knaus said a generic CX has been used for Underground Storage Tank (UST) cleanup activities. Donham asked why a short EA could not be done which would be subject to public review. He asked what the reason was for choosing the CX route. Knaus said he could not answer for the agency; however, one of his observations is that there are very strict UST regulations that do not provide many alternatives. Donham referred to Number 10 of the Significance Criteria of the CQ regulations and said that the removal is potentially significant. He said it would be good to educate the public on what the govern-

ment has to go through and that public scrutiny is essential to implementing NEPA. Donham said CXs are done more often than EAs and it seems that the purpose of NEPA is being bypassed. Knaus said it is a fairly major effort on the DOE to prepare an EA. Knaus went over a list of what went on last week under the CX at the Paducah Gaseous Diffusion Plant. The list included mainly routine maintenance activities. Knaus said if an activity does not fall under a specific list, then it needs to be written out and submitted to the DOE. The DOE then decides if the activity is a CX and signs off on each specific action. Kay asked if there was a mechanism to make the board aware of CXs of significance. Jones asked if the board agreed that it wanted to consider evaluating only the significant CXs. Donham said he thought the UST and PCB removals were broad and would like to know more information about these. Knaus read the highlights in the CX for the UST and PCB removal. Donham asked if there were any limitations such as on nonradioactive waste. Knaus said the removal action has to be less than five years and five million dollars. Donham asked who drafted the highlights in the CX. Knaus said they came out of the Oak Ridge office; however, the CXs themselves went through a rule-making process. Donham said the environmental laws for public scrutiny were minimal and NEPA is about the only thing the public has. Jones asked if the DOE's approval was needed to conduct an EA. Knaus said, yes, and, at a minimum, David Allen has to approve it. Courtney asked how much resource time is spent doing a CX. She said it seemed like a phenomenal amount of time and money. Knaus said the process has gotten a lot better. He said that only the DOE can make NEPA decisions and, as a contractor, he can look only at activities. Jones said that NEPA requires that every federal action be reviewed by NEPA. Volpe said that the DOE has gone from no oversight to too much. Kay said the issues seem to cover both sides æ over-review and under-review. Redfield asked if it would be beneficial for David Allen to come back and explain why CXs are chosen. Donham proposed to put NEPA back on the agenda next month. The board agreed to not have David Allen come back yet, but to put NEPA back on the agenda and have someone come back to answer questions.

Courtney led the discussion of Waste Area Group (WAG) 22. She referred to the fact sheet which had been handed out and asked if the D1 FS for Solid Waste Management Unit (SWMU) 2 included SWMU 3. Bob Pratt, Bechtel Jacobs Company project manager, said SWMU 3 was not included in this FS. Courtney said the United States Environmental Protection Agency (EPA) and the Kentucky Department for Environmental Protection (KDEP) submitted comments on the FS. She said the KDEP had some real concerns and felt like the DOE failed to consider the mobility risk of the waste. Volpe said the Radiation Health and Toxic Agents Branch has concerns that insufficient evidence exist to support the migration of uranium. Volpe said the DOE should not take the health risk to excavate. He said there were a number of reasons why the Radiation Control Branch thinks that excavation should not be done and he said those concerns have not been addressed. Donham asked what the uranium was packed in inside the barrels. Volpe said it was possibly packed in PCB oil. Donham asked if the barrels were intact. Volpe said it depends on the oxidation state and the chemistry within the cell. Courtney said the concern of the KDEP seemed to be that the barrels will rupture over time. Volpe said that even if the barrels corrode, uranium metal is left. Pratt said that their projections are that between 100 to 150 years, TCE levels at the security fence would only be at 60 parts per billion, assuming the drums have been excavated. Redfield asked if the modeling by the state would be finished when the FS is final. Volpe said that Brookhaven National Laboratory is working on the modeling and it will hopefully be done within the next month. Donham asked if this was a model for migration. Volpe said it is called "Breach, Leach, and Transport." Courtney asked if the model had a time limit. Volpe said that uncertainty grows when years are added to the model. Volpe said that some of the alternatives to excavation presented in the FS were very good. He said that one of the alternatives involves a containment wall.

Pratt said the fact sheet shows all the alternatives. Volpe said the Commonwealth rejected using grouting at the Maxey Flats Disposal Site because it just did not work. He said there were a number of health physics and other concerns with grouting. Pratt said the FS stage is not where the DOE will select what it is going to do. Lamb said that Paducah was a wetland before the plant was built and asked how grouting would work. Pratt said there are a variety of grouting chemicals that work in a wetland. Lamb asked if uranium breaks down to lead. Volpe said in a few billion years. He said that in-growth really stops at uranium-234. Pratt said his understanding of the location of the drums is that they are very close to the surface and placed in overpacks. He said they border the property boundary of the facility and if the land is turned back over to the city, the drums have to be gone. Donham asked about the ecological effects of WAG 22 and if it was possible for some of the molecules that have oxidized to be taken in by plants and insects. He asked if this was a long-term concern. Courtney said the EPA had four major issues with the FS and one was that the ecological risk assessment was incomplete. Volpe said there have been a number of studies out of Oak Ridge that have looked at the uptake of uranium in plants and said he could provide the studies to Donham. Jones asked about the depth of contamination. Pratt said it is approximately 10 to 12 feet below surface with a total depth of about 18.5 feet. Jack Stickney asked if any surface vegetation had been sampled and Pratt told him, no. Pratt said that the FS has gone out for SWMUs 7 and 30 of WAG 22 and the project team is in the process of getting comments addressed. Courtney said that SWMUs 7 and 30 might need to be addressed in next month's meeting. Donham asked if the SSAB members could receive comments on WAG 22 from the EPA and the KDEP before the next meeting. Brandstetter said yes.

Greg Waldrop led the discussion of WAG 6. Clayton, Bechtel Jacobs Company project engineer said a review of current activities was included in the fact sheet that was handed out to SSAB members. He said that the field investigation of WAG 6 should be completed this year. Clayton said the highest point for contamination for 99Tc is north of the C-100 Building. He said that SWMU 11 may not be the major source for this contamination. Clayton also said that a risk assessment and remedial investigation (RI) for WAG 6 are currently being drafted and an FS should be issued December 1999. He said there is a treatability study scheduled that will look at vapor and water extraction in the Regional Gravel Aquifer. Waldrop asked if C-400 is an operating building. Clayton said yes, but the building would not be remediated itself, just the ground below. Waldrop said WAG 6 is clearly a major source of TCE in the ground water and plumes. He asked if July was on target for the RI. Clayton said yes and that the team is collecting comments internally at this point. Lamb asked if the floor was taken up in the C-400 Building. Clayton told him parts of it are. He said there were two borings put through the floor and there was very little water; the water was not flowing. Craig Rhodes asked what happens when TCE oxidizes. Clayton said that hydrochloric acids and hydrogen oxides might be released in vapor form; however, he was not exactly sure and would check with a chemical engineer. Stickney asked if the remediation was considered a destructive treatment and Clayton told him yes. Waldrop said once the RI Report is released in July, there will be numerous comments by the state and the EPA. Donham asked if the SSAB would get copies of the RI Report. Since the report was fairly large, Waldrop asked if the members could get a copy of the summary. Clayton said it might be helpful for the SSAB to have a copy of the executive summary and a copy of Volume 1. He said the additional four volumes are basically data tables. Waldrop said the board might like a copy of the entire document in the SSAB office. Donham asked if high levels of thorium and neptunium were found in WAG 6. Clayton said that since C-400 is a cleaning building, there were a number of semivolatiles found. He said there are also some radioactive components and the largest is technetium. Stickney asked if this was in the ground water or soil. Clayton said he was not sure because other organics are present. Donham asked about

dioxins. Clayton said he did not believe any samples were found. He said one area had some PCBs during the Phase I and II investigations. Waldrop said WAG 6 should be put back on the agenda in September. Waldrop also said he would like to be on the mailing list for WAG 6. Kay said that Shelley Hawkins would mail related material to members before each meeting when their assigned project is on the agenda.

The next item on the agenda was administrative issues. Redfield said that Ms. Bradbury of the Pacific Northwest National Laboratory asked if she could call the co-chairs of the SSAB about attending the next meeting in order to begin work on a survey of the SSAB. Redfield said she did not want to make a presentation, she just wanted to introduce herself and observe the board. The co-chairs agreed.

Dennis Hill gave an information update about the depleted uranium hexafluoride workshops. He said there has been a meeting in Cincinnati and Knoxville and they are in the progress of scheduling one for Paducah. Hill said there was a possibility that the Kentucky meeting would be in Lexington. Courtney said the SSAB might want to send a representative to the workshop if it is not in Paducah. Hill said the meeting was scheduled for August 27, 1998.

Revision of the draft work plan was next on the agenda. Waste management, waste minimization/ pollution prevention, and transportation of wastes/hazardous materials were all moved to November from July. A discussion of the NEPA CXs was added to the agenda for July along with WAG 22. McLennan said he wanted to be responsible for the Northeast and Northwest Plumes. A discussion of the Northeast and Northwest Plumes Pump and Treat Facilities was added to the September agenda.

The next item under administrative issues was the format of meeting minutes. Kay said the minutes are not a verbatim text. Courtney said the format is good and very helpful. Waldrop said he wants the minutes at least as detailed as they are now. Redfield said her intent was to make sure the SSAB understood the process of creating the minutes. The board members agreed that the minutes should stay in the same format. Kay asked if the format of the meeting with no presentations was working well for the board and the members said yes.

Waldrop said he still has an interest in getting a connection with the SSAB and the government representatives. Hill said he had been in touch with the representatives' office. Waldrop said that part of the SSAB's job is to give the representatives an idea of the environmental side of the SSAB as opposed to the public participation side. Hill said he would see if there was a time when Representative Ed Whitfield and possibly some state representatives would meet with the SSAB.

Securing office space, furniture, and equipment was discussed by Hill. A list of furniture and office information was distributed to the SSAB. The list included furniture that was provided to the board free-of-charge by the DOE and supplies, which have already been ordered for the board by Jacobs. Phone and internet service will be arranged by Hawkins. Hill said that Jacobs can take possession of the office space at any time for the duration of six months. He suggested that the board wait until July 1 so the lease would start at the first of the month and the board agreed. There will be a charge for the duplication of keys for each member and this will also be taken care of by Hawkins. Waldrop said he thought it was important for the members to have their own keys. He also asked if each member would have his or her own mailbox. Hill said that can be arranged. Waldrop asked if Hawkins would go to the office on certain days and she replied that going three times a week in the morning was suggested in

previous meetings. Hawkins agreed to send a notice to inform the members when the office and keys are secured. Hill asked if the SSAB wanted to have its next meeting at the Information Age Park and the members agreed. Hill referred to another handout given to the SSAB on a computer for the office. He said that $1,664 is a government price. He said the package includes a 24-speed CD ROM and a web browser. The board chose Microsoft Office '97 as the software for the computer. Hill said prices of printers would be provided to the board for the members to choose the printer they prefer.

There was a discussion of the meeting time being changed from 5:00. Some of the members said people are having a hard time making it to the meeting at 5:00 and since the meeting location is changed to the Information Age Park, it would take even longer for people to drive from work. The members agreed to change the time to 5:30.

A brief financial update from Hill was given to the board. Hill said that out of $95,000, the board has only spent $12,000. He said there are a lot of costs coming in such as the computer and office space which have not yet been included. He said he would try to give the board an update on finances each month.

The next meeting will be held July 16, 1998, at the Information Age Park at 5:30 p.m. The meeting was adjourned.

Tentative agenda for the July 16, 1998, meeting:
• Minutes
• Introduction from Ms. Bradbury of Pacific Northwest National Laboratory
• Information (Handouts)
• EMEF Project Updates
• Local NEPA Representative on Categorical Exclusions (30 minutes)
• WAG 22, SWMUs 2 and 3 and SWMUs 7 and 30 (30 minutes)
• DOE Response to SSAB Recommendations (15 minutes)
• Administrative Plans for the Board
• Computer (10 minutes)
• Review of the SSAB Draft Work Plan (10 minutes)
• Financial Update (10 minutes)

Action Items
• SSAB members need to bring their copies of CXs to July 16, 1998, meeting
• Provide SSAB members with copies of EPA and KDEP comments on the D1 WAG 22 FS
• Bryan Clayton will provide information from a chemical engineer on what happens when TCE oxidizes
• Provide SSAB members with a copy of the executive summary from the RI Report for WAG 6 (WAG 6 RI Report pushed back to August 14)
• Dennis Hill will contact Representative Whitfield to see if there is a time he and/or state representatives could meet with the SSAB
• Provide SSAB with a price list of printers for the computer