

**Minutes of Community Workgroup Meeting #2  
Plum Brook Reactor Decommissioning  
Firelands College  
December 7, 1999**

**Agenda:**

1. Introduction of Members and Participants (5 minutes)
2. Follow-up/Old Business from Previous Meeting (10 minutes)
3. Presentation on Decommissioning - Tim Polich (20 minutes)
4. Q&A/Discussion of Decommissioning Plan (30 minutes)
5. Overview of Community Relations Plan, including Q&A – Susan Santos (20 minutes)
6. Other Issues and General Discussion (25 minutes)
7. Confirm Date for Next Meeting (10 minutes)

The meeting began at 7 PM. Present were the following Workgroup members: John Blakeman; Janet Bohne; Mark Bohne; Steve Casali; Fred Deering; Richard Ennis and Bill Walker. Also present were: Tim Polich, NASA Glenn Decommissioning Project Manager; Bill Wessel, NASA Glenn Director of Safety and Assurance Technology; Bob Hysong, Health Physicist, Argonne National Laboratories; Susan Santos and Michael Morgan of FOCUS GROUP and some 20 members of the general public.

Bill Wessel began by expressing his appreciation for the public interest in attending the meeting and stressed that NASA is an "open organization" that makes safety its "number one priority." He also expressed his desire that the Workgroup be a conduit to the larger community. He pledged that the Decommissioning Plan, soon to be sent to the Nuclear Regulatory Commission (NRC), will meet the NRC's requirements, promising that NASA will "staff it appropriately and fund it appropriately."

Bill noted that the actual decommissioning process is expected to commence in October 2001. "When you move through the evolution of a facility," he observed, "there comes a time when you have to remove the facility." He said the goal, at project's end, would be to "make sure the property has no more radiation than any other place in Northeast Ohio." NASA's goal is to make the land safe enough for any purpose.

Bill then introduced Tim Polich and Susan Santos, with the latter serving as the meeting's facilitator. Susan introduced Bob Hysong, then mentioned that fact sheets on

decommissioning and a Workgroup meeting sign-in sheet were available in the back of the meeting room. She distributed copies of the December meeting agenda and said that, in the future, Workgroup members absent from a meeting will receive the minutes of that meeting as quickly as the attendees do. Susan also laid down some ground rules for the meeting noting that following Tim's presentation on the decommissioning plan Workgroup members would first be invited to ask questions. She noted that time was built into the end of the meeting to allow for any questions or comments by the members of the public present. As part of old business Susan reminded Workgroup members that as stated at the last meeting, the makeup of the Workgroup was "fluid" and open to new members. She asked whether any Workgroup member had someone else they thought should be invited. She also invited members of the audience interested in joining to talk with Tim Polich or FOCUS GROUP after the meeting.

Susan briefly reviewed the agenda and asked if there were any other items to be added. No one had any additional items.

Tim Polich then made a presentation on the Decommissioning Plan noting that this was the same presentation made to NASA management. He said the overall Management Plan, combines a Construction of Facilities plan and a Project Management Plan. He explained that decommissioning involves, essentially, "construction in reverse" and, as such, would require the hiring of a Construction Manager. He also mentioned other members of the management team, including Hank Pfanner (Reactor Manager), Gayle Reid (Radiation Safety Manager) and Amy Bower (Health and Safety Manager). Other team members will include a Licensed Engineer, Health Physicist and Health Engineer. Tim added that the Decommissioning management team will be led by NASA Glenn personnel but would also borrow from a "Federal Sector Team" consisting of Argonne Laboratories, the US Department of Energy and the Army Corps of Engineers. The project will be funded by either a line item in the federal budget (as approved by Congress) or by NASA itself.

Tim provided an overview of the Decommissioning Plan which consists of ten sections. He emphasized the importance of three sections of the Plan: Summary, Decommissioning Activities and Protection of the Health and Safety of Radiation Workers and the Public.

Tim said three cleanup options had been considered: Entombment, Safe Storage and Cleanup and Restore, with the latter being selected. Under this alternative, the piping, loose equipment and fixtures in the Reactor Facility will be removed for offsite disposal in a licensed facility. The facility would be decontaminated such that it met the cleanup criteria of reuse for any purpose. At that point, NASA would have achieved the NRC's cleanup goal. Next, the building and everything in the 27 acre area will be demolished to three feet below grade. Demolition debris that is found to be safe will be used to fill "holes in the ground (such as basements)", while material found to be contaminated with low level radiation will be packaged and sent to licensed facility for disposal. Fred Deering asked whether in fact NASA had decided to take the buildings down or will the

NRC decide it? Bill Wessel clarified that NASA has decided to go beyond the NRC's regulations to take down the facility completely.

Next, Tim described the radiological status of the facility and that NASA now knows where radiation exists to be cleaned up. John Blakeman asked Tim if NASA were currently monitoring radiation at the 27-acre site. Tim said yes, adding there was a "characterization...every 30 feet." Susan Santos emphasized that there has been no off-site exposure to the public. Tim talked at length about health and safety issues, noting that, in terms of worker exposure, "we have estimates of the whole process for doing the work." The estimates, he said, are termed "Dose" and he stressed that the estimated level of exposure, over the life of the project, "will be well within safety limits."

Tim pointed out that several chapters in the Decommissioning Plan that are required by NRC regulations are short, since site conditions at Plum Brook do not pertain to some NRC requirements (e.g. that there has been no nuclear fuel at Plum Brook in over 27 years and there is no on-site water flow). Tim described the accident analysis section of the plan which looks at: What kinds of things could happen? What would be released? He noted the results show we would be well below any of the guidelines or limits. The results of the accident analysis ensures NASA that there should not be any concern to public safety or the environment during decommissioning.

There was some discussion of the map of the site, previously shown by Tim regarding Pentolite Ditch that indicated the presence of contamination. Tim pointed out that some ditches in the area were measured in 1985 for levels of radiation. Levels of radiation were found in Pentolite Ditch higher than expected. Tim noted that naturally occurring radiation exists in shale at high levels in this area of Ohio. He added that another ditch was cut a mile away to determine background and lower levels of radiation were found. This level, he said was established as background for the site and will be the levels to which concentrations will be reduced to after decommissioning.

At the conclusion of Tim's presentation, Susan said a copy of the Plan will be placed in the Community Information Bank at the Firelands College Library once it is submitted to the NRC later in December and that summaries of the Plan or the full Plan will be made available to workgroup members upon request. During the Workgroup member discussion of the plan, an audience member expressed several concerns, including: Who decided to decommission and why since he understood previously NASA had decided to leave the facility as is. He also asked about the potential for accidents during decommissioning; contaminated materials at the site and where the funding would come from. He also voiced concerns - echoed by one or two audience members - that the neighborhood would be better served by simply leaving the Reactor Facility in its current state. Finally, he was concerned that he lives 300 yards from NASA and that nobody on Cambridge Circle had been given any notice about decommissioning related events. [Note: As a point of fact not all Cambridge Circle residents had received mailings regarding the Plum Brook Open House and the November 3 Decommissioning

Community Information Session. Inadvertently only one side of the street had been put on the mailing list].

Tim and Susan responded to the concerns. Susan noted that many of his questions were answered in the fact sheets and she apologized for the inadvertent oversight of his not receiving the mailings. Susan described all NASA's efforts at getting the word out including the Media Tour, Open House and newspaper advertisements. She indicated it's NASA's intent to keep the public informed. Tim responded to the question of why the decision was made and who made it noting that the "radiation - especially Cobalt 60 - has decayed significantly." He also addressed the costs of keeping a nuclear facility in the "Safe Storage" mode, "knowing that we'll never reuse it." He explained that the NRC denied NASA's request for renewal of their "Possess But Do Not Operate" license and required that NASA proceed with decommissioning.

Tim and Bill explained a variety of technological and practical reasons for doing decommissioning now. Tim said the technology available has substantially improved and there had been a history of successful decommissioning projects, including Waltz Mills, Shippingport and GPU Saxton in Pennsylvania, Big Rock Point in Michigan and Yankee Rowe and the Army's Watertown Reactor in Massachusetts. Jan Bohne added that there was a Web site for information on decommissioning: [www.physics.nist.gov](http://www.physics.nist.gov). Other web sites include [www.nrc.com](http://www.nrc.com) and [www.nrc.gov/NRC/STUDENTS/decommissioning.html](http://www.nrc.gov/NRC/STUDENTS/decommissioning.html). Bill emphasized that while Plum Brook had been in Safe Storage for a decade, "we've come to a point where it doesn't make sense to continue to maintain the facility." He used the example of after some period of time the walls in the building could fall down and NASA wants the site cleaned up long before the facility gets to that point. Another community member stated he had been a contractor at the facility and he thought it was in good shape. He noted that several years ago the roof had been replaced. Several residents along Cambridge Circle Road continued to question the safety of leaving the current site intact vs. decommissioning. Bill reiterated that now is the most cost effective time to safely decommission the facility. A question was asked as to how long would it take to decay if the NRC allowed safe storage to proceed.

Bill noted that it could take 300-400 years for existing radiation at the Reactor Facility to completely decay. Jan Bohne then explained the concept of nuclear half-life, the time (in number of years) it takes for radiation to become half as strong as it currently is. There were also questions regarding the amount of contaminated material on-site. Tim said that some parts of the facility have radiation that "could be stopped by a piece of paper" while other parts could require "aluminum foil or inches of steel." He said the current on-site radiation level is 58,000 Curies, with 56,000 of those concentrated in the facility's Berilium reflector plates, which are "in hot, dry storage."

Bill also addressed other safety and cost issues. Noting that "in our cost analysis, we did a worst case scenario" to ensure adequate funding for any contingencies. He noted that "NASA is going for a separate line item." He promised that NASA will "go the extra

mile" to ensure that when we finish decommissioning, radiation levels will be at "Background"...no different than your backyard or my backyard in Northeast Ohio.

There were several community member questions regarding demolishing the buildings and concern that it could create more waste and potential air impacts. Bob Hysong explained that Tridium, which is found in the reflector plates is a "low energy Beta...It could not make it through a dead skin layer." He also explained that 98% of the radiation at Plum Brook is "in a metal or cement matrix so it is not in a very dispersible form." Janet Bohne added that disposal of low level radioactive waste at Plum Brook is not unlike disposing of "six old X-ray machines," which she said can be routinely and safely packaged and transported. After several other questions relating to radiation, Susan reiterated that a fact sheet exists which explains some of the information people wanted and that NASA has several displays which addressed radiation that had been presented at the Open House and Community Information Session. Bill Wessel said NASA would bring the material to the next Workgroup meeting. Susan suggested that decontamination methods be a topic for a future Workgroup meeting.

Susan then discussed the Community Relations Plan (CRP), noting that it was developed from interviews with 29 residents of Erie and Huron Counties, as well as from a review of historical information and issues coverage in area newspapers. She also pointed out that many of the questions asked by people NASA interviewed were the same ones asked at the Workgroup meeting (Why bother to decommission? Why now? Will it be safe? What might the impacts be to area groundwater or air?).

Susan then briefly described the various tools and methods NASA proposed to use to communicate with the public, including fact sheets, speaking engagements to local organizations, briefings for local officials, Community Workgroup meetings, the Community Information Bank, a web page, more Community Information Sessions and outreach to area schools. She asked Workgroup members and the audience to think of topics that should be covered in future fact sheets. There was a brief discussion on the CRP with some community members noting the public perception of NASA as the "mystery...behind the fence." One person mentioned periodically hearing loud noises from Plum Brook and of getting no satisfaction when asking security gate staff about the occurrences. Bill Wessel vowed that more information would be made available to the public and Susan said a Decommissioning Hot Line would be set up, if the public wanted it, to inform people of when shipments of material would be moved. Several workgroup members complimented NASA on the thoroughness of their efforts to communicate noting "they've done everything we've suggested." The reporter present from the Sandusky Register also echoed NASA's intent to provide information to the public on decommissioning at the Media Tour and that she had written several articles on the subject.

Susan conducted a quick survey to determine how the public had heard about the Workgroup meeting. Seven said they had seen ads published in five area papers,

including the Sandusky Register, while four others said they had either read the recent article in the Register or heard the public service announcements on local radio stations.

Several Workgroup members proposed topics for future fact sheets. Jan Bohne suggested a cost analysis of other decommissioning projects and Susan suggested a fact sheet that deals with decommissioning success stories. Steve Casali suggested one that addresses types of radiation and that a glossary of terms be included in it.

The next Workgroup meeting was then scheduled. It will take place on Tuesday, February 15, again at the Firelands College East Lounge. The agenda will include a presentation on methods of decontamination and a walk through of the display boards that were made available for the Open House and the Community Information Session. The first 15 minutes of the next workgroup meeting will be devoted to the displays, with special attention given to levels and types of radiation.

The meeting adjourned at 9 PM.