Meeting of the Decommissioning Project Community Workgroup (#33)
Tuesday, February 5, 2008
Saint Stephen United Church of Christ, Sandusky, OH

The meeting began at 7 p.m. The following Workgroup members were present: Barbara Berg, John Blakeman, Anne Hinton, Rick Myosky, Ralph Roshong, Sharon Schaeffer and Lois TerVeen. Representing NASA were Decommissioning Program Manager Keith Peecook, Senior Project Engineer Pete Kolb, Radiation Safety Officer Bill Stoner and NASA Glenn Public Affairs Specialist Sally Harrington. Also present were Jim Webb of the U.S. Nuclear Regulatory Commission (NRC), Mike Rabideaux of the Ohio Department of Health (ODH), and Susan Santos and Michael Morgan of FOCUS GROUP. Attendees included church Pastor Rob Patton and six members of the public.

Pastor Patton welcomed all participants and attendees. Keith Peecook then provided some opening remarks and introductions to members of the Decommissioning Team. Susan Santos asked for, and received, acceptance of the October 2007 Workgroup meeting minutes, and reviewed the February agenda, noting that this would be a shorter meeting than normal in deference to the winter schedule.

Project Update

Keith began the Project Update by discussing ongoing decontamination work in Reactor Facility buildings and structures. He noted that decontamination was necessary to achieve the project cleanup levels for decommissioning - known as Derived Concentration Guideline Levels (DCGLs). He explained that the goal was based on meeting the Resident Farmer Scenario, such that at the end of decommissioning, a family would be able to live on the (former) Reactor Facility site, grow crops there and drink the groundwater and "from all pathways…would not be exposed to more than 25 millirem of radiation." He described DCGL's as the levels that answer the questions "How clean is clean and how do we know when we're done?"

Keith reported that decontamination work was near completion in the Service Equipment Building and in the Sub-pile Room (the latter under the former location of the reactor tank) and showed photos of these areas, and those of work close to completion in the Hot Handling Room of the Hot Lab Building, the Fan House, Waste Handling Building and the Primary Pump House. He added that work would start soon in the Hot Retention Area, which was used as a large holding tank for water awaiting discharge when the reactor was operational.

Keith said workers are utilizing a variety of tools and equipment for decontamination, including the hand-held Sponge Jet Blaster, which he described as similar to a sandblaster but with abrasive sponge material embedded in it. He showed slides of the tool removing lightly contaminated paint from the walls. He added that workers then "vacuum up the surface media (paint, concrete) and the abrasives…leaving behind a clean smooth surface" of metal or concrete. He noted that decontamination allows NASA to reduce the volume of waste that has to be removed, which results in NASA "saving a lot of money

on disposal costs." Keith added that "when we do demolition of the buildings, we'll be able to recycle most of the structural steel" they contain.

Keith then reported on decontamination and asbestos work in the quadrants and canals of the Containment Vessel - and the removal of some steel rails from the walls of the structure. He reminded the audience that this area had been filled with 25 feet of water when the reactor operated, "so we don't know if any contamination ever managed to find its way underneath those rails." He explained how a remote controlled piece of heavy equipment, known as the Brokk, had been lifted into the building to help remove the rails from the concrete walls, so they could be sampled and decontaminated as needed.

Keith mentioned that asbestos abatement is taking place in the quadrants and canals because the Reactor Facility's builders had used a fiberglass wallpaper and epoxy paint to keep contamination out of the concrete. Unfortunately, the mastic used to apply the fiberglass covering contained asbestos, which needs to be carefully removed. Keith showed photos of (subcontractor) MOTA workers who are certified asbestos abatement workers and noted that they are using a vacuuming system - and frequent monitoring - so there is no need for the large ventilation system that was in place for earlier work, like segmentation of the reactor. He also pointed out that there is about 46,000 square feet of concrete in the floors and walls of the quadrants and canals that must be cleaned and surveyed. In order to decontaminate the walls, workers must clean many former piping penetrations. Keith showed very recent photos of wall paint removal and decontamination in the a Hot Lab area near the former Hot Cells and said he expects work in at least four buildings to be "complete in the next two months."

Embedded and Buried Piping

Keith reported that workers from pipe cleanup contractor BSI are closing in on the completion of grouting operations. He noted that last year, BSI cleaned nearly four miles of embedded piping (pipes encased in concrete at least three feet below ground), and that 7,200 feet of this pipe needed to be grouted - filled with a cement-like substance to stabilize them. To date more than 5,000 feet of this total has been grouted. He also discussed another kind of PBRF piping - buried piping - which is not encased in concrete or as deep in the ground. Much of this pipe is covered by dirt in external areas within the PBRF fence line. Keith explained that about 200 feet of currently embedded piping - under concrete slabs in some buildings (Primary Pump House, Waste Handling Building) will no longer be covered with three feet of concrete once the buildings are demolished - so it needs to be classified as buried piping. He said buried piping has stricter DCGL's than embedded piping (because there is less shielding), so NASA is re-examining this 200 feet of piping to determine how to best deal with it. Some piping will either be cleaned in place to the more strict DCGLs or dug up and disposed of as low-level radioactive waste (LLRW). He also showed slides of some pipe being excavated in the Waste Handling Building, where it was determined that there had been a pipe break. He added that cleaning pipe under concrete slabs and keeping it in place was NASA's preferred option.

Characterization & Final Status Survey
Keith reported on characterization activity within PRBF buildings and grounds, noting that NASA employed a Geoprobe - a two-pronged deep drilling device - to conduct sampling near PBRF building foundations. There were 43 locations where this work took place in January, with the Geoprobe going down as far as 25 feet to bedrock. Another area sampled in this fashion was the site of the old sewage treatment plant, with 20 locations drilled near Taylor Road. All samples are undergoing laboratory analysis.

NASA subcontractor SAIC has been conducting Final Status Survey (FSS) field work, which is complete in the Reactor Office and Lab Building and near completion in the Service Equipment Building and Sub-pile Room. Keith noted that the FSS is "our finished product" and that teams from the NRC and its independent contractor - the Oak Ridge Institute for Science and Engineering (ORISE) - were in the process of visiting PBRF "to see how we do it." ORISE has conducted field sampling "to verify our sampling." He also pointed out that the NRC was still formally reviewing the FSS Plan, but that "we expect general approval" soon and that NASA had provided answers to several written questions from the NRC.

Keith also reported that in the Sub-pile Room (located 56 feet below grade), there was a 200,000-pound lead "doughnut" that had helped anchor the room. He said the Ohio Environmental Protection Agency gave NASA approval to leave the "doughnut" in place, because it was so far below ground. Workgroup member John Blakeman asked if the lead could be recycled but Keith responded that "it's hard to survey lead - and very costly." He added that NASA would have workers use a powerful diamond-wire saw to cut up the bioshield, a concrete and rebar structure at the former site of the reactor that was once intended to provide an extra layer of protection for workers, when the reactor operated.

Off-site Contamination
Keith stated that cesium discharged as part of normal reactor operations ended up binding with clay in Pentolite Ditch and worked its way downstream in Plum Brook over a nearly 40-year period. He noted that NASA has been working with Sandusky-based Haag Environmental to understand the physics of the stream and where the material would have been deposited. Sampling - over 1,000 samples of sediment taken between fall 2006 and fall 2007 - was completed last fall and analysis of all sampling is also complete. The results again confirmed there is no health concern from the levels that have been found. Since summer 2005, NASA has collected and analyzed more than 3,200 samples (including the Haag samples), with none of them representing any health concern to area residents, including small children.

Keith said Haag Environmental has been preparing a series of reports on the sampling results for NASA, who will send them to the NRC and ODH for their review and analysis. These agencies will determine any future cleanup of the off-site areas. He added that NASA will send all the reports to the Community Information Bank at the

BGSU Firelands Library when they are completed. They will also be sent to the Erie County Health Department and made available to the Workgroup upon request.

Keith reported that at the NRC's recommendation, NASA is in the process of developing new DCGL's for areas adjacent to Plum Brook. He said the existing DCGL's do not reflect exposure conditions along Plum Brook and said NASA was developing "site specific DCGL levels," based on land uses, "for Putnam Marsh, the golf course (at Plum Brook Country Club) and …for other different pathways, where people live." Susan Santos said the effort represents "a big exposure assessment, and how we calculate dose," in these off-site areas. She added, "NASA used the highest level (of cesium) that had been found in Plum Brook as the basis for the initial assessment of whether the levels posed a health concern." Keith noted that the new DCGL's were contained in a "Technical Basis Document" that is currently under internal review and would then be submitted to the NRC.

John Blakeman asked why the NRC had asked for new DCGL's and Keith said the NRC wanted new modeling that reflects how people live and work along Plum Brook. He noted that unlike the Resident Farmer Scenario employed at the PBRF reactor site, people do not primarily farm the land along Plum Brook. He also reassured the public that NASA would do "whatever is necessary and right," as far as future steps that may be mandated by the NRC and ODH, but reiterated that he expects that only some "spot cleanup" along Plum Brook may be necessary. Keith added that NASA will prepare a fact sheet on both the results of the off-site sampling and the new DCGL's, once the latter have been submitted to the NRC. Workgroup member Lois TerVeen (of Erie MetroParks, which has assisted in the off-site sampling efforts), asked to receive copies of the reports. Keith said all reports will be made available to Workgroup members upon request, with FOCUS GROUP to coordinate the requests and provide the reports.

Cadmium-containing Control Rods

Keith reported that on January 16, NASA had shipped the cadmium-containing control rods, which had been in safe storage at Plum Brook Station (PBS) since 2004. He said that when the reactor was operational, the rods had been used to absorb neutrons in order to shut down reactor activity. The seven rods were sent to the U.S. Department of Energy's Nevada Test Site (NTS, located an hour south of Las Vegas) for permanent disposal. Keith said the disposal rates for mixed waste at NTS were "way below commercial rates" and he hoped that either NTS would accept more mixed waste from decommissioning (including "lead shot" from the Hot Cell windows) or that NASA could convince the Energy Solutions licensed disposal facility in Utah to provide a lower rate than what has been offered to date.

Keith showed slides of the shipment, noting that the seven rods (weighing a total of 1,800 pounds) had been in temporary PBS storage within a polyurethane container that had been placed inside a 60,000-pound cask (with a 20,000-pound lid). On January 16, workers immobilized the rods with an inert absorbent substance that Keith likened to "kitty litter" and used a crane to place the container inside a stainless steel cask - which,

in turn was placed inside a travel cask for the truck trip to Nevada. The NTS formally accepted the shipment on January 22, which was documented by one of the slides that Keith showed.

Decontamination & Waste Disposal Contract
Keith observed that the Request for Proposals (RFP) for the new Decontamination & Waste Disposal Contract had been issued in November, with all responses due to NASA by February 13. He indicated that current subcontractors MOTA and BSI have said they are submitting proposals for the new contract. They are currently working under a contract formerly managed by the U.S. Army Corps of Engineers which expires soon, and only previously approved work can be done. Keith said NASA Glenn's Source Evaluation Board will evaluate the proposals, with the goal of awarding a contract by this April - and actual work beginning in June. Keith said the tasks associated with the Decontamination & Waste Disposal Contract scope of work include; finishing the decontamination of the Reactor Building, all outdoor areas and the Cold Retention Area; digging up tanks; cleaning Pentolite Ditch; assaying an estimated 100 million pounds of soil; shipping an estimated 10 million pounds of soil to be disposed of and performing any needed off-site spot cleaning adjacent to Plum Brook.

Next Few Months
Keith expects the pace of work will continue to accelerate in the next few months. All building decontamination work will be completed everywhere except the Reactor Building by June. Keith added that workers will also remove all activated areas of the bioshield. FSS work will continue as decontaminated buildings become available, pipe grouting will be finished and all previously packaged waste that has been in temporary storage in the Reactor Facility will be shipped for off-site disposal. As always, NASA will notify local emergency responders in advance of every shipment and will post information on the Telephone Information Line just after shipments have been made.

Community Outreach
Sally Harrington said the next newsletter edition would be published the first week of March. She also reported that the documentary video on the Reactor Facility - "Of Ashes and Atoms" - had been shown on WGTE public television (Toledo) on December 17. The documentary has been nominated for a local Emmy award in the History and Culture category. John Blakeman said the WGTE airing had been "exceedingly well received," and asked if the video would ever be shown on a national program such as "Nova" (PBS) as had been discussed when the documentary was first released in 2004. Sally said there were no plans for national airing. NASA retiree Jim Martz asked if there might be a repeat showing on WGTE with Sally saying that the station would like to show it again. She also said any repeat showing would be announced well in advance on the Project Information Line (1-800-260-3838) and Website (www.grc.nasa.gov/WWW/pbrf). Sally added that both the station and the NASA Glenn History Office had received requests for copies of the DVD (hundreds were distributed to NASA retirees and to local community organizations in 2004) and that NASA would see about fulfilling the DVD requests.

Sally handed out "Save the Date" cards regarding the Open House (celebrating NASA's 50th anniversary) events at NASA Glenn (Lewis Field) in Cleveland on Saturday, May 17 and Sunday, May 18; and then at NASA Plum Brook Station (PBS) on Saturday, May 31 and Sunday, June 1. Keith noted that the PBS Open House would include tours of the four active PBS test facilities but not the Reactor Facility.

Sally also announced that the NASA-sponsored FIRST Robotics Competition will take place from Thursday, March 20 through Saturday, March 22 at the Wolfstein Center, on the campus of Cleveland State University. The event is free. One FIRST award-winning team in 2007 was the EHOVE Mavericks, who conducted well-received robotics demonstrations during last October's Decommissioning Community Information Session.

Next Meeting and Topics

The next Workgroup meeting will be held on Tuesday, June 24, starting at 7 p.m. at a location to be determined. The annual Community Information Session (CIS) and fall Workgroup meeting will be held on Wednesday, October 22 at a location to be determined. This Workgroup meeting will begin at 5 p.m., the CIS at 7 p.m. Susan asked if the Workgroup would like to have particular topics covered at the next meeting and observed, "Obviously, you want to hear about the off-site DCGL's." John Blakeman remarked that the project was "over the hump," adding that its completion "always seemed to be conceptual…in the murky distance." Keith said NASA now had a "funding profile and an idea on time and cost," noting that the plan was to complete all the decommissioning field work by 2010 and achieve termination of NASA's license with the NRC by 2011.

Workgroup member Ralph Roshong asked if there were any nuclear reactors currently under construction. Jim Webb of the NRC responded that five entities had applied for new licenses but was not sure about anyone "getting ground broken." Jim Martz asked if the election of a new president this fall could have an effect on funding for the Decommissioning Project but Keith said the project was still in the NASA budget "no matter who is in the White House." Ralph Roshong asked that, for the June meeting, Keith put together a project cost presentation which reflects "the original budget when the project began eight years ago, where we are now and the estimate for the future." Keith said he would make this presentation as requested.

The meeting adjourned at 8:20 p.m.