

**Meeting of the Decommissioning Community Workgroup (#12)
Tuesday, July 23, 2002
EHOVE Career Center**

The meeting began at 7 p.m. Present were the following Workgroup members: Janet and Mark Bohne; Chris Gasteier; Stan Taylor; Ralph Roshong; Dave Stein; Bob Speers and Lana Wood. Also present were: Tim Polich, Keith Peecook, Sally Harrington and Peter Kolb from NASA; Wes Watson and Dewey Rissler from the US Army Corps of Engineers; Mike Lambert of Framatome; and Susan Santos and Michael Morgan of FOCUS GROUP. There were six members of the public at the meeting, including reporter Bob Finkelstein from the Sandusky Register and NASA retirees Paul Mainzer and Dick Sweeting.

Decommissioning Project Manager Tim Polich began the meeting with welcoming remarks, noting that the last Workgroup meeting (in April) had not been publicized because NASA had held a tour of the Reactor Facility for the Workgroup. He noted that a similar tour was given to Ohio media representatives on June 26. He then introduced members of the Federal Sector Team working on the Decommissioning Project and noted the presence of our newest Workgroup member, Lana Wood.

Tim then gave a brief status update on the project, mentioning the upcoming “critical lift” of the 20-ton shrapnel shields in the Reactor Facility, as part of the reactor tank entry and Reactor Internals Investigation scheduled to take place in August. He observed that this “may be the biggest (lift) on the project and we’re doing it early on,” adding that a load test had to be conducted to ensure that the crane could handle 125% of the expected load weight. Tim also pointed out that if the crane could not handle the 125% load, NASA would stop all work and not proceed with the tank entry because “safety is our number one priority.” Finally, Tim said this Workgroup meeting was the twelfth NASA has held.

Next, Susan Santos of FOCUS GROUP asked for and received Workgroup acceptance of the April meeting minutes and reviewed the July meeting agenda. She pointed out that on the agenda was “one of the first things (Workgroup members) asked for: information on dust containment and ventilation during the Reactor Internals Investigation.

Project Update/Reactor Internals Investigation

NASA Senior Project Engineer Keith Peecook gave a Project Update that focused on the upcoming reactor tank entry and Reactor Internals Investigation. He said, “Equipment has been staged, including lifting gear” for the 20-ton shrapnel shields and reinforced the earlier point made by Tim, on ensuring that the “rated capacity of the crane” was sufficient for the lift. In addition, he reported that new air monitoring equipment has been set up near the reactor tank and “new procedures are being done in a controlled and consistent manner.” Keith made an observation regarding the reactor tank entry: “We have a facility that was mothballed for 30 years. This is a bigger task than we envisioned, but we’re not going to do this until we are ready and confident” that the appropriate work plan is in place and has been reviewed.

Keith said the tentative schedule calls for the contractor crew to lift the shrapnel shields during the week of July 29, with the reactor tank entry scheduled for the week of August 5. During the Reactor Internals Investigation, he said, “we’ll get the information we need,” regarding radiation levels inside the reactor tank. During a two or three-day period, the crew was to open a hatch on the top of the reactor tank and take a variety of readings. These include snipping a piece of

aluminum tubing that goes into the tank, taking “swipe samples” (using a pole) to establish loose contamination levels and using a remote camera to take direct radiation readings. The Reactor Internals Investigation, he said, is an important step to be taken before the scheduled segmentation work – in which a crew from Wachs Technical services will cut up the reactor internals and then the reactor tank – beginning in January 2003. [Note: Due to its commitment to safety as the Decommissioning Project’s number one priority, NASA decided to postpone the shrapnel shield lift and Reactor Internals Investigation until autumn, using the time to review its crane related safety procedures.]

Workgroup member Janet Bohne asked if notice of the Reactor Internals Investigation would be posted on the 24-hour, toll-free Information Line and was assured by Susan that this would be done. NASA retiree Paul Mainzer then asked if the US Nuclear Regulatory Commission (NRC) has been notified and if NRC representatives were planning to be on-site for the reactor tank entry. Tim said NASA had complied with the request from the NRC for two weeks’ notice and the NRC had hoped to attend. But he said that if the NRC were not on-site, the work would still go forward. Tim also noted that NRC had come for a visit in April and was satisfied with the progress NASA was making. He explained that NASA had conducted a Health Physics Audit, employing a highly regarded consultant – Dr. Anthony Greenhouse – who conducted the audit over a two week period this past spring and reported that “Overall, we were pretty solid.”

According to Tim, NASA improved upon the internal dosimetry program – to measure personal radiation levels – after the radiation characterization process found traces of transuranic radiation. He said this was likely the result of the experiments that had been carried in the Reactor facility during the 1960’s and early 1970’s. Based on the characterization, Tim said NASA had brought in a contractor with expertise in the field and together they had “beefed up the program,” and said NASA has been “methodical” in ensuring the safety of workers.

Janet asked if the NRC’s confidence in the NASA Decommissioning Team was a reflection on Tim’s having worked for the agency. Tim noted that he had worked closely with several current NRC officials and Keith pointed out that NASA has enjoyed a positive relationship with the agency since the 1960’s that “contributes to their confidence in us,” adding that because there has been no nuclear fuel on-site since 1973, the NRC realizes any risk the Decommissioning Project could pose for the public is “way down on the list” compared with other facilities. But as Susan pointed out, “NASA has to meet the bottom line with the NRC on everything,” regardless of relationships. Tim added that NASA’s track record of “going the extra step” on the project also contributes to NRC confidence and Keith emphasized “This is the only Decommissioning we’ll ever do...so we have be sure we have the public’s confidence.”

Characterization Plan

Keith discussed the Characterization Plan being developed for the Decommissioning Project. He explained that characterization is a detailed radiation survey that “goes from the top to the bottom of the facility,” to identify all ionuclides for each survey area and determine the waste stream from the project. This information will be used to identify what low-level waste can be sent to which licensed disposal sites and then in designing the “final site survey” that will ensure the site of the former Reactor Facility is safe – and meets the Decommissioning Standards established.

Keith said contractor Montgomery Watson Harza is working on the Characterization Plan, adding that when it is finalized, a copy will be sent to the Decommissioning Community Information Bank at the BGSU Firelands Library. Although the plan has not been finalized, Keith said some characterization work has been taking place for several months, using a two-person health physics crew and that this data “will be fed into the plan.” He also said that once the plan is approved, a

dedicated crew consisting of four Health Physics (HP) technicians and an HP supervisor will begin the formal effort - which will take several months to complete.

The research has yielded “four or five occasions” on which they’ve found “discrete particles” which he described as having “2,000 to 10,000 counts per minute.” But he added that for this to be a “hot particle...you’d need a half a million counts per minute.” He said these higher counts are caused by traces of strontium and promised that “we’ll find them and we’ll clean them up.” Keith added that once the plan is complete, characterization work “will go forward in earnest.”

Activation Analysis

Keith then reported on the Activation Analysis that subcontractor Framatome (formerly Duke Engineering) had conducted over several months and completed in May. During the Activation Analysis, Framatome used three different sophisticated computer models to estimate the amounts of radiation that had resulted from metal being exposed to the high neutron flux inside the reactor tank. He explained that because much of the tank is constructed of stainless steel, the metal itself becomes radioactive – or activated – and “you need to know what you expect to find,” during the actual examination. Keith also provided statistical handouts from the study to Workgroup members and said he had a copy of the full report with him for anyone who would like to see all the data.

During the Activation Analysis, Keith noted, Framatome examined the exact construction of the reactor tank and the exact geometric and material makeup of each piece of the core and internal structures, adding that the reactor tank also contained 5% nickel. He said the results of this rigorous analysis came “pretty close” to the results of estimates made in 1978 and 1985, when less sophisticated models were used.

Keith said there “some surprises” resulting from the Activation Analysis, including indications that there is some low-level radioactive waste that is classified as “Greater than Class C” adding that he expected the amount of this waste (still low-level but higher than most of what has been in the Reactor Facility) “could fit in a five-gallon bucket.” But this waste cannot be sent to either the Chem Nuclear licensed disposal facility in Barnwell South Carolina or the Envirocare licenses facility in Clive Utah. Keith said if the presence of this waste is actually confirmed, it would either be transferred “to another licensee” or send to a US Department of Energy disposal facility.

According to Keith, the reactor has almost 81 tons of activated metal, which contains 44,000 curies of radioactivity. He noted that the previous estimate was 37,000 curies and NASA was in “good shape” by being within 20% of this figure. Most of the radioactivity (all of which is low-level) is from tritium in the beryllium components of the facility. Keith said that much of the waste would be packaged in what are termed “strong tight containers” such as the B-25 boxes that have been used during the project, with a few components requiring casks.

Dust Control/Ventilation

In response to requests by Workgroup members, there was an in-depth presentation on dust control and ventilation measures for the project. Mike Lambert a health physicist employed by Framatome and a recent addition to the Decommissioning Project Team, gave the presentation. Mike, who had previously worked at the DOE facility at Savannah River, South Carolina, is the Radiological Engineer for the project. He said his role is to protect the radiological safety of the public, the workers and the environment.

Mike started his presentation by saying there are two ways to control airborne contamination: engineering controls and administrative controls, with engineering controls the primary method.

The engineering controls include a portable ventilation system for minimizing airborne contamination, known as a High Efficiency Potential Air (HEPA) filter system. He said this would put in place for the reactor tank entry. During upcoming segmentation activities, scheduled to begin in January 2003, subcontractor Wachs Technical Services will also make use of a special enclosure known as a "glove bag." As Mike observed, "If you cannot control the source (of contamination) then you can minimize the areas through which it can travel." He added that HEPA filters are 99.97% efficient.

Mike noted that the ventilation system has a process flow of 24,000 cubic feet per minute meaning the air is turned over every 30 minutes. It will maintain the containment vessel at a slightly negative pressure, compared to the air outside the vessel - such that air will come in rather than escape. He also talked about dust control measures that will be employed, including an airlock that will minimize the potential for any outward escape of dust contamination. He said that "source capture" will be important in protecting the work area and keeping any contamination away from the public, noting that "by controlling it at the source, you minimize the overall air that is impacted and minimize the significance of the exposure."

Mike said that during the segmentation work, much of the cutting would be done remotely, using a separate work platform. Keith noted that nearly all of it will be "cold cutting," except for two cuts that will be done with plasma torches. Mike explained that the factors involved in minimizing exposure are time, distance and shielding. He said the HEPA filter system will be tested each time a filter is changed and that there will be monitoring of the air to verify the effectiveness of the engineering controls. This will involve the use of continuous air samplers both inside and outside the containment vessel and samples collected at the work site—as well as on-site analysis of air samples (with NASA taking action if the samples indicate a need).

Janet Bohne asked about the composition of the reactor tank and containment vessel. Keith said the tank consisted of a stainless steel overlay covering carbon steel and that there "may also possibly be" a one-inch blanket of asbestos, covered by 10 feet of concrete with 50% rebar. Wes Watson said the crew would cut the tank from the inside and peel it away with Tim making the comparison of "taking an orange and peeling it inside out, in concrete." Keith noted two decommissioning projects in which the reactor tank was removed intact but pointed out that much of the Plum Brook facility was built below grade, so it would not be as easy to remove the tank in one piece on this project. Wes noted the heavy use of rebar (steel rods covered by concrete) and said the builders had used "super duper concrete" adding that veriteze ore was also used during construction which had resulted in "burned up drill bits" during testing last year. Keith said that NASA would make great use of diamond wire saws to cut through the ore and the other materials.

Community Relations Update

NASA Glenn Public Affairs Specialist Sally Harrington followed with an update of Community Relations activities taking place since the April Workgroup meeting. She mentioned the Nearby Neighbors Reception, which was held on April 24 and involved several Workgroup members, and the publication of the newspaper supplement that was in the May 7 editions of both the Sandusky register and Norwalk Reflector (and can be accessed on the Register website at www.sanduskyregister.com and clicking on to Special Features). Susan asked the Workgroup meeting attendees if they recalled seeing the supplement and nearly all said they had.

Sally then talked about the Media Briefing and Tour that has taken place on June 26, noting the "positive and factual" coverage the project had received in several newspapers and three radio stations. Susan asked if the meeting attendees had seen any of the coverage and most had, citing the Sandusky Register and radio station WLEC. Susan observed that the Workgroup members

are “the best judges of whether the information is getting out at the right levels,” and asked if they felt this was occurring. The members agreed that it was.

Sally reported that the July newsletter had been mailed the week before to 1,300 Erie County residents – with another edition to be published in October – and said the Decommissioning Website would be updated shortly, with the Information Line also due for an update (with one taking place almost monthly). She also said there would be new fact sheets published in October (one on Radiation Protection and one on Environmental Monitoring). Sally and Susan also talked about the next Community Information Session (CIS), which is scheduled for Tuesday October 15 at Perkins High School. They said the PowerPoint presentation used for the CIS is being updated and that new display panels are also being readied in time for the CIS. Susan added that the CIS will again be publicized via both print and radio advertisements and on the Information Line as well as the Banner ad and web page space that NASA has purchased on the Sandusky Register website. She also asked Workgroup members to invite neighbors to the CIS.

Janet asked about the regular schedule of hours for work on the Decommissioning Project, once segmentation begins and expressed concern about possible long hours. Tim said the team is currently working four 10-hour days and would likely maintain this schedule, possibly adding a fifth day. But he said that work would not occur 24 hours a day and there were no plans to employ a second shift. Wes added that the project hours are normal for construction (7 a.m. to 5 p.m.) and Keith agreed, noting that the 10-hour workday includes time spent in a morning briefing and donning and removing protective gear.

Workgroup member Dave Stein asked if there would be further media coverage of “major events” during the project and Sally said, “we’re always ready to give interviews.” Dave then asked about pictures of the project with Susan noting that photos of work in progress might be posted on the website and provided to the media. Keith emphasized that a camera will be heavily utilized for monitoring the project, in order to help NASA minimize the physical presence of workers near the reactor tank. Janet asked if pictures from this monitoring would be put on-line. Tim said there were no plans to, but Keith said NASA would make a videotape of work in progress, adding, “If footage inside the reactor tank looks interesting, we’ll show it.” Tim added that work continues on the historical documentary video, noting that there were plans for more interviews with NASA retirees in the Reactor Facility control room. He also said there were plans for the eventual installation of a camera that “oversees the project,” expecting this to occur by the end of this year.

Next Meeting

Susan said the plan was to have the next Workgroup meeting at 5:30 p.m. on October 15, followed by the CIS at 7:30. The Workgroup agreed that topics at the next meeting should include an update on the Reactor Internals Investigation and information on waste processing facilities such as Alaron (where last year’s pre-decommissioning shipment was sent). Susan added that in January or April 2003, the plan was to bring in a representative from Wachs Technical Services to talk about the segmentation process.

The meeting adjourned at 8:30 p.m.