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Office Of Environmental Management

Response to Public Comments

Nuclear Facility
Engineering Evaluation/Cost Analysis
for the
Separations Process Research Unit
(SPRU)
Disposition Project

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The following document was prepared in response to questions and concerns raised during the public comment period for the Nuclear Facility Engineering Evaluation/Cost Analysis for the Separations Process Research Unit (SPRU) Disposition Project. As discussed during the public meeting, contaminated soil and groundwater issues associated with the SPRU Disposition Project are being addressed in a separate document, and a separate public meeting will be held to discuss these issues.

This document is organized into the following sections:

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Questions asked and answered during the public meeting are summarized in Section 2, Major SPRU Facilities Topics. Section 3 contains questions asked during the public meeting requiring additional responses and those submitted in writing during or after the public meeting. The questions and responses are organized alphabetically and tabbed with names for ease of reference. A letter received from the New York State Department of Environmental Conservation (NYSDEC) and the Department of Energy responses to the concerns raised in this letter are included in Section 4. Finally, certain questions asked by the public required a response directly from Knolls Atomic Power Laboratory (KAPL); these responses are in Section 5, alphabetically tabbed by name.

Section 1
Public Meeting Transcript – May 2006

U.S. DEPARTMENT OF ENERGY

SPRU DISPOSITION PROJECT

SPRU PROJECT PUBLIC MEETING

STENOGRAPHIC MINUTES OF PUBLIC MEETING conducted in the above-entitled matter on the 25th day of May, 2006, at the Niskayuna Town Hall, Niskayuna, New York, commencing at 7:00 p.m.

HOST: Mr. Steven Feinberg
Federal Project Director
U.S. Department of Energy
SPRU Project Office

FACILITATOR: Mr. Barry Lawson

P R O C E E D I N G S

MR. LAWSON: Good evening and welcome to this meeting on the United States Department of Energy's Separations Process Research Unit Disposition Project, or SPRU. Tonight's meeting is being held to provide you with information on the project and to hear your comments and answer your questions on this project.

My name is Barry Lawson and I will be moderating the session. Before we begin, I'd like to point out that the rest rooms, if you would need them, are off the lobby and to the back. If you go back in the main rotunda, go back to the right and the rest rooms are located there. And the emergency exits are actually up here, over to that side and over to this side behind me. (Indicating)

I'd like to request that cell phones and pagers be muted, please. I hope that you have all had an opportunity to participate in the poster session. I understand that that poster area will be open throughout this meeting and for a short while afterward. The personnel there will be pleased to discuss with you the material

that's presented.

The Department of Energy has provided several handouts this evening that you should have received when you came in. The information packets contain a form that you can use to make comments and request information and that looks something like this. (Indicating)

There are also forms that are separate like this in the back of the room. (Indicating)

There's also a list of acronyms and a glossary of terms that you might hear tonight and references. There's also a fact sheet which describes the clean-up alternatives. If you didn't pick up a packet on your way in, please do so either now or when you leave.

Let me take a brief minute or two to explain the schedule for the remainder of the program tonight and how you can participate in the public process both during and after tonight's session.

After my brief comments, Steven Feinberg, the U.S. Department of Energy Project Director, will welcome you and make a presentation on the project and how you can most effectively become involved. I would ask you to hold your questions

and comments until after he has finished his presentation. I will then open the meeting to you for questions and comments.

Now, the Department of Energy is especially interested in finding out if you have opinions about those alternatives that are being presented. If you favor one over another, please let them know. If you don't like one alternative, please let them know that, too.

Now, I plan to complete this session about 9:00 o'clock, but I'm prepared to continue if necessary and appropriate after that hour. When we get to the question and answer segment, my suggestion is that you make your comments clear and concise as we have a stenographer taking notes of the meeting. Please speak only after I recognize you to speak and if you would, please, give us your name. I want to be sure that everyone has a fair opportunity to participate. And by the way, our stenographer tonight is Teri Klos right over here. (Indicating)

Right now, let me introduce Steven Feinberg, the federal project director for SPRU. Remember, please hold your comments and questions until he

has completed his presentation.

Mr. Feinberg.

MR. FEINBERG: Thank you, Barry. My name is Steve Feinberg. I'm the Department of Energy's Environmental Management Federal Project Director for this job. It's my pleasure to be here. I've lived in the Capital District about 21 years and it's great to be able to work on a project in a place I call home.

Tonight, I'd like to go through things with you in a little more detail. We have the poster information session in the lobby and it will continue to be there this evening. I'm going to discuss during this presentation why we are here, a little bit about the Separations Process Research Unit history in an overview. I'm going to discuss some project alternatives which many of you may have read already in the fact sheet that I've issued, and I'm going to discuss the next steps for this project. And also tonight, I'm going to hear your comments, questions and try to answer as many as we can here tonight.

A little bit about why we are here: I'm

here to inform you about the Department of Energy's project here, the Disposition Project for the Separations Process Research Unit.

Disposition means we are looking at the means to clean up these facilities or remove them. This project is located in Niskayuna at the Knolls Atomic Power Laboratory.

I'll describe the alternatives which you may have seen on the poster boards and was also covered in the fact sheet. I'll listen to your comments and answer questions. We intend to factor your comments into our project planning in selecting a preferred alternative.

I'd like to give you a little more of an idea about where is the Knolls Atomic Power Laboratory. This is a picture of what you see going by the Knolls site. It is located on River Road in between GE's Global Research & Development Center and Blatnick Park.

The facility here in this location, the back portion of this facility, is where the G2 and H2 buildings are located.

A little bit more about the facilities themselves: The building in the corner here is

Building G2. This was the primary research facility. We also have Building H2 here. This is where wastes were stored from the research facility. We also have some supporting structures, the G2-H2 Tunnel. This is how liquid wastes were removed from this building and moved to these buildings and into these tanks.

To give you a little bit of an idea about these buildings themselves: The research facility is about one and a half stories abovegrade. It's a similar amount of floor space belowgrade. The facility footprint is about 22,000 square feet. Building H2 is about one story abovegrade. It has two stories belowgrade. Both of these buildings are constructed regularly with concrete and steel. The residual radioactivity in these buildings is located mostly belowgrade or below the surface of the earth here. This tank farm here is located belowgrade. When I take a picture of Building H2, all that you see is the ground here. (Indicating)

A little more about the facility's history: It was built between 1947 and 1949 at the Knolls

Atomic Power Laboratory and operated for the government by General Electric for about a three-year period. After that time, it finished its research mission. It was used as a pilot plant to research the chemical process to extract plutonium from irradiated materials.

After SPRU shut down in 1953, the equipment was flushed and drained and bulk wastes were removed. That means at this point, there's some residual contamination in the equipment, in the facilities and in other areas of these buildings. SPRU has been maintained in a safe condition by the Knolls Atomic Power Laboratory since that time.

Let me give you a little bit more about location within the facility. This area is where Buildings G2 and H2 are. I've also highlighted some other areas on this map at the Knolls site. This area here is where a rail bed was and over here in a land area. The reason why I've highlighted those is those are land areas where there's residual contamination on the ground from the SPRU project. I'll be having another public meeting later this year to talk about those

areas. Tonight, I'm going to focus only on the buildings.

I'd like to give you a little on the current conditions. Again, there is residual radioactive contamination in these facilities, in the process piping, on the floors and walls. I did want to point out the SPRU waste was not buried on-site. It was shipped off-site and disposed of at approved facilities.

KAPL does maintain these facilities in a safe condition and performs comprehensive environmental monitoring. They issue an annual report and that report is located across the street in the town library. The SPRU project and KAPL do comply with EPA and New York State Department of Environmental Conservation requirements. New York State DEC and EPA both visit the site.

KAPL has used Buildings G2 and H2 since 1999 and after that period, they moved out of these facilities and that's a part of why the Department of Energy is here today.

In 2000, the Department of Energy & Environmental Management sent me here to start

assessing these facilities and trying to help them decide what to do with these facilities, how to disposition them.

I'd like to talk to you a little bit about the project process which you're involved in tonight. The first task was to define the clean-up project scope and assess the facilities. Well, we've created a document called Historical Site Assessment. It's located at the library. Go to the library shelf, the SPRU area. It looks like this. (Indicating)

In this document, you'll find details about the buildings, how it was constructed, where contamination may be present in the facilities and other hazards, such as asbestos that was a common building material at the time that is present in these facilities.

We also, as part of the project, have to identify the permits that are required and we will obtain them. We also have developed clean-up alternatives. The fact sheets available at the table, and some of you received them in the mail, describe the four alternatives we consider possibly viable for this project.

We're here tonight as the next step in the process to get the public's input of those alternatives. You'll note the document's a draft. It's a draft, because we do not yet have a preferred alternative. Part of the process is getting the public's input.

After I receive your input, DOE will take your comments and your input and your preferences, factor them into the project and recommend a preferred alternative. That will be made to the Department of Energy in Washington. There, the Department of Energy has to take the technical recommendation, and it also has budget considerations for other projects across the nation, and will make a decision on which alternative to choose.

Once that alternative is chosen, there will be another public comment period in which we'll notify the public, much as we've notified you tonight of this public meeting, the availability of that document at the town library, and there will be a 30-day comment period where you can provide your input again on a preferred alternative this time.

After that, we have to implement the alternative, which means we pursue contracts to actually pursue one of these alternatives, which may be, hopefully, the clean-up alternative. We will keep you, the public, informed of the process.

I did want to talk to you a little bit about these alternatives. You've seen some of them already. The first alternative states no action. What that means here is we maintain the facilities in a safe condition and we defer the actual removal of the buildings.

In this particular case, this is basically status quo, maintain the facilities in a safe condition. Removal of facilities will still have to be addressed at a future date. That's why I use the word deferred. To do that over a 30-year period, the Department will have to spend about $60 million to maintain safety. And, of course, in the future, the costs will be more than they are today. And I'll discuss the cost of removal in the next alternatives.

Alternative 2: In this case, we're removing 95 percent of the residual radioactivity. We

would do this to help reduce the cost of the surveillance and maintenance activities. You'll notice in the map, we've colored it here to indicate the tanks where most of the residual waste is would be removed. The enclosures where the tanks are would also be cleaned. We would go through these buildings to remove areas where higher levels of contamination are, so it would be easier for surveillance and maintenance. The cost of this alternative is about $90 million.

You'll note that there will be some local benefit here by providing more employment at the KAPL site. There would be a temporary increase in local traffic caused by that as well, and I'll talk about local traffic a little bit later on after we discuss all the alternatives. We expect this alternative to take about five years to perform.

The next alternative, the third alternative, we would remove about 98 percent of the radioactivity present. How we accomplish that is removing the waste process in the building where the tanks are. Again, here, we reduce the cost and effort it takes for future surveillance and

maintenance. There would be additional temporary benefit for workers on the site.

This particular alternative is estimated to cost about $130 million. It would take over a seven-year period to perform.

The last alternative we want to discuss tonight would be complete removal of the facilities. The benefit here, of course, is it would remove all residual radioactivity in the buildings. There would be additional temporary local employment. And another benefit in this particular alternative is once the facilities are removed and the area restored, the KAPL site could re-use that area for additional research facilities, perhaps.

This particular alternative would cost about $160 million and we project it would be done over a seven-year period.

I did want to talk about traffic, by the way. When I talk about an increase in traffic, what we're considering is how many vehicles would it take, how many workers and how many trucks that would be coming to the site.

We anticipate less than one percent of

impact on traffic on Balltown Road. Balltown Road receives about 13,000 vehicles per day. We're estimating less than one percent or approximately a hundred, a hundred vehicles; mostly laborers that would be coming to the site and working. We don't believe this would be a noticeable impact on Balltown Road into your local area.

To summarize these alternatives again: In Alternative 1, we would defer a removal action, continue surveillance and maintain these facilities in a safe condition.

In Alternative 2, we would remove 95 percent of the residual radioactivity; and in the third, about 98 percent of the residual radioactivity.

In the fourth alternative, we'd remove the buildings completely, restore the area so it could be re-used.

I'd like to turn this back over to Barry to initiate the comment and question period.

MR. LAWSON: Thank you, Mr. Feinberg.

I will now begin the question and answer session. We have a roving microphone and I'd request that you use it so that the record of

your comment or question will be as accurate as possible.

I will occasionally repeat questions to be certain that I know just what it is that you're asking and you may ask one question and a follow-up, if appropriate, but please no second questions until each person has had an opportunity to ask his or her first question.

Please raise your hand if you wish to speak and once recognized, please wait for the microphone to be brought to you. I would ask you to give your name, if you would, especially if we wanted to follow-up afterward, we'd know who to call, and your affiliation if you wish. Your cooperation in following these guidelines is most appreciated.

Let me also add that oral and written comments have the same weight to the Department of Energy. If you would prefer to write your comment, there is a form, as you know, in the packet that was given to you and there's also some loose forms as you go out the door. You may write your question and submit it to me or, perhaps, even submit it after this meeting.

Questions that cannot be answered this evening or that are submitted subsequent to the meeting will be answered by the Department as soon as possible after the meeting by written response.

A record of this meeting; that is, of the comments, the questions and DOE's responses, will be provided to the information repository at the public library right across the street from us.

If you now wish to speak, raise your hand and I will have a microphone brought to you at your seat. And remember, only one question plus a follow-up, if necessary, per person until each person wishing to speak has an initial opportunity to do so. And if you have a written copy of your comments or additional comments, please hand them to a staff person before you leave. And I notice there's also a box on the right as you're leaving the door that you can sting them in there.

Do I have any questions or comments?

This gentleman over here, please.

MR. EDWARDS: Actually, I have a statement that I'd like to read. It's about two and a half pages long. So if that's appropriate and this is

the appropriate time to do that --
MR. LAWSON: That would be fine.
MR. EDWARDS: Could I come to the front?
MR. LAWSON: Well, actually, we can give you the microphone and you can do it from there, if you would, please.
MR. EDWARDS: Hi. My name is Jeff Edwards. I'm the staff for the Schenectady County Environmental Advisory Council. And on behalf of the Schenectady County Environmental Advisory Council, I would like to thank you for the opportunity to comment on the Department of Energy's Nuclear Facility Engineering Evaluation Cost Analysis for the Separations Process Research Unit, or SPRU, Disposition Project draft.
SCEAC was formed in 1971 as a council of citizen volunteers appointed by the County Legislature to advise them on environmental issues. And SCEAC would like to express a preference for alternative number four, the complete removal of the contaminated facilities.
Alternative number four should be implemented for the following reasons: One, it

is the only option that can completely remove the long-term threat to residents in the vicinity of this site posed by radioactive releases into the air. It's also the only option that can completely remove the threat posed by radioactive releases into the river to residents of the Latham Water District and the Town of Niskayuna who obtain their municipal water from wells that are adjacent to the river.
Alternative number four is also the only alternative that completely meets the removal action objectives stated in the report. The long-term cost of implementing the other options will exceed the cost of implementing option number four if all factors are considered.
And alternative number four can be implemented safely and with little risk to workers on the site or the general public.
And finally, it is in the best interest of the economy of Schenectady County.
So I'd like to elaborate on each of those options, but before I do, I'd like to state one important factor that I believe was left out of the NEPA section of the report. The SPRU site

is within the Schenectady/Niskayuna sole-source aquifer as designated by the U.S. Environmental Protection Agency. Although soils beneath the site are not aquifer soils, the site does lie within the watershed of the section of the Mohawk River that serves to recharge the Niskayuna aquifer and the municipal wells that utilize it.
The fact that the site is in a sole-source aquifer should be mentioned in the NEPA analysis and any implications of this should be addressed in that analysis and possibly in the main body of the report itself.
That said, I would like to go on to elaborate on the points that I mentioned above. The first reason for supporting alternative number four is it is the only option that can completely remove the long-term threat to residents in the vicinity of the site posed by radioactive releases into the air.
Although alternative numbers two and three greatly reduce contamination on the SPRU site, they do not completely eliminate it. The threat of any radioactive contamination remaining on the site will last for tens of thousands of years.

The threat of release of radioactive material into the air, no matter how small, at any given time cannot be ignored when such an extensive time period is considered.
The protection and safety of residents living near the facility should be the foremost consideration of any project of this type even if the majority of those residents haven't even been born yet.
Second: Alternative number four is also the only option that can completely remove the threat posed to residents of the Latham Water District and the Town of Niskayuna that obtains its municipal water supply either directly from the river or, in the case of Niskayuna, wells directly adjacent to it by the threat of radioactive releases into the river.
Using the same reasoning as in discussing the air releases, the only way to completely remove the threat of radiological contamination of the Mohawk River and, by extension, the Latham Water District drawing water directly from the river and the wells utilizing the Niskayuna aquifer is to completely remove the source of the

radiological contamination.

Third: Alternative number four is the only alternative that completely meets the removal action objectives stated in the report. These removal action objectives are listed in Table 2.1 on page seven of the report. They include restoring the property occupied by the SPRU facilities to a state that is suitable for re-use, demolition, disposal, transfer of sale; restore that area occupied by the SPRU facilities to a state that meets the needs of KAPL and is consistent with the DOE continuing mission site; reducing or eliminating the surveillance and maintenance programs; and reduce or eliminate potential for future releases from the facilities to the environment.

The only alternative that merits a high rating in achieving these objectives according to Table 30 of the report is alternative number four.

Fourth: The long-term course of implementing all the other options will exceed the cost of implementing number four if all factors are considered.

First, alternative number three is only 18 percent less costly than alternative number four. Alternative number three is only 18 percent less costly than alternative number four. But more importantly, there are a number of factors identified in the report that indicate that the costs enumerated for all these options except for number four are deflated.

The report notes on page twenty in discussing alternative number one that "This alternative does not include the cost of capital improvements that would be required during the next 30 years to maintain the SPRU facilities in their current state."

Obviously, infrastructure at the site will need to be replaced or maintained within the next 30 years. I assume that these maintenance costs are not included in the analysis of alternative number one. They're also not included in the costs of the other options that require continued monitoring and maintenance, and that is all the options except alternative number four.

Also, the monitoring and maintenance activities required for all the options other

than alternative number four will need to be carried out for more than thirty years, the time frame considered in the study, unless remaining facilities are removed during that time frame.

The costs of continued monitoring and maintenance beyond 30 years is not considered in the report when calculating the costs of these options.

Finally, the report indicates that the eventual complete removal of the facilities will be required anyway. Since the contamination and consequent threat to the community will last until the facilities are removed, eventual complete removal is indicated.

In other words, not completely removing the facilities as part of this project is only delaying the eventual completion of the project with all the consequent costs of complete removal being eventually required anyway.

Additionally, delay in complete removal extends the costs of monitoring not to mention the risks to the community with no evident benefit.

Fifth: Alternative number four can be

implemented safely and with little risk to workers on the site or the general public. The study finds, and the report states, as with alternative numbers two and three, the alternative is technically and administratively feasible and service and materials are available.

And, finally, alternative number four is in the best interest of Schenectady County. Complete removal of the buildings and remediation of the site employ the most people during project implementation. It will also allow for reutilization of the site by KAPL providing the best chances for job retention and increased employment at the site. And the complete remediation of the site is also likely to increase property values of the neighboring residents, improving the wealth of the neighborhood and the tax base of the community.

For all these reasons, Schenectady County Environmental Advisory Council recognizes that Alternative 4 be implemented as outlined in the Nuclear Facility Engineering Evaluation Cost Analysis for the Separations Process Research Unit Disposal draft prepared for the U.S.

Department of Energy by their consultants, Environmental Research Group.

Thank you very much.

MR. LAWSON: Thank you, sir. I appreciate your going through that whole thing, but I also want to tell other people that if they do have written comments and they'd like to summarize the written comments and hand in the full written comments, they may do that as well.

Thank you very much. I appreciate that. I'm going to take somebody over on this side.

MS. GOLD: Good evening. I'm Leslie Gold. I've been in town since I was a small child and I'm honored to serve on the Town's Planning Board. I'm going to echo the previous speaker in some regard, because I agree Alternative 4 is the only one that really makes sense.

I had one question, and I think he's already raised it, and that's: What about the runoff? Even if the water's not being absorbed back there, I don't know about the runoff, because it does go both to the aquifer and to the river itself.

And aside from that, the Town of Niskayuna

is a small town in the smallest upstate county going in this state. Land is extremely valuable. Only Alternative 4 makes it reusable. I think the business case mitigates for Alternative 4 as well, because you really don't know what the other costs are going to be. You can say it's going to cost X-number of dollars to monitor for 30 number years, but if nothing's been done to change the condition, it's going to cost more money on top of that.

And the same thing with the partial clean-ups in Alternatives 3 and 4. So I think the business case is for Alternative 4. And both as a resident and as a member of the Planning Board, I prefer that. I think it's the safest option for the community.

I will comment that I think one of the expenses that's going to go up is actually getting the materials to the site where they can be permanently stored. I understand that's a federal facility and it will be available and all, but more and more communities are objecting to hazmat being shipped through their communities whether it's by truck, train or whatever. They

don't want it. And I think it's going to make it more difficult over time and much more expensive to get these materials where they should be.

MR. LAWSON: In other words, to postpone it, you're saying?

MS. GOLD: Yes. So I think everything really argues for doing it sooner. Go with Alternative 4.

MR. LAWSON: Okay. Great. Thank you. I want to go back to the question that you had and you suggested that it was dealing with runoff.

Can we put that in the form of a question and say --

MS. GOLD: Is there runoff?

MR. LAWSON: -- is there runoff and is it being considered?

MS. GOLD: Yes.

MR. FEINBERG: I'd like to clarify. I'm not quite sure what you mean by runoff. I understand rainwater runoff, but I'm not sure of the context that you're asking the question.

MS. GOLD: My understanding is that there is some contamination of the soil itself.

MR. FEINBERG: That is correct.

MS. GOLD: And that because of the particular soil and rock there, it's not going down. But it could still be going off and down towards the aquifer site.

MR. FEINBERG: I believe I understand your question now. At the immediate vicinity of Building H2, we do collect the water that percolates immediately around the building. It does contain radioactivity, because there's radioactivity there. And it is processed and treated before it's discharged.

MS. GOLD: Okay. That's encouraging. Thank you.

MR. LAWSON: Thank you. Right over here, please.

MR. PERUZZI: My name is Bill Peruzzi. Do I understand that if I ask a question, I'm limited to one but if I don't ask a question, I can go on as long as I want?

MR. LAWSON: I've done meetings like this for many years and a clever person will find a way to do the two questions in one.

MR. PERUZZI: I'll do my best.

MR. LAWSON: By the way, somebody said

you've already asked your question.
MR. PERUZZI: Let me just clarify something and see if I can get this straight. You said you work for Department of --
MR. FEINBERG: Department of Energy.
MR. PERUZZI: -- Energy.
And you didn't say who you were.
MR. LAWSON: No. I'm an independent contractor. I have my own company and I moderate meetings around the country.
MR. PERUZZI: Okay. In reading the reports, I came across several elements: Strontium 90, cesium 137, cobalt 60, plutonium and uranium. This is a two-part question. Are those all of the elements that are present because of activities that were conducted at this site; and what are their half-lives?
MR. FEINBERG: I can answer part of that question now and, some, I'll have to respond back to to complete the record. But the primary contaminants concerning radioactivity is the cesium, strontium; there are small amounts of plutonium. We did look and investigate for others in case they were present and you will

find that information partly in this report here, the Historical Site Assessment, in which we identify the radionuclides that are present.
In regards to half-life, the predominant ones, cesium and strontium, the half-lives are 30 years. Plutonium has a much longer half-life. And, yes, it's correct; it will be there a very long time.
MR. PERUZZI: Thank you.
MR. LAWSON: Okay, sir. I am going to surprise you. Would you like a follow-up question?
MR. PERUZZI: Yes. On page 428 of the monitoring report, it talked about "above weapons testing fall-out." That was a very interesting sentence. Would you explain that?
MR. FEINBERG: I actually am not the author -- the Department of Energy & Environmental Management is not the author of those reports. I have to understand more about your question. I might be able to answer it, but I may have to defer it.
MR. PERUZZI: Why don't you look at 428?
(Handing to Mr. Feinberg)

MR. FEINBERG: Thank you.
MR. PERUZZI: Two-sentence paragraph.
MR. FEINBERG: Just give me a moment. I might be able to answer this, but I may have to defer the question.
(Pause in the proceedings)
MR. FEINBERG: I'm going to try to answer this question. I may have to defer this back to the KAPL site. They're talking about monitoring in the Mohawk River having potential impacts from the KAPL site itself, the entire site, not just SPRU. "The results of fish and other biological sampling conducted show no detectable radioactivity of KAPL origin above weapons testing fall-out levels in any biological sampling. These results continue to demonstrate that residual radioactivity in the sediment is not contained on the food chain."
I believe -- and I'll address this again in written comments responsive to this comment that I'll put in the library -- I believe what they're indicating is there is a certain level of radioactivity throughout the areas and, of course, the world because of fall-out from past

weapons testing.
What they're telling you is they cannot discern any impact from the Knolls site above what's typically there and has been shown to be there as a result of weapons testing in the past.
MR. PERUZZI: So it did not mean internal weapons testing?
MR. FEINBERG: That is correct. There were no weapons tested whatsoever or weapons built at the old Atomic Power Laboratory.
MR. LAWSON: Is there someone else?
Yes.
MR. STEENBURGH: My name is Brett Steenburgh. I'm a resident of the Town of Niskayuna. I haven't had a chance to go through the reports and I did have -- I am an advocate of option four presuming, you know, that it's safely handled when transported throughout. I would assume that would be true under the state and federal guidelines.
But one thing I am concerned about, and I'm kind of jumping ahead here to another public hearing, but you did allude to the areas which have ground contamination and ground radiation.

The expenditure of $160 million to remove these two structures, I mean, would that possibly preclude a better clean-up of the ground radiation? My concern with that is the radiation is somewhat contained within these structures, but the radiation in the other areas which you alluded to are open to environmental contamination with wind and rain and runoff and things like that.

And from my standpoint, I think that would be something that should be cleaned up prior to or at least not be -- the clean-up of that should not be predicated on what is chosen here for this clean-up.

MR. LAWSON: I think he's basically asking if Alternative 4, which is his preference, is chosen, will that in any way preclude or otherwise affect working on the land areas that he mentioned are also contaminated?

MR. FEINBERG: There's no expected impact in choosing an alternative for the buildings to what needs to be done for land areas. I'm here for the buildings, because we're ready at this time. We have the information we needed and there was a

lot of information to present for both the buildings and there will be more information for land areas. I'm going to delay talking about the land areas until we've completed those reports.

I did want to point out to you that in the land areas, the levels are very low. I walk out there in clothes, just as I am here tonight, today safely.

MR. STEENBURGH: Okay.

MR. LAWSON: Thank you for your question and your comment.

We have somebody up here.

MR. CHAPMAN: My name is Bill Chapman. I'm a councilman in the Town of Niskayuna. I do have a position, but I have two questions I want to ask first quickly.

The materials that you take, they would be stored safely somewhere else? I mean, we don't want them stored unsafely in somebody else's backyard or their community. So could you say a little bit about where that would be and the safety precautions?

And then, secondly, in Alternative 1, it's $60 million over 30 years, but again, that's

just deferring, right?

MR. FEINBERG: Right.

MR. CHAPMAN: At the end of the 30 years, then we'd be right back to having to consider a more expensive option.

So if you could answer those for me.

MR. LAWSON: Maybe you want to do the second one first. The second one is 30 years and you have to pay eventually anyway. And the first question was: Do you have any information on where waste will be stored after it's removed from the site?

MR. FEINBERG: I'll answer the second question. You're right; at the end of 30 years, the intent is not just 30 years and nothing happens. Really, it's deferred. I would again be back here again, or someone else, actually, and we'd be addressing likely the same alternative I'll discuss tonight.

With regard to moving to another location, the intent is disposal and there are approved facilities throughout the country that both the Department of Energy owns and operates and several that are commercially operated. They're

better suited for disposal of radioactive materials.

You'll note in the alternatives, I haven't offered any viable alternative for disposal here on-site. Technically, we don't believe that this is a suitable area to dispose of radioactive materials.

MR. LAWSON: But you don't know necessarily where it would go?

MR. FEINBERG: I do not. The contractors that we would hire would tell us their preferred location to do that. It would be approved facilities. For example, commercially, there's a facility called Envirocare of Utah.

The Department of Energy also has the Savannah River site, which is a site that commonly disposes of radioactive material. There's also the Hanford facility in Washington.

So there are a number of options for disposal of this material and all are suitable and approved for the disposal of radioactive material.

MR. LAWSON: Do you have a follow-up question?

MR. STEENBURGH: Yeah, I guess, just on the safety. In other words, the material is contained there in some way and then it's monitored to make sure there's no escape?

MR. FEINBERG: They're designed for disposal of radioactive materials, so that is their intended purpose. And they do charge quite a bit to do that service.

MR. LAWSON: Thank you.

This gentleman right here.

DR. BLOCK: My name is Eric Block. I'm a professor of chemistry at the University of Albany. I guess the first question is a technical one.

The nub of this issue deals with, perhaps, four or five radioisotopes. Can you tell us, or can you tell us at a later date, the quantities, the number of Curies, of plutonium and strontium and cesium and americium that are actually contained, the total amount? Is that known from analysis? That's the first question.

And the second question jumps to a different issue, and that is: What experience has your agency had elsewhere in the United States with

similar remediation; and what problems have occurred and what have you learned from those activities that would be relevant to the issue at hand?

MR. LAWSON: Okay. The first question dealt with what you know about the amount of waste in terms of Curies.

DR. BLOCK: The total amount of plutonium in particular that's present in terms of Curies or microCuries.

MR. LAWSON: Let's do that one first.

MR. FEINBERG: Well, I can answer this: I know the total amount in the buildings is less than a hundred Curies. I would have to go back to the reference material that I have in the historical site assessment to provide that information to you.

Plutonium is a much smaller amount in the total. It's primarily the cesium and strontium.

MR. LAWSON: The second question related to the experience of the Department in other parts of the country dealing with, I presume, issues that are comparable to this and whether there have been successes or, perhaps, failures.

MR. FEINBERG: Do you have any particular concerns that I can try to address? Are you referring to certain kinds of problems or types of problems relating to --

DR. BLOCK: Well, ideally, a situation as similar as possible where you're dealing with a facility in proximity to residential areas and how similar they are so that you could extrapolate from your success and problems.

MR. FEINBERG: The Department of Energy & Environmental Management has a number of sites where they've removed residual waste from tanks successfully. There's a known technology and that is part of why we're moving today in recommending removal of these facilities as one of the options, because the technology is here and present and is shown to work.

In addition, the amount of contamination we have in these facilities is relatively low to other Department of Energy projects. That's why in the Engineering Evaluation/Cost Analysis report, the EE/CA that we have on the library shelf, we talk about the removal action objectives.

As noted here tonight, it's readily done with today's technology. It can be done safely. And I recognize it is near residential areas. We do follow OSHA requirements. We do recognize, yes, in any demolition project, there will be noise, there will be potential for dust and we do have controls such as water mist to control dust.

The typical process in a demolition of this nature is to remove the hazardous materials before we demolish. That also addresses a number of, I believe, some of the concerns you're getting to.

Does that clarify that for you?

DR. BLOCK: Yes. There's also a concern about monitoring with the public interest in mind. Will there be public interest groups, members of the press or other groups, that can closely monitor the process and report on any problems before they get out of hand?

MR. FEINBERG: I do issue fact sheets to the public and will continue to. And, in fact, tonight is a good example of this public meeting where one of the newspaper reporters spent about 20 minutes before the meeting to ask questions.

They do call. Reporters do call. I do answer their questions. Often, I try to answer them before their deadline, but sometimes I have very short notice. But I will answer their questions.

MR. LAWSON: Just one question. He asked about other sites. Is there a compendium of information of sites that have been cleaned up that might be comparable that he might look at?

MR. FEINBERG: I'm not sure there's an actual compendium of sites, but the Department of Energy does operate what's called a Lessons Learned program. Specifically, what they are doing with Lessons Learned is what is the experience of clean-up at other sites and identify what problems and issues arose so we, the Department of Energy, and our contractors can have access to that so we don't repeat the same mistakes twice.

MR. LAWSON: Thank you.

This lady over here.

MS. SKOLNIK: I'm Jacqueline Skolnik, a resident of Niskayuna. Perhaps, you can tell me what inspired DOE to come into our town at this

point to do the clean-up; and if option number four is chosen, what is the time frame from start to end, especially now that you're mentioning unfavorable fall-out such as to the community?

I happen to live fairly close to KAPL. So I'm wondering -- obviously, it's going to upset the bike path and increase traffic on River Road and so on.

So what kind of time frame are we looking at for being in a state of confusion from this?

MR. FEINBERG: There's a number of questions there. The part I'm a little concerned about is fall-out. Earlier references about fall-out were --

MS. SKOLNIK: Oh, I'm not talking nuclear fall-out. That was a play on words.

MR. FEINBERG: Thank you for clarifying that. The time frame for the project is expected, from a planning standpoint, to be about seven years for the fourth alternative, from 2007 to 2014.

Did you have another question?

MS. SKOLNIK: Well, you didn't answer my first question as to why DOE decided to descend

on us now. Then, I do have a follow-up, yes.

MR. FEINBERG: The reason why I'm here today, part of it, is after the G2 and H2 facilities were shut down and put into a safe condition, the Knolls site also re-used portions of the building. In fact, they were using portions of the building until about 1999. At that point, they did let us know they really had no further use for the building and, truly, it was an appropriate time for the Department of Energy & Environmental Management to take on the responsibility and start addressing what to do. I've been on the site in the field project office since 2000.

MR. LAWSON: And your follow-up question?

MS. SKOLNIK: So you're implying that increased traffic on River Road, the hauling of radioactive waste, increased dust to the area and other environmental unpleasantness will continue for seven years?

MR. FEINBERG: It would occur over seven years if we're, in fact, to do that removal action. It's not occurring at the moment.

MS. SKOLNIK: Oh, I understand that. Once

you start.

MR. FEINBERG: Yes, that is correct. That's, in fact, why I'm here tonight to get the Town of Niskayuna's input; would they be willing to pursue an alternative with the Department of Energy -- would you be willing to accept that there would be more traffic, potentially more noise, more dust for a seven-year period while we have that short-term impact? Would they be willing to accept that? That's why I'm here today to hear your choice of our alternatives.

Do you have a preference?

MS. SKOLNIK: Sure. Put it off for 30 years. I won't be here anymore. I mean, I think that's a terrible imposition on the residents of Niskayuna. I mean, I understand that there are some various options. I'm certainly not happy with your imposing on my air, my space, my roads and so on.

MR. FEINBERG: Thank you for your comments.

MR. LAWSON: Thank you very much. We appreciate that.

We have a lady over here.

MS. STEENBURGH: Hi. My name is April

Steenburgh. I live very close to Knolls. I live off on Rosendale Road. I pass Knolls on an average probably three to four times a day with my three-year-old son.

What I'd like for you to give me more information on is specifically as you remove the hazardous material, exactly how much radiation does OSHA allow as what they consider a safe amount of radiation as you remove the hazardous material?

And, specifically, if this is going to happen over seven years and I'm passing three, four times a day, is it going to be removed during regular business hours? Is there any consideration for people who live immediately in the area and would be, you know, possibly exposed to that material?

MR. FEINBERG: I'd like to address the questions here. I believe I understand your questions. During the removal action, at least our experience is, in a case like this with low levels involved, we do follow Department of Transportation regulations in regards to packaging and transport of materials. They're

actually designed for public safety.

In regards to during the project itself, I can say I have a great deal of confidence that you will not be exposed to radioactivity as a result of doing this job. We do understand how to handle this material and how to handle it safely.

MS. STEENBURGH: I worked for 15 years as a radiation therapist so I'm familiar with how they transport uranium and cobalt, and I do understand there is some low level amounts of exposure that people would have as a result of transporting at least medical radioactive material.

So I am a little bit concerned if it truly is -- I don't know, you know, what material you have, if you're moving and it's in your walls or whatnot. But can you really guarantee that there's a very, very low level or, as you're saying, almost no level?

MR. FEINBERG: It's not almost no level. There are some materials that are hard levels of radioactivity. But by following Department of Transportation rules for packaging -- personally,

I'm not familiar with the medical materials -- but we do ensure the public safety in that manner.

They have established levels. For example, when we package waste in containers, there are limits that we must meet in order to ship them over the road. We will comply with those rules.

As far as exposure to an individual, I would point out as you're passing by, if you happen to pass one of these vehicles, you'll be passing them very momentarily. It's highly unlikely that it could be measured how much exposure you'd have.

Typically, you have to calculate those and estimate those. It would be unlikely you would receive exposure from our service.

MS. STEENBURGH: As a follow-up question: Do you know what OSHA allows in the commercial setting and have they considered people, like I said, that would be going three, four times past?

MR. FEINBERG: If we do have something, I'll review it. I don't know off the top of my head the number for OSHA. I'll try to address that more fully. We have your comment recorded and

we'll try to address that more fully. I do not know what that number is.

MR. LAWSON: Thank you. I believe there's somebody in the back of the room.

MR. MASUCCI: My name is Nick Masucci. I'm a resident of the Town of Niskayuna. I have two questions. The first question is: What sort of volumes do you anticipate taking off of the property if you go for a clean-up over seven years? Are you talking a truck a week, two trucks a week? I know that's more than one question.

And the second question is, and I think the gentleman over here alluded to it earlier: In cleaning these two buildings in some manner, are you going to disturb the rest of the property and increase contamination from the rest of the property?

MR. FEINBERG: To answer your last question, the intent of removal is not to contaminate other areas of the property in the process. We do check -- in a demolition project such as this, the goal is not to do that. And in order to ensure that, not only do we remove the materials,

but we do survey and inspect and sample the areas that we have worked to ensure that we didn't contaminate another area as part of the process.

In regards to the first question, for the fourth alternative, the estimate for all the truck loads, whether it be a dump truck bringing clean material or remove clean material for waste, is about 2,800 trucks over about a five-year period of time of the project.

The project itself will likely take about seven years. The physical work would likely occur over about a five-year period for removal of waste to occur. That's roughly less than three vehicles in a day.

MR. MASUCCI: One follow-up.

MR. LAWSON: Please.

MR. MASUCCI: For these trucks, will there be any cost to the Town of Niskayuna? Will we need a police escort for these vehicles at any point? Will you guys reimburse us for this?

MR. FEINBERG: The majority of the vehicles will not require an escort. If, in case, we had vehicles that were either over-size or over-weight, which has occurred on projects I've

worked on and may occur here as well, normally, we pay. We pay our way. I don't believe the Town of Niskayuna will be offering those services for free. Typically, we pay them. It will be paid.

MR. LAWSON: Thank you.

There's a gentleman right over here, please.

MR. RICH: I'm Basil Rich (phonetic), a resident of Niskayuna, and I have two questions. First of all, how are the contractors going to be chosen for this thing? Certain horrors come to mind with like asbestos removal or the horror story of the national lead plant on Central Avenue where it's been worked on for many, many years and still isn't done.

And my second question is: Are there any plans in the works for an independent assessment of these various alternatives, independent of the Department of Energy; for example, by the National Academy of Sciences or the National Academy of Engineering?

MR. LAWSON: Two good questions. The first is: What are the criteria that you use in choosing your contractors?

And the second question is --

MR. FEINBERG: For independent review. I remembered that one. I think I got that.

On the first question, it's a little early in the contract process, but I can tell you typically in the contract process, we are looking for -- I would guess I would call it high quality contractors. They need to have experience in working with hazardous materials, whether it be asbestos or radioactivity. They need to provide us historical information and references basically for us to evaluate. That's typically the process before we hire a contractor.

With regards to an independent review, that's a good point, but we have not considered an independent review at this time. We do have several reviews that are done and required at the headquarters level. They do not involve the National Academy of Sciences.

For example, some of the things that headquarters may choose is have an independent contractor review the materials that I have to see are the estimates -- are they good estimates for the costs to the Department of Energy?

They will also look at: Is the schedule that we have realistic? That's typical of the type of reviews for these jobs, and I will have to make sure that I can support those as well.

MR. LAWSON: Follow-up?

MR. RICH: Well, just one quick follow-up, yes. I guess I'm more concerned about the technical aspects of the removal process; for example, how they isolate the contaminants and so on, rather than the cost and budget analysis which is, of course, very important, which is why I mentioned, for example, something like the National Academy of Sciences. Of course, we have a tremendous concentration of talent and expertise in the fields that pertain to this thing right here in the tri-city area.

So I'm just saying we'll be watching with interest, because we've all been around and seen a lot of these horror stories where everything is just fine only to find out 20 years later that everything wasn't fine.

MR. LAWSON: Okay. That's a good comment and, I'm sure, will be taken into consideration, especially that second point that you made.

Now, this gentleman right here.
MR. PARSONS: My name is Dred Parsons. I'm a senior health physics technician and industrial hygiene technician, as a matter of fact, at the very site that this gentleman's talking about. I'm also on the Planning Commission of the Town of Rensselaer, so we deal with brownfield issues on a regular basis.
I guess the six million dollar question that everybody is kind of dancing around is: Does the money currently exist to fund this project in any of its stages, stages one through four?
A lot of the problems that we have on both the state and the federal level is we go through the approval process, which is painstaking, incredibly painstaking, public approval, town commission boards, zoning boards, everybody, and then come to find out, right at the end, when the horse is in the gate, there's no money.
Is there money for this project?
MR. FEINBERG: You've identified the process that I must go through and on a planning basis, yes, there's money and I'm already working for dollars in FY, fiscal year, '08. And there's

always the potential -- as we noted before, we do have to apply for the dollars amongst all the other congressional concerns and how they want to spend their dollars. I can't predict what those would be.
So your point you wanted to discuss could happen; I hope it does not, but I do have to vie for the dollars. The fact that I've been here for five years working here and been able to do that; in some years, we lost the dollars, but we're still here.
MR. LAWSON: Okay. The gentleman in the back.
MR. ADAMEC: Hi. John Adamec, a Niskayuna resident. My question is: We've heard a lot about the radioactive contamination of the site. Have any surveys been conducted in regards to other potential contamination of the site, whether it's heavy metals, organics or other compounds from the continued use after it was stopped being used for radioactive research?
And how is that fitting into these clean-up costs? What types of concerns are arising from these? How are we going to handle that situation

if it exists?
MR. FEINBERG: Good question. I do have an assessment report that does address that. I've primarily talked about radioactivity tonight because that's the predominant concern we have when we go through a demolition of this nature.
For example, there is asbestos throughout these buildings. They were built in a time frame where asbestos was considered a wonder material and was used in many building products, including insulation, floor tiles, even some of the wall panels that make walls. We do have asbestos.
There is lead in the facilities that was used for shielding. There's paint in the facilities that, no doubt, have lead in the paint as well from that time frame.
The contractors that we do eventually hire for any one of those removal actions will have to address those concerns and recognize, characterize and sample those materials and then decide on the best method of waste disposal.
MR. LAWSON: Okay. A man up here.
MR. ELLIS: Good evening. My name is Tom Ellis. I live in Albany. I'm concerned that the

public comment period seems to be quite short. It's only about three weeks. It would seem to me that if people are going to really look at this document carefully and write technical comments and maybe send them out to people to check them out for like peer review, that there's no way that that can be done well in three weeks and that the public comment period really should be extended by like at least another month so that people can submit meaningful, technical comments.
MR. FEINBERG: I guess I'd have to consider that comment. I do note that the reason why I have a three-week comment period is because you're looking at a draft document, one where there is no alternative. And what I was trying to gauge here tonight before I start going through the process of getting to a preferred alternative, I wanted to gauge the Town of Niskayuna's support or, perhaps, some people may say, "I'd rather you defer it."
I wanted to get that aspect of it. That's why I provided fact sheets to describe specifically the alternatives. I do recognize that the EE/CA document, just as an example of

what's on the library shelf -- some of you have already asked me -- it contains a lot of technical information from a regulatory standpoint.

But what I did with the fact sheets and the posters in this meeting tonight is to point out the alternatives, specifically what is this document all about; if you choose an alternative, disposition of some buildings, whether we defer it or we take some action to clean it up.

That's why I considered that a three-week period would be reasonable. We will consider any request we receive for a longer time period. The comments we're really looking for is the support from the Town and what would they like seeing done.

MR. LAWSON: Mr. Feinberg, if the time period is not extended officially and he or others want to submit information and it comes in five or ten days later, does this get considered as practical or how does that work?

MR. FEINBERG: That's a good point, Barry. Yes, of course, if you do submit comments later, we do consider them. They will be factored in.

I note there will be another public comment period as we get to the preferred alternative. I will also have another public comment period and notify the public of that.

So if you do have comments and it does come in past the 5th, do not be concerned. Send them in and I will still respond to them.

MR. LAWSON: Okay. Thank you. Over here.

BOB FEINBERG: My name is Bob Feinberg. I could tell you I'm a brother to Steve, but we are not related.

I retired from KAPL 10 years ago. I spent 39 years there. I served as the manager of health physics and nuclear criticality safety for many years. I was also the executive secretary for 25 years of its Nuclear Safety Audit Council and the administrator/program director for the R (phonetic) program, which covers nuclear technology, radioactive wastes, radiologic controls, decontamination facilities, primary chemistry and shielding.

I also was the chairman of the big report put out by a committee of KAPL from the SPRU facilities and prepared the letter signed by the

general manager of KAPL, Henry Stone, 1960-ish, recommending that the SPRU facilities be D&D'd at a cost of $80 million. So now you know where the comments are coming from.

I'm also a board certified health physicist, one of the original 50 in the nation. I have reviewed the report in the library; very well written, typed up, antiseptic. One cannot make a decision on which way to go based on a report itself. One needs backup material.

I have seven comments, maybe one question, and I'll run through them very quickly just to give you bottom lines. The first one, of course, is a question. Was the report and the backup reports that support your report submitted to former KAPL and DOE employees who have experience in design, operation and deposition of the SPRU and H2 facilities; and why not? That's the one question.

MR. FEINBERG: I would like to answer the questions. I do not remember all seven.

MR. LAWSON: There's only one question and seven comments.

MR. FEINBERG: Okay. I'll answer the

question and I'll point out that there was more than just the EE/CA report. There's an Historical Site Assessment report on the operations of Buildings H2 and G2. The answer is yes, it was provided to Knolls Atomic Power Laboratory and we requested comments and they did provide comments that were factored in.

In addition, we were fortunate enough to have an interview with some of the former employees that actually worked at the time. Unfortunately, there aren't that many available, but we did have some opportunity to contact them. I do not believe -- you were not contacted, Mr. Feinberg, to my knowledge.

BOB FEINBERG: There are at least a dozen people that are no longer here that would have served well to review your backup report and give comments then rather than now.

My next comment is the following: There have been estimates documented for the deposition of SPRU facilities of $80 million, $200 million, and $500 million over the years and, now, I have a report that does both SPRU and H2 for $160 million. Who is correct?

In other words, KAPL over the years has had estimates. Were they wrong and you're right now; or did we use different assumptions? Have we made an analysis to say were they right or they were wrong and we are right now?

In other words, you have to go back and say: What did they look at that you may not have looked at? That's a comment. I think it should be done.

Three: Spending $160 million of taxpayer money is a lot, especially for a facility which we say is very safe, has very little radioactivity, et cetera. I don't think any corporation would make a decision based upon the report as it's presented, because you have to look at the cosmo view of the situation.

What is going to be done for the final deposition of the 170 acres at KAPL at some time in the future?

If we find out the analysis shows -- I don't know what the number is -- that it's X-billion dollars to clean up the whole place, are we going to get an irrevocable commitment from the Department of Energy that the funds will be there

to do it; or are we just spinning our wheels and wasting $160 million of the taxpayers' money when it's going to cost billions to do the rest of the site and maybe long range, KAPL just becomes a national burial site with free tours type of a thing? We have to know what the big picture is before we spend $160 million.

The next one: I notice that the $60 million for surveillance over 30 years, which averages $2 million a year, I doubt that it's going to take $2 million a year to do the surveillance. I'd like to see some independent party look over the background to get the $60 million.

In the year 1992, the budget for waste disposal, waste processing, was $370,000. I cannot conceive how you would come up with $2 million a year when, if you look at the overall budgets that we have in the various fields, it doesn't make sense in any way.

But it does look nice to say it's going to cost $60 million to survey the place yearly -- it looks nice, it makes the 160 look pretty nice. But if that $60 million is not $60 million, which I doubt, and is more like $1 million, which is a

hundred thousand dollars a year, and I think that's a more -- at least when I was manager, that's the kind of money or less than that, I would say. You're not doing any more than we did then. Then, $1 million dollars for surveillance makes 360 not look good. So I think we need an independent review of that $60 million.

The next one: We learned -- my mentor, Kenneth A. Kesselring, when you make a decision of this nature, a management decision, you look at the benefits versus the risks. You're giving a little bit of the benefits and the risks in your report, but you leave out a lot. And some people have asked some questions about radioactivity. Every report of this nature should have a backup, which is a safety assessment report, which indicates an analysis of the consequences of plausible accidents that will be made in any of these facilities and is required by the Department of Energy.

Where is your safety assessment report that tells us all what are the consequences, the potential accidents and the levels of radioactivity to be experienced by the employees

and the public if we leave the facility alone? Do you have that safety report? That's a question.

MR. LAWSON: Oh, that's a question.

MR. FEINBERG: The Department of Energy & Environmental Management does not have a safety report that we developed of what would occur if we left it in place. The KAPL site may have such a report. I believe they have such a report, but I'd have to go back and ask KAPL. I will have to take your question and --

BOB FEINBERG: They had one which I was the editor of that goes back 20 years, but I'm looking at a safety report analysis that has been made now directly for the SPRU and H2 facilities as it is. If it doesn't pose a hazard to the public or the employees from now to doomsday, why spend $160 million?

The next thing is a comment.

MR. LAWSON: This is the seventh one.

BOB FEINBERG: Pardon me?

MR. LAWSON: This is your seventh one, the last one, right?

BOB FEINBERG: Okay. The next one: I'll

make the comment to Luke Smith. He's our CEO in Niskayuna. He's doing a fantastic job even though he's a democrat. And I happen to be a registered Republican and I voted for him and I will still vote for him.

I think my recommendation to Luke Smith is that he establish an advisory board to give some advice and counsel on the KAPL situation in all matters. Luke cannot compete and understand the nerds that are putting this stuff together.

And number two, he is an amateur when it comes to being deceitful, manipulating information, taking things out of context, leaving something out. He needs a top-notch team that will advise him for the Town of Niskayuna.

One more comment on it: And the cost for this advisory board should be borne by the Department of Energy.

You tell me to stop, I'll stop right there.

MR. LAWSON: Yes.

BOB FEINBERG: Let me say for the Town of Niskayuna, there's no question if they do the job, I don't think they'll get away with $160 million. I think it'll end up more. But

the Town of Niskayuna should not worry about the safety or any real effects, as this woman put out, in the Town of Niskayuna. And I live right over here on Godfrey Lane.

MR. LAWSON: Okay. Thank you, sir.

MR. FEINBERG: I appreciate your comments, Bob.

MR. LAWSON: Okay. Now, are there other people? We have two up here.

MR. HANNA: I'm Ed Hanna and I'm a citizen of the world, I guess. Anyway, I think Bob Feinberg must have misunderstood the notice. I think he thought he was coming for a job interview, but thanks for all the comments anyway, Bob.

The other thing is somewhere you may have explained that this is not like the recovery of Three Mile Island where they used remote manipulators and robots. It is essentially a house cleaning project with radioactive dirt and they're well-experienced in containing it.

The schedule thing, I suspect, of the alternatives is going to depend on how much money is available. You might not be able to get the

whole ball of wax even if you want it. I support the whole ball of wax, but we might have to accept less.

I wish I was getting paid at the scale that they're talking about for the surveillance of it, as Bob Feinberg pointed out; however, I think there are some costs of the project to consider. They'll still be collecting the footing water around the drains and processing that. There's some operations, but probably $2 million is a little bit high.

And I guess that's it. Thanks a lot.

MR. LAWSON: Thank you.

MR. FEINBERG: Thank you for your comments.

MR. LAWSON: This gentleman right here.

MR. PERUZZI: Before I ask my question, I just want to get something clarified. You did say no to Dr. Block, right?

MR. FEINBERG: What was the question?

MR. PERUZZI: I thought he had a wonderful suggestion that either you missed it or you said no by not answering. He didn't call for a professional review of what's going on. It was more like a public review. You were talking

about citizens or reporters having independent access, being able to report back to the Town, and I think that's important that it gets into your minutes. Did you say no?

MR. FEINBERG: I did not say no to that. In fact, all the information we generate is available at the town library and I'll continue to make it available. And when I'm called and asked questions, I will answer them.

MR. PERUZZI: That's not how I interpreted what he said. I think he said during the seven years that people would be able to -- why don't you say it? What did you mean?

MR. FEINBERG: Since I didn't get a follow-up question, I thought I answered his question.

DR. BLOCK: Well, to ensure that no funny business is going on as sometimes occurs, one would like to have public representatives of the most critical sort and the most vocal sort to be able to kind of act as watch dogs as the process occurs. And if accidents occur, we want to know about them, why they occurred and how they can be prevented.

But I think the best protection for the Town of Niskayuna is to have some people planted right in the middle of this process as watch dogs, as spokespeople, as advisors to Luke and to his successor so that we all know what's going on, especially if we live a quarter of a mile away or less than that, right across the street.

MR. FEINBERG: I think you've put a lot on Luke Smith's plate. As far as the public's concerned, I do meet and I do discuss the project with the New York State Department of Health and I have prior to coming here as well.

I will discuss with DEC as well as the Department of Health the operations that are occurring, and I'd be happy to have them to visit. If Luke Smith asked me to have a visit -- and I know in the past, he has come to the site and he has representatives -- I cannot see a reason why to say no.

I will do my best to make access available for the Town as well as Department of Health, EPA and the Department of Environmental Conservation.

MR. PERUZZI: I left something out earlier. I've since learned you pay more attention if

someone is from Niskayuna and I forgot to mention that I live in Niskayuna along the river.

MR. LAWSON: Oh, that makes all the difference.

MR. FEINBERG: I'm paying attention to everybody equally.

MR. PERUZZI: Before I ask my question, I want to say that if your assumptions that you have presented today are correct, even though I'm not going to be here thirty years from now, I am very much in favor of four.

MR. FEINBERG: Okay.

MR. PERUZZI: But I am somewhat concerned. I looked at the figures and some of -- they must be very difficult to project and I don't want you to go into what models you used, but you had to have used models to make such predictions of these costs. And I probably wouldn't understand it if you did say it, but something I do understand is you had a model up there about people going to work on this project and you had them all going down Balltown Road. Now, there's no way you're going to get everyone to go down Balltown Road.

MR. FEINBERG: I agree.

MR. PERUZZI: So why did you say that? That's my question.

MR. FEINBERG: I was trying to use that as a base, for example, the truck traffic, because that is the typical worker route. I work at the site and I do not use Balltown Road. I go right along River Road. I used that to try to give you a point if all the traffic's there. You're right; not all the traffic will be on Balltown Road.

MR. PERUZZI: This makes me nervous about your assumptions.

MR. FEINBERG: I was just using that as a point of comparison.

MR. LAWSON: This gentleman here.

MR. KLEIN: I'm in favor of option four. With respect to the storage tanks, I was wondering if you could comment on how much material is actually in storage there, whether that's a radiation level that you're thinking that you're going to have to classify it or anything like that.

And in view of DOE's dealings with Hanford,

how are you really going to handle this as far as if you're not doing high-level handling, whether you're really going to take good care of putting things in 55-gallon drums and protecting everything?

MR. LAWSON: Your name, sir?

MR. KLEIN: My name is Mark Klein. I'm a Niskayuna resident.

MR. LAWSON: Thank you.

MR. FEINBERG: With regards to the waste in the tanks, in our reports, we did identify the volume of waste remaining, residual waste. It's less than 300 cubic feet. I had an independent team advise me prior to coming here several years ago that worked similar tank clean-up projects throughout advise me and identify the kind of waste I had in these tanks wouldn't be the type of -- it wouldn't be a vitrification that I should be pursuing.

In fact, the reports I have will reflect that we would have to remove them and send them to the waste isolation plant in Carlsbad, New Mexico. It's called WIPP within DOE. It's that type of waste.

It's the type of waste we handle that's likely to be initially stored in 55-gallon drums to be removed and then shipped off-site. But that's a little premature for me to say, because the contractors will ultimately decide the safest method.

MR. LAWSON: The gentleman in the back has another question.

MR. KLEIN: I'm a little concerned about your relationship to state and local government. They will have no oversight of this project apparently, though, their oversight will be by invitation only. Will you tell them?

MR. FEINBERG: That's not exactly what I intended to say. I do have to get a permit from New York State Department of Environmental Conservation for the work that I'm going to do. They do inspect the site. We're subject to their inspection and their enforcement.

New York DEC's concerns are hazardous waste and chemicals. For the Department of Energy at this site, we are the regulator of radioactivity at the site, but we must follow as we bring radioactive waste out of these facilities and

over the road the Department of Transportation. We must also follow the waste facilities that we send it to, their requirements.

So as far as independent oversight, it is correct that it is Department of Energy -- it's Department of Energy, Environmental, referred to as the EA group; they have an enforcement agency at Washington, D.C. and they will visit my site and they will review activities at our site.

As far as independent, that is not -- it's still within Department of Energy. It may not be the independents you are looking for. But if they wish to come to the site, I've never said no.

MR. KLEIN: Okay. But wouldn't a better approach be to put some sort of state and federal oversight unit in place? This is going to have a big impact on the Town of Niskayuna if there is a clean-up, and I'm not even sure if there should be a clean-up. I was kind of convinced of it until the gentleman spoke to the stability of the unit.

Wouldn't it be better for you guys to reach out to the state and say, "Maybe we should have a

committee"?

MR. FEINBERG: That's really an option for the state to decide, the town to decide. We will obviously cooperate if the state decides to do that or the town.

MR. LAWSON: And I also assume that that would be a comment that you would make and it would be in the record.

MR. KLEIN: Yes.

MR. LAWSON: Not just as a question but as a comment.

A few questions over here.

MS. GOLD: I'm still Leslie Gold. I'm going to wonder out loud why in this electronic age, being a new techie that I am, everything's in hard copy at the library instead of on-line somewhere.

But my question is going back to the cost assumptions on number one. My understanding is that the monitoring has been ongoing for a number of years and that you would have a baseline figure to work from. Is that accurate?

MR. FEINBERG: Are you referring to the average $2 million a year?

MS. GOLD: Yes.

MR. FEINBERG: I had brought in an independent consultant. When I first came to the site, I didn't really have a good cost on what surveillance and maintenance would cost the Department of Energy & Environmental Management. I did hire an outside contractor experienced in maintaining these types of facilities for the Department of Energy and that's what this cost estimate is based on.

MS. GOLD: It's not an actual figure that's being paid out currently?

MR. FEINBERG: That is correct. No site currently maintains those. I do not have a figure from the Knolls site today that I recall. I could ask the Knolls site: What are they currently paying?

But, understand, the estimate that I have in here is for the Department of Environmental Management to take over these facilities and bring in our own work crew to maintain these facilities to our standards.

Is everyone hearing me there?

So that wasn't an independent assessment,

but it's based on Department of Energy supplying their own manpower, not from the KAPL site.

MS. GOLD: Okay. So if I understand correctly, you're saying it would be a different pay scale and people would be dedicated to it and, perhaps, now at KAPL, people are doing this as part of their duties and not full time on the monitoring and things like that?

MR. FEINBERG: I'm not sure I'm following that. We do have a cost estimate and it was fairly detailed and it's available if anyone wishes to see that.

With regards to your earlier comment about the electronic age, I am required to put hard copies in the administrative record at the library. If you'd like electronic copies, please ask and we'll send them to you if it's possible to send them to your e-mail account. And many have asked and I have done so.

MS. GOLD: It couldn't be put on a town web site or something?

MR. FEINBERG: I do not know if the Town has a web site to do that.

MS. GOLD: The Town has a web site. I don't

know about the mounting of it. You'd have to talk to the Supervisor.

MR. FEINBERG: If that's something the Town would like to do, they just need to contact me. These are public documents. There's no reason not to put them there.

MS. GOLD: Thank you.

MR. LAWSON: This gentleman.

MR. CHAPMAN: Bill Chapman, again, a member of the Town Board of the Town of Niskayuna.

When we built this building, it was around three and a half million dollars, the Town hired what we called was a clerk of the works really to monitor the construction of the building, to maintain and to be sure that the design and everything that was in the design was correctly done by the contractor.

I guess I'm wondering -- other speakers have made reference to the fact that elected officials and other people don't have the technical expertise, but is it possible that the county or the municipality could hire a professional person to monitor this? And is that an expense that the Department of Energy would -- it would be part of

the contract that we pick a person that we hire to monitor the clean-up process?

MR. FEINBERG: The Department of Energy will have monitors done by field office here. If the Town chooses to have such a clerk of the works, as you call it, I would expect the Town to pay for that. We normally don't pay the towns to provide additional monitoring, to my knowledge. At least presently, that is not something we're currently doing.

But Department of Energy does have a field office at the site in addition to what inspections we have from federal and state as well as DOE's enforcement group. Again, that's something I think you need to take up with the town, what to do with that matter. Of course, we'll cooperate with you.

MR. LAWSON: You could make that a comment, too.

MR. CHAPMAN: I would like to make that a comment.

And is that something that -- well, is that something that could be possible? I mean, it may not have been done on other projects. Again, I

would just note with our review of site plan projects and the Town Department of Planning process is that we build in having, say, a second engineering firm review the plans that come in and whoever the developer is may have his own engineering firm. But part of the cost of doing that is borne by the developer that wants to do a project. So it's not a town cost, but it is something that helps us to make sure that, I guess, the quality control that speakers were referring to does happen.

MR. FEINBERG: Good comment. I would point out, by the way, I have hired an independent verification contractor for work. For example, I'm doing a land which requires a great deal of environmental monitoring and I hired a separate contractor to do the similar work that you were just talking about for the benefit to advise me: Did my original contractor do the right? Did they do a decent job? I've done that.

MR. LAWSON: This gentleman here.

MR. PARSONS: KAPL is probably known throughout the agency for its stringent requirements as far as hiring personnel. The

personnel that are going to be asked to do the clean-up as far as these contractors, are they also going to have to go for 108 and security clearance type training or apply for security clearances?

MR. FEINBERG: There will be some security clearances involved for the work. In the early stage of this project, the site has cooperated with Department of Energy to allow us to try to fence off those portions of the site we need to work with that's near the secured facilities so it allows us to more quickly get into the work there.

So there are some cases where I still need to have security-cleared people but not all of the workers will need to do that. We purposely fenced them off so we could avoid that, because it does take a considerable amount of time to do that and it'll allow for a more fluid flow of workers in and out of the facilities. That was one of the considerations early on in this project that we had.

MR. PARSONS: How long does that take?

MR. FEINBERG: How long does what take?

MR. PARSONS: How long does security clearances take?

MR. FEINBERG: I cannot predict that. It's not within my agency. You mentioned 108 and I'm not sure what you're referring to.

MR. PARSONS: 108 training for KAPL personnel for nuclear technician training.

MR. LAWSON: Is 108 a KAPL number?

MR. PARSONS: I don't know exactly where the designation comes from.

MR. FEINBERG: You're apparently referring to -- we do have rad worker training that our contractors have to go through. They do have to train their workforce.

MR. LAWSON: We have a question back here, or a comment, perhaps.

MR. FOUNTAIN: I got both, I think. My name is George Fountain. I'm a former resident of the SPRU facility.

We should learn from history. I'd like to point out that Bob mentioned the 1980 figure of $80 million, everything goes. I wrote a report in 1972 everything goes for $16 million. Now, why the difference?

The difference is that the regulators, the anti-nukes and the environmental freaks, although some of them are okay, had the regulations changed where everything went up astronomically.

For example, in 1972, you could get rid of a jug of waste for 80 cents a cubic foot. Steve, I don't know. What's the number now? It must be hundreds of dollars.

MR. FEINBERG: In some cases, it's several hundred dollars just in the taxes.

MR. FOUNTAIN: Right. So the costs can be explained by the regulatory changes that impacted the costs.

But what I'd like to point out is that why didn't we get rid of everything in 1972? And why didn't we get rid of everything in 1980? And here we are in 2006 talking $180 million. Well, we've been spinning our wheels for 30, 40 years.

Now, Steve Feinberg can't get $180 million. You gotta shake the cage of the bureaucracy. You gotta go down to Washington and pound on the door, put some heat on them and tell Steve "Get some bucks."

I mean, if you really want to get rid of

SPRU, you're gonna have to do more than just sit around here nit-picking. That's all I have to say.

MR. LAWSON: Okay. Thanks.

The gentleman right next to you, please.

MR. STATER: My name is Robert Stater and I'm a nuclear engineer. I worked at KAPL for 33 years. I'm in favor of option four, but I'd like to make some comments on some of the previous questions and maybe throw in a couple of my own, if that would be satisfactory.

MR. LAWSON: Please go ahead.

MR. STATER: First of all, it bothers me to no end that every time I read an article in the newspaper about this project or I look at your fact sheet, I see you talking about low-level radiation.

Now, this happens to be a weapons factory and it doesn't make marshmallows. It processed a lot of radiation and there's still a lot of radiation in there. And it seems to me we're defeating our own purpose by downplaying the radiation.

If we're going to get this thing ever moved

out of here, the government is never going to move it if we tell them that there's nothing in there but marshmallows.

MR. FEINBERG: That's correct.

MR. STATER: Let me go back to a few of the questions that were asked. There's real concern about having some independent monitoring here and it makes a lot of sense; I mean, not just somebody sitting over here in this building and getting your reports but being in there and seeing what's going on.

The DOE is the organization that put this beast in our midst and, now, you guys are coming in as the DOE and telling us you're going to correct everything and take it out of here.

Is there any good reason that we should believe you? And I ask that in the context of what's happened between the time you put it in and right now, because there's been a lot of bad things happen with this weapons factory.

For instance, one of the earlier questions was about the river. The radioactivity in the river in the sediment downstream from KAPL is 17 times higher than the radioactivity upstream from

KAPL. Now, the radioactivity upstream from KAPL came from bomb fall-out from testing in Nevada. The radioactivity downstream from KAPL also contains that small amount, but all the rest was dumped from H building into the river for 10 years. And I have a graph of the activity in the river sediment over that 10-year period.

And at the end of 10 years, the activity in the river has gone straight up. I mean, it's accelerating at a very rapid rate. And at that time, for some strange reason, the dumping was terminated. I think the reason was if they kept going, they saw the river glowing in the night.

I'll move on to another question. Dr. Block asked about the amount of plutonium that's in that facility. Nobody knows how much plutonium is in there. The only way you can know how much plutonium is in there is if you did a mass balance over those three or four years you were running that project.

You had to know how much was going in, how much you were recovering and how much was going out to those waste tanks. The difference between the latter two numbers and what went in would be

the amount of material, plutonium and so forth, that was still hung up in the system. And I suspect it is not 15 milligrams.

The number you're using, I think, is 100 Curies. That number was generated by somebody else, I believe, several years ago. You don't know where that number came from, I doubt. Somebody pulled it out of a hat probably.

As a matter of fact, those tanks over in H2 at one time contained so much plutonium there was very real concern about the fact that they might grow critical. And what happened then -- this was, perhaps, in the mid-'50s -- boron solution was dumped in those tanks to be sure they stayed shut down and didn't take off on their own. Okay?

So I just want to make it clear that I don't think anybody knows how much plutonium is in there.

I'll go to another question. The lady over here asked: Why now is the DOE coming in here and doing this? Well, George Fountain here and Bob Feinberg referred to that. There have been recommendations made by KAPL since 1983 that that

facility be shut down immediately and removed as expeditiously as possible, because it was a risk to not only the employees but to the public.

Now, this was a committee appointed by KAPL, but it was high level, respected individuals that had integrity. And their recommendation was made in all seriousness.

KAPL management ignored that recommendation then and they ignored similar recommendations at other times. So here we are today.

The SPRU facility besides what you've -- the containment of the SPRU facility has been breached. It is breached. It is not a tight facility and you can't call it totally safe, because it's leaking radioactive water and it's leaking particulate radioactivity into the office areas of the laboratory and it's been doing it for 30 or 40 years.

And I'm not talking off the top of my head. I'm talking about KAPL documents that report this stuff. Radioactivity has leaked into the hallways, into the office -- essentially, the entire laboratory is contaminated. It's in the hallways. It's in the offices. It's in the

technical library. It's in the parking lot. It's down by the railroad sitings. It's down by the landfill. And there are employees that have carried this radioactivity as far away as Johnstown. That's the only ones I know about. There may be further ones.

A guy in Johnstown had his wife's vacuum cleaner confiscated by the DOE, because it was so highly contaminated with radioactivity. So to say that this facility is stabilized and is not leaking anything and it's not a risk to the employees and it's not a risk to the public just is not true. It's a high-risk facility.

And another way you can look at it from the standpoint of high risk is -- well, somebody was talking about safety report, another question. How about a plane crashing into this facility? How about a fire?

We had the biggest fire in Schenectady in a hundred years down at the Peek Street Plant. The Peek Street Plant was built in a residential neighborhood in Schenectady, New York. It was a little bit smaller than SPRU. It went up in a roaring inferno. And because of

some efforts by myself and my friends, we had finally gotten the DOE in there to clean that place up, because they used it and then they walked away and they didn't decontaminate it and they wouldn't admit that it was radioactively contaminated.

The only way we got the DOE in there was Mayor Ducey went to Governor Cuomo and told him what the problem was and showed him the documents we had provided. And the DOE was in there within a matter of days. Then, they proceeded to clean the place up covertly. They went in there and they hauled away truck loads of dirt and cleaned up the inside of the building and never told anybody what they'd done or what the state of the building was after that.

But the grounds even outside of that Peek Street facility were contaminated to a level 700 times higher than the New York State limits. And that was along an old railroad track which was now converted into a bike path and kids played on this bike path. Somebody went down there one night at midnight, took a soil sample out by the fence and they got a radioactivity level that was

700 percent higher than the state limit.

Oh, they took the soil sample right next to a Raggedy Ann doll that happened to be laying up against the fence, because the kids were around there all the time.

Now, I'm just giving a little past history here, because if you don't know this stuff, then when you say the place is stable and it's not leaking anything, KAPL's own documents show that's not true.

MR. LAWSON: Sir, I'm going to let some other people ask a question or make a comment, but there's one thing I want to ask you to do and I want to remind other people, too. If you're sitting on information -- and you mentioned a couple of things that have been graphed and so forth. If you have information that you don't think has been submitted, please, I encourage you to submit that as part of your written comments for the record, because if there's information out there that hasn't been collected, it's important that the Department have that.

Let's go to somebody else. I appreciate your comment and your questions. Is there

somebody else here?

MR. FEINBERG: The gentleman in the back row wants to make a few comments. Bob Feinberg.

BOB FEINBERG: I don't want to get into a pissing contest here, but Mr. Stater, what you say is hogwash. KAPL has had the highest standards in the area of radiation protection --

MR. LAWSON: Mr. Feinberg, hold that a little closer so that we can hear you. And, also, I hope that both of you can keep your comments related to this project rather than some other.

BOB FEINBERG: Okay. Many of the comments don't pertain to SPRU, but I just think what he said was very unfair to the high standards that KAPL's maintained over the past 60 years. In no way should it reflect upon the DOE to monitor, supervise and execute a safe decommissioning of the SPRU facilities in the future.

MR. LAWSON: Okay. Is there anyone else?

MR. STATER: I'd like to say that, yes, KAPL is known for its excellence. The only thing about the Neighbor Access program -- and I say this from the standpoint of the DOE, that for

most of the period of time that Bob Feinberg is talking about, Neighbor Access program wouldn't even let DOE inside the fence. So they didn't know what was going on in there.

MR. LAWSON: Okay. And the person who had the first word.

MR. EDWARDS: I'm still Jeff Edwards with the Schenectady County Environmental Advisory Council. This isn't directly related to what this meeting is about, but as you move forward to actually choosing an option, I assume -- there was like a NEPA summary in the report. I don't know if there's a more complete NEPA review of all the alternatives. But when a final option is chosen, will there be a NEPA analysis of that option in full that would be available to the public?

MR. FEINBERG: The answer to your question is yes. There will be a full analysis available under a CERCLA process, which includes the NEPA values as you saw in that document you reviewed.

In regards to the sole-source aquifer, I did note your comment. We will have a separate meeting and a separate document addressing land

and groundwater and that's certainly the appropriate place for us to address the aquifer question you raised earlier tonight.

MR. LAWSON: This gentleman.

DR. BLOCK: Eric Block again. I came to this meeting with an open mind and I wonder really if it's appropriate for us to be voting on any of these options while there are questions being raised for which we don't have good answers.

I would prefer to defer any judgment on any of these options until we get some clarification for a number of the issues whether or not they're true or not. Again, I'm trying to be absolutely neutral.

So my concerns in the form of a comment that I'd like to see addressed is the river situation. We can fix one problem and ignore another problem, but certainly, the river is out there, it's a wonderful resource and we're trying to do more with it. If, indeed, there's differential radioactivity, that's something that can be easily validated. It will take money, but I think we need to invest some money before we

spend $160 million.

And one expenditure would be to do a careful study upstream and downstream and measuring what's present and what radionuclides are there. If there's plutonium, then we need to know that. And these things are pretty straightforward, I think, to determine.

Again, I would not want to make any recommendation without having a full quantitative determination of just what is present. And I think that it's absolutely essential that we go in there, we hire someone, independent groups, to quantitate the amount of plutonium that's present and these other nuclides so that we know if there are differences of opinion and there's history; some of it is confidential and we don't know about it, but we can certainly ask that before anything be done, we get a quantitative assay of just what is in that building in terms of the most dangerous compounds, which would be the plutonium and some of the other nuclides.

In addition, we're talking about making access in a non-secure manner. Well, that requires building a road. That road needs an

exit and the obvious exit point would be just west of the flashing yellow light, which would go directly across the street from some of our neighbors. And I would certainly be concerned if I were living on River Road immediately across the street from a new entrance where dump trucks would be coming about the impact of that on River Road traffic, on school buses that go back and forth, on emergency vehicles that frequently traverse it, because it's next to a fire station.

So these are my concerns and they underscore the need for independent people outside of DOE. DOE created the facility. DOE is planning to remediate it. So we don't want a fox in the hen house type situation. It's in everyone's interest to have other folks involved who have enough of a security clearance -- and we can find people who have clearances or could get them -- to have full access and can independently comment on just what is going on there. Maybe it's fine, but that would make us rest a lot more comfortably in our houses that are just a few thousand feet away knowing that other people besides DOE are watching and monitoring the

situation.
MR. LAWSON: Thank you for your comment.
MR. FEINBERG: I do want to address a point, because it's come up a couple times tonight about the river. I know I'm here to talk about the buildings and I'm from DOE Environmental Management.
I do know the Knolls site has done evaluations of the river. They are located in the town library and available for anyone to see. I happened to scan the report and New York State Department of Environmental Conservation actually was part of the last sampling of that investigation. And for those of you that are very much interested in that, that report is available in the town library.
MR. EDWARDS: Right now, I believe we're just analyzing which option we're going to be taking and with very few exceptions, it seems like people are supporting option number four.
Obviously, once that's chosen, there's going to have to be a full study of how to do that. I mean, this doesn't go into this. We just at this point know enough to try to determine which

option to do. And that was actually the base of my question. I wasn't referring back to the sole-source question.
I was thinking more about the transportation issues and some of the other issues that people have brought up. I'm not all that familiar with NEPA, but I assume it's similar to SEQRA which is our New York State version of doing environmental review. And all these issues would have to be addressed, I would hope, as the final option is laid out in how that would be implemented. Is that correct?
MR. FEINBERG: The process we're using again is the CERCLA process. It does incorporate the NEPA values. And I do believe you're correct, although I'm not completely familiar with the state rules, we are following the federal rules and I do believe they're very similar.
There's more information in the library in some of the documents I have that has more discussion on that.
MR. LAWSON: We're closing in on 9:00. I have three other comments. This gentleman hasn't spoken yet.

DR. PARISI: Hi. My name is Patrick Parisi. I'm a physician and a resident of Niskayuna. I was wondering -- and I was kind of waiting for someone else to ask this question -- has any studies been done of health of the employees of that facility that have been there for five, ten, twenty years of what the cancer rates are of those people and any studies of whether or not the incidence of cancer in the area is any higher or cancer in the area that, perhaps, the runoff has drained from?
I know that on many occasions, I've looked at -- you know, tried to access web sites and the data from New York State seems to be very old. If you look at cancer maps, you get information from maybe the 1990s. I was just wondering if anyone looked at that and if you had any information on that.
And then I had one other comment or question that I just wanted to mention. I do work with radioactive materials on a very minor scale and I know that, you know, when a radiation spill occurs in a hospital that it really spreads very, very quickly and you really have to act quickly

to contain it. You have to kind of stay in place and put things down to absorb the material, and this is something of a really trivial level.
And one of the thoughts that I was having as I was sitting here was the amount of radiation that could become ambient with a clean-up, and it seems to me that there would be a real risk of -- you know, as you're taking these things apart, these buildings apart, that a fair amount of material can become ambient.
And then one last thing that I kind of wanted to ask is: Can you give us any data on the background level of radiation in the immediate vicinity as opposed to normal background radiation?
So the issues that I wanted to address are, you know, cancer rates, if you had any data on that; if there's any impact of -- you know, the health of the workers that work at the facility for many years, if there's any particular health concerns that seem to be recurring; and you know, what exposure would the community get in terms of radiation with the destruction and the clean-up of the facility.

MR. FEINBERG: You asked a number of questions. Clearly, I do not have answers to all your questions. We'll take those questions and do our best to respond to them. They are part of the record.

I'm not aware of any studies, but I will find that out. With regards to -- when you're referring to ambient condition, I'm assuming radioactivity airborne is what you're referring to. I did want to point out in these kinds of clean-ups, the most common method is first for the buildings intact to remove the radioactive materials, and that is the common method, typical method done.

I will capture the other questions from our stenographer and we'll do our best to answer them. Thank you.

MR. LAWSON: One of the questions that I think -- he didn't ask it exactly this way, but you probably could answer this question. I hope I'm not stepping over you.

When the waste is being cleaned up -- is the way I understood you -- there could be a release of waste. Do you have a monitoring that's going

on around where the work is done so that you have a background and that monitoring is also done during the removal process?

MR. FEINBERG: That is the standard practice and there are engineering controls to prevent that from occurring. There are engineering controls put in place to prevent that and, of course, we do air monitoring and other kinds of radiation protection monitoring to make sure the engineering controls are functioning correctly.

DR. PARISI: I guess my main concern and, I think, the concern of people in the community is, you know, what is the health impact on residents; what is the health impact, if any, in the community and in the employees of the facility?

And I would really like to know if there is any increase in types of cancers that are associated with radiation exposure or any other toxins that we used at that time and if there's any data on any of that, because I can't find any data.

MR. LAWSON: Your comments have been taken and I'm sure if they have something, they'll --

MR. FEINBERG: We'll try to see if that's

available.

MR. LAWSON: It's about four of. I think I saw two hands at the back of the room.

MR. STATER: I'd like to go back to low-level radiation again. Steve, are you aware that there's been a number of recent studies -- maybe some go back two, three, four years -- that ingestion of alpha-emitting particles, such as plutonium and I think uranium also is one of those, have shown that there is no such thing as a low-level radiation?

Even if they emit one particle in your body, it can end up causing cancer. It can end up causing death. Now, one study was by the National Science Foundation, I believe. One was done by Hardwell in England. One was done by Columbia University. There may be others. I'm not a health physicist. I don't keep up on that kind of stuff, but you might want to check into that.

MR. LAWSON: Again, if you have specific references, I urge you to provide those; or if you don't have them now, to provide those references.

MR. STATER: Would it be all right if I just write up everything I've said? Because I stand by what I say.

MR. LAWSON: We have the notes here, but we don't -- we have the verbatim report of what you've said, but what we don't have is if you're referring to the Columbia University study, we don't have any reference to that. So if you do have reference to that, that would be helpful.

MR. STATER: I'll do that.

MR. LAWSON: Okay. Thank you.

We have one over here.

BOB FEINBERG: I think a few of the questions that have been asked of Steve are somewhat unfair to be answered by him. I think we should have had a management person in radiologic controls from KAPL present here to answer some of the questions.

And although I have been the management individual in past years, I don't think the Department can give these answers.

But let me full assure you, Dr. Block, that the studies in the Mohawk River have been made, including the fish, core samples. It's been

analyzed and quantitized. The overall radiation protection program at KAPL, I want you to know, is a 10. RPI is good, but they don't approach that.

With respect to the doctor's questions, KAPL has all the information you need relative to incidence of cancer. They've kept records of it. There is a beautiful epidemiological study made of all the naval nuclear facilities with respect to incidence of cancer and what have you. There are many reports on this.

There are people, KAPL management team, that should be able to provide you with these answers. They have had every study possible made.

MR. LAWSON: All right. Do I have any other questions or comments before we close?

This gentleman here.

MR. PERUZZI: Bill Peruzzi. The option one -- I'm still in favor of option four, but I said it's based on your assumptions. And I don't understand your assumption on number one that after 30 years, we're still going to have to do something. Would you clarify that?

MR. FEINBERG: In order to provide the

alternatives here tonight, we had to make an assumption of a period of time frame. We chose 30 years. It was just an assumption of a time frame.

MR. PERUZZI: I don't care if it's 40 or 20, but why at the end of that time does this same process need to take place? I want you to clarify that.

MR. FEINBERG: Okay. I think I understand your question. The point is after 30 years, these facilities will still be radioactive, will still contain radioactive material. Much of the material has a 30-year half-life. What that means is in 30 years, half of the radioactivity of some of the materials are reduced, but the smaller quantity of materials, like plutonium, will still be there for thousands of years. It will be essentially the same numbers I have today.

So the point is after 30 years, why I said I'd have to be back here again or someone else is the facilities will still be radioactive and will still need to be addressed.

MR. PERUZZI: As a follow-up to that: The

reports, the only half-lives that are given there are the two that are at 30. And the point that was made about marshmallows is exactly the point about why you still have the problem after 30 years. And so your reports -- if you're going to give a half-life for the two that have the least, it's not informative.

MR. FEINBERG: You keep pointing to these blue copy reports. The reports I have on the shelf for the SPRU project are here. We do discuss half-lives in that. But your comment's well noted. When I do pursue this project technically, I will make sure it's understood it's not just 30-year half-life materials, just as you asked me to clarify, because that's an important point why we recommend pursuing this project at this time. Thirty years from now, it still will be radioactive. It still will need to be pursued. I will make sure my management team understands that.

MR. PERUZZI: Even the 30-year one will only be half gone.

MR. FEINBERG: That's correct.

MR. EDWARDS: This report does also mention

the half-life of plutonium, which is 24,000 years.

MR. FEINBERG: The report he's referring to is this one. You're referring to some environmental reports. The report for Buildings G2 and H2 --

MR. PERUZZI: Are these the ones we were provided?

MR. FEINBERG: There are other ones out there as well as the town hall. The alternatives and a much more detailed discussion is here. I did give you the fact sheet to discuss the alternatives to help facilitate this meeting. The purpose was so you could understand the point of this document with these alternatives.

MR. LAWSON: Mr. Stater, and then up here to this lady.

MR. STATER: In the first of that article that came out in October of 2003, you talked about the SPRU clean-up process and the numbers quoted in that article are $200 million. So it was assumed that this project was going to remove this facility. But, now, here we are six years later and, all of a sudden, three other options

appear. How come?
MR. FEINBERG: That's a good question. There are a couple points I'd like to make on cost. I'm only talking about here tonight the cost of removal of Buildings G2 and H2. I still have to address land areas. That will add more cost.
You'll note in the fact sheets, tonight, we're really just focusing on just the buildings. So I'm referring to only costs of just the buildings. The cost is still in excess of $200 million for the whole project at this point. Tonight reflects what I understand of the buildings.
At the next public meeting, I'll be addressing what we now understand about the land areas and based on a considerable amount of characterization or sampling information. I will be presenting those costs.
You did have a second question. If you don't mind, could you repeat that again?
MR. STATER: No, I didn't have a second question, I don't think.
MR. LAWSON: Before we take this next

question, some people are leaving and if you do have to leave, I can certainly understand, but I don't want you to leave without you knowing that we really appreciate you coming to the meeting and asking questions and making comments. This is extremely helpful to the Department.
We'll continue as long as there's comments or questions, but if you're leaving, I want you to know we really appreciate it.
This lady right here.
MS. KLEIN: My name is Elaine Klein and I've lived on Rosendale Road since 1979. And, obviously, you're going to be asking us either way to give you our trust and, obviously, that's pretty difficult given the degree of this situation, but I have a point of confusion.
If I understand you, when someone else asked why is it coming up now that you're going to be looking at cleaning this up, you said it was because they're done with what they needed to do in the building. They're done with their use of it, right?
MR. FEINBERG: That is correct.
MS. KLEIN: But from what he said before,

there appears to be a long history of some problems that people knew about. So what can you tell us regarding those problems and why we should trust people if they haven't been working on cleaning them up all along?
MR. FEINBERG: I'll try to address that. I guess I can't address all of the history of what occurred in that building. I do know the SPRU process -- the processing portions of the facilities were used for a three-year period and then shut down. There was no longer a need for those.
Other parts of the facilities at the laboratory reclaimed and cleaned up portions of the facilities after 1953 and made re-use of those facilities.
So I believe the problems that may have been there have, in fact, been cleaned up over the times and there are portions of the facilities that are still isolated in safe storage, because we understand there's radioactivity present and requires protective clothing to access it.
So those parts of the facilities are still there and that's why I'm here tonight addressing

that point. The Department of Energy has concluded since the site no longer needs any of these portions of these facilities any further, that's why we're here tonight in a process to address these issues.
MS. KLEIN: Just a follow-up. There still seems to me some discrepancy between the word safe and the way you're using the word safe and what he was saying before. Is safe absolutely safe or is safe a degree of safety or what?
MR. FEINBERG: You, as a member of the public, are safe based on the surveillance and maintenance of the work done at the KAPL site to contain the activity. The members of the public aren't being exposed to radioactivity from the SPRU facilities.
There will be radiological exposure to going into these facilities and cleaning them up. Do not doubt that that will occur. We will have trained workers to do that and they will get radiological exposure to do this clean-up.
MS. KLEIN: Are you saying that you're concerned about the public now but the people he referred to before who were working there all

along, their safety wasn't considered so much along the way?

MR. FEINBERG: I guess I can't address that. I'll note your comment. I'm here tonight to address the future of Buildings G2 and H2 clean-up.

MR. LAWSON: Okay. Mr. Block.

DR. BLOCK: I'd like to, perhaps, comment to underscore what Dr. Parisi has raised, because I have a real concern here. It's my understanding that the Knolls facility is a secure federal facility whose records may be sealed for security reasons. I'm really wondering whether the health records would be publicly accessible in a form where one can make a reasoned decision.

So I would ask that, for example, the epidemiologists with the New York State Department of Health who are an impartial group, a very excellent group with wide training, be invited to have full access to the health records at Knolls and be commissioned to prepare a report both based on the health of those workers and, perhaps, the community surrounding it to really look in a way where one might have to look at

records that are possibly off-limits.

And I'm not convinced that those off-limit records would be made available unless it was ensured by the Department of Energy and an independent group such as the epidemiologists at the New York State Department of Health.

MR. FEINBERG: I'd like to make a brief point. We've talked a number of times about health of past workers. I would like to point out that the Department of Energy & Environmental Management is here on the clean-up of Buildings H2 and G2. I will pass these comments along, but I will not be the source of information on that matter. I'm here specifically for the H2 and G2 facility clean-up.

MR. LAWSON: Let's take this gentleman right here and then the doctor.

MR. PARSONS: I've been doing environmental restoration for the past 15 years for sites that are under the control of the U.S. Department of Energy and the U.S. Army Corps of Engineers and I've been sitting listening about concerns about exactly what's there and for how long and how come things weren't told.

We also have public meetings that we give once a quarter to be able to let the people know what we're doing and, you know, how many millions of gallons of water that we've been processing per quarter and how many hundreds of thousands of cubic yards of soil that we've moved and where it's gone and all this stuff.

The bottom line still remains the same. You have to ask yourself really one question in all this, and the key question is: Do you want it here; yes or no?

And I understand all the questions and concerns that are being raised about the type of contamination and how bad it is and how much it is. But in my dealings with the Department of Energy, they are the most stringent, if-you-mess-up-once-you're-gone type of administration to be able to be associated with. They're some of the most best professionals that I've ever had the pleasure of working under and with. They know what they're doing.

So the question really comes down to this: Is the contamination there? Obviously, it is from all the data that's there. Does it need to

go?

And I also agree with the majority of the people here that option number four seems to be the way to go. The numbers may change over the years and cost is always relevant. It's going to cost more 20 years down the road than what it's going to cost today. Get rid of it. Let's get it gone. Let's get it done and then we can move on to other things in which we decide to be able to spend our money on.

MR. LAWSON: Thank you. The doctor up here.

DR. PARISI: I guess just going back to what I said before, the gentleman back there who said those records are available, I can tell you that whenever we call New York State to see if they can provide any information, whenever I look on-line, no matter who I ask, I can't seem to get any information.

I think this is -- you know, we're really sitting here thinking about what the health impacts of things are and I don't have a good feeling for what the health impacts are and I can't seem to find anyone who has information that can tell me what the health impacts are or I

can't seem to find access to any records of various cancer rates associated with various, you know, radiation or whatever.

And I know that that's probably, you know, maybe not specific to the clean-up of those two buildings, but you know, as an educated professional, I still don't have a good feeling for, you know, what the levels of risk are.

And just to speak to something that this other gentleman made, you know, is it there and should it go, you know, probably it should go, but you know, there may be -- you know, I don't know what the risks are in terms of the actual removal of it over the community in the next five to ten years.

And I don't know, you know, perhaps, technology may advance 30 or 40 years from now, there may be technological ways of removing the waste that may make it much less risky than today, which is something that no one really had mentioned or said. I mean, they're able to remove artifacts from ships at the bottom of an ocean today and that was unthinkable, you know, 30 or 40 years ago. So I don't know what all

that is.

I guess the comment I'm trying to make is that I kind of wish I had more relevant information in terms of the health of the community base. I still don't have a good feel for that.

MR. LAWSON: The way this system is supposed to work is when you ask a question or make a comment like that, the Department responds as part of the public record. So your comment has been taken. The last one you made is an excellent comment and I think that you'll find that somebody will respond to that one way or the other if they have the information.

DR. PARISI: How will that response take place?

MR. LAWSON: Steve, can you explain how the public document gets done?

MR. FEINBERG: Certainly. There are a couple things. We've recorded comments here tonight. We'll make sure the questions are answered. Some of them, I realize, I've already answered tonight. They're in the public comments. They will be available in writing in

an administrative document in the town library, the same place where documents such as this one are stored tonight.

If you have a preference where we contact you directly, you just need to make that known, provide us your name and address and we'll do our best to take your comments and respond to you directly as well. We'd be happy to do that.

DR. PARISI: Thank you.

MR. LAWSON: All right. Any final comments?

(No affirmative response.)

MR. LAWSON: I understand that the people like Mr. Feinberg will be around for a few minutes at least outside if you have particular questions that you'd like to follow up on.

I would just remind you all that you have these comment forms and if you want to take them with you and then send them in later, you may. If you've written up some comments tonight and you would like to hand them in, there's a box on the right as you go out to leave them there.

I would also ask you to remember that comments should be submitted as soon as possible and, certainly, by June 5th to be as fully

considered as possible before the Department decides on a preferred option.

As we heard earlier, if you submit comments after that, they will be taken into consideration to the degree that's practical and that there will be another 30-day review period for people to review the decision that's made and to add comments if they'd like.

I also want to remind you that if you have not signed up for the mailing list that you do so before you leave, so that if you want to have some material sent to you or some follow-up information, that they have the place to which you'd like to have the mail sent.

Finally, I'd just like to thank you all for your cooperation in making this meeting both productive and respectful and, certainly, for me who is not a technical person really quite interesting. I thought they were well-thought out questions and comments.

I'd like to also offer special thanks to the Town of Niskayuna for making the town hall available for the meeting. It's a wonderful facility that you have here.

I'd like to thank Mr. Feinberg as well as our stenographer, Teri Klos. Thank you. And Debra, thank you very much.

Mr. Feinberg, do you have any final comments?

MR. FEINBERG: Thank you for coming here and helping. Your comments will be considered. I have your comments and I'll look forward to seeing any written comments that you send in as well. Thank you again.

(WHEREUPON, at 9:16 o'clock, p.m., the public meeting was closed.)

* * * * *

C E R T I F I C A T I O N

I, THERESA L. KLOS, Shorthand Reporter and Notary Public within and for the State of New York, do hereby CERTIFY that the foregoing record taken by me at the time and place noted in the heading hereof is a true and accurate transcript of same, to the best of my ability and belief.

THERESA L. KLOS

Dated: June 10, 2006.

Section 2
Major SPRU Facilities Topics

SPRU RESPONSE TO PUBLIC COMMENTS – FACILITIES EECA

Project Oversight

Community involvement is critical and a key component of the site cleanup process. Multiple meetings are held with local administrators and state agencies. Public meetings are part of the ongoing decision-making process. All of the parties affected by this cleanup are encouraged to review available documentation, attend the public meetings, and submit comments and questions. All comments from all interested parties are reviewed and considered in the development of site cleanup strategies.

During the course of the SPRU project, multiple federal and state agencies are notified, and document reviews requested (including workplans and reports), and all necessary permits obtained. These agencies include the New York State Department of Health (NYSDOH), New York State Department of Environmental Conservation (NYSDEC) Region 4, the U.S. Environmental Protection Agency (USEPA), the State Historical Preservation Office (SHPO), and the local Schenectady Naval Reactors (SNR). While DOE-Environmental Management (DOE-EM) is the primary responsible party administering these activities, each agency reviews documentation for compliance within its individual purview. Additionally, NYSDEC Region 4 conducts planned and unannounced inspections for compliance with approved workplans and other RCRA requirements. Local administrators and the general public are kept informed of project progress through fact sheets and press releases.

In addition, multiple teams of engineers and scientists are retained by DOE to develop project strategies and work plans to investigate and remediate the SPRU site. Each of these work plans and reports are comprehensively reviewed by DOE-EM, SNR, and SNR's operating contractor, Knolls Atomic Power Laboratory (KAPL). Independent contractors are also retained by DOE to review project documents associated with the proposed activities.

Documents associated with investigations performed to date for the SPRU facilities are available for review at any time in the reading room for this project at the Niskayuna Library.

SPRU RESPONSE TO PUBLIC COMMENTS – FACILITIES EECA

Facilities Characterization

The SPRU facilities were built between 1947 and 1949 at the Knolls Atomic Power Laboratory, and were operated for the government by General Electric for approximately three years. The SPRU mission was to research the chemical process to extract plutonium from irradiated materials. The SPRU facilities were shut down in 1953, the equipment flushed and drained, and bulk wastes were removed. Some residual materials are present in the former SPRU facilities, especially in the tanks, with lesser amounts in buildings H2 and G2, and the interconnecting pipe tunnels.

A comprehensive assessment of the SPRU facilities has been conducted and is documented fully in the Facilities Historical Site Assessment (Facilities HSA), which is available in the public reading room at the Niskayuna Branch of the Schenectady County Public Library. As a matter of routine, contractors hired to perform cleanup acts will perform additional characterization to ensure the safety of workers, the public, and the environment.

The primary contaminants of concern in the SPRU facilities are cesium-137 and strontium-90. While levels of radioactivity vary throughout the tunnels, tanks, and buildings H2 and G2, cesium-137 and strontium-90 account for approximately 85% of the total radioactivity present throughout the facilities. The remaining 15% of radioactivity is comprised of americium, plutonium, uranium, and other radionuclides.

The SPRU facilities are maintained by KAPL in a safe manner, and have been since operations shut down in 1953. KAPL personnel continue surveillance, maintenance, and capital improvements to ensure the facilities continue to pose no risk to on-site workers, the public, or the environment.

Potential Impacts on Public Health

During the course of demolition activities, the local DOE project office will enforce the rules and requirements of the U.S. Environmental Protection Agency (USEPA) and the New York State Department of Environmental Conservation (NYSDEC) regarding the control of hazardous air pollutants, protection of water resources, and management of hazardous wastes; and the U.S. Department of Transportation (USDOT) regarding the proper packaging and transportation of hazardous wastes.

The health and safety of workers, protection of the public and the environment are of the utmost importance and a prime consideration in future cleanup activities. The DOE has developed orders, many of which were specifically created to ensure the safety of workers, the public, and the environment. In addition to the federal laws mentioned above, DOE has developed additional orders and requirements to assure protection of the public and the environment.

KAPL has provided additional responses regarding health and safety, past operations, medical monitoring (attached in Appendix B). For additional background information regarding KAPL Site operations, see KAPL-4855, *Knolls Site Environmental Summary Report,* August 2005, and KAPL-4854, *Environmental Monitoring Report, Calendar Year 2004.* These documents are available to the public in the Niskayuna Library.

Transportation and Waste Handling

Waste materials from the SPRU cleanup activities will be packaged and shipped to permitted and approved facilities. The SPRU project follows all federal, state, and local regulations for the safe handling, packaging, and transportation of hazardous materials and wastes. These regulations are designed to protect the public from the hazards associated with the transport of radioactive and hazardous wastes. The following agencies are all involved in the creation, implementation, and enforcement of the rules governing the transportation of hazardous wastes:

U.S. Department of Transportation (DOT)

DOT oversees transportation safety and security requirements by highway, rail, air and sea. DOT's Office of Hazardous Materials Safety (OHM) issues regulations on the shipment of hazardous materials. Title 49 of the Code of Federal Regulations defines and classifies hazardous materials, outlines safety procedures for shipping, and provides strict specifications for containers and packaging of the hazardous materials

U.S. Nuclear Regulatory Commission (NRC)

NRC oversees the design and use of special packaging for shipping radioactive materials. NRC is responsible for protecting the public from the effects of radiation from nuclear reactors, materials, and waste facilities. Regulating the safety of transported radioactive material is the joint responsibility of NRC and the DOT.

U.S. Department of Energy (DOE)

DOE is responsible for implementation of the federal and state rules at its sites for the shipment of radioactive waste, which includes coordinating, planning, and arranging for the transportation of this material with a comprehensive system of safety checks and responses.

Individual State Agencies

In the United States, each state has programs on radiation protection and on the transportation of hazardous materials within states' borders.

Wastes anticipated from decontamination and/or demolition of the SPRU facilities is not expected to be hazardous as defined by the Resource Conservation and Recovery Act (RCRA), which primarily is concerned with organic and inorganic chemical contamination. The radioactive wastes generated from the disposition of the SPRU facilities are expected to be similar to that generated by any other commercial nuclear facility. Wastes generated from SPRU activities are expected to go to either DOE or other approved and permitted facilities. Most wastes are expected to contain relatively low concentrations of radioactivity.

As discussed during the public meeting, traffic impacts associated with removal of wastes and importing of backfill material along Balltown Road, River Road, and the general area of the site are expected to be less than one percent of current traffic volume. Balltown Road receives approximately 13,000 vehicles per day. DOE estimates less than one percent or approximately 100 vehicles, mostly laborers entering and exiting the site daily. DOE does not believe there would be a noticeable impact on Balltown Road or in the local area.

SPRU RESPONSE TO PUBLIC COMMENTS – FACILITIES EECA

Worker Safety

The U.S. Department of Energy (DOE) has developed laws (10 CFR 835 – Occupational Radiation Protection) and requirements documented in DOE Orders, many of which were specifically created to ensure the worker safety. These DOE Orders, along with the requirements of the Occupational Safety and Health Administration (OSHA) have, since the Facilities EECA was released, recently been incorporated and promulgated as law in 10 CFR 851- Worker Safety and Health Programs. In addition to the Worker Safety and Health Program being promulgated as law, the new rule strengthens enforcement. The Applicable and/or Relevant and Appropriate Requirements (ARARs) section of the Engineering Evaluation and Cost Analysis (EECA) for the SPRU facilities identifies the DOE orders that must be followed to conduct any actions at the SPRU site. These orders are in addition to the requirements of OSHA. The DOE Orders implement the laws and in many cases are more stringent. Some of the DOE Orders that must be followed include:

DOE Order 5400.5 Radiation Protection of the Public and the Environment
This order establishes standards and requirements for DOE operations with respect to protection of members of the public against radiation, and contains a discussion of DOE's "As Low As Reasonably Achievable" (ALARA) approach.

DOE Order 5480.1B, Chg. 5 Environment, Safety, and Health Program for DOE Operations
This order establishes the requirements for an environmental, safety, and health program for DOE operations.

DOE Order 5480.3 Safety Requirements for the Packaging and Transportation of Hazardous Materials, Hazardous Substances, and Hazardous Wastes
This order establishes packaging and transportation requirements for hazardous materials, substances, and wastes.

DOE Order 5480.8 Contractor Occupational Medical Program
This order established the requirements for an occupational medical monitoring program for contractor personnel.

DOE Order 5480.9 Construction Safety and Health Program
This order establishes the requirements for a program to protect DOE, contractor employees, and the general public.

DOE Order 5480.10 Contractor Industrial Hygiene Program
This order established the requirements for implementing an industrial hygiene program.

DOE Order 5480.20A Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities
This order establishes DOE requirements for staff and contractor personnel selection, qualification, and training.

DOE Order 420.1 Facility Safety
This order established facility safety requirements related to nuclear safety, criticality safety, fire protection, and mitigation of natural hazards.

Why Are We Taking This Action Now?

In their present state, the SPRU facilities do not pose a risk to the public, on-site workers, or the environment. KAPL personnel continue surveillance and maintenance and capital improvements to maintain these buildings safely. However, it is not prudent to continue surveillance and maintenance activities indefinitely since over time the SPRU facilities will continue to age, deteriorate, and require additional capital improvements to be adequately maintained. The proposed removal action is designed to not only significantly reduce any future risk to the public, on-site workers, and the environment, it also allows the areas currently occupied by the SPRU facilities to be redeveloped and used by KAPL in its continuing mission at the site.

The SPRU facilities were built between 1947 and 1949 at the Knolls Atomic Power Laboratory, and were operated for the government by General Electric for approximately three years. The SPRU mission was to research the chemical process to extract plutonium from irradiated materials. KAPL converted some of the Building G2 area for re-use, and continued use of Building H2 for waste processing. KAPL continued to use these areas until 1999. At that time KAPL informed DOE that it had no further use for the buildings H2 and G2 since the specialized purpose for which these facilities were designed and the presence of residual contamination make these facilities non-usable. DOE policy is that property that is not used must be eliminated through reuse, demolition, disposal, transfer, or sale. And that is why DOE is taking these actions now.

Section 3
Outstanding Questions and Answers

Comment By: Eric Block
Form: Asked During Public Meeting
Date: May 25, 2006
Subject: Contamination/River

Comment:

So my concerns in the form of a comment that I'd like to see addressed is the river situation. We can fix one problem and ignore another problem, but certainly, the river is out there, it's a wonderful resource and we're trying to do more with it. If, indeed, there's differential radioactivity, that's something that can be easily validated. It will take money, but I think we need to invest some money before we spend $160 million. And one expenditure would be to do a careful study upstream and downstream and measuring what's present and what radionuclides are there. If there's plutonium, then we need to know that. And these things are pretty straightforward, I think, to determine. Again, I would not want to make any recommendation without having a full quantitative determination of just what is present.

KAPL's Response:

Several comprehensive environmental studies of the Mohawk River have been previously conducted, including both upstream and downstream of the Knolls Site. For information on these studies see KAPL-4855, *Knolls Site Environmental Summary Report*, August 2005. For accurate information regarding the environmental conditions of the Mohawk River, and what is present in the Mohawk River as a result of KAPL operations, refer to KAPL-4808, *Knolls Atomic Power Laboratory, Mohawk River Survey Report*, May 1995 and KAPL-4850, *Knolls Atomic Power Laboratory, Mohawk River Survey Report*, Calendar Year 2002. These documents are available to the public in the Niskayuna Library.

Comment By: Michael Diffler
Form: Written; submitted during public meeting
Date: May 25, 2006
Subject: Transportation

Comment:

You talk about less than 1% impact from traffic on Balltown Road (about 100 cars) what about the impact on River Road?

Response:

The estimated impact to River Road is similar to that of Balltown Road, approximately 1 %.

Comment By: Leslie Gold
Form: Asked During Public Meeting
Date: May 25, 2006
Subject: Contamination

Comment:

Is there runoff and is it being considered?

…because of the particular soil and rock there, it's not going down. But it could still be going off and down towards the aquifer site.

KAPL's Response:

The geologic materials underlying the Knolls site have poor aquifer characteristics, with low porosity and permeability, consequently there is little groundwater under the site and no known domestic wells in the vicinity of the Site; local residences and the Site use the municipal water system. Nevertheless, KAPL monitors Site groundwater for radioactivity. The highest measurement was less than the Nuclear Regulatory Commission Limit for unrestricted release of water to the environment and, therefore, of no environmental concern.

KAPL has always monitored Site effluent water to assure that it meets the requirements of applicable Federal and State environmental standards. This includes monitoring of discharges to the Mohawk River, the Mohawk River itself, and surface water draining from the Site. Extensive environmental monitoring has confirmed that Knolls Site operations have had no adverse effect on human heath, including that of employees, or the quality of the environment. For example, during 2004, the radioactivity released to the Mohawk River was over 100 times lower in concentration than the Nuclear Regulatory Commission limits for unrestricted use and was also a small fraction of the concentration permitted by the U.S. Environmental Protection Agency for drinking water.

For additional information, please see KAPL-4855-, *Knolls Site Environmental Summary Report*, August 2005, and KAPL-4854, *Environmental Monitoring Report, Calendar Year 2004*. These documents are available to the public at the Niskayuna Library.

Comment By: Elizabeth Kinney
Form: Written; submitted during public meeting
Date: May 25, 2006
Subject: Contamination

Comment:

I noted a discrepancy in my review of the materials left on hand at the Niskayuna Public Library. In Table 4-8 of the KAPL from the Environmental Monitoring Report published in 2004 by Lockheed Martin, the gross beta values of radioactivity concentrations (pCi/liter) for two municipalities (Schenectady and Colonie/Latham) have standard deviations for this year of data compilation nearly as high as the values measured themselves. Those measured for both upstream and downstream of KAPL not only have half the number of samples, but a standard deviation among them running at closer to 33% than 100%. As the Colonie/Latham water intake is likely downstream of the KAPL, I am curious as to why it would be included in an average to provide evidence for a "background" level for the KAPL downstream output of a "less than significant level". Inclusion of downstream data is likely to skew the comparison considerably, providing higher numbers that would certainly enhance the probability of finding "no significant difference" between the outflow quantities and those for the local background.

KAPL's Response:

Samples are collected monthly from the homes of KAPL employees supplied by the Schenectady, the Niskayuna, and the Latham/Colonie municipal water systems. For each municipal water system, the three monthly samples taken each calendar quarter are mixed together, and the resulting composite sample analyzed for gross alpha and gross beta radioactivity. Therefore, a total of twelve monthly samples result in four quarterly samples analyzed for each municipal water system.

Two upstream and two downstream water samples are collected from the Mohawk River during each calendar quarter that the river is available for sampling, resulting in six upriver and six downriver samples each year. The river is unsafe for boating during January through March due to winter weather conditions and ice coverage; therefore, no samples are collected during the first quarter of the year. The six quarterly river samples are analyzed individually.

The calculated confidence intervals (standard deviations) for the river water sample results are smaller than for the municipal water sample results because more river samples are analyzed (six river samples at each location vs. four municipal water samples for each system) and the river water sample volumes are larger.

All the water sample results were provided in Table 4-8 of the Environmental Monitoring Report for convenience. No direct comparison was intended between the Mohawk River

and the municipal water system data. The only direct comparison that can be made is between the upstream and downstream results, which show no significant difference.

Comment By: Elaine Klein
Form: Written; submitted by mail
Date: June 4, 2006
Subject: Historical

Comment:

The handout you distributed stated that "DOE began characterizing the SPRU areas" in 2000, but it did not explain why this was done at this time, and it offered no history of problems regarding containing this radioactive material. The question of timing was raised at the May 25 meeting, but was answered in a rather cursory manner.

Please provide additional information regarding why it is now necessary to clean up the site. Is there a greater chance of problems now than in the past? Did something happen recently?

Response:

See Section 2: Major SPRU Facilities Topics- Facilities Characterization; and Section 5: Additional KAPL Reponses

Comment By: Elaine Klein
Form: Verbal; asked during public meeting
Date: May 25, 2006
Subject: Worker Safety

Comment:

MS. KLEIN: Are you saying that you're concerned about the public now but the people he referred to before who were working there all along, their safety wasn't considered so much along the way?

KAPL's Response:

The health and safety of KAPL employees have always been of the utmost importance and a prime consideration in Knolls Site operations. Significant effort has been applied to ensure workers' exposure to radiation or radioactive material is consistently kept As Low As Reasonably Achievable (ALARA) – well below any level that would pose a health threat.

The majority of Building G2 external to the actual SPRU processing area was decontaminated and released for other uses, e.g., offices, shops, library storage, etc. Considerable effort was expended in this conversion process to remove any loose radioactivity and ensure barriers were in place to contain fixed radioactivity. Radiological controls were established for any work in these converted areas to preclude inadvertently disturbing any normally inaccessible radioactivity that might exist. Over the years, however, there were a few isolated occasions when a small amount of low-level radioactivity was found in the accessible areas of this building. Corrective actions were promptly taken to contain the radioactivity and preclude similar occurrences. There were no instances of personnel becoming contaminated as a result of the occurrences.

The overall health of KAPL employees is consistent with the general population, with no observable anomalies. The conclusion reached is that there is no adverse health impact from working at KAPL.

Comment By: Elaine Klein
Form: Written, submitted by mail
Date: June 4, 2006
Subject: Wildlife/Environment

Comment:

Niskayuna has abundant wildlife. Please provide information whether the cleanup poses a risk to them, particularly since there are issues with the water contamination. Do birds routinely land near the site? Could they carry contaminated particles elsewhere? Has the risk to are wildlife been monitored over time? Is there information regarding potential risk from this project?

KAPL's Response:

The KAPL Knolls Site also has abundant wildlife in the undeveloped areas. The SPRU facilities are in developed areas, and the cleanup is not expected to pose any risk to wildlife. The current radioactivity is contained within the facilities or in the subsurface and groundwater. The contained radioactivity is not available in the environment for wildlife to pick up. Residual radioactivity from SPRU poses no threat to site employees, the public, area wildlife, or the environment.

Comment By: Elaine Klein
Form: Written; submitted during public meeting
Date: May 25, 2006
Subject: Health/Environment

Comment:

I would like to know if our town has had previous exposures of certain levels of radioactive material or other harmful material from this site. Were there many close calls with this facility? Were there workers at KAPL harmed by it?

KAPL's Response:

The KAPL Knolls Site has always been a research and development facility, not a production facility. As a consequence, the quantities of on-site radioactive materials and hazardous chemicals have always been limited. Extensive environmental monitoring has confirmed that Knolls Site operations have had no adverse effect on human health, including that of employees, or the quality of the environment.

The comprehensive Knolls Site radiation-monitoring program shows that the radiation exposure to persons off-site is too small to be measured. Therefore, KAPL has employed calculational techniques that conservatively estimate potential exposures. These calculational techniques consider exposure pathways that include fishing, boating, and swimming in the Mohawk River, using the river water for drinking and irrigation, breathing the air, and eating regionally produced animal and vegetable food. The most recent assessment for 2004, discussed in the references below, shows that the maximum potential radiation exposure to a member of the public was less than 0.1 milliRem for the entire year. This is about one-twentieth of the exposure that a person would receive from naturally occurring radiation from a single cross-country airplane flight. KAPL conservatively estimates that the total accumulated radiation exposure to a member of the public living continuously next to the Knolls Site during all the time the facility has been operating, over five decades, would not exceed 130 milliRem. For perspective, this is less than the average exposure a person in the U.S. receives in six months from natural radiation sources. Every day each of us is exposed to radiation from natural sources, such as cosmic rays from space, radon from earth, and natural minerals in the soil.

Regarding non-radioactive environmental effects, KAPL has always monitored Site effluent water and air to assure that they meet the requirements of applicable Federal and State environmental standards. This includes monitoring of Mohawk River water and surface water from the Site, and more recently, groundwater sampling from monitoring wells around the Site.

For additional information, please see KAPL-4855-, *Knolls Site Environmental Summary Report,* August 2005, and KAPL-4854, *Environmental Monitoring Report, Calendar Year 2004*. These documents are available to the public at the Niskayuna Library.

Comment By: Elaine Klein
Form: Written; submitted during public meeting
Date: May 25, 2006
Subject: Security

Comment:

Please provide additional information regarding the additional security that Niskayuna will be provided with. Knolls is on the river. This is accessible to many people. Would our community be at risk for additional acts of sabotage because the dangerous material might be more accessible since it is getting readied for removal?

KAPL's Response:

The total quantity of radioactivity involved is too small to be of interest to terrorist groups. However, like other governmental agencies and commercial entities around the country, after the events of September 11, 2001, we evaluated potential threats and implemented enhanced security measures.

Consistent with the Department of Homeland Security's plans to protect key infrastructure such as chemical facilities, major electrical grids, bridges, power generation facilities, mass transit systems and other similar sites, we continue to evaluate information about potential threats as a part of ensuring security and safety at our sites.

To discuss the specific nature of our security measures would provide potential terrorist valuable information. It is therefore inappropriate, and indeed contrary to our goal of thwarting such an attack, to provide further details.

Suffice it to say that access to KAPL facilities is strictly controlled and our sites are strongly defended.

Comment By: Elaine Klein
Form: Written; submitted by mail
Date: June 4, 2006
Subject: Public Comment Period

Comment:

I attended the meeting on May 25 regarding cleaning up the SPRU facility at KAPL. I am a long time home owner in Niskayuna, and would like to express my concern regarding cleaning up radioactive material in my home town.

(Public comment period) You have presented us with four options to comment on; however, the comment period was rather brief. I wonder why, and I also wonder why there was not a greater lead time before the meeting so that residents could become better versed in the issue. I hope that you will extend the time for the public to comment and that you will do additional publicity regarding the issue.

Response: From Public Meeting Transcript

MR. LAWSON: As we heard earlier, if you submit comments after that (public comment period), they will be taken into consideration to the degree that's practical and that there will be another 30-day review period for people to review the decision that's made and to add comments if they'd like.

See also: Section 2: Major SPRU Facilities Topics – Project Oversight

Comment By: Elaine Klein
Form: Written; submitted by mail
Date: June 4, 2006
Subject: Risk/Health

Comment:

However, I would like more information regarding how the public would be impacted by the cleanup and what assurances we can rely on that there will not be a release of harmful matter. I understand that there are certain levels that are considered "safe." I also understand that scientific research has revised these levels over time. In the summer of 2005, The National Academy of Sciences released a report stating that even low level doses of gamma radiation are harmful. Committee chair Richard R. Monson, associate dean for professional education and professor of epidemiology at Harvard School of Public Health, Boston stated, "The health risks - particularly the development of solid cancers in organs - rise proportionally with exposure. At low doses of radiation, the risk of inducing solid cancers is very small. As the overall lifetime exposure increases, so does the risk."

Our community does not need new radiation exposure, however low, to compound the exposure that each of us has already experienced via emissions from nuclear testing, nuclear leakage, such as Chernobyl, depleted uranium dust, medical testing, etc. Can we be assured that we will not be subjected to any level of radiation exposure? Or does this cleanup project assume that we will all be exposed, but the exposure will be within the so-called "safe" limits?

Response:

See Section 2: Major SPRU Facilities Topics- Potential Impacts on Public Health

Comment By: Elaine Klein
Form: Written; submitted by mail
Date: June 4, 2006
Subject: Transportation

Comment:

Please comment whether Blatnick Park, the bike path, and river activities would need to be limited because of the decontamination and removal project.

Response:

No impacts to Blatnick Park, the bike path, or river activities are anticipated.

Comment By: James McGee
Form: Written; submitted during public meeting
Date: May 25, 2006
Subject: Cost

Comment:

I would be interested in learning more about how the cost estimates were generated and how accurate they are.

Response:

The cost estimate document is available for review in the various record repositories.

Comment By: Patrick Parisi
Form: Asked During Public Meeting
Date: May 25, 2006
Subject: Health

Comment:

I guess my main concern and, I think, the concern of people in the community is, you know, what is the health impact on residents; what is the health impact, if any, in the community and in the employees of the facility? And I would really like to know if there is any increase in types of cancers that are associated with radiation exposure or any other toxins that we used at that time and if there's any data on any of that, because I can't find any data.

KAPL's Response:

While there have been no specific health studies of the employees at the Knolls site, their overall health is consistent with the general population, with no observable anomalies. The conclusion reached is that there is no adverse health impact from working at KAPL. KAPL has no specific knowledge of any studies of the surrounding area.

It should be noted that only a fraction of employees at the KAPL site work with radioactive materials. Exposure to radiation by these employees is maintained As Low As Reasonably Achievable (ALARA), and consequently they receive on average only a small fraction of the occupational radiation exposure allowed by Federal regulations. Large scale studies by Johns Hopkins University and Yale University School of Medicine of personnel working in the Naval Nuclear Power Program with associated radiation exposures higher than those at KAPL concluded there was no increased cancer risk from such exposures. The Johns Hopkins study included 70,000 individuals, and the Yale University study included 76,000 personnel; both significantly larger samples than the number of radiation workers at the Knolls Site.

The comprehensive Knolls Site radiation-monitoring program shows that the exposure to persons off-site is too small to be measured. Therefore, calculation techniques have been used to conservatively estimate potential exposures. These techniques consider exposure pathways that include fishing, boating, and swimming in the Mohawk River, using the river water for drinking and irrigation, breathing the air, and eating regionally produced animal and vegetable food. The most recent assessment for 2004, discussed in the references provided below, shows that the maximum potential radiation exposure to a member of the public was less than 0.1 milliRem for the entire year. This is about one twentieth of the exposure that a person would receive from naturally occurring radiation during a single cross-country airplane flight. KAPL conservatively estimates that the total accumulated radiation exposure to a member of the public living continuously next to the Knolls Site during all the time the facility has been operating (over five decades), would not exceed 130 milliRem. For perspective, this is less than the average exposure a

person in the U.S. receives in six months from natural radiation sources. Results from the extensive environmental monitoring program confirm that Knolls Site operations have had no adverse effect on human health or the quality of the environment.

Regarding the actual dismantlement of the SPRU facilities, the process of disassembly and removal of SPRU facilities will be accomplished in a careful, methodical manner designed to prevent the release of radioactivity. Containment and control of radioactivity will be maintained during disassembly. Dismantlement will be performed in a manner that prevents or contains dust from building disassembly and prevents radioactivity from entering the environment. Careful monitoring of potential release points, such as ventilation exhausts and storm drains, and continuing environmental monitoring will be used to confirm that an environmental release is not occurring.

Comment By: Robert Stater
Form: Asked During Public Meeting
Date: May 25, 2006
Subject: Contamination/Environment

Comment:

The SPRU facility besides what you've -- the containment of the SPRU facility has been breached. It is breached. It is not a tight facility and you can't call it totally safe, because it's leaking radioactive water and it's leaking particulate radioactivity into the office areas of the laboratory and it's been doing it for 30 or 40 years. And I'm not talking off the top of my head. I'm talking about KAPL documents that report this stuff. Radioactivity has leaked into the hallways, into the office -- essentially, the entire laboratory is contaminated. It's in the hallways. It's in the offices. It's in the technical library. It's in the parking lot. It's down by the railroad sidings. It's down by the landfill. And there are employees that have carried this radioactivity as far away as Johnstown. That's the only ones I know about. There may be further ones. A guy in Johnstown had his wife's vacuum cleaner confiscated by the DOE, because it was so highly contaminated with radioactivity. So to say that this facility is stabilized and is not leaking anything and it's not a risk to the employees and it's not a risk to the public just is not true. It's a high-risk facility. And another way you can look at it from the standpoint of high risk is -- well, somebody was talking about safety report, another question. How about a plane crashing into this facility? How about a fire? We had the biggest fire in Schenectady in a hundred years down at the Peek Street Plant. The Peek Street Plant was built in a residential neighborhood in Schenectady, New York. It was a little bit smaller than SPRU. It went up in a roaring inferno. And because of some efforts by myself and my friends, we had finally gotten the DOE in there to clean that place up, because they used it and then they walked away and they didn't decontaminate it and they wouldn't admit that it was radioactively contaminated. The only way we got the DOE in there was Mayor Ducey went to Governor Cuomo and told him what the problem was and showed him the documents we had provided. And the DOE was in there within a matter of days. Then, they proceeded to clean the place up covertly. They went in there and they hauled away truck loads of dirt and cleaned up the inside of the building and never told anybody what they'd done or what the state of the building was after that. But the grounds even outside of that Peek Street facility were contaminated to a level 700 times higher than the New York State limits. And that was along an old railroad track which was now converted into a bike path and kids played on this bike path. Somebody went down there one night at midnight, took a soil sample out by the fence and they got a radioactivity level that was 700 percent higher than the state limit. Oh, they took the soil sample right next to a Raggedy Ann doll that happened to be laying up against the fence, because the kids were around there all the time. Now, I'm just giving a little past history here, because if you don't know this stuff, then when you say the place is stable and it's not leaking anything, KAPL's own documents show that's not true.

KAPL's Response:

There is an indication of a release of radioactivity from the SPRU facility to the soils around the foundation; groundwater adjacent to the foundation contains very low levels of radioactivity. Therefore, the water is collected and processed to remove the radioactivity prior to release. Additional information is provided in the KAPL-4855, *Knolls Site Environmental Summary Report*, August 2005, available to the public at the Niskayuna Library. The residual radioactivity in the soil poses no threat to KAPL workers, the public, or the environment.

The majority of Building G2 external to the actual SPRU processing area was decontaminated and released for other uses, e.g., offices, shops, library storage, etc. Considerable effort was expended in this conversion process to remove any loose radioactivity and ensure barriers were in place to contain fixed radioactivity. Radiological controls were established for any work in these converted areas to preclude inadvertently disturbing any normally inaccessible radioactivity that might exist. Over the years, however, there were a few isolated occasions when a small amount of low-level radioactivity was found in the accessible areas of this building. Corrective actions were promptly taken to contain the radioactivity and preclude similar occurrences. There were no instances of personnel becoming contaminated as a result of the occurrences.

The Peek St. facility, a self-propelled gun assembly building from WWII, was fixed up and used by KAPL in the late 1940's- early 1950's as a temporary research and development laboratory prior to the construction of the Knolls Site. Work performed at Peek St. involved theoretical physics studies, engineering design, non-radioactive liquid metal technology development, and some limited work with radioactive materials. When KAPL left in 1955, the facility was radiologically surveyed and released to the standards of the day. In 1988-1989, the facility was re-surveyed to today's standards by the DOE and found to present no health hazard. A parallel survey by the New York State Department of Health reached the same conclusion. In addition, nothing above normal background was found on any neighboring property. The slightly elevated levels of radioactivity and beryllium in the facility were subsequently remediated to today's standards with the concurrence of the New York State Department of Health and Environmental Conservation and certified as such. The property owner and State, County, and Schenectady officials were briefed on initial survey results, remediation progress, and the final release report and certification. The final release report is available from the Knolls Atomic Power Laboratory on request. The very small quantity of radioactivity at the Peek St. property never posed a threat to public health or the environment.

Comment By: Robert Stater
Form: Asked During Public Meeting
Date: May 25, 2006
Subject: Contamination/River

Comment:

And I ask that in the context of what's happened between the time you put it in and right now, because there's been a lot of bad things happen with this weapons factory. For instance, one of the earlier questions was about the river. (River) The radioactivity in the river in the sediment downstream from KAPL is 17 times higher than the radioactivity upstream from KAPL. Now, the radioactivity upstream from KAPL came from bomb fall-out from testing in Nevada. The radioactivity downstream from KAPL also contains that small amount, but all the rest was dumped from H building into the river for 10 years. And I have a graph of the activity in the river sediment over that 10-year period. And at the end of 10 years, the activity in the river has gone straight up. I mean, it's accelerating at a very rapid rate. And at that time, for some strange reason, the dumping was terminated. I think the reason was if they kept going, they saw the river glowing in the night.

KAPL's Response:

KAPL has always been a research and development laboratory, not a manufacturing facility. KAPL has had effective environmental control programs in place since operations at the Knolls Site began in 1949. These programs met or exceeded the requirements of laws and regulations applicable at the time.

Since the inception of KAPL, work with radioactive materials has always been carefully controlled. The limits for release of radioactive material in effluent water, mutually agreed to by KAPL and appropriate government agencies, have never been exceeded. In addition, KAPL has performed comprehensive environmental monitoring of the Mohawk River since 1948, before operations at the Knolls Site began. In 1955, based on data obtained from the hydraulic and hydrology study of the Mohawk River conducted by the U.S. Geologic Survey and the results of previous environmental monitoring, the Mohawk River Advisory Committee concurred with the use of the dilution potential of the river in determining appropriate discharge limits. The Mohawk River Advisory Committee consisted of representatives of the New York State Departments of Health, Environmental Sanitation, and Pollution Control, and the City of Schenectady. Most of the radioactivity was dispersed and carried away by the river. Over time, however, routine periodic environmental monitoring conducted by KAPL indicated an increase in radioactivity in river bottom sediment; first immediately adjacent to the Site outfall; while later, lower concentrations were found several miles downstream.

To prevent further buildup, KAPL significantly reduced radioactive discharges in early 1964, eliminating reliance of river dilution, and adopted a program to further reduce

discharges to the lowest practical levels - less than 0.001 curie per year since 1977. More extensive KAPL environmental sampling programs in 1978, 1992, and 2002, which included biological, sediment, and water sampling, confirmed that the residual radioactivity remains buried in the sediment, is not being released to the water, is not being taken up the food chain, and is therefore having no adverse effect on human health of the environment. For perspective, the total radioactivity of KAPL origin is less than 10% of the naturally occurring radioactivity found in sediment in the same region. The amount of radioactivity present in the sediment will continue to decrease by its natural decay.

The New York State Department of Environmental Conservation participated in the 2002 sampling program by observing KAPL sampling and splitting select samples for independent analysis, with results in good agreement.

For additional information on the history of discharges to the Mohawk River see KAPL-4855, *Knolls Site Environmental Summary Report*, August 2005. For accurate information regarding the environmental conditions of the Mohawk River sediment downstream from KAPL, refer to KAPL-4808, *Knolls Atomic Power Laboratory, Mohawk River Survey Report*, May 1995 and KAPL-4850, *Knolls Atomic Power Laboratory, Mohawk River Survey Report*, Calendar Year 2002. These documents are available to the public in the Niskayuna Library.

Comment By: Jim and Linda Weinman
Form: Written; submitted by email
Date: May 22, 2006
Subject: Geology

Comment:

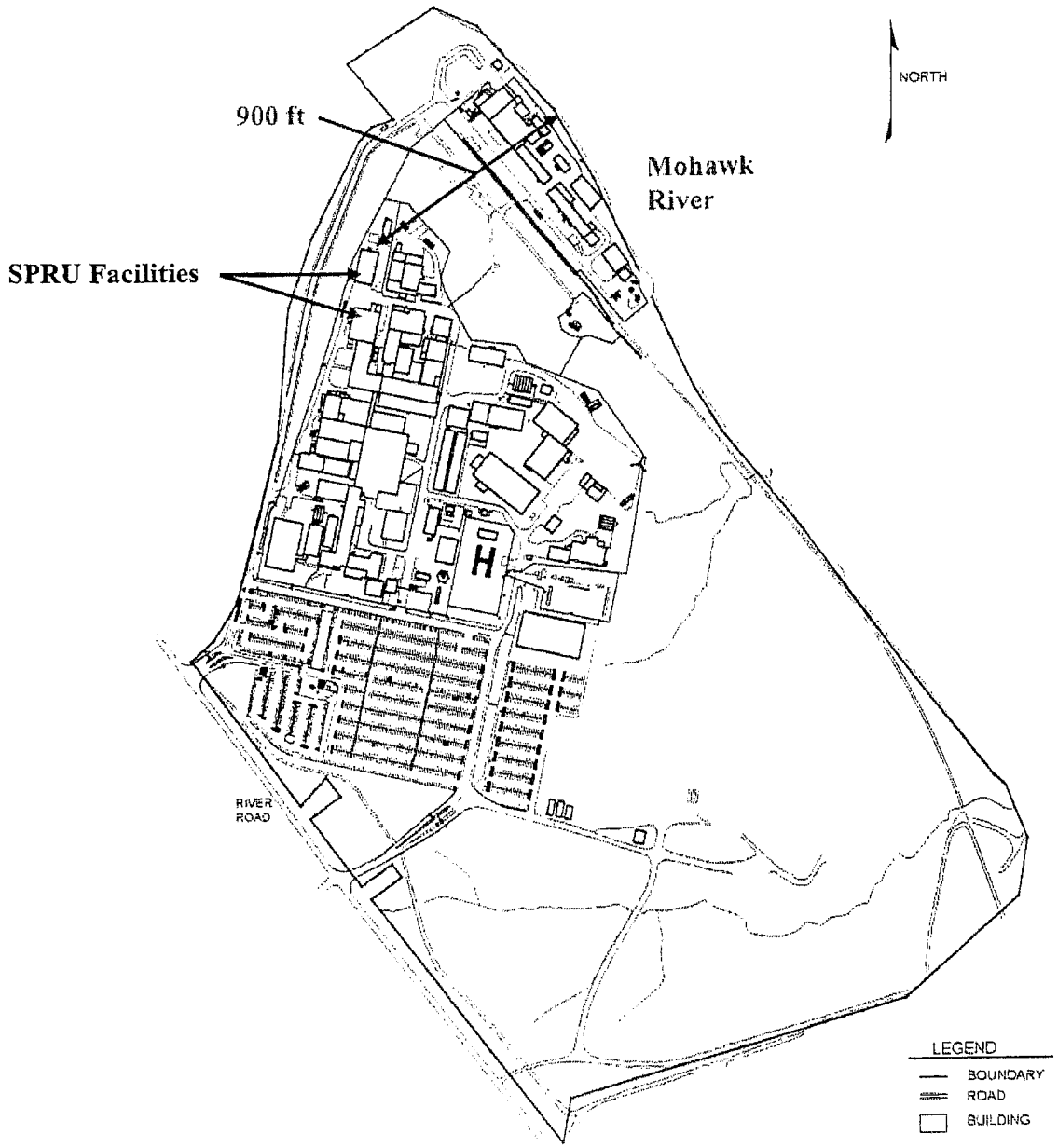
Concerning the Separation Process Research Unit (SPRU), we have some comments to make. As is stated in the newspaper article by Anne Miller, staff writer for the Albany Times Union, the SPRU facility is "on the back corner of Knolls, just above a bluff overlooking the Mohawk River." You are probably aware that the soil along the river side is a loamy- clay soil mixture which is very unstable and subject to mud sliding. This can be seen on route 146 coming up from the Mohawk river bridge in Aqueduct. Several slow moving mud slides have occurred in this area along the road side.

The same could very well happen if in fact the bluff on which the SPRU facility sits is also on unstable soil. This certainly needs to be investigated before any decision is made concerning the timing of the removal of the SPRU facility and the associated contamination. In 30 years the bluff may collapse bringing contamination with it which could eventually reach the Mohawk River.

(Alt 4) Our recommendation is to spend the 160 million dollars and remove the buildings and the contamination before an event such as the collapse of the bluff on which the SPRU facility sets occurs.

KAPL's Response:

The SPRU facilities do not sit on a bluff next to the river; they sit about nine-hundred feet back from the river on the upper level portion of the site. The foundations of the SPRU facilities rest in rock-like basal-till, not the loamy-clay soil mixture to which you are referring. Basal till has rock-like properties, being dense, tough, and compact as a result of its formation under the great weight of ice during the ice ages. There is no danger of SPRU facilities sliding into the river. See the attached map for reference.


NORTH
900 ft
Mohawk
River
SPRU Facilities
H
RIVER
ROAD
LEGEND
BOUNDARY
ROAD
BUILDING

Comment By: Sylvia Winer
Form: Written; submitted by email
Date: May 21, 2006
Subject: Health

Comment:

As we live not far from the river, we felt compelled to voice our concerns.

We would like to see the removal of both structures and a tunnel between them. There seems to be a very high rate of people who live in the surrounding area that have died of cancer.

KAPL's Response:

KAPL is not aware of any studies showing a higher than normal cancer rate in the surrounding area. The comprehensive Knolls Site radiation-monitoring program shows that the radiation exposure to persons off-site is too small to be measured. Therefore, KAPL has employed calculational techniques that conservatively estimate potential exposures. These calculational techniques consider exposure pathways that include fishing, boating, and swimming in the Mohawk River, using the river water for drinking and irrigation, breathing the air, and eating regionally produced animal and vegetable food. The most recent assessment for 2004, discussed in the references below, shows that the maximum potential radiation exposure to a member of the public was less than 0.1 milliRem for the entire year. This is about one-twentieth of the exposure that a person would receive from naturally occurring radiation from a single cross-country airplane flight. KAPL conservatively estimates that the total accumulated radiation exposure to a member of the public living continuously next to the Knolls Site during all the time the facility has been operating, over five decades, would not exceed 130 milliRem. For perspective, this is less than the average exposure a person in the U.S. receives in six months from natural radiation sources. Every day each of us is exposed to radiation from natural sources, such as cosmic rays from space, radon from earth, and natural minerals in the soil. Results from the extensive environmental monitoring program confirm that Knolls Site operations have had no adverse effect on human health of the quality of the environment.

For additional information, please see KAPL-4855-, *Knolls Site Environmental Summary Report*, August 2005, and KAPL-4854, *Environmental Monitoring Report, Calendar Year 2004*. These documents are available to the public at the Niskayuna Library.

Section 4
NYSDEC Review Letter

US Department of Energy
SPRU Field Office, SP-23
2425 River Road
Niskayuna, New York 12309

December 8, 2006

Lynn M. Winterberger, P.E.
New York State Department of Environmental Conservation
Division of Solid and Hazardous Waste Management
Bureau of Hazardous Waste and Radiation Management
Western Engineering Section, 9th Floor
625 Broadway
Albany, NY 12233-7258

Dear Ms. Winterberger:

The following is a point by point response to your letter dated July 7, 2006 regarding the Nuclear Facility Engineering Evaluation and Cost Analysis (EECA) for Separations Process Research Unit (SPRU) Disposition Project (DRAFT) dated May, 2006.

1) The EE/CA should provide an estimate of the amount and type of radioactivity (nuclides and total activity, in curie or Becquerel's) that would remain under each alternative, instead of simply stating that the inventory would be 95% or 98% less than the current inventory. Without some understanding of the contaminants that would be left, it is difficult to compare the alternatives.

Response: There is no impact to the public or the environment from the SPRU facilities. Recognizing the inherent safety of the public, DOE's intent is to reduce risk and reduce the cost of surveillance and maintenance activities.

2) Is DOE SNR commenting on this proposal? Did they have any input in the EE/CA?

Response: Yes, SNR and KAPL have commented, and these comments have been considered in the approaches discussed in the EECA.

3) Are the transfers between DOE EM and DOE SNR, referred to throughout this document, an actual property transfer or is it only a responsibility transfer?

Response: There is no transfer of real property to take place. The property KAPL is located at is deeded to the United States Federal Government. DOE EM is the steward of the SPRU project areas, and this recognition is formally documented between DOE EM and Naval Reactors, as well as formally recognized in the Congressional Budget Process.

4) In general, the document discusses requirements associated with CERCLA but fails to address DOE obligation under both the Federal RCRA regulations and New York State's Part 370 Series for hazardous waste management. This oversight should be corrected.

Response: DOE will comply with NYSDEC requirements. The New York State RCRA regulations are Appropriate and Relevant Requirements and are listed as such in Appendix B-3 of the EE/CA.

5) Please note that the only permit at the facility is KAPL's Part 373 Operating Permit. Reference should not be made to permits that are not issued. However, it should be mentioned that DOE EM has requested a Corrective Action only permit for the SPRU Solid Waste Management Units (SWMUs).

Response: DOE recognizes the need for a SPRU RCRA permit, and has made application for such.

6) Page ES-1, 1st paragraph - Why is only the soil adjacent to the buildings and not the soil underneath the buildings being addressed in this EE/CA? All soil contaminated due to the buildings should be addressed. Please provide information as to the planning for and disposition of the remaining contaminated soils.

Response: The purpose of the Facilities EECA is to disposition the buildings. Soil and groundwater underlying the SPRU facilities, as well as contaminated soil or groundwater at other locations where SPRU waste containers were temporarily managed will be addressed in a separate Land EECA.

7) Page ES-1, 3rd paragraph - What has been done to decommission the SPRU facilities in the last 50 years?

Response: Sections 1.1 and 1.2 of the Facilities EECA discuss the historical deactivation activities. Detailed information is described in the Facilities Historical Site Assessment document. As discussed in Section 1 of the EECA, the process systems were drained and flushed and the wastes shipped off-site to approved facilities.

8) Page ES-2, 1st paragraph - Is this EE/CA intended to fulfill DOE'S RCRA/Part 373 obligations, which are presently included in the NYS Operating Permit issued to DOE SNR?

Response: The EECA has been developed to meet regulatory requirements under CERCLA and DOE's internal decision making process, and to obtain public input. As agreed with the NYSDEC and documented in the DOE letter to NYSDEC dated March 23, 2004, DOE will follow the RCRA

process to obtain NYSDEC's approval of a permit. DOE also informed NYSDEC of its intent to submit workplans for approval as customary under the RCRA process.

9) Page ES-2, 2nd paragraph - Were RCRA characterizations included in the risk evaluations?

Response: RCRA issues were included in the strategic process, but radioactivity is the predominant contamination of concern based on DOE's comprehensive assessment in the Facility Historical Site Assessment.

10) Page ES-2, 3rd paragraph, 1st sentence - DOE EM states that the SPRU facilities do not pose a risk to the public, on-site workers, or the environment in their current state. Is the risk referred to an immediate risk or any risk?

Response: Based upon KAPL's comprehensive monitoring, surveillance, and maintenance programs and data, there is no immediate risk to the workers on site, the public, or the environment from these facilities. To preclude long-term risk, DOE will have to continue surveillance and maintenance and make capital improvements to contain radioactivity, e.g. roof replacements, etc.

11) Page ES-2, 3rd paragraph and elsewhere, - The EE/CA states that it is not prudent to continue the surveillance and maintenance program indefinitely, and that the future risk to the public, on-site workers, and the environment would be significantly reduced or eliminated if part or all of the SPRU facility were removed. The Department concurs with these statements, and supports the complete removal of the SPRU facilities.

Response: We appreciate NYSDEC's support of the removal action.

12) Page ES-2, 3rd paragraph, 6th sentence - What risk is being referred to in this sentence? DOE EM stated in the 1st sentence of this paragraph that the SPRU facilities do not pose a risk.

Response: Based upon KAPL's comprehensive monitoring, surveillance, and maintenance programs and data, there is no immediate risk to the workers on site, the public, or the environment from these facilities. To preclude long-term risk, DOE will have to continue surveillance and maintenance and make capital improvements to contain radioactivity, e.g. roof replacements, etc.

13) Page ES-2, 4th paragraph - DOE EM should also have "meeting the Part 373 regulatory requirements" as one of the Removal Action Objectives.

Response: Applicable New York State laws and regulations are required to be followed and are included in the ARAR tables in Appendix B of the EECA.

14) Page ES-3, Table ES-1 - What happens in the pipe tunnels under Alternatives 2 & 3? Decontamination of the pipe tunnels is not mentioned as a scope element.

Response: In Alternatives 2 and 3, the pipe tunnels will be decontaminated.

15) Page ES-3, Table ES-1- Based on the Table it appears that some soil and the tank farm vaults and tanks are being removed in Alternatives 2, 3 and 4. Is this accurate?

Response: The tanks and incidental soil will be removed in Alternatives 2, 3, and 4. In Alternatives 3 and 4, both the tanks and the vaults will be removed.

16) Page ES-3, 1st paragraph - The SPRU area is a RCRA/Part 373 regulated site. The obligations under both the RCRA and Part 373 regulations need to be addressed.

Response: Applicable federal and New York State laws and regulations are required to be followed and are included in the ARAR tables in Appendix B of the EECA.

17) Page ES-3, last sentence - Please clarify the meaning of "moderately implementable".

Response: Under CERCLA, each remedy is evaluated for implementability relative to the other proposed remedies, with greater emphasis on the institutional aspects of implementability, such as the ability to obtain necessary permits for offsite actions, the availability of treatment, storage, and disposal services (including capacity), and the availability of necessary equipment and skilled workers to implement the technology. "Moderately implementable" in this instance, means that the above elements are readily available to DOE.

18) Page 2, 2nd paragraph - How will DOE EM distinguish between soils that are adjacent to as opposed to underlying the building? Please explain DOE EM'S decision not to address all building soils together.

Response: The purpose of the Facilities EECA is to disposition the buildings. Soil and groundwater underlying the SPRU facilities, as well as contaminated soil or groundwater at other locations where SPRU waste containers were temporarily managed will be addressed in a separate Land EECA.

Incidental soils are defined as soil that would likely be contaminated during the demolition activities, and is therefore incidental to the process. The soil that remains after the demolition will be dispositioned to land cleanup criteria in the Land EECA document.

19) Page 2, Section 1.2, 3rd paragraph - The preliminary assessment conducted in 1988 by EPA dealt with CERCLA. This document should also include what has been and is being done concerning the RCRA and Part 373 regulatory requirements.

Response: A RCRA Visual Site Inspection was also performed in 1998 for the Knolls Site. The VSI was used as a precursor for the Corrective Action Module of the Knolls Site RCRA Permit.

20) Page 3, Section 1.3, 1st paragraph - DOE EM has addressed the radiological contamination but should still address RCRA/Part 373 hazardous wastes and hazardous constituents of concern.

Response: The EECA has been developed to meet regulatory requirements under CERCLA and DOE's internal decision making process, and to obtain public input. As agreed with the NYSDEC and documented in the DOE letter to NYSDEC dated March 23, 2004, DOE will follow the RCRA process to obtain NYSDEC's approval of a permit. DOE also informed NYSDEC of its intent to submit workplans for approval as customary under the RCRA process.

21) Page 3, Section 1.3, 2nd paragraph - The document states that non-radioactive contamination (i.e. asbestos, PCBs, miscellaneous chemicals) has not been assessed but that characterization sampling would be performed during the actual decontamination removal actions. In actuality, this characterization sampling is necessary prior to selection and implementation of a corrective action remedy for budgeting purposes as well as to determine, up front, where the wastes would have to be sent.

Response: DOE's knowledge of the facility operations is sufficient to prepare cost estimates for the Alternatives proposed in the EECA. DOE recognizes that proper characterization is necessary for selection of disposal methods for other types of wastes.

22) Page 5, 1st paragraph - Although DOE EM believes the residual chemical contamination is not expected to drive the removal action, it still needs to be addressed.

Response: DOE did consider the presence of RCRA hazardous wastes. The quantities expected are small relative to quantities of radioactive wastes expected.

Applicable federal and New York State laws and regulations are required to be followed and are included in the ARAR tables in Appendix B of the EECA.

23) Page 7, Table 2-1 - Please define exactly what a "continuing-mission site" is and how it will be developed at the SPRU facility.

Response: A "continuing-mission site" is one where existing operations are expected to continue into the foreseeable future.

24) Page 7, Table 2-1 - Which alternative is consistent with a DOE continuing-mission site?

Response: All the Alternatives presented in the EECA are consistent with a continuing-mission site.

25) Page 7, Table 2-1 - DOE EM should also have "'meeting the Part 373 regulatory requirements" as one of the Removal Action Objectives.

Response: The EECA has been developed to meet regulatory requirements under CERCLA and DOE's internal decision making process, and to obtain public input. As agreed with the NYSDEC and documented in the DOE letter to NYSDEC dated March 23, 2004, DOE will follow the RCRA process to obtain NYSDEC's approval of a permit. DOE also informed NYSDEC of its intent to submit workplans for approval as customary under the RCRA process.

Applicable New York State laws and regulations are required to be followed and are included in the ARAR tables in Appendix B of the EECA.

26) Page 8, Section 2.1, 2nd paragraph - Please explain what is meant by "supporting structure." Does it include the tank farm?

Response: Supporting structures included a cooling tower, the former K6 storage pad, and the K5 retention basin.

27) Pages 8 and 21 - The EE/CA states that the soil and groundwater underlying the SPRU facilities will be addressed in a separate regulatory document specific to the SPRU land areas. It is not explained why the remediation of the site is being divided into two actions. It would seem logical to include removal of the underlying soils in Alternatives 3 and 4.

Response: The purpose of the Facilities EECA is to disposition the buildings. Soil and groundwater underlying the SPRU facilities, as well as contaminated

soil or groundwater at other locations where SPRU waste containers were temporarily managed will be addressed in a separate Land EECA.

28) Page 8, Section 2.2, 1st paragraph - ARARs are relevant for radiation protection requirements but Part 373 has established values that are used for protection requirements.

Response: The EECA has been developed to meet regulatory requirements under CERCLA and DOE's internal decision making process, and to obtain public input. As agreed with the NYSDEC and documented in the DOE letter to NYSDEC dated March 23, 2004, DOE will follow the RCRA process to obtain NYSDEC's approval of a permit. DOE also informed NYSDEC of its intent to submit workplans for approval as customary under the RCRA process.

Applicable New York State laws and regulations are required to be followed and are included in the ARAR tables in Appendix B of the EECA.

29) Page 9, 5th bullet - This should state "Necessary NYSDEC permits will be requested." A guarantee cannot be made about permit issuance since NYSDEC needs to ascertain that each application is complete and that a permit can be issued to ensure that the regulations will be met.

Response: A permit application has been submitted to NYSDEC and comments are being resolved.

30) Page 11, and elsewhere in the draft EE/CA - It is stated that surveillance and maintenance costs were only estimated for 30 years, for cost estimating purposes. The EE/CA should explain the basis for selecting this time period.

Response: DOE selected 30 years as being a reasonable assumption for continuing KAPL operations at the site.

31) Page 11 and elsewhere - It is assumed that the larger the amount of contaminated media removed, the less robust the surveillance and maintenance program is required to be. This is not necessarily accurate. For example, on page 13, it is stated that under alternative 2, approximately 95% of the residual radioactive contamination would be removed. However, the buildings would remain and presumably would still require maintenance, if not surveillance. The current surveillance and maintenance program should be described, along with how that program would be reduced under Alternative 2 or Alternative 3.

Response: DOE is able to make this statement based upon its knowledge of surveillance and maintenance activities, and its experience with other similar situations.

32) Page 11, Section 3.1 - "No Action" alternatives are also required for RCRA and Part 373 Environmental Impact Statements (EIS) under NEPA and SEQRA, respectively.

Response: Acknowledged

33) Page 13, 1st bullet - There is a discrepancy between Table ES-1 and the 1st bullet dealing with the tank vaults. The 1st bullet states removal of tanks and decontamination of the tank vaults whereas Table ES-1 states removal of tanks and vaults. Please clarify.

Response: Table ES-1 will be corrected to indicate that removal of the tank vaults is not included in Alternative 2.

34) Page 13, 4th bullet - Once excavation and removal of contaminated soil is complete does DOE EM plan to backfill the excavation area? How will this be done to ensure that backfill is not contaminated? Will further soil removal be required in the future?

Response: The excavation area will be backfilled. As a standard practice, DOE requires due diligence by contractors to verify backfill materials do not re-introduce contaminants.

35) Page 13, last paragraph - If demolition is still needed later, those costs should be addressed in this alternative.

Response: The cost of demolition is not included, because at the end of 30 years, it is not certain that this will be the action taken.

36) Page 14, Figure 3-2 - Will anything be taking place in the E1 & G1 pipe tunnels, such as decontamination?

Response: In Alternatives 2 and 4 the E1 and G1 pipe tunnels will be decontaminated. DOE did not elaborate on this in the EECA because of the small area of the facilities they represent.

37) Page 14, Figure 3-2, G2-H2 Cross Section - Why isn't the tunnel yellow since it is to be decontaminated? Is that to show that it will remain onsite?

Response: The tunnel should be colored yellow and this omission will be corrected with the release of the final EECA.

38) Page 14, Figure 3-2, Explanation - It may be easier to follow the color scheme if yellow indicates areas that will be decontaminated and will remain onsite; and

white indicates areas that will remain with no decontamination/action being performed.

Response: Acknowledged.

39) Page 15, Section 3.3, 1st paragraph - What are the levels of hazardous and radioactive contamination in the tunnels?

Response: Levels of radioactive contamination vary throughout the tunnels. A full description of contaminants and levels in the tunnels is presented in the Historical Site Assessment, Sections 7, 8, and 9.

40) Page 15, Section 3.3, 3rd paragraph - How will underlying/adjacent soil be separated from contaminated soils still left? Will the remaining contamination be handled with the "land areas"?

Response: The purpose of the Facilities EECA is to disposition the buildings. Soil and groundwater underlying the SPRU facilities, as well as contaminated soil or groundwater at other locations where SPRU waste containers were temporarily managed will be addressed in a separate Land EECA.

41) Page 15 of 33, Section 3.3, 4th paragraph - The document states here and in subsequent sections (pp, 17, 20, 21, 22) that excavated on-site soil and crushed concrete characterized as non-hazardous and clear of radiological activity (interpreted as "clean") would be reused as backfill material. At the very least, DOE EM will have to follow state and federal regulations for the reuse of these materials, which should be acknowledged.

Response: DOE will follow federal and state rules in assessing the suitability of backfill material. As a standard practice, DOE requires due diligence by contractors to verify backfill materials do not re-introduce contaminants.

42) Page 15, Section 3.3, 4th paragraph - The document states that DOE EM will remove soil within one foot of the foundation and floor slab. Please provide a thorough justification for this value.

Response: Based on DOE's experience and professional judgment, typically at least one foot of material surrounding a structure is disturbed during demolition activities and must be removed along with demolition debris.

43) Page 15, Section 3.3, 5th paragraph - The document states here and in subsequent sections (pp. 17, 20, 21, 22) that contaminated steel would be reused at other DOE facilities. At the very least, DOE EM will have to follow state and federal regulations for the reuse/recycling of scrap metal, which should be acknowledged.

Response: DOE has a program at permitted facilities to allow re-use of contaminated steel and metals. These materials will not be released to the public, but will be controlled by DOE as contaminated materials.

44) Page 16 of 33, Figure 3-3 - Will the isolation and sealing off of pipe tunnels be for all tunnels including E1 & G1?

Response: E1 and G1 are already sealed and controlled.

45) Page 17, 2nd bullet and Page 18 of 33, 3rd bullet - Will E1 and G1 tunnels also be removed?

Response: E1 and G1 will remain in place since they are a part of the supporting foundation of Buildings E1 and G1.

46) Page 17, 3rd paragraph - How will underlying/adjacent soil be separated from contaminated soils still left? Will the remaining contamination be handled with the "land areas"?

Response: The purpose of the Facilities EECA is to disposition the buildings. Soil and groundwater underlying the SPRU facilities, as well as contaminated soil or groundwater at other locations where SPRU waste containers were temporarily managed will be addressed in a separate Land EECA.

47) Page 19, 1st paragraph - The analysis of alternatives needs to also take into account RCRA/Part 373 requirements.

Response: Applicable New York State laws and regulations are required to be followed and are included in the ARAR tables in Appendix B of the EECA.

48) Page 19, Section 4.1.1 - Do the National Contingency Plan threshold and balancing criteria used to evaluate effectiveness also meet RCRA/Part 373 needs?

Response: These criteria deal with the feasibility of each alternative. DOE intends to submit the appropriate RCRA workplans for NYSDEC review and approval.

49) Page 19, Section 4.1.1 - Do the additional questions used to determine the effectiveness of the removal action alternatives meet all the required needs of the KAPL facility?

Response: SNR and KAPL have commented, and these comments have been considered in the approaches discussed in the EECA.

50) Page 19, Section 4.1.1.1, 1st paragraph - Why are costs for capital improvements that would be required during the next 30 years to maintain the SPRU facilities in their current state not included in this alternative?

Response: DOE's experience and information is sufficient to make this point. Only those costs associated with ongoing surveillance and maintenance were included. Assumptions and uncertainties associated with the cost estimates are presented in the EE/CA and are considered by decision makers in the remedy selection process.

51) Page 20, Section 4.1.1.2, bottom of page - Please include G2 in the list of areas to be decontaminated.

Response: DOE will correct this section to add G2 process areas.

52) Page 24, Section 4.1.3.1 - The cost for continuing the current surveillance and maintenance is estimated at $60 million. In the next sentence, there is a reference to the need for capital improvements. It is not clear whether the costs of those capital improvements are included in the $60 million. The EE/CA should be revised accordingly.

Response: DOE's experience and information is sufficient to make this point. Only those costs associated with ongoing surveillance and maintenance were included. Assumptions and uncertainties associated with the cost estimates are presented in the EE/CA and are considered by decision makers in the remedy selection process.

53) Page 24, Section 4.1.3.1 - Why are costs for any future removal actions not being included? These costs could be significant and should be factored in for an accurate cost comparison.

Response: DOE's experience and information is sufficient to make this point. Only those costs associated with ongoing surveillance and maintenance were included. Assumptions and uncertainties associated with the cost estimates are presented in the EE/CA and are considered by decision makers in the remedy selection process.

54) Page 25, Section 4.2 - This section also needs to consider SEQRA requirements. Could these actions under either NEPA or SEQRA be considered segregation?

Response: DOE is pursuing the cleanup of the SPRU facilities under CERCLA. However, as discussed during the public meeting, there is no expected impact on choosing an alternative for the buildings to what needs to be done for the land areas. This is not considered segregation.

55) Page 30, Table 4-2 - Alternative 1 doesn't include capital costs. What about alternatives 2 & 3?

Response: Costs associated with capital improvements in Buildings H2 and G2 areas were not included in any Alternative.

56) Page A-1, 1st paragraph - 5th sentence - The EE/AC seems to imply that the decommissioning of the buildings will be part of our RCRA permit application review. This is inaccurate. This is not a component of a Part 373 permit application review.

Additionally, the requirements of a Part 373 permit do not dictate how evaluation or cleanup actions are performed. They require that the facility submit certain reports and workplans for NYSDEC's approval. In general, permits cover regulated units, management and transport of hazardous wastes generated and corrective action of SWMUs and contaminated environmental media (non-radioactive contamination).

Response: DOE did not intend to imply that NYSDEC was going to review the DOE containment, demolition, environmental or safety plans to conduct demolition activities. DOE recognizes that NYSDEC interest is related solely to past or future potential for impact to soil and groundwater from these facilities.

57) Appendix B, Table B-1 - Under "'Type of Requirement" column, some ARARs are listed as merely "To be considered." What does this mean? Please provide an explanation for use of this phrase as opposed to "applicable," and how is it determined? Is it possible that these ARARs could be rejected? Please explain how this is determined.

Response: ARARs are the "laws of the land" that must be taken into consideration when selecting a remedy for the SPRU areas. ARARs "to be considered" are typically DOE's internal requirements, or "guidance" documents from various agencies rather than promulgated laws and regulations.

58) Appendix B, Table B-1, 4th Reason for Inclusion - TAGM 4003 is listed, appropriately, as "To Be Considered." However, the entry under "Reason for Inclusion" appears to be a misprint. We suggest replacing it with this: Recommends a maximum dose limit of 10 millirems/year from residual radioactive material, under plausible use scenarios."

Response: DOE agrees that this is a misprint that will be corrected.

59) Appendix B, Table B-l, 5th Reason for Inclusion - DOE EM states that some soil may exceed TAGM levels, but not RCRA/Part 373 levels. This is a moot point because if hazardous waste or constituents of concern are in the soil, DOE must meet TAGM 4046 for hazardous constituent contamination.

Response: DOE agrees. This inclusion is more appropriately stated as "NYS guidelines for determining cleanup levels." The final EECA document will be revised to reflect this change.

60) Appendix B, Table B-1, 6th Citation - Does this refer to KAPL's permit, since that is the only permit issued? The permit number should be listed, not just New York.

Response: DOE will add "(permit pending)" to the citation.

61) Appendix B, Table, 6th Citation - Actually, the RCRA Part B Permit is also a NYSDEC Part 373 Operating Permit and should include the state regulation citations.

Response: DOE agrees. NYS Part 370 series will be included in this revised table.

62) Appendix B, Table, 12th Citation - The Hazardous Waste Management regulations include the entire Part 370 series not just Part 373 through which KAPL's NYSDEC Part 373 Operating Permit was issued.

Response: DOE agrees. NYS Part 370 series will be included in this revised table.

DOE trusts this information is sufficient to your needs. Please contact me should you have any questions or require further information.

Sincerely,

Steven B. Feinberg

Steven B. Feinberg
Federal Project Director
USDOE Environmental Management
SPRU Field Office

New York State Department of Environmental Conservation
Division of Solid and Hazardous Materials
Bureau of Hazardous Waste and Radiation Management, 9th Floor
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Website: www.dec.state.ny.us

Denise M. Sheehan
Commissioner

July 7, 2006

Mr. Steven Feinberg
Federal Project Director
DOE SPRU Project Office
2425 River Road
Niskayuna, NY 12309

Dear Mr. Feinberg:

RE: Separation Process Research Unit (SPRU) Disposition Project
Draft Nuclear Facility Engineering Evaluation/Cost Analysis (EE/CA)

The New York State Department of Environmental Conservation (Department) has completed its review of the Draft EE/CA received in our offices on May 17, 2006. Enclosed are comments specific to the review of the EE/CA that need to be addressed. The Department would appreciate a response to these comments by August 21, 2006.

If you have any questions regarding this matter, please contact me at (518) 402-8594.

Sincerely,

Lynn M. Winterberger, P.E.
Environmental Engineer 2
Western Engineering Section
Bureau of Hazardous Waste and Radiation Management

Enclosure

cc: J. Robillard, DOE SNR

e-cc: B. Youngberg, NYSDEC
J. Riggi, NYSDEC
J. LaClair, NYSDEC
M. Rogers, NYSDEC Region 4 Office

New York State Department of Environmental Conservation Comments
on the Nuclear Facility Engineering Evaluation/Cost Analysis (EE/CA)
for the Separation Process Research Unit (SPRU) Disposition Project

1. The EE/CA should provide an estimate of the amount and type of radioactivity (nuclides and total activity, in curie or becquerels) that would remain under each alternative, instead of simply stating that the inventory would be 95% or 98% less than the current inventory. Without some understanding of the contaminants that would be left, it is difficult to compare the alternatives.

2. Is DOE SNR commenting on this proposal? Did they have any input in the EE/CA?

3. Are the transfers between DOE EM and DOE SNR, referred to throughout this document, an actual property transfer or is it only a responsibility transfer?

4. In general, the document discusses requirements associated with CERCLA but fails to address DOE obligation under both the Federal RCRA regulations and NewYork State's Part 370 Series for hazardous waste management. This oversight should be corrected.

5. Please note that the only permit at the facility is KAPL's Part 373 Operating Permit. Reference should not be made to permits that are not issued. However, it should be mentioned that DOE EM has requested a Corrective Action only permit for the SPRU Solid Waste Management Units (SWMUs).

6. Page ES-1, 1st paragraph - Why is only the soil adjacent to the buildings and not the soil underneath the buildings being addressed in this EE/CA? All soil contaminated due to the buildings should be addressed. Please provide information as to the planning for and disposition of the remaining contaminated soils.

7. Page ES-1, 3rd paragraph - What has been done to decommission the SPRU facilities in the last 50 years?

8. Page ES-2, 1st paragraph - Is this EE/CA intended to fulfill DOE's RCRA/Part 373 obligations, which are presently included in the NYS Operating Permit issued to DOE SNR?

9. Page ES-2, 2nd paragraph - Were RCRA characterizations included in the risk evaluations?

10. Page ES-2, 3rd paragraph, 1st sentence - DOE EM states that the SPRU facilities do not pose a risk to the public, on-site workers, or the environment in their current state. Is the risk referred to an immediate risk or any risk?

11. Page ES-2, 3rd paragraph and elsewhere, - The EE/CA states that it is not prudent to continue the surveillance and maintenance program indefinitely, and that the future risk to the public, on-site workers, and the environment would be significantly reduced or eliminated if part or all of the SPRU facility were removed. The Department concurs with these statements, and supports the complete removal of the SPRU facilities.

12. Page ES-2, 3rd paragraph, 6th sentence - What risk is being referred to in this sentence? DOE EM stated in the 1st sentence of this paragraph that the SPRU facilities do not pose a risk.

13. Page ES-2, 4th paragraph - DOE EM should also have "meeting the Part 373 regulatory requirements" as one of the *Removal Action Objectives*.

14. Page ES-3, Table ES-1 - What happens in the pipe tunnels under Alternatives 2 & 3? Decontamination of the pipe tunnels is not mentioned as a scope element.

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17. Page ES-3, last sentence - Please clarify the meaning of "moderately implementable".

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22. Page 5, 1st paragraph – Although DOE EM believes the residual chemical contamination is not expected to drive the removal action, it still needs to be addressed.

23. Page 7, Table 2-1 – Please define exactly what a "continuing-mission site" is and how it will be developed at the SPRU facility.

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31. Page 11 and elsewhere - It is assumed that the larger the amount of contaminated media removed, the less robust the surveillance and maintenance program is required to be. This is not necessarily accurate. For example, on page 13, it is stated that under alternative 2, approximately 95% of the residual radioactive contamination would be removed. However, the buildings would remain and presumably would still require maintenance, if not surveillance. The current surveillance and maintenance program should be described, along with how that program would be reduced under Alternative 2 or Alternative 3.

32. Page 11, Section 3.1 – "No Action" alternatives are also required for RCRA and Part 373 Environmental Impact Statements (EIS) under NEPA and SEQRA, respectively.

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40. Page 15, Section 3.3, 3rd paragraph - How will underlying/adjacent soil be separated from contaminated soils still left? Will the remaining contamination be handled with the "land areas"?

41. Page 15 of 33, Section 3.3, 4th paragraph - The document states here and in subsequent sections (pp. 17, 20, 21, 22) that excavated on-site soil and crushed concrete characterized as non-hazardous and clear of radiological activity (interpreted as "clean") would be reused as backfill material. At the very least, DOE EM will have to follow state and federal regulations for the reuse of these materials, which should be acknowledged.

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49. Page 19, Section 4.1.1 - Do the additional questions used to determine the effectiveness of the removal action alternatives meet all the required needs of the KAPL facility?

50. Page 19, Section 4.1.1.1, 1st paragraph - Why are costs for capital improvements that would be required during the next 30 years to maintain the SPRU facilities in their current state not included in this alternative?

51. Page 20, Section 4.1.1.2, bottom of page - Please include G2 in the list of areas to be decontaminated.

52. Page 24, Section 4.1.3.1 - The cost for continuing the current surveillance and maintenance is estimated at $60 million. In the next sentence, there is a reference to the need for capital improvements. It is not clear whether the costs of those capital improvements are included in the $60 million. The EE/CA should be revised accordingly.

53. Page 24, Section 4.1.3.1 - Why are costs for any future removal actions not being included? These costs could be significant and should be factored in for an accurate cost comparison.

54. Page 25, Section 4.2 – This section also needs to consider SEQRA requirements. Could these actions under either NEPA or SEQRA be considered segregation?

55. Page 30, Table 4-2 - Alternative 1 doesn't include capital costs. What about alternatives 2 & 3?

56. Page A-1, 1st paragraph - 5th sentence – The EE/AC seems to imply that the decommissioning of the buildings will be part of our RCRA permit application review. This is inaccurate. This is not a component of a Part 373 permit application review. Additionally, the requirements of a Part 373 permit do not dictate how evaluation or cleanup actions are performed. They require that the facility submit certain reports and workplans for NYSDEC's approval. In general, permits cover regulated units, management and transport of hazardous wastes generated and corrective action of SWMUs and contaminated environmental media (non-radioactive contamination).

57. Appendix B, Table B-1 - Under "Type of Requirement" column, some ARARs are listed as merely "to be considered." What does this mean? Please provide an explanation for use of this phrase as opposed to "applicable," and how is it determined? Is it possible that these ARARs could be rejected? Please explain how this is determined.

58. Appendix B, Table B-1, 4th Reason for Inclusion - TAGM 4003 is listed, appropriately, as "To Be Considered." However, the entry under " Reason for Inclusion" appears to be a misprint. We suggest replacing it with this: Recommends a maximum dose limit of 10 millirems/year from residual radioactive material, under plausible use scenarios."

59. Appendix B, Table B-1, 5th Reason for Inclusion - DOE EM states that some soil may exceed TAGM levels, but not RCRA/Part 373 levels. This is a moot point because if hazardous waste or constituents of concern are in the soil, DOE must meet TAGM 4046 for hazardous constituent contamination.

60. Appendix B, Table B-1, 6th Citation - Does this refer to KAPL's permit, since that is the only permit issued? The permit number should be listed, not just New York.

61. Appendix B, Table, 6th Citation - Actually, the RCRA Part B Permit is also a NYSDEC Part 373 Operating Permit and should include the state regulation citations.

62. Appendix B, Table, 12th Citation – The Hazardous Waste Management regulations include the entire Part 370 series not just Part 373 through which KAPL's NYSDEC Part 373 Operating Permit was issued.

Section 5
Additional KAPL Responses

Comment By: Eric Block
Form: Asked During Public Meeting
Date: May 25, 2006
Subject: Contamination/River

Comment:

So my concerns in the form of a comment that I'd like to see addressed is the river situation. We can fix one problem and ignore another problem, but certainly, the river is out there, it's a wonderful resource and we're trying to do more with it. If, indeed, there's differential radioactivity, that's something that can be easily validated. It will take money, but I think we need to invest some money before we spend $160 million. And one expenditure would be to do a careful study upstream and downstream and measuring what's present and what radionuclides are there. If there's plutonium, then we need to know that. And these things are pretty straightforward, I think, to determine. Again, I would not want to make any recommendation without having a full quantitative determination of just what is present.

KAPL's Response:

Several comprehensive environmental studies of the Mohawk River have been previously conducted, including both upstream and downstream of the Knolls Site. For information on these studies see KAPL-4855, *Knolls Site Environmental Summary Report*, August 2005. For accurate information regarding the environmental conditions of the Mohawk River, and what is present in the Mohawk River as a result of KAPL operations, refer to KAPL-4808, *Knolls Atomic Power Laboratory, Mohawk River Survey Report*, May 1995 and KAPL-4850, *Knolls Atomic Power Laboratory, Mohawk River Survey Report*, Calendar Year 2002. These documents are available to the public in the Niskayuna Library.

Comment By: Leslie Gold
Form: Asked During Public Meeting
Date: May 25, 2006
Subject: Contamination

Comment:

Is there runoff and is it being considered?

…because of the particular soil and rock there, it's not going down. But it could still be going off and down towards the aquifer site.

KAPL's Response:

The geologic materials underlying the Knolls site have poor aquifer characteristics, with low porosity and permeability, consequently there is little groundwater under the site and no known domestic wells in the vicinity of the Site; local residences and the Site use the municipal water system. Nevertheless, KAPL monitors Site groundwater for radioactivity. The highest measurement was less than the Nuclear Regulatory Commission Limit for unrestricted release of water to the environment and, therefore, of no environmental concern.

KAPL has always monitored Site effluent water to assure that it meets the requirements of applicable Federal and State environmental standards. This includes monitoring of discharges to the Mohawk River, the Mohawk River itself, and surface water draining from the Site. Extensive environmental monitoring has confirmed that Knolls Site operations have had no adverse effect on human heath, including that of employees, or the quality of the environment. For example, during 2004, the radioactivity released to the Mohawk River was over 100 times lower in concentration than the Nuclear Regulatory Commission limits for unrestricted use and was also a small fraction of the concentration permitted by the U.S. Environmental Protection Agency for drinking water.

For additional information, please see KAPL-4855-, *Knolls Site Environmental Summary Report*, August 2005, and KAPL-4854, *Environmental Monitoring Report, Calendar Year 2004*. These documents are available to the public at the Niskayuna Library.

Comment By: Elizabeth Kinney
Form: Written; submitted during public meeting
Date: May 25, 2006
Subject: Contamination

Comment:

I noted a discrepancy in my review of the materials left on hand at the Niskayuna Public Library. In Table 4-8 of the KAPL from the Environmental Monitoring Report published in 2004 by Lockheed Martin, the gross beta values of radioactivity concentrations (pCi/liter) for two municipalities (Schenectady and Colonie/Latham) have standard deviations for this year of data compilation nearly as high as the values measured themselves. Those measured for both upstream and downstream of KAPL not only have half the number of samples, but a standard deviation among them running at closer to 33% than 100%. As the Colonie/Latham water intake is likely downstream of the KAPL, I am curious as to why it would be included in an average to provide evidence for a "background" level for the KAPL downstream output of a "less than significant level". Inclusion of downstream data is likely to skew the comparison considerably, providing higher numbers that would certainly enhance the probability of finding "no significant difference" between the outflow quantities and those for the local background.

KAPL's Response:

Samples are collected monthly from the homes of KAPL employees supplied by the Schenectady, the Niskayuna, and the Latham/Colonie municipal water systems. For each municipal water system, the three monthly samples taken each calendar quarter are mixed together, and the resulting composite sample analyzed for gross alpha and gross beta radioactivity. Therefore, a total of twelve monthly samples result in four quarterly samples analyzed for each municipal water system.

Two upstream and two downstream water samples are collected from the Mohawk River during each calendar quarter that the river is available for sampling, resulting in six upriver and six downriver samples each year. The river is unsafe for boating during January through March due to winter weather conditions and ice coverage; therefore, no samples are collected during the first quarter of the year. The six quarterly river samples are analyzed individually.

The calculated confidence intervals (standard deviations) for the river water sample results are smaller than for the municipal water sample results because more river samples are analyzed (six river samples at each location vs. four municipal water samples for each system) and the river water sample volumes are larger.

All the water sample results were provided in Table 4-8 of the Environmental Monitoring Report for convenience. No direct comparison was intended between the Mohawk River

and the municipal water system data. The only direct comparison that can be made is between the upstream and downstream results, which show no significant difference.

Comment By: Elaine Klein
Form: Verbal; asked during public meeting
Date: May 25, 2006
Subject: Worker Safety

Comment:

MS. KLEIN: Are you saying that you're concerned about the public now but the people he referred to before who were working there all along, their safety wasn't considered so much along the way?

KAPL's Response:

The health and safety of KAPL employees have always been of the utmost importance and a prime consideration in Knolls Site operations. Significant effort has been applied to ensure workers' exposure to radiation or radioactive material is consistently kept As Low As Reasonably Achievable (ALARA) – well below any level that would pose a health threat.

The majority of Building G2 external to the actual SPRU processing area was decontaminated and released for other uses, e.g., offices, shops, library storage, etc. Considerable effort was expended in this conversion process to remove any loose radioactivity and ensure barriers were in place to contain fixed radioactivity. Radiological controls were established for any work in these converted areas to preclude inadvertently disturbing any normally inaccessible radioactivity that might exist. Over the years, however, there were a few isolated occasions when a small amount of low-level radioactivity was found in the accessible areas of this building. Corrective actions were promptly taken to contain the radioactivity and preclude similar occurrences. There were no instances of personnel becoming contaminated as a result of the occurrences.

The overall health of KAPL employees is consistent with the general population, with no observable anomalies. The conclusion reached is that there is no adverse health impact from working at KAPL.

Comment By: Elaine Klein
Form: Written; submitted during public meeting
Date: May 25, 2006
Subject: Security

Comment:

Please provide additional information regarding the additional security that Niskayuna will be provided with. Knolls is on the river. This is accessible to many people. Would our community be at risk for additional acts of sabotage because the dangerous material might be more accessible since it is getting readied for removal?

KAPL's Response:

The total quantity of radioactivity involved is too small to be of interest to terrorist groups. However, like other governmental agencies and commercial entities around the country, after the events of September 11, 2001, we evaluated potential threats and implemented enhanced security measures.

Consistent with the Department of Homeland Security's plans to protect key infrastructure such as chemical facilities, major electrical grids, bridges, power generation facilities, mass transit systems and other similar sites, we continue to evaluate information about potential threats as a part of ensuring security and safety at our sites.

To discuss the specific nature of our security measures would provide potential terrorist valuable information. It is therefore inappropriate, and indeed contrary to our goal of thwarting such an attack, to provide further details.

Suffice it to say that access to KAPL facilities is strictly controlled and our sites are strongly defended.

Comment By: Elaine Klein
Form: Written; submitted during public meeting
Date: May 25, 2006
Subject: Health/Environment

Comment:

I would like to know if our town has had previous exposures of certain levels of radioactive material or other harmful material from this site. Were there many close calls with this facility? Were there workers at KAPL harmed by it?

KAPL's Response:

The KAPL Knolls Site has always been a research and development facility, not a production facility. As a consequence, the quantities of on-site radioactive materials and hazardous chemicals have always been limited. Extensive environmental monitoring has confirmed that Knolls Site operations have had no adverse effect on human health, including that of employees, or the quality of the environment.

The comprehensive Knolls Site radiation-monitoring program shows that the radiation exposure to persons off-site is too small to be measured. Therefore, KAPL has employed calculational techniques that conservatively estimate potential exposures. These calculational techniques consider exposure pathways that include fishing, boating, and swimming in the Mohawk River, using the river water for drinking and irrigation, breathing the air, and eating regionally produced animal and vegetable food. The most recent assessment for 2004, discussed in the references below, shows that the maximum potential radiation exposure to a member of the public was less than 0.1 milliRem for the entire year. This is about one-twentieth of the exposure that a person would receive from naturally occurring radiation from a single cross-country airplane flight. KAPL conservatively estimates that the total accumulated radiation exposure to a member of the public living continuously next to the Knolls Site during all the time the facility has been operating, over five decades, would not exceed 130 milliRem. For perspective, this is less than the average exposure a person in the U.S. receives in six months from natural radiation sources. Every day each of us is exposed to radiation from natural sources, such as cosmic rays from space, radon from earth, and natural minerals in the soil.

Regarding non-radioactive environmental effects, KAPL has always monitored Site effluent water and air to assure that they meet the requirements of applicable Federal and State environmental standards. This includes monitoring of Mohawk River water and surface water from the Site, and more recently, groundwater sampling from monitoring wells around the Site.

For additional information, please see KAPL-4855-, *Knolls Site Environmental Summary Report,* August 2005, and KAPL-4854, *Environmental Monitoring Report, Calendar Year 2004*. These documents are available to the public at the Niskayuna Library.

Comment By: Elaine Klein
Form: Written, submitted by mail
Date: June 4, 2006
Subject: Wildlife/Environment

Comment:

Niskayuna has abundant wildlife. Please provide information whether the cleanup poses a risk to them, particularly since there are issues with the water contamination. Do birds routinely land near the site? Could they carry contaminated particles elsewhere? Has the risk to are wildlife been monitored over time? Is there information regarding potential risk from this project?

KAPL's Response:

The KAPL Knolls Site also has abundant wildlife in the undeveloped areas. The SPRU facilities are in developed areas, and the cleanup is not expected to pose any risk to wildlife. The current radioactivity is contained within the facilities or in the subsurface and groundwater. The contained radioactivity is not available in the environment for wildlife to pick up. Residual radioactivity from SPRU poses no threat to site employees, the public, area wildlife, or the environment.

Comment By: Patrick Parisi
Form: Asked During Public Meeting
Date: May 25, 2006
Subject: Health

Comment:

I guess my main concern and, I think, the concern of people in the community is, you know, what is the health impact on residents; what is the health impact, if any, in the community and in the employees of the facility? And I would really like to know if there is any increase in types of cancers that are associated with radiation exposure or any other toxins that we used at that time and if there's any data on any of that, because I can't find any data.

KAPL's Response:

While there have been no specific health studies of the employees at the Knolls site, their overall health is consistent with the general population, with no observable anomalies. The conclusion reached is that there is no adverse health impact from working at KAPL. KAPL has no specific knowledge of any studies of the surrounding area.

It should be noted that only a fraction of employees at the KAPL site work with radioactive materials. Exposure to radiation by these employees is maintained As Low As Reasonably Achievable (ALARA), and consequently they receive on average only a small fraction of the occupational radiation exposure allowed by Federal regulations. Large scale studies by Johns Hopkins University and Yale University School of Medicine of personnel working in the Naval Nuclear Power Program with associated radiation exposures higher than those at KAPL concluded there was no increased cancer risk from such exposures. The Johns Hopkins study included 70,000 individuals, and the Yale University study included 76,000 personnel; both significantly larger samples than the number of radiation workers at the Knolls Site.

The comprehensive Knolls Site radiation-monitoring program shows that the exposure to persons off-site is too small to be measured. Therefore, calculation techniques have been used to conservatively estimate potential exposures. These techniques consider exposure pathways that include fishing, boating, and swimming in the Mohawk River, using the river water for drinking and irrigation, breathing the air, and eating regionally produced animal and vegetable food. The most recent assessment for 2004, discussed in the references provided below, shows that the maximum potential radiation exposure to a member of the public was less than 0.1 milliRem for the entire year. This is about one twentieth of the exposure that a person would receive from naturally occurring radiation during a single cross-country airplane flight. KAPL conservatively estimates that the total accumulated radiation exposure to a member of the public living continuously next to the Knolls Site during all the time the facility has been operating (over five decades), would not exceed 130 milliRem. For perspective, this is less than the average exposure a

person in the U.S. receives in six months from natural radiation sources. Results from the extensive environmental monitoring program confirm that Knolls Site operations have had no adverse effect on human health or the quality of the environment.

Regarding the actual dismantlement of the SPRU facilities, the process of disassembly and removal of SPRU facilities will be accomplished in a careful, methodical manner designed to prevent the release of radioactivity. Containment and control of radioactivity will be maintained during disassembly. Dismantlement will be performed in a manner that prevents or contains dust from building disassembly and prevents radioactivity from entering the environment. Careful monitoring of potential release points, such as ventilation exhausts and storm drains, and continuing environmental monitoring will be used to confirm that an environmental release is not occurring.

Comment By: Robert Stater
Form: Asked During Public Meeting
Date: May 25, 2006
Subject: Contamination/Environment

Comment:

The SPRU facility besides what you've -- the containment of the SPRU facility has been breached. It is breached. It is not a tight facility and you can't call it totally safe, because it's leaking radioactive water and it's leaking particulate radioactivity into the office areas of the laboratory and it's been doing it for 30 or 40 years. And I'm not talking off the top of my head. I'm talking about KAPL documents that report this stuff. Radioactivity has leaked into the hallways, into the office -- essentially, the entire laboratory is contaminated. It's in the hallways. It's in the offices. It's in the technical library. It's in the parking lot. It's down by the railroad sidings. It's down by the landfill. And there are employees that have carried this radioactivity as far away as Johnstown. That's the only ones I know about. There may be further ones. A guy in Johnstown had his wife's vacuum cleaner confiscated by the DOE, because it was so highly contaminated with radioactivity. So to say that this facility is stabilized and is not leaking anything and it's not a risk to the employees and it's not a risk to the public just is not true. It's a high-risk facility. And another way you can look at it from the standpoint of high risk is -- well, somebody was talking about safety report, another question. How about a plane crashing into this facility? How about a fire? We had the biggest fire in Schenectady in a hundred years down at the Peek Street Plant. The Peek Street Plant was built in a residential neighborhood in Schenectady, New York. It was a little bit smaller than SPRU. It went up in a roaring inferno. And because of some efforts by myself and my friends, we had finally gotten the DOE in there to clean that place up, because they used it and then they walked away and they didn't decontaminate it and they wouldn't admit that it was radioactively contaminated. The only way we got the DOE in there was Mayor Ducey went to Governor Cuomo and told him what the problem was and showed him the documents we had provided. And the DOE was in there within a matter of days. Then, they proceeded to clean the place up covertly. They went in there and they hauled away truck loads of dirt and cleaned up the inside of the building and never told anybody what they'd done or what the state of the building was after that. But the grounds even outside of that Peek Street facility were contaminated to a level 700 times higher than the New York State limits. And that was along an old railroad track which was now converted into a bike path and kids played on this bike path. Somebody went down there one night at midnight, took a soil sample out by the fence and they got a radioactivity level that was 700 percent higher than the state limit. Oh, they took the soil sample right next to a Raggedy Ann doll that happened to be laying up against the fence, because the kids were around there all the time. Now, I'm just giving a little past history here, because if you don't know this stuff, then when you say the place is stable and it's not leaking anything, KAPL's own documents show that's not true.

KAPL's Response:

There is an indication of a release of radioactivity from the SPRU facility to the soils around the foundation; groundwater adjacent to the foundation contains very low levels of radioactivity. Therefore, the water is collected and processed to remove the radioactivity prior to release. Additional information is provided in the KAPL-4855, *Knolls Site Environmental Summary Report*, August 2005, available to the public at the Niskayuna Library. The residual radioactivity in the soil poses no threat to KAPL workers, the public, or the environment.

The majority of Building G2 external to the actual SPRU processing area was decontaminated and released for other uses, e.g., offices, shops, library storage, etc. Considerable effort was expended in this conversion process to remove any loose radioactivity and ensure barriers were in place to contain fixed radioactivity. Radiological controls were established for any work in these converted areas to preclude inadvertently disturbing any normally inaccessible radioactivity that might exist. Over the years, however, there were a few isolated occasions when a small amount of low-level radioactivity was found in the accessible areas of this building. Corrective actions were promptly taken to contain the radioactivity and preclude similar occurrences. There were no instances of personnel becoming contaminated as a result of the occurrences.

The Peek St. facility, a self-propelled gun assembly building from WWII, was fixed up and used by KAPL in the late 1940's- early 1950's as a temporary research and development laboratory prior to the construction of the Knolls Site. Work performed at Peek St. involved theoretical physics studies, engineering design, non-radioactive liquid metal technology development, and some limited work with radioactive materials. When KAPL left in 1955, the facility was radiologically surveyed and released to the standards of the day. In 1988-1989, the facility was re-surveyed to today's standards by the DOE and found to present no health hazard. A parallel survey by the New York State Department of Health reached the same conclusion. In addition, nothing above normal background was found on any neighboring property. The slightly elevated levels of radioactivity and beryllium in the facility were subsequently remediated to today's standards with the concurrence of the New York State Department of Health and Environmental Conservation and certified as such. The property owner and State, County, and Schenectady officials were briefed on initial survey results, remediation progress, and the final release report and certification. The final release report is available from the Knolls Atomic Power Laboratory on request. The very small quantity of radioactivity at the Peek St. property never posed a threat to public health or the environment.

Comment By: Robert Stater
Form: Asked During Public Meeting
Date: May 25, 2006
Subject: Contamination/River

Comment:

And I ask that in the context of what's happened between the time you put it in and right now, because there's been a lot of bad things happen with this weapons factory. For instance, one of the earlier questions was about the river. (River) The radioactivity in the river in the sediment downstream from KAPL is 17 times higher than the radioactivity upstream from KAPL. Now, the radioactivity upstream from KAPL came from bomb fall-out from testing in Nevada. The radioactivity downstream from KAPL also contains that small amount, but all the rest was dumped from H building into the river for 10 years. And I have a graph of the activity in the river sediment over that 10-year period. And at the end of 10 years, the activity in the river has gone straight up. I mean, it's accelerating at a very rapid rate. And at that time, for some strange reason, the dumping was terminated. I think the reason was if they kept going, they saw the river glowing in the night.

KAPL's Response:

KAPL has always been a research and development laboratory, not a manufacturing facility. KAPL has had effective environmental control programs in place since operations at the Knolls Site began in 1949. These programs met or exceeded the requirements of laws and regulations applicable at the time.

Since the inception of KAPL, work with radioactive materials has always been carefully controlled. The limits for release of radioactive material in effluent water, mutually agreed to by KAPL and appropriate government agencies, have never been exceeded. In addition, KAPL has performed comprehensive environmental monitoring of the Mohawk River since 1948, before operations at the Knolls Site began. In 1955, based on data obtained from the hydraulic and hydrology study of the Mohawk River conducted by the U.S. Geologic Survey and the results of previous environmental monitoring, the Mohawk River Advisory Committee concurred with the use of the dilution potential of the river in determining appropriate discharge limits. The Mohawk River Advisory Committee consisted of representatives of the New York State Departments of Health, Environmental Sanitation, and Pollution Control, and the City of Schenectady. Most of the radioactivity was dispersed and carried away by the river. Over time, however, routine periodic environmental monitoring conducted by KAPL indicated an increase in radioactivity in river bottom sediment; first immediately adjacent to the Site outfall; while later, lower concentrations were found several miles downstream.

To prevent further buildup, KAPL significantly reduced radioactive discharges in early 1964, eliminating reliance of river dilution, and adopted a program to further reduce

discharges to the lowest practical levels - less than 0.001 curie per year since 1977. More extensive KAPL environmental sampling programs in 1978, 1992, and 2002, which included biological, sediment, and water sampling, confirmed that the residual radioactivity remains buried in the sediment, is not being released to the water, is not being taken up the food chain, and is therefore having no adverse effect on human health of the environment. For perspective, the total radioactivity of KAPL origin is less than 10% of the naturally occurring radioactivity found in sediment in the same region. The amount of radioactivity present in the sediment will continue to decrease by its natural decay.

The New York State Department of Environmental Conservation participated in the 2002 sampling program by observing KAPL sampling and splitting select samples for independent analysis, with results in good agreement.

For additional information on the history of discharges to the Mohawk River see KAPL-4855, *Knolls Site Environmental Summary Report*, August 2005. For accurate information regarding the environmental conditions of the Mohawk River sediment downstream from KAPL, refer to KAPL-4808, *Knolls Atomic Power Laboratory, Mohawk River Survey Report*, May 1995 and KAPL-4850, *Knolls Atomic Power Laboratory, Mohawk River Survey Report*, Calendar Year 2002. These documents are available to the public in the Niskayuna Library.

Comment By: Jim and Linda Weinman
Form: Written; submitted by email
Date: May 22, 2006
Subject: Geology

Comment:

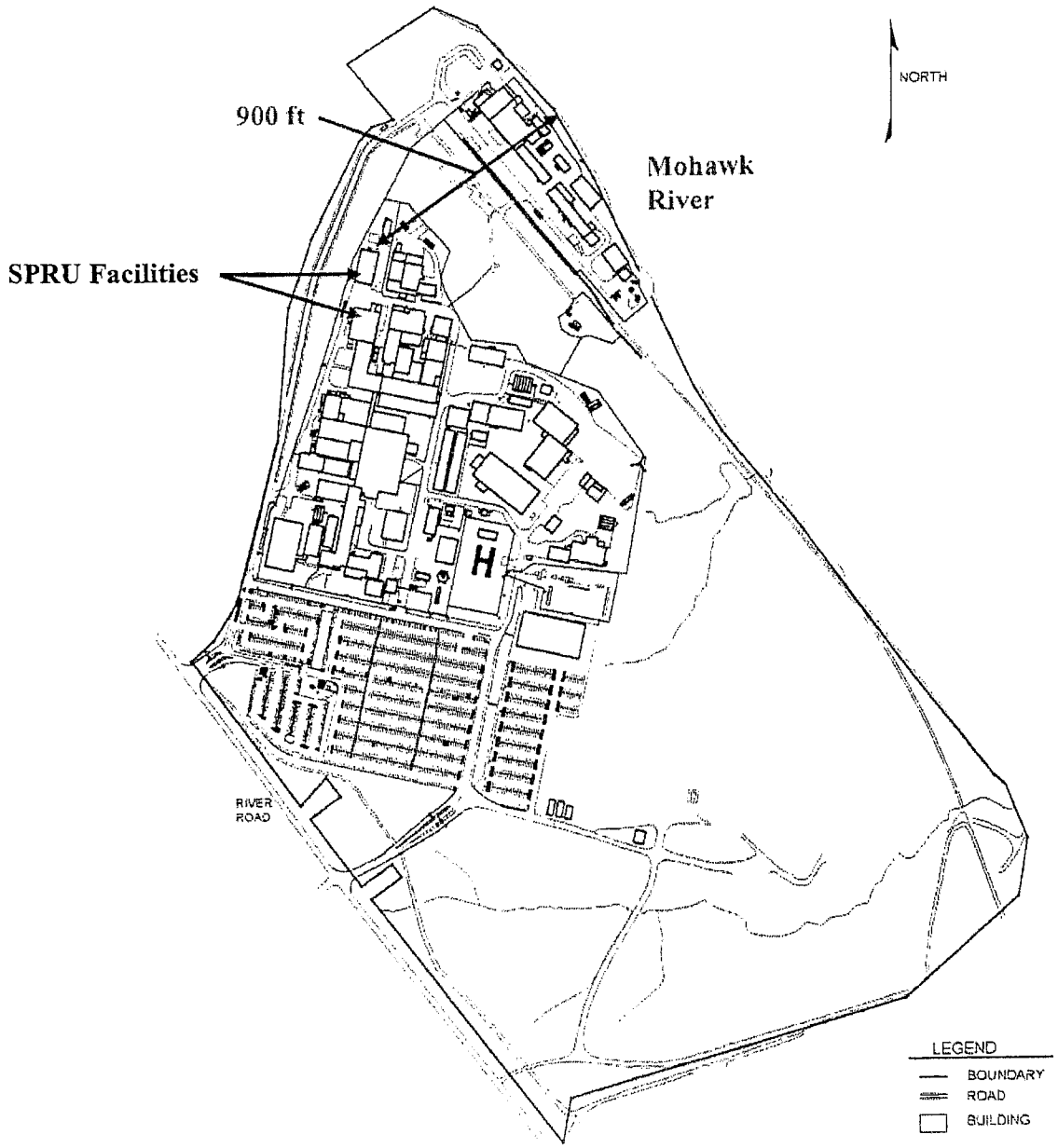
Concerning the Separation Process Research Unit (SPRU), we have some comments to make. As is stated in the newspaper article by Anne Miller, staff writer for the Albany Times Union, the SPRU facility is "on the back corner of Knolls, just above a bluff overlooking the Mohawk River." You are probably aware that the soil along the river side is a loamy- clay soil mixture which is very unstable and subject to mud sliding. This can be seen on route 146 coming up from the Mohawk river bridge in Aqueduct. Several slow moving mud slides have occurred in this area along the road side.

The same could very well happen if in fact the bluff on which the SPRU facility sits is also on unstable soil. This certainly needs to be investigated before any decision is made concerning the timing of the removal of the SPRU facility and the associated contamination. In 30 years the bluff may collapse bringing contamination with it which could eventually reach the Mohawk River.

(Alt 4) Our recommendation is to spend the 160 million dollars and remove the buildings and the contamination before an event such as the collapse of the bluff on which the SPRU facility sets occurs.

KAPL's Response:

The SPRU facilities do not sit on a bluff next to the river; they sit about nine-hundred feet back from the river on the upper level portion of the site. The foundations of the SPRU facilities rest in rock-like basal-till, not the loamy-clay soil mixture to which you are referring. Basal till has rock-like properties, being dense, tough, and compact as a result of its formation under the great weight of ice during the ice ages. There is no danger of SPRU facilities sliding into the river. See the attached map for reference.


NORTH
900 ft
Mohawk
River
SPRU Facilities
H
RIVER
ROAD
LEGEND
BOUNDARY
ROAD
BUILDING

Comment By: Sylvia Winer
Form: Written; submitted by email
Date: May 21, 2006
Subject: Health

Comment:

As we live not far from the river, we felt compelled to voice our concerns.

We would like to see the removal of both structures and a tunnel between them. There seems to be a very high rate of people who live in the surrounding area that have died of cancer.

KAPL's Response:

KAPL is not aware of any studies showing a higher than normal cancer rate in the surrounding area. The comprehensive Knolls Site radiation-monitoring program shows that the radiation exposure to persons off-site is too small to be measured. Therefore, KAPL has employed calculational techniques that conservatively estimate potential exposures. These calculational techniques consider exposure pathways that include fishing, boating, and swimming in the Mohawk River, using the river water for drinking and irrigation, breathing the air, and eating regionally produced animal and vegetable food. The most recent assessment for 2004, discussed in the references below, shows that the maximum potential radiation exposure to a member of the public was less than 0.1 milliRem for the entire year. This is about one-twentieth of the exposure that a person would receive from naturally occurring radiation from a single cross-country airplane flight. KAPL conservatively estimates that the total accumulated radiation exposure to a member of the public living continuously next to the Knolls Site during all the time the facility has been operating, over five decades, would not exceed 130 milliRem. For perspective, this is less than the average exposure a person in the U.S. receives in six months from natural radiation sources. Every day each of us is exposed to radiation from natural sources, such as cosmic rays from space, radon from earth, and natural minerals in the soil. Results from the extensive environmental monitoring program confirm that Knolls Site operations have had no adverse effect on human health of the quality of the environment.

For additional information, please see KAPL-4855-, *Knolls Site Environmental Summary Report*, August 2005, and KAPL-4854, *Environmental Monitoring Report, Calendar Year 2004*. These documents are available to the public at the Niskayuna Library.