LAKE ONTARIO ORDNANCE WORKS

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM FOR FORMERLY USED DEFENSE SITES

WASTE WATER TREATMENT PLANT SAFETY PROJECT

AND

NIAGARA FALLS STORAGE SITE

FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM

PUBLIC WORKSHOP

LEWISTON, NEW YORK

NOVEMBER 3, 2010

Minutes of Public Meeting held at the Lewiston Senior Center, Youngstown, New York on Wednesday, November 3rd, 2010 commencing at 6:04 p.m.

APPEARANCES:

VINCENT AGNELLO, Porter, NY

NIDAL AZZAM, EPA

MICHELLE BARKER, Regional Technical Specialist

KENNETH BARNES, SR, community member

MATTHEW BAVARO-PHELAN, community member

WILLIAM BOECK, Lewiston, NY

RENTON BOND, community member

ROBBIE BOND, community member

CHARLES BOOS, Lewiston, NY

JOAN BRODERICK, community member

JASON BRYDGES, community member

JOHN BUSSE, LOOW/NFSS Program Manager

JOE CALARCO, community member

DAN CAPPY, community member

DANIEL CISZEK, on behalf of Congresswoman Louise Slaughter

CHRIS CLAYTON, Department of Energy

BOB DARR, Support Contractor, SM Stoller

MARK DELFRATTE, community member

DON DEMARCO, geologist

PAUL DICKY, community member

TRAVIS DIEZ, community member

GRETCHEN DULING, Youngstown, NY

APPEARANCES CONTINUED:

KEITH FOX, community member

JOE GARDELLA, Buffalo, NY

PAUL A. GIARDINA, EPA

JOEY GILLESPIE, Support Contractor, SM Stoller

TIM HENDERSON, community member

KENT JOHNSON, Albany, NY

KAREN KEIL, Risk Assessor

RICHARD KNOWLES, community member

ARLEEN KREUSCH, Outreach Team

CHARLES LAMB, community member

JACK LLOYD, community member

GEORGE MAZIARZ, community member

ED MCGREEVY, Youngstown, NY

KEVIN MYERS, Lewiston, NY

NANCY ORSI, community member

MATTHEW PATTERSON, community member

MEGAN PELKA, court reporter

JANE POWELL, community member

JIM RAUCH, Snyder, NY

RALEIGH REYNOLDS, community member

JANE RICHARDSON, Youngstown, NY

NEIL RIORDAN, Mayor of Youngstown, NY

APPEARANCES CONTINUED:

ANN ROBERTS, community member

MARY ANN ROLLAND, Youngstown, NY

JANET SCHIFF-DIFIORE, community member

MARY SCHREINER, Niagara University

BILL SCOVILLE, Shaw Group

MICK SENUS, LOOW Program Manager

JIM STACHOWSKI, LOOW Project Engineer

JANE STATEN, NFSS Project Manager

FRED STEPHENS, community member

WENDY SWEARINGEN, community member

NATALIE WATSON, Outreach Team

MARN A. WELD, community member

ROBERT WELLER, community member

JOHN P. WINTER, community member

AMY WITRYOL, Lewiston, NY

GUY ZACZEK, Niagara Falls, NY

BECKY ZAYATZ, Lockport, NY

MS. KREUSCH: Thank you for coming tonight. My name is Arleen Kreusch. I'm the Outreach Program Specialist for the Niagara Falls Storage Site and the Lake Ontario Ordnance Works work site. Just to go over some meeting logistics, the restrooms are on your right, my left and the exits, there's two in the back and one when you came in by the sign- in table.

We're going to change the layout of this meeting tonight a little bit. Instead of doing the presentations and then doing the poster session and then doing the discussion portion, we're going to have a small discussion portion after each presentation because there's four presentations tonight.

Our first presentation will be Mick Senus. He's going to talk about the Office of Economic Adjustment safety project at the former Lake Ontario Ordnance Works waste treatment plant. Second will be Jim Stachowski. He's going to talk about the Lewiston-Porter School property and Occidental

property sampling and then next, there will be John Busse who will be talking about Building 401 demolition at Niagara Falls Storage Site and also will be leading the technical facilitation presentation and then, also here tonight from the USEPA is Paul Giardina and Chris Clayton is going to be here from the Department of Energy. I don't believe he has arrived yet, so with that, I will turn the meeting over to Mick Senus.

MR. SENUS: Thank you, Arleen. Good evening. My name is Mick Senus. I'm Project Manager for the Former Lake Ontario Ordnance Works site for LOOW. The Corps is working in conjunction with the Town of Lewiston to address public safety concerns at the former waste water treatment plant at LOOW.

I'm here to present project summary and update and proposed schedule. Please note that no work has started yet. Mobilization for this project is planned for later this spring. The figure on the slide shows the former LOOW in green. Niagara Falls Storage

Site is located within the developed area of LOOW in the central portion of the figure. The former waste water treatment plant is on the northern border of the NFSS shown in blue. The project's primary objective is to address public safety hazards resulting from deteriorated World War II era facilities at the waste water treatment plant.

The project will be split into two phases. Phase one being the removal of structural hazards addressed by the Corps and phase two being the site security and installation of signage addressed by the Town of Lewiston. Walking through the site, you will see evidence of trespassing such as ATV tracks, bonfire debris, trash, graffiti and ballistic impacts to most of the plant structures.

Physical hazards at this remote location include several falling and drowning hazards and open pits and vaults, tripping hazards due to dense vegetation surrounding existing structures and overhead hazards such as the concrete canopy at the former acid

neutralization building.

To correct these problems at the site, the Office of Economic Adjustment or OEA has funded the Corps and the Town of Lewiston to mitigate these public safety hazards. I would like to mention at this time that this is a safety project and neither a FUDS nor FUSRAP project.

In 2009, funding was requested by Congresswoman Slaughter and the Town of Lewiston from the OEA. In August and September of this year, funding was received by both the Corps and the town for their respective portions of the project.

This spring, the Corps will begin the first phase of the project which includes demolition of the deteriorated structures, foundations, steel railings and wooden tanks, back filling, excavations and disposing of demolition debris and water, in partnership with the Corps, the town will complete the project and secure the site by installing fencing grates over open pits and vaults and

"No Trespassing" signage. Further to the west, the town will also remove a small section of the 30-inch outfall as it crosses at the Southwest Drainage Ditch.

The photo on the left is an example of one of the overhead hazards from the concrete canopy I mentioned on the previous slide. On the figure to the right of the screen, the waste water treatment plant is located one half mile south of Balmer Road. The property is about 22 acres in size and has been owned by the Town of Lewiston since 1975. The site is bound on the east by Lutz Road also known as the former A Avenue and by National Grid power easement to the west.

Chemical Waste Management property is to the north and east and the Niagara Falls Storage Site property is located to the south. This 1942 photograph is a panoramic view of the site at the time of the operation. Various structures associated with the plant from left to right are: The sewage pumping station, an Imhoff tank in the background, a

Venturi Vault adjacent to the intersection of the two roads and on the far right, the Acid Neutralization Building.

The intent of the former waste water treatment plant in 1942 was to treat waste water generated solely by DoD operations, sanitary waste. Acid waste, TNT production waste and other process-related waste water. In the photograph at the bottom of the slide, you can see the plant during operations as viewed from the western border of the property.

Please note that in order to show this photo, the map and landscape view, I need to orient you to the north arrow on the left side the screen. NFSS is to the south on the right side of the screen and this is Lutz Road. At the top of the slide is the site map of the waste water treatment plant. A single sanitary sewer line entered the waste water treatment plant from the east. Sanitary waste was first mixed in a Venturi Vault shown here (indicating) in that red square. After mixing

the sanitary waste, with settle in Imhoff tank. At this point, liquid waste was gravity fed from the Imhoff tank to a collection tank and solid waste was transferred to one of the two sludge beds on either side of the Imhoff tank. This is the northern sludge bed and southern sludge bed.

Upon entering a collection tank, the sewage waste waster was combined with treated acid waste and chemical waste. The resulting mixture was then gravity transferred to the former mixing house where it was combined with TNT production waste. Once mixed, the treated waste water was discharged to the Niagara River through the 30-inch diameter outfall pipe.

Last month, the Corps was awarded a contract to deconstruct the above-ground, reinforced concrete at the Acid Neutralization Building. The contractor was also scoped to remove all steel railings and two large wooden tanks. Both above-ground and below-ground structures of the pump house and Venturi Vault

will be completely removed. All water and structures below grade at these two structures will be removed, characterized and transported in accordance with state and federal regulations and the disposal facility's waste acceptance criteria. Once pump house and Venturi removals are complete, excavations will be back filled with clean fill.

All the structures as mentioned above were targeted for deconstruction because they presented the greatest hazard to public safety. This is a 1942 photo of the Acid Neutralization Building. The building was used to neutralize acid received at the plant. The bottom photo was taken this summer showing the east and north faces of the remaining structure. The above-ground concrete canopy will be removed.

This photo shows two large wooden tanks on site that were used for lime storage. During the treatment process, lime was used to make pH adjustments to acid waste. Both of these deteriorated tanks will be also removed. The

upper photo is what the Imhoff tank looked like at the time of construction. The lower photo was taken from the top of the Imhoff tank. In the background, you can see the Acid Neutralization Building. Besides the steel railings seen here, the Corps contractor will also remove similar railings at the collection tank and chlorine tank.

This is also a 1942 photo of the Venturi Vault taken at the time of the construction. The Venturi Vault system was used to promote aeration of sanitary waste water system. The structure, water and sludge would be entirely removed and then, back filled with clean number two crushed stone, four to six inches of top soil and annual rye grass will then be placed over the clean fill.

In addition to the Venturi Vault, the pumping station will also be entirely removed. Both these structures will also have entering and exiting utilities grouted with up to two feet of the concrete. Any permanent structures placed on site will be installed by

the Town of Lewiston. This phase of the project will include construction of security fence installation of no trespassing signs, installation of permanent grates over all pits and vaults and removal of the 30-inch out fall portion as it crosses the Southwest Drainage Ditch.

The plant fence line will be constructed adjacent to this road at the western edge of the property. This is the view looking south towards Niagara Falls Storage Site. This area is the only remaining portion of property that is not currently bounded by the fence or by a fence, excuse me. Once complete, this fence will restrict public access from Chemical Waste property southward towards the Niagara Falls Storage Site.

This photograph was taken this summer shows the pit and 24-inch wood pipeline on the western edge of the Acid Neutralization Building. The lower photo is an open manhole on the north side of the building. In both these cases, grates will be placed and secured

over these open areas. This photo shows Southwest Drainage Ditch at the time of construction at the top. 30-inch outfall pipeline was built to cross over the ditch as it traversed from the waste water treatment plant to the Niagara River. The lower photo shows the 30-inch outfall as it intersects the Southwest Drainage Ditch.

This is a portion of the line that would be cut and capped. Note that it's a little bit difficult to see what looks like lightning or a crack in the camera is actually branches from a tree perpendicular to this photo of the Southwest Drainage Ditch, you can see water down at the bottom of the ditch. Finally, this slide represents the Corps' portion of the project, beginning with the work plan submittal this December followed by mobilization in the spring and final site restoration in the summer.

This concludes my portion of the presentation. I'll take questions at this time. Yes, sir.

MR. HENDERSON: Where will the demolition debris go?

MR. SENUS: Pardon me?

MR. HENDERSON: Where will the demolition debris go once you're done tearing everything down?

MR. SENUS: That's still to be determined by the contractor. When we receive their work plan, their proposed disposal facility, we can go ahead and make that public later on this winter. Yes, ma'am?

MS. ROBERTS: Ann Roberts. Are there any radiological issues with the debris of the buildings that you know of?

MR. SENUS: I'm sorry, can you repeat that?

MS. ROBERTS: Are there any radiological issues with the building that you're demolishing on the waste water treatment plant?

MR. SENUS: We're going to go ahead and rad screen everything, whether it's going to be demolished or whether the steel railings

will be taken off or anything taken off site.

MS. ROBERTS: Is there any indication that there is a possible problem or are you anticipating any?

MR. SENUS: Not at this time, ma'am, no.

MS. ROBERTS: Thank you.

MR. SENUS: Yes, Dr. Boeck?

DR. BOECK: Follow up on that, what radiation training will the contractors be receiving? I'd like to go back to slide five. We have a number of red buildings there along that railroad line. That's the location where the reactor KAPL waste was loaded and unloaded on this site and those buildings at various times store radioactive waste, the foundation. So, what training will any of the workers, Town of Lewiston and contractors, receive as they work in this area?

MR. SENUS: Well, this is the footprint at the time of construction. A lot of those buildings are no longer there.

DR. BOECK: The pads are still there. The pads are contaminated.

MR. SENUS: Right. They will not be in this entire 22 acres. They will be located -- this deconstruction will occur in just a few of those buildings that are safety hazards right now.

DR. BOECK: So, you will fence off the areas that are all there at the former pad area?

MR. SENUS: Yes, sir.

DR. BOECK: To keep people from wandering there accidentally?

MR. SENUS: This is Town of Lewiston property. There should be nobody in there right now. The entire area will be sealed off.

DR. BOECK: No, I'm referring to the construction laborers.

MR. SENUS: Construction workers, yes. Any other questions? Yes, sir?

MR. MYERS: Kevin Myers. Can you explain the 30-inch pipe? You said it's going to be capped, but how much is going to be removed?

MR. SENUS: Just as it crosses the

Southwest Drainage Ditch.

MR. MYERS: Who is in charge of the rest of the --

MR. SENUS: The Town is in charge of capping -- removing and capping and maintaining.

MR. MYERS: And then, that pipe continues all the way to the river? Who is in charge of that?

MR. SENUS: Yes, sir.

MR. MYERS: Whose responsible for that?

MR. SENUS: The same property owners that are responsible now.

MR. MYERS: Okay.

MR. SENUS: The only reason they're removing that section across the ditch is because it's an attractive nuisance right now. Any other questions? Yes, ma'am?

MS. ROLAND: My name is Mary Ann Roland. Where is the drainage ditch on that map? Is it the green thing that goes around the bottom?

MR. SENUS: No, ma'am. The Southwest

Drainage Ditch is off the map.

MS. ROLAND: Oh, it's off the map?

MR. SENUS: Yes, ma'am. This is just waste water treatment plant proper, but it would be --

MS. ROLAND: Going north?

MR. SENUS: To the west. And again, I apologize for this map, but to show it landscape, I needed to turn it to the left, but this is the western boundary to the Southwest -- or the, I'm sorry, the 30-inch outfall is in this direction (indicating). And the Southwest Drainage Ditch is down in this area (indicating).

MS. ROLAND: Does that go all the way to the Four Mile Creek?

MR. SENUS: Where it goes, it leads up to the edge of the school property.

MS. ROLAND: Oh, to the school property?

MR. SENUS: That's the intersection of that Southwest Drainage Ditch and the 30-inch outfall are adjacent to the school property and Occidental. Does that help?

MS. WELD: Marn Weld. This is a lay question. Page 13 showing a well hole and then, this big square sort of hole in the ground, you're planning on putting a grate on this?

MR. SENUS: Yes, ma'am.

MS. WELD: Why wouldn't it be filled in, you know, tested, filled in?

MR. SENUS: This a precautionary measure to keep any trespassors from falling in that grate. This is not an end to the project. There may be further remediation of these buildings as well as further demolition but provided the money and resources given to us by OEA and that appropriation which was just over $1 million, this is about as much as we can do at the site.

MS. WELD: Thank you.

MR. SENUS: Welcome. Any other questions? If there's no other questions, I will be followed by Jim Stachowski who will present the Lew-Port School sampling and Occidental supplemental sampling this past August.

MR. STACHOWSKI: Good evening, ladies and gentlemen. Can everyone hear me well? My name is Jim Stachowski. I'm Project Engineer for the Lake Ontario Ordnance Works site. The Army Corps of Engineers in conjunction with the Lewiston-Porter School Board and their consultant Dr. Joseph Gardella developed an investigation program to evaluate potential environmental impacts attributed to the Department of Defense, the Manhattan Engineering District and the Atomic Energy Commission on property owned by the Lewiston-Porter School System.

We also developed an investigation program to evaluate potential Department of Defense contamination on property owned by the Occidental chemical corporation. Both of these sites are within the boundaries of the former Lake Ontario Ordnance Works site. I'm here this evening to present preliminary results from those investigations.

The Corps conducts investigations on the former Lake Ontario Ordnance Works site in

accordance with the Defense Environmental Restoration Program for Formerly Utilized Defense Sites. I'll refer to that program as FUDS, Formerly Used Defense Sites. We also perform environmental services and environmental investigations at the Niagara Falls Storage Site under the Formerly Utilized Sites Remedial Action Program, which I will refer to as FUSRAP.

The figure here to my right shows the boundary of the Lake Ontario Ordnance Works site in green. The Lewiston-Porter school property is shown on the left side of that -- of the Lake Ontario Ordnance Works in white in this area right here (indicating).

Now, the Lewiston Porter School property is located on the portion of the former Lake Ontario Ordnance Works that was not developed by the Department of Defense. The Occidental property is located further in on the Lake Ontario Ordnance Works site. It's located just south of Balmer Road.

That property is located adjacent to

former Department of Defense facilities that were used for TNT manufacturing and also waste water treatment operations which Mick just previously talked about. Also shown on this figure for reference is the Niagara Falls Storage Site. This is the Lewiston-Porter property, this is the Occidental property and here is Niagara Falls Storage Site. The investigation programs that we developed for the Lewiston-Porter School property were done under both the FUDS program and the FUSRAP. Now, the FUDS program was designed to evaluate potential impacts from former Department of Defense activities, environmental impacts attributed to chemicals.

The FUSRAP program was designed to evaluate and remediate former activities by the Manhattan Engineering District and Atomic Energy Commission associated with early atomic weapons production. As such, that program focuses more on the radiological contamination and in fact, our services at the Niagara Falls Storage Site do focus on the radiological

elements.

The investigation program that we implemented at the Lewiston-Porter School properties was done under both the FUDS and FUSRAP programs. That means we evaluated both the potential for chemical impact due to previous Department of Defense activities and also, radiological impacts due to previous Manhattan Engineering District and Atomic Energy Commission activities.

Now, the investigation program for the Occidental property, that was done under the FUDS program and at that site, we evaluated the potential for environmental impacts due to chemicals from former Department of Defense activities. Next. This aerial photograph on the slide shows greater detail of the Lewiston Porter school property.

The approximate property boundaries are shown by the yellow and then, white line in this area. Now, shown on this aerial photograph on the left side or the west side of that property is a developed portion of the

school campus. You can somewhat distinguish that by the lighter color and also, the light grey color are the school buildings. Also shown on this figure is the Southwest Drainage Ditch where it crosses the Lewiston-Porter property.

The Southwest Drainage Ditch basically flows in this area north and ultimately discharges into Four Mile Creek. This location right here is where water within that ditch enters that school property. This location is where water flowing in that ditch exits school property. Also shown on this photograph is the 30-inch outfall pipe that Mick had talked about just a little bit earlier.

That outfall pipe originates at the former waste water treatment plant and terminates at the Niagara River. Shown here on this photograph, this line is the 30-inch outfall line. Now, our investigations were centered on undeveloped portions of the Lewiston Porter school property and undeveloped -- and the

general area where our investigations are, are shown or outlined here with this yellow line. That is to say, we didn't do investigations on the actual campus of the developed property. There are three general areas in this undeveloped area that were investigated. Soil disturbances that were identified by evaluation of aerial photographs, previous aerial photographs, we evaluated and did investigations on the Southwest Drainage Ditch and we also evaluated and investigated a soil mound located immediately west of the school campus.

The green symbols here shown on this figure are areas where the soil anomalies were investigated. There were nine anomalies that were part of the investigation program. One of those anomalies in the southeast corner we termed a pit. There was an anomaly on the north side with a trench. The remaining anomalies were classified as mounds.

There were six locations within the Southwest Drainage Ditch that were evaluated.

The northern most location or the most downstream location was at the position where the property boundary crosses the Southwest Drainage Ditch. The southernmost or most upstream location was the position where the Southwest Drainage Ditch enters the property. The four remaining locations were somewhat equally-spaced between those two locations with one variation.

This location here (indicating) was moved closer at the position where the 30-inch outfall crosses the Southwest Drainage Ditch. And the last area that we evaluated was this mound east of the school campus. Now, on this aerial photograph, that mound is shown as the orange-colored circle.

Previous environmental investigations conducted by the Corps in 2001 determined that there was elevated radioactivity in this mound and our investigations were conducted to further evaluate that condition. The investigation program was presented to the Lewiston-Porter School Board on June 15th and

it was presented also to the public on June 23rd. The actual field investigations were conducted during the period August 23rd to August 27th.

What I'm going to do in the following slide is provide a bit more detail on exactly the scope of our investigations, how we actually conducted the work, the kind of samples and field measurements we had taken in each one of the three areas, those being the soil disturbances, the Southwest Ditch and the mound and then after that, I'm going to talk about the preliminary results, our field observations, our field measurements and basically, what we saw and what we learned from all three of those areas.

Afterwards, I'll talk about the investigation program at the Occidental property. This slide summarizes the investigations that were performed on the soil disturbances. There were nine disturbances in total that were selected for investigation. As I mentioned previously, one of those in the

southeast corner was a pit or what we called a pit. One was a trench and the remaining were mounds. At each one of those locations, field measurements were taken, field screening measurements were taken. Three types, three categories of field tests were done. We screened for volatile organic compounds using a field instrument. We had a field test to measure for explosive residues and we also had a field instrument to measure radioactivity on the soil. Soil samples were also taken, undisturbed soil core samples were taken using a mechanical drilling rig.

In general, the soil core samples were taken down to a level where we encountered undisturbed soil or to a depth of four feet, whichever was greater. Those soil core samples were retrieved. Geologists on site did inspect them for indications of the potential contamination such as staining, odors, discoloration.

We also did the field screening on all soil cores that were extracted from the

ground, that is, the volatile organic compounds were screened throughout each soil core, radiological screening was done and a field test kit for explosive residues also was used. From each location, two soil samples were also selected for laboratory analysis. One soil sample was from the surficial material and by surface, I mean the top six inches of soil.

The next soil sample was selected between that interval from six inches to the termination depth of the hole based on our field observations. Now, in many -- in some areas, one soil borings was drilled. In other areas where some of the mounds or features were a bit larger, we drilled up to four soil borings and the investigation program was designed to accommodate larger disturbances or anomalies with more investigation holes.

So, in total, there were nine disturbances evaluated and actually, there were 11 investigations done. That pit in the southeast corner, we actually evaluated three

different areas of that feature. This is a photograph that shows the mechanical drilling rig equipment that was used to take the soil core samples. Now, this vehicle is mounted on a tractor. It uses a pneumatic hammer to advance a four-foot long soil core sampler.

The tool was designed to take a continuous, undisturbed soil core sample. It's four foot long so we'd get a four-foot core. In locations where we had a sample greater than four feet, we would run the tool back down in the hole and continue to collect samples until we were done. Again, as those soil cores were retrieved, we evaluated them not only for impact and screen them, but the geologist in the field also looked at the soil core to determine were we, in fact, in native, undisturbed soils.

This photograph shows one of the anomalies or mounds being investigated. Now, this particular mound here is, if you'll refer back -- if you remember back a few slides ago when I showed the aerial photograph of the

Lewiston-Porter property and in particular, the position where the 30-inch outfall line crosses the Southwest Drainage Ditch, this mound is just immediately north- northeast of that intersection of the 30-inch line and the Southwest Drainage Ditch. It was a relatively large mound and as such, we drilled four borings on this, on this feature.

The soil core samples were taken down to where we hit native soil. Now, I'm going to talk briefly about how we conducted the field investigation within the Southwest Drainage Ditch. There were six locations that were sampled, the first location being the northern most point or the most downstream point where water flowing within the Southwest Drainage Ditch exits the Lewiston-Porter School property.

The most upstream or southernmost point being the point at which water enters the property and then, the other four were spaced in between that. At each location, we took water samples, sediment samples and soil

samples. Now, the procedure in which we investigated and sampled these locations was we first did the most down gradient or the northern most location and then successively, we proceeded upstream and that was done to prevent the potential or possibility of cross-contamination by our activities within the ditch.

So, we started north and sequentially moved down to that last location where the water actually enters the property. At each location, we sampled water, sediment and soil in that sequence and again, that was done to prevent the possibility of cross-contaminating the overlying media. First, we took a water sample.

Then, we take our sediment sample which tends to disturb it a little bit and you get some fines and organic material in the water. After that was done, then we took soil core samples below the material that was deposited in the channel or the natural, organic, decaying material.

Field screening was done in the same manner as the screening was performed for these anomalies or the soil disturbances that we investigated on the undeveloped property, that is, we screened for volatile organic compounds. We did a field test for explosive residues and we screened for radioactivity. Water samples taken from each location. There were field measurements done in the field, water quality tests and those were done for pH, temperature, conductivity, dissolved oxygen and oxidation reduction potential.

We also submitted samples from each location for laboratory analysis for chemical and radionuclides parameters. Now, on the soil disturbances, the samples that were submitted for laboratory analysis, those were done for chemical parameters. In the same manner, the sediment and soil core samples that were taken were also sent for laboratory analysis and in this case, for radionuclides parameters which is the FUSRAP program and chemical parameters which is the FUDS program.

This photograph shows the Southwest Drainage Ditch. Now, the view is north, so the water -- actually, it's a pretty low energy water course, so there's not a lot of active flow that you actually see in that, but this view is north and the location that this was taken from is where the Southwest Drainage Ditch enters the school property and actually, at that location, there's a small bridge and we're standing right on the bridge taking a picture of that. So, it's looking north. It's that most up gradient location and if you'll look at that, the water in that channel is flowing into the picture and ultimately, it discharges into Four Mile Creek.

This is one of the environmental scientists taking -- he's taking a soil core sample within the Southwest Drainage Ditch. Now, the soil disturbances, our soil core samples were taken with a mechanical drilling rig. The characteristics of this channel, the depth and width were such that we couldn't get mechanical equipment in there, so we had to

use manual tools.

This was the third sampling process done at each location, so his soil core -- he's using a -- we had a manual hand core sampler and also, a hand auger and his sampling now is being done after our water and sediment samples had already been collected. And lastly, that mound that I indicated we investigated which was just on the east side of the Lewiston- Porter School property, back in 2001, there was a more -- there was a large remedial investigation conducted by the Corps of Engineers on the former Lake Ontario Ordnance Works site.

As part of that investigation, there was radiological monitoring done and in large part, some of that is also done for worker health and safety, but the Lewiston- Porter School campus was used as a location where background radioactivity measurements can be taken and there was a gamma walkover survey at that time done on the campus to develop background levels and those background levels

then were subsequently used to evaluate measurements that were taken on site as part of that remedial investigation.

Well, during that time, there was a mound that was identified largely consisting of soil and rock material and it was on the east side of the campus just off the developed portion of the campus where elevated measurements were encountered during again, like I say, the background survey and those measurements were up to 38,500 counts per minute.

There was additional work done at that time to evaluate the nature of that, you know, those elevated readings and in fact, what was found out at that time is that the radioactivity from that material was attributed to rocks within that mound. Now, our investigation of this mound, were done to number one, confirm the previous results and previous conclusions that were developed in 2001 and we also -- the program also went beyond that in that we were going to take soil borings through the mound, evaluate the

radiological levels and gamma levels vertically through the mound, so there were two soil borings locations that were selected for that material and while doing that, soil and rock samples were going to be collected for off-site laboratory analysis. That was a radiological analysis.

So, we were not only confirming previous work, but doing a more rigorous profiling vertically of the mound and then, supplementing that with chemical analyses. And in addition to that, we did screening as we did on the soil disturbances and also as we did on the Southwest Drainage Ditch. These photographs, I've got some photographs that actually show -- this is the area where the mound is located.

Now, you probably can't see much in there because it's very heavily overgrown. There are trees in that area and largely, there's a lot of dense underbrush. It's hard to get at. Frankly, it's very difficult to walk back in there, which makes public access somewhat

limited, but in this area right in here (indicating) shown in that figure is where the mound was.

We did have to clear a little bit of that to do the gamma walkover survey that we did on that mound. Now, what I'd like to do is discuss briefly the preliminary results we have from these three areas on the Lewiston-Porter School property and I'd like to do that in the same sequence as I talked about the investigation programs.

So, first being the soil disturbances the field screening measurements that were taken for volatile organic compounds, for explosive residues and for radioactivity, the volatile organic compounds and the radioactivity we -- at every one of the locations that were investigated, we did not get measurements above background. For the explosives screening in the field, we had no positive results.

Furthermore, the soil core samples that were collected in every location where mounded

material was encountered, that material was determined to be redistributed native material and by that, I mean, excavated soil from -- basically, soil from the site that was mounded up. So, as we went through this, you could see that it was native soil, either topsoil, organic-rich topsoil or some of the underlying the lucustrian clays.

Below that, the native, undisturbed soils consisted of largely of a stiff, lake clays and there was no evidence of non-native fill identified at any one of those locations. The laboratory results, validated laboratory results are not available yet and they're expected by early 2011.

Now, in the Southwest Drainage Ditch, the field screening result we got were similar to -- as a matter of fact, the same as what we got on these soil disturbances, that is, the volatile organic compound screening, the radiological screening, we found nothing above background. The explosive residues field tests, we have no positive results or no

detection.

The water quality test that was did in the field, pH, conductivity, temperature, dissolved oxygen, oxidation reduction potential were all within expected ranges. We found no evidence of non- native materials, fills in these areas and in general, the sediment consisted of a natural decay organic, kind of a muck, highly organic material. Below that, we had stiff clay which is pretty much ubiquitous in this area.

The laboratory results for the chemical analyses and the radiological analyses, those validated results will be available in early 2011. The mound on the east side of the campus. We took measurements of the dimensions and the approximate height of that feature and it's about 20 feet by 30 feet.

It's irregular-shaped, but it's about 20 by 30 and the height varies and typically, between two to four feet above natural ground level. The materials within the mound consisted largely of native soil and they were

fine-textured generally and then there were variable amounts of the gravel and cobble-size rocks in that material.

We took background gamma survey measurements beyond -- quite a ways beyond where that mound was located. Those survey measurements indicated that natural ambient levels were about 8,750 counts per minute. We also did a gamma walkover survey on the surface of that mound and generally, the readings that we would get on the mound were two to three times greater than background, however, there were two locations, two specific locations on the mound where we were about five times over background and in fact, those two locations are where we advanced the soil borings into the mound.

So, we advanced the soil borings at the highest locations where we had the highest gamma walkover survey readings. We did vertical profiling with the gamma survey instruments and we also took samples for lab analysis at those locations. The vertical

profiling, as we augered the holes down through the mound, we continued those until we hit native soil.

At the two locations that was done, we hit native soil at two and a half feet at one location, at four feet at the other location. The gamma survey scanning through those vertically through those holes, we had found that the highest readings generally are at about a foot below the surface. They were elevated, they were above background consistent somewhat with what we found by doing the survey of the surface of the mound.

Furthermore, we took -- there were a lot of rock, some cobble size, some larger, actually. We took those out individually, took individual measurements of those and what we did find is that, in fact, we did confirm results from the 2001 investigation that, in fact, most of that elevated radioactivity is from the rocks and in fact, I have a series of photographs here that right after I talk about this, I'll go through and I'll show you that

where you can actually see that work being done and see the results on the field instruments and more so than just the individual rocks, we also took several rocks, put them in a plastic bag, moved them quite a ways away from the mound and took a measurement and again, we confirmed that those were higher.

We did the same thing with soil. We bagged it, moved it away and those results were comparable to background and the other thing that we determined from the walkover survey that was done on the mound is that the elevated readings that we got dissipated quickly with distance from the mound. In other words, when we were a few feet off the mound, we quickly approached background levels.

So, it was -- this elevated activity is confined to the mound and more specifically, our field survey and our field investigation did confirm previous results, that it was within the rock material in that mound. We

did collect samples.

We did -- some of the rocks were sent for laboratory analysis for radiological parameters and from each soil boring that was drilled, soil samples were sent off site for laboratory analysis for radiological parameters. Similar to the soil disturbances and the Southwest Drainage Ditch samples, the validated, analytical results from that work are expected by early 2011. Okay.

These next series of slides actually kind of go through in sequence some of the work or some of the results that I just talked about. This photograph here shows the gamma survey instrument and this is the actual electronic portion of the instrument and here's the digital and analog read-out. This is the gamma survey probe.

Now, at this location, we're at a considerable distance from the mound and we're in an area that's not affected by any radioactivity from those rocks and if you can see that or perhaps if you can see it on the

handouts that you may have, the reading that we got there is about 8,750 counts per minute which is about background in this area. Okay.

This photograph shows the gamma survey instrument on the surface of the mound. Now, one of the things we did is did the gamma walkover survey just on the surface initially. Here's the instrument, here's the probe right here. The reading on that instrument at this location on the surface of the mound is about 32,500 counts per minute, so compare that with the previous photo that I showed youbackground was about 8,750.

We did -- we took soil samples and we did borings at two locations. Those were done manually with a hand auger. This photograph here shows the hand auger being extracted from one of the holes and here is some of the soil material that was collected. This is a photograph of one of the holes as it was being advanced.

This is an open hole where that hand auger is inserted into and soil material is

extracted. You can see by this photograph that the soil -- the material in this is largely native or natural soil. It's predominantly fine-textured and also as I mention, there's a considerable amount of rocks. Well, you don't see in this photo, but you know, they are there in others. Okay.

This photograph shows a gamma survey instrument probe being inserted into a hole that was excavated with a hand auger. So, this is the vertical profiling or the down hole gamma survey that we did and in this case and it's kind of hard to read because of the sun, the actual reading on that instrument there is about 58,500 counts per minute and again, as I mentioned, the highest readings generally that we got vertically in the mound were about one foot below ground surface.

This is one of the rocks that I'm referring to and here is the gamma survey measurement from that rock and in this case, the reading here is 18,000 -- about 18,300 counts per minute and compare that to the background of

8,750. Here's another rock. This is a larger one and there's the probe portion of the gamma survey instrument. That measurement about 33,900 counts per minute and again, compare that to your 8,750 background. Here is the bag -- or here is -- we collected several smaller size rocks, put them in a plastic bag and moved them at considerable distance from the mound and actually, this is a location about where the background measurement was taken.

This bag of rocks, if you will, the measurement on that is 29,300 counts per minute. Now, I'm going to talk a bit about the investigation, the scope of the investigation. May I ask, could we hold the questions till the end if you would, please? Okay. I'd like to talk about the scope of the investigation that we conducted on the Occidental property.

Now, again, the Occidental property was further in in the border of the former Lake Ontario Ordnance Works and that site also was

next to Former Department of Defense facilities for TNT manufacturing and waste water treatment operations.

This photograph here of this map here shows the -- a more detailed depiction of the Occidental property within the Lake Ontario Ordnance Works and the actual property boundary as shown by this heavier, black line that property size is about 304 acres.

During the 2001 remedial investigation, samples and investigation activities were done on this site and also as a prelude to that work, aerial photographs were evaluated site wide for the former Lake Ontario Ordnance Works and an outcome of that aerial photo interpretation, it was determined that there was an area within the site.

It's about 400 feet by 500 feet dimensions that was fenced off and years ago during Department of Defense occupancy, it was determined that that area may have been used by Department of Defense. It was investigated in 2001. Samples were taken and analyzed.

That area is shown here on this figure as the grey-colored area.

The dimensions again are about 400 feet by 500 feet. There's a lot of sampling done on that. There were some elevated -- there were some chemical compounds that were detected, explosive residues and a class of organic compounds, polycyclic aromatic hydrocarbons that were detected above screening levels at that time.

There also were some metals detected in one soil sample that were above background concentrations for this area. The scope of our investigation on this property therefore, was to determine the extent of that area where we did find elevated polycyclic aromatic hydrocarbons and explosive residues and also, some of the metals and the area that it focused on again was this grey-colored area here (indicating).

MS. KREUSCH: Jim, how many more slides do you have because Marie has got to change her tape. Seven minutes? Okay. Finish the

slides and then, we'll change the tape.

MR. STACHOWSKI: I'm almost done, actually.

MS. KREUSCH: Okay.

MR. STACHOWSKI: Okay. Sorry. This photograph or this image shows you greater detail of the investigated area. Now, what is shown on here, the small back dots with some of the labels, these were previous investigation points from the 2001 remedial investigation and in fact, at each one of those locations, soil samples were taken for chemical analysis.

One location right in here, that's where elevated polycyclic aromatic hydrocarbons and explosives were found and so, our investigation then focused on determining the extent and magnitude of that around that point. What we did is we set up a systematic grid around that location.

Now, the grid size varied right in around, immediately around that sample point, the grid nodes were set at 5 feet and then, further

beyond that, we set it at 10-foot spacing and then, further beyond that at 20-foot spacing. Now, at the intersection of each one of these lines or at each node on the grid be it 5 foot, 10 foot or 20 foot, we did field screening similar to as I had described earlier, for work that was done on Lewiston-Porter.

Field screening was done for volatile organic compounds, there was a field test kit done for explosive residues and also, screening was done for radiological parameters. Now, on this site, we were investigating it under the FUDS program which largely looks at Department of Defense impacts attributed to chemicals.

So, in this case, the radiological screening was done for worker health and safety, however, we did have a provision in the work plan where if we did find elevated radioactivity measurements, an elevated at a level of two times or greater than two times background, samples would be taken for

analysis, but FUSRAP was not -- or radiological contamination was not per se a part of this investigation.

Along these nodes then, there were 16 locations where soil samples were selected. At each one of those locations, a surface soil sample was selected for laboratory analysis and sub surface soil was selected for lab analysis. So, therefore, in total 16 locations, 32 samples, each location being represented by surface soil and subsurface soil.

Laboratory analysis were done for chemical compounds and I would say that we did have one location, one grid node where we were greater than two times background on the gamma survey. So, there was one location where we actually collected a sample for radiological analysis. Results. Preliminary results from that investigation. Prior disposal activities were confirmed.

What we did find out there is there is fill in this area. It's non-uniform in its

distribution. The best way I can describe it is that there are several mounds or it's an irregular-shaped areas where disposal did occur. The mounds typically or the disposal areas varied between two and three feet height elevation above ground level. They are non-uniform in their distribution. There is more than one area, if you will, within that 400 by 500-foot area. The fill that we encountered was -- there was metallic debris, old bottles, terra cotta pipe, there was tires, there was incendiary gasoline ignitor caps that were encountered.

There was slag-like material that we found and other miscellaneous, solidified materials. During the previous 2001 investigation, fill was identified and in fact, we confirmed that out there. All the field screening measurements and pretty much all the explosive screening measurements were negative. We found nothing on that field test.

The volatile organic compound screening, nothing above background. On the radiological

screening that was done for worker health and safety, as I mentioned just a little but earlier, we had one location that was a little bit over two times greater than background, so therefore, we collected a sample for radiological analysis. So, you know, in summary, there is fill. There is fill that area and the laboratory samples were submitted for chemical analysis and one for radiological. We're waiting for those results and similar to the Lewiston-Porter investigation, we expect validated results by early 2011. That's it, ladies and gentlemen. If you have any questions, I'd be happy to entertain those now.

MS. KREUSCH: Before he takes questions, both of our camera people have to change their tapes, so if you could just -- if you want to refresh your coffee or grab a couple cookies before we take the questions, that would be great.

(Brief recess)

MR. STACHOWSKI: Questions? And this gentleman in the back has been patiently waiting. I apologize for the delay, and your question, sir?

MR. RAUCH: My name is Jim Rauch. You said earlier I believe a mound on the Lew-Port campus was surveyed in 2001 and it was found to be 38,000 counts per minute?

MR. STACHOWSKI: The maximum readings were.

MR. RAUCH: It seems that you're using a Ludlum detector or a Ludlum meter with a sodium iodide crystal?

MR. STACHOWSKI: The gentleman sitting right next to you is the person who actually did that field survey, Neil Miller, and he can answer that a lot better than I can. Neil, if you would?

MS. KREUSCH: Neil, would you go to the mike when you answer?

MR. MILLER: Yes, it was.

MR. RAUCH: I'm wondering, what does that convert to in micro-r per hour?

MS. KREUSCH: Jim, can you go to a mike because people can't hear your question.

MR. RAUCH: I'm wondering what the 38,000 CMM correlates to in micro-r per hour.

MR. MILLER: It's right about 8 or 10 micro-r per hour.

MR. RAUCH: 38,000 correlates to 8 to 10 or 8,750? 8,750 correlates to 8 to 10?

MR. MILLER: Yes.

MR. RAUCH: 8,750 correlates. Thank you.

MR. STACHOWSKI: By the way, I had mentioned that I eluded to this 2001 survey. That information is publicly available and the report of that work is available on the Corps' website we do maintain a website for the Lake Ontario Ordnance Works and in fact, the entire phase two remedial investigation, the investigation that I've eluded to in 2001 is available and specifically, results from the survey and the survey that was done on that mound is presented. So, it is publicly available and yes, ma'am?

MS. ROBERTS: Ann Roberts. I have a

problem with your Occidental property investigation. When the 2001 investigation was done, it was done largely on the basis of what you can actually see, which was deteriorated drums on the surface of that area?

MR. STACHOWSKI: Correct.

MS. ROBERTS: Subsequent to that, you produced an aerial review of old photographs?

MR. STACHOWSKI: Correct.

MS. ROBERTS: And in that, it identified two buildings which were constructed opposite the gateway to that fenced area. Now, the subsequent review of photographs that you have done which was, was it 2007, 2008? Those building have disappeared. They're no longer shown in the second report.

They weren't there in 1938, but they were there in 1944, suggesting that there was some more official use of that area for disposal maybe and in the past, I have also given the Army Corps a copy of a citizen interview where he says that there were -- there was a

disposal area in the same location where they used to explode munitions in bunkers. Now, that has just fallen off the radar as far as I can understand.

So, when I look at what you have actually done there, you seem to have focused on a few discarded drums of chemicals that were on the surface and that has been the focus of your investigation, whereas if you look at the review of aerial photographs, it will actually show several areas of some soil disturbance, some mounded material.

But what you've actually done doesn't seem to even scratch the surface, no pun intended, of what that area may be used for.

MR. STACHOWSKI: My response to that, Ann, is that this program was designed and implemented to evaluate the extent of elevated measurement that we got in this fill area back in 2001 and that was the objective of this investigation and in fact, what we did. So, in that regard, that's where our focus was.

MS. ROBERTS: Right, but I'm saying that

inadequate because it doesn't take into account all of the information you've been given and also, all of the aerial photograph review that you've done. I mean, I don't see that there's any point in spending money to do reviews of aerial photographs if you're not going to use that information in the investigation. I mean, I -- I

DR. KEIL: You're not referring to the pond area, are you?

MS. ROBERTS: No, no. I'm referring to the fenced storage area that you're looking at the moment and I just don't understand how you can have buildings opposite that disappear. So, there are a number of points, I think, that you can do an investigation on one level, but if you don't use all the information at your disposal, it's basically a waste of time.

MR. WEBER: I have sort of a follow up on that, Robert Weber. These mound areas are apparently non-native. Do you know where them rocks come from.

MR. STACHOWSKI: No, I don't. Many of

them did appear to be native rocks. Actually, I mentioned that we submitted samples of rocks for radiological analysis. We also did submit a rock for just geochemical analysis to determine the geochemistry, if you will, of the rock, to evaluate where it's from, what kind it is and I didn't want to get burdened into that level of detail with this, but suffice it to say we did inspect them in the field and we did have a geologist in the field. Most of them were determined to be native, native rock.

I would venture to say perhaps they were igneous or metamorphic, maybe some of glacial origin. But we are -- we have -- we are also having geochemical analysis done of some of that and you know, similar to the environmental, chemical and radiological data, those validated results are not yet available.

I would suspect then, Robert, that in the future, we'll have more knowledge, a bit more knowledge about the nature of these rocks? Yes, sir.

MR. GIARDINA: At the places we were at, back when we took some of your background readings, we took soil samples, so you'll have, at some point, an understanding of what the radium, uranium content -- what the primordial radionuclides were?

MR. STACHOWSKI: Correct, yes.

MR. GIARDINA: Okay. Do you have any of that data available now or is that coming?

MR. STACHOWKSI: Validated result are not yet available.

MR. GIARDINA: Okay. And then from the rocks, what are you -- are you doing --

MR. STACHOWSKI: We're doing also radiological and the same radioisotopes. There was a pretty extensive suite of radiological analysis were done and the same suite of analyses, Paul, that were done for the soil and actually, the same thing we did samples from the Southwest Drainage Ditch was also done on some of these rocks and as I had mentioned to Robert here also, we also did some geochemistry on the rocks just to find

out what kind they are and determine that.

MR. GIARDINA: Okay. And then, as far as the grid size, I guess it's on the Occidental property where you did your gamma survey?

MR. STACHOWSKI: Correct.

MR. GIARDINA: What was the grid size?

MR. STACHOWSKI: Well, it varied. Right at the former location where we had the elevated readings, first of all, we went back and we resurvey that area. We had GPS coordinates. We actually had the last date right where that was and we surveyed that and then, we set up an orthogonal grid and the grid spacing was 5 feet and then we extended outwards and it increased to 10 feet and then outwards beyond that, it increased to 20 feet.

Now, that one figure I had did show that, so it was variable sized and you know, the sizing actually of the grid nodes, it increased as you got -- as you increased in distance from this former location where elevated measurements were taken. Off the top of my head, I don't remember the number of

nodes there were. There were quite a bit. There was a lot. There was a lot done out there and we did at the surface soil at each location not only the volatiles, but we did the explosives field test at the surface of each one of those nodes and then, the surveying for the radiological and the volatile organic compounds.

MR. GIARDINA: So, you used a two by two sodium iodide crystal on your grid points?

MR. STACHOWSKI: Right. Now, I would say though that that investigation was not done under FUSRAP. So, radiological contamination was not the focus. That was the FUDS program and I tried to explain that early on, FUDS is the chemical, but we do that radiological survey as part of this pretty rigorous worker health and safety.

MR. GIARDINA: Right.

MR. STACHOWSKI: So, it was done really for worker health and safety and we had a provision if you're greater than two times background and like I said, that's why we

wound up taking one sample for radiological analysis.

MR. GIARDINA: I assume that where you got the twice background, you also have some background things that you're going to analysis just to see the variables? In other words, you've got back -- you've taken some background soil samples in the same area?

MR. STACHOWSKI: Well, actually, not for radiological, no.

MR. GIARDINA: Okay.

MR. STACHOWSKI: We have 32 samples that are being analyzed for soil chemistry or for chemical contaminants if you will. Target compound was volatile, semi-volatile, explosive, PCB's, metals, you know, that type of thing that sample note -- that one location was just for radionuclides, but I would say we have a good database and a good history of data throughout the Lake Ontario Ordnance Works.

So, while we didn't take one per se in that area, we have a lot of data now through

the years of work that had been done on that site that those results can be compared to.

MR. GIARDINA: Okay. Thank you.

MR. STACHOWSKI: Okay. Amy?

MS. WITRYOL: Amy Witryol. First, let me say this agenda is jam-packed with a number of technical projects and this community remains crippled without the assistance that our sister site Fernauld had in terms of public participation and technical assistance, so I want to just repeat that for the record.

With respect the school property and actually, every other project, we'd like to see the raw data, not just the validated data and it doesn't cost the Army Corps anything to post that on the website for us and at the time, if you'd like to wait until the validated data comes in and I'm sure that the Army Corps can explain any differences between the raw data or the validated data should anyone even have a question about it, but it would be nice to have that posted.

As far as suggesting at the end of August,

at the end of summer that the Southwest Drainage Ditch is a slow-water course is not the case and ask anyone who's got kids running cross-country over that ditch in the spring season and as the maintenance people at the school district how often the Southwest Drainage Ditch runs so high and so fast that it backs up into the drainage pipes onto the fields in the developed portion of the school property.

With respect to the investigations of the berms on this and many other projects, one of the concerns is a little bit of a cart and a horse in terms of having fate and transport analysis done on this property of every single constituent of concern, whether it's chemical or radiological so that we know after 70 years in our environment whether or not going down to four feet or to the level of soil disturbance is going to be enough to capture anything that might move after a period of 70 years or during that and obviously, in terms of the radiological screening, same thing on

fate and transport, what will a gamma meter find on the surface as opposed to, you know, doing more extensive gridding, both surface and subsurface, shallow and deep soil samples in all constituents of concern as an abundance of caution on our school property, so those are just some of the comments.

We probably don't have time to go through a more extensive list given the number of projects that the community is being faced with this evening in the presentation, but would certainly recommend that for any one of these projects that establishing a meeting, even if we have to do it monthly and ensuring that the community has the type of facilitation, technical assistance, administrative assistance that many other sites have that this community has really never had in full support, but in my view, something similar to Fernauld certainly would give the community a lot more opportunity to really fully participate in the investigation of this site. Thank you.

MR. STACHOWSKI: Joe, you had a question?

MR. GARDELLA: Could you go back to slide two, which was the map and point again to where the mounded materials were?

MR. STACHOWSKI: Yes. There actually were three rather large sized mounds that we did find, Joe and I tried to mention I was going through this quickly that the anomalies was rather small or we really didn't detect anything. We just located the position of -- first of all, all the anomalies were located using the global GPS, global positioning system because when you're in there, it's very heavily wooded and it's easy to get lost and not know where you're at.

So, that's how we located all of them, based on the aerial photographs, but we, in fact, had three that were rather large where we had to do four different soil borings. Now, the one that I showed you with the photograph with the drill rig, that was the one right in here. Now again, this is the Southwest Drainage Ditch. This is the 30-inch

outfall line.

There's a large mound in there. That's all native soil. It's redistributed, native soil is the best way I can describe that and I was out there the entire week with our contractors doing the work and honestly, what it looks like is somebody excavated and put the material right there. I'm not going to venture to say where that come from, but it's native soil.

Now, there were two other locations where we did find somewhat larger, mounded materials. The other location was right in here. Now, that was more of a linear feature, in other words, it wasn't a parabolic shape or a circular shape or anything like that, it was more of a linear -- and it actually, it looked like when you get back in there, it's like somebody had a bulldozer and just pushed it out.

These areas are heavily overgrown and actually, in those disturbed areas, there's quite large, mature trees now which gives one

a sense that this was done quite a while ago, but nevertheless, there was one in here (indicating) and we did four soil borings in that area and again, that was more of a linear feature, but it was a mound. Now, this area down in here in the southeast corner right by that property boundary, there was kind of a large mound right along that boundary right there and I would say it's somewhat similar to what we found in here (indicating) and it looks like somebody had a bulldozer and pushed up a lot of the soil.

As we drilled here (indicating), as we drilled here (indicating) and we drilled there (indicating), in every case where you go through that it's all what I would call redistributed native soil. There's no non-natural anthropogenic fill, nothing whatsoever that we identified and it's not -- you know, we took continuous soil borings until we got to the native or the undisturbed soil, but also walking around there, one investigation exposed face that you kick open and that and

there was no evidence whatsoever of anything other than there's been some soil moved around in these areas.

Now, the other areas, frankly, there wasn't a lot that you see there. There just isn't a lot and so, these other areas were investigated by essentially one boring and then, there was a lot of field screening done and actually, there was a good walkover survey done all throughout that area. This area here because this showed up as a larger feature, we dually did -- this location represents four separate soil borings.

This location represents one soil boring and it's in the middle of where that feature was and this represents another soil boring, somewhat on the northwest end of that feature. Each one of these was treated as an individual sample, so -- and therefore, we'll have analytical -- we'll have three different sets of analytical results from that area and it's not only the mounded material, but maybe some of the soil was scraped in there on the bottom

of that. The photograph I showed you again was right there.

MR. GARDELLA: And the high -- the elevated radiological, the elevated gamma readings, the mound, that was excavated --

MR. STACHOWSKI: It's probably hard to see from where you're sitting, that's right here (indicating). Now, all these locations we accessed from the east. This you actually get in right off the school campus. I would say there was another disturbance right here (indicating) that we investigated.

Again, it's rather small, but when I talk about the mound and I somewhat, for simplicity, tried to classify these into three different areas, you know, these disturbances, the Southwest Drainage Ditch, but that mound is right there (indicating).

MS. WITRYOL: Just one question on sedimentation in the Southwest Drainage Ditch. Did you select the sediment samples based on intervals or based on where sedimentation was likely to accumulated in the ditch and was

there any consideration given to sampling the tributaries at the end of the waterway?

MR. STACHOWSKI: The water, sediment and soil core samples in general were taken from the middle of the channel. Now, in most areas, other than this area over here (indicating), in most areas, the material is quite soft and it's got a very high organic content and you actually have quite a bit of sediment in there and perhaps calling it sediment is not a proper classification.

A lot of it is decayed, natural, organic material, but what I'm trying to say is, there's quite a bit of it from channel -- from bank to bank in five of these areas and our program was designed to largely take it from the middle of the channel which we did and based on my time out there and my observations, Amy, there really wasn't anything distinguishable.

That's a linear feature. It's not like you have meanders or channel bends or anything like that where one sees more or less

deposition. You don't really see those features or I didn't see those in the channel when I was out there and at each one of the -- it's actually very difficult to get into that because it's keep and wide and you've got to go through a lot of brush. So, when we did identify the locations, we would make our -- in some cases, we had to use like ropes and that to get ourselves down, but when you look at it, there really wasn't anything distinguishable as to well, there's more sediment here or less sediment here and therefore, our sampling was done largely in the middle of the channel.

Now, in this location here, this is where there's a bridge that goes over it and there's a corrugated metal pipe beneath that bridge where the actual water flows through and in that area, you tend to get more coarser material. It's not that real muck, the high organic sediment and that appeared to be more of an artifact from perhaps the construction of that structure. To answer your question

simply though, no. They were taken in the middle of the channel.

MS. WITRYOL: Okay. So, anywhere along that pathway to find the highest concentrations of the sediment or at the mouth off of the school property either above it or below it, these sediment samples were confined to the channel along the school property?

MR. STACHOWSKI: They were confined to within the school channel, correct, yes. And you know, the boundary was where the channel exits the school property, the southernmost boundaries where it enters and the other four were somewhat equidistant between those two points.

MS. WITRYOL: Well, at some point, we'd encourage you to take samples in higher areas that have more significant accumulations of sediment.

MR. STACHOWSKI: Questions?

DR. BOECK: Start with a comment.

MR. STACHOWSKI: And your name, sir?

DR. BOECK: I sent my children to Lew-

Port. I would send my grandchildren if they lived here, to Lew-Port. I believe the campus is quite safe, but I do have a bunch of questions on your procedures. When I was a kid, we had a farm out in Hartland and we used fertilizer and it was phosphate fertilizer and eventually, the bags would leak and certain amount would spill in the barn.

Now, that phosphate fertilizer came from Florida and typically contains traces of uranium so that when the Lew-Port campus was surveyed, I believe they found the locations of the previous barns by the elevated radioactivity undoubtedly due to spilled fertilizer, but now when you present us with a background sample taken from a grassy area, I would really suggest that you pick an area where is not grass and therefore, fertilized in order to get your radioactive background.

As you've noticed, this is a lake bottom. All of this area is lake bottom. It's clay, on top of it, a little bit of soil. Okay. When you find a rock, I'd like to go back to

slide 14 -- 18 is the rock. Okay. The rocks that are deposited here by the glacier were worn and rounded. The rocks that are deposited in the shore are rounded. That looks like another piece of slag, industrial slag which was produced in Niagara Falls and found in numerous driveways, fill areas and everything else. It was used typically in the process of making phosphate, phosphorus in Niagara Falls and it does contain traces of uranium. The angular shape of that rock looks like another piece of slag and so, I would not refer to that as a rock. I think that is a beneficial fit.

MR. STACHOWSKI: I'll have Neil because Neil did most the work out there and he spoke earlier. I'll ask you to chime in, Neil, but actually, Dr. Boeck, I would say that that photograph is not typical of most of what we found in that mound. Am I correct in saying that, Neil?

MR. MILLER: Yes. There's a lot of different rocks in there. I mean, some of

them were edges like you mentioned, but there were rounded ones as well. The majority of them had elevated activity in it, but it wasn't the norm. There were other rocks in there as well.

MR. STACHOWSKI: Now, for example, when I look at that and you see a lot of those forays and bubbles in them, it looks like to cooled very quickly. If you go to I think two slides beyond this Natalie, see there, right there. Now, that, again, it's not as well-rounded. It doesn't look like it was subject to a lot of erosion, but that does not appear to be slag material and in fact, on that, that's, you know, 33,800 counts per minute on that rock.

I'm not going to speculate what the origin of that is, but, in fact, a lot of it is like that and perhaps in my showing that one figure maybe skews or biases the, you know, one's interpretation. A lot of it was like this (indicating), though.

DR. BOECK: Okay. Because we have a lot

of the same materials in the roadways on the NFSS and again, it's always the issue as to whose responsibility it is.

MR. STACHOWSKI: Yes and we are doing the geochemical analysis. I would say -- and correct me if I'm mistaken, Neil, most of them appeared like this (indicating). Yes. So, that was the exception rather than the rule when you look at that other one.

DR. BOECK: Yes. That's not a glacially-deposited rock.

MR. STACHOWSKI: You know, and I'm not suggesting it was. Maybe that's construction demolition debris from yes, who knows. There's a lot of construction done there on the school. I'm not going to speculate where it comes from, you know? There was no anthropogenic fill that we identified. That's probably the best thing I can say about that.

MS. KREUSCH: One more question, Jim and then, we need to move on.

MR. STACHOWSKI: Yes, ma'am?

MS. ROLAND: Mary Ann. I was wondering if

maybe those rocks were dumped there? You know, there's a lot of dumping that goes on around -- midnight dumpers and you don't have any -- because the vegetation has covered those areas, you can't really tell whether they -- the soil and the rocks came from that site originally or whether they were spirited in because nobody was around in the interim from the original site.

MR. STACHOWSKI: Mary Ann, at this point, I can't speculate what the origin of that material was, where it came from. I can tell you this: This discussion, this presentation that I -- we had already met with representatives from the Lewiston Porter Schools and we had met with their consultant, Dr. Joseph Gardella and did go over this.

I can't speculate where it came from or how it may have gotten there. I don't know that we'll be able to determine that, but we did present these results already to the school and we've talked to them about that.

MS. ROLAND: That's fine. I have a

question though. When you say it's four times the base rate, is that dangerous because, you know, your picture shows people handling them, the rock, with their bare hands with no protection. Is that not dangerous?

MR. STACHOWSKI: Karen, could you -- Karen or Hank, could you answer that?

MR. SPECTOR: Yes, Hank Spector, Army Corps. I think the point I'd like to make is that the readings that we're seeing and the questions you're asking is best answered in a relative sense, starting with maybe what Dr. Boeck was talking about, the fact that this might be a type of slag, possibly located throughout Western New York, used throughout Western New York for roads and various other uses and may not even be an unusual reading.

The readings that we were also discussing were in terms of fairly small readings close to background, micro-r, micro-rem per hour. The typical exposure somebody gets being a citizen of the United States is estimated to be many, many more times those type of

readings. So, I think the question is best answered in a relative sense as opposed to, you know, an absolute risk.

So, we're exposed to a lot more radiation from other things just being citizens than we'd get from this.

MS. ROLAND: Like, radon?

MR. SPECTOR: Radon is a big part of it.

MR. MILLER: This pile is centrally located and once you get a few feet away, you don't see it anymore. So, unless you're on top of the pile, you can't even detect it with an instrument.

MR. STACHOWSKI: Okay. I've been told we've got to move on. Paul, you've got one more question?

MR. GIARDINA: I just want to categorize this. There are areas in this country where what you found in the rock is natural background. I mean, people live on levels like this in areas of the country and this would represent less than 5 percent of your radiation exposure.

The NCRP just came out. Natural background from all radiation sources in the United States in the 1990's was estimated at around 350 millirems per year. Now, it's 610 and it's all from increased use of medical x-rays exposures. So, I'm a 62-year-old old man and going through my normal x-ray procedures and what happens when you get to be 62, you don't even -- doesn't even show up on the graph.

MR. STACHOWSKI: I need to -- perhaps we can discuss this further. I need to turn it over to John Busse who's going to talk --

MS. ROBERTS: I'm not clear on -- you take comments from the public and in the case of the Occidental investigation, there are clear data gaps, important data gaps, things that have not been addressed, where does the investigation go from here? What did you do with the public comments? Is there a route for you to take action and go back and re-look at the property, look at the issues that have been raised?

MR. STACHOWSKI: I think we're going to discuss that topic a bit. John is going to talk about Building 401 deconstruction and then, he's also going to talk about this -- about public interaction further as one of the -- and I think, Ann, if perhaps you'd be willing to wait just a little bit, we're going to get into that topic in greater detail and it's something that John or others can answer better than I can.

DR. KEIL: We're not done with our investigation. We're just beginning the feasibility study phase. We're not closing the book. We're still evaluating it.

MR. BUSSE: Just send us in your comments. We'll evaluate them and address them accordingly --

MS. ROBERTS: I think the thing that concerns me is that I first sent you data five years ago and it disappears into a black hole.

MR. BUSSE: Well, that's not the case anymore.

MR. STACHOWSKI: With that -- yes, sir?

MR. CALARCO: Picture number two, the aerial photograph is quite conceiving, I think. It shows the 30-inch pipe going west to end up in Niagara Falls, I guess. Is that underground?

MR. STACHOWSKI: It is, except where it crosses the Southwest Drainage Ditch and Mick early on showed you a photograph of that location.

MR. CALARCO: Well, if that is true, if that aerial photograph is just exactly the way it is, it shows that it would be above ground going across the campus and that can't be, could it?

MR. STACHOWSKI: No. I've been on that campus during that work and it is not.

MR. CALARCO: So, is it covered over with asphalt, perhaps?

MR. STACHOWSKI: In some areas, it is. I would say in other areas where you have grassy fields, it's covered with soil and grass.

MR. CALARCO: But it's definitely not accessible to any student whatsoever?

MR. STACHOWSKI: No. The only place it's accessible is where it crosses the Southwest Drainage Ditch and as Mick has talked about earlier, the Town of Lewiston is going to remove that section. I apologize. I've got to wrap this up because we've got a lot of other things to talk about and with that, John Busse is going to talk about deconstruction activities at Building 401. Thank you.

MR. BUSSE: All right. I'm John Busse, Project Manager for Niagara Falls Storage Site. I'm going to walk through just a brief update because we're kind of running short on time on Building 401.

The work plan preparation was completed in August 2010. The work plans are ultimately posted on the web. We solicited stakeholder comments. We received comments from the DEC. No other stakeholder has provided comments. We addressed the DEC comments, incorporated those into some plans and we moved forward mobilization was completed during the week of October 4th.

Heavy equipment office and trailers were brought on site. All workers received required health and safety before commencing any activities. Next slide. The background radiological survey was completed. Background study included the building materials that were not impacted and included sheet metal, poured concrete and concrete block. These areas were selected using the historic surveys as guidance for locations where no activity was previously detected. Suitable background locations were located such that material is representative, but unaffected by radioactive contamination.

Instruments were held in place for one minute, static measurements during the background study and for each material, four separate areas were selected and within each area, 10 measurements of each were obtained at locations not impacted by radioactivity within the area.

This basically established the data set of independent measurements for each material and

each type of measurement. Background study results were provided to the DEC. We had a conference call with them making sure that they were in agreement with what was provided by our contractor and accepted by us and ultimately, it allowed us -- our contractor to obtain the letter to dispose of non-radioactive material within New York State and anything that was radioactive, determined to be or classified as radioactive would be sent off site to a facility, Energy Solutions in Clive, Utah. The exterior radiological survey was completed for all accessible exterior areas.

No radioactivity was discovered on the exterior of the building, except for one small window sill on the west side of the building. The interior survey is approximately 55 percent complete. The first floor is complete and there are four rooms and the entire south wall on the second floor are basically completed at this time.

Elevated radiological survey measurements

have been detected, pretty much in line with previous survey results. The Corps performs daily quality assurance surveys and oversees all work done by our contractor. NYSDEC also performs period quality assurance and actually, Tom Papura of the DEC is in the picture on the left. He's up in the rafters there performing the QA survey. Next slide. The asbestos survey was completed. All potential areas that could possibly contain asbestos were identified and sampled to determine whether or not they contain asbestos.

In this picture, you can see some of the asbestos activities taking place on the northeast corner of the building. Basically, the transite panels on the exterior were found to contain asbestos. There's some on the low bay, there's some up on the high bay. We found some drywall inside and there was some pipe insulation as well. All that is continuing.

The northeast corner is completed. Most

of the low bays -- all the low bays are completed and they were actually up doing the high bays the last couple of days. Next slide. We took down the silos. I don't know if anybody has driven near the site in a while. The landscape has kind of changed. The initial stages are shown there. Of course, the final stages are shown there. Exterior radiological survey was completed on each of the silos. There's no radioactivity discovered or encountered. Once it was brought down to the ground, the debris again was re-analyzed and resurveyed and no radioactivity was discovered.

Dust suppression was used throughout this whole process. If we go to the next slide, you can see basically, they were wetting it down as they went to mitigate any dust. Particulate dust monitoring showed particulate concentrations well below the permissible exposure limit set by OSHA and daily radiological air sampling is being conducted and there has been no detectable activity.

Next slide.

Pretty much the path forward, we have predemolition activities continuing through November 2010. That includes the radiological surveys and continuing on with the asbestos abatement through November 2010 as well with demolition continuing through early January 2011. We have started demoing some of the low bay on the north side of the building in order to access some of the asbestos on the high bays and we expect to wrap up the project by the Summer of 2011. That's the quick and dirty update. Question?

MR. HENDERSON: Historically, the building was constructed to resemble old barns and silos to throw off all the German spies in the area. Historically, what was the use of the building.

MR. BUSSE: The building, actually, I presented this at the last meeting. It originally was the boiler house for the TNT production plant. From there, it moved into boron production and ultimately, they started

storing waste in there from the MED/AEC days. Any other questions? No, you've got a question?

MS. ROBERTS: Just a comment. You left out the storage of the Knowles atomic power laboratory waste in between the use as a boiler plant and the use as a boron 10 production facility.

MR. BUSSE: Thank you. Can I put you on my payroll?

MS. ROBERTS: Please do.

MR. BUSSE: Anybody else? Going, going, gone. All right. This is the one that you've probably all been waiting for, so I'm going to kind of walk through this slowly and basically, just going to provide you with a general scope and vision of what we see and how this will work.

We have questions at the front table. I'm asking you guys to fill it out because I need to set boundaries on this. I don't have unlimited funds to go willie-nillie, so I'm kind of going to walk through what our vision

is and hopefully, you'll give us some feedback on those questions. I can solidify the scope and then, we can move out on that.

This past summer, we committed to discussing community expectations and options available at the Corps to establish facilitated technical discussions with interested community members. We have received communication from some community members that they are satisfied with the Corps' communications to-date.

There are also some dedicated, knowledgeable community members that want to be involved at a more technical level. We value the community's input and have included a list of questions like I've stated previously and if you could fill those out and get those back to me, I can really finalize the scope and then, we can contract this out, obligate and start expending money and get this moving forward.

The purpose of the facilitation process is to provide a means for the community to

prioritize and communicate concerns to the Corps. Based on input we have received from some of the community, we understand that the facilitator would focus on the Niagara Falls Storage Site FS. Again, if there's more issues you wish to focus on, please fill out that questionnaire and get it to me. We are considering having the facilitator available during the public comment period for each FS technical memorandum. There are currently five technical memorandum planned for the Niagara Falls Storage Site FS over the next three years.

We recognize that the documents that are produced through the environmental decision making process are technically complex and the intent of the technical facilitator would be to help the community better understand each document prior to submitting comments and we'd like the technical facilitator to be able to digest and interpret the technical information and help the community voice their concerns and their issues back to us so we can better

address them.

These are some of the additional scopes of services that we see. The technical facilitator would work with stakeholders to identify, focus, prioritize and frame issues to establish and maintaining ongoing dialogue and relationship between the community and the Corps. They would support the review process and revisions, they would facilitate presentation and discussion actively, not passively, prepare draft meeting minutes for technically facilitated sessions, circulate for review, revise and distribute.

The technical facilitator would also be available for verbal and written interaction with interested parties related to the projects. Who can participate? Everybody. It's open to everybody. Technical expertise is not required. Participants will not be paid. The Corps would participate.

If there was facilitated meetings held, we would show up and attend those and work with the facilitator and the community as far as

verbal interaction, e-mails, teleconferences, the community is more than welcome just to have that one-on-one session with the technical facilitator. We'd still continue the Corps public workshops and would welcome any input and comments you have in improving this process with the comment cards. Next slide. And contact us. We gave you the questions. Send those in as soon as you get that to us, I'd appreciate it. I would like to shoot for the end of the month, keep this moving, keep this process moving forward. I would like to have the technical facilitator in place before we issue one of the tech memos. So, the sooner I get your input, the better I can frame it and I can move out on it. Anybody got any questions? Amy?

MS. WITRYOL: Do you have a copy of the scope from Fernauld and could you post that on your website? They had not only a facilitator, they also had a technical panel.

MR. BUSSE: Yes, I'm aware of that. I have spoken with people from the legacy

management that have worked with Fernauld about the process and will incorporate their input into it.

MS. WITRYOL: Could you post their documents?

MR. BUSSE: I haven't gotten their scope per se.

MS. WITRYOL: Is that something you could request and post for us so we could take a look at it?

MR. BUSSE: I will try and request it and try and get it so I can post it on the web and you guys could take a look at it if I can get it.

MS. WITRYOL: That would be helpful. As you know, they --

MR. BUSSE: It would be helpful to me, too, because it would be a good template.

MS. WITRYOL: Right.

MS. KREUSCH: One thing to note is that was not a -- this is Arlene. One thing to note is that the group that they had at Fernauld was an Official Federal Advisory

Committee Act, Citizens' Advisory Group. It was not what we are looking at here. We're looking at facilitated technical discussions, not to the extent that is allowable under that specific group. That's established, basically, by the Office of the President.

MS. WITRYOL: We understand that, that a Citizens Advisory Board differs from the Restoration Advisory Board that we don't even have in terms of the Corps' position, but in terms of the responsibilities and duties of the functions, it would certainly be helpful to know what the Fernauld site that has had the same K-65 that we've have got, what they have with respect to public participation so that we can -- it can help aid in the community's input on what would be valuable here.

MS. KREUSCH: Okay. John did ask them for the scope and as far as I know, he hasn't received it.

MR. BUSSE: I haven't received it yet, but I'll keep pushing for it and try to get it to

you. Boy, I thought there would be more questions on that one. Spoke too soon.

MR. CALARCO: I have a question. It's just a dumb question, but I'm kind of leery on asking you. Perhaps it's your attitude on the way you're addressing us in your presentation. Like, if we have a question, we've got to write it down and submit it, we can't ask anything, but anyway, I'm going to ask you anyway.

MR. BUSSE: I don't know --

MR. CALARCO: What is the -- what --

MR. BUSSE: We ran out of time before, so that's why I wanted her to write down the questions and get them to us.

MR. CALARCO: Anyway, I'm lost here. Where is the Niagara Falls Storage Site located?

MR. BUSSE: On Pletcher Road.

MR. CALARCO: That's LOOW or LOOW, L-O-O-W, correct?

MR. BUSSE: It's within LOOW. It's a property within LOOW.

MR. BUSSE: Okay.

DR. KEIL: There's a map in the back that show the entire Lake Ontario Ordnance Works in the back corner here and the Niagara Falls Storage Site is outlined in brown on that map in the back.

MR. CALARCO: All right. Thank you.

DR. KEIL: There's the street and you can look on the map on the back for the location.

MR. CALARCO: Okay.

MR. BUSSE: It's up on the screen here. Niagara Falls Storage Site is here (indicating). We've got the boundary of LOOW here. Does that better orient it for you?

MR. CALARCO: Mm hmm.

MS. ROBERTS: I have one question, obviously, you're going forward with the technical facilitator. Over the last few months, I've had various discussions with EPA, yourselves regarding leakage from the Interim Waste Containment Structure and my main concern is, is there an imminent risk from that leakage?

We have discussions about whether it's leakage or whether it's pre-existing contamination. I firmly believe it's leakage. So, if the appointment for the technical facilitator takes several months, how do I proceed forward in the meantime with discussing leakage from the NFSS cell.

MR. BUSSE: We are more than willing to set up a meeting with you and you can come in and discuss it with the Corps team and present your ideas and your concerns and we can address them accordingly.

MS. ROBERTS: Okay. At the last meeting, it was said that you would look at the waterlines because I have particular concern about the 10-inch cast iron potable waterline.

MR. BUSSE: The 10-inch waterline? Yes.

MS. ROBERTS: That's 70 years old that seems to be acting as a preferential pathway.

MR. BUSSE: We're going to work that into the feasibility study. I have shaken money loose for FY12 to incorporate an investigation of that line into the feasibility study. I

will try and push that up in FY11, but I can't make any promises on that.

MS. ROBERTS: Okay. The only other point I had was has the Army Corps actually looked at the interactions of the surrounding landfills with the Interim Waste Containment Structure?

MR. BUSSE: We are going to evaluate that during the feasibility study. We recently had a technical project planning meeting.

MS. ROBERTS: But you haven't done that to-date as part of the RI?

MR. BUSSE: Not as part of the RI. As part of the feasibility study, we most certainly will because we'll have to determine the protectiveness of any remedial solution that ultimately will be selectedat the site.

MS. ROBERTS: But are you aware that pumping of water from the landfills on Modern actually changed the direction of flow of the lower water bearing zone groundwater? Because if you are, how is it that you actually used Modern to establish a background for

groundwater because Modern would have been impacted by the groundwater flowing towards it. That doesn't make any sense to me.

MR. BUSSE: Karen?

DR. KEIL: Michelle is ready to speak. I'll speak after Michelle.

MS. BARKER: The one about the redirection of groundwater flow, I believe Don DeMarco, our hydrogeologist who developed the model is here tonight and maybe can speak better to this, but we had actually had a meeting with Modern because we had the same concerns that you do and because they were actually going to be establishing their new landfill and part of that is that they actually pump continuously until that landfill liner is down.

So, what we did is we met with them to talk about how in the past their pumping efforts have influenced our water levels in the past. So, we have noticed that locally within the area that they are pumping there is an effect, however, when you look at it from a regional perspective, you don't see that level

of influence.

The second aspect of your question was Modern background and that may not make sense to people, why would you use a landfill as a background, you know, wouldn't it potentially be contaminated? There's one facet of background that's important to know is, you want to get the closest to the site that hasn't been impacted because you want it to be representative and you understand of the area. So, what we tried to do was, we actually -- the wells that we focused our background sampling on was actually upstream of their land fills.

MS. ROBERTS: But if you look at the environmental surveillance report from the 1990's, the water on the NFSS changes direction and not just regionally, across the entire NFSS so that Modern is actually down gradient of the IWCS.

MS. BARKER: I'd have to look specifically at the document that you're looking at.

MS. ROBERTS: It's not just one, it's

several. Its from about 1996 up until about 2001. That's five years.

MS. BARKER: That's something that we can talk about when we sit with you and talk about your concerns. I know that we did look at their pumping rates and what affect it would have and Don is going to speak up behind me here.

MR. DEMARCO: I'm sorry, I heard someone else.

MS. KREUSCH: I was just going to say, Don, when you get done, we have to change the tape again. I'm sorry.

MR. DEMARCO: Okay, sure. And I just thought I would mention that I'm not aware of the changes in water levels that you're referring to such that, you know, basically, in our analysis of the water level, we compiled all of the available water level data for the Niagara Falls Storage Site, for Modern landfill and the data available from CWM and in total, was over 15,000 different monitoring data points.

We plotted this up. We separated data according to water levels in the upper water bearing zone, that is, in the brown clay till and water levels in the -- below the GLC. We refer to those as a separate hydrogeologic unit and refer to that as a lower water bearing zone. At any rate, we plotted hydrographs up and at the Modern Landfill property, we were aware that pumping, as Michelle attested and met with them and in some instances in reviewing the hydrographs, we saw that pumping in the lower water bearing zone depressed water levels at that location, but it would have no affect on the upper water bearing zone.

So, there is a separation between these two units but at any rate, I'd be interested -- I could look into the particular dates because I have this data available in a database form and so on. If you have particular dates, we can look into that.

MS. ROBERTS: If you look at the environmental surveillance report for the NFSS

from 1996 up until say, 2001 and you look at the maps that have been produced for the lower water bearing zone, that should give you the data that you require, but I think that's concerning that at a time when the lower water bearing zone groundwater actually reverses, the Department of Energy stopped monitoring the lower water bearing zone. So, I think, you know, from my perspective, the community is being persuaded that there isn't really an issue with the Interim Waste Containment Structure but really, there hasn't been any real monitoring going on, you know, in the sense that we're not looking at the lower water bearing zone since 1993, yet you're actually causing that water to completely reverse direction and yet, we feel comfortable because in 1995, a report is put out that says there is no imminent risk because of the data presented to that panel, but largely, the panel didn't have all the data and thereafter, there was no data. So, I feel really concerned that the question of leakage is

being overlooked.

MS. BARKER: Just to clarify a couple -- sorry. Just to clarify a couple points, during the remedial investigation, 93 percent of our lower water bearing zone wells were sampled and the reason we're focusing on the upper at this point water bearing zone is because that is where the contamination has been found, but we heard your concerns last time and I know you've brought this up before, so one of the things we did as part of the environmental surveillance program is enhance it to add a further level of protection and that included adding 9 upper water bearing zone wells and 12 deep wells to the environmental surveillance program. So, we started collecting it this fall, so you should see it in the 2011 tech memo.

MS. ROBERTS: Didn't you actually have the data for well OW11B for Spring of 2009? I was hoping that you might have released the environmental surveillance data in time for tonight's meeting because I'm just interested

in how much the uranium has increased in the spring. You sent me the fall, but not the spring.

MS. BARKER: I'd have to check on that. I'm not sure where that stands.

MR. BUSSE: Jane, did you bring that table with you?

MS. STATEN: It's actually gone down a little bit. It's 274.

MS. ROBERTS: In spring?

MS. STATEN: In spring.

MS. ROBERTS: And what was it previously?

MS. STATEN: It was 241 pico Curies per liter, so it's a slight decrease.

MS. ROBERTS: It's gone from 274 to 240?

MS. STATEN: It was 274 and it's 241 was the latest.

MS. ROBERTS: In spring?

MS. STATEN: In fall.

MS. ROBERTS: No. I was asking what the spring value was.

MS. BARKER: 274.

MS. ROBERTS: And what was it in 2008?

MS. STATEN: It was 274 and it's dropped to 241.

MS. WITRYOL: This is spring? She wanted the spring.

MS. ROBERTS: I wanted the Spring 2008.

MS. BARKER: So, the Spring 2008 --

MS. ROBERTS: Because I don't think you can compare fall with spring. I wanted the 2009 spring value. You sent me the fall.

MS. BARKER: The Spring 2008 is 253 and the Spring 2009 is 274.

MS. ROBERTS: So, it's still increasing from spring to spring?

MS. BARKER: From spring to spring it has increased and then in the fall, it went to 241.

MS. ROBERTS: Right. What I did was I actually compared values each year spring to spring just because I think that's more realistic, not mixing spring and fall.

MS. BARKER: Right. And that's a well that we're continuously monitoring to keep an eye on.

MS. ROBERTS: Right, but I think there's a point that what you're not taking into account is the preferential pathways that may exist within the waterlines. So, for instance, I believe that that particular well has affected by the contamination south of the IWCS. So, how is modifying the groundwater monitoring program going to take into account preferential pathways which may allow the contamination to bypass the well?

MS. BARKER: We actually did add some of the wells just north of it to keep a closer eye on the extent.

MS. ROBERTS: My concern and I think the concern of many of us is that --

MS. STATEN: We've added wells south of the cell as well, both in the upper and lower water bearing zones.

MS. ROBERTS: Right, but this one --

MS. STATEN: Now, this well that you're talking about is on the other side of the Central Drainage Ditch from the cell. We've added several --

MS. ROBERTS: Down gradient to the water line.

MS. STATEN: Right, but we've added -- if it's a leak, it is, in fact, coming from the cell, we'll detect it in the wells that are closer to the cell itself, wouldn't you agree?

MS. ROBERTS: Not if it's coming from the waterline, no.

MS. STATEN: Well, it depends on where the well location is, but if it's coming from the cell, if you have a well that's closer to the cell near the waterline --

MS. ROBERTS: Depends if you've got a preferential pathway.

MS. STATEN: Well, it's got to originate from the cell itself.

MS. ROBERTS: Right, but you don't have wells every few feet, do you?

MS. STATEN: Well, we have -- we have -- I think we have a fairly good spacing of wells around the perimeter of the cell and we've added 21 wells.

MS. ROBERTS: Right, but one of the wells

that you temporarily put in for the remedial investigation was very high in uranium, about over 900 pico Curies per liter. Is that well still in existence, because it would be interesting to measure that again.

MS. BARKER: Unfortunately, the temporary wells have been closed. They were meant to be temporary.

MS. ROBERTS: Can you sink another one?

MS. BARKER: It's possible.

MR. GIARDINA: Just a point of order, the numbers here that I'm seeing 253, actually to the nearest significant figure 254, 274 and 241 and if I'm doing the math correctly, that's within two sigma which has got to be a counting error of these things.

These are essentially the same number to two significant figures, it would be 25, 27 and 24. That's not movement. It's the same number. I mean, it's hot, but it's the same number. I wouldn't see there's any trend there.

MS. ROBERTS: So, you don't see a trend --

MR. GIARDINA: Neither up nor down.

MS. ROBERTS: From if you look back, you plot it out from 2003?

MR. GIARDINA: Oh, yes, there's a difference from 2003 but I'm saying over the last three measurements, they're within two sigma.

MS. ROBERTS: Right, but if you compare Fall 2008 with Fall 2009, what's the difference?

MR. GIARDINA: There's a difference there, but you were saying there's a difference --

MS. ROBERTS: No. I was saying that you have to compare fall with fall and spring with spring.

MR. GIARDINA: But this is what, this is only uranium, right?

MS. BARKER: Totally uranium.

MR. GIARDINA: And this is?

MS. BARKER: They're all totally uranium.

MR. GIARDINA: Yes.

DR. KEIL: Can I address the question about background? We did scrutinize the

background data set from Modern and we did see that there were two wells that were slightly higher in uranium concentrations than the rest of the data set and they also had differing ratios of the isotopic radionuclides uranium-234 and uranium-238 which can indicate whether or not the source of the uranium is naturally occurring or if it's from a contaminated area and we did eliminate those two data points from the background data set, so we did scrutinize it carefully to make sure that it was clean and truly representative of a clean, unimpacted area, so we did eliminate two data points from that set. So, we think that the remaining data points do represent an unimpacted area.

MS. ROBERTS: I don't see how it can be unimpacted if it's down gradient of the IWCS.

MS. BARKER: I guess the thing to mention, too is that wasn't our only background groundwater locations. We did actually sample as part of -- in an effort with the LOOW background and gathered some off site as well,

actually north and west of the properties, in some cases south.

So, there was other data generated for the background data set that we compared the Modern data set with to make sure that it truly was representative and didn't have any type of evidence of --

DR. KEIL: We also -- I mean, this is not our only FUSRAP site. We have about 10 or 12 other FUSRAP sites around New York State, Pennsylvania, Ohio. So, we do sample unimpacted areas to get background, local reference points for unimpacted areas for uranium at each one of our sites and that the background data set at Niagara Falls Storage Site is similar to the background data sets that we've been obtaining at all these other locations.

MR. BUSSE: All right. It looks like we do need a technical facilitator after all.

MS. WITRYOL: Well, I recall the DEC discounting a background well that was a mile away because it was too far away, so we do

need to decide which way we're going to go on background.

MR. BUSSE: I know from talking to Paul that he was going to maybe say a few words tonight. I don't know if he's still --

MR. GIARDINA: I'm still awake.

MR. BUSSE: If he's still awake if he still wants to get up here and say a couple things.

MR. GIARDINA: Good evening. For those who don't recognize me, I'm Paul Giardina. I'm Chief of the Radiation and Indoor Air Branch from the U.S. Environmental Protection Agency's Region 2 Office. With me are Naidal Azzam and Mike Basile. They're EPA colleagues of mine and Mike is in our Office of -- our Public Affairs Office here.

He's the one who keeps his hand on the pulse, goes to all the meetings and is really our eyes and ears and Naidal works with me as my technical colleague and has been involved in this project on and off the last what, two or three years. So, after this is over, if

you want to talk with them about this, that would be great, but I again want to thank both the Buffalo District of the Army Corps of Engineers and several of the community stakeholders involved with the Niagara Falls Storage Site for continuing to suggest I attend both this stakeholder meeting as well as for interchanges on the issues associated with the site.

When last I was here in June, I made a point of mentioning our mutual interests in assuring that there was an adequate radiation detection system around the Interim Waste Containment Structure. This houses the extremely radioactive residues, about 99 percent of the hazard on the site left over from our nation's nuclear weapons development program.

As I mentioned, several key stakeholders, specifically, Dr. William Boeck and Dr. Joseph Gardella gave us very valuable and specific input on what they though would be necessary to assure the existing scheme would meet

future challenges. I also enlisted support from our EPA National Air and Radiation Environmental Laboratory and all of the input we got was sent to and discussed with the Buffalo District.

Recently, we received a proposed upgrade from the U.S. Army Corps of Engineers and after our review, we believe it is responsive to our suggestions and in fact, we had a couple more suggestions, which we just talked today and I think we're going to be in total agreement. This is really important. We cannot determine at this time when a preferred alternative would be in place until the Army Corps of Engineers completes its feasibility study for the NFSS site.

We have provided guidance on that issue to the Corps. We believe the Corps needs to focus it's attention on the Interim Waste Containment Structure and the removal of the radioactive residues therein. We realize this would be a costly endeavor and a properly designed and executed preferred removal

alternative will take time and substantial funding.

So, it's important the best possible environmental monitoring system be put in place to detect any possible malfunction in the IWCS. I think we're there. Equally as important is stakeholder confidence. Over the past year, EPA has been working with stakeholders, not only Bill and Jim, but Amy and Ann and specifically, other concerned local citizens who volunteer time and effort to meet the common goal of getting these leftover weapons development wastes removed, safely disposed while assuring that while this process unfolds, all around the NFSS facility are adequately protected.

I think that's the bottom line. Since the past summer, I think we have met and made great strides. I met with the local citizens who are technically savvy and they have helped shape our suggestions. I also am aware that the Corps is moving to create a more formal process whereby sound, technical judgement of

local citizens can be harvested to be part of the final preferred alternative.

From where we stand at EPA, this looks most promising and I really congratulate all of those who sat down and worked things out. I know this has come a long way. We need to remember that we're working on a problem that is over 70 years old. It's a problem that was born out of serious national defense concerns and was handled for some seven decades with perhaps too much secrecy which had bread mistrust. The bright side is we have the technology to move forward. The veil of secrecy is being removed, stakeholder engagement seems to be moving in the right direction and it's certainly constructive. That will be done.

Now, we need time to move in the right direction and properly draw up the plans to remedy the problem. That will be done by the U.S. Army Corps of Engineers' feasibility study which is going forward with stakeholder involvement and with regulatory review.

When that is completed and passes muster, then it will be time to get on with the final remedy. In the end, it will be costly. In the end, it will seem like it took too long, but from my viewpoint, we will get there and we'll do it safety and we'll protect the environment. In closing, I want to go back to what I said in my closing remarks at the June meeting.

Then, I challenged us all to channel our passions to find a pathway to work together and move forward. I believe we have a pathway to move forward. The road is not going to be a short one, but we all need to stay the course. Thank you. And if you have questions for the EPA, I'm here.

MS. SWEARINGEN: I just want to make a comment. I'm Wendy Swearingen and I'm on the Lewiston-Porter School Board. My colleague Bill Willard is here, too and I just want to make sure that Ann Roberts' issues are addressed because it's very concerning to me that you incorporate all her data in with the

data with the groundwater, okay? Thanks.

MS. KREUSCH: Thank you. Bruce, if you would turn the lights up, we'll go to the regular discussion workshop portion of this meeting where you are able to ask any question you like of any member of the team and please feel free to drink more coffee and have more cookies as we're going through with the rest of the discussions. Are there additional questions? Yes?

MS. ROLAND: Your questionnaire about this technical facilitator, I don't understand what a technical facilitator is. You want somebody from our community to be that technical facilitator or what does a technical facilitator do, interpret your data?

MR. BUSSE: He'll help the community understand the data that we put out, whether it's the monitoring data, these technical memorandums which will be complex. They'll help to interpret and digest that so the community can understand it and so we're not talking, I don't know, technical babble and

you guys -- it will help you to distill it down, analyze it and then, be able to get back and prioritize your concerns and issues back to us.

MS. ROLAND: This will be from the community or from the Army Corps?

MR. BUSSE: We will hire the technical facilitator. They'll be contracted by us to work with the community.

MS. ROLAND: I see.

MS. KREUSCH: So, we're trying to get your ideas so we can develop the scope of work for that person.

MS. ROLAND: Okay. Fine. Thank you that helps.

MS. KREUSCH: Additional questions? Ann?

MS. ROBERTS: Do we have any representatives from the Department of Energy?

MS. KREUSCH: Yes. Chris Clayton is here.

MS. ROBERTS: Right. I had a few questions for the Department of Energy because in discussions with the Army Corps and EPA, there seems to be a piece missing which is the

Department of Energy. So, I sent you a few questions via e-mail --

MR. CLAYTON: Yes, ma'am.

MS. ROBERTS: In the hope you should answer the, should I let you read them out?

MR. CLAYTON: Let's see. Do you want me to read your entire letter, ma'am?

MS. ROBERTS: No, let me read them then. The first one was has the Department of Energy ever evaluated the impact of the adjacent landfill operations on the NFSS Interim Waste Containment Structure?

MR. CLAYTON: To my knowledge, no ma'am.

MS. ROBERTS: Has the Department of Energy ever developed an alternative system of monitoring the Interim Waste Containment Structure other than groundwater monitoring and measurement of the water levels inside the IWCS?

MR. CLAYTON: To my knowledge ma'am, no, ma'am.

MS. ROBERTS: Does Department of Energy have a record of the nuclear reprocessing

waste from the Knowles Atomic Power Laboratory placed inside the IWCS?

MR. CLAYTON: I'd have to defer to my colleague.

REPORTER: What's your name, sir?

MR. GILLESPIE: Joey Gillespie.

REPORTER: Thank you.

MR. GILLESPIE: We took a look at that, but -- and we're still looking at it. We can't find the definitive list of what went in there other than there was -- over 90 percent was the, you know, the radium wastes that were there. It just wasn't definitive enough.

MS. ROBERTS: I think what concerned me was that the information I heard being given by the Army Corps or other agencies was that only remediated soils, et cetera that contained KAPL waste had gone into the IWCS, but when I looked at the 1994 Bechtel surveillance report, they had actually listed other waste described as crates of combustible material and drums of processed waste which the only time I've seen that description

referred to the KAPL waste.

MR. GILLESPIE: That's correct.

MS. ROBERTS: So, my concern was that not all of the KAPL waste actually got sent to Oak Ridge and in connection with that, there was one drum of waste, uranium residues left on the NFSS. Are you able to say whether that's from KAPL? It was basically -- contained uranium and also I think it was americium.

MR. CLAYTON: Michelle, could you comment on that?

MS. BARKER: Ann, are you talking about the drum like the deteriorated drums?

MS. ROBERTS: Yes, the abandoned drum. You actually addressed that in the replies to the questions when you said it could have come from there.

MS. BARKER: If there is any americium residue, I mean, that would be the only main --

MS. ROBERTS: Right, but I was wondering whether the KAPL people could actually comment on that because they should have a better

knowledge of what they sent to the site.

MR. CLAYTON: We have a general list that was sent at the request of the New York Department of Health, but even it is not as detailed as I would have like for it to have been. We are currently putting together a KAPL assessment report of the vicinity properties and the NFSS, wherever KAPL waste was known to be stored from the record. We've taken a look at that. Just from our past surveys, any data that we may find, any citizen input would be nice as well and our report at this point is leaning towards the bulk of the KAPL waste was either shipped off site or the less than six micro-r combustibles may have been incinerated at a couple of locations and we evaluated those locations and our findings are that there's really very little if there's any KAPL waste remaining and that would be covered by the Corps -- I mean, not covered, but they would evaluate that.

MS. ROBERTS: Have you looked at the groundwater data for the lower water bearing

zone?

MR. CLAYTON: No.

MS. ROBERTS: Which has several wells both on Modern and on the NFSS which shows elevated beta, gross beta, which I know is only a screening, but has yet to be investigated?

MR. CLAYTON: Ma'am, when the FUSRAP program was transitioned from the Department of Energy to the Army Corps of Engineers for remedial action, a majority of that monitoring and such was also transitioned to the Army Corps. So, since approximately 1997, our involvement, the Department of Energy's involvement has been limited on any analysis, any review of collected data on that except for those data packets that were completed prior to the transition of 1997.

MS. ROBERTS: One point on that was that Department of Energy commissioned a special study of gross beta in the groundwater around the IWCS, but there's no record in the annual surveillance report of why they did that. Was that related to the possibility of KAPL

material going into the IWCS?

MR. CLAYTON: Do you have a title of that document?

MS. ROBERTS: It's the 1991, 1992, '93, Environment Surveillance Reports for the NFSS on the measure of gross beta for these years.

MR. CLAYTON: We'll take a look at that.

MS. ROBERTS: Thank you. I'd appreciate that.

MR. CLAYTON: Yes, ma'am.

MR. GILLESPIE: Now, on the KAPL report, we're finalizing that, getting comments from the Corps and making sure it's all together and then, we will post that to the website for the public to take a look at. We also have posted our assessment of the vicinity properties. You should have gotten a notice as part of this public group.

MR. CLAYTON: And I'd like to follow up, how many copies did we bring, Joey, of CD's?

MR. GILLESPIE: We have six hard copies and we'll take names for CD's if you want me to send it to you one.

MS. ROBERTS: Thank you.

MR. GILLESPIE: Yes. There's no problem. So, at the end of the meeting, if you want to provide an e-mail address or shipping address, I'll be more than happy to send it out, but it will be publicly available and posted.

MS. KREUSCH: Additional questions? Okay we do have a short time lapse video that we can show of the demolition of Building 401 at Niagara Falls Storage Site. It's not the whole demolition, it's just what we could get together before the meeting of the shots that we had from the time lapse cameras and then, we'll have -- so, you can either go to the back and look at the posters and talk one-on-one with either Paul Giardina or any member of the team or Chris Clayton from the DOE and his team will still be here for another 15 to 20 minutes. Thank you very much for coming tonight.

(The meeting concluded at 8:30 p.m.)