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COUNTY OF SENECA
STATE OF NEW YORK

THE SIXTH MEETING OF THE TECHNICAL REVIEW COMMITTEE

HELD AT: Seneca Army Depot
Romulus, New York

HELD ON: February 2nd, 1994

REPORTED BY: PATRICIA A. NELK

LTC. JOHNSON: I am Lieutenant Colonel Roy Johnson, the installation commander. On behalf of all the people at Seneca I would like to welcome you here today. There is a lot of old faces and new faces. I would like to take the opportunity today to introduce myself and make sure that everybody knows who is here in attendance and Steve will take care of those formalities.

For those who were here for the last meeting I said Ground Hog Day would be a good day. Sure enough we didn't have snow today. Something I am eternally thankful for. I am certainly glad to host this meeting. We try to do this on a quarterly basis. It does serve a very important purpose. There is a lot of information and questions and answers that we cover at this forum and so we are very pleased to have the opportunity to host it.

At this time I would like to turn the meeting over to Steve Absolom, our public works director, who will discuss the agenda and also do some introductions.

MR. ABSOLOM: Thank you. Okay. To

start with we have some -- we have at least one new member who is not present. But I want to make sure everybody knows that the town supervisor for Town of Romulus is now Ray Zajack (phonetic) and he will be a member of this committee. Okay. So he will be a new member. He called me at lunch time to say because of certain personal reasons he would not be in attendance but he had planned to be here.

Another thing that was brought up at the last meeting was the concern on staffing levels at Seneca. I wanted to let everybody know that we have received authority to hire two people. I have, in fact, interviewed one and have a project start date. And if nothing goes wrong, I should have additional staff people start working for me prior to the next TRC. Things are moving in that light.

With that what I would like to do is go around the table and make sure everybody introduces themselves so that everybody knows who they are talking to and that sort of thing. If I could start with Kevin?

MR. HEALY: Kevin Healy, lead engineer from Huntsville Division for all clean up work.

MR. SUEVER: Rick Suever, the project manager for Seneca from the Huntsville Division.

MR. DUCHESNEAU: Mike Duchesneau from Engineering Science. I am the project manager for Engineering Science.

MR. CHAPLICK: Jim Chaplick. I am the engineering manager from Engineering Science.

MR. RADDELL: Chris Raddell, program manager with Engineering Science.

LTC. JOHNSON: Lieutenant Colonel Roy Johnson, commander, Seneca Army Depot Activity.

MR. ABSOLOM: I am Steve Absolom, chief of public works.

MAJ. GERMAN: Major John German, U.S. Army Environmental Center.

DR. KATHLEEN BUCHI: Dr. Kathleen Buchi, Army Environmental Center.

CPT. RAIMONDO: Captain Antony Raimondo, Command Judge Advocate.

MR. WHITAKER: My name is Jerry

Whitaker. I am the public affairs officer at Seneca.

MR. ENROTH: Tom Enroth, alternate project manager.

MR. BATTAGLIA: Randy Battaglia, project manager at Seneca.

MS. STRUBLE: Carla Struble, project manager with the United States Environmental Protection Agency.

MS. RAFFERTY: Lani Rafferty, State Health Department.

MR. GERAGHTY: Dan Geraghty, New York State Department of Health.

MR. SHINAL: Joseph Shinal, private citizen.

MR. DOMBROWSKI: Brian Dombrowski, Seneca County Health Department

KAMAL GUPTA: Kamal Gupta, project manager, New York State Department of Environmental Conservation.

MR. MEHTA: Manmohan Mehta, New York State DEC, Avon Office.

MR. SCOTT: Robert Scott, Regulatory Affairs, Environmental Conservation.

MR. STAFFORD: Ken Stafford of the Town

of Varick.

MR. COOL: William Cool, councilman of the Town of Varick and manager of the Soil and Conservation District, Seneca County.

MR. ABSOLOM: Marty, you want to take a bow?

AUDIENCE MEMBER: No.

LTC. JOHNSON: At least introduce yourself.

MR. ABSOLOM: This is Marty Toombs representing the Finger Lakes Times. This is Doris Wolf representing the Rochester Democrat and Chronicle. I am, in fact, passing around a sign in sheet. If everybody would sign in so we just have a record of the attendance it will help. Just a reminder, as you talk please speak up so our recorder can hear you. It is important. And with that I am going to turn it over to Kevin Healy and he's going to start the agenda.

MR. HEALY: Good afternoon. I am sorry we don't have overhead as we normally do but you can easily follow along in your package. I am starting off with the second page of my presentation entitled status update for the

ash landfill at opening burning ground sites. These are the two main sites, the remedial sites. As always we start with those first, the remedial investigation reports. The remedial investigations have been submitted for regulatory review. We received the first set of comments from the regulators and we are in the process now of responding to those comments. As far as the feasibility study report is concerned, it is in the process of being finalized and will be submitted for regulatory review. And the records of decision are still expected in early calendar year 1995. I believe that is consistent with the schedule that we proposed at the last TRC. I don't believe there has been any delays.

The next topic will be a status update of Seneca Army Depot's activities, high priority areas of concerns. These are the sites where we are doing site investigations right now. The field work is predominantly complete at the high priority sites. There have been some small delays due to weather but pretty much on schedule without too much

of a problem. Our conclusions in the final reports are expected by September of '94 and I don't believe that represents too much of a delay based on the schedule we gave you the last time.

The third topic would be status update of Seneca Army Depot's activities, moderate areas of concern. We are also doing site investigations here. The field work at the moderate priority sites was lagging slightly from the high priority sites. So the weather delays had more of an effect on the overall work schedule there. But we are proceeding with field work as best we can. And conclusions and final report would be expected by late calendar year '94 or possibly early year '95. That represents a delay over the last TRC's proposed schedule of roughly two to three months.

The final topic of discussion would be a status update on the finalization of the SWMU classification study. We have -- I believe we discussed the last time the limited sampling being done at several sites. Field work as we originally proposed is essentially

complete. However, we do have some disagreements with the regulators as to how much work will be done at individual sites. We are in the process of trying to resolve those disagreements. And it may involve having to do additional field work depending on how those disagreements are resolved. As far as the finalization of the studies is concerned, it could be finalized by, I believe we said, the next TRC. And that would be assuming there were no substantial problems resolving in disagreements on work to be done at the individual sites. If there were some problems and additional field work was required, it would be more likely by this fall that the study would be finalized. That would represent a delay of approximately four or five months.

That is it for the administrative update. Mr. Duchesneau from Engineering Science will give us a little bit more detail on the work that's been done in the last three months.

MR. DUCHESNEAU: My name is Mike Duchesneau. I am the project engineer for

this project. I would like to start off with an organizational chart. I think many of you have seen this before but for the new people that are here here is our organizational chart that we have established for this program. There will be one slight change here. Gary East has moved on at the corps and he will be replaced by Mr. Rick Suever, who is sitting over here by Kevin. I am roughly the person who is responsible for coordinating a lot of the field work, a lot of the subcontractor people and preparing the documents that are reviewed by the regulatory agencies.

Just to provide you with an update, I will be speaking today about all of these different SWMUs and CERCLA investigations that we have ongoing. The one is the SWMU classification report Kevin has just mentioned that previously we have, in fact, completed the limited sampling. At many of the SWMUs we are looking to collect a bit more information on before we make a decision on whether or not the SWMU would be classified as AOC.

MR. HEALY: Why don't give an explanation of what some of the abbreviations mean?

MR. DUCHESNEAU: Solid waste management. It is a RCRA term. It is a term to identify areas where potential releases could have occurred.

We have identified up to 72 areas called SWMUs. From that list of 72 we grouped the SWMUs into what we call high priority, moderate priority and low priority and moderately low priority to try to set some type of hierarchy as to when and in what order these different SWMUs would be investigated. What you see here is a listing of all of the delivery orders that we currently have ongoing with the Corps of Engineers, the Huntsville Division.

MR. SHINAL: What criteria did you use for determining?

MR. HEALY: Based --

MR. BATTAGLIA: As far as the initial site investigations, we had some information about most of the sites as to what the site was strictly used for and that gave us enough

indication to pick what would be the higher priority or worst to investigate first. Because it was mainly based on funding requirements we need to necessarily know if they were going to fund the whole amount of the investigations that we had to do.

MR. SHINAL: If we had more money, we could probably have more than 72 areas?

MR. BATTAGLIA: No. Seventy-two areas are all the areas that we know of that potentially could be investigated as a site.

MR. DUCHESNEAU: We have approximately 30, 35 SWMUs that are of no action SWMUs. The ones that you see here, the 25, the 10 and the 15 are the ones that we are planning on performing site investigation studies on. The top two represent actually six SWMUs. We combined five SWMUs with the ash landfill because of proximity. These two are actually in the RI/FS process. They have jumped from the site investigation process into the RI/FS process and maybe my next slide will provide more information.

MR. SHINAL: I am familiar with them.

MR. DUCHESNEAU: The remedial

investigation feasibility study -- it is a termed used in CERCLA -- means to perform and conduct investigations. And the follow-up feasibility analysis lists several remedial options for cleaning up the site. Okay.

The one that I haven't mentioned here is something that we were talking about last time that I want to give a little bit more information on. That is the action memorandum. The Army is proposing to perform an expedited soil remediation at the ash landfill in an area of soil impact with some of the chlorinated organic solvents we believe is the source of a discovered groundwater plume there.

CERCLA is the term used for Super Fund. We are getting to a point in the process where I think it is important to step back a minute and look at what is identified in the IAG, Inter-Agency Agreement, between EPA, NYSDEC and the Army. This is a flow chart that we have prepared to try to outline the process that we have been discussing here. It begins with the SWMU classification where a SWMU is identified. We talked about doing

some limited sampling in determining at one point whether or not it is an AOC, an area of concern, or a no action SWMU. If it is determined that it is an area of concern -- in other words, limited sampling or the historical use of that SWMU lead us to believe that there is a potential threat -- we move into the site investigation phase.

I had mentioned earlier 25 different SWMUs that we are actually currently performing a site investigation study on. The results of the site investigation study are then evaluated to determine whether a threat to the environment or human health exists. If it is determined, yes, that is true, there is a threat, the Army has an option to perform a removal action to eliminate that threat. And a removal action is regarding the action memorandum where you implement some type of remedial program to eliminate a threat. Or you can move right into the remedial investigation feasibility study phase. This is more an indepth study. It actually involves human health risk assessment. Once that is the prepared you

evaluate various remedial options in terms of how it would attain your goals and attain your risk. You follow through the RI/FS/CERCLA, prepare a remedial action plan and record of decision for those particular sites. You actually would implement a remedial action. I think you get the idea here that there are basically three phases. One leads to the next which leads to the next. And as you move across, the investigation becomes more involved and encompassing.

The SWMUs that we have classified as high priority SWMUs are seven in number. I list them here. They basically involve facilities at the depot where activities were performed that would lead us to believe that there could be a threat of a release, including the munitions washout facility where materials were washed out of old projectiles and whatnot, abandoned powder burning pit areas, fire demonstration pads and fire training pit. I will get into a little more detail shortly as to what our plans are for investigating those particular

SWMUs.

To provide you with a little bit more dates to show you where we stand on these high priority SWMUs, this plan was approved on July 30th and we initiated field work October 1st. And we met the task in all of the work plan that was approved by EPA and NYSDEC. It involves a fairly extensive amount of sampling including asbestos sampling, test pits. We performed some soil gas surveys at a couple of landfills. Generally when we start off we perform a large amount of geophysical investigation to try to get an indication or direction of groundwater flow, slope of the bedrock, the existence of any type of buried tanks, that kind of stuff. We obtain a lot of quick and cost effective information doing geophysics. We also prepare photogrammetric survey maps to help us define what is going on in the location of our wells accurately.

What needs to be done? We have installed upwards of 45 monitoring wells. Each one of those monitoring wells has developed the geology. At this locale it

does not yield a lot of water and so the development process has been rather slow. And in addition to the fact that the weather has been particularly cold and it is difficult to deal with water and that kind of stuff with pumps when you are trying to develop wells we have basically completed the well development as of last week and are well under way into the well sampling and should be completed within the next week or so. We have received data from the laboratory and we are in the process at this point of preparing evaluation reports for that data and summary tables that will be included in our reports. We expect the field work to be completed in a couple of weeks, by mid February.

The schedule that we had presented to you last time is what's up on the screen here. I wanted to point out where we planned on being and where we actually are. The well sampling that we just talked to you about was to be completed by January 27th. We are slipping that by a couple weeks largely due to what I was saying earlier; that the weather has been particularly cold and Mother

Nature does not yield a lot of water in these wells. Its been a little bit longer than we expected to develop the wells. Overall I think we have pretty much stuck to this schedule and we are planning on meeting the milestones in the future.

This is an oversight view of what we call SWMU four, Solid Waste Management Unit Number Four. It is the former munitions washout facility. These buildings were used. Some of them aren't here anymore. But the buildings that you see here, the former locales, are used in the process of obtaining a shell of some sort. Steam cleaning the inside to remove whatever residual propellant or explosive material was in there. That material was processed and recovered and used in other applications. The discharge water was discharged to a leach field approximately in this area. We have performed test pit sampling, geophysics. We have identified the locale of a clay pipe that went out to a small holding pond here. We have done test pitting in the pipe and underneath the pipe; established soil borings at strategic

locations around the facility to find if there had been any release to the wells; monitoring wells to see if the material had been released and has it impacted the groundwater. We have an upgradient monitoring well located in this area as well as some of the sediment sampling in the drainage ditch that moves away from the site here.

COMMITTEE MEMBER: You want to show them where on the overall map these facilities are?

MR. DUCHESNEAU: The munitions washout facility is located approximately in this area right here. Just for your bearing, here is the air field. This is Route 96-A. Seneca Lake on this side. Okay. Cayuga Lake would be up here. The main gate for the facility is here and 96 would run -- Route 96 would run somewhere along here. We are located right up in this area here. At this point it is way down.

MR. BATTAGLIA: In the back of the handout there is a list of all the site investigations.

MR. DUCHESNEAU: Right. All this work has been done. We are in the final stages of sampling some of these wells. The overburden material, the material of soil above the bedrock, is fairly thin at this site. It is very dense till. Till is an unsorted geological material deposited by a glacier, fairly compact and dense and doesn't yield a lot of water. We are having longer than expected time frames to sample these wells largely because we have a lot of turbidity in the wells. It takes us a lot longer time to make sure we can eliminate that from our samples.

This is a SWMU or SEAD 16. It is the abandoned deactivation furnace. This facility is located right about in here. This is the main gate. This is here. It is not far from where we are now. This is an abandoned facility. This was the facility we had actually sampled asbestos inside the facility. We have taken surface water samples from the standing water in the building and have collected quite a large amount of surficial soil samples. The idea

was if something had been released we want to know how widespread that was.

These lines that I identify here as hatch lines refer to the seismic survey that we do at every SWMU. This is a standard operating procedure. We perform seismic surveys on all four sides of the SWMU to better get an idea of the groundwater elevation. If we can't find the water surface, if the water table has dropped close to the bedrock, that allows us information as to where we can place our upgradient and downgradient monitoring wells and give us an idea where we can set our well streams.

Moving on to the next SWMU. This is what we call SEAD 17. It is the existing deactivation furnace. I might just qualify that. Although it is an existing facility it is currently not operating. We are in the process at this point of trying to attain a RCRA permit to allow this facility to operate. It would essentially do the same processes that went on at the abandoned furnace. Mainly deactivating small arms. It is a small rotary kiln in where the

projectiles would detonate in a small tube. We are collecting once again surficial soil samples at this facility.

This is SEAD or SWMU 24, the abandoned powder burning pit. Pretty much the same scenario applies here with geophysics or surface soil samples. The soil borings which we identified as the main body of the SWMU as well in this one. We are doing quite a bit more geophysic work because it is a pit. We are interested in finding out if there was anything buried in the pit; what kind of materials were there. We performed two types of geophysical investigations. One which is called EM, which is electromagnetic survey, which is trying to find the presence of metal, steel or buried objects. Which the ground penetrating radar could help us find non-metal objects which could be buried there. This work has all been completed.

SEAD 25 is the fire training and demonstration pad. That is located approximately in this area here. Not far from we are now. This was a pad that used to be where fire training activities were

performed. We have done some monitoring wells and some soil borings in the pad.

This is a SEAD 26. It is a fire training pit and the demonstration area. That facility is located over in this area. Again here is the main gate. Not too far from where we are now. This was a large -- it was a lagoon that has oil in it. It is bentonite lined; a clay lined bentonite which prevents the oil from penetrating into the subsurface. We have sampled the sludge and sediment that was below the oil. We have placed monitoring wells what we consider downgradient of the oil area. We have also placed monitoring wells at two different locations along this elevated filled area. This whole -- this area here is elevated approximately 10, 15 feet around the surrounding area and it is comprised mostly of fill materials such as bricks, rocks and things of that nature. Essentially what was done here is material like this oil was occasionally lit on fire and people trained as to how best to put it out. We have done quite a bit of geophysical work here. We

have done eight thirteen foot long ground penetrating radar surveys along this platform or elevated area to try to determine if there were any buried objects of interest. In the test pits we did find some geophysics, ground penetrating anomalies. We did six test pits and one or two over here and essentially found nothing. Essentially found buried fill material. No buried drums that we can determine. There is nothing here that would lead us to believe that there was a release in that area. Again we have performed our seismic survey to help us locate upgradient and downgradient monitoring wells. The data from this survey is currently coming in. We are in the process of evaluating it. I think at the next TRC we will have more information to present to you. I am presenting to you essentially cuts from the work plan and describing to you the work that we have already performed.

This is SWMU 45. It is located adjacent to the open burning pad that we have investigated as part of the RI/FS process. This is an active facility that has also been

applied for RCRA status under sub part X. What is performed here is the safe detonation of munitions under this large mound of material. Essentially what happens is a series of approximately 10 pits are excavated into this mound. Ammunitions are packed in this mound and buried with soil to keep the noise and explosive force down and are essentially detonated to destroy the ammunitions. It is the safest, most cost effective way the Army has to deal with this. We have sampled the soil from test pit samples of the mound itself, placed three downgradient monitoring wells, collected surface water and sediment samples from some of the drainage ditches that discharge from this area and also established an upgradient monitoring well and collected some upgradient soil samples here. We have a pretty good idea where the groundwater is flowing, which comprises approximately 40 wells. We are fairly sure we know which way groundwater is flowing there.

Moving on to three moderate priority SWMUs, which are SEADS 11, 13, 57,

construction debris and IRFNA, inhibited red fuming nitric acid. It was used as a rocket propellant back in the 50's and apparently some of that material was stored here in the explosive ordnance disposal area.

This is SEAD 11, the old construction debris landfill. As the name implies, it is the landfill where lots of the construction debris from the base operations was buried. We have performed our seismic survey, installed our monitoring wells, performed test pits. The test pits and the soil borings that were done actually in the landfill were linked to the geophysical work that we did, which was ground penetrating radar as well as soil gas sampling. And soil gas sampling involves extracting a small amount of the gas in the landfill itself and doing an on site analysis using a gas chromatograph to determine the presence of volatile organics. It is helpful in locating the optimum places in the landfill to locate test pits and soil borings. The results of the soil gas survey indicated -- I think we had one hit approximately in the middle.

Which when I say a hit, I mean elevated number. More in background, I believe the value was approximately 10 parts per million total volatile organics in this landfill, which implies there was some potential material in there that we are interested in sampling. The monitoring wells will give us a better handling if that material has impacted the groundwater at all. That area, by the way, is -- I think it is down right here in this locale.

COMMITTEE MEMBER: Down by the air field.

MR. DUCHESNEAU: This is the IRFNA disposal. That is over by the duck pond in this area here. Here is the main gate and Route 96. We are approximately here right now. This facility was the area where pits were dug. The red fuming -- inhibited red fuming nitric acid was discharged in some of the pits. The pits were lined with lime stone. And lime stone was essentially used to neutralize the acid to render it in inert. We have performed geophysics to help identify the location of the pits and then done our

monitoring wells installation and other soil borings in the locales that indicated the presence of where the pits were. This is all pretty much grassed over right now. You can't walk out and obviously see where the locale of that is. This area on the other side of the duck pond contained pipes and shower stalls that were used, we think, in the operation of this area here. So we actually included some sampling and geophysical work in this area to see if there was any releases in this area. We have collected surface water samples and sediments from the pond itself.

The last SWMU that we are going to be talking about details on today is 57. This is the explosive ordnance disposal area. It is a bermed area with a small pad in the middle of it. The open detonation burning ground is over in this area here. That would place it right about over in here. Here is the open burning open detonation ground and SWMU 57 is right about here. There is a building here -- basically a wood barn -- that we also collected some soil samples

around to determine if there was any releases as this process was going on; if material was stored and possibly released. And we were interested in that. We performed test pits, did our geophysical surveys, as I have already mentioned, and sampled test pits in what we found was a shallow depression in this area.

Moving on to the action memorandum. As I mentioned, the action memorandum is a process by which the Army can implement an expeditious -- expedite a remedial action process. And this draft action memorandum was submitted for Agency Review on December 3rd and we are currently awaiting regulatory comments. I understand from Carla, the person representing EPA, that we will be receiving comments shortly from this. The action memorandum is intended to eliminate an area that we had identified during our remedial investigation of the ash landfill. The ash landfill is in approximately this area. This is the abandoned incinerator building. The non-combustible landfill. Seneca Lake is down in this area and Route 96

is approximately over in here. The area of concern that we are interested in that we will be performing this action memorandum remedial action on is what we call the bend in the road. The bend in the road is aptly named because the road takes a bend right where the area of the most concern is. We identified that area largely based on the work we had done during our ride on soil gas survey that was performed here. Here is the bend in the road. Something like that. We did our soil gas survey and we found several hits in here. And we went back and did more points to try to delineate the extent of this area. And also found another area next to it.

MR. SHINAL: You refer to the area as most of concern. Why do you call it the area of most concern?

MR. DUCHESNEAU: Because we would like to perform a remedial action quicker than the others, the other areas. We are also investigating the ash landfill, the non-combustible landfill, which I showed you earlier, which was in that area.

MR. SHINAL: That appears to be arbitrary. What factual information would make it an area of most concern?

MR. DUCHESNEAU: We believe the material that we find in the soil here is the same material --

MR. SHINAL: What is the chemical?

MR. DUCHESNEAU: Trichloroethlyene and dichloroethylene, otherwise known as TCE and DCE. Then small amounts of vinyl chloride. Based on that --

MR. SHINAL: Do you have any amounts?

MR. DUCHESNEAU: Yes. The highest value that we have in here was approximately -- was it 200 ppm, 300 ppm?

MR. SUEVER: In the soil.

MR. DUCHESNEAU: About 200 ppm.

MR. SHINAL: Trichloroethlyene?

MR. DUCHESNEAU: Yes.

MR. SHINAL: What about the dichloroethylene?

MR. DUCHESNEAU: I can't remember the number.

MR. SHINAL: How about the vinyl chloride?

MR. DUCHESNEAU: Once again I think it was maybe ten ppm range because the chlorinated material is TCE, trichloroethlyene,

COMMITTEE MEMBER: Highest was 120 ppm. Dichloroethylene was 60 or 70 ppm.

MR. SHINAL: What did you use for determining this? What instrumentation?

MR. DUCHESNEAU: Gas chromatic mas-ca-trop-ca-pe (phonetic). Otherwise known as GCMS. We followed New York State CLP protocols, Contract Laboratory Program, analytical protocols established by the State of New York which are currently being used by New York State at several other Super Fund sites. The level of QAQC on these protocols are the highest that you can get. So we are fairly certain that the numbers are correct.

We did the soil gas survey. We are finding a lot of these hits here and we went back in Phase II and delineated this area. As you can see, we set up a star pattern. And based on that information we then went back and collected some soil boring samples in this area of greatest impact and also

here. We tried to quantify how high these soil values were. We believe that -- I will show the plume in a minute -- it emanates from this area and moves westward towards the lake but doesn't reach the lake. So the area that we are looking at to remediate is essentially the areas I just showed you which comprises of approximately 20,000 cubic yards of material here. What were placed here were some borings. As you can see, we have done a monitoring well in the hot spot. That is what we call it. This well is the most contaminated well on the site. As we expected.

The technology that we have decided to utilize here is low temperature thermal desorption. Essential what that is is a large rotating drum. In this case, molten salt is allowed to come into contact with the soil. The volatile material is allowed to come in contact with the salt and is placed through the air processes. The molten salt is placed in a series of screw augers. The soil is placed in and allowed to mix with the heated screw augers and that is how the heat

transfer takes place between the heat source and the soil. There are several vendors that provide this service. Here is another vendor. This is Canonie. It is placed in hoppers, put on a conveyor belt, allowed to rotate in this dryer. But it is essentially a low thermal desorption. The burner is on this side. You can do it concurrently or counter-currently depending on the vendor. They could do it concurrently. The soil is moved down this tube. The tube has the chemical in it and augers and that allows the soil as it tumbles to come into contact with each other. And it is inclined. As the soil tumbles there it moves down into this area here. The lot gas is collected and this particular process uses a cyclone to remove the particulates and a bag house to lose smaller particulates and a scrubber to remove any hydrochloric acid and then in goes into some carbon units.

MR. SHINAL: What's the maximum absorption rate that you anticipate with that unit?

MR. DUCHESNEAU: Maximum absorption of

the carbon?

MR. SHINAL: Of the pollutants.

MR. DUCHESNEAU: A hundred percent. There is another carbon here to remove all of the pollutants so there would be no air discharge.

COMMITTEE MEMBER: How many months does it take to do a 120 cubic yards? Do you get topsoil on it or get vegetation to grow on it? Do you have to add something to the soil?

MR. DUCHESNEAU: We actually thought about this quite a bit. We were talking about taking the heated soil and putting it back in the hole that it came out of. We were leaning not do that and place it intentionally in the non-combustible landfill next to it. If we placed the soil back into the hole, we would -- we are looking to create some type of a leach field so that we could flush the groundwater and create some kind of groundwater divide or mound so we could eliminate clean water from coming into the site. This whole thing of what we do with the soil -- the clean soil is related.

We wanted to integrate. That is in terms of how we are planning on constructing our groundwater treatment plant. We are still not clear what the final outcome will be but, yes, it will be placed back to the soil -- back to the ground and probably covered with some kind of topsoil covering.

COMMITTEE MEMBER: How long will it take to do 20,000?

MR. DUCHESNEAU: Two to three months.

COMMITTEE MEMBER: We are going to try it, obviously, during the summertime if we could for several reasons; one, the groundwater level is extremely low at that time.

MR. SHINAL: I am sure there is some kind of financial agreement, contract, in all this. Does it state anywhere that you will remove 100 percent of this material? Is there any warranty that we will get our money's worth; that you will remove 100 percent of the material?

COMMITTEE MEMBER: We are not going to be the contractor who actually implements this.

MR. SHINAL: You are going to go ahead and advise them or advise us or advise somebody. Are you going to advise them they are going to have to remove 100 percent of the material?

MR. DUCHESNEAU: We are planning on doing follow-up.

MR. SHINAL: I would like to have something in writing from whoever gets that.

MR. ABSOLOM: Excuse me. Time out. Time out. One of the things -- keep in mind this is an interim action. This does not say this is the only thing we are going to do at the site. We have identified the source. We are going to get the source out of the ground so we don't continue to contaminant the groundwater. We still have to decide at what level are we going to clean up the surrounding area and the groundwater. That comes after this activity.

MR. SHINAL: Regardless of when it comes we want to make sure the job is done perfectly just as is stated here. A hundred percent clean up, right?

MR. ABSOLOM: That is my point.

MR. SHINAL: Let's use this.

MR. ABSOLOM: There are guidelines that we have that determine what level we have to clean up any site.

MR. SHINAL: All right. What are your guidelines?

MR. ABSOLOM: They are created --

MR. BATTAGLIA: Federal regulations.

MR. SHINAL: What are they? What level of purity, doctor? When do we say this stuff is no longer? I can find pollution in your backyard.

COMMITTEE MEMBER: And how clean is clean? I cannot give you an answer. It is dependent on the site. It is dependent on the risk.

MR. SHINAL: Depends upon the contaminant. This is what we are after.

COMMITTEE MEMBER: There are currently no firm guidelines in soils. New York State has guidelines that are to be considered.

MR. SHINAL: Whose are we going to follow then?

MR. BATTAGLIA: As far as the groundwater is concerned, primary contaminant

level that you clean down to is strictly water standards.

MR. SHINAL: What are the standards?

MR. BATTAGLIA: Maximum five ppb.

COMMITTEE MEMBER: We are doing what is feasible and using the best available technology.

MR. SHINAL: Technical feasibility is a gamble. We are wasting our money if we are going to talk that way.

COMMITTEE MEMBER: If we are using proven technology --

MR. SHINAL: What level did we use with the proven technology?

COMMITTEE MEMBER: The levels that we are reaching in the report.

MR. HEALY: Huntsville will be the one that writes the contract. There are State level guidelines and there are air guidelines that need to be applied. We will not make any efforts to run this system unless we know we are going to meet those guidelines.

MR. SHINAL: We have no guidelines right now?

MR. HEALY: Yes.

COMMITTEE MEMBER: We can get you copies of the guidelines.

MR. SHINAL: What are the guidelines we are going to use? I can find guidelines.

MR. DUCHESNEAU: In our opinion when we wrote this document we used the New York State TAGM Guidelines and they are Technical Administrative Guidelines Memorandum. And they list all of the pollutants that we are interested in here and they give us the numbers; what they consider clean up numbers.

MR. SHINAL: Is that what is going to be used?

MR. HEALY: It will be in the contract and the report. It will be in both.

MR. SHINAL: I haven't heard any mention of it up until now.

MR. DUCHESNEAU: I am just trying to follow-up with his question. The value for TCE in this is TAGM's. For soil it is several parts per billion. We are using that as our guidelines as to where we want to get below.

(Whereupon there was brief recess taken.)

MR. ABSOLOM: Before we go any farther,

one of the things I would like to make clear is that we are doing this as a technical review committee meeting. It is not -- it is intended to provide information to everyone of what we are doing. We will be glad to entertain questions. I am going to ask, so we can continue through this, that any questions that you have please write them down and hold them so that we can answer them for you. We have a time for a question and answer period after the agenda and we will be glad to entertain all questions at that time. Otherwise we will not be able to keep the report straight as to what is said.

MR. SHINAL: What you are telling me is I can't ask a question at this meeting?

MR. ABSOLOM: No, sir. I am not telling you that at all. What I am trying to say is I have to have accurate documentation of what transpires here at this meeting. I have to be able to have control. You have a tendency to not allow people to finish their answer before you ask your next question.

MR. SHINAL: I am sorry.

MR. ABSOLOM: I --

MR. SHINAL: If I stop you at any time when you are not finished, let me know. I am here for the information. I am not with you everyday and I don't have all these reports.

MR. ABSOLOM: All these reports we talk about will be, if they are not already, in the administrative record in the Romulus Town Hall. You are more than welcome to read them. That will be the appropriate place to look for information if you are concerned.

MR. DUCHESNEAU: It is strictly for the stenographer. We need to be a little bit more careful as to how and when we say things.

Just to move on. Here is an actual photograph of a site that I was involved in. This was a Super Fund clean up in Maine called the McKinn (phonetic) site. What you see is the low temperature thermal process in operation here. It is kind of blurry. Here is the rotary kiln, the hoppers, the soil being discharged into the kiln. This is a bag house, the scrubber and then the stack exhaust gas here. So I have personal firsthand knowledge that this process is in

fact reliable and will work.

Just another example. This technology is fairly widespread at this point and becoming more recognized as an appropriate technology. It is the same kind of process. Same kind of a screen. Here is the kiln. It is the backside. The bag house is over here. You find this process used quite a bit for petroleum contaminates. It has application for the chlorinate as evidenced by the McKinn site, which was contaminated by the identical material.

MR. HEALY: Why not for everyone's benefit simply state what we hope to accomplish when that IRM is complete?

MR. DUCHESNEAU: Our goals clearly are to eliminate the source of groundwater contamination at the ash landfill. And that is our intent with this action memorandum and interim action, to eliminate continued leaching of these materials into the groundwater and thereby decrease the length of time that we will need to treat groundwater and eliminate the potential for the plume to move further. Stated in a

nutshell, I guess.

MR. HEALY: Yes. As of right now with the source still sitting there, every time the groundwater raises it takes a little more TCE solution into the groundwater. If you remove the source, you won't have that happening anymore.

MR. DUCHESNEAU: We are now waiting to recover the TCE in the groundwater. When we now where it is and approximately how much is there, we can get at it and eliminate that problem.

Moving onto the RI and FS for the ash landfill and OB ground. Just to bring you up to speed where we stand on those. We talked about this extensively in the past but I would like to bring you up to speed where we are. We moved ahead quite a bit since our last TRC. We have issued the draft RI. These were chapters one through five on Agency Review. On November 10th chapters six and seven were separated out from that document because the Army wanted to review the Baseline Risk Assessment, which is chapter six. Prior to submission to the

Agency chapters one through five were information regarding site maps, the extent of some of the summary tables, the extent of impacts that we found, a transport analysis to keep the process moving. We broke this particular document up into those two aspects. We received EPA comments on chapters one through five December 3rd. And NYSDEC comments on December 20th. Currently we are waiting for EPA and NYSDEC comments on the Baseline Risk Assessment, which would be chapter six, and summary and conclusion section, which is chapter seven. When we receive those comments, we will incorporate those comments into the risk assessment and re-issue the documents as a whole, chapters one through seven, within probably a month or so.

MR. HEALY: For those who are not familiar with the Baseline Risk Assessment, a baseline risk means nothing will be done with the site. We use that as a baseline. We compare all the other alternatives. That is what Baseline Risk Assessment is.

MR. DUCHESNEAU: It is essentially the

decision item that requires us to go and to do some type of remedial action. An unacceptable risk value would require us to do something to make that result in an acceptable level. We have, in fact, completed what we call the pre-draft feasibility study. And the feasibility study would be to look at several other remedial options based on the risk assessment that we have performed. We have submitted that to the Army for review on January 17th and we are currently awaiting comments.

Just to provide you with a little background into the ash landfill, we did do a two phase program. I think you have seen this overhead before. The constituents of concern are the volatile organic, which we have talked about. We have soil gas work and fracture trace analysis to look at in the bedrock system, install some cluster monitoring wells in the upper portions of the bedrock and also into the deeper portions of the bedrock to find out if any of these materials are in the bedrock. We have packer tests.

This is the extent of the groundwater plume based on the information that was collected from the RI. The bend in the road area is right there. Right at ground zero. Here is MW 44. MW 44 is the most impacted area on the site. We have placed wells around the boundary of the plume so we have a fairly complete picture as to the lateral and vertical horizontal extent of this groundwater. The good news is the plume does not migrate. We found the end of the plume. It does migrate past -- a little bit past the boundary near the railroad tracks here. It does not move much this way nor that way and it is pretty much what we expected to find. There is no surprises here.

COMMITTEE MEMBER: What are the numbers in the middle? What are the highest values?

MR. DUCHESNEAU: MW 46, which is the overburden well and the well that was screened into the till material. There was a cluster. We have a deep bedrock well and a very deep bedrock well. Those two bedrock wells that you will see in a minute are clean which is very good news. This monitoring

well here in the overburden is 167 parts per billion of total volatile organics again mostly TCE, a little bit of DCE and no vinyl chloride in these wells here. The only time we find vinyl chloride is up in MW 44, up in the source area. This value is 254 parts per billion. Here we have 90. This one here is 101, 88, 66. All in the same approximate ballpark. This here is BDL, below detectable limits. Essentially zero. We feel fairly certain that we have defined the extent of this problem.

What I am going to show you now is some cross section cuts that we have prepared that shows you the penetration of this groundwater plume. I will be showing you the cross section on the AA prime axis and BB prime axis. The AA axis shows the bend of the road. The BB goes over to the area that we showed you before, if you recall. The two areas of soil impacts that we are interested in doing something about with the action memorandum. I prepared a kind of schematic here to show you our rendition of how the plume actually exists in a cross section

slice. This is MW 44. This is the bend of the road area. We have identified that as red to identify an area greater than 100,000 micrograms per liter. It was this locale that I was just discussing with you earlier. We have the overburden well which is 167 parts per billion. The bedrock well goes from here to here. It is nondetectable. We found no pollutants. The deep bedrock well screens from here to here. There is no impacts there. The good news is the competent shale, which is the bedrock, is not transmitting water vertically from the upper areas of the till down deep into the rock. That is a great relief to us because people derive their water from the bedrock in some of the areas around here. We are fairly happy that is the case.

Just the other slice, the BB prime cut, the area over here. PT 18 was a little less bit impacted. Approximately 11,000 parts per billion. Again the same type of picture. The material is essentially in the weathered shale and in the till and again a bedrock well cluster and we have not detected the

presence of chlorinate organics in these wells in this area.

MR. SHINAL: Can I ask a question? What levels do you show there? I can't see from there. Can we get copies of those slides?

MR. DUCHESNEAU: I didn't make copies of that because they are color and I didn't have a chance to make copies. We have two numbers. We have the Phase I and the Phase II number. The Phase I number is 11,580 parts per billion. That is total chlorinate organics. And the Phase II number was 19,900 -- 13,000. I can't even see. Thirteen thousand nine hundred fifty three. That is as we move towards the downgradient slope of the bedrock. The Phase I number for PT 12 is 374. The Phase II number was a little higher at 2,651. Again parts per billion of total chlorinate organics. The Phase I value for the deeper PT 21 was -- Phase I value was 184 and the Phase II was 254. The Phase I value for the shallower screen well, PT 22, was 18. And Phase II value was 17. MW 53, which is the overburden well, the shallow well, was 55 parts per

billion. And the deeper well, MW 5D was essentially nondetect, no values detected. And likewise for the deeper MW 55 well.

MR. SHINAL: You talk about total organics. There are so many things called organic. There are -- so many things are organic. We are talking about toxic organic?

MR. DUCHESNEAU: When I say chlorinate organic, I refer to the three that we talked ability earlier. There are no other animals or compounds that we're interested here. It is TCE, DCE and vinyl chloride. There is no vinyl chloride in any of these wells. The only time we found vinyl chloride is in MW 45.

MR. SHINAL: Vinyl chloride naturally tends to polymerize. It is something inert, inactive. So I think it is time for you to address it. Did you notice vinyl chloride got lesser as we went along?

MR. DUCHESNEAU: We suspect that as the volatile --

MR. SHINAL: Is TCE volatile?

MR. DUCHESNEAU: TCE is liquid. As room temperature drops, TCE and vinyl chloride

polymerize. The mechanism -- the reason we don't find it in these wells from the source is due larger to the volatile nature of that -- I think I am right in that -- as opposed to polymerization.

Kevin just asked me to mention briefly there is a well documented series of breakdown products starting from TCE to DCE to vinyl chloride which has been well documented into literature, which is exactly what we find here. It is not surprising to us that we find TCE decreasing. And, in fact, in some of these wells the DCE value actually is going up a little bit. We suspect that is largely due to a biological action of the soil and the TCE breaking it down into its component breakdown products. It is a well documented sequence of de-chlorination steps that occur and we believe that is exactly what is happening.

MR. HEALY: The fact that you have all three present is not necessarily due to the fact that all three were dumped at separate incidents. It means that TCE was dumped once and it broke down to DCE and broke down to

VC, vinyl chloride.

MR. DUCHESNEAU: Just to move onto the open burning ground. Again we are involved in the remedial investigation feasibility study. If you recall way back, one of my first slides gave us our three groups of phases of this whole process; these two sites, the ash landfill and the open burning -- former open burning ground which was on the RI/FS phase which is down here on the chart. It has pretty well moved along on the process. We submitted the draft OB RI for Agency Review on October 21st; on or about October 21st. Received the EPA comments on November 18th. And received NYSDEC comment on December 14th. EPA comments received on the 18th of November. The pre-draft OB FS was submitted for internal Army review on December 3rd and we received Army comments on January 19th. We are in the process at this point of trying to assimilate the risk issues associated with the OB RI. And before we proceed forward too far on the OB FS and some of that information we need to talk a little bit more with the

State about that.

The investigation that we had done here was again a two phase approach. Here we use a lot of screening of the soil samples to decrease the cost of the investigation, make it more cost effective yet not lose track of the intent of the investigation, which is to provide data to delineate any impacts. We used quite a bit of remote control drilling for the obvious reason of unexploded ordnances at this site and we had done quite a bit of penetrating radar and technical techniques.

This is the open burning ground. What you're seeing here is the pads detonation area, which is over here. The geology here is very familiar to the ash landfill. I will show you in a second what that geology pretty much looks like. It is not unusual to find glacial till up in this area overlaying an area of weathered shale and then the competent shale. Pretty much identical at the ash landfill. We placed our monitoring wells in particular regions and borings along this geological strata to identify if there

has been any releases. What you see here is an exaggerated vertical profile of the pads and how they are built of fill on the top of the original till material. The slope of the rock essentially slopes towards Reeder Creek which governs essentially the direction of groundwater flow towards the river. Results of our investigation indicated that groundwater flow was pretty much how we expected it. As we just showed you that cross sectional slice, it slopes generally towards the stream. In fact, when we do our groundwater elevation measures we find a pattern of movement towards the stream. That's not to be unexpected.

In terms of the impacts to the soil, I think I provided you a lot more information the last time. I am not going to go through all the details. I picked this one as an example. We sampled quite a bit of the pads, pad borings, some berm excavation. These are berms that surround each of the pads. We performed some surface water sampling and some of the wetland area that was basically man made from the bulldozing operations. We

find elevated levels of some lead. Some of the heavy metals are mostly in the berm areas here, which was all included in our analysis of risk.

As we move off of the pads, we find a situation that is fairly consistent with what our conception of the understanding of the site was. And that is some of the material may have washed down into the low lying areas and we find, you know, some indications of lead. This is lead and surface soils down into the low lying areas of the site. Essentially what must be happening here is material is washed off of the site during a rainstorm and tends to pond in the low lying areas. The sediment that is carried by the movement of the rain over land flow creates little areas of water and it tends to accumulate to the low lying areas, which is in fact what this area represents.

At this point I think that is pretty much the end of what I had to say. Any questions?

MR. SHINAL: What form was that lead and what concentration?

MR. DUCHESNEAU: That is total lead.

MR. SHINAL: Metallic lead.

MR. DUCHESNEAU: Total metallic lead. You want the concentration?

MR. SHINAL: Whatever you got.

MR. DUCHESNEAU: Seven thousand four hundred and fifty parts per million.

MR. SHINAL: Seven thousand four 1hundred and fifty parts per million.

MR. DUCHESNEAU: Right. That is ppm. That is the status where we stand on these issues. Thank you.

COMMITTEE MEMBER: Is there a procedure for the remediation that is planned?

MR. HEALY: As the soil comes out of the testing, the air will be tested. To make sure it is tested they will be testing constantly throughout the process to make sure anything we do is resulting in what we plan to achieve and hope to achieve. There is all kinds of testing involved to make sure what happens is what we said we would do.

MR. ABSOLOM: Are there any other questions or general comments that anyone would like to be addressed?

MR. SHINAL: Let's get into the finance of this. What does the Engineering Science and contract work consist of financially?

MR. HEALY: What's the nature of it?

MR. SHINAL: What's the total? Is there a value set on this contract?

MR. HEALY: There is a limit. I guess what you are referring to is how much has been spent to this point in time?

MR. SHINAL: Good idea.

MR. HEALY: Okay. Each of the two RI/FS's -- I am not sure I am allowed to give out this information. Each of the two RI/FS's is 2.1 million dollars.

MR. DUCHESNEAU: That includes subcontractor costs, which is substantial.

MR. HEALY: From start to finish.

MR. SHINAL: You are the primary contractor?

MR. HEALY: He's the contractor and I am the one that puts out the contract.

MR. SHINAL: So far it is 4.2 million?

MR. HEALY: Roughly, from completely finished.

MR. SHINAL: How much do we have left to

the fund?

MR. DUCHESNEAU: The Super Fund?

MR. SHINAL: Whatever we have in this work for Seneca Army Depot.

MR. HEALY: There is not a pot of money sitting around. As we need the money -- as we negotiate it, then our higher ups in our headquarters approve it and give it to us piecemeal. It is not as there is one big pot.

MR. SHINAL: There is no boundaries listed?

MR. HEALY: No.

COMMITTEE MEMBER: The Army and Environmental Center is the program manager for the Army sources that can be spent across the country on any environmental restoration program. The people that are doing the work here at Seneca give us an estimate of what they think they need. That information I can't really give out because that gives the contractors sort of an idea of what we think it is going to cost. And we would like to be able to negotiate contracts without them having have an idea what it might cost.

MR. SHINAL: I take that as open ended.

COMMITTEE MEMBER: No. We only have a certain amount of money that Congress allocates us each year. Within the Army we must distribute that money to all the installations that may require funds across the country. We cannot fund all the requirements that the Army has each year. We have established a priority system and we give them funding based on priority. Seneca's priority is very high. They normally will get the funding that they are asking for but they are scrutinized by my agency to make sure everything is being done in accordance with Army policy and guidance. We do everything consistently across the country. And we look at how the money is being used. For the stuff that is exceedingly expensive, first we look at what are our gains versus the amount of money that we are expending on this. We are very aware we are stewards of the taxpayer's dollars. We have to protect the environment. We have to see the taxpayer's dollars are being spent properly.

MR. SHINAL: Then you don't have any timetable as to how much you can spend each time and what results you can expect right now? And that information financially is of public knowledge. How much is appropriated?

COMMITTEE MEMBER: The amount -- what is appropriated by the Defense Department money is a line item in the congressional budgets. It is the Defense Environmental Restoration Account.

MR. SHINAL: Do you know what that amount is?

COMMITTEE MEMBER: The Army's portion is six hundred ninety-three million dollars and currently Seneca is getting most of what they asked for but not all of it because some of what they have asked for is not -- is not allowing it on their priority list.

MR. SHINAL: Who makes the requests?

COMMITTEE MEMBER: The installation makes the request.

MR. ABSOLOM: I do.

MR. SHINAL: Have there been any requests lately?

MR. ABSOLOM: I update by request.

MR. SHINAL: What's the amount?

MR. ABSOLOM: I can't divulge that because that will give the contractors an undue advantage.

MR. SHINAL: You have estimates. You can't say what they are?

MR. ABSOLOM: I can't give you dollar value.

MR. SHINAL: Right now we can consider it open ended?

MR. ABSOLOM: If you want to look at it that way.

MR. SHINAL: We have to. We have no choice.

MR. ABSOLOM: It is based on the project and what it takes to follow the process step-by-step and we identify projects for each of those steps.

MR. SHINAL: It goes on to ad infinity?

MR. ABSOLOM: Whatever you want to do.

LTC. JOHNSON: Why do you want to say it goes on ad infinity?

MR. SHINAL: It goes on as we need it. I can't draw any conclusion from that comment.

MR. ABSOLOM: It goes on each step in the process I identify a project for. I identify a project to do a remedial investigation feasibility study. I identify a project to do an interim remedial action. I will identify a project to do the actual remediation on the project for the overall site. I will identify a project to do follow-up monitoring after the remediation is accomplished. At this point I do not know what the exact remediation is going to be. I can only estimate. It is used for temporary budget purposes. And based on that I can only estimate what my follow-up monitoring requirements are going to be and that is again an estimate based on my knowledge.

MR. SHINAL: What's your best estimate that this project will take? Off the record.

LTC. JOHNSON: There is no such thing as off the record. This is public law.

MR. SHINAL: This is an estimate.

LTC. JOHNSON: No, sir. We are covering this; procuring this. This is not trying to hide everything. What happens here is a step-by-step sequence where you identify the

problem, you take remedial action and we contract for that remedial action to begin. Based upon studies such as this, we do an independent government estimate. We request moneys to do this work. Contracts are let competitively. The Huntsville Office and contractor comes in and cleans up Seneca Army Depot property. That is the process. But we are only in that process. We are not at the end of it right now. It is based upon studies that gather information and data.

MR. SHINAL: In the process that you are at now how much has been let out in contracts financially and how much do you plan on letting out in the near future?

LTC. JOHNSON: I can't speak to that

MR. HEALY: The part I started to say before, roughly 4.2 on the two RI/FS's and on the 25 SI's I would say around 1.5 million. That is what has been spent to this point in time. Plus there are some peripherals as far as the future work is concerned, even in the very near future. I am not at liberty to talk about it. It is against the integrity of procurement and I go to jail. We have

contractors here. It is not right to give a specific contractor an advantage above others.

MR. SHINAL: Mr. Healy, we are not naive about what maybe going on for public purposes. But I am asking how much you will spend. And you spent 4.2 million so far?

MR. HEALY: On two sites.

MR. SHINAL: You spent 1.5 on what?

MR. HEALY: On the 25 site investigations.

MR. SHINAL: You talk about the asbestos program. Was that the 4.2 million?

MR. HEALY: The asbestos?

MR. DUCHESNEAU: We haven't mentioned that.

MR. HEALY: We have done some samples for asbestos. He did that for, I think, a site because asbestos was there. The asbestos program in general is not in under this.

MR. SHINAL: Was that funded?

MR. HEALY: Not under the same funds.

MR. BATTAGLIA: Asbestos removal is funded out of the base operations.

MR. SHINAL: Not a part of this?

MR. BATTAGLIA: No.

MR. DUCHESNEAU: We did the asbestos sampling out of that one particular unique SWMU only to see if there was any asbestos issues related to that one site. So far we have expended 6.7 million.

MR. HEALY: No. 5.7 million.

MR. SHINAL: 4.2 and 1.5. That is over the last five years?

COMMITTEE MEMBER: In this year's annual report to Congress we are pointing to 5.2 million to the expenditure of '93.

MR. SHINAL: Does that include the 5.7?

MR. BATTAGLIA: The site investigation ended '93. The report for Congress was fiscal year '93. 4.2 million was fiscal year '93. Some of the year happened to carry over after October 1st. This will be included in the fiscal year '94 to report to Congress as to where the money was spent.

MR. HEALY: It would be safe to say the 5.7 represents what has been contracted for but since we spend it as we go we have not necessarily laid out all 5.7 million.

MR. SHINAL: I understand.

MR. ABSOLOM: Any other questions, comments?

MR. BATTAGLIA: One comment. The reason the government estimate is not released is if we tell them our estimate is two million dollars, they are going to say two million dollars on the proposal. That is where the competition occurs when the contracting phase starts. That is where the competition occurs as to getting the best price. What happens is we start a project and we know we have to investigate such and such a site. That goes through the Army priority system as to basically what sites in the country gets the money first. I identify a project and it goes through the Army system. The Army Environmental Center has a priority system that prioritizes all the sites that the Army has in the country. Basically you compete against the other sites.

MR. ABSOLOM: Sir, you asked who writes the proposal. Are you saying the proposal for the contract?

MR. SHINAL: Yes.

MR. ABSOLOM: That is the Huntsville Division. Are there any other comments or questions? If not, what I would like to do is establish the date for the next TRC.

MR. BATTAGLIA: May 4th.

(Whereupon there was a discussion about the next meeting date.)

MR. ABSOLOM: Does anyone have any problems reconvening on the 18th of May? That is a Wednesday. Okay. We will reconvene the 18th of May at twelve thirty at this same location.

I would like to thank you all for coming. Again I hope this was helpful and beneficial to everybody. And the next one we will have more information. Thank you very much.

* * *

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

I, Patricia Ann Nelk, hereby certify that I reported in stenotype shorthand the proceedings had on the 2nd day of February, 1994, in the matter of the Sixth Meeting of the TRC.

And that the foregoing transcript, herewith numbered pages 2 through 68, is a true, accurate and correct record of those stenotype shorthand notes.

Patricia A. Nelk

Patricia Ann Nelk

DATED AT: Rochester, New York

this 13th day of February, 1994.

AGENDA
TECHNICAL REVIEW COMMITTEE
MEETING
FEBRUARY 2, 1994

12:30- 12:35	**Welcome** LTC Roy E. Johnson Commander, Seneca Army Depot Activity
12:35- 12:50	**TRC Administration- New Members** Stephen M. Absolom, Seneca Army Depot Activity
12:50 - 1:30	**Site Briefing Status Update** Kevin Healy, Huntsville Division, Army Corps of Engineers
1:30 - 1:45	**Investigation of Other Areas of Concern** Engineering-Science, Inc.
1:45 - 2:00	**Proposed Interim Action-Source Removal and Treatment at the Ash Landfill** Engineering-Science, Inc.
2:00 - 2:15	**Ash Landfill and OB Grounds Overview** Engineering-Science, Inc.
2:15 - 2:30	**Question and Answer Session** Open Discussion
2:45 - 3:00	**Set Date and Agenda for next TRC Meeting** Open Discussion

TECHNICAL REVIEW COMMITTEE
HANDOUTS
FEBRUARY 2, 1994

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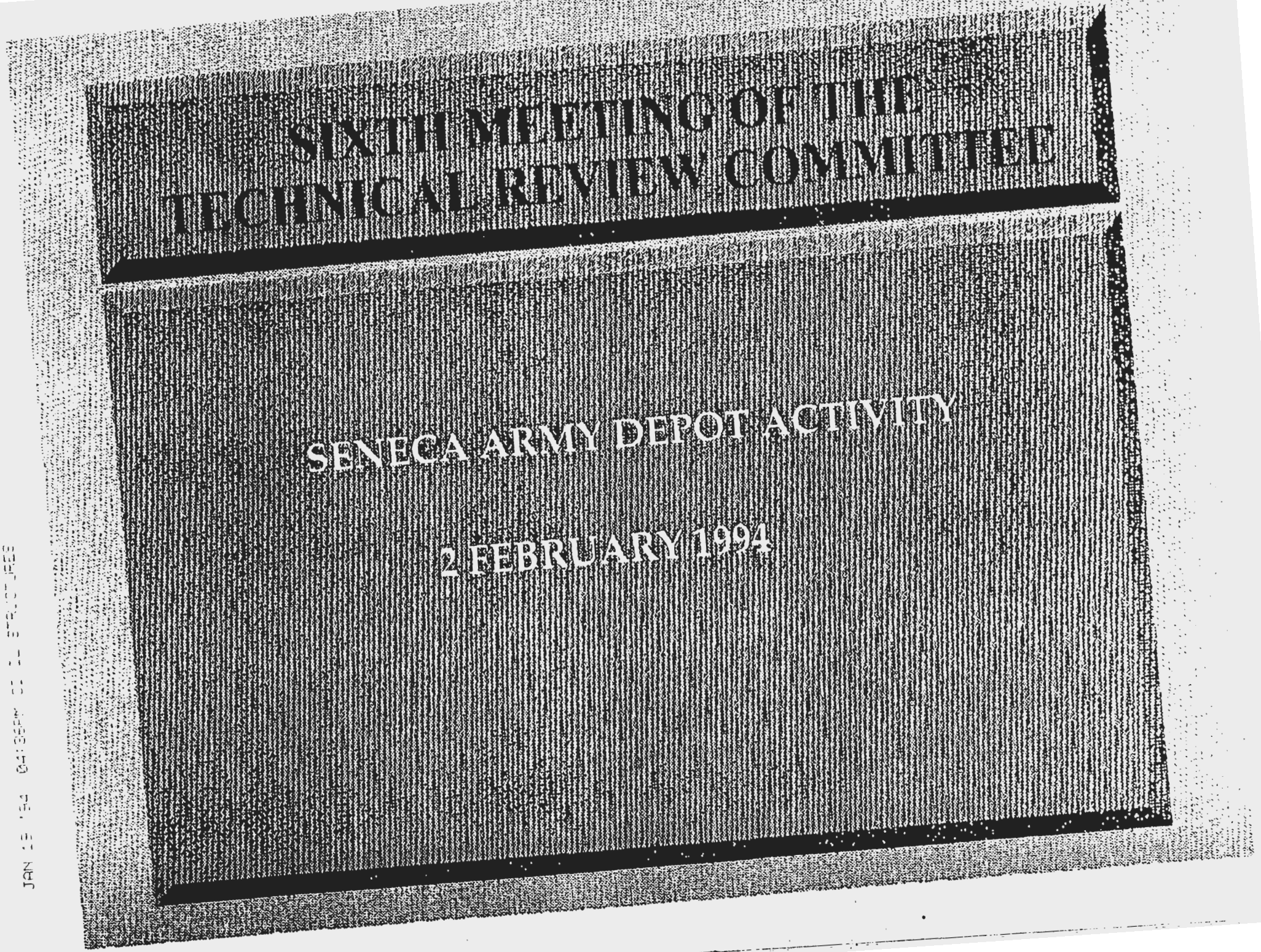
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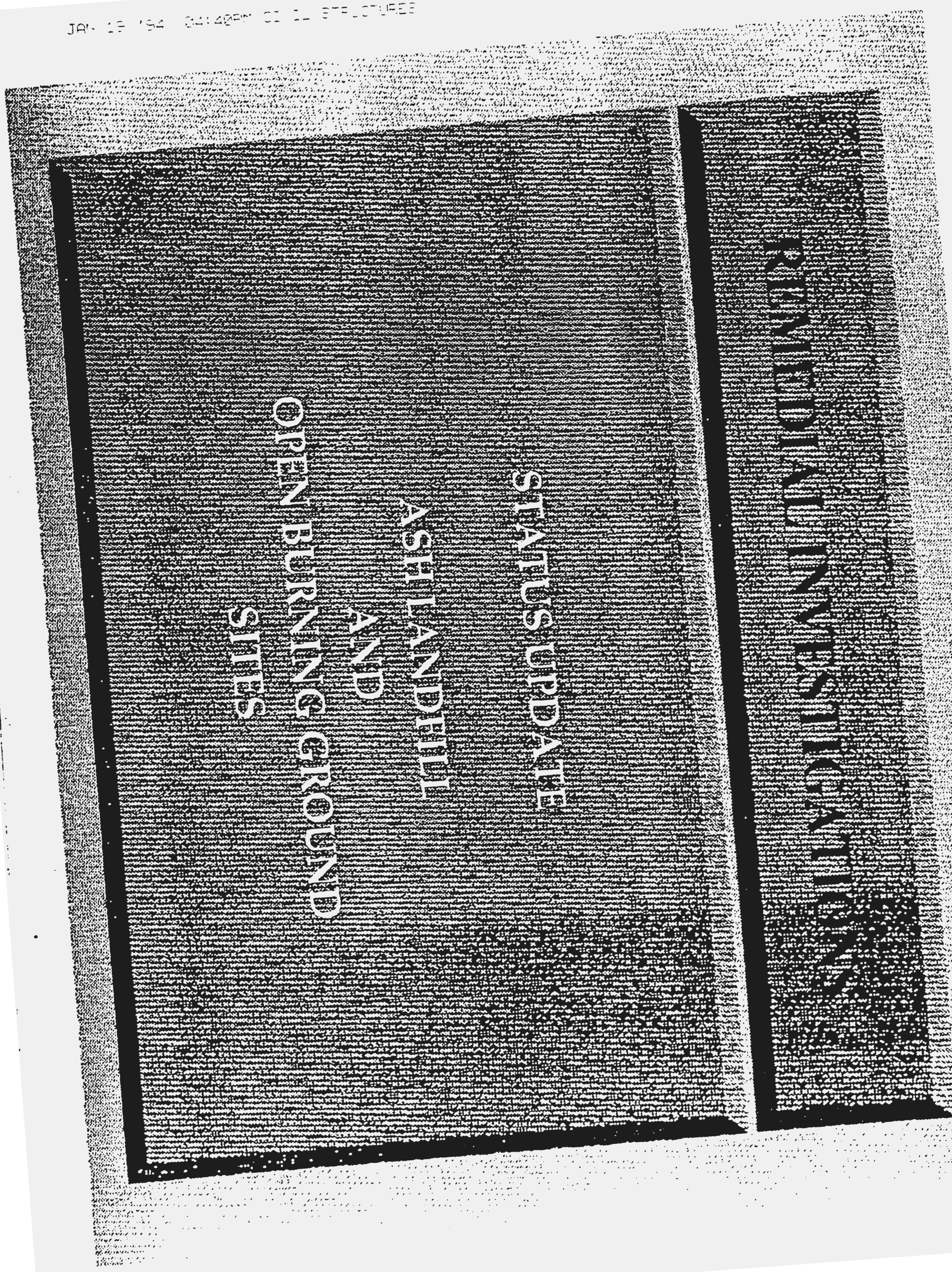
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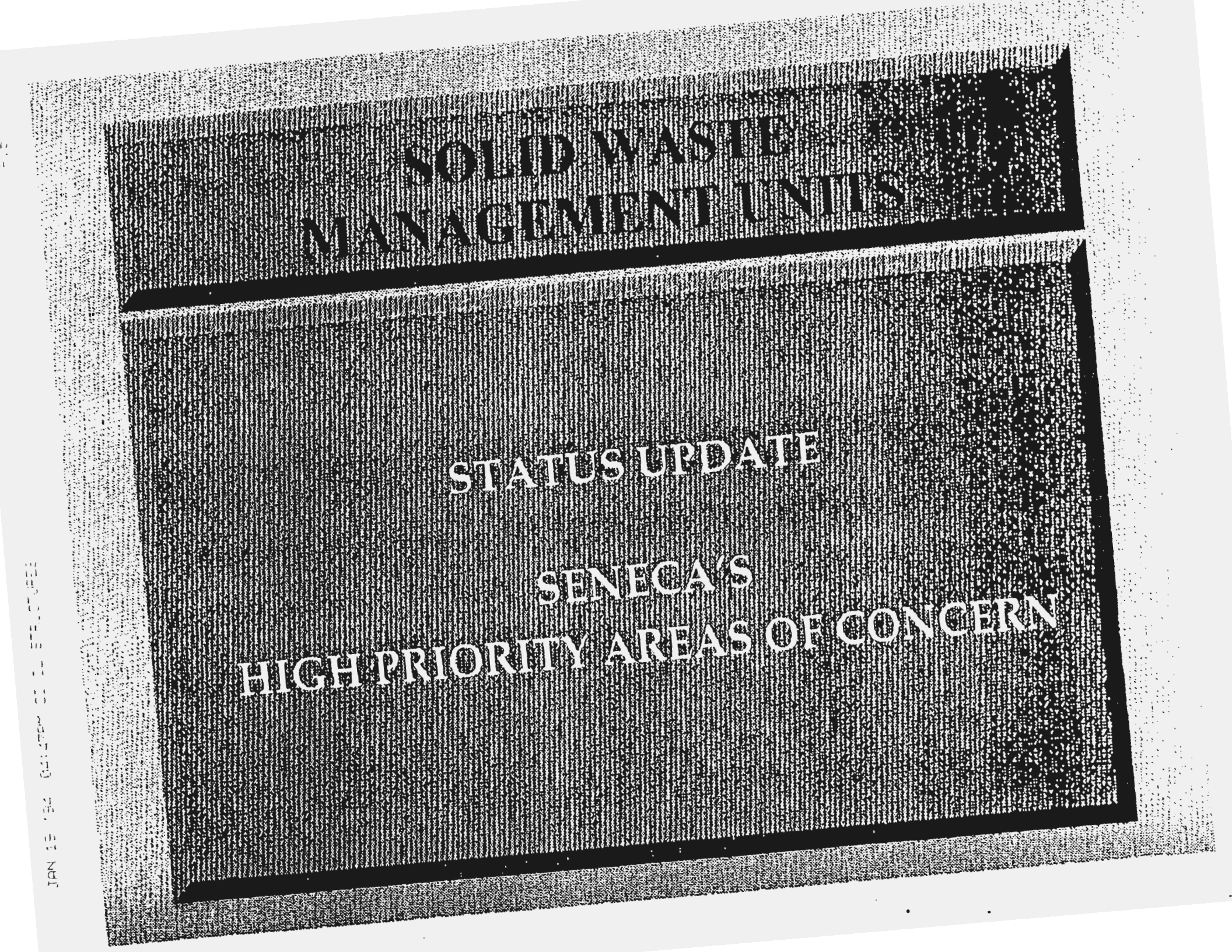
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MANAGEMENT UNITS
STATUS UPDATE
SENECA'S
HIGH PRIORITY AREAS OF CONCERN

SITE INVESTIGATIONS
FIELD WORK PERFORMED MAY
COMPLETED SOME DELAYS DUE TO
BAD WEATHER IN EARLY
COLLECTION OF GEOTECHNICAL REPORT
CONCLUSIONS AND RECOMMENDATIONS
EXPECTED BY SEPTEMBER 1994

SOLID WASTE MANAGEMENT UNITS

STATUS UPDATE

SENECA'S MODERATE PRIORITY AREAS OF CONCERN

SITE INVESTIGATIONS
FIELD WORK INITIATED AT SOME
DELAYED AT OTHERS DUE TO BAD
WEATHER.
CONCLUSIONS AND FINAL REPORT
EXPECTED BY LATE CY 84 - EARLY CY 85

SOLID WASTE MANAGEMENT UNITS

STATUS UPDATE

FINALIZATION OF THE SWMU CLASSIFICATION STUDY

LIMITED SAMPLING
FIELD WORK ESSENTIALLY COMPLETE
AS PROPOSED, QUESTIONING
ISSUES NEED TO BE RESOLVED
RESOLUTION MAY REQUIRE
ADDITIONAL FIELD WORK

STUDY FINALIZATION

- BY SUMMER - WITHOUT ADDITIONAL FIELD WORK.
- BY FALL - WITH ADDITIONAL FIELD WORK.

UPDATE ON CURRENT SWMU AND CERCLA INVESTIGATIONS

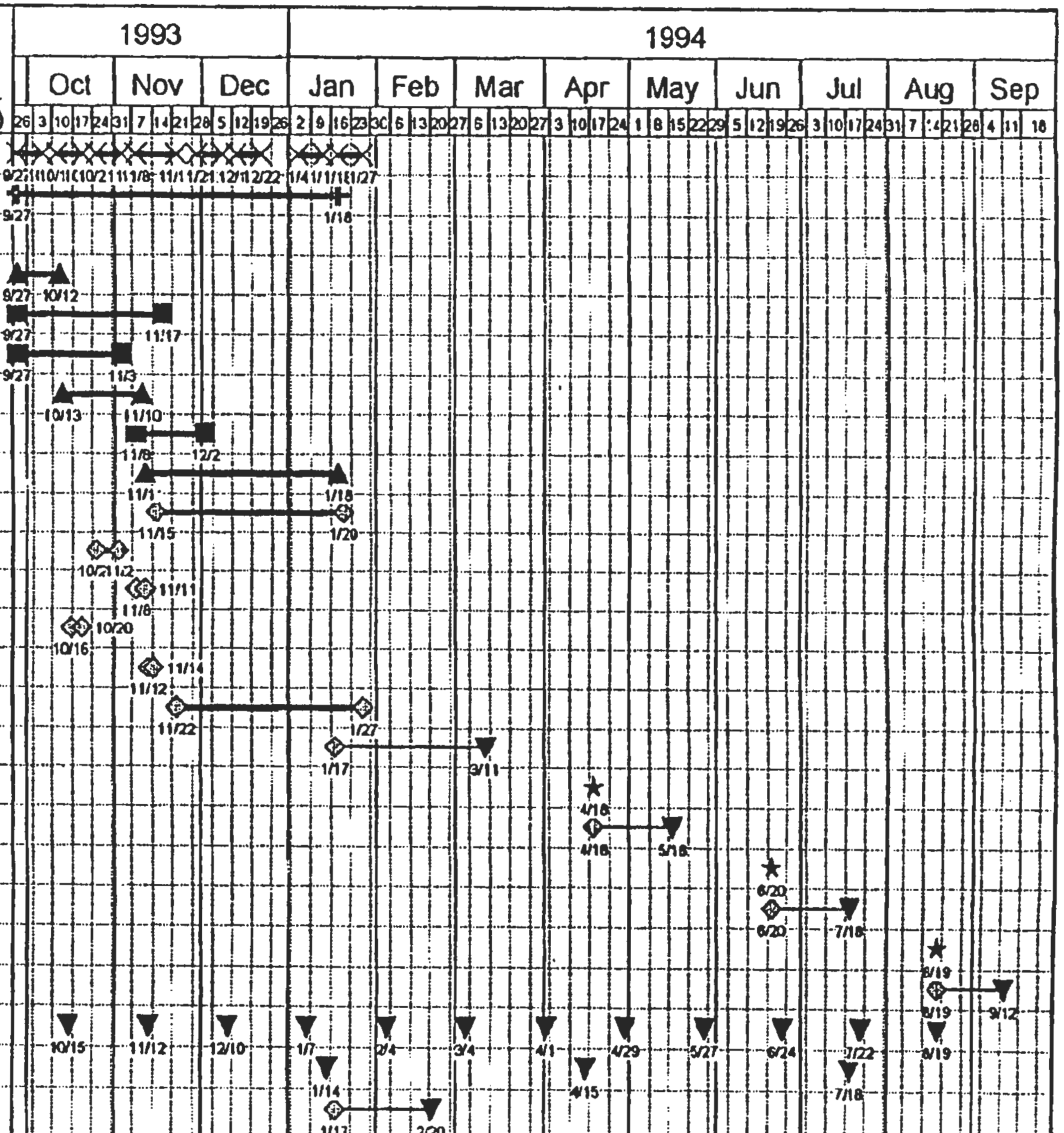
- ☑ Former Open Burning Ground
- ☑ Ash Landfill
- ☑ Action Memorandum (Soil Remediation at the Ash Landfill)
- ☑ High Priority SWMUs (7 Sites)
- ☑ Moderate Priority SWMUs (3 Sites)
- ☑ Low Priority SWMUs (7 Sites)
- ☑ Moderately Low Priority SWMUs (8 Sites)

SEVEN HIGH PRIORITY SWMUs

SWMU Number	Description
SEAD-4	Munitions Washout Fac. Leach Field
SEAD-16	Bldg. S-311 Abandoned Deact. Furn.
SEAD-17	Bldg. 367 Existing Deact. Furn.
SEAD-24	Abandoned Power Burning Pit
SEAD-25	Fire Training and Demon. Pad
SEAD-26	Fire Training Pit and Area
SEAD-45	Open Detonation Area

7/3 SWMU FIELD INVESTIGATIONS

TASK NAME	7 SWMU (DAYS)	3 SWMU (DAYS)	TOTAL (DAYS)
WORK DAYS			77
UXO CLEARANCE			
GEOPHYSICS			
SEISMIC SURVEYS	8(2)	4(1)	12(3)
EM-31 SURVEYS	28(1)	12	40(1)
GPR SURVEYS	21(1)	9	30
SOIL BORINGS*	15.5(4)	5.5(2)	21(6)
TEST PITS*	12.5	6.5	19
MONITORING WELL INSTALLATION	34(7)	16(3)	50(10)
WELL DEVELOPMENT	22	9	31
SURFACE SOIL SAMPLING*	8	1	9
SW/SD SAMPLING*	3	1	4
MISC. MEDIA SAMPLING*	5	0	5
SOIL GAS*	0	3	3
MW SAMPLING/LEVEL*	5	2	7
PRE-DRAFT SITE INVEST. REPORT			
RECEIVE ARMY COMMENTS			
DRAFT SITE INVEST. REPORT			
RECEIVE REGULATORY COMMENTS			
DRAFT-FINAL SITE INVEST. REPORT			
RECEIVE REGULATORY COMMENTS			
FINAL SITE INVEST. REPORT			
MONTHLY PROGRESS REPORTS			
QUARTERLY REPORTS			
FIELD SAMPLING LETTER REPORT			



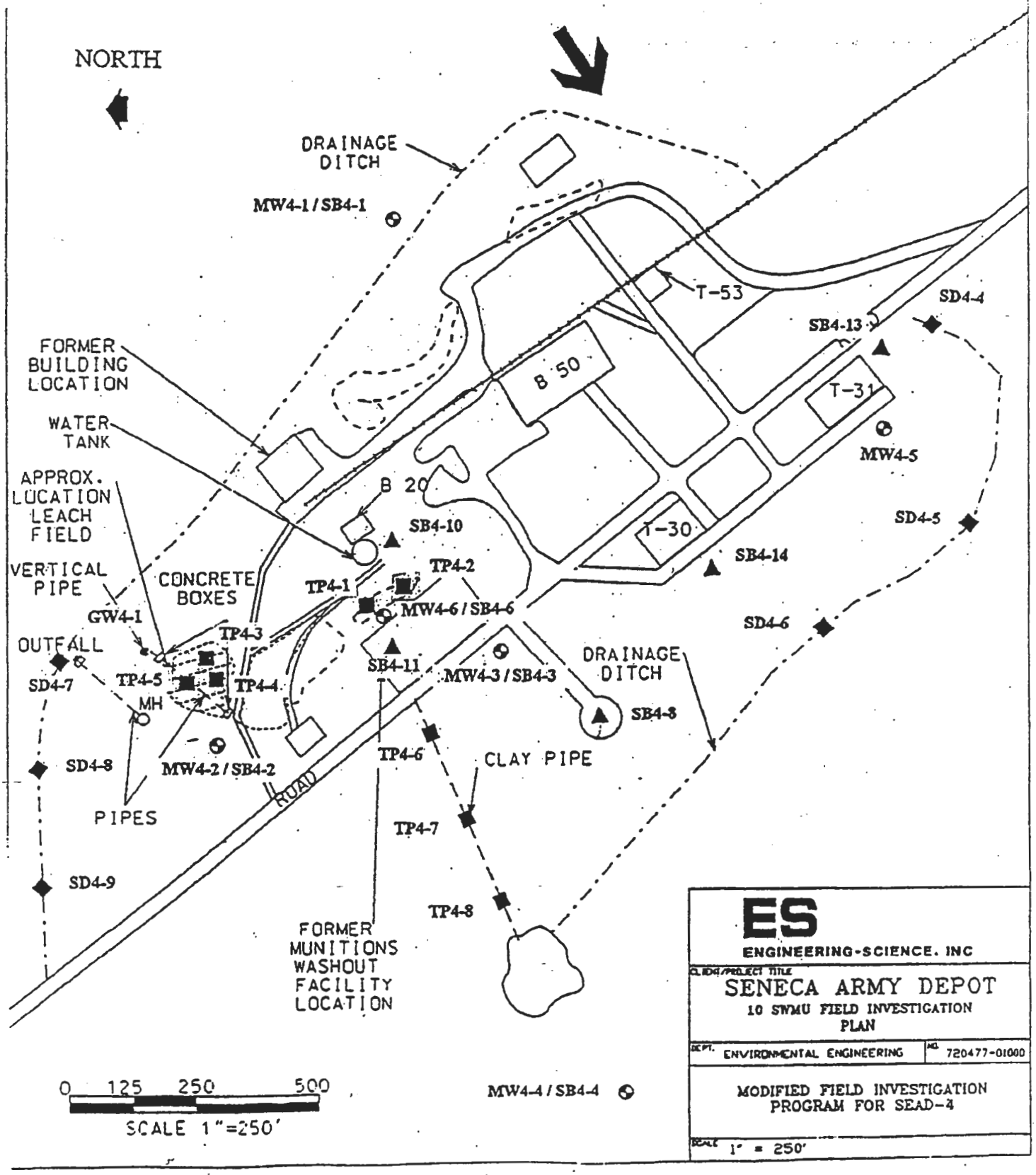
CREW 1 | CREW 2 | CREW 3 | Deliverable Task | ★ COMMENTS DUE | ▼ Deliverable

*Sampling

() Recon/Surveying/Waste Handling/Misc.

FIGURE 3

GROUNDWATER FLOW DIRECTION



ES
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CLIENT/PROJECT TITLE
SENECA ARMY DEPOT
10 SWMU FIELD INVESTIGATION PLAN

DEPT. ENVIRONMENTAL ENGINEERING | NO. 720477-01000

MODIFIED FIELD INVESTIGATION PROGRAM FOR SEAD-4

SCALE 1" = 250'

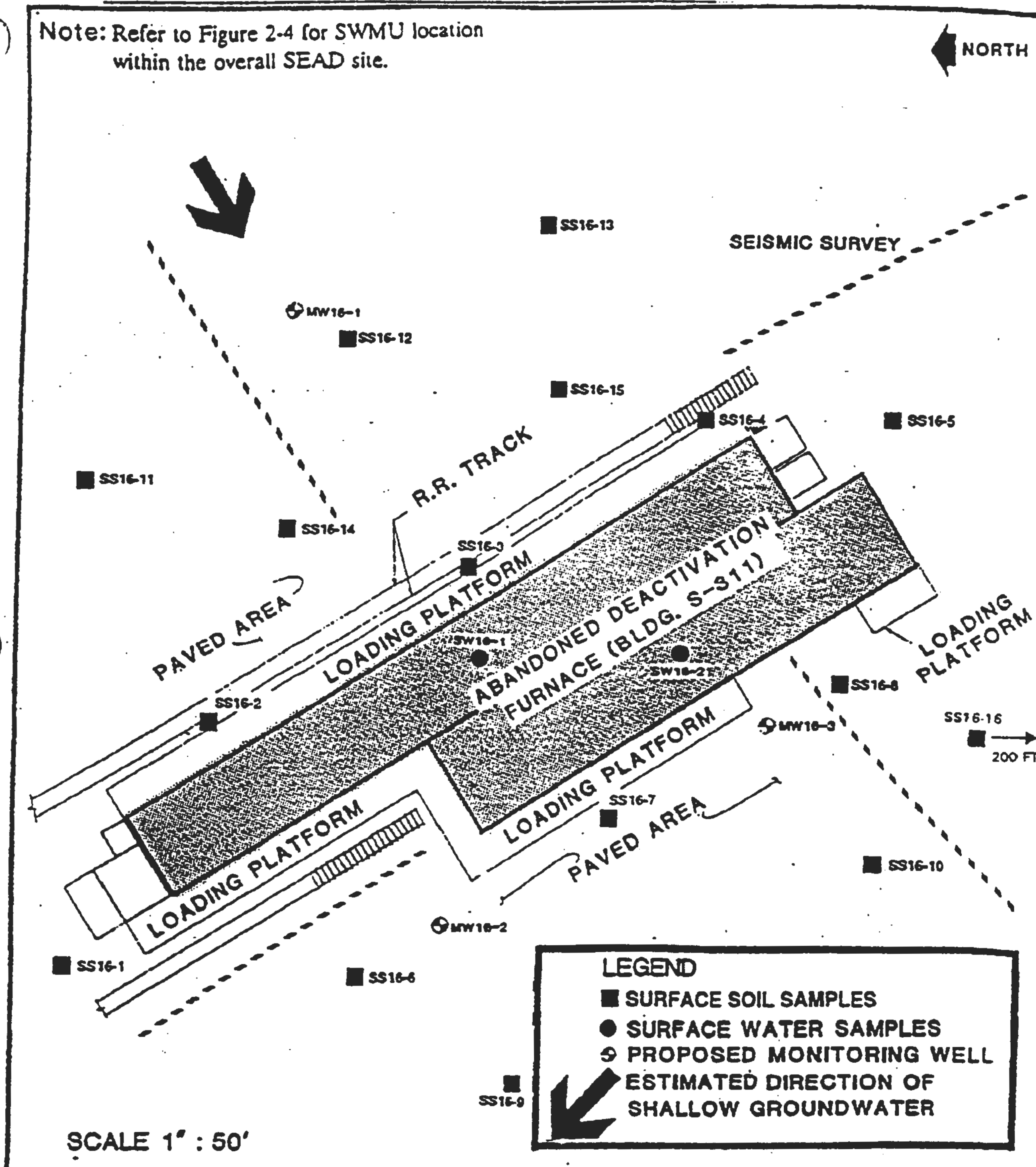


FIGURE 5-4 SAMPLING LOCATIONS FOR SEAD-16: ABANDONED DEACTIVATION FURNACE (BLDG. S-311)

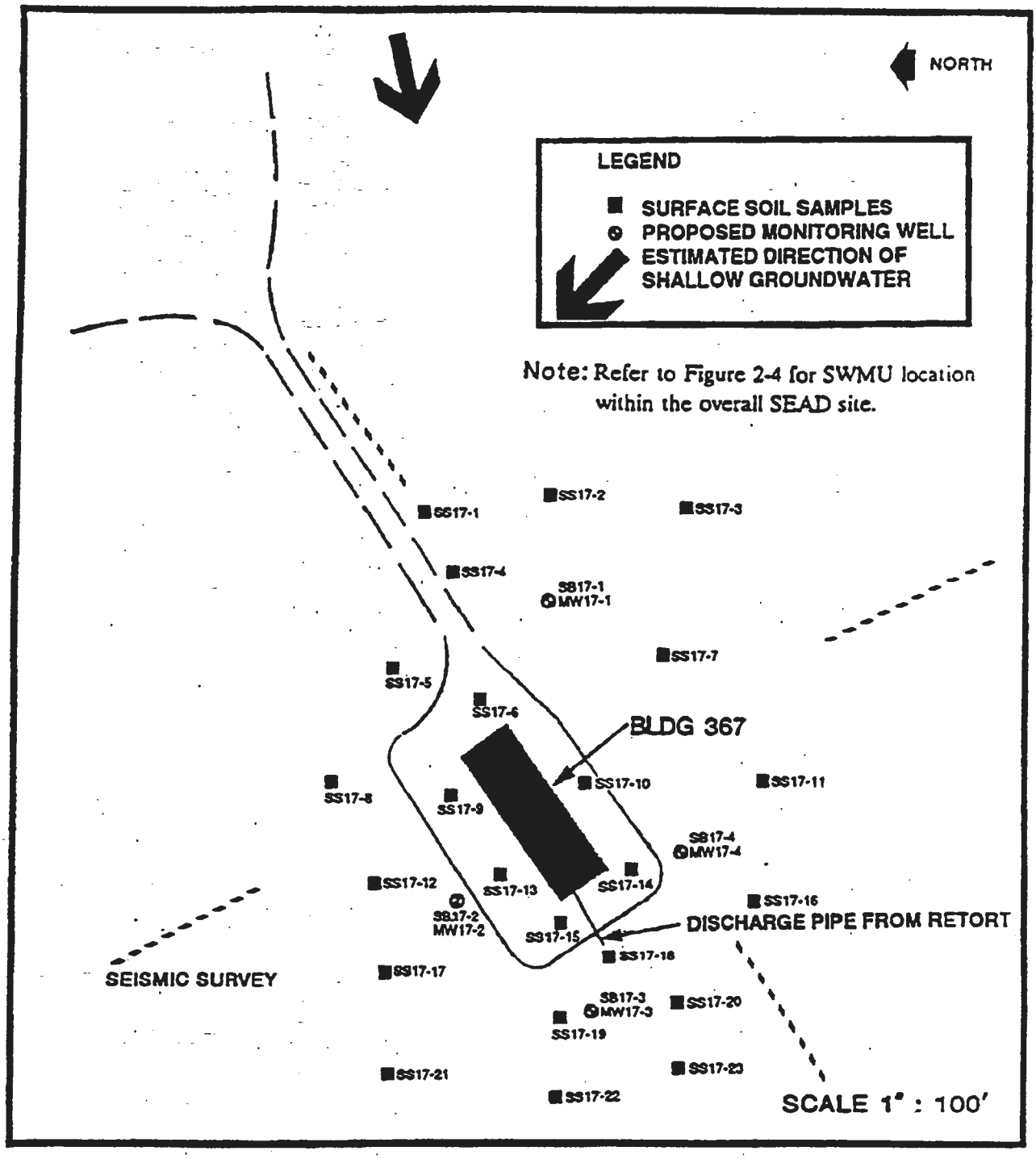


FIGURE 5-5 SAMPLING LOCATIONS FOR SEAD-17: EXISTING DEACTIVATION FURNACE (BLDG. 367)

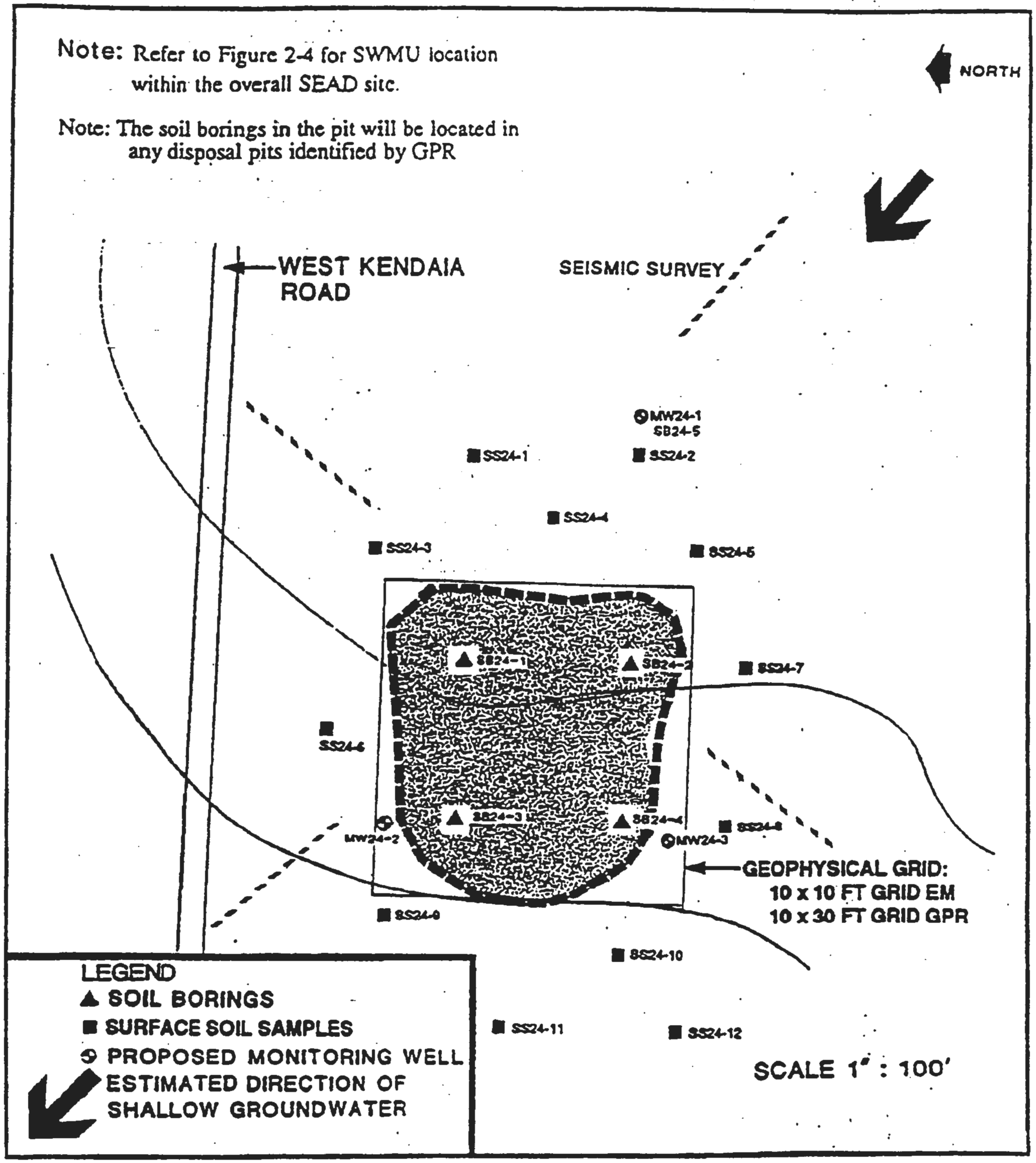


FIGURE 5-6 SAMPLING LOCATIONS FOR SEAD-24: ABANDONED POWDER BURNING PIT

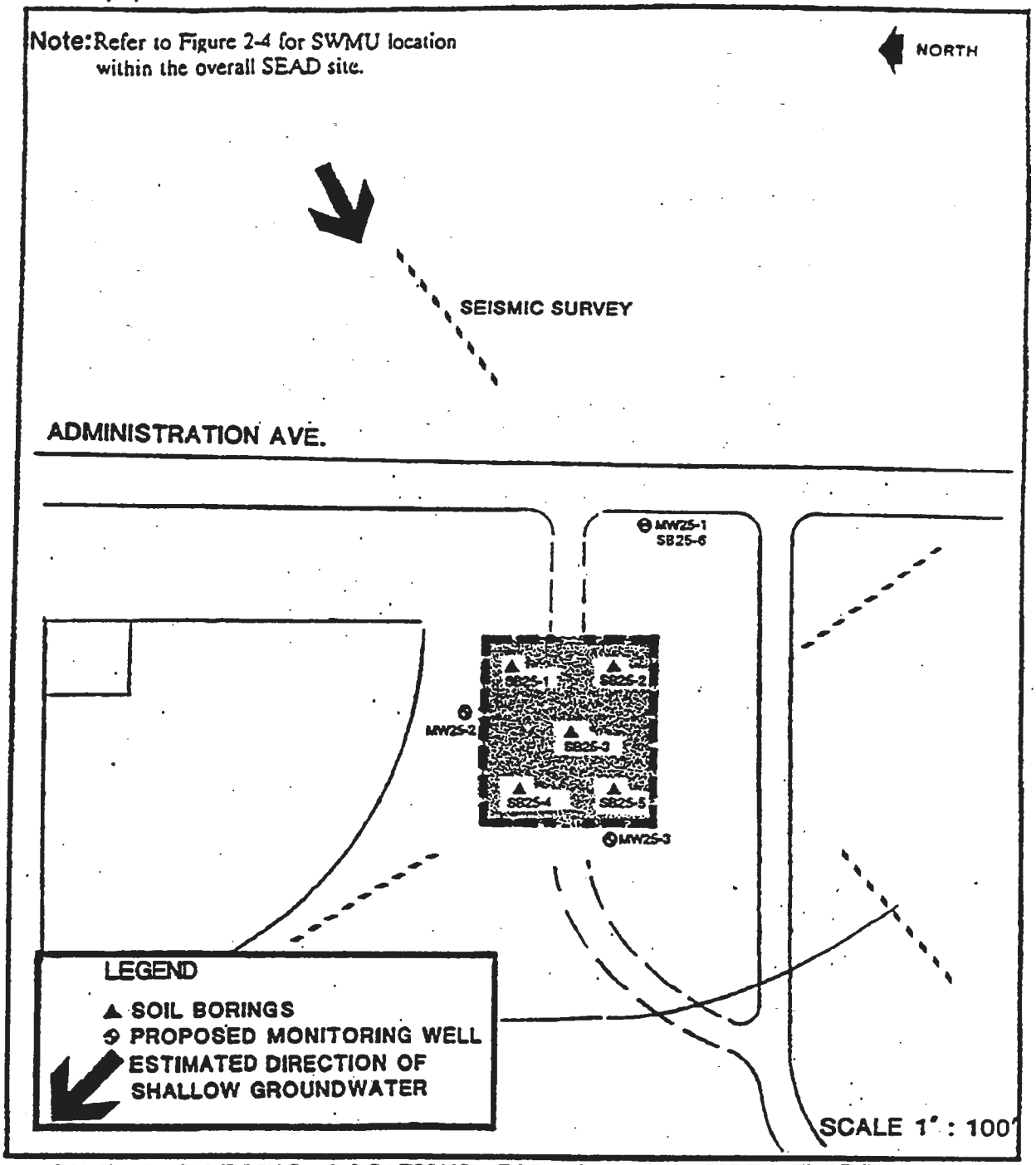


FIGURE 5-7 SAMPLING LOCATIONS FOR SEAD-25: FIRE TRAINING AND DEMONSTRATION PAD

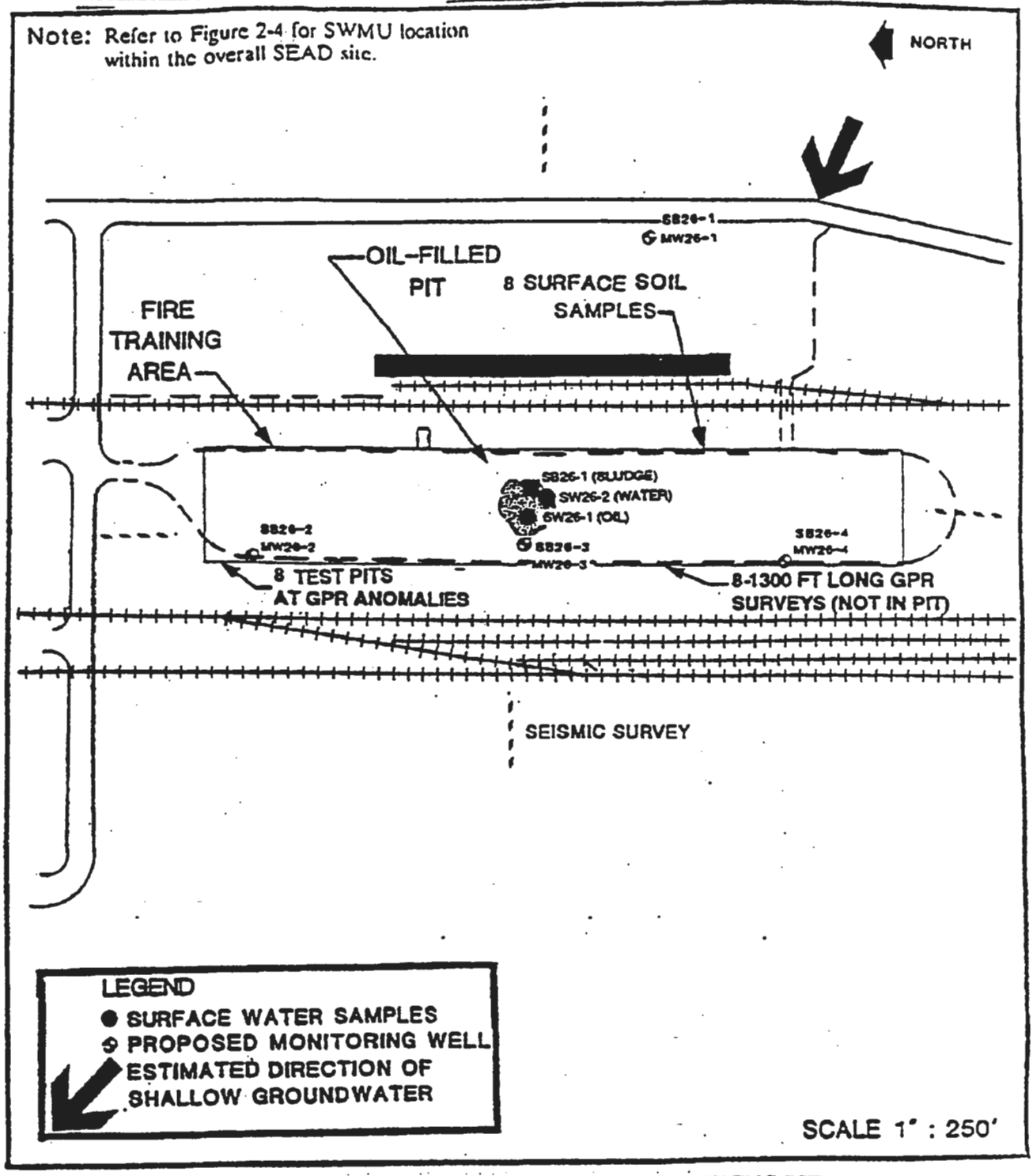
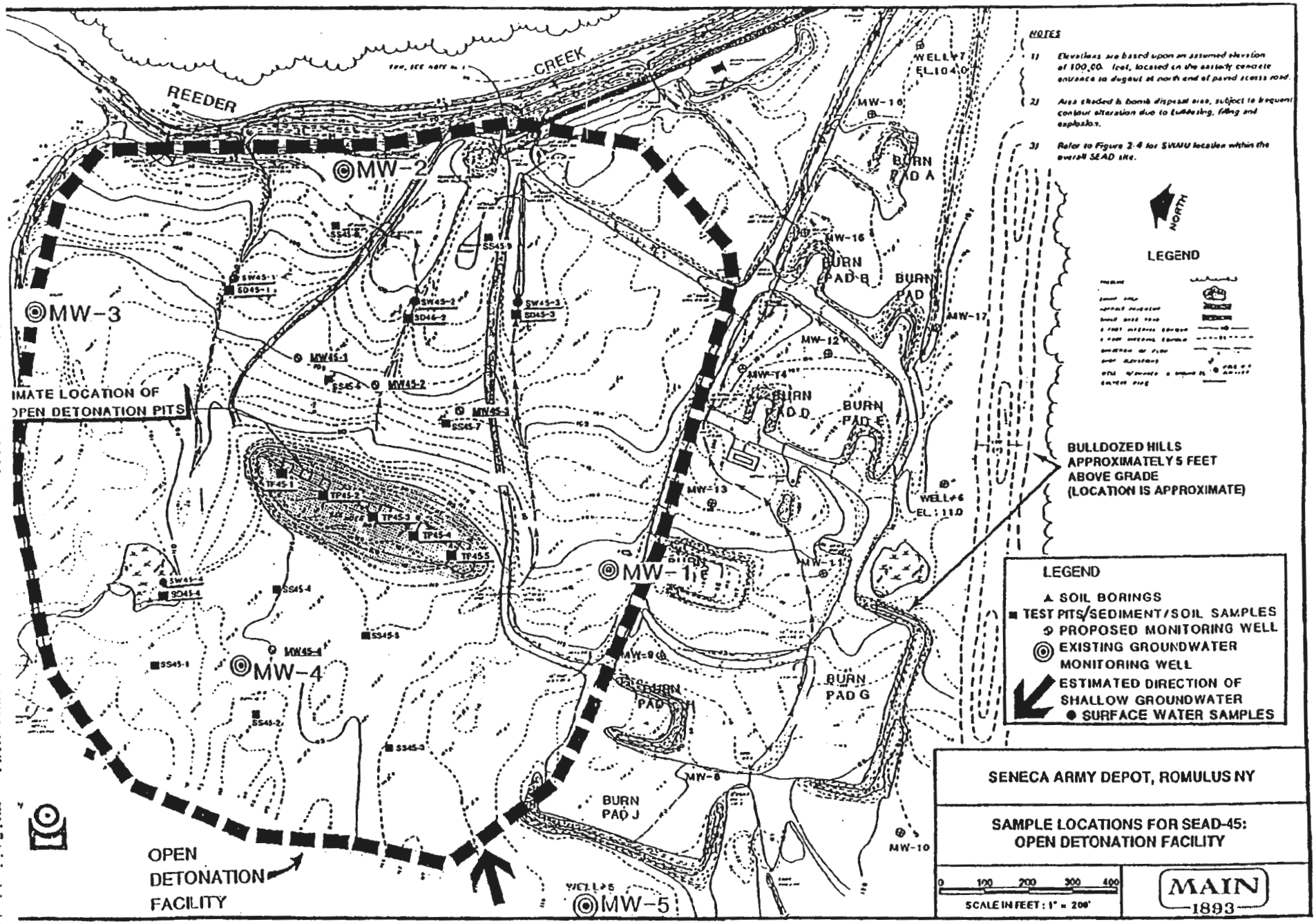


FIGURE 5-8 SAMPLING LOCATIONS FOR SEAD-26: FIRE TRAINING PIT AND AREA

FIGURE 5-9



[redacted]

THREE MODERATE PRIORITY SWMUs

SWMU Number	Description
SEAD-11	Old Construction Debris Landfill
SEAD-13	IRFNA Disposal Area
SEAD-57	Explosive Ordnance Disposal Area

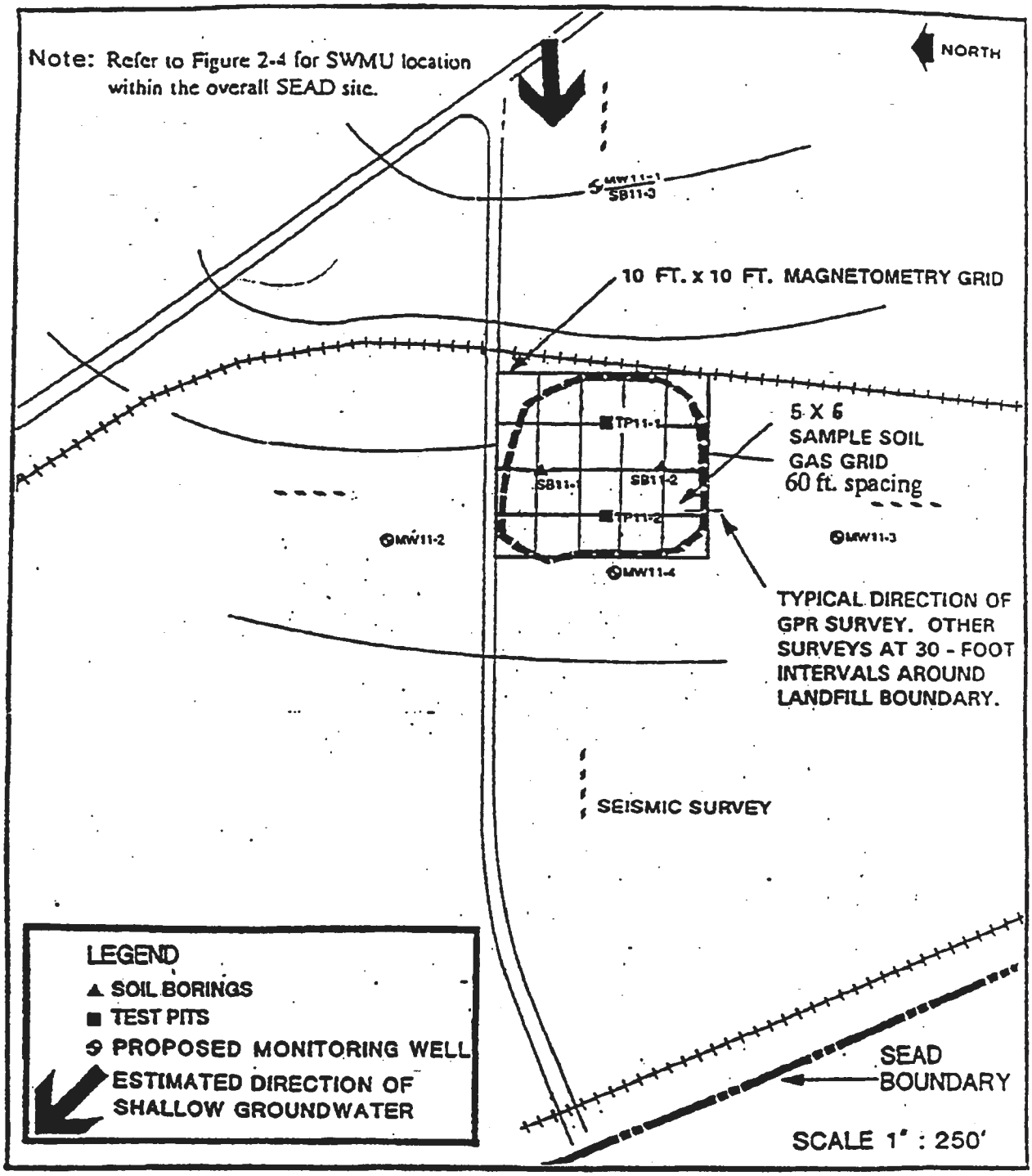


FIGURE 5-2 SAMPLING LOCATIONS FOR SEAD-11: OLD CONSTRUCTION DEBRIS LANDFILL

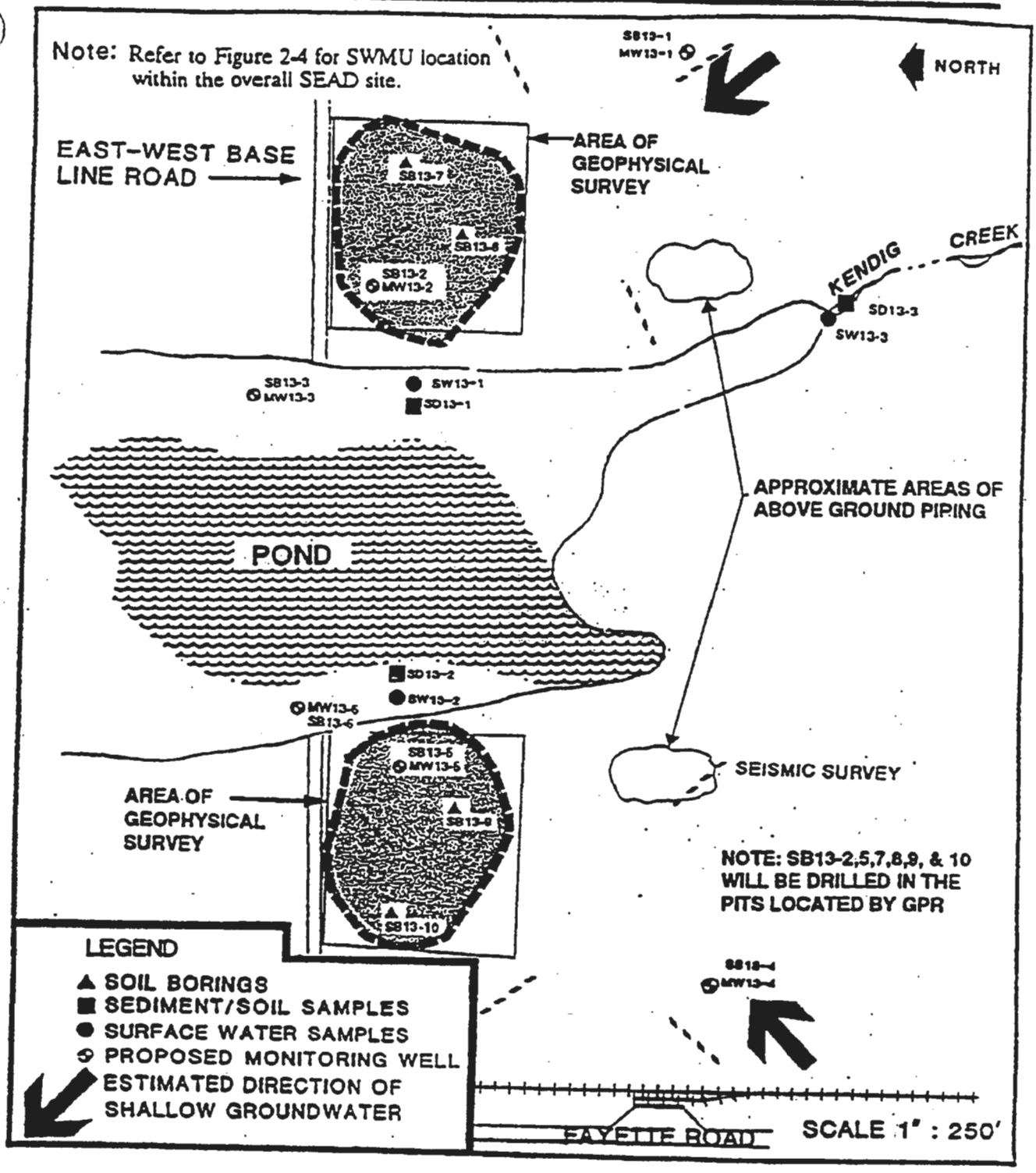


FIGURE 5-3 SAMPLING LOCATIONS FOR SEAD-13: IRFNA DISPOSAL SITE

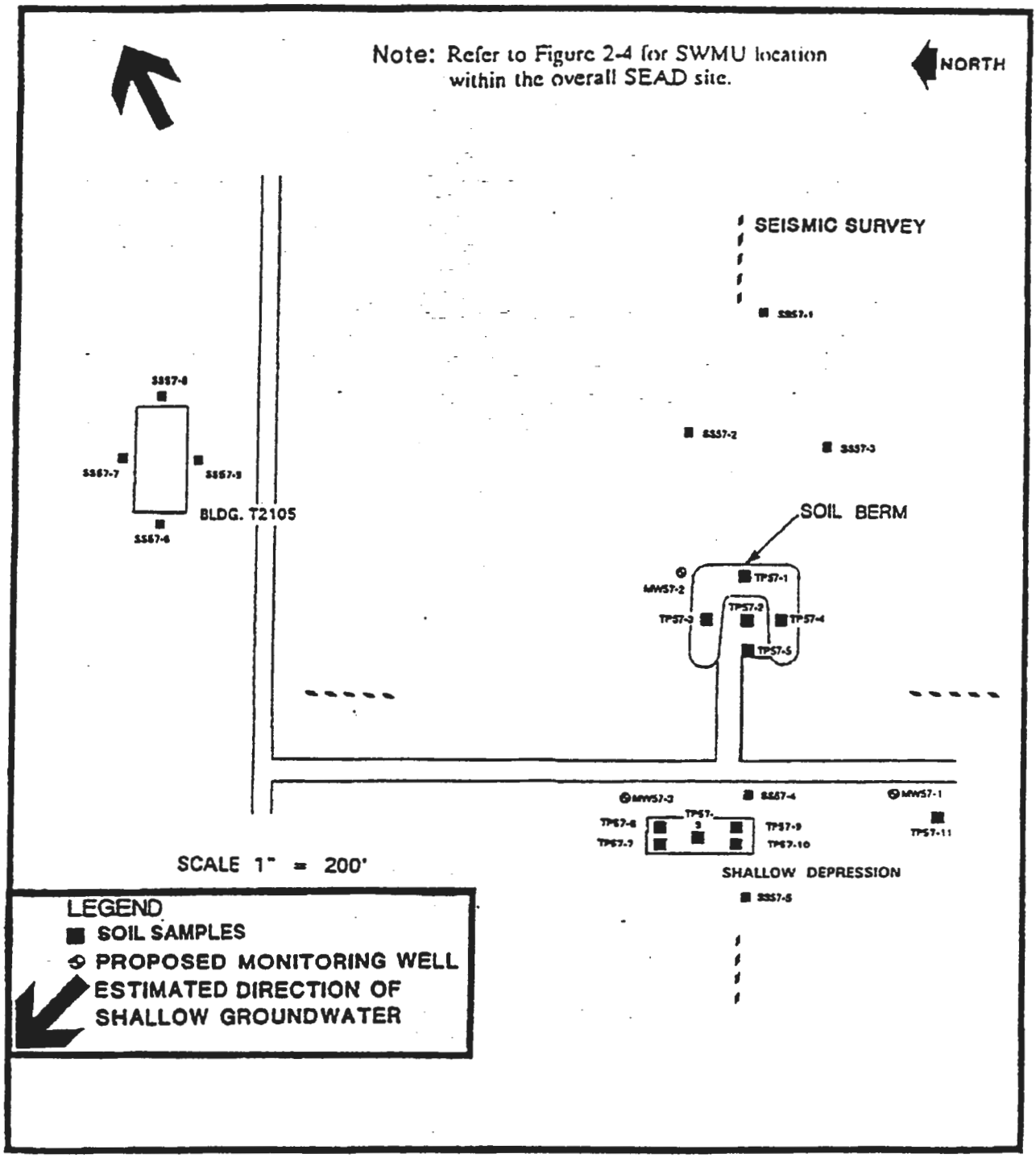
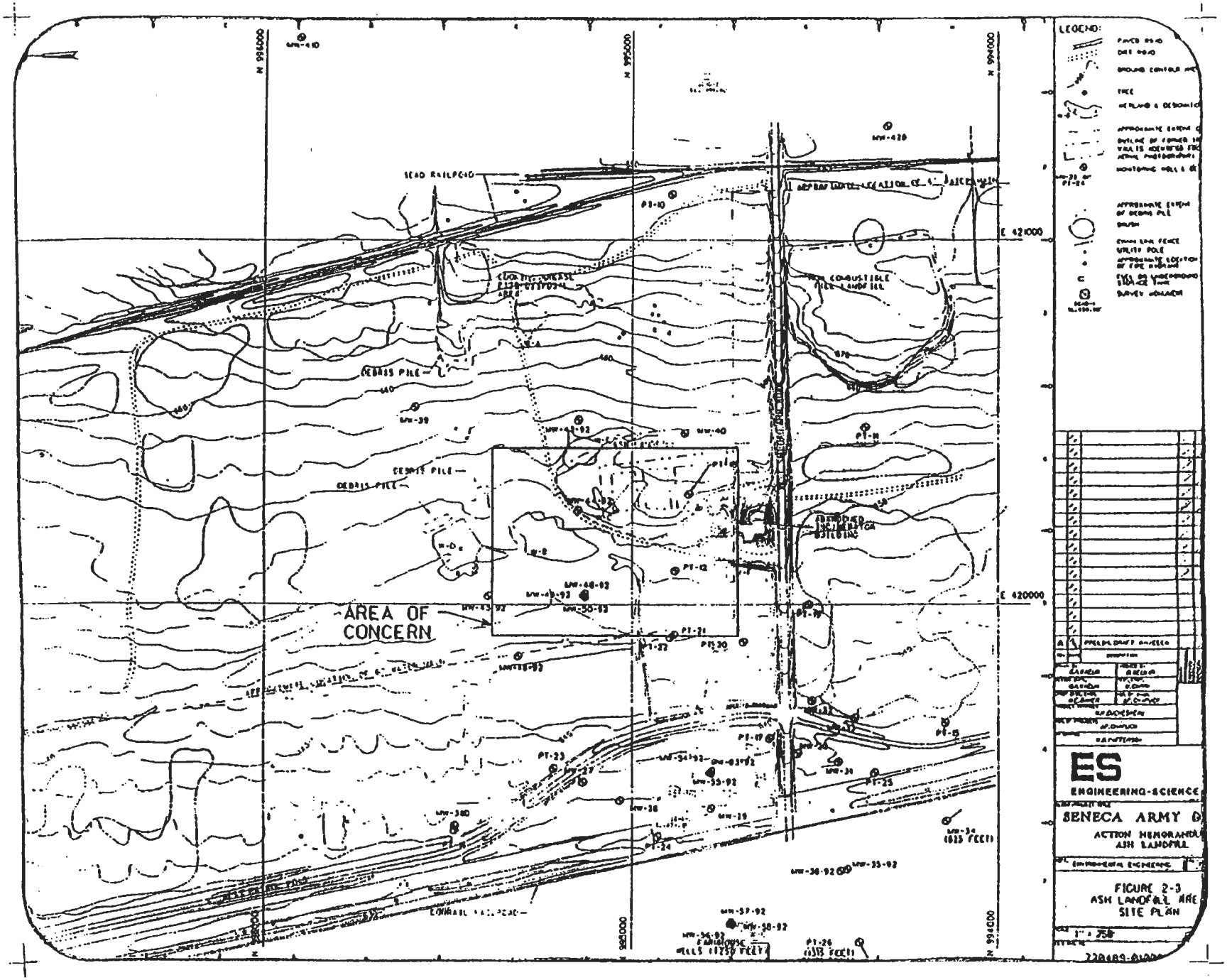


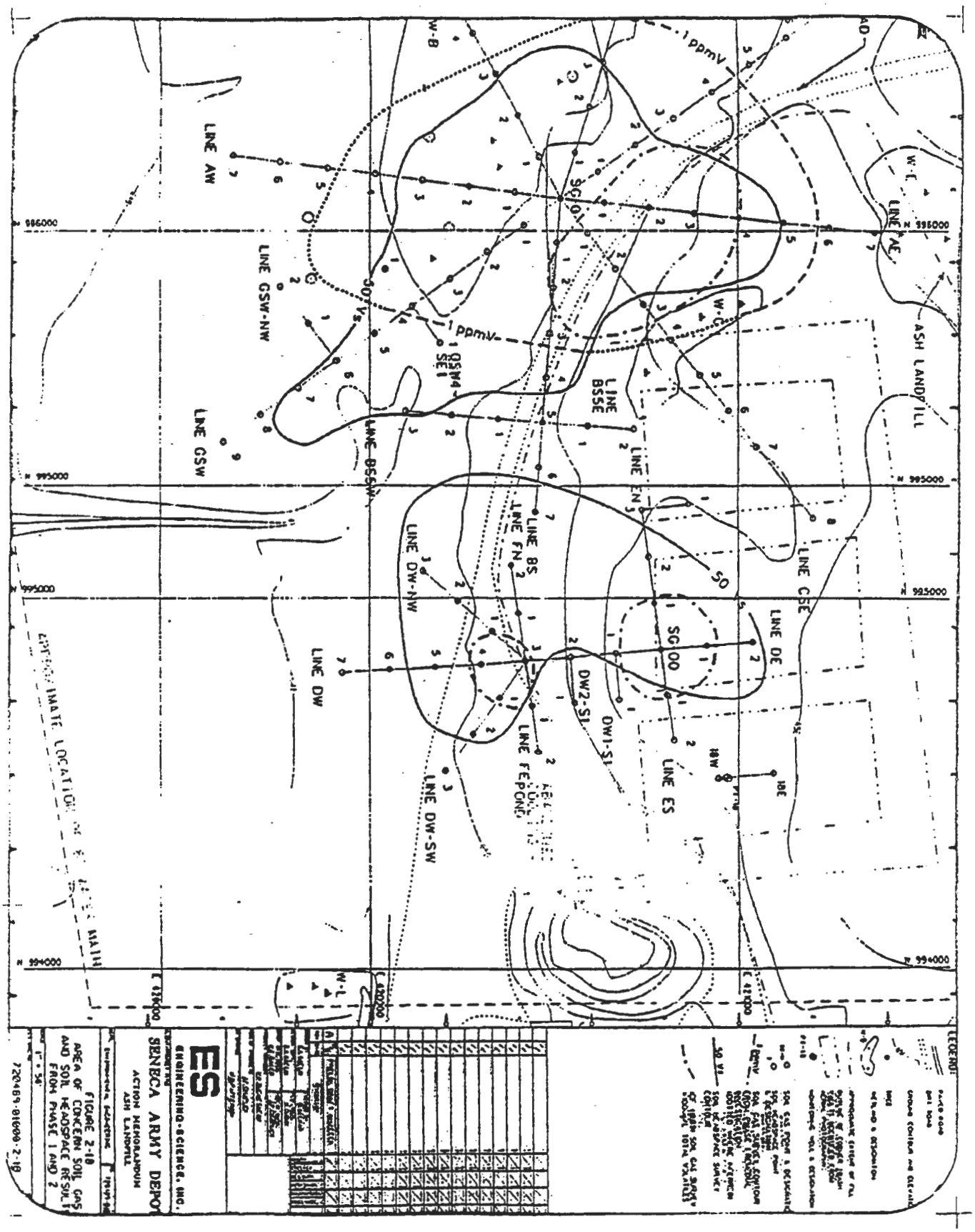
FIGURE 5-10 SAMPLING LOCATIONS FOR SEAD-57: EXPLOSIVE ORDNANCE DISPOSAL

ACTION MEMORANDUM (MILESTONES)

☑ DRAFT ACTION MEMORANDUM

- ▶ **Submitted for agency review on December 3, 1993. ES awaiting regulatory comments.**


AREA OF CONCERN
DEBRIS PILE
SEAD RAILROAD
LEGEND:
ES
ENGINEERING-SCIENCE
SENECA ARMY D
ACTION MEMORANDU
ASH LANDFILL
FIGURE 2-3
ASH LANDFILL ARE
SITE PLAN



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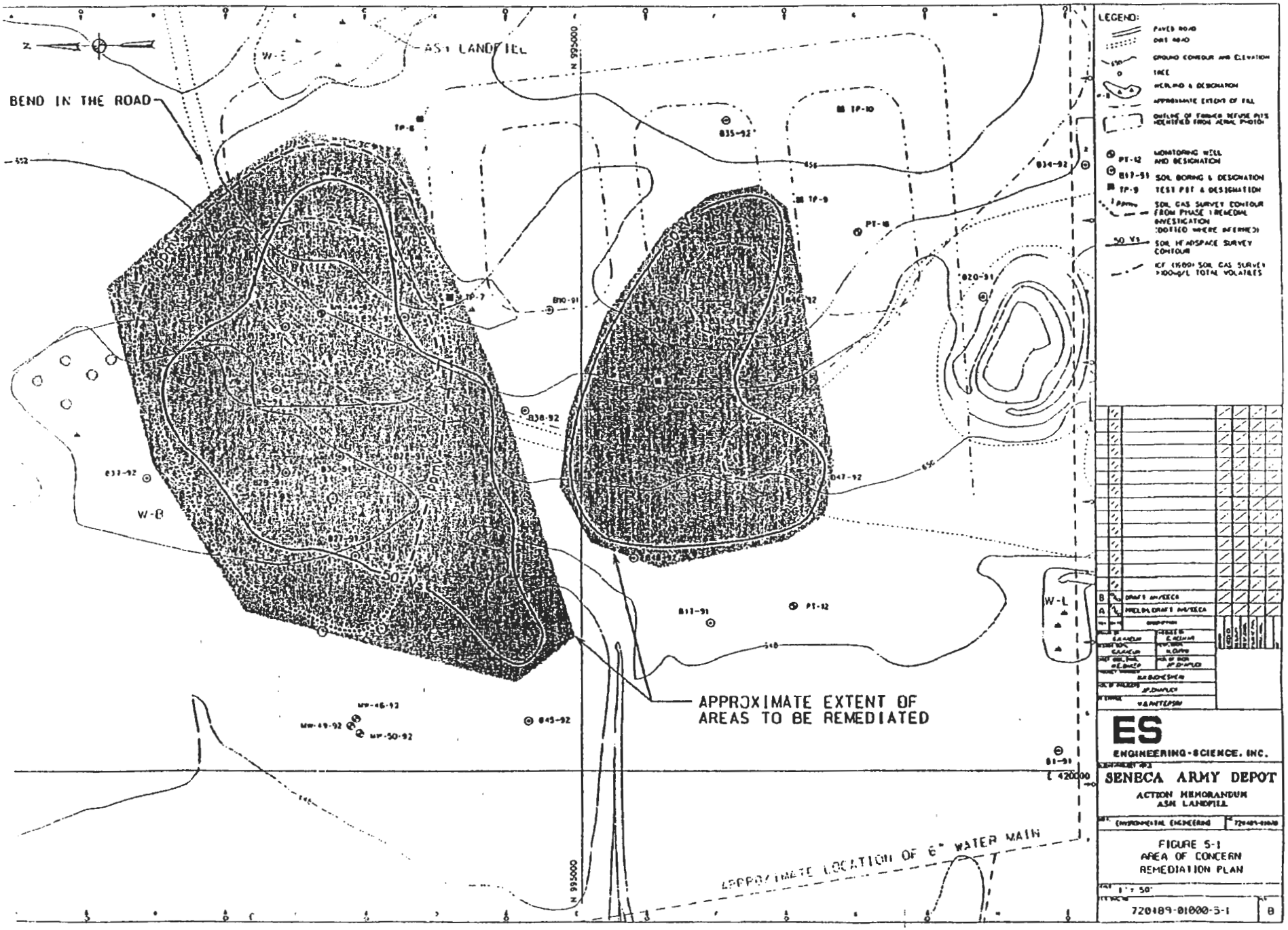
SENECA ARMY DEPOT
ACTION MEMORANDUM
ASH LANDFILL

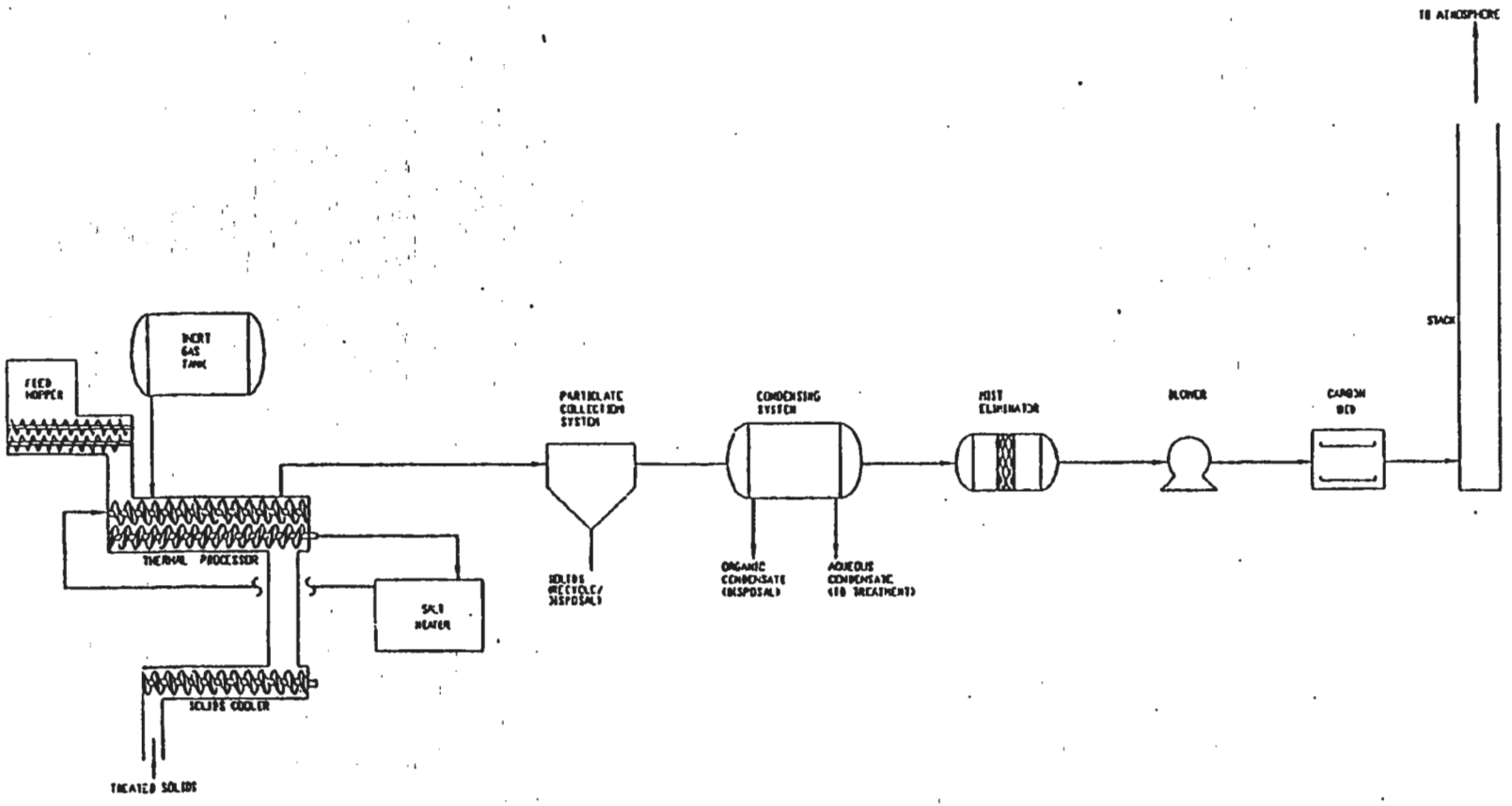
FIGURE 2-18
AREA OF CONCERN SOIL GAS AND SOIL HEADSPACE RESULTS FROM PHASE I AND 2

1" = 50'

720489-01600-2-18


BEND IN THE ROAD
ASH LANDFILL
W-B
W-L
APPROXIMATE EXTENT OF AREAS TO BE REMEDIATED
APPROXIMATE LOCATION OF 6" WATER MAIN
N 995000
N 995500
E 420000
LEGEND:
PAVED ROAD
DIRT ROAD
GROUND CONTOUR AND ELEVATION
TREE
WETLAND & DESIGNATION
APPROXIMATE EXTENT OF FILL
OUTLINE OF FORMER REFUSE PITS IDENTIFIED FROM AERIAL PHOTOS
MONITORING WELL AND DESIGNATION
SOIL BORING & DESIGNATION
TEST PIT & DESIGNATION
SOIL GAS SURVEY CONTOUR FROM PHASE I REMEDIAL INVESTIGATION (DOTTED WHERE INFERRED)
SOIL HEADSPACE SURVEY CONTOUR
ICF (1990) SOIL GAS SURVEY >100ug/L TOTAL VOLATILES
ES
ENGINEERING-SCIENCE, INC.
SENECA ARMY DEPOT
ACTION MEMORANDUM
ASH LANDFILL
ENVIRONMENTAL ENGINEERING
FIGURE 5-1
AREA OF CONCERN
REMEDIATION PLAN
1" = 50'
720489-01000-5-1
B

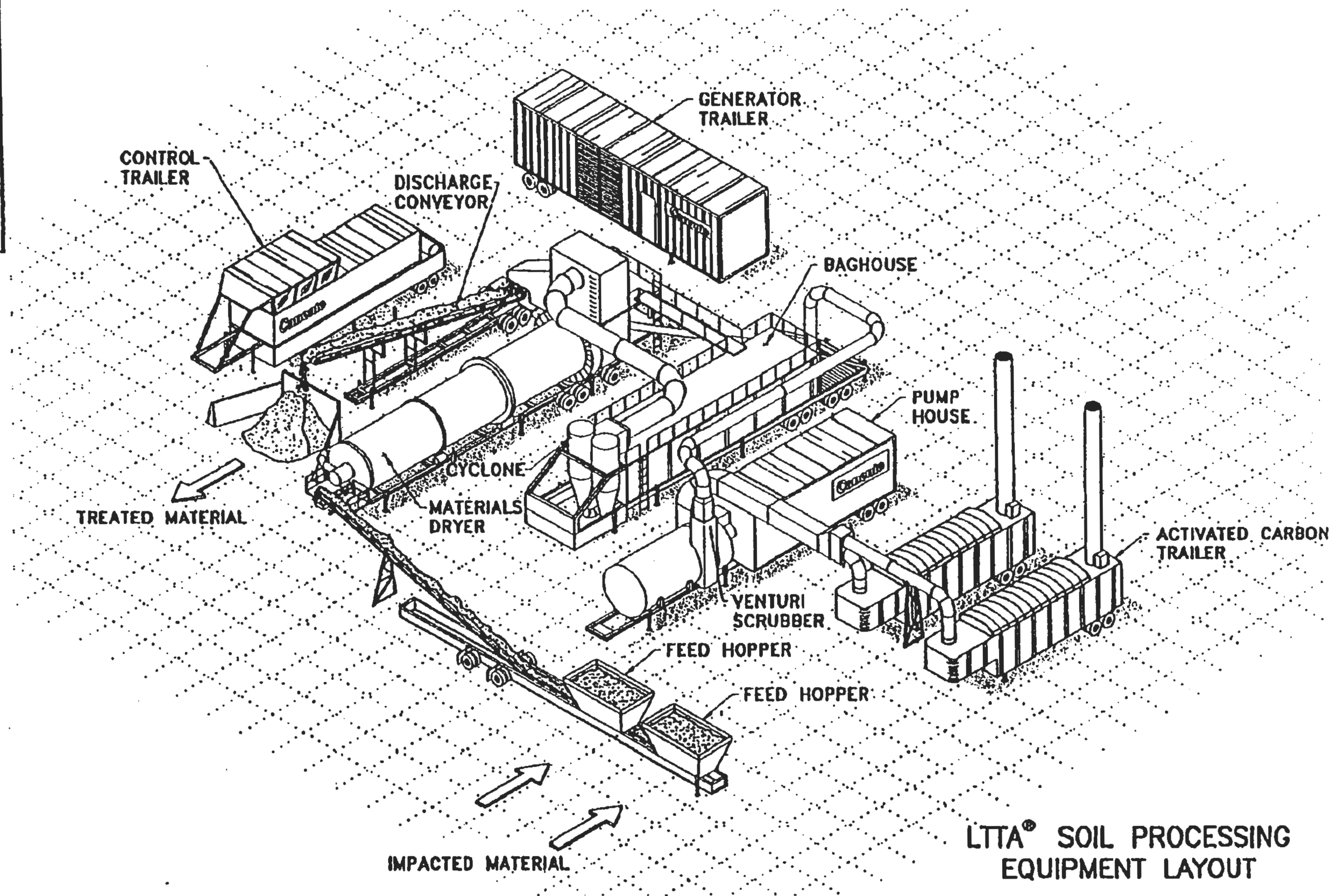
RETEC



FLOW DIAGRAM OF THERMAL DESORPTION SYSTEM

FIGURE 3

DRAWING NUMBER 75-305-A5



LTTA® SOIL PROCESSING EQUIPMENT LAYOUT

CanonieEnvironmental

DATE: 6-26-92	FIGURE 1	DRAWING NUMBER 75-305-A5
SCALE: N.T.S.		

REMEDIAL INVESTIGATION (RI) AND FEASIBILITY STUDY (FS) OF THE ASH LANDFILL (MILESTONES)

☑ **DRAFT ASH RI**

- Chapters 1 through 5 was submitted for agency review on November 10, 1993

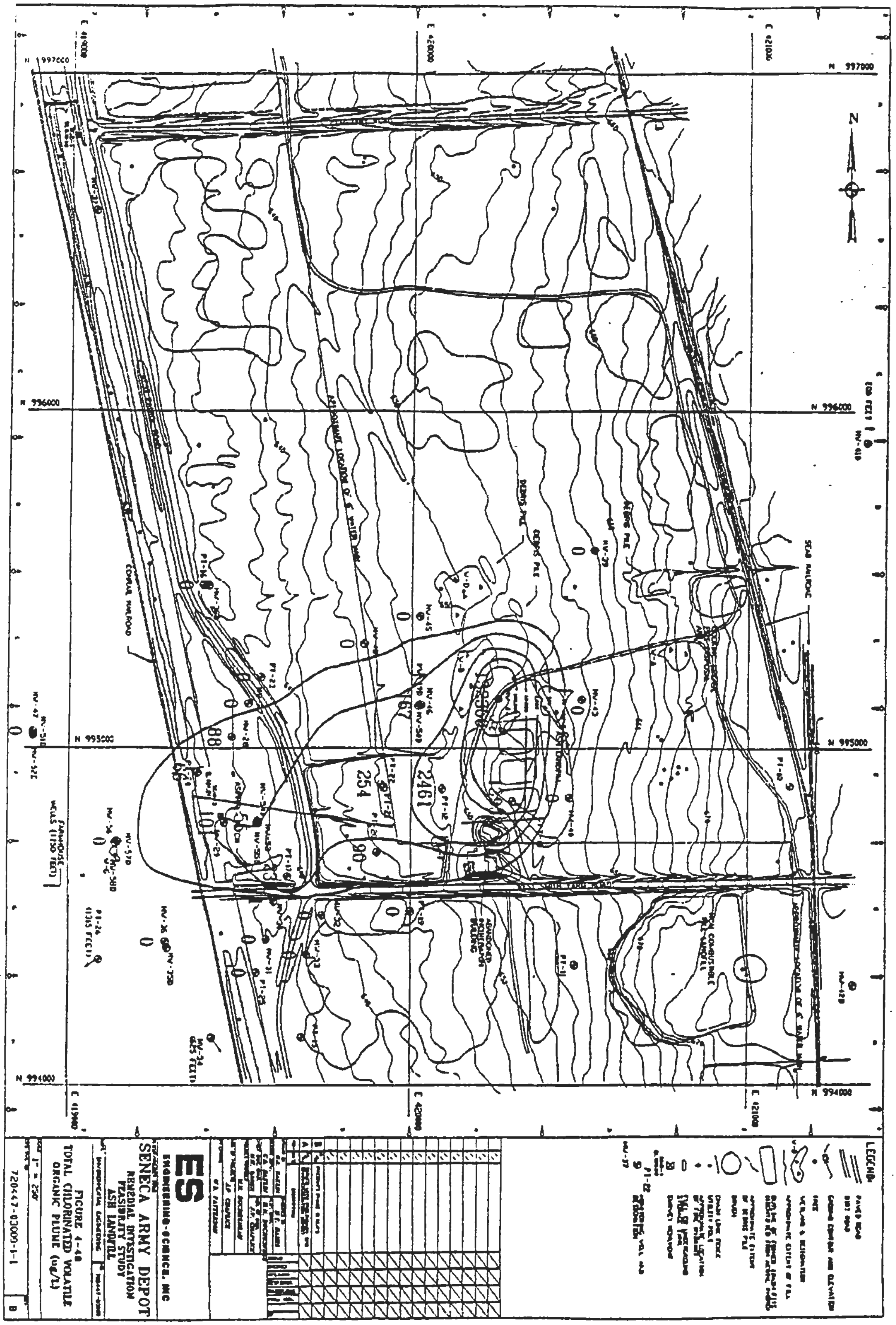
- Chapters 6 and 7 (The Baseline Risk Assessment) was submitted for agency review on January 5, 1994

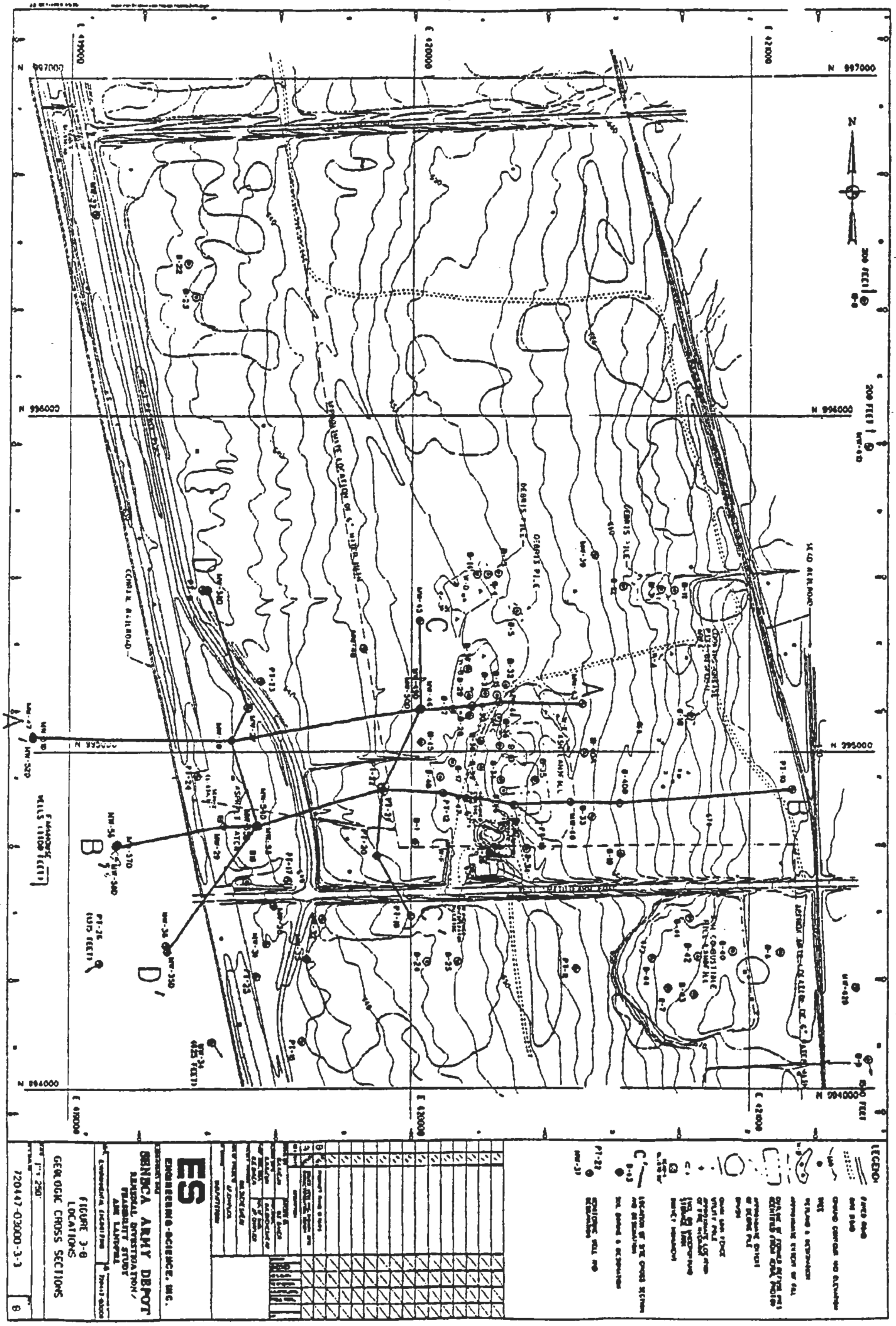
- Received EPA comments on Chapters 1 through 5 on December 3, 1993. Received NYSDEC comments on Chapters 1 through 5 on December 20, 1993. ES is awaiting EPA and NYSDEC comments on Chapters 6 and 7.

REMEDIAL INVESTIGATION (RI) AND FEASIBILITY STUDY (FS) OF THE ASH LANDFILL (MILESTONES)

☑ PRE-DRAFT ASH FS

- Submitted for Army review on January 17, 1994. ES is awaiting Army comments.


ES
ENGINEERING-SCIENCE, INC
SENECA ARMY DEPOT
REMEDIAL INVESTIGATION
FEASIBILITY STUDY
ASH LANDFILL
FIGURE 4-48
TOTAL CHLORINATED VOLATILE
ORGANIC PLUME (ug/L)
1" = 250'
720447-03000-1-1
B
N 994000
E 419900
N 995000
N 996000
N 997000
E 420000
E 421000
CONRAIL RAILROAD
SEAD RAILROAD
LEGEND
2461
254
90


ES
ENGINEERING-SCIENCE, INC.
SENECA ARMY DEPOT
REMEDIAL INVESTIGATION/
FEASIBILITY STUDY
ASH LANDFILL
FIGURE 3-8
LOCATIONS
GEOLOGIC CROSS SECTIONS
720447-03000-3-3
LEGEND
N 997000
N 996000
N 995000
N 994000
E 419000
E 420000
E 421000
A
A'
B
B'
C
C'
D
D'

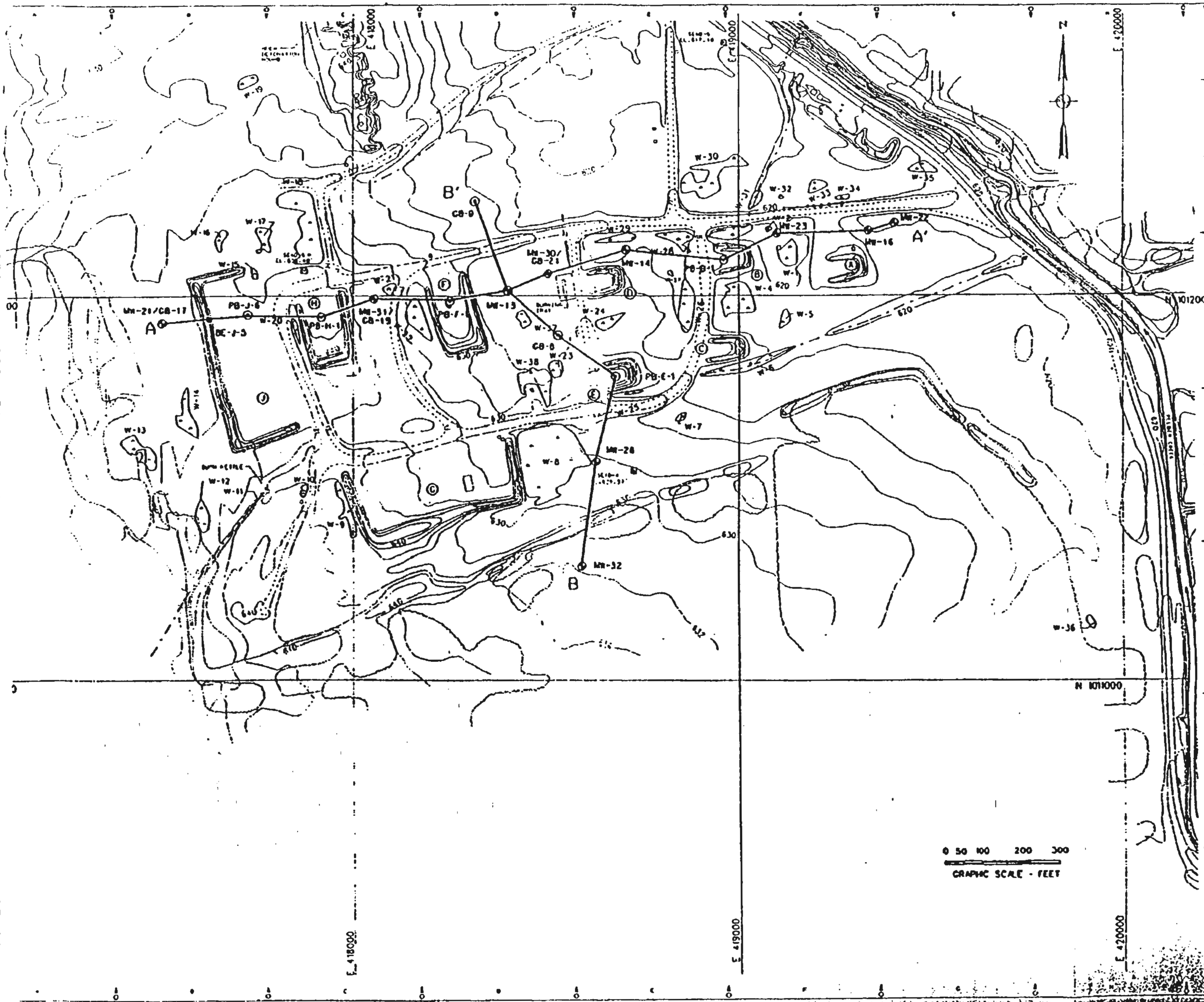
REMEDIAL INVESTIGATION (RI) AND FEASIBILITY STUDY (FS) OF THE FORMER OPEN BURNING GROUND (MILESTONES)

☑ **DRAFT OB RI**

- Submitted for Agency Review on October 21, 1993. Received EPA comments on November 18, 1993. Received NYSDEC comments on December 14, 1993.

☑ **PRE-DRAFT OB FS**

- Submitted for Army review on December 3, 1994. Received Army comments January 19, 1994.



LEGEND:

PAVED ROAD

DIRT ROAD

GROUND CONTOUR

UTILITY POLE

TREE

BRUSH

WETLAND & DESIGNATI...

RUNOFF SWALE

BURNING PAD DESIGN...

CULVERT

MONUMENT AND DESI...

LOCATION OF CROSS ... DESIGNATION

BORING & DESIGNATIO...

ES

ENGINEERING-SCIENC...

SENECA ARMY ...

REMEDIAL INVESTIGA...

FEASIBILITY STU...

OPEN BURNING GRO...

ENVIRONMENTAL ENGINEERING

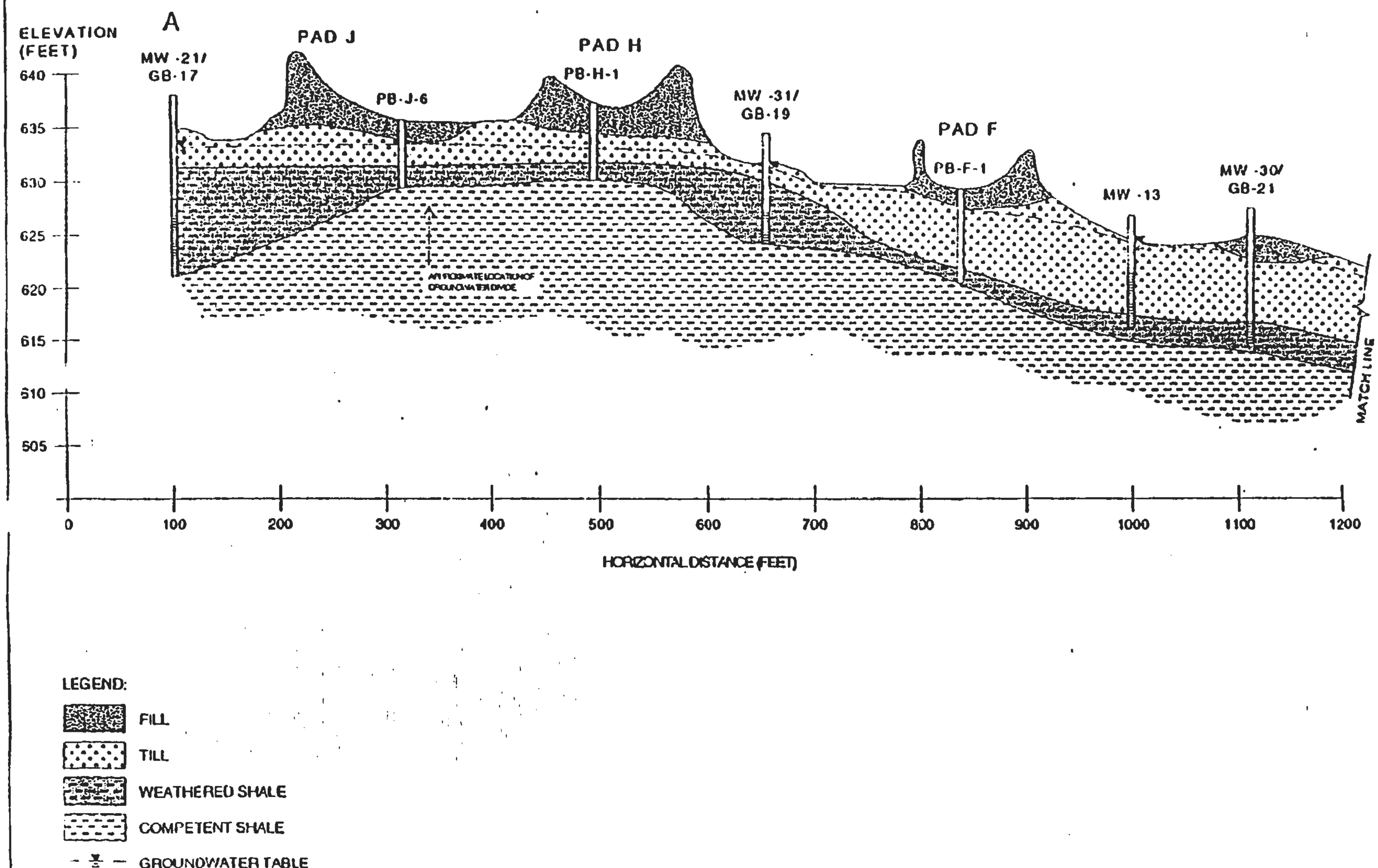
FIGURE 3-6

LOCATION OF

GEOLOGIC CROSS SE...

720146-01022-3-6

CROSS SECTION A - A'



NOTES:

1. Lithologic units are descriptions suppli Engineering-Scien Interpretations are extrapolations betv spaced boreholos, conditons may var

2. Groundwater table depth to water mea made in January 1

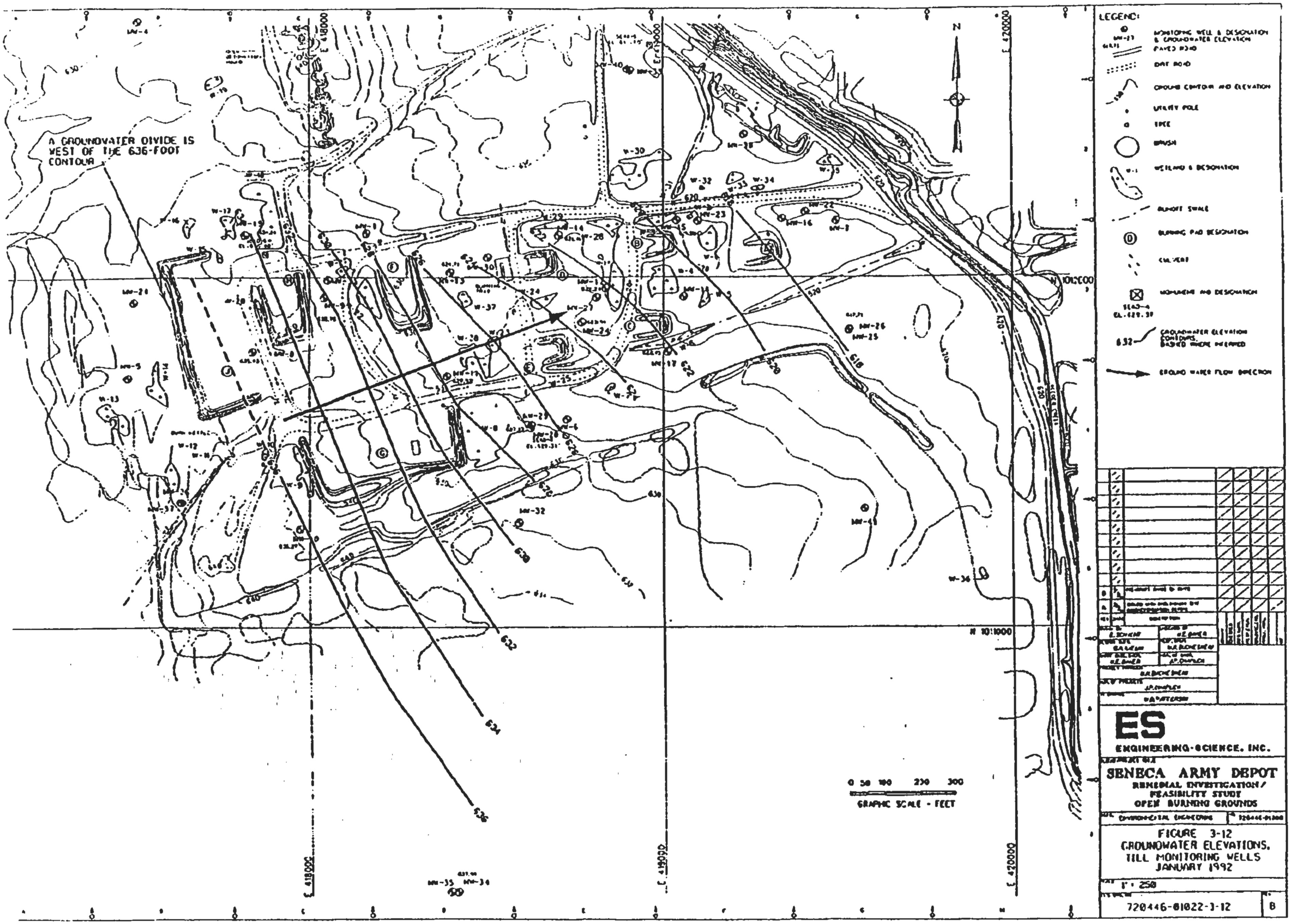
ES
ENGINEERING-SCI

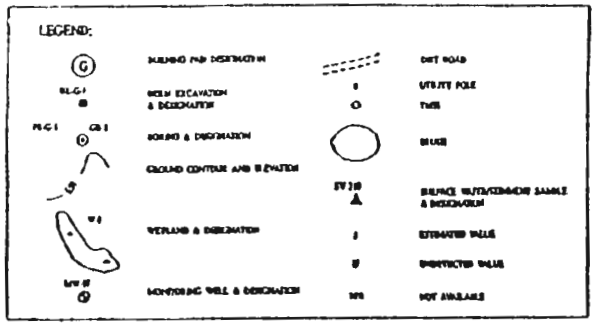
SENECA ARM
REMEDIAL INVESTIGATION / OPEN BURNING G
ENVIRONMENTAL ENGINEERIN

FIGURE :
CROSS-SECTI

HORIZONTAL: 1" = 100'
720446-01000

11:21AM FROM PARSONS MAIN TO 916078691[illegible]/75567 P030





BERM EXCAVATIONS

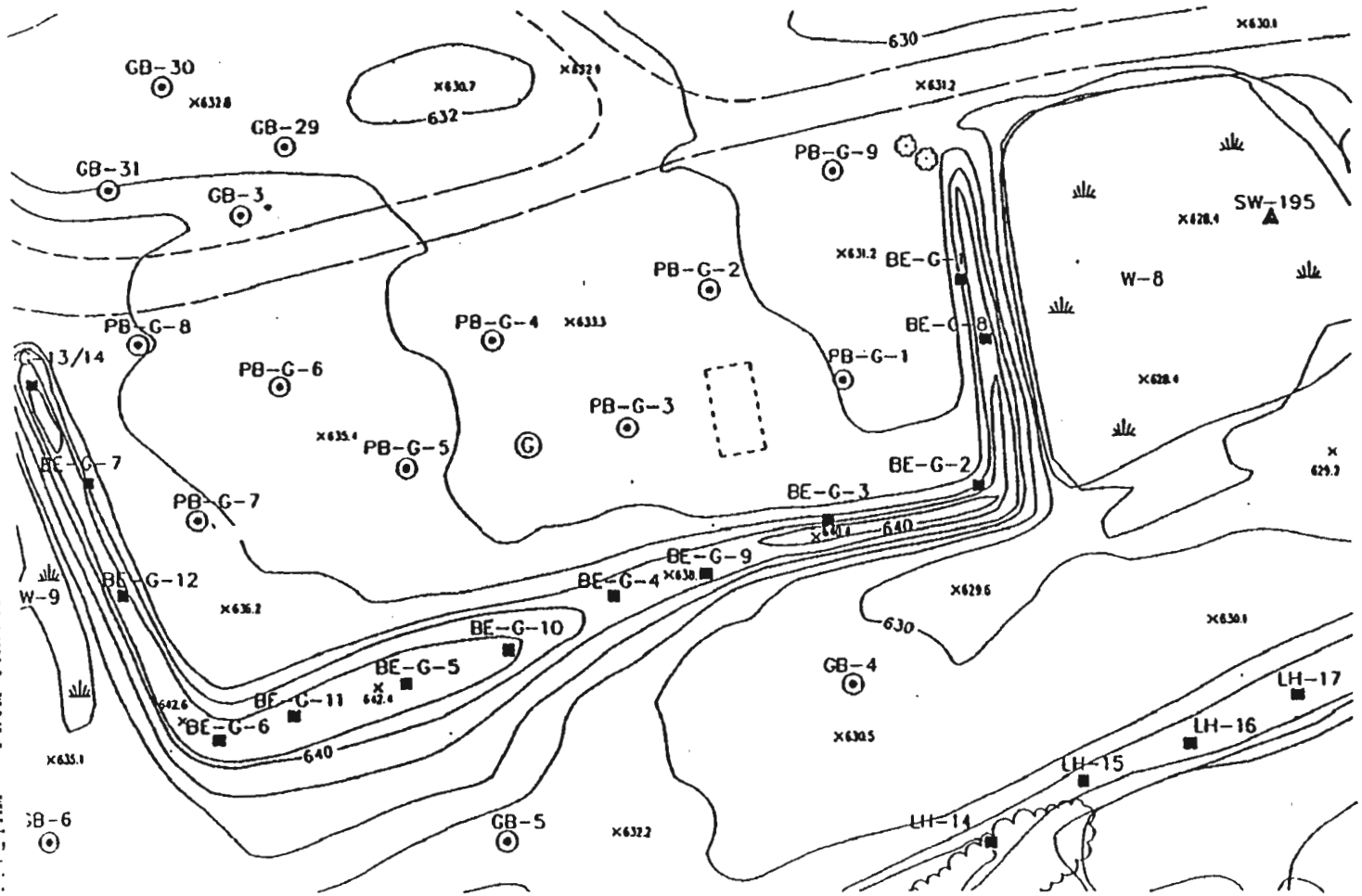
LOCATION	DEPTH	LEVEL II	LEVEL IV			
		Pb	Ba	Cu	Pb	Zn
GAE-G-1	2.0'	NA	190 J	21.6 J	18	108 J
GAE-G-2	2.0'	NA	270 J	316 J	390 J	637 J
BE-G-1	2.5'	103	NA	NA	NA	NA
BE-G-2	4.0'	19700	4740	5300	22400 J	1650
BE-G-3	4.5'	7100	1400	632	7800 J	862
BE-G-4	2.0'	2600	NA	NA	NA	NA
BE-G-5	4.0'	850	NA	NA	NA	NA
BE-G-6	3.0'	7900	2890	998	8710 J	5300
BE-G-7	3.0'	31	NA	NA	NA	NA
BE-G-8	2.0'	57	NA	NA	NA	NA
BE-G-9	2.0'	310	NA	NA	NA	NA
BE-G-10	2.0'	340	NA	NA	NA	NA
BE-G-11	2.0'	4800	1650	918	5450	4040
BE-G-12	2.0'	32	NA	NA	NA	NA
BE-G-13	2.0'	NA	206	66.1	249 J	281

All concentrations in mg/Kg.

PAD BORINGS

LOCATION	DEPTH	LEVEL II	LEVEL IV			
		Pb	Ba	Cu	Pb	Zn
PBG-1	0-6"	NA	709	466	509	1590
	0-2'	84100	NA	NA	NA	N.
	2-4'	2100	1390	1650	3360	513
	4-6'	590	NA	NA	NA	N.
	6-8'	135	NA	NA	NA	N.
	8-10'	23	NA	NA	NA	N.
PBG-2	0-6"	NA	422	108	203	340
	0-2'	1250	481	754	77	293
	2-4'	18	NA	NA	NA	N.
	4-6'	64	NA	NA	NA	N.
	6-8'	14.8	NA	NA	NA	N
PBG-3	0-6"	NA	554	688	212	583
	0-2'	350	233	463	63 7	172
	2-4'	<10	NA	NA	NA	N
	4-6'	28	NA	NA	NA	N
	6-8'	<10	NA	NA	NA	N
PBG-4	0-6"	NA	159	80 8	639	210
	0-2'	15.9	134	27	43.3 R	93 1
	2-4'	NA	NA	NA	NA	N
	4-6'	11.7	NA	NA	NA	N
PBG-5	0-6"	NA	167	28	88.5	127
	0-2'	31	161	378	50 2 R	125
	2-4'	11	NA	NA	NA	N
	4-6'	17.2	NA	NA	NA	N
	6-8'	28	NA	NA	NA	N
PBG-6	0-6"	NA	511 R	439	291	1560
	0-2'	44	NA	NA	NA	N
	2-4'	31	NA	NA	NA	N
	4-6'	900	354 R	162	37.5 R	799
	6-8'	21	NA	NA	NA	N
PBG-7	0-6"	NA	1860	15500	1700	6380
	0-2'	280	366 R	185	332	772
	2-4'	15.7	NA	NA	NA	N
	4-6'	191	NA	NA	NA	N
	6-8'	22	NA	NA	NA	N
PBG-8	0-6"	NA	153	363 R	64.3 J	110
	0-2'	24	114	287 R	23.2 J	95.2
	2-4'	<10	NA	NA	NA	N
PBG-9	0-6"	NA	141	23.6 R	24.4 J	77.2
	0-2'	27	122	37.7 R	38.1 J	111
	2-4'	17.3	NA	NA	NA	N
	4-6'	8.6	NA	NA	NA	N
	6-8'	11.4	NA	NA	NA	N

All concentrations in mg/Kg



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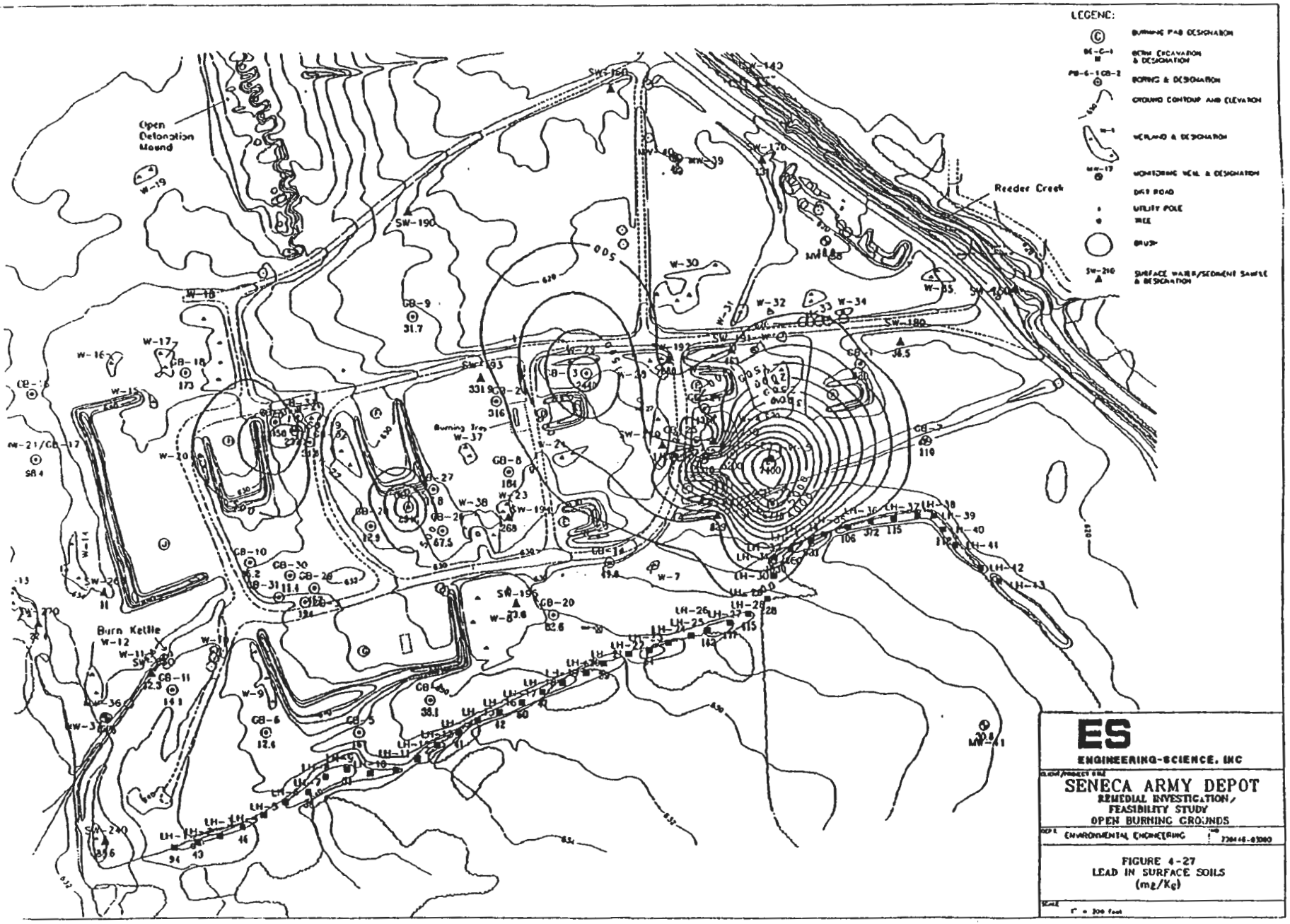
SENECA ARMY DEPO
REMEDIAL INVESTIGATION / FEASIBILI
OPEN BURNING GROUNDS

ENVIRONMENTAL ENGINEERING

FIGURE 4-18
DISTRIBUTION OF META
OPEN BURNING PAD G

SCALE 1" = 60'

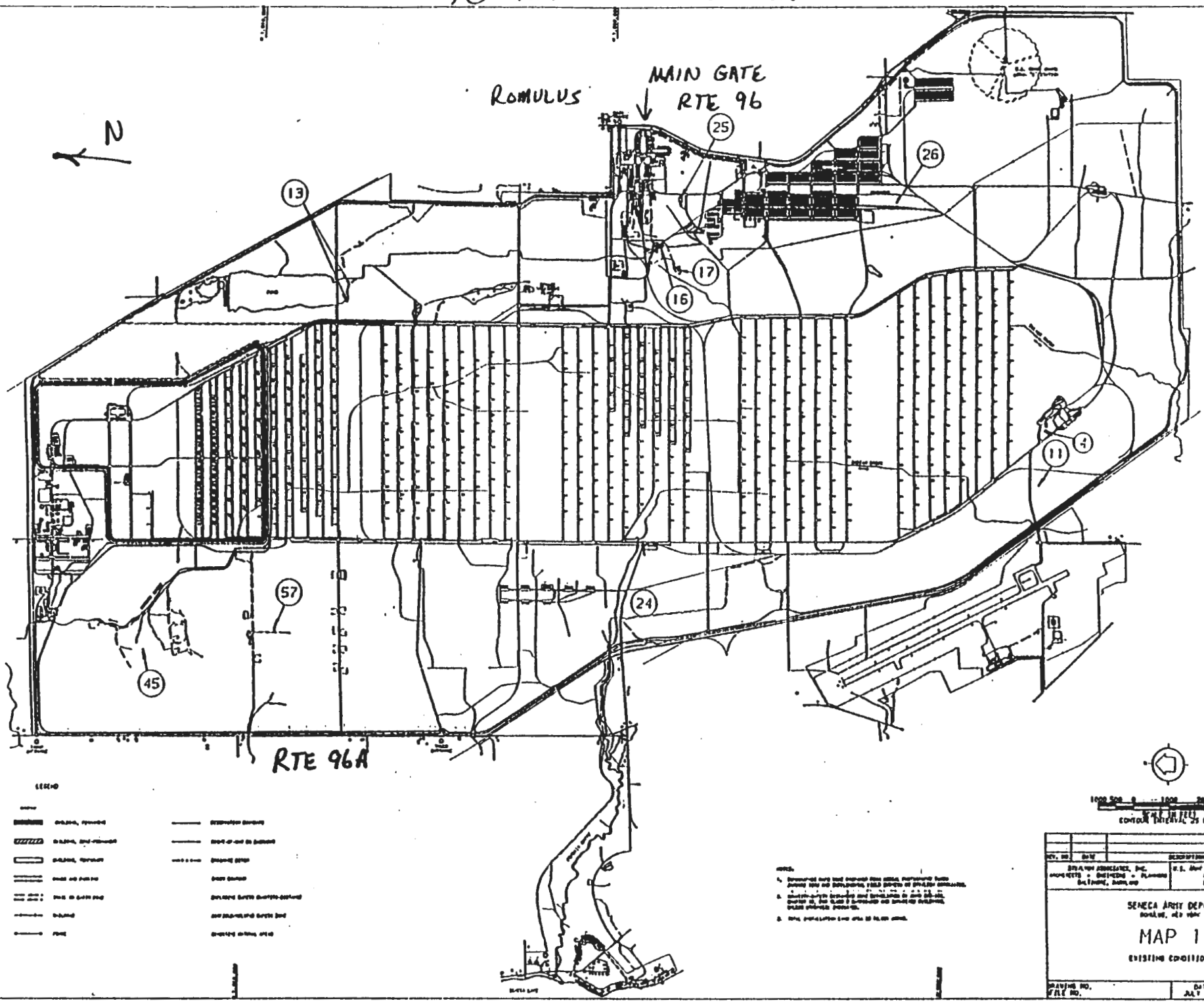

LEGEND:
BURNING PAD DESIGNATION
BERM EXCAVATION & DESIGNATION
BORING & DESIGNATION
GROUND CONTOUR AND ELEVATION
WETLAND & DESIGNATION
MONITORING WELL & DESIGNATION
DIRT ROAD
UTILITY POLE
TREE
BRUSH
SURFACE WATER/SEDIMENT SAMPLE & DESIGNATION
Open Detonation Mound
Reeder Creek
Burning Iron
Burn Kettle
ES
ENGINEERING-SCIENCE, INC
SENECA ARMY DEPOT
REMEDIAL INVESTIGATION/
FEASIBILITY STUDY
OPEN BURNING GROUNDS
ENVIRONMENTAL ENGINEERING
FIGURE 4-27
LEAD IN SURFACE SOILS
(mg/Kg)
1" = 200 feet

TEN AREAS OF CONCERN
TO BE ADDRESSED UNDER THE
FIRST SITE INVESTIGATION
WORKPLAN

(Map 1)

SEAD #	DESCRIPTION
4	Munitions Washout Facility Leach Field
11	Old Construction Debris Landfill
13	IRFNA Disposal Site
16	S-311 Abandoned Deactivation Furnace (DF)
17	Building 367 Existing DF
24	Abandoned Powder Burning Pit
25	Fire Training and Demo Pad
26	Fire Training Pit and Area
45	Open Detonation Facility
57	Explosive Ordnance Disposal (EOD) Area

10 AREAS OF CONCERN

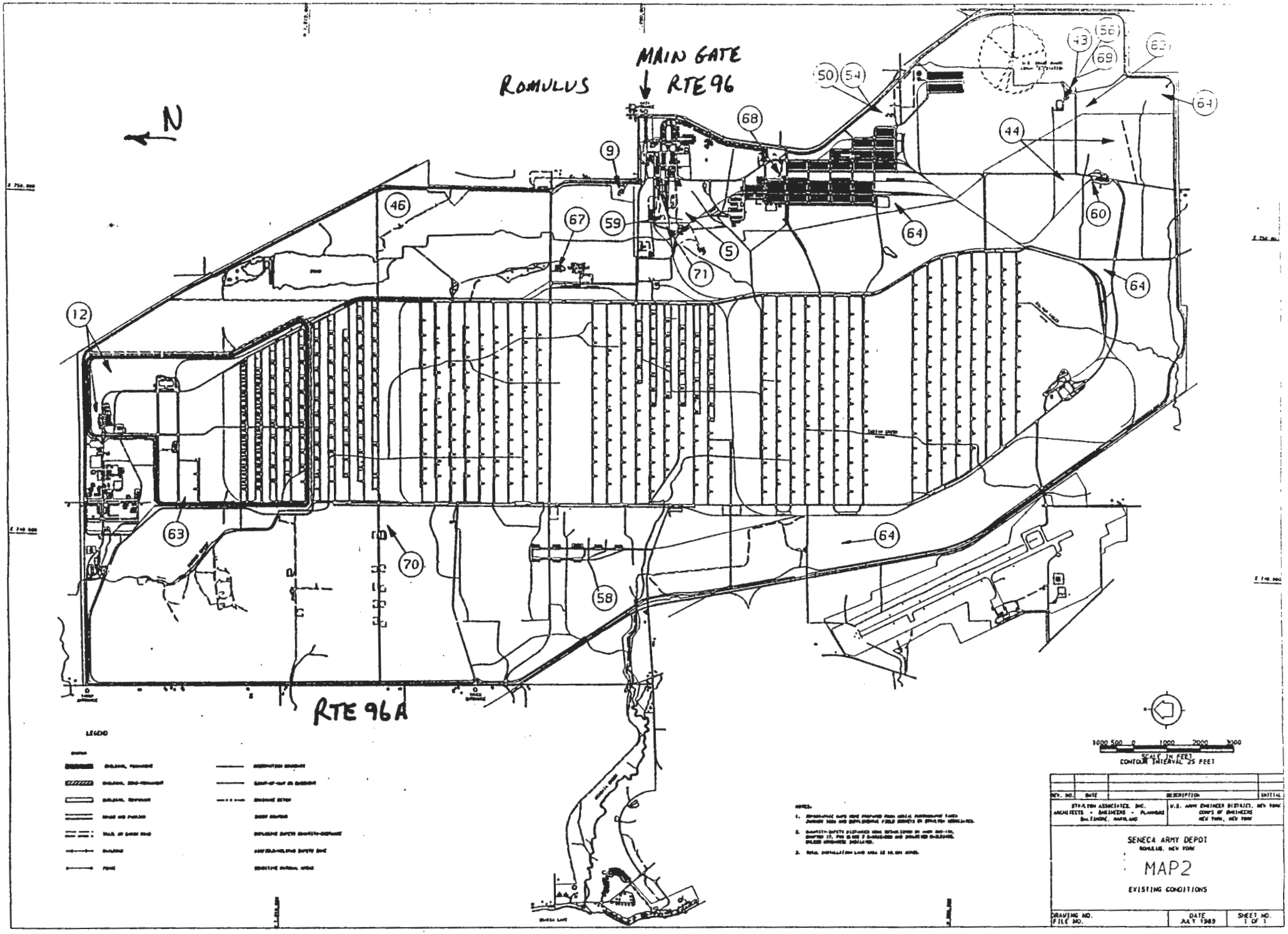


FIFTEEN AREAS OF CONCERN
TO BE ADDRESSED UNDER
THE SECOND SITE INVESTIGATION
WORKPLAN
(Map 2)

SEAD #	DESCRIPTION
58	Booster Station Debris Area
67	Building 4 Dump Site
50,54	Tank Farm, Asbestos Storage *
44	QA Lab
5	Sewage Sludge Piles
59	Fill Area, Building 135
62	Nicotine Sulfate 606/612
63	Miscellaneous Components Burial Site
64	Garbage Disposal Areas
69,43,56	Building 606 Disposal Area, Old Missile Test Facility, Herbicide and Pesticide Storage *
12	Rad Waste Burial Areas
9	Old Scrap Wood Site (Landfill)
60	Oil Discharge Adjacent to building 609
70	Building 2110 Fill Area
71	Alleged Paint Disposal Area

* COMBINED- same geographical area

15 AREAS OF CONCERN



COUNTY OF SENECA
STATE OF NEW YORK

TECHNICAL REVIEW COMMITTEE MEETING

HELD AT: Seneca Army Depot
Romulus, New York

HELD ON: May 18th, 1994

REPORTED BY: PATRICIA A. NELK

MR. ABSOLOM: Okay. If we can get started, I am going to kick this thing off as close to twelve thirty as I can today. For those who don't know, I am Steve Absolom. I am chief of public works here at Seneca Army Depot. The commander of the Army Depot, Colonel Johnson, is away in training this week. He's unable to attend and be here.

A few opening things I want or opening remarks is, first off, I would like to make sure that everybody understands that we will answer all questions but I would like them one at a time so we can answer them one at a time. This is so that we can properly record the question and the answer. So please be patient if we say, "time out, one question, please." That is the purpose for it. We passed out an agenda for today. We are going to make one slight change on that. Because of the way we are going to present it Mr. Healy is not going to give a presentation. Engineering Science will give the overall presentation. So that will be the one change we will have in the agenda.

I do see a few new faces. What I would

like to do is go around the table and have everybody introduce themselves so everybody knows who is here at the front and then we will get right into investigations and where we stand.

MR. HEALY: Kevin Healy from the Huntsville Division Army Corps of Engineers. I am the lead engineer for the work being done at the Seneca Army Depot.

MR. DUCHESNEAU: Mike Duchesneau, Engineering Science in Boston. I am the project manager.

MR. SUEVER: I am Rick Suever. I work for Huntsville Division Corps of Engineers. I am the project manager for the work at Seneca.

MR. CHAPLICK: Jim Chaplick from Engineering Science. I am the department manager.

MR. ABSOLOM: As I said before, I am Steve Absolom. I am chief of public works here at Seneca.

MR. HODDINOTT: Keith Hoddinott, risk assessor for the Surgeon General.

MR. BATTAGLIA: I am Randy Battaglia. I

am the project manager at Seneca.

CPT. RAIMONDO: I am Captain Raimondo, the command judge advocate here at the Seneca Army Depot.

MR. GERAGHTY: Dan Geraghty, New York State Department of Health.

MR. ENROTH: Tom Enroth, project manager.

MR. NELSON: Bruce Nelson with Malcolm Pirne providing technical assistance to the EPA.

MS. STRUBLE: Carla Struble, project manager for USEPA.

MS. RAFFERTY: Lani Rafferty, State Health Department.

MR. GUPTA: Kamal Gupta, project manager for New York State Department of Environmental Conservation Division.

MR. MEHTA: Manmohan Mehta, New York State Department of Environmental Conservation. I am out of Region 8 in Avon

MR. SCOTT: Robert Scott, DEC permit administrator, Avon, New York.

MR. COOL: Bill Cool, Seneca County Soil and Water Conservation and councilman for the

Town of Varick.

MR. DURST: Dick Durst. Cornell University. I work at the experimental station. I am a resident of the Town of Varick.

MR. DOMBROWSKI: Brian Dombrowski. I am the director of the Seneca County Health Department.

MR. ABSOLOM: I would like the people in the back to introduce themselves.

MS. MCDONALD: Molly McDonald. I am a student intern at the New York State DEC for today.

MS. VERA: Linda Vera. I am also out of the DEC office in Avon as a citizen participation specialist.

MS. FALLO: Janet Fallo. I work here at the Depot in environmental.

MR. HUNTER (phonetic): My name is Bob Hunter, environmental protection specialist.

MR. CROOK: My name is Steve Crook, Law Environmental.

MR. QUINN: My name is Mike Quinn. I am from Law Environmental Remediation Engineering.

MR. LAFFIN: Alan Laffin, Lozier Labs out of Rochester.

MR. BURNS: Chuck Burns, Lozier Engineers, Rochester, New York.

MR. ABSOLOM: Very good. Welcome, everybody. With that we are going to get started right in with some briefings from Mike.

MR. DUCHESNEAU: Sure. I would like to welcome you all here to the presentation. We will begin with an overview of the organizational project. Many of you have seen this before. On the top here is Rick Suever. You have already met Rick. He's the project manager. And technical manager for this project for the Corps of Engineers, Huntsville is Kevin Healy. I am the engineering science project manager. And Kamal, who you have met, represents the State of New York. Carla represents EPA Region Two. And Randy represents the Seneca Army Depot. We have been working together here for almost three years. Now we are fairly comfortable with each other. I think that is a very positive aspect of the project that we

have been involved in.

Just to give you an overview of the items that we will be discussing -- that I will be discussing with you. These are the seven active delivery orders that we currently have with the Corps of Engineers in Huntsville. And I will be discussing each one of these projects individually. They have all the SWMU classification reports, the high priority AOC's, the moderate priority, the moderately low and the two RI/FS as well as the action memorandum.

I think it is important that we briefly discuss the SWMU classification flow chart. This was -- I know it is hard to see but you should have a copy in your handout here. And this was derived from the Interagency Agreement, otherwise known as the IAG. It is an overview of the process that is outlined in that document as to how to identify a SWMU, investigate it and perform ultimate remediation. It essentially involves three phases. The first phase is the SWMU classification phase. We are currently very active in this phase. The second phase once

the SWMU has been identified as an AOC, area of concern, or no action SWMU -- let me step back a second. Once it is listed as an AOC it enters the site investigation phase. For a no action SWMU, there would be no further action and it will be deleted from any further action investigation. The site investigation phase involves potentially site investigation. But also possibly if there is enough information to assure that a threat doesn't exist or it could possibly. We just make a completion report and that will be the end of it. However, if there is sufficient information and a removal action can be performed, that is done at the Army's discretion. To perform a removal action, say for a localized area, we have to eliminate the threat and prepare the completion report and that will be done with it.

Some SWMU's are AOC's that have a sufficient threat and additional work is required or additional large scale remediation would be required. That would enter the RI/FS phase. What this is intended to do, this whole process, is to blend the

obligations of RCRA with CERCLA. The Seneca Army Depot is on the NPL, National Priority List. That means that there are CERCLA obligations but there is also RCRA. RCRA is considered an ARAR in this scheme of investigation. So we have some obligation to RCRA. The nomenclature of a SWMU is strictly a RCRA term. When we get into site investigation or RI/FS, they are CERCLA terms. I think what we are showing here is the process outlined in the IAG and it is a blending of both of those particular regulations.

Just to briefly highlight the classification of the SWMU's that we have identified to date. Again this is in your handout. What we show there are 72 SWMU's. And SWMU's are consolidated waste management units that have been identified at the Depot. I will show you shortly the summary of this. As you see here, all the SWMU's have been identified and classified. The classifications include no action, high priority, moderate priority, low priority or moderately low priority. We will go through

a summary of this. Just to point out also that several of these -- I think there is seven, as a matter of fact, that have been identified on these sheets as TBD, to be determined. We met yesterday, our group project managers group which includes NYSDEC, New York State Department of Environmental Conservation, as well as EPA and Seneca. And we have agreed to classify all of these to be determined SWMU's as low priority AOC's. So when we revise this we will include all of those TBD's, or to be determined, as low priority SWMU's. I am not going to spend a lot of time here identifying any particular one. It is all shown in your handout but I want to provide you with a listing of the 72 and where they currently are classified. But what's interesting is the summary of all of the classifications of all the SWMU's. This is an overview picture -- again this is in your handout -- of where we stand on all the SWMU's.

Now, just to make sure there is no confusion here. There are 13 high priority SWMU's that have been identified in the SWMU

classification report. All of those SWMU's are currently under investigation. Five of those SWMU's were combined into an operable unit at the ash landfill. Plus there is another operable unit that is currently involved in RI/FS. That would bring that number to six. Plus the six high priority SWMU's that are currently under investigation. So it brings the number to thirteen. All of the thirteen are currently under investigation either with an RI/FS process or under the, you know, site investigation.

The moderate priority, there are three of those. They are also under investigation as site investigations. As well as the eleven moderately low priority. Those have been combined into a couple of SWMU's which have all been investigated as eight but there are really eleven.

The low priority SWMU's. At this point we are investigating seven. We have identified thirteen. Plus there are seven additional that I just mentioned from the to be determined that are also listed -- will be

listed as low priority which will bring the number to twenty. We are investigating at this point seven. There are thirteen low priority AOC's that we have to consider at this point. There are twenty-five no action AOC's or SWMU's.

That pretty much is a summary of where we currently stand in the investigation and identification of all of the SWMU's or AOC's at the Seneca Depot.

One of the primary documents that is identified in the IAG is the SWMU classification report. As the name implies, it is a report that identifies all of the SWMU's, classifies them in one of the groups that we just discussed.

We have performed limited sampling recently. The limited sampling was intended to provide us with preliminary information to help support classification of several of these SWMU's that were teetering on whether they were no action or low priority. We have collected that information. And based on that information, as I said, those to be determined SWMU's have been classified as low

priority AOC 's. Which again the second bullet item here really doesn't apply. We agreed to do low priority. The report is due to EPA and NYSDEC on June 10th, 1994. We have every intention of making that date.

Moving on to the high priority SWMU's. Actually they are AOC's. I somewhat use that term interchangeably. At this point they are not SWMU's. They are AOC, areas of concerns. This is the list of the high priority AOC's. We have currently completed the field work and have begun writing the report. The field work is initiated in October after receiving approval of the work plan from both NYSDEC and EPA. It was completed in early February. Some of the tasks that I highlighted are investigatory tasks, include photogrametric mapping, surface soil sampling, geophysical investigations, data evaluations, asbestos sampling, et cetera. We have prepared a pre-draft report for our review only. We have received comments from that. It was submitted April 29th. We should be receiving regulatory comments on June 10th; also on the same date the SWMU report is due. It will be

a busy week for us.

What I am going to show you today are some of the figures that will be included in that high priority AOC site investigation report. And I made copies of these overheads so you can follow along. Although they are not color I think you can hopefully follow along with what's happening here.

This is SWMU -- what we call SWMU four. It is SWMU four. It is the old munitions or break out washout plant. What was performed here was the spent casings of the shells, like Howitzer (phonetic) shells and whatnot, still had residual propellant in there. It would come to this plant and be washed out with steam and the wash water was discharged through leach fields. Our investigation was to try to ascertain the extent, if any, of the impacts caused by the operations. I guess the interesting thing on this facility is that we had expected to find some residual amounts of PEPS. Well, we haven't found that much. We found low levels of TNT. What I show here is we were surprised to find copper at the levels that we did find here. And we

think there is kind of a relationship between possibly what went on in the building. It is former building 230. We are not sure exactly what specific operation went on there. But there is a ditch or drainage pipe, I believe, that comes across the road from this building and leads directly to this pond down here. When the pond sediment built up in time, some of that sediment was pushed to the side over here. We are in fact finding elevated levels of copper not only in the sediment that was excavated from the bottom of the pond but we went out to the middle of the pond in a boat and found -- took a sample of sediment in the pond. I am talking in the neighborhood of three thousand parts per million here. Background for the site is generally running someplace in the neighborhood about 30 parts per million. It was kind of unusual that we found metals where we didn't expect to find metals. We are going to have to consider that.

The next facility is what we call SEAD 16. And this is the old deactivation furnace. What went on here is bullets or

small arms were deactivated or rendered harmless through the process of heating inside a large steel rotary kiln tube. This is the old facility. Subsequent to this a newer facility was built and that is SEAD 17 that we will discuss in a minute. What we found here was not surprising. We found some elevated levels of lead in a lot of the surface soils, which is the picture I am showing you now. The highest being upwards of nine thousand parts per million of lead in the surface soil. Lead was known to be a component of, you know, the bullets and some of the propellant material.

The next AOC that we have investigated is what we call SEAD 17. That is the existing deactivation furnace. This facility is currently being applied as part of the permit to operate under the part B permit. A trial burn has been prepared. But we identified this as a SWMU and subsequently did an investigation to identify the potential threat to human health and the environment. Again what we find here are lower levels of lead but nonetheless what we

think are elevated above background levels of lead; the highest of which here is probably around three thousand parts per million. But not inconsistent with what we would like or what we expected to find.

COMMITTEE MEMBER: Are these surface samples or do they go down?

MR. DUCHESNEAU: These are zero to six inches to the surface. That is consistent with what NYSDEC's policy of surface soils should be.

What we are looking at here is SEAD 24, which is the abandoned powder burning pit. This again was somewhat of a surprise to us. We found elevated levels of arsenic in the surface soils and those are identified in this area pretty much up in here. By elevated I am talking approximately 50 parts per million where the background is generally running much lower than that. I think NYSDEC's Tag -- technical action guidance memorandum -- which is the soil clean up value that NYSDEC uses for guidance, is seven parts per million for arsenic. We are somewhat above that. This was somewhat

surprising. We don't understand why arsenic would be at the levels that we found it at. Because arsenic is not typically associated with the operations that went on here; in other words, burning of powder, of munitions.

MR. DURST: Could this have come from farming pesticides?

MR. DUCHESNEAU: Yes. I believe arsenic is a component of pesticides. In some cases it could have been spread there. I guess the issue that we are concerned with is why is it so localized in this area. It is kind of unusual.

The next one is SEAD 25, this is the fire demonstration pad. What went on at this facility was, as the name implies, fires were ignited and then, you know, subsequently put out by the fire department at the facility. We have found BTEX -- Benzene, Toluene, Ethylbenzene and Xylene, otherwise known as BTEX -- at levels approaching -- the highest in this one boring is about 15,000 parts per billion micrograms per kilogram. It coincides almost exactly with the location of what we find in the groundwater for these

components. It is very consistent with what we would expect. Implying the use of a gasoline. These BTEX compounds are petroleum based compounds and major components of gasoline. What we expect what happened here is some of the gasoline that was used to ignite the fires to be put out have leached into the soil and subsequently into the groundwater. Again that is not inconsistent with what we expected to find. We didn't expect to find the levels at that level. We pretty much knew what went on there.

This is SEAD 26. It is the fire training pit. And in the middle of this is an elevated plateau approximately 10 to 15 feet above the low ground and it flattens out and is consistent grade-wise with the elevation of the railroad tracks on this side. Right in the middle is a bentonite -- bentonite is a clay -- lined pit. And as the name implies here this is where fire training activities were performed for people involved in fire prevention and fire fighting activities. So the pit was occasionally ignited. Oil was placed in the pit. It is a

bentonite lined pit so the oil wouldn't seep down into the ground. The pit was ignited and then subsequently extinguished by the fire training folks. What we found here is not inconsistent with what we expected. What I am showing you are the PAH's. PAH's are poly-aromatic hydrocarbons. Those PAH's are products of the combustion process as it occurred. It was totally consumed. As a result of that, there are PAH's. They are deposited had over the surface of those soils. What we are finding is elevated levels of these particular compounds. These are the same kind of compounds that you probably inhale through cigarette smoke and the like. In this case they are deposited on the surface of the soils.

The last of the high priority SWMU's that I will be talking to you about today is SEAD 45. This is the open detonation area. This is a facility that is an active RCRA facility. The subpart X has been submitted to the DEC and we are currently in the stages of negotiating the permit for that facility. But again while that permit is being applied

for this was identified as a solid waste management unit. We have subsequently performed this investigation to identify what the existing issues are at this facility. What we found here are not unexpected. Explosives in some of the surface soils. That is what this graph shows you. The open detonation mound is a rather large mound of soil; approximately 10 to 15 feet high and I would say 60 to 90 feet long. What occurs here is ammunitions that are deemed off spec or needing to be deactivated are buried in pits that are dug and then detonated. What we found here, the point of the mound is to decrease the shock of the explosion to try to keep the material from, you know, kicking out as far as it would if the mound of soil wasn't over it. What we found is some of the explosives that were detonated here have residual amounts that have been found in the mound itself. Given the fact that the mound is the center of the detonation it is not unusual to expect residual levels of explosives in the mound. I guess the issue that we see or feel is that given the slope

of the land and the infiltration of the run off of the rain from this we found, you know, the highest concentration of explosives in the low lying area down in this spot here. So we think that what we believe is happening is some of the rainfall is basically washing some of that material down into the low lying spots.

Just to move on to what we call the moderate priority SWMU's. Again we set up this criteria of identifying these SWMU's and our investigations have been focused on worst first type of priority. The seven priority SWMU's are fairly far along in the process. The three moderate priority SWMU's are lagging along in a couple months. We will get to them in the degree of completion as the other ones are.

This is SEAD 11. It is the old construction debris landfill. And what we found here is material that was construction debris and that kind of stuff was deposited in this landfill. It is a well defined landfill. Actually I think I have this turned somewhat around here. I guess it goes

this way. Right. But it is clear where the boundary of this mound of this landfill is. You can see it from the rise of the elevation. We have done several borings and test pits and whatnot. We have found basically the problem is semi-volatiles or PAH's; several that we were talking about earlier at the fire training pit. These compounds are very insoluble and tend to absorb to soil. You generally find them associated with the soil particles and not dissolved in the groundwater.

This is SEAD 13, what is called the IRFNA pit. IRFNA stands for inhibited red fuming nitric acid. Back in the 50's and 60's it was used as rocket propellant and some of that was stored at the Depot and subsequently disposed of. Because it was an acid you have to dispose of it in a base. Pits were dug in this general vicinity, lined with lime stone, which is a base, and the acid was slowly poured into the pits and mixed with the lime stone to neutralize the acid.

What I am showing you here is the

results of our geophysical and photogrametric survey. It identifies areas in the ground that are highly conductive. This produces a salt. The salt obviously increases the conductivity of the ground. As a result of that we have been able to identify the mound of this dissolved salt plume which seems to be consistent where the IRFNA pits were neutralized. This area here, the organic here is associated with dissolved salt -- nitrates from the nitric acid, calcium from the lime stone, sodium from probably the nitric acid also -- which is causing us this high conductivity area. So we think we have pretty well delineated the extent of this salt plume.

The last of the three is SEAD 57. And it is the EOD area, explosive ordnance disposal area. This is SEAD 57. At this point we don't have all our data back. I can't show you any nice color graph of this. This would obviously be for the next time we met. I will show you the map that we have produced from the photogrametric work that we have done and identify this as the area where

the explosive ordnance detonation was done. It is similar to the berm area at the open burning ground. We have done several monitoring wells and soil samples in the area.

Moving on to the eight moderately low priority AOC investigations. Again we have received final work plan approval on January 27th and initiated field work in February. As we speak, we are currently involved in completing the investigation at these eight AOC's. The tasks that we have completed to date include the seismic survey, the geophysical work, the test samplings, surface soil sampling, et cetera. We have installed several monitoring wells. We have additional monitoring wells to be installed. As well as some additional soil bores. We expect the field work to be done in July. And two or three months after we would be issuing this report. I would imagine sometime in early fall we would have completed this investigation.

Just a note on our general approach. It is consistent throughout both the RI/FS

process as well as the investigation of the AOC's. What we generally begin by doing after we have done a thorough literature search of the history of the site is to perform geophysical; that includes EM surveys to try to identify magnetic anomalies. We try to find pits or any other anomalies. In the geophysical work we do seismic surveys. The intention of the seismic survey is to find the depth of the bedrock. From that information we believe -- and its been consistently shown throughout the investigations to date -- the slope of the bedrock or the shale defines the slope of where the groundwater flows. From that information we are able to place our wells from the upgradient and downgradient of the area. And it helps us space so we don't space them too far apart or in the wrong location so we don't miss where the downgradient location is. Its been very successful to date.

Although I have in the book identified all of the SWMU's, I am not going to bore you to death here going through each one

individually. But the general approach, as I have mentioned, we generally come in, identify the location, where the groundwater flow is, install an upgradient well and two downgradient wells as required by RCRA following our geophysical work. It could be pending the soil gas survey if we believe volatiles are involved. From that information we are then able to go back and install test pits. If we identify, you know, a pit or a buried metallic object, we collect some soil samples. As a result, we do some test pitting and also some soil borings in the area to better define the location of any dispersed material there, such as a liquid like a gasoline type plume or something. That generally has been our approach at all of these SWMU's. I am not going to get into each individual SWMU here because I think you will be asleep before we get halfway through. They are all included in your book. And these are essentially figures from our approved work plans. So the approach is relatively consistent between all of them.

The seven low priority investigations is

again following behind the moderately low priority AOC investigations. And I mean it is almost a repetition of what you have seen. They are probably a week or so lagging behind the moderate priority, the moderately low priority AOC's. We also expect this report to follow shortly thereafter. Sometime in early fall after the eight moderately low priority AOC's having completed.

I have also included in your handout again work plan cuts showing the location of the wells, soil samples that we are planning on taking. We are currently involved in completing these investigations and I am simply not going to go through every single SWMU here and show you where the wells are. I mean, it is all defined in there. I mean, unless there is a need to do that.

MR. DURST: Could I ask one question on a couple of the moderately low sites? It was radioactive waste burial sites. I was just curious what the wastes were and how were they buried? Were they containerized in some way?

MR. DUCHESNEAU: I think -- could we

hold off on that question until after this? That is probably a topic I think Randy or Steve may want to discuss with you.

MR. ABSOLOM: Fine.

MR. BATTAGLIA: We can do that.

MR. DUCHESNEAU: The next order that I would like to discuss with you is the action memorandum. What this is is a document that has identified an area at one of the RI/FS's that we are doing at the ash landfill. It is a document that basically says we want to do some type of remedial action. It was submitted for agency review on December 3rd, 1993. We received regulatory comments. We are currently revising the document on the final and we just recently re-submitted it back to EPA and NYSDEC for the draft finals. So we are getting very close to finalizing this document and moving forward and actually performing a remedial action at the ash landfill.

Now, just to highlight that particular site. This is the ash landfill site. The area of concern is this bound area here. And in particular it is pretty much this area

that we call the bend in the road that we have identified through Phase I. Through the soil gas surveys there was a concentration of volatiles as well as through our monitoring well a source of dissolved chlorinated organics pretty much originating from this spot. We think it is responsible for the source of this groundwater plume that we have identified as the ash landfill RI/FS. We will get into talking about that briefly. On a close up of this area there are basically two areas of contaminated soil that is the focus of our interest here that we would like to remediate. It constitutes approximately 23,000 cubic yards of material or roughly 35,000 tons of material that need to be remediated in some way.

The proposed strategy here involves excavation, low temperature thermal desorption followed by thermal oxidation of off gases. It is to remove the existing threat and streamline the RI/FS process and eliminate the source of continual leaching to the groundwater plume. Treatment goals are the NYSDEC tag, technical action guidance

memorandum. Values for TCE, 0.7. It was 540 parts per million. DCE, a known proposed breakdown product of trichloroethylene, 79 parts per million, is above the .3 parts per million. And also some vinyl chloride, which is a final breakdown product of trichlor. As I mentioned, we are talking about 23,000 cubic yards or roughly 35,000 thousand tons of material.

The technology that we think is the most appropriate to use here is called low temperature thermal desorption. This is a machine that happens to be by Canonie. There happen to be several in the country that can do this. It means excavating the soil, putting it in some type of hopper, through a rotary kiln process, which basically rotates the soil. And as it is rotated it mixes it. The hot air is forced up the cylinder. The volatiles are volatilized from the soil, swept through a series of air pollution control, which includes a bag house, cyclone and venturi. In this particular instance they are using activated carbon. Because of the presence of vinyl chloride we are asking

the gases be thoroughly oxidized. Vinyl chloride does not oxidize through carbon and we are concerned about the emissions from the stacks of that.

Just a picture of a similar process that I was involved in. It is pretty much what you see here. I don't know if you can see it in your book there but here is the conveyer. Right here is the rotary kiln. Off gases are swept through the bag house. In this case there is a wet scrubber. What you can't see is the cyclone and the activated carbon absorber. They are in the background. The soil in this case was taken out and actually put back in the ground with concrete.

Moving on to the RI/FS at the ash landfill. Again we have touched on this just briefly as part of the action memorandum. We have scheduled a submission of the draft final RI on June 22nd. The reason that has been somewhat delayed -- the reason is to put in two additional monitoring wells and the ash landfill operation unit being made operable was combined in here. We have needed to install two additional wells so

that has delayed the submission of the report. But we are planning on getting that out on the 22nd of June. Subsequent to that the FS, or the feasibility study, which looks at various alternatives will be submitted to the Army. It was submitted -- it was submitted to the regulators. It was submitted to the Army for review on January 17th. Because of that delay I mentioned it is not planned to be re-submitted for regulatory review until July 11th. That will include all the data from those two additional wells that we have just recently installed.

Just to provide you a highlight of where we stand on that. On the aspect of what the big picture issues are on that site we talked about the soil issues related to this site; in other words, the contaminated soil and the bend in the road area. And that is being addressed expeditiously with the action memorandum. The groundwater plume still remains. Here is the outline. This is right out of the RI basically. Basically the highest concentration is right in the area NW

44, which is right in the middle of where that contaminated soil that we identified was. And it is a fairly extensive groundwater plume heading off towards the west. What our proposed remedial action for that problem is is a series of collection interceptive trenches strategically located; one immediately downgradient in this area and another one down at the toe. We believe because of the nature of the geologic material there -- the till, which doesn't yield a lot of water -- that the most effective way of capturing that plume is installing trenches -- trench drains to go down to the bedrock 10 feet down, back filling with gravel and at the bottom of the gravel filled trenches, you know, using PVC perforated pipe to allow the water to collect in and move off into a sump. That material would be pumped to a holding tank and treated with either air stripping or UVO zone. We are not sure exactly which alternative at this point. We are currently looking into doing treat-ability studies with UVO zone. Those are the two alternatives that we have

decided on. We want to do more studies on the possibilities of using UVO zone. The advantage of using UVO zone is it doesn't have any air emission.

Moving on to the opening burning RI/FS. These are CERCLA type investigations. The draft final was submitted March 3rd for the RI. We received EPA comments. NYSDEC has no further comments on the document. The final is expected to be submitted back to EPA and NYSDEC in late May. So that is coming up very shortly. The FS, which again lags slightly behind the RI, has been submitted for regulatory review on March 10th. We have NYSDEC comments. We should be receiving EPA comments shortly. Once we have all the agency comments we will respond to the comments and resubmit that back as the final -- actually the draft final for the FS.

Just to provide you with a highlight of some of the alternatives that we are considering at the open burning ground. One, is the no action alternative. That is a baseline alternative. Essentially the problem here, as we see it, concerns metals

and basically you cannot really destroy a metal. You can't change lead to gold. You can't change lead to Co2. It is lead and it will always stay lead. What the alternatives involved in doing something with metals are basically isolation or solidification or somehow binding the metals in a matrix that would prevent it from leaching into the groundwater, for example, or prevent it from getting on people's skin and that kind of thing. So the alternatives that we are looking at are excavation and consolidation of the areas; off site treatment of some of the more elevated levels of lead and possibly capping in place. You can see the list here. Off site landfill is another one. Constructing solidifying material. The solidification phase is a process that involves mixing the soil with the heavy metals in some type of cement based material; basically form an analytic structure. Disposing on site or off site. Soil washing is another innovative technology. That is potential application soil washing. It could separate the fine material from the course

material. And the intention of that is the heavy materials would tend to segregate with the fine materials. So once we have separated the fines that have most, if not all, of the heavy metals we basically have accomplished a volume reduction. It is a lot less material that would have to be either disposed of off site or somehow solidified and placed on site into a cap or a landfill on site. Another option that we are considering is the possibility of acid washing some of the fines to remove the metals to another level of consolidation and then treating that smaller volume of material.

So therein lines pretty much the alternatives that are currently under consideration. It encompasses pretty much a wide range of innovative and standard technologies. That is it pretty much. I think we have run through all of the delivery orders. That is pretty much all I had to discuss today. I will turn the floor over. Are there any questions?

MR. DURST: I had a few others besides

the radio chemical one. In the case, for example, of the calcium nitrate where you got rid of the red fuming nitric acid, that was rated firstly high priority, I guess.

MR. DUCHESNEAU: Moderate.

MR. DURST: Why? Neither of those things are really toxic insofar as the nitrate? If anything, it is going to make vegetation grow better.

COMMITTEE MEMBER: There is a primary drinking water standard for nitrate. That is one of the reasons. And, in fact, we did find concentrations in excess of that drinking water standard.

MR. DUCHESNEAU: The other thing would be the concept of mixing a strong acid with a base. Not all of the acid was neutralized. Some of that acid could slip through the cracks and maybe change the pH and maybe do ecological damage. Those were some of the issues that may have gone through, you know, the people that decided upon the range. I think it was Randy and EPA.

MR. DURST: Another question I had was on your diagrams where you had the color

contours and so on. Some of the contours seemed to just cut off where a high level was indicated. Are you going to fill in those contours with more studies?

MR. HEALY: Yes. Anything that shows a high level running off the page would be indicative that a site investigation is of concern or is of need. In which case we will follow up with the site investigation which goes into much more -- or the RI/FS goes into much more detail delineating those areas.

MR. DUCHESNEAU: If you remember back to the whole process we first outlined going from the SWMU class phase to the site investigation phase and to the RI/FS phase, the intention of the SI, the site investigation phase, is to basically answer the question does a threat exist. In a case that you are pointing out, we have an elevated concentration but we haven't bounded that on all sides. That would probably constitute enough of an issue to cause it to move over into the RI/FS phase. In which case we would add additional soil samples to define that area and then evaluate it as part

of the risk assessment process simply as we are doing for both the ash landfill and the OB ground, which were the last two sites we talked about.

MR. DURST: Okay. One other question on the chlorinated organics, especially at this plume that you are just discussing at the old landfill. Have you had enough time to determine whether that plume is continuing or is natural bio-remediation holding it in place?

MR. DUCHESNEAU: Seneca has been groundwater monitoring for about eight years. Actually, to be honest with you, the concentration and the extent of that thing has not changed. All the time we have been involved we haven't seen a real shift in that plume. My personal opinion is exactly what you suggested here. Is that by the time the plume gets down that far -- because the groundwater is so slow in moving here -- that it is essentially bio-remediated pretty much by the time it gets to that point. Now, will it ever move an additional 10 or 15 feet? I mean, who is to say? We don't have wells in

every two foot intervals to tell you that conclusively. I don't believe that we think the plume is particularly moving at all. We haven't seen it move that far.

MR. HEALY: Also it is likely the stuff that was dumped there was in the area of 75 years ago. What you are looking at is 15 to 20 years later.

MR. DUCHESNEAU: We have tried to monitor that plume and accumulate data to date based on what we think is reasonable bio degradation, which we have tried to calibrate with the site data. We think most of that plume is being bio degraded.

MR. DURST: Are you going to do more environmental damage rather than let nature take its course?

MR. DUCHESNEAU: The ARAR's used, which is classified as a source of drinking water, is for TCE. It is five parts per billion. Some locations on this site it is much higher than that from an ARAR standpoint because we exceed the established State's standards for drinking water and groundwater, you know. That is, to a larger degree, driving this

whole process.

MR. CHAPLICK: The other issue is how far is that from the edge of the plume? There is a drinking water well a thousand feet downgradient.

MR. DUCHESNEAU: A trench is not going to be that big of a destruction to the environment. It is basically about this wide and going down about eight feet. So we are not talking about excavating the entire site to get that. Certainly, the excavation of the soil is going to cause some environmental damage to the critters, the worms that live in the soil at that particular spot. But we would like to eliminate that source of contamination.

COMMITTEE MEMBER: Just a quick question. You basically have 10 feet of glacial till over bedrock?

MR. DUCHESNEAU: Correct.

COMMITTEE MEMBER: The depth to groundwater is?

MR. DUCHESNEAU: For the ash landfill, for example, there are times during the year where the groundwater is six inches from the

surface. At other times of the year that level drops to, you know, six to eight feet below ground surface. It is pretty amazing when we looked at it but we have confirmed that. We have also done some literature searches at other sites around the country; one in particular in Ohio where it was reported there were similar types of fluctuations in groundwater. The best we can come up with is largely this whole process of fluctuation of groundwater is a evaporation issue. Possibly springs or seepage through some of the ditches that surround the roads and facility maybe contributing to that also. But we sampled the springs. We sampled the surface water discharges in those areas and have not really found any volatiles in that water. Now, the depth to rock here is, I would guess -- again depending upon the site -- but roughly about 10 to 15 feet of till to the bedrock and there is a 5 foot zone of weathered bedrock, weathered shale followed by seven hundred feet of Devonian shale loaded with fossils, I might add. That is basically the geology here. When we do

our augering, we do auger essentially to compensate bedrock. We can generally auger with no problem. We may break a few bits off here and there. It is fairly soft.

COMMITTEE MEMBER: These wells are screened in the weathered bedrock?

MR. DUCHESNEAU: The majority of the wells are screened in the overburden, the till. We have conducted at the ash landfill a fairly extensive bedrock investigation, which has included down to 100 feet; also packer tests at 20 foot intervals. And we are screening the wells at the zone that we found most permeable in the rock. That has all been completed at the ash landfill. The bedrock has not detected volatiles in the competent rock. So we are not focusing our remediation efforts at this point in the bedrock because there is hardly any water there. The permeability that we are getting through the rock through the packer test are ten to the seventh and up. So there is essentially no water there. And the water that is there is uncontaminated.

MR. HEALY: Ten to the seventh or ten to

the minus seven?

MR. DUCHESNEAU: Ten to the minus seven.

MR. HEALY: Slight difference.

MR. DUCHESNEAU: I think he knew what I meant. Therein lies a quick synopsis of the geology out there. It is fairly consistent throughout the facility. If you look at the U.S. Survey Publication, this whole area is a glacial till plane. To the north it is a little bit more washed out deposits. To the south there is a terrain. But right here it is essentially a till plane. And that has been absolutely every place we look we find basically that.

COMMITTEE MEMBER: Given its TCE contamination -- understanding that TCE is a predominant plume -- is there -- has there been any evidence of DNAPL?

MR. DUCHESNEAU: It is called DNAPL, dense, non-aqueous phase liquid. Those aqueous liquids -- TCE has a greater interest of point one. Because of its density being greater than one then it will pond someplace below the water; say in the bedrock in this case. And obviously it is a difficult thing

to remediate and difficult to find and really get it out. We have, in fact, done several borings of the hot spot and have not, as of yet, discovered the presence of DNAPL's. That doesn't say we have elevated soil concentrations. We have not found through the boring program that we have done or through the existing monitoring that has been installed the presence of a DNAPL's. My answer is no. There are some transfers of the solvent in the pore space of the soils. Maybe there is a displacement of the water in the saturated pore space by some of this TCE material. But we haven't found enough evidence to say that exists as of yet. I think we have done enough borings out there that if it was there we would have hit it.

COMMITTEE MEMBER: Is there any reason to believe that the source would generate such a pool or substantial residual contamination?

MR. DUCHESNEAU: I am sorry.

COMMITTEE MEMBER: Not understanding the exact source of the TCE, would the quantities lend itself to generating the pools or

residual zone?

MR. DUCHESNEAU: You are talking about the concentration levels we are finding?

COMMITTEE MEMBER: Understanding the concentrations are dissolved and maybe indicative of three phases of the area, the residual zone as a pool. But more specifically I am interested in whether there is any historic reason to believe that large quantities of pure product were disposed of at the ash landfill during that time.

MR. DUCHESNEAU: We are not sure exactly how much was deposited there. We have not -- I mean, I can't say there is a DNAPL'd plume. I have no evidence of that. Could I suspect that it is there? I guess I could but I don't believe it is there. The concentrations -- the highest soil concentration we found was 540 parts per million of TCE. That is hot but it is not, you know, to the level where I would expect a DNAPL. The percent levels and also the dissolved concentration, the highest is getting upwards between -- is it getting close to 10 percent or one percent?

MR. CHAPLICK: Of the saturation?

MR. DUCHESNEAU: Right.

MR. CHAPLICK: I think they got 10 percent but I am not sure what the value is.

MR. DUCHESNEAU: I thought it was less than one percent. TCE is what? Seventeen hundred ppm? I don't think we are finding upwards.

MR. BATTAGLIA: Eighteen was 9.8.

MR. CHAPLICK: I don't remember what the numbers were.

MR. DUCHESNEAU: We have gone through this with the EPA. Although it is getting close to that magic number of ten percent of the saturation, this case would be 170 parts per million of TCE. One-tenth of the saturation, which is about 1700 ppm. We still have not yet found evidence that there is a DNAPL present. We have well 44 that is right smack dab in the middle of this thing at the hot spot. And that well does not indicate the presence of DNAPL. We have used clear balers (phonetic) to locate. If there is a separate phase, we haven't found that. But I mean, be that as it may, we are

planning at this point to excavate that whole area and it is all going to be roasted and remediated at that point. So I think we will take sufficient precautions to assure if that does appear through the process we will remove that material and remediate that potential problem, if it is there. Any other questions?

COMMITTEE MEMBER: I had a question. I think it was 12-A, the solid waste management unit geographically is big. But the area of concern was -- the arrow says, "pit." I am just wondering why it is labeled such a large area?

MR. BATTAGLIA: Actually the arrow is down.

MR. CHAPLICK: It is the pit and the tank.

MR. DUCHESNEAU: Maybe.

MR. BATTAGLIA: I will go over all that.

MR. DUCHESNEAU: May I can go over that. We weren't sure actually where these pits were. There were rumors they were in this general vicinity. What we did is basically put a bound on what we thought would

encompass any of this potential area of these pits. Subsequent to this we did our geophysical investigation again to try to focus on a large area down to a small area. Although I haven't, you know, shown you the information here we have, in fact, done an EM and radar and identified the location of these underground buried pits. We just recently completed that work. So we knew that there was one pit marking out there. You could see that. We also suspected there were other pits. Through the use of geophysical techniques we have been successful in identifying those locations. Therein lies the focus of our test pits. Not throwing a dot out on this huge area. To go and do it right at the spot where we found the geophysical evidence to suggest there is a pit there.

MR. BATTAGLIA: Rob, is this the one that you are talking about?

COMMITTEE MEMBER: Yes.

MR. BATTAGLIA: When you walk around this field, it is a moot field. By the terrain it is hard to tell as far as where.

There is a couple areas where they were found or areas that there were depressions. That is where we did the EM surveys to find out if there was a burial area. I think we identified a couple areas over in here in addition to these pit areas here.

MR. CHAPLICK: Maybe you just want to start the whole thing again.

MR. BATTAGLIA: We are answering your question. We waited for you.

MR. DURST: Thank you.

MR. BATTAGLIA: About the time we started looking at these areas we had got a phone call from Sandia National Labs. They are looking at the atomic sites around the country. There is 12 sites around the country where they built the same facilities. So we met with the people out there. And right now I am preparing a document that is a detailed description of what activities occurred at these buildings. It is a little hard to show on this map. But building 803, building 804 and some of the other 800 number buildings were built exactly the same across the country; twelve areas in the country.

Seneca Army Depot was the last one to be built in 1956. That is an important point. A lot of details I got to hold until I get the document prepared because there is a fine line on whether something can be public information or not because of the technical information that is going into it. So the things that are over the line we can't really release. We are going to get a historical description of the activities that went on at those facilities. That is what we are going to do. The people at Sandia are helping us. We got people from the Atomic Energy Commission back in the 40's and 50's. They had people that worked here when the Army took over, too. It is also very similar across the country at these places. They had similar disposal areas associated with these buildings. Building 804 -- they called it A structure and C structure. Building 804, which is the C structure, has the waste water tank to the north of that building. We had no idea what that waste water tank was for. After those discussions with Sandia they told us in case there was a problem in the

building they could washout the building and wash everything in the waste water tank. What they said is we never had a release here; that they never used the tank. But we are going to sample the tank as part of SEAD 12 A and B just for confirmatory purposes.

Also across the country they also had what they call a dry waste disposal pit or area that normally was out behind the SEAD building. In Seneca it is over in this area here. These buildings are on the north end of the Depot; directly on the north side of the Depot. I don't have a Depot map here handy to show you. Just on the north side of the Building 804 is a waste water tank and directly northeast of that is one of the disposal pits. Building 803 is basically built with bank vault doors because if they had valuable items that is where they stored them. Also near these areas there is the northeast corner of the Depot. Romulus would be over on this side.

And in 1986 the Army dug up a pit location here and did remove drums with material inside the drums that was disposed

of off site. There is other areas. This whole field really was blocked off as being suspected because we really didn't know where or how much in that area they had buried things. We did know the Army buried a lot of miscellaneous parts that they generated from de-militarization activities. They just buried the parts. I don't know if they got it handy here or not. We have found a couple areas.

MR. DUCHESNEAU: You want the miscellaneous components?

MR. CHAPLICK: Twelve A, the big one.

MR. DUCHESNEAU: It would be oriented something like this. Although I am sure you can't see it back there. What this is is a geophysical output.

MR. BATTAGLIA: Show the pits here. Right here is the pit area that I am talking about next to the woods. And after we did the electromagnetic surveys we found the other burial areas over in here, which would be over in this area here. Also, to get your bearings, building 803 and 804 are over here.

COMMITTEE MEMBER: Where are the ponds?

MR. BATTAGLIA: Southeast of here.

MR. DUCHESNEAU: Far away.

MR. BATTAGLIA: Probably -- I don't know -- a quarter of a mile. We didn't know this whole field had been dug up or certain pits were in there. First draft of the SWMU classification report we basically just got an arbitrary square paced off in the report because I had somebody from the Army out there and we just kind of paced off an area. But that was just an initial report there. When we did this survey, we actually nailed it down to where they had burial areas. And in the site investigation that we are going to do we are going to do some test pitting and borings and sampling in and around those areas. This is one of the sites that is suspected for radioactive contamination as a contaminant of concern. Whether or not where or how it was generated, a lot of it we don't know. We do know that they did dig up radioactive contaminant waste in the dry storage pits.

MR. DURST: I don't suppose you can tell us what the radio isotopes are in particular?

Do they have long lives or are these --

MR. BATTAGLIA: We may say that in the document. The problem is when you are talking about sensitive things as far as whether something is classified or not, if you can add one and one equals two you can infer it equals two. You can't really say it completely like that. So what you do is you filter out some things so you can still tell the story without telling one and one equals two. Okay. That is basically what Sandia had to do for us. They really couldn't tell us everything AEC did down there. We are still working with them. They are going to come out on site. They are studying all these sites in the country. And they are going to be out here when we do the field work. My document, when it is done, is probably going to be detailed enough. You are really going to see everything they did back then when the AEC was here.

MR. COOL: What watershed is that in, Seneca or Cayuga?

MR. BATTAGLIA: Kenda (phonetic) Creek. The duck ponds feed down through there. It

is kind of split in half. To the west of there tends to drain westerly through Reeder Creek. That is in the northeast corner of Kenda (phonetic) Creek. This area here is SEAD 63. This is on the western side. Do you have a bigger map, Mike?

MR. DUCHESNEAU: That is all I have, Randy.

MR. BATTAGLIA: We can hold that up. We have the whole corner blocked off there. If you walk out on the site, it is a big gravel pad. It is not above grade from the rest of the ground around there. When we did the EM surveys, pretty much --

MR. DUCHESNEAU: The way it would look following that same area here is the same orientation. Here are the two roads that are identified and the fence line area here. So the area of high magnetic anomalies are in this area here.

MR. CHAPLICK: Like the big red spot.

MR. BATTAGLIA: We are looking at right in here.

MR. DURST: Is that near the special weapons compound?

MR. BATTAGLIA: This fence line here is the perimeter of the special weapons area.

MR. CHAPLICK: That is on the inside?

MR. DUCHESNEAU: Yes.

MR. CHAPLICK: That is on the inside of the fence.

MR. BATTAGLIA: And if it is done in time, it will go into the SWMU classification on June 10th. But if it is not done and if the report is not done in time for that, it will go in the SI report with the finding of the investigation as far as the historical information about the site. And the SI reports the work plans. And the SWMU classification report would be added in the record down at Willard. Okay. Does that answer your question good enough?

MR. DURST: Yes. Thank you.

MR. BATTAGLIA: Okay. Anything else?

MR. COOL: You said you found barrels on that one site. Can you tell us what was in the barrels?

MR. BATTAGLIA: They told me it was lab waste. That is what they told me. They were disposed of in a radioactive waste burial

site in South Carolina.

MR. COOL: After you dug them up?

MR. BATTAGLIA: After we dug them up.

MR. COOL: Were they leaking?

MR. BATTAGLIA: I wasn't there. I wasn't there.

MR. COOL: Is there evidence of leaking?

MR. BATTAGLIA: I don't know. In our site investigation we are going to investigate.

MR. DUCHESNEAU: That is what we are apt to find out. I guess it would be hard at that point for them to determine if anything had leaked. They didn't do soil sampling and that kind of stuff. That is what we are going to be doing.

MR. BATTAGLIA: One of the things the Sandia people told me -- told us when we were out there was some of the waste potentially would have been radioactive; would be swipes of uranium dust -- uranium oxide dust on the swipes. So that is why uranium was one of the contaminants of concern that we are looking for out there.

MR. CHAPLICK: These are primarily dry

materials. I would say not 100 percent dry but they were not liquid materials in the drums. They were solids.

MR. BATTAGLIA: As far as what I know. Another thing --

MR. DUCHESNEAU: That is what they tell us.

MR. BATTAGLIA: When they are out there burying parts and things, who knows if they threw a drum of solvent in there. We are also looking for chemical contaminants, also porous.

MR. COOL: When you removed the materials, was the integrity of the barrels all right, though?

MR. BATTAGLIA: I don't know. They didn't tell me anything about it. If no one else has any questions, we can set the date for the next meeting.

MR. CHAPLICK: If you look at that same figure, there are three surface water and sediment sampling locations along the creek that is indicated there.

MR. DUCHESNEAU: You want me to put that up, 12?

MR. CHAPLICK: Twelve A. I am not sure if that is Kenda (phonetic) Creek there.

MR. DUCHESNEAU: This is 12 A, correct? These black triangles here.

MR. CHAPLICK: Is that Kenda (phonetic) Creek that is flowing down?

MR. DUCHESNEAU: I think that is a drainage ditch.

MR. BATTAGLIA: Drainage from that area.

MR. CHAPLICK: That is actually flowing to the west.

MR. BATTAGLIA: Kenda (phonetic) is over here.

MR. DUCHESNEAU: We have sediment and surface water sampling planned at these three locations. Instead of being at that point, it could be over at that point. It is hard to get a surface water sample when there is no surface water. You try to plan for it and you go there and get the surface water you can get it. Obviously, you can get sediment. We sample what we can sample.

MR. BATTAGLIA: We all seem to think the 17th of August is a good day for the next TRC. I don't know if anybody has any

conflicts with that. It is usually far enough ahead.

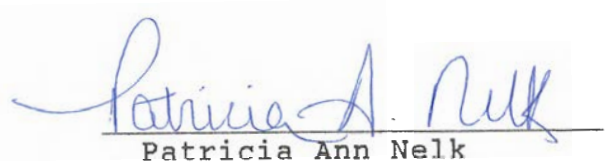
MR. ABSOLOM: Is that agreeable to everyone? Seventeenth of August it shall be. Does anybody have anymore questions? If not, thank you all for coming. I think it was an informative meeting. I look forward to seeing you all on the 17th of August at twelve thirty.

* * *

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

I, Patricia Ann Nelk, hereby certify that I reported in stenotype shorthand the proceedings had on the 18th day of May, 1994, in the matter of the TRC Meeting.

And that the foregoing transcript, herewith numbered pages 2 through 62, is a true, accurate and correct record of those stenotype shorthand notes.



Patricia Ann Nelk

DATED AT: Rochester, New York

this 6th day of June, 1994.

TECHNICAL REVIEW COMMITTEE

CHARTER

Seneca Army Depot Activity
Romulus, New York

TECHNICAL REVIEW COMMITTEE CHARTER

for

SENECA ARMY DEPOT ACTIVITY

ROMULUS N.Y.

I. Agencies Forming the Technical Review Committee (TRC) -

This Technical Review Committee (TRC) Charter is being entered into by the U.S. Army, the New York State Department of Environmental Conservation (NYSDEC), the U.S. Environmental Protection Agency (USEPA) and the local authorities.

II. Basis and Authority for the TRC Charter -

The basis and authority for this Charter is the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), particularly Sections 120(a), 120(f) and 121(f); 10 U.S.C 2705, enacted by Section 211 of SARA; Army Regulation 200-1, Section 9-10.

III. Purpose -

(1) The primary purpose of the TRC is to establish a body which will facilitate communication and coordination among members. The TRC is intended to provide a forum for cooperation between the U.S. Army, concerned local officials and citizens, and the regulatory agencies in order to provide a meaningful opportunity for members of the TRC to become informed and to express their opinion about the technical aspects of the Remedial Investigation/Feasibility Study (RI/FS) or Remedial Design/Remedial Action (RD/RA) process at any site at Seneca Army Depot Activity (SEDA).

(2) A purpose of the TRC shall be to coordinate technical review procedures and schedules to be followed by the Army during the Installation Restoration Program (IRP) for SEDA.

IV. Structure -

TRC membership

(1) Appendix 2.0 of this Charter presents a listing of TRC

members as of June 2, 1994. Absences of any of the members listed in Appendix 2.0 from the TRC due to illness, job transfer or unavailability, may be filled by a duly designated representative.

(2) *Working Sessions of the TRC:*

(a) In accordance with AR 200-1, section 9-10(b), meetings of the TRC will consist of working meetings and public information meetings. Working sessions will consist of the U.S. Army and regulatory agency conducting discussion of operational progress, recommended Applicable or Relevant and Appropriate Requirements (ARAR's), problems, and scheduling. At working sessions, the TRC members, who are community representatives, are full participants in the discussions. Working meetings will be held at Seneca Army Depot Activity on a quarterly basis during normal business hours.

(b) Working sessions will serve to facilitate and enhance the Army's decision making process regarding all phases of the IRP process leading to the implementation of remedial responses at SEDA. While concurrence and consensus on various issues will be reached at working sessions, which will ultimately provide direction to the IRP program at the Depot, final decisions will not be made by either the Army, NYSDEC or USEPA Remedial Project Managers during TRC meetings. Recommendations of committee members are not binding on SEDA or the Army.

(c) Working sessions of the TRC are open to the general public and/or news media. Sufficient notice will be posted in print media and by mail, and also by broadcast media if community interest is substantial.

(3) *Public Information Meetings:*

(a) At certain milestones in the IRP process, as indicated in the Community Relations Plan (CRP) for SEDA, public meetings will be held to discuss project activities. The Depot will organize these public meetings and TRC members will be expected to attend. The TRC members will constitute the panel of experts at these public meetings.

(b) Public Information Meetings will be held in the evening, during dates convenient to the general public. Advance notification of the public meeting will be provided by SEDA in a major local newspaper of general circulation.

V. General Responsibilities of Committee Members -

(1) When requested by any TRC member, more frequent meetings or an alternate location may be called by the Chair upon a simple majority vote by present voting members. The normal meeting place for working sessions of the TRC will be at Seneca

Army Depot Activity, Building 142 (NCO Club), Romulus, N.Y.

(2) In the event that any member cannot be in attendance for a scheduled meeting of the TRC, the Chair should be contacted two (2) days in advance of the scheduled meeting. A substitute for the absentee committee member may be appointed by the non-attending member.

(3) TRC members wishing to comment on and make recommendations about proposed IRP actions to be taken at SEDA must submit their comments and recommendations in writing to the Chair.

(4) Members will serve without compensation. All expenses incident to travel and review inputs will be borne by the respective members organization.

(5) For working sessions of the TRC, members intent on bringing guests (contractors, additional technical representatives of the TRC members agencies, or any other employee of the members agency or group) should notify the Chair in advance of any scheduled TRC meeting to insure necessary physical accommodations. Attendance by members representing any new group or agency not described in Section IV (1) of this Charter shall be an agenda at a working session of the TRC for discussion.

(6) If an imminent health hazard is discovered by any member during the effort covered by the Charter, immediate action will be taken to notify all TRC members in addition to the required notification by the installation to regulatory agencies and appropriate local health officials. Additionally, the installation may take appropriate emergency response measures.

VI. Specific Committee Member Responsibilities -

(1) *Responsibilities of the U.S. Army:*

(a) The Commanding Officer of Seneca Army Depot Activity shall serve as the TRC Chair, and preside over the orderly administration of TRC business.

(b) The Chair is responsible for notifying each member, in writing, of the date, time, location, and agenda of all TRC meetings.

(c) The Chair is responsible for collecting a written list of attendees at each meeting and assuring the written list of attendees is incorporated into the minutes.

(d) The Chair is responsible for assuring that the minutes for each TRC meeting are recorded and copies are provided to each committee member within fifteen (15) days of the date of

any such meeting. The Chair is also responsible for assuring the minutes are promptly incorporated into the Information Repository or appropriate Administrative Record files.

(e) The Chair is responsible for maintaining a mailing list for organizations that wish to receive meeting minutes, the upcoming agenda, and other TRC notices. Mailings should be sent in a timely manner.

(f) In the event that the Chair is unable to attend a TRC meeting, the Executive Secretary shall serve as Acting Chair.

(g) The Army is responsible for, when necessary, supplying appropriate visual aids and other materials associated with conducting presentations relating to past and future IRP projects, issues and progress at SEDA. The Army will deliver presentations as appropriate, provided ample notification of the need for a presentation is provided by the Chair.

(2) *Responsibilities of the USEPA Representatives:*

(a) The USEPA shall notify the Chair two (2) weeks in advance of a scheduled meeting of the TRC if USEPA consultants will be attending the TRC meetings.

(b) The USEPA should use the TRC as a forum through which advice can be given to the regulated agencies on environmental restoration and waste management and technology development issues related to environmental restoration.

(c) The USEPA's participation in this TRC shall be in addition to and not in lieu of the relationship and obligation established by the IAG developed pursuant to section 120 of CERCLA, 42 U.S.C., Section 9620 for SEDA.

(3) *Responsibilities of the NYSDEC Representatives:*

(a) The NYSDEC shall notify the Chair two (2) weeks in advance of a scheduled meeting of the TRC if NYSDEC consultants will be attending the TRC meetings.

(b) The NYSDEC should use the TRC as a forum through which advice can be given to the regulated agencies on environmental restoration and waste management and technology development issues related to environmental restoration.

(c) The NYSDEC's participation on this TRC shall be in addition to and not in lieu of the relationship and obligation established by the IAG developed pursuant to section 120 of CERCLA, 42 U.S.C. Section 9620 for SEDA.

(4) *Responsibility of Town Officials:*

(a) TRC members that are official town representatives

have the responsibility of keeping Town Councilmen, relevant Town Boards and town organizations up to date regarding environmental restoration activities at the Seneca Army Depot Activity.

(b) TRC members who are local government officials have the responsibility to participate in the planning and selection of Army response actions by reviewing and, where warranted, commenting on various Installation Restoration Program actions.

(5) *Responsibilities of NYSDOH Representatives*:

The NYSDOH representative should use the TRC as a forum for assisting the NYSDEC representative in proposing any State health standard, requirement, criteria, or limitation that is legally applicable or relevant and appropriate under the circumstances of the release or threatened release of any hazardous substance, pollutant or contaminant which will remain or be treated on site.

(6) *Responsibilities of the County Health Department Representatives*:

The County Health Department representatives should use the TRC as a forum for assisting the NYSDOH representative in proposing any county or municipal health standard, requirement, criteria, or limitation that is legally applicable or relevant and appropriate under the circumstances of the release or threatened release of any hazardous substance, pollutant or contaminant which will remain or be treated on site.

VII. Revision and Termination of the Charter -

(1) This charter may be amended from time to time as requested by any charter member, and any approval should be by mutual consensus.

(2) The provisions of this Charter shall be satisfied and considered complete when all members agree so in writing.

VIII. Effective Date -

(1) The effective date of this charter shall be the date of the last signature.

IX. Proposed Signatories to the Implementation of the TRC Charter -

All members entering into this Charter recognize that mutual consensus and cooperation will result in the best possible solutions to potential and actual environmental problems and protect the health and welfare of the local citizenry and the environment.

X. DISCLAIMERS-

(1) The Charter does not create obligations which are legally binding on the NYSDEC, USEPA, U.S. Army, NYS Department of Health, Seneca County Department of Health, local authorities, or the signatories herein listed, including any citizen participants. The goal of the charter is to provide guidance and structure to meetings of the TRC, and to maximize efficient use of time during the meetings. This will enhance coordination among TRC members which will result in the best possible solutions regarding the Restoration of Hazardous Waste Sites at Seneca Army Depot Activity.

(2) Nothing in this charter impairs, alters, limits or in any way affects NYSDEC's, U.S. Army's or the USEPA's statutory or common law rights, including, but not limited to, the right under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), and NYS Environmental Conservation Law. No statements made in this charter shall be deemed a statement, admission or position adopted by the NYSDEC, U.S. Army or the USEPA.

(3) The provision of the IAG pursuant to CERCLA 120(e)(2) with reference to this site will govern if a conflict arises between the provisions and the terms of this charter.

Roy E. Johnson — 3 NOVEMBER 1993

Roy E. Johnson — DATE
Lt. Col., U.S. Army
Commanding Officer, Seneca Army Depot Activity

Kathleen C. Callahan — May 12, 1994

Kathleen C. Callahan — DATE
Division Director, ERRD
U.S. Environmental Protection Agency, Region II

Michael J. O'Toole Jr — 7/29/94

Michael J. O'Toole — DATE
Director, Division of Hazardous Waste Remediation
New York State Department of Environmental Conservation

Allen Nivison — 12-3-93

Allen Nivison — DATE
Town of Romulus Supervisor

Kenneth Stafford — 7/12/94

Kenneth Stafford — DATE
Town of Varick Supervisor

Robert N. Favraeu — 12/3/93

Robert N. Favraeu — DATE
Town of Ovid Supervisor

APPENDIX 1.0
ARMY REGULATION 200-1
Section 9-10

9–10. Technical review committees

a. Per 10 USC 2705(c), a TRC will be established whenever possible and practical to review and comment on the Army's actions with respect to releases or threatened releases of hazardous substances at installations. For the TRC, the rules governing Federal advisory committees do not apply.

b. The IC will be responsible for establishing and designating a chairperson for the TRC as part of any ongoing IRP cleanup program at and related to the installation, if the installation is included or proposed for inclusion on the NPL, or if a high level of community interest has been expressed about the cleanup, or if the ACE has so requested. For a FUDS cleanup, the same criteria apply in deciding whether a TRC should be established; if the decision is affirmative, CEMP will appoint a representative to convene and chair the TRC. The chairperson of the TRC will be an employee of the Army. For related IRP and FUDS activities, see paragraph 9–5*c*.

c. Meetings of the TRC serve as—

(1) *Working sessions of the involved Army and regulatory agency representatives for discussing operational progress, recommended ARARs, problems, and scheduling.* If policy questions arise, they should be forwarded through command channels to HQDA (ENVR–E) WASH DC 20310–2600.

(a) Membership generally consists of representatives from the Army; i.e., the installation (or CEMP representative, if the cleanup is a FUDS project, and USATHAMA and the supporting USACE FOA, if the cleanup is an IRP project); the MACOM; the Army contractors for the cleanup; the EPA regional office; the State, regional, and local regulatory agencies; local governments of all potentially affected communities; and concerned neighborhood groups.

(b) A charter may be adopted, although none is required. Decisions on matters of technical management are made by consensus of the representatives of the Army and the regulatory agencies. At working sessions, the community representatives are full participants in the discussions. These meetings, which are open to the public, may be held monthly (or as often as needed) during business hours. Each agenda must provide a comment period for any visitors who wish to speak.

(2) *Public information meetings.* Quarterly, or at milestones in the IRP or FUDS schedule, the TRC will hold a public meeting to report progress and to provide a forum for comments and questions. This meeting should be held in the evening, and the date, time, and location should be convenient for general public attendance.

d. The following provisions for all working sessions and public meetings of the TRC should be made—

(1) Minutes should be kept of each meeting and should be prepared in written form within 1 week after the date of the meeting. A court reporter is not required.

(2) A public file of TRC documents, including minutes of all meetings, should be maintained in an information repository at a public library or other easily accessible location.

(3) A mailing list should be maintained for individuals and organizations that wish to receive meeting minutes, the upcoming agenda, and other TRC notices. Mailings should be sent in a timely manner.

(4) A telephone number for information should be made known to the public.

(5) Sufficient notice, at least 21 days, should be posted in the print media and by mail, and also by broadcast media if community interest is substantial. The notice should state where to obtain a work product that is available for review and the minutes of previous TRC meetings. The notice should also list the telephone number to call for additional information.

Appendix 2.0 - TRC Members as of November 3, 1993

MEMBER	MEMBERS AGENCY or GROUP
Lt. Col. Roy E. Johnson, Chairman	U.S Army - Seneca Army Depot Activity
Stephen M. Absolom, Executive Secretary	U.S. Army - Seneca Army Depot Activity
Jeremiah Whitaker	U.S. Army - Seneca Army Depot Activity
Randall Battaglia	U.S. Army - Seneca Army Depot Activity
Thomas R. Enroth	U.S. Army - Seneca Army Depot Activity
Kevin Healy	U.S. Army Corps of Engineers - Huntsville Division
Dr. Kathleen Buchi	U.S Army Environmental Center
John Biernacki	U.S. Army - Depot Systems Command
Lani Rafferty	New York State Department of Health
Brian Dombrowski	Seneca County Department of Health
Carla Struble, P.E.	U.S. Environmental Protection Agency, Region II
Kamal Gupta	New York State Department of Environmental Conservation
Frank Ricotta	New York State Department of Environmental Conservation
Dr. Richard A. Durst	Township of Varick, N.Y.
Allen Nivison	Township of Romulus, N.Y.
Kenneth Stafford	Township of Varick, N.Y.
Robert Favreau	Township of Ovid, N.Y.
James Terryberry	Township of Romulus, N.Y.
William Cool	Township of Varick, N.Y.

~~THIRD~~ MEETING OF THE TECHNICAL REVIEW COMMITTEE

HELD ON: November 9, 1994, 1994

HELD AT: Seneca Army Depot
NCO Club
Romulus, New York 14541

REPORTED BY: KAREN A. BIANCHI-RITTER

MR. JOHNSON: I'm LTC. Roy Johnson, Commander of Seneca. I think I recognize just about everybody's faces here, so I would again say welcome back, glad to have you here again. Does everyone have a copy of the agenda? If you do not, I believe we have extra copies.

One of the things that we are going to do today at the conclusion of the formal portion of the presentation and the question and answer period is take a side visit look at the ongoing efforts at the Ash Landfill. So for those of you if you can fit this into your time schedule, we'll have transportation available to take you out there.

Since we met last, Seneca Army Depot Activity has successfully completed a realignment of our organization, this is streamline in order to have a more profitable operation, reduced cost in our staff. Keynote to this, the environmental staff remained in staff, there was no change. I just wanted to highlight that.

I'd like Steve Absolom, our Chief of Public Works, to just quickly summarize a few of the successes that we had in our environmental

program and then begin with the formal portion of our presentation, thank you.

MR. ABSOLOM: Okay, a few administrative notes first. Please if you do have questions, speak loudly so that our recorder can hear what the question is and who is saying it. We are passing around a sign in sheet, we are trying to keep it in order so that she will have a list of everybody that's here and will know who made the comment. Please let us answer one question at a time before you go on to the next question. And we'll comfirm that you are satisfied with that answer before we go on.

'94, our fiscal year ended during September, we had, we were quite successful in the environmental arena, we got a lot of work awarded and just in general had a very good year. The Ash Landfill removal action that we are going to go on tour with later, really to get that done was a team effort with the Army, the State and and the EPA, it was a successful accomplishment and it really shows progress, we were able to get something done this year.

And with that I'm going to turn it over to

Kevin Healy who will do the next introduction.

MR. HEALY: Do you want to go around the table and introduce everybody as we normally do?

MR. ABSOLOM: Yes.

MR. HEALY: I am Kevin Healy, U.S. Army Corps of Engineers from Huntsville Division, I'm the leader that's down for Seneca.

MR. DUCHESNEAU: Mike Duchesneau, I'm Project Manager, I work for Parsons Engineering Science out of Boston.

MR. CHAPLICK: I'm James Chaplick, with Engineering Science.

MR. BATTAGLIA: Randy Battaglia, I'm the Project Manager for Seneca.

MR. ABSOLOM: Steve Absolom, I'm Chief of Public Works here at Seneca.

MR. JOHNSON: I'm Roy Johnson, Commander at Seneca.

MR. WHITAKER: My name is Jerry Whitaker, I'm a Public Affairs Officer at Seneca.

MR. HODDINOTT: Keith Hoddinott, Office of the Surgeon General.

MR. GERAGHTY: Dan Geraghty with the New York State Department of Health.

MS. FALLO: Janet Fallo, I work here at SEDA Environmental.

MS. RICHARDS: I'm Dorothy Richards, I'm the Project Manager with Huntsville Division and I'm going to be replacing Rick Seaver.

MS. BUCHI: Kathleen Buchi from the Army Environmental Center. Army Environmental Center controls the Army's portion of the DOD, Department of Defense.

MR. PICKETT: Jack Pickett with the North Atlantic Division of Corps of Engineers. We have oversights of the districts work here.

MR. GUPTA: I'm Kamal Gupta, I'm Project Manager, New York Department of Environmental Conservation.

MR. RICOTTA: Frank Ricotta, with the New York State Department of Environmental, Regions 8 Office in Avon.

MS. VERA: Linda Vera, also with the Department of Environmental Conversation in Avon.

MS. PEACHEY: Mary Jane Peachey, with the New York State Department of Environmental Conservation in Avon.

MR. SCOTT: Robert Scott, with the New York

State Department of Environmental Conservation, Permit Administrator.

MR. SCHANTZ: I'm Blair Schantz from the New York District Corps of Engineers, Project Manager.

MR. DURST: Dick Durst, Professor of Chemistry, Director of analytical labels at Cornell University.

KENNETH STAFFORD: Supervisor of the Town of Varick.

MR. ENROTH: Tom Enroth, Seneca Army Depot.

MR. BURNS: Chuck Burns, Lozier Engineers.

MR. VELTZ: Seneca County Planning Board.

MS. MADISARY: Joanne Madisary, Legal Office, Seneca.

MR. WHITE: Denzie White, Corps Engineers, Omaha.

MR. COUTTS: Pete Coutts, with IT Corporation.

MR. HOOVER: My name is Greg Hoover, I'm with the Corps of Engineers out of Omaha, Huntsville Division, Program Manager.

MR. TOOMBS: Marty Toombs from the Finger Lakes Times.

MS. LOMBARDO: Bev Lombardo, Official Information, Seneca.

MR. EAST: Gary East, U.S. Army Corps of Engineers.

MR. HEALY: All right, normally I start off but since Mr. Duchesneau and I end up repeating each other and he repeats me better than I repeat him, we are going to let Mike jump right into it.

MR. DUCHESNEAU: My name is Mike Duchesneau. As I mentioned, I'm the project manager for Engineering Science. It's nice to see so many familiar faces here. I'll try to keep my presentation brief.

A lot of the information that I have provided you in the past I've been, I've annotated to try to just hit the highlights of the report and points. I've expanded the project organization diagram a little bit from what you've seen in the past just to try to highlight some of the other key people that are involved in the project.

In particular a lot of the review processes are people who provide review comments from the Army, which many people are seated here, are

around this table, as well as some of the Department of Health people. I think we are all familiar with those folks. As well as Randy and Kevin and Rick, who is being replaced by Dorothy, I think we already discussed some of that.

The items on todays agenda that I would like to bring you up to date on are basically four areas included, is the SWMU Classification Report. SWMU is an acronym for Solid Waste Management Units. As well as the Expanded Site Investigations, otherwise known as ESIs, that we are performing at the areas of concern, otherwise known as AOCs. As well as the update on the RIs, the two current RIs that we have on the OB Grounds and the Ash Landfill. And the Interim Remedial Action that we have written specifications that are currently being implemented as we speak. Which would be the focus of our forum later on this afternoon.

The first issue that I mentioned I'd like to update you on is the status of the SWMU classification process. I have some fairly good news to report. But before I get into the details of where the report stands, I just wanted

to provide you again with a description of the process that we outlined in the IAG that are performing here at Seneca, and it is a simulation of both of the RCRA issues as well as the CERCLA issues. CERCLA being Comprehensive Environmental Response, Compensation and Liabilities Act. As well as the RCRA, which is the Resource Conservation and Recovery Act.

The focus of what I'm going to be discussing in a minute is in this phase here, the SWMU classification phase. And basically it begins with identifying all of the possible solid waste management units and in this case it's Seneca. We have identified 72 SWMUs that have been classified as either no action SWMUs, as the name implies requiring no further action, or as areas of concern because of past historical uses or issues that have been, that have come up, environmental issues that have come up with the processes that have been performed at the various sites. We have had a lot of discussions back and forth with the regulators, NYSDEC, New York State Department of Environmental Conservation, as well as EPA to try to come into agreement on how all

the 72 sites would be classified. And we have submitted that report final on September 16th. At this date I'd like to announce that we have received acceptance of that document as a final document, which is the first primary document identified in the IAG, the Inter Agency Agreement, as final. So I think we are beginning to see some progress in a lot of these areas.

All of the SWMUs, as I mentioned, all 72 have been classified and this is a summary and a status update as to where all of these SWMUs exist. The Army has classified these SWMUs as a worst case SWMUs, high priority being the worst SWMUs, moderate priority, moderately low and finally the low priority. So there are basically five classification groups which includes the ones I just mentioned as well as no action. Of the 72 SWMUs we have 25 no action SWMUs. Of the 72 we also have 13 that have been classified as high priority SWMUs. Eleven of those are considered to be in the RI/FS process, that would include the Ash Landfill as well as the OB Grounds and several ESI. Several sites have had ESIs, Expanded Site Investigations, performed and

we are now currently preparing workplans to do the RI/FS investigations. The three moderate priority SWMUs are still within the ESI process. As well as the eleven moderately low priority SWMUs. The 20 low priority SWMUs, 10 of which have been classified in are to be in the ESI process. In other words, we are performing either Expanded Site Investigations or currently preparing workplans to investigate some of these ESI workplans, that is. Which leaves 10 low priority SWMUs that have yet to be investigated. And in the future years to come we will be, you know, investigating those SWMUs.

The next issue for a status update of what we call the ESI, the Expanded Site Investigations, and this is, an ESI is sort of the midpoint at which we decide whether or not we will perform a full-blown RI/FS or if we will do a removal action. If it's a small problem, we can perform a removal action, eliminate the threat, and then prepare a closeout report. As I mentioned earlier, we have high priority AOCs of which we were tasked with investigating seven. We have completed the fieldwork early in February

of this year. Prepared the draft report for EPA and NYSDEC review in June. We had recommended, in conjunction with the Army, to perform three RI/FS's, three removal actions and one we recommended as a no action site. We received NYSDEC comments on September 17th and are currently awaiting EPA comments. Once we have concurrence with the regulators as to the status of these 7 SWMUs, we will then begin the process of either doing the removal action or performing a RI's. In the case of a no removal action, we will prepare a case report which will become part of the administrative record.

Regarding the three moderate priority AOCs we submitted the draft report to EPA/NYSDEC. We completed the fieldwork in roughly the same time as we had completed the high priority SWMU fieldwork. The Army had recommended two RI/FS's and one removal action. And we received NYSDEC comments on September 17th. And are still awaiting EPA comments.

The eight moderately low priority AOCs we completed fieldwork in mid-July and have prepared the, what we call the pre-draft report. It's

been submitted for Army review. Actually it has not been submitted, that's right, it will be submitted in December for Army review. We just received all of the laboratory data, all of the surveying data, we are currently preparing our maps and performing our data evaluation.

In a similar manner the 7 low priority AOCs we completed our fieldwork roughly at the same time as the eight, in mid-July. And again the pre-draft report will be prepared in December for Army review. Once we have comments back from the Army, we will then submit the draft report for EPA and NYSDEC review, that will be roughly 30 days after we receive Army comments.

We have also added, received a new delivery order for investigating three AOCs, these are low priority AOC. These are the small arms range, the pesticide storage area, as well as building 804. As a mentioned, it's a new delivery order, we are preparing workplans to reach the investigations and that draft workplan will be submitted to the Army roughly at the end of January for their review.

Moving on to the status of the RI/FS reports

that are currently well underway. The two sites that we've been working quite a bit on are the OB Grounds and the Ash Landfill. Regarding the OB Grounds, we have again good news to report. We have completed our remedial investigation, have submitted it's final for the agency and recently have received agency approval as a final document. Again this is a primary document, so we are beginning to show completion of a lot of these documents. I think it's a good step forward. This would be the second document that would be final. The first one, if you recall, was the SWMU classification report. The feasibility study was submitted for regulatory review on March 10th. We received EPA and NYSDEC comments in September and we are currently in the process of responding to those comments.

The Ash Landfill RI is also well underway. We have completed the remedial investigation, have submitted that document final to the regulators and we are awaiting regulatory acceptance of this document. The draft feasibility study was submitted for regulatory review on September 19th. And we are currently

awaiting completion or receipt of the regulatory comments on that document. So we have a lot of documents that are floating around in different status, either with the regulators or within the Army, trying to be finalized.

We've recently received a new delivery order to perform RI/FS's at some of the high priority AOCs. If you recall back a little ways I had mentioned that some of those high priority AOCs were recommended for RI/FS work so that the impetus to do remedial RI/FS's based upon the results of the expanded site investigations. And we are currently in the process of preparing a workplan to investigate these sites. Once that workplan is prepared, which should be early in December, we'll get concurrence from the regulatory folks on that and then begin, again, the process of performing the fieldwork, evaluating the site from a risk analysis standpoint and then, if necessary, conducting a feasibility study to evaluate the best option to remediate the site if necessary.

The final topic of my presentation today is the IRM, the Interim Remedial Measure Status,

which would be the focus of our little bus ride that we will be taking shortly, and in regards to the source of contamination that was discovered at the former Ash Landfill through the process that we performed, the remedial investigation process that we performed as part of the RI/FS work. The objective was to eliminate this threat, also eliminate the source of groundwater plume and also to streamline the RI/FS process.

We have established treatment goals as NYSDEC TAGM's, TAGM stands for Technical Administrative Guidance Manual, these are guides against poor soiling for a lot of constituents that we have in the soils out there and they have been established in the New York State Department of Environmental Conversation. We have estimated about 35 thousand tons of soil would be remediated. We had discussions with some folks out there that are currently in the process of doing the remediation and they estimated the quantity of soil that would need to be remediated slightly less, at about 20 or 25 thousand tons of material. This difference is based upon the elevation of the bedrock that seems to be a

little bit higher in some of the areas that we initially looked at. So it would mean that there would be less material that needs to be treated, but the problem will be resolved nonetheless. We are excavating right down to the bedrock, that is the limit of our excavation.

The selected alternative was what we call low temperature thermal desorption or LTTD, that involves eating the soil and volatilizing the constituents in the soil, sweeping them off of the soil through an air stream, it's through a bag hose, followed by an after burner or combustion chamber to destroy all of the volatilized material in the air and then discharging basically clean air through the environment through a stack. The remedial contractor is currently on-site and is well underway in performing this work.

Essentially that's all.

MR. DURST: After you do the burning of the volatiles that come off, does that go through any kind of a scrubber before it's exhausted?

MR. BATTAGLIA: No. When we were starting up the process we had to get approval from the

State as far as what goes up the stack. And as long as that's what the requirements would be for a regular air discharge from that, for example, if he had a vapor degreaser, an industrial source, and he had such a vapor degreaser and what ventilation would be coming out from that, as long as they met substantial requirements, we didn't have to put additional equipment on, with like a scrubber, to remove any chemicals that are going up the stack because actually there was an order of magnitude lower than what those standards would be.

MR. CHAPLICK: I think the other point too to make is that the chlorine, in other words, the hydrochloric acid that would be degenerated from the dosage of chlorinated organics is not high enough in organics through the discharge, the stack, and therefore there is really no need for a scrubber in order to remove those acids and that's why we basically haven't required that. Jim Chaplick, just one more point. As you'll see when we go out there, they have actually set up three ambient air monitoring stations around the perimeter of this site, a couple downwind and one

upwind. And on a realtime basis they are monitoring for particular RIT's and for BOC's and at the semiannual in January, if they get that date to continue, you will see the whole excavation process is really negatively impacting the ambient air.

Do you understand the process? It goes through an after burner and heated at a very high temperature, approximately 18 hundred degrees Fahrenheit with the residence time of one or two seconds. Those folks can give you a little bit more of the details. All the organics have been combusted to CO2, water, and if there is chlorine there from say the chlorinated organics that stuff is then converted into hydrochloric acid, HCL. And as I mentioned, there is simply not enough hydrochloride produced in the combustion chamber to have a need to have a scrubber there. Thanks.

MR. BATTAGLIA: Randy Battaglia. We do have a scrubber and water storage and treatment system for anything that runs off the site. For example, we have about seventy thousand gallons of water from last weeks rainstorm. And we have

to test that water to see if it's contaminated from what might have ran off the site during the rainstorm, and we have an air stripping unit there. And also there is going to have a filler and an air strip, it goes through activated carbon to remove the chemicals in the area and activated carbon will be removed as a hazardous waste. What we have to do for air controls, it also includes any emissions from the site and when we treat the air from cleaning that water, it runs off the site. That gives us a little more leeway as far as overall remediation process. For example we have so much going up out of the stack, so we can clean what comes up out of water easily enough, we don't have to put expensive scrubbery system on the stack and basically the defining line was that there wasn't enough there. What was going up, they were well under the requirements for that. What we are going to see out on the site is there are different designated areas that are the source area, we also have the treated soil, intermittent storage area that's coming out of the process, the process itself is a rotary kiln, which is

basically a long tube inside which has a burner and burns the soil at nine hundred degrees. That's followed by a bag house and an after burner that pushes around fourteen hundred, I believe.

Also on the site is water storage controlling runoff. And we'll be pumping water out whenever rain water gets in the area and we are digging it out of the hole. That's a treatment system for that. That's actually a bit of distance to look at that because there is a designated area where you have to be in protective equipment to go in. So what we are going to do is look at it from a parking lot.

We also have a couple other operations out there where we screen materials. We have an area where people have come out of the contamination zone, go through a decontamination process, they wash off in different steps and that's the basics of what we are going to see out there. Of course you can ask if you have some questions out there from what we see out there.

And we also have some programs near Omaha, Greg Hoover from Omaha of the Corps Engineers and

Pete Coutts from IT Corporation in Rochester who will be, who are here now and who will be with us out there when we go out and look at the site about particular operations out there. And now we are going to open up now if anybody has any more questions and answers.

MR. DURST: Dr. Durst. On the equipment they were using for the remediation right now how long do you expect it to take before it's completed?

MR. BATTAGLIA: We expect it to be completed by February.

MR. DURST: And in that time frame do you expect you will be through with all other surveys in terms of needing that equipment then for further remediation so that it's not taken away?

MR. BATTAGLIA: That's a good question. We are talking about just recently. We have a couple other sites that are a good candidates for treatment in that process, and we can save a heck of a lot of money by doing removal at other sites. Namely there is an old landfill that's near an airfield but it's an ammunition area that we found in our ESI's, trichloroethylene and

perchloroethylene contamination of the soils and some empty drums that were in and around that same area. So that kind of looks like that's where we put the drums. And we also have a couple other sites that contamination typical from petroleum, actually fire training areas, they did fire training activities and have similar petroleum contamination. They are also good candidates for removing it and treating it in this system and we just talked about that with the regulator. Of course, everybody has to approve of that before we do, but there is a lot of money invested in mobilizing the site. And we have a lot of good candidates that can excavate the soils and treat it with the system. So we are just doing that right now.

MR. DURST: One other question. One thing I haven't heard much conversation of here is PCB contamination and I'm sure this must have been transformers that were dumped or accidentally spilled. Was there much done?

MR. BATTAGLIA: We have preliminary results and I just looked at the data of an old boiler house near our ammunition repackaging area and

there is an oil spot on the ground and we tested around there and we found some PCB contamination in that oil spot, that contamination was what, ten per million. And the soils and EPA defines clean soils as the one per million.

MR. CHAPLICK: Jim Chaplick. We have, at every site where we have done decontaminations, we have tested for PCB, okay. We have not found them in many locations. Randy described it one way we did, but we have routinely tested for them everywhere.

MR. DURST: Are there particular locations where transformers were stored or repaired and so on that you didn't test?

MR. BATTAGLIA: We have a storage facility that has a place, storage facility for electrical equipment, that we take out of service, and since around 1980 we started that. When we took them out of service, we put them in there. We tested for PCB's, we disposed of them as a hazardous waste if they are contaminated. If they are not, it just goes on uncontaminated electrical equipment. What was one of the what if's about the old landfills that we had out there, we went

out there, we didn't know if it was just construction debris, which is very common, they dispose of construction debris and they normally dispose of it on base. And what else did they throw in there, and electrical equipment, a good candidate. And we didn't know what we were going to find in the PSI and luckily they all came out clean. The 15 areas, we just got initial data back about that, and we haven't got the report back together, so the only place that we found was out at the boiler house.

MR. DURST: The thing that concerns me before 1980's people were very cavalier about their treatment of PCB's and it's a terribly persistent material. So if it was dumped somewhere, it probably will be around.

MR. BATTAGLIA: That's why it's regulated because of the persistence. And most of the Department of Defense facilities in the country have the same practice as the private industries has, not for the same reasons, more so just because it's easier rather than cost. So we didn't find any yet. Any other questions?

MR. ABSOLOM: Before we go on the bus what I

would like to do is change the agenda a little bit and just establish the next TRC meeting now so that when we get back from the tour we don't have to reconvene just to do that. And there may be people that don't want to go on the tour that seen the site or something like that. We try to do this on a quarterly basis, which would put us somewhere in either the February or March time frame. And I'm looking for possible suggestions from all. Does anybody have any known conflicts in that time frame?

MR. DURST: I just recall another question while I have another opportunity. In the past you've shown contour diagrams of the test sites and so on, or not test sites, the ESI's and all the other things. Are those contours, the more updated versions of them, available over at Willard where you had the documents at one time available for public scrutiny?

MR. BATTAGLIA: Some are over there, some we have to get over there. I don't think we have the final RI at the landfill out there yet. And we don't have the ten SI's, site investigations, out there yet. We do have them and it's one of

the things that we talk about, the Army getting draft documents down there, and it takes a long time before the draft is final, but everyone, they are open to be looked at. The only reason we haven't been putting the draft documents down there because things changed, regulators review it and things change a lot. They were available to be looked at if anybody wants to look at this.

MR. DURST: Could I ask at the next meeting, at March perhaps, you could show some of those again just to show the status of the contamination.

MR. CHAPLICK: Again, because of the bus tour there is not a lot of new information this time as well. The last time we were here we WENT through the ten SWMU investigations, I think we showed you what we found in each one. We were not ready to do that today, for the next 15 that we've investigated, but by March we will be. So we can go over all these 15 new sites as well and what we have down there.

MR. ABSOLOM: Are there any more questions or comments?

MR. HEALY: Did you decide on a date?

MR. CHAPLICK: 15th of March.

MR. ABSOLOM: If there are no other questions or comments, I have a bus right outside waiting for us to go out and take a look at the site. We'll take a five minute break if you want to use the facilities.

* * * *

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

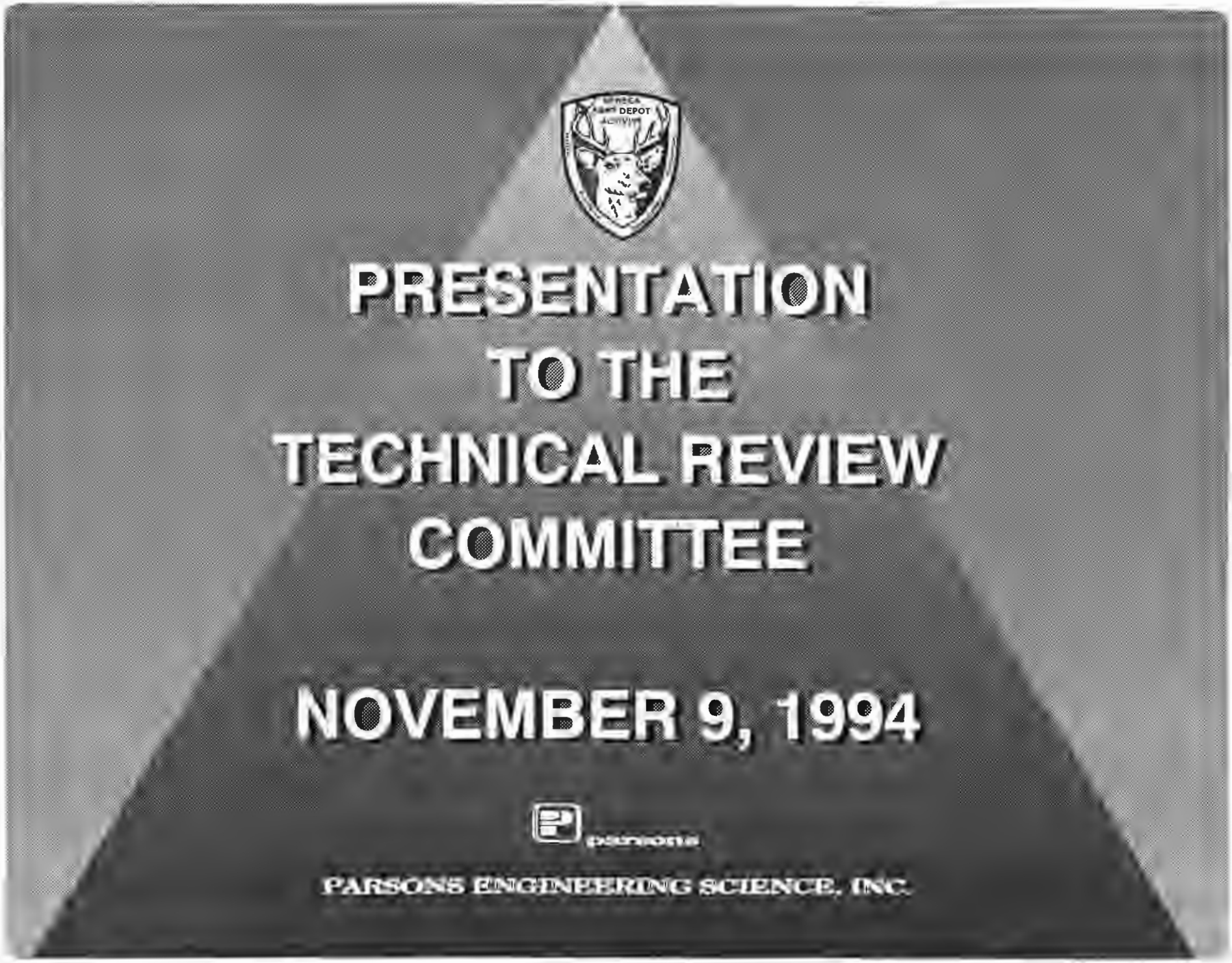
I, KAREN A. BIANCHI-RITTER, do hereby certify that the foregoing transcript, TRC, is a true, accurate and complete record of my stenotype notes taken on the 9th day of November, 1994, pages numbered one through twenty-eight.

Karen A. Bianchi-Ritter

KAREN A. BIANCHI-RITTER

Dated at Rochester, New York this

22nd day of Dec., 1994.


SENECA
Army DEPOT
Activity
PRESENTATION
TO THE
TECHNICAL REVIEW
COMMITTEE
NOVEMBER 9, 1994
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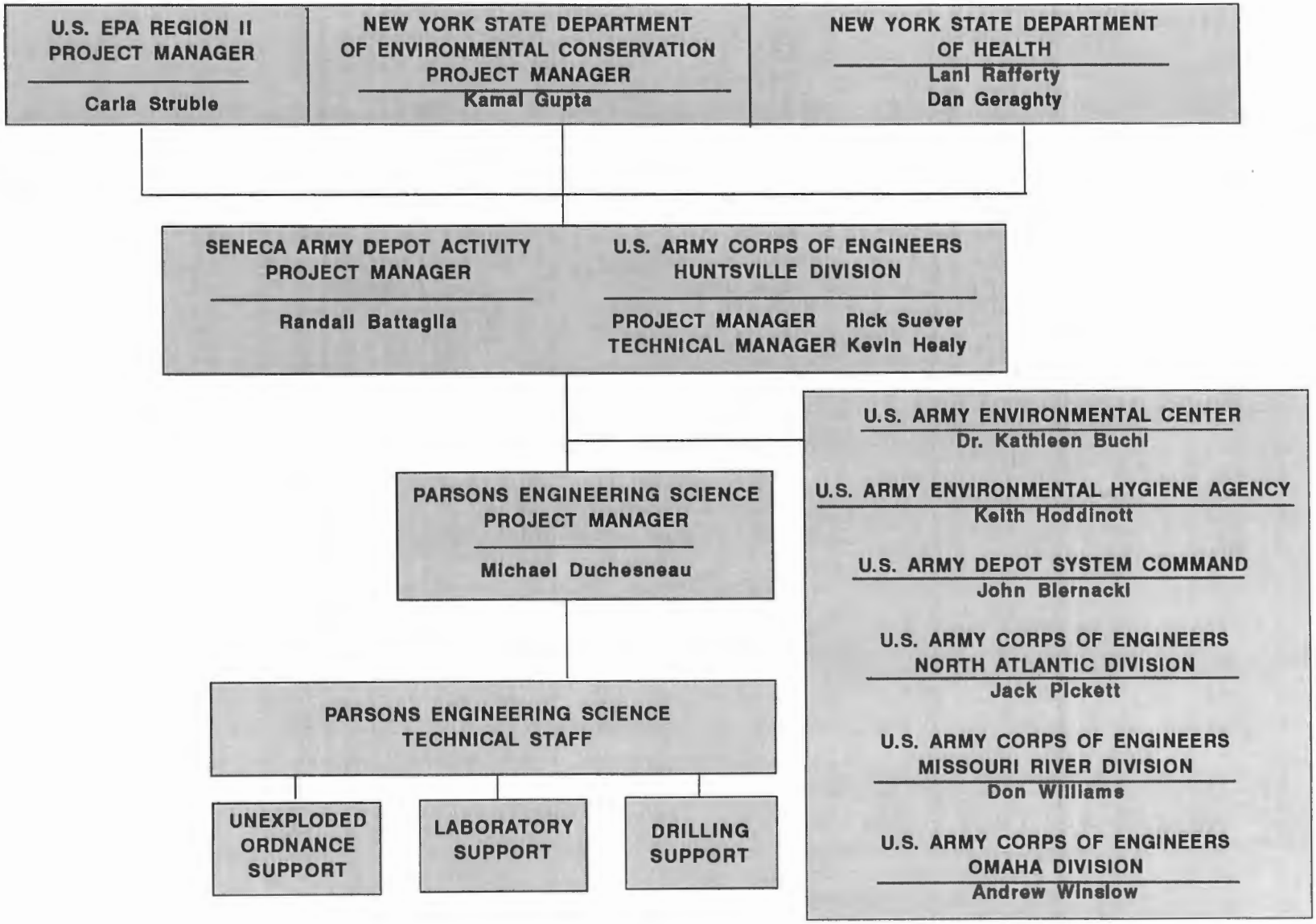
SENECA ARMY DEPOT ACTIVITY
PROJECT ORGANIZATION



UPDATE ON CURRENT AOC AND CERCLA INVESTIGATIONS

- ☑ SWMU Classification Report
- ☑ Expanded Site Investigations (ESIs) at AOCs
- ☑ RI/FS's at OB Grounds and Ash Landfill
- ☑ Interim Remedial Action (Soil Remediation at the Ash Landfill)

SOLID WASTE MANAGEMENT UNIT (SWMU) STATUS UPDATE

SWMU CLASSIFICATION REPORT

- All 72 SWMUs Have Been Classified as Either No Action or Areas of Concern (AOC)
- Final SWMU Classification Report Issued on September 16, 1994
- Accepted as Final Document by Regulators
- First Primary Document Finalized Under IAG

SWMU CLASSIFICATION SUMMARY

SWMU Class.	To Be Invest.	ESI Process	RI/FS Process	Action Completed	Total
High Priority	0	2	11	0	13
Mod. Priority	0	3	0	0	3
Mod. Low Priority	0	11	0	0	11
Low Priority	10	10	0	0	20
No Action	0	0	0	25	25
TOTAL	10	26	11	25	72

EXPANDED SITE INVESTIGATIONS (ESI) AT AREAS OF CONCERN (AOC) STATUS UPDATE

PARSONS ENGINEERING SCIENCE

PARSONS

INVESTIGATION OF SEVEN HIGH PRIORITY AOCs

- ☑ Field Work Completed February 5, 1994
- ☑ Draft Report (EPA/NYSDEC Review) Issued June 8, 1994
- ☑ Army Recommends 3 RI/FS's, 3 Removal Actions, 1 No-Action
- ☑ NYSDEC Comments Received on September 17, 1994

3 MODERATE PRIORITY AOC MILESTONES

- ☑ **Draft Submitted for EPA/NYSDEC Review on August 5, 1994**
- ☑ **Army Recommends 2 RI/FS's and 1 Removal Action**
- ☑ **NYSDEC Comments Received on October 17, 1994**

8 MODERATELY LOW PRIORITY AOC INVESTIGATIONS

- ☑ **Fieldwork Initiated in Early February Completed in Mid-July**
- ☑ **Pre-Draft Site Investigation Report for Army Review will be Submitted in December 1994**

7 LOW PRIORITY AOC INVESTIGATIONS

- ☑ **Fieldwork Initiated in Early February Completed in Mid-July**

- ☑ **Pre-Draft Site Investigation Report for Army Review Will be Submitted in December 1994**

EXPANDED SITE INVESTIGATIONS (ESI) FOR THREE (3) AREAS OF CONCERN (AOC)

- ☑ New Delivery Order
- ☑ Three (3) Low Priority AOCs
  - ▸ Small arms range
  - ▸ Pesticide storage area
  - ▸ Building 804
- ☑ Workplan Under Preparation
- ☑ Pre-Draft for Army Review Due on January 30, 1995

REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS) STATUS UPDATE

REMEDIAL INVESTIGATION (RI) AND FEASIBILITY STUDY (FS) OF THE FORMER OPEN BURNING GROUND (MILESTONES)

☑ Remedial Investigation

- Final Submitted on September 9, 1994
- Accepted by Agency as Final

☑ Feasibility Study

- Submitted for Regulatory Review on March 10, 1994.
- Received NYSDEC Comments on May 5, 1994.
- Received EPA Comments on September 30, 1994

REMEDIAL INVESTIGATION (RI) AND FEASIBILITY STUDY (FS) OF THE ASH LANDFILL (MILESTONES)

- ☑ **Remedial Investigation**
  - ▸ **Final Submitted on October 3, 1994**
- ☑ **Feasibility Study**
  - ▸ **Draft Submitted on September 19, 1994**

RI/FS FOR HIGH PRIORITY AOCs

- ☑ Need for Further Investigation Identified by the ESI
- ☑ New Delivery Order
- ☑ RI/FSs Planned for High Priority AOCs
- ☑ Workplan Under Preparation
- ☑ Pre-Draft for Army Review due on December 7, 1994

INTERIM REMEDIAL MEASURE (IRM) STATUS UPDATE

ACTION MEMORANDUM HIGHLIGHTS

- **Objectives:**
  - Remove existing threat
  - Eliminate source of groundwater plume
  - Streamline RI/FS process
- **Treatment Goals (NYSDEC TAGM Values)**
- **Approximately 23,000 Cubic Yards (35,000 tons) of soil will be treated on-site**
- **Selected Remedial Alternative**
  - Excavation, low temperature thermal desorption, thermal oxidation of off-gas
- **Remedial Contractor On-Site and Beginning Operation**

COUNTY OF SENECA STATE OF NEW YORK

EIGHTH MEETING OF THE

TECHNICAL REVIEW COMMITTEE

HELD AT: Seneca Army Depot
Romulus, New York

HELD ON: August 17, 1994

REPORTED BY: MARY GRASEK

TIRO REPORTING SERVICE
536 Executive Office Bldg., Rochester, N. Y. 14614

MR. ABSOLOM: I would like to introduce Lieutenant Colonel Roy Johnson, Commander of the Seneca Army Depot.

LTC. JOHNSON: It is a great pleasure to welcome you all back here for the quarterly Technical Review Committee. We have a pretty good agenda. I hope you will receive copies passed out to each of you of the areas which we are going to cover, the order we are going to cover them today.

At this time, I would like to turn the presentation over to Mr. Kevin Healy from the Huntsville Corps of Engineers for the current status of our program.

MR. HEALY: Good afternoon. As always, we are starting out talking about the remedial investigation. The two main sites are the ash landfill and open burning grounds site. Since the last time we talked to you, our reports are now being reviewed by the regulators and they will be providing us with comments. And we will incorporate those comments as need be. Hopefully within another, I'd say, month or two, these documents will be completed.

(Off the record.)

(Back on the record.)

MR. HEALY: I am Kevin Healy from the Huntsville Division Army Corps of Engineers. I am the

lead engineer for the work being done at the Seneca Army Depot.

MR. DUCHESNEAU: Mike Duchesneau, Engineering-Science in Boston. I am the project manager.

MR. CHAPLICK: Jim Chaplick from Engineering-Science in Boston. I am the environmental manager of the office.

LTC. JOHNSON: I am Lieutenant Colonel Roy Johnson, Commander of the Seneca Army Depot.

MR. ABSOLOM: I am Steve Absolom. I am Chief of Public Works at Seneca.

MR. HODDINOTT: Keith Hoddinott, risk assessor for the Surgeon General.

MR. SUEVER: I am Rick Suever. I am with the Huntsville Division Corps of Engineers. I am the project manager for the work at Seneca.

MS. WILSON: Judy Wilson with the Public Affairs office, the Huntsville Division U.S. Army Corps of Engineers in Huntsville.

MS. FALLO: Janet Fallo. I work at the Seneca Army Environmental.

MR. ENROTH: Tom Enroth, Seneca Army Depot alternate project manager.

MR. GERAGHTY: I am Dan Geraghty with the New York State Department of Health.

MR. WHITAKER: Jerry Whitaker, Public Affairs Officer for Seneca Army Depot.

MS. BUCHI: Kathleen Buchi with the Army Environmental Center. My agency does the -- controls the program money for the Army.

MS. STRUBLE: Carla Struble, I am with the U.S. Environmental Protection Agency. I am the project manager assigned to answer Army questions.

MR. NELSON: Bruce Nelson with Malcolm Pirnie providing technical oversight for the USEPA.

MR. BIERNACKI: I am John Biernacki with the Army HQDESCOM. We have four installations throughout the U.S. and Seneca is one of our installations in this program.

MR. STAFFORD: Ken Stafford, Supervisor of the Town of Varick.

MR. COOL: Bill Cool, Seneca Soil and Water Conversation District and Varick Councilman.

MR. DURST: R. A. Durst, Professor of Chemistry at Cornell University. A resident of Varick.

MR. BATTAGLIA: I am Randy Battaglia, the project manager of Seneca Army Depot.

MS. MANASERI: I am Joanne Manaseri. I represent the legal office at Seneca Army Depot.

MS. STANCZAK: I am Marti Stanczak with the

legal office. Tobyhana.

MR. MOLOUGHNEY: I am Joe Moloughney. I am with the New York State DEC Central Office in Albany.

MR. REAMON: Tom Reamon, New York State DEC in Albany.

MR. VELTE: Cliff Velte, Seneca Planning Board.

MR. PICKETT: Jack Pickett, Corps of Engineers, the North-Atlantic Division of New York.

MS. VERA: Linda Vera with the DEC in Avon.

MR. BURNS: Charles Burns, local engineers.

MR. MEHTA: Manmohan Mehta, DEC in Avon.

MR. RICOTTA: Frank Ricotta, New York State Department of Environmental Conservation.

MR. CROOK: Steve Crook. I am with the Law Environmental Office in Auburn, New York.

MS. MC NIEAL: I am with The Citizen newspaper in Auburn.

MS. SAMPREE: Lucinda Sampree, a private citizen and member of the Seneca Lake Pure Waters Association.

MS. COLEMAN: Estelle Coleman. I am a resident in Romulus.

MR. HEALY: As I started out, let me briefly rehash the two main sites are the ash landfill and the open burning ground areas. These are the sites at which

we are doing the remedial investigation feasibility study. We are proceeding along two paths. First the remediation reports. These are now in draft final form. We have gotten one round. Our regulatory comments, hopefully, will be incorporated and from there we hope to finalize the documents. That should be within the next month to two months.

As far as the feasibility study report is concerned, that currently is in draft form which means the EPA and the DEC are reviewing them. We will be receiving comments from them within, hopefully, the next month. And it will be up to the Army to respond to those comments and correct the documents accordingly. Records of decision which is somewhat the final decision from these sites is formalized, are expected somewhere in early 1995. That would be calendar year 1995.

As far as the Solid Waste Management Units are concerned, I would like to give an update on the high priority areas of concern. These are ten sites. We have draft documents that have been submitted to the Regulatory Review. The final reports were originally expected by November. We are now looking at a little bit of a delay, possibly early calendar year 1995. The reason for the delay is there has been a lot of higher priority documents that have to be reviewed by the

regulators. So these have slipped the priority in consideration.

The next site of the Solid Waste Management Unit to be dealt with, what that section refers to is the moderate priority of concern site investigation for those fifteen sites were all recently completed. Primarily draft report which is the draft report that goes to the Army only for the Army's inspection is due probably within the next month or so. The final reports were originally expected in late 1994. More likely they will not be arriving until February or March. Again, the reason for this there have been higher priority documents that have been reviewed. From the review on those have been delayed. What I believe we are only talking about a month or two months delay; nothing more serious.

As for the SWMU clarification which is the report that incorporates the Army's position and record search of all SWMUs on site, limited sampling is now done. This report finalization has been completed from basically the Army's standpoint. There is a few issues that remain to be reviewed. Based on some of the names that were received from DEC, we will possibly be required at least to do some altering of the verbiage in the report and very simple statement changes. Additional consolidation work may be necessary, very little.

That is it as far as the update as to all the work that is going on.

MR. DURST: Kevin, as far as the regulatory review of these documents by the EPA and the DEC, are there any other organizations who have priority first?

MR. HEALY: The two main ones are the EPA and NYSDEC. Along with NYSDEC is the Department of Health. And I believe those are the two state agencies that are reviewing these documents. Each one, I would say, has the same priority because this is all site work is being done under the Federal agreement that was signed by the three parties. I believe that they all have equal priority.

At this point, I would like to introduce Mr. Duchesneau -- no, I'm sorry. Randy is going to give a discussion, more detailed discussion of the other areas of concern that we are working with.

MR. BATTAGLIA: This summer, I think the last field work was done in August. We have investigated twenty-five sites on Seneca Army Depot which may require further investigation and some may end up being no action because we did not find anything at those sites. Mike will talk later about an ash landfill site which is not one of the twenty-five. It's a previous site -- for some of you that are new here -- that we have been doing in-

depth investigations at. Another site, the open burning ground, has been going through an in-depth investigation. That in-depth investigation is remedial investigation feasibility studies.

Before I get that far into the study, you do initial site investigation at sites. That's also called preliminary assessment and site investigations. Preliminary assessment is a historical review of operations that may have occurred at a facility. And some of those, based on just historical information about a particular area, you can make a reasonable decision that the site does not have to be investigated. You don't have to spend money to look at a site when there is no -- really no need to. If there is any doubt, you go ahead and do the initial site investigation. And twenty-five sites on Depot, we have done a field work this summer on those sites. I am going to go over what -- where the sites are on Depot and what they are and a little bit about what we have found.

We have found -- we have some preliminary information about what we found out when we were in the field. The lab work simply hasn't been performed yet by the labs. We haven't gotten the data back to tell -- to determine just what we do have at a particular site. When we get that information back, we will know whether

we can do a -- just do a cleanup right then and there. If it's pretty simple, such as metals in soils, we can do a removal operation. Those decisions have to go through a lot of review with EPA and DEC before we decide when we can remove the contamination or if you have to do further studies to determine just how much gets removed or what the best alternative is; how to treat the contamination that's there.

On this map here, we have number -- we have ten sites. We call them high management -- high priority sites. Basically in general, based on what we know about the sites, whether it's more than likely to be contaminated. Or sometimes we have limited information that really doesn't wind up on the remedial -- on the list. It may be more contaminated; may be a higher priority in the future as far as which one we look at next.

This is a map of Seneca Army Depot. To get your bearings here, the Town of Romulus is over here, this is Route 96A along here, over here is Depot Airfield, Route 96A runs along here, and this little triangle down here is lake housing area, that's Kendaia Creek that runs up to the Depot. I will just take it from the top here.

Number 4 is the munitions washout facility

leach field. Back in the fifties, we had a washout plant where they washed out things like chromium. They steamed it with water and inside the room removed the explosive. We believe we burned that at the abandoned powder burning pit here on Depot which I think that we don't have much information what they did, where they did it.

At that particular site, we thought we would find explosive contamination, but we did not. The preliminary results is metals in soils; primarily chromium and copper.

Incidentally, a lot of information -- at our public meeting, we are going to be handing out fact sheets. The preliminary results, I hand wrote on here. Again, I want to stress those are preliminary results. We may very well learn a lot more with the lab work when they come whether the contamination is there or not there. We do initially -- just because of some of the results are in some other sites, what they found in the field with some of the monitoring equipment, they know there is paint and solvents there at a particular site -- I will get to that later.

Number 11 which is on the east side of Seneca Airfield in the ammunition area of the Depot is an old construction debris landfill. We have a number of these old construction debris landfills on Depot. The common

practice we have -- we are still doing it, if you have any construction on Depot, say you just built a building, you go to the landfill. On Depot or on post, any other construction debris, whatever, also got landfilled there. Trouble is, you don't know if anything else was disposed of. We have a number of these construction landfills. We don't know what we would find. We found a lot of roadside construction debris. So it varies. We found that there is something underground, we dig it up, we don't know if it's going to be a drum or some kind of construction debris.

Number 13 is over on the east side of the Depot towards Romulus. Some of you that are familiar with the Depot boundaries may know that there is a big pond there. We call them the duck ponds. Number 13 is an IRFNA disposal site which is Inhibited Red Fuming Nitric Acid disposal site. Back in the forties and fifties and sixties where they disposed of Nitric Acid by digging trenches and putting limestone in the trench and pouring acid on the limestone to neutralize it. We found some nitrates in the ground water around those sites. We haven't got as far as what to do about it. Each site, some places we will have to coordinate with the EPA and NYSDEC on which sites to be developed, which sites can't and do interim removal, remove contamination.

Number 16, which is over here. Sixteen and seventeen are two deactivation furnaces, deactivation furnaces, incinerators, which the furnaces which we have disposed of small arms ammunition. When small ammunition, regular size bullets on up to big bullets get old, a lot of them might be duds. Some might be hazardous for the soldiers to handle. So they dispose of them in the incinerators. We have one that is existing which is No. 17. The abandoned one which they used up until 1962 over here on the east side of the Depot here. And at those sites we have found mostly metals in soils; primarily copper, lead, zinc. And they found some explosive residue in the abandoned deactivation furnaces.

Again, those are preliminary results. And actually those two sites are two candidates where you have the soils with metals contamination. It's a simple project to clean that up. When you get into the ground water contamination, it's a little more complex about what the chemicals are and how you can remove them from the ground water. That is, I have to do more independent studies to determine what to do about that site.

Number 24 which is over on the west side of the Depot is an abandoned powder burning pit. I presume that's where they burned explosives in the washout plant just because of the time of the operation of both of

those areas. It's pretty feasible, but we don't really have good information about the historical use out there. At the abandoned powder burning pit we found explosive residue in the soil and also arsenic. We have no idea where the arsenic came from. We found that out there when we did the initial site investigation. In more in-depth remedial investigations, we look for pretty much everything there is. It's a matter of how much -- how many samples you take between the two investigations.

Number 25 which is over here by this end of the Depot is the fire training demonstration pad. In number 26, which is over by the warehouses just south of where we are here, is a fire training pit and area. We did fire training activities at those two areas over the years. And what we did find, we expected. We found gasoline and some fuel products in the soil and in the ground water.

SEAD-45, which is over here and this is the northwest corner; again, this is Route 96A. This is our open detonation area. We open burn and detonate weapons, anything from 9 millimeter to artillery round. We have Korean warheads and there are Korean air war rockets that we stored there. We detonated the warheads on the open burn pit. The propellants -- what we found are contaminations out there normally likely from the old

operations, older operations. I know that because the contents of the chemicals that are in the propellants are in explosives that we are disposing of now. And also in the past, a lot of operations were not regulated as they are now. Also in the detonating area we have found metals in the soil and sediments; primarily copper, lead, zinc, and mercury. We will most likely do a more in-depth investigation around the detonation area just because of the nature of that site.

And SEAD-57, which is nearby there, is an EOD area which is Explosive Ordinance Disposal. That's the Army bomb squad. They used that as a training range in the past. They most likely disposed of material out there, that's why it made the Solid Waste Management Unit. And at 57 we have found some copper in soils.

We have identified 72 areas in total on the Depot that fall into the definition of Solid Waste Management Unit, or is an area that needs to be investigated because of the potential contamination. I have broken up the maps here and the different areas just for simplicity sake. I guess it's pretty messy for all 72. On this map, we have 15 areas.

SEAD-58, which is over here on the west side of the Depot, is called the booster station debris area. We had a report that there was a number of drums out in the

middle of a field. Actually, we had walked out there about four or five times before we even found it. We used to have a dotted area about a half a mile in circumference for that site. When we went out there, there was what looked like a pile of garbage, old drums lying around. So we found the site and identified it as a site. I will give you a little history of what we have done out -- what we do is a lot of work talking to people who have been here for a number of years and some retirees about where they disposed of things on Depot. That's how we find a lot of these IRFNA sites is to get connections. Which again, is up in the air. Which maps down the south end of the Depot. It was really two and a half miles away from it. The booster station debris area which is a case of finding the area, some of the sites were just rumors at one time. Actually in talking to -- to find somebody who knew about an operation, then went on from there. We found them on the Depot.

SEAD-67, which is over in this area, is the building for dump site. There is a sewage treatment plant right near SEAD-67 which is one of our no action SWMUs. There are some funny piles. We went out and investigated around there. We don't know if somebody dumped something out there. We don't have any preliminary results yet about that site; whether or not

there is any contamination there, the labs are still working on it. Again, we just went out in the field in August, did the sampling on some of these, we found some things. On actually the first list, the first map was done in June, July, No. 3. Before that, 10 was done about February or March of this year. That's why we knew -- that's how we knew we had metals and so forth with those.

SEAD-50 and 54. Again, this is Route 96 over on the east side of the Depot. We drive down 96, you will see a couple of tanks, large above-ground tanks. They used to be a tank farm. Some of the tanks we still store asbestos in. We store for the Army. The question was, was there environmental contamination around that tank farm. That tank farm stored dry ores. They didn't expect any contamination there. One thing we are looking at is past contamination because there are stories about shoveling asbestos on Depot years ago. Actually, I know somebody who used to be here that did that; whether that was when they filled up those tanks, we don't know. We are testing the site to see if there is asbestos contamination. And, of course, it's a full site investigation, we are testing for everything else.

SEAD-44 which has two areas. They are identified as a site called QA Lab or QA Test Facility.

That's all we know about it. I think they tested explosives at the sites. We knew they did, somebody did. We don't know anything about it. The investigation -- we called for a site investigation there. We looked for everything. Everything that we are looking for at all the other sites.

SEAD-50, which is over in this area. Again, so you have got your bearings, we are here, right here. This is Romulus and SEAD-50 is just west of us. Right now, we had accumulated sewage sludge, a number of piles called sewage sludge piles. And the State EPA feels there is another concern. We ought to have that tested around there. I don't expect to have contamination from the sewage sludge because we have tested our normal generation of sewage sludge. We haven't had anything in there that would be a problem. But things are out there, piled out there, so they tend to attract other disposal areas too. Which, of course, SEAD-59, which is right near there, is a little small to see on here, there is a shop right here. There is a number of disposal areas down in here. SEAD-59 is called the fill area building 135. The fill areas has rumors about disposal out there. When we did our field investigations, we found one spot where two drums were buried. Some other spots, some paint and paint thinners were buried. And next

year, we should have the funding to go and remove those drums and paint and solvent that are behind there.

SEAD-62 which we have identified over here, over in this area, is another example of a rumor. It is called the nicotine sulfate disposal building 606 and 612. There is a confirmed rumor they buried a couple of drums of nicotine sulfate. They might be the two drums we found over here. We don't know yet until we sample these drums. The rumor was the nicotine sulfate used to be used as a pesticide. So, if they are not the two drums, I think I know of a couple of retirees, the best way to find out, the best way to find out where they might be.

SEAD-63, which is over here at the northerly end of the Depot, is called Miscellaneous Components Burial Site. We have buried miscellaneous parts. When we dug that site up, we found drums containing metal pieces, metals and wires and so forth. We also, when we do those site investigations, we put a well around there. Then we test the ground water for any contaminants that might have seeped out of those areas. We do a number of the -- we also test the pits where we think there might be something buried or we go in with a backhoe and dig it up to see if it's a drum, piece of concrete, or a rock.

SEAD-64 is a number of areas. One out here, there is a couple at the end -- of the south end of the Depot. When they used to have a municipal incinerator on the Depot which is where the ash landfill site is over here, when this incinerator did not operate, they landfilled the garbage on post. They found those areas. Just like any old landfill, it could have contamination because of something that might have been thrown in there. We don't have any information about that site yet.

Sixty-nine, forty-three and fifty-six, building 606 is currently used for herbicides and pesticides. We have a licensed pesticide applicator who does things like herbicide along the front fencelines. It is a lot cheaper going along with herbicide than men doing it with a weedeater. That's currently used, but it was an old missile test facility. And there is also some disposal area out there. So we have found this one here, right near this, the circle, is the LORAN tower, which is the Coast Guard tower. Down here, there is a lot of disposal activity, some funny looking tanks out there underground too with vent pipes coming up. And we had no idea what they did at that facility. I had stores that they generated nitric acid. We have very little information. We are doing a site investigation around this whole

area. That's still preliminary. We don't have any information.

SEAD-12 in the 800 row -- SEAD-12 is right here and the 800 row is the last row of igloos. Igloos are the ammunition storage bunkers that we have on Depot. Both these sites were excavated in 1976. We excavated around the igloos at the north storage pit bunker which we found remains of Howitzer parts. When the excavated and cleaned up the inside of the igloos, they disposed of the materials that were contaminated in Birmingham, South Carolina, which is a radio active waste disposal facility. When we did that, we did not have any reports that there was enough information for DEC and EPA to sign off that these sites have been cleaned up. We still have to go back and do a site investigation now. So we don't -- that is around SEAD-12 and probably next year we will have to go back and redo the 800 row to confirm for DEC and EPA that the sites were cleaned up.

We did find a number of disposal areas where things were buried, different parts and things around SEAD-12. The preliminary field work where we look for radio activity, we did not find anything that was radio active in our site investigation. Again, this is preliminary. We haven't got all the data back.

SEAD-9, the old wood scrap site. But it's

actually a landfill that's over here by Romulus. Again, that's another one of those construction debris landfill, like landfill. We treated it like it was on a landfill. Hopefully all there are is construction debris and there is not contamination. We don't know until we go out and look. These results aren't back yet either.

SEAD-60 which is the south end of the Depot. Over on the east side there is a boiler house that discharged oil on the ground. There is a big oil spot. We don't know anything, yes, the oil spot is on the ground. So we did a site investigation at this site to see if all it was was just oil and clean the dirt that has oil on it.

SEAD-70 is building 2110 fill area which is over here on the west side of the Depot. That is, again, this is another construction debris landfill. We went out there and there it was. We don't have any information yet about that one. And SEAD-71, which we call the alleged paint disposal area, is over in here by the sludge piles and other burial pits. And well, it's not alleged, that is a confirmed rumor. It's a site, when we did the field work in some of the instruments they used for their own personal protection, they could use solvent vapors and paint-type vapors. That one, when you have contamination like that, most likely I do an in-

depth remedial investigation before you go ahead and clean it up.

Going on to my next map. I don't know -- this map is from a list of what we call Solid Waste Management Units that required additional information. We had a number of areas that at this time we don't know if we need to do a full site investigation since we had some information about them and it's right now in the process of being reviewed by DEC and EPA. And some of these other sites vary from what they are. I will show you what the -- building 360 is called the steam cleaning waste tank which is over in this area here. Again, this is Romulus and over in here, if anybody is familiar with the Depot, it's near the IPE shop which is the Industrial Plant Equipment shops. We used -- we have an in-floor concrete tank kind of grate really, the ditch and concrete in the floor of the building. And we used to accumulate steam cleaning water in there for blowing off oil and blowing off the machines. Right now the particular tank has been undergoing -- or is closed under the Hazardous Waste Law where they are going to test the tank. They are going to remove anything that's contaminated. We are going to confirm underneath whether any of the ground water has been contaminated from that tank. Building 360 is on the additional information list

because the Hazardous Waste Division of the State, our lead agency for that project, and they are undergoing -- right now, they are reviewing this closer. This plan -- it's almost approved, we will be able to go out there and clean up the tank.

Twenty-eight and twenty-nine, thirty and thirty-one, which are -- twenty-eight, twenty-nine, thirty, thirty-one, most of them are over here. They're all underground waste oil storage tanks. We generate a lot of waste oil. We generate a lot, between 4,000 and 6,000 gallons a year. We have a number of underground tanks that stored waste oil used to burn in the boilers. Mostly it's the same type of oil you get in the garage because it's a waste oil; made those tanks Solid Waste Management Units. Right now they are under additional information because they are being managed under our tank storage program. You have to have a registered tank to store any petroleum product underground or above ground. These tanks are included with that. And we have to do tightness testing of those tanks. So they are additional information because we are due for the next round of tightness testing to see if those tanks leak. We are providing that information whether they pass the test or not to the State or EPA under these programs.

SEAD-48, as mentioned earlier, is the last row

of igloos which is a pit and other storage.

SEAD-72. There is 29. SEAD-72, the north end of the Depot, is a mixed waste storage facility. And that is currently most likely going to be no action. Our representative from the State couldn't make it today. We had talked about that because of the history of the building because it's a management facility. It's not likely to have contamination. So that's one of the ones that is still under additional information.

No. 41 which is building 718. It's not on here. There it is. Forty-one is a boiler plant blow down leach pit. Boiler plants, we have four main ones, building 718, 319, 2079 and 121. All those buildings are boiler houses. They have two to three underground tanks where -- which the full tanks, the old days they used to have the leach pit. When they operate a boiler you used to flush out the boiler. They used to run that down into the leach field. Right now, it goes to the sanitary sewer. These all became Solid Waste Management Units because we burned waste oil in the boilers. We mixed it in virgin oil. They made the tank, boiler, then leach pits Solid Waste Management Units. We have four of these tank sites. They were called sites in general. What we found with the boilers some hydrocarbons. We did limited sampling. The State wanted us to do it. We found some

petroleum products in the soil. Most likely we will do some more testing there. It's not the in-ground site investigation that we did. If anything, we expected -- if you were going to find out it's going to be petroleum, there is a boiler there. The boiler uses fuel oil. Potentially, they could have spilled some around. We don't know what happened over the years. We still have yet to determine whether there is contamination there; whether or not you have to go do more investigation. We are going to do some more because we found something there. Whether it has to be remediated or cleaned up, that's something we will find out in the future after we do some more investigations around that -- in those particular buildings.

Building 2079 is out here on the southwest corner of the Depot. Building 121 is over in the administration area, right over here next to my office. Building 718 is up here at the north end. Again, those are the boiler plants, the underground waste oil tanks. And they used to operate with a leach pit. Actually, that knocked off a lot of them here.

SWMU No. 10. Ten is the present scrap wood site which is over in this area here of the Depot. At that site, we had accumulated scrap wood. We have given that out to the Depot employees and the public.

Periodically we used to use it for the fire training for the firemen. They would use the wood for training because that ended up having an ash. That's most likely going to be a no action site. We tested the ash. The ash didn't have any metals in it. At this time the State and EPA most likely is going to be happy with that. They are not going to cite it which means since you don't -- we don't burn anything like treated lumber, like that. We have ceased that operation. We are now using a wood chipper as far as getting rid of the wood. And the firemen don't want to do fire training any more with the wood.

SEAD-49 is building 357. As you go right down 96, you run by some more piles which look like hills. There is a couple of warehouses down in there we used to store Columbite ore there which I believe contained chromium. It was naturally radio active. We had all that shipped out last year to another facility. The State will have a concern because it was radio active. They may have spilled chromium around that building. The State came out here last year and surveyed that building. They didn't find any contamination. Mostly, that's going to be a no action also because of that survey. Again, that's over here on Route 96.

SEAD-51 is herbicide usage. That is part of

the high security area. That's the fenced area where all the lights used to be at the north end. We have herbicided this area for weed control over the years. And we are still controlling that because that's still being sprayed and maintained in that manner. This is going for a no action site because we are still herbiciding. Herbicides are inclined to leave a residue of herbicide to keep the weeds down. In the future, then you just spot treat after that.

SEAD-52 is building 606 and 612, ammunition breakdown area which is out in the area of the Depot, over on the east side. And that building there was the building they disassembled ammunitions, old ammunitions. They used to have a treatment system where the propellant was sucked out through a pipe. It's another building on the other side where it caught that -- used to catch it in a tank that had water in it. They used to dump that water out afterwards. We did some limited testing there. We found some amounts -- we did find some explosive contaminants in and around that building. We are going to have to do full site investigation. We did some limited sampling there.

SEAD-66 was an old storage of a couple of little buildings. They stored pesticides there. We did have some hits there. We found DDT at that site.

MR. CHAPLICK: That is a good site. We may be able to go to pick up the dirt that has DDT on it. We have to do some more tests to see if it has gotten in the ground water or anything.

MR. BATTAGLIA: Moving on.

MR. DUCHESNEAU: You may want to mention the identification of all the SWMUs and the names that Randy is talking about are in the handouts that I have passed out along with the status. There is a summary of what Randy is saying in this handout for those of you who have it.

MR. BATTAGLIA: This last map is the remainder of the 72 sites on Seneca Army Depot. There is two grounds on this map. Six of these sites are already included in investigations at our ash landfill site and our open burning ground site and those are -- this ash landfill site here, there is a number of areas inside and around that landfill that were, by definition, "distinct" Solid Waste Management Units. There is the cooling water pond, the old landfill incinerator that used to be out there. There is an abandoned ash landfill itself. There is a non-combustible fill area which is another fill area right next to the landfill. They used to burn the garbage in the pits out in the old days. So we have two rough use burning pits and then there is an incinerator

itself.

And over in the area, in the open burning ground which right now we are open burning propellants out in that area. One thing we have changed from the past, in the past, they used to burn underground. We now built a 40-foot long tray. We burn the propellants in the tray out in the open burning ground area. We found metals contamination. In some of those operations, they now just don't have metals in it. What we found contaminated in the soils. So they probably did different types of materials out there when they disposed of them in the past. It is good to mention, when you have a bomb, your metals are usually in the fuse. They are usually in small amounts compared to a regular bomb. The regular bomb would be primarily explosives, not have a lot of metals. What we found in the open burning ground, there is metals in the soil. They may have done a lot of fuses. We don't know what they did in the past; where the metals came from out there.

Moving on. The rest of the ones I am going to talk about are currently -- I have under the list of no action. This is not finalized yet. We have Solid Waste Management Unit clarification report that should be in the management records at Willard Town Hall probably in two months; a month and a half or two months. And you

will have the opportunity to comment on that and review that when that gets finalized and is down there.

Number one and number two, which is over here, are hazardous waste storage facilities. Number one is building 307. We generated hazardous waste either from cleaning a machine or something like that. We store that in a building that has a permit to store hazardous waste. Then we send it to a disposal facility off post that can treat that waste. Building 301, we take transformers down there. We put them in the building when they are burned out. This is another permitted storage building. We test transformers to see if they've got PCBs in them. PCBs, if you are not familiar with PCBs, they are commonly used in transformers and they are regulated because they could bio-accumulate in the environment. That is one of the problems with some of the Eagles as far as the pesticides and PCBs get in them and they have reproductive problems.

No. 7 is titled the shale pit. Right now that's our clean fill area where we landfill concrete, stone, metal, and clean dirt. We keep a close eye on that. When you just have a clean fill area, you don't need a permit like a landfill permit. We inspect that before we push all the dirt into the fill area. It's down here as a site just because it's a site. Right now,

I have it on a no action list because for all intents and purposes, it is no action. It is just clean fill.

No. 18 and 19, which are over here; this is 18, and 19 is over here in the same area. They are classified document incinerators. We have operated incinerators. We burned all classified papers. We burned paper in the incinerators. They have an air permit. Right now it's under no action because all it was was paper actually. I think the State or EPA still want to look at some of the test results where we tested the ash from the paper years ago to see if the ash was okay.

Then we have three sites that are called sewage treatment plants. We have No. 20 which is Building 4. This is an active sewage treatment plant. Sewage treatment plant 715, which used to operate at the north end. And one titled No. 314 which is actually just a pump station now, but it used to be a sewage treatment plant. Which over here on this side of the Depot, those are sewage treatment plants. Normally you don't have to investigate around a sewage treatment plant, but they fell into our list of potential sites.

Three other no actions are all the boilers in boiler houses which is 718, 121, and 319. 718 is here; 121 is over here; 319 is over here also. These are all

boilers in the boiler houses. And everyone had agreed that these are not likely to have environmental contamination or high concentration in the boiler houses. The main concern around them is underground tanks wherever the leach pits were in the past because the blowdown from the boilers are -- they wash down the boilers before we process or sent our sewage treatment to the plant.

Building 106 was titled preventive medicine lab. We just couldn't plain find this building. We think it's over here where the current health clinic used to be. We really called that no action because we couldn't find any information if that was an actual building in there. There was no other building over there. That was kind of it was an old report. We really couldn't find anything about where it was.

Building 321 and 806 is up here. We had two areas where we had -- where we did calibration of equipment for radiation surveys. This is called the radiation calibration source storage. We have SEDA equipment or radiation surveys. You have to calibrate that so you have a little source as to the specific amount of radiation that comes out of that. We had a couple of labs here that did that kind of calibration for the Army.

Fifty is the old ammunition storage. Here the State wanted that on as a potential area. Right now we are considering it no action, but they have concerns about the storage of ammunition. And if that causes any kind of environmental problems. That is one that was kind of reserved for the future. It's on here because it's on their list. When they look at a facility -- this list was generated. The Army had a list and the State had a list and kind of combined the list and wanted to make sure all the numbers stayed the same and get one master list of all the potential areas. Originally, the list was 69 and we found a few more places. Now we are up to 72. Hopefully we found them all.

Building 357, that is the one here, tannin storage. Right now we have shipped all the tannin out. It's actually tannic acid. It's not a hazardous waste or a hazardous substance. It was on here because -- just because we stored the material here. And everyone, the State and EPA, had agreed that this stuff was not hazardous; that it should not be an area of concern. Building 718, underground waste oil tank. That was specifically for waste oil. I think it was about five years ago built an additional tank to store waste oil, modified the boiler because it was more than what we could fit in with our fuel oils. That's a new tank.

Most likely no action because it's a new tank. It is included with our tank problem where we are testing them.

No. 65. We have done some limited sampling on those. They stored acid open -- in open pads. We have done some field sampling around these pads.

MR. CHAPLICK: We couldn't find anything around those pads.

MR. BATTAGLIA: I skipped a number -- those are all our 72 areas on Depot. I want to also mention this was not a statistic or final thing. I am still talking to people about rumors or where certain areas are out here. What I try to do is find somebody who might know something about it. It is the easier and cheaper way. If I can get down and locate an operation, a location, then I will know where the location is and what to look for. Our initial idea was we can do some relatively cheap surveys to determine if anything was buried in an area. The electro-mechanical surveys that usually tell if something is buried. Actually, it tells if some of these ground penetrating radar show us if there was -- the penetrating radar is in the top of the ground. It is straight across. You end up getting a printout that looks like a chart for trolling or a chart for trout. Again to give you an idea if something was buried in a given area, you can do an electro-magnetic survey that

usually tells if something was buried. Actually tells if something was buried. Then we go out and do other surveys like soil gas. We put a pipe in the ground and put a vacuum on this to see if any contamination that could be detected in that area. Then we put a well around the area. Again, a lot of the ones I did not mention what we found at the areas because the -- especially the list of fifteen we just did the field work. We just don't have any information back. The stuff we got back in February, we did in February, we got the results this summer, some of those. It's a little bit of time it takes to get information back from the labs.

If anybody has a question --

MR. DURST: At the earlier meeting you were talking about flyovers with ground penetrating radar and magnetometers or perhaps something to locate some of the anomalies. In other words, you talked about these 55-gallon drums that you were told were in a field that you looked for just on hearsay evidence and that's the sort of thing that -- have these flyovers been done or why haven't these been seen before?

MR. BATTAGLIA: The ground radar, you actually drag across the ground. It's like equipment they put on the equipment and drag it across the ground. On the

flyovers, I think we have a contractor that does aerial flyovers.

MR. DUCHESNEAU: There may be some confusion. The flyovers are used to create our base maps. We use them -- we take the aerial photographs. What we find is that with some land control survey, we generate our base maps. Many of which are in this document. I think you can see the land contour of the buildings, the roads, etc. The flyover is used for that information. Now, we also have some historical aerial photographs that was done in '68 and the fifties. We know that we also can get, from NASA and some other government agencies, that we used to look at the sites in the past. That helps us get an idea where certain activities were done. Again, that focuses where we begin our investigation. So, the flyovers -- we don't go ground penetrating radar from the air. What you are implying is also magnetometers.

MR. CHAPLICK: All that is done is basically a walking over the ground.

MR. DURST: Can't you do that not only as a flyover, but you couldn't graph the flyover?

MR. DUCHESNEAU: I believe that was techniques that was possibly usually applied on a gigantic area. We are talking about a localized area that we have information, historical or otherwise, that we can use to

focus, narrow in our investigation. Our first step is usually to do a site walkover. If you find some strange looking bumps or hills that look out of place, we do some magnetic work; pull this device, either radar, magnetometry, over that area; find out if we are getting any kind of unusual anomalies. From that information, following that, we follow up, you know, soil gas or some soil boring, some soil sample test pits to determine what the identification of those geophysical anomalies are. Then we usually follow that with a monitor well. Once they are confirmed there is something there, you put the monitoring wells in. There is whatever was there has been located in the ground. All these geophysical techniques, they are not -- they are limited. Again, in order to see something like as small as a drum, six or eight feet down, what we have to do, we lay out grid lines; usually ten feet on center in both directions. And then we drag some of the instruments of these small -- you can carry them. They are small. You drag them along these lines over that area. That pretty much allows us to say you are not going to miss anything in that kind of space. If you've gone 25 lines on 25-foot centers, the instruments are not receptive enough if anything was in the middle of the box they are surrounding, you could miss it. It really kind of gives

you an idea of how far they go side to side.

MR. DUCHESNEAU: We are looking at these sites, the entire Depot as one site. We may do something like what you are saying, do an aerial photograph survey. That is to say, I haven't personally done it. But I believe that is a viable alternative. It's, like I say too, it depends on the size object you are looking for. If you are looking for a drum, you've got to be on a scale I mentioned.

MR. DURST: It seems like the possibility of missing things the way you are going about it as far as hearsay evidence. As far as -- it would seem like a generic screening of the whole Depot would be the way to go.

MR. HEALY: I don't know that the techniques for locating subsurface anomalies from the skies are developed enough that you can count on them. I think if you are talking about surface features, yes; an aerial flyover can be used.

MR. BATTAGLIA: We have done that when we have used what is called USGS. That actually shows where the ground was disturbed in certain areas. So you can go to that map and find out, I think, what might have been land in the area of the washout plant. We could see the building.

MR. CHAPLICK: If you go to the public meeting tonight, there will be some exhibits up in the hallway. On one of the boards is one of the more particular areas of the ash landfill or the burn pits. You can see the pits are excavated. There is refuse in these pits. I don't know what years that was. Was that '68?

MR. DUCHESNEAU: Before the incinerator was built. The incinerator was not there. This was all used as a first starting point. What we are trying to do, again, is to get a handle --

MR. CHAPLICK: I think what you are saying, there is no technique currently available.

MR. COOL: I don't have a connection with the CIA. I believe they have the surveys to do it.

MR. BATTAGLIA: You are not connected to the CIA, are you, Jim?

MR. COOL: Who permits the building for storage of hazardous waste and PCB?

MR. BATTAGLIA: That's under DEC. We have to -- under DEC, have air permits for the sewage treatment plant.

MR. COOL: For everything?

MR. BATTAGLIA: I think the Army tried to exempt themselves. They can't as far as environmental permits go.

MS. SAMPREE: Are those maps that are very clear that you were using in your demonstration, are they going to be part of the public information minutes that are at the Willard Town Hall?

MR. BATTAGLIA: I can make them.

MR. CHAPLICK: Most of the maps are on the back of the fact sheet, Randy. We put that on the back of the fact sheets for tonight. They are being copied.

MR. HEALY: Are you going to be there tonight?

MR. COOL: The '68 flyovers were the flyovers that you have examined?

MR. DUCHESNEAU: I believe there was the fifties -- sometime in the early fifties. We have some information. We contacted a service that does that search for us and provides a list of all available aerial photographs. Now, there is probably fifteen different lists that have been done over the years. We picked three or four of them to look at. We don't look at every single one. We picked enough that we thought we covered the time frame.

MR. HEALY: Did you go back to when the base was first constructed? I heard there was materials buried at the construction phase; paint and plumbing supplies and so forth that was just a big push the contractor left.

MR. DUCHESNEAU: I think the earliest we looked at was '54, '55. But I can --

MR. CHAPLICK: All the area photographs are not taken from the same elevation. Obviously, the lower you are, the better the definition of what you can see. Some of them is up higher. It's really very, very difficult to make out in a map in terms of in-ground features. You can see a lot of lines, underground tile lines will show up in the certain time of year if you know specifically what you are looking for.

MR. BATTAGLIA: I think it was the State air on the west side of the area, I thought the aerial photograph one time an old map showed where they basically were to the concrete plant over on the west side. I haven't really found that spot where they were yet. That's on the maybe list. I haven't heard anything about them digging holes or burying them. Before the original building, they had their own concrete plant.

MR. COOL: What I am saying, is this hearsay.

MR. BATTAGLIA: I don't want to call it hearsay. A lot of stuff started as a rumor. If I asked enough people, I found that enough people knew it existed, I actually found a site. That's how we found a lot of these; just checking out those rumors and so forth. We knew as an area some were just something like

that. You talk to somebody else, somebody else knew where it is. Sometimes you find somebody that knows something about where it is.

MR. COOL: The Sampson Naval Base was the same way; when they were finished, it was buried.

MR. BATTAGLIA: Someone told me, someone that just retired told me, they told me that they buried arms. He gave me a couple of areas, a couple of names of people who are retired that might know of it. I haven't told EPA and the State that one. Is it a rumor or is it a site? I don't even have an area to go look at it.

MR. COOL: Sounds like a rumor to me.

MR. BATTAGLIA: If I end up a dead end, I kind of leave it open until I hear something.

MR. ABSOLOM: Before we go on to the next presentation, I would like a five-minute break to let our stenographer rest her fingers for a minute. I have learned in the past that she likes that. That she likes to have a break. We will take a five-minute break and come back.

(Whereupon a recess was taken.)

(Back on the record.)

MR. ABSOLOM: As we get started, one thing I would like to remind everyone is that if you have questions, please speak up so the Court Reporter can hear

you. People have a tendency to let their voice trail off as the question goes on. Please remember that.

MR. DUCHESNEAU: My name is Mike Duchesneau. I am the project manager. I work for Engineer Science in Boston. I am the project manager for the Seneca Army Depot activity project.

All my presentations, everything I have, I will be showing up on the overheads. There are handouts that I provided so you can follow along. This organization chart usually is where I like to start. In case people are new, to get a handle on who the players are in the program, EPA is the State we have talked about. We are all working together to identify and solve all these environmental issues that come up. I will be talking to you about where the tanks, some of the AOC investigation. Normally, I would be talking about the action memorandum, the soil remediation project we have planned.

So what I am going to do is move fairly rapidly along to the slides I have. I think Randy and Kevin have pretty much touched on the details of that. We have a SWMU classification flow chart that summarizes in graphics. It is derived from the inter-agency agreement that was signed between the Army, State and EPA. And this graphic depicts the process we are going through to

first identify the SWMUs. Randy has talked about the list of 72. Once we have identified the SWMUs, we perform an investigation; move through what we call a site investigation phase based on those results we get in the RI/FS phase. This whole process is merge of the obligation of RCRA as well as the CERCLA obligation. CERCLA is an acronym used for Superfund project. And basically, all the investigations are being done under the umbrella of the requirements of CERCLA. Comprehensive Environmental Restoration Conservation Liability Act; otherwise known as CERCLA.

So, this depicts that process of trying to mesh the obligations of RCRA, which is a Resource Conservation and Recovery Act as well as the CERCLA obligations.

I think Randy has gone through the list of all the SWMUs. I just want to provide this so you can get an idea where the sites and the classification of all the SWMUs are. I am not going to go through each one individually. Randy has already gone through a lot of that. But I would like to say that we have, at this point, reached an agreement with the State and the EPA on the identification of all 72 Solid Waste Management Units; otherwise known as SWMUs. Basically the site of all of these Solid Waste Management Units. And again, all of this information is in your handout.

The bottom line here, I think the important message is, where do we stand. We have 72 identified Solid Waste Management Units. Twenty-five of those are deemed no action SWMUs. And as the name implies, no action will be performed on them. We are currently investigating a total of 27. We have combined several of these SWMUs into one SWMU. So the middle column indicates the total number that need to be investigated. And we are investigating 27 of those -- wait a minute. This isn't -- yes, right. So, there are 13 low priority Solid Waste Management Units that still need to be investigated in the coming years. I think the important thing to mention, also, is that all the high priority to moderate priority as well as moderately low priority SWMUs are currently under an RI/FS, Remediative Investigative Facility Study, or under investigations as site investigations which is the middle portion of that flow chart.

If you remember, the reports, what we call SWMU classification reports, is the primary document. The list -- that lists all the SWMUs. As I mentioned, all the SWMUs had been classified. It's been issued to EPA and NYSDEC, New York State Department of Environmental Conservation, on June 10th. We have received some comments. We plan on issuing the final documents in

early September. Randy has identified the seven high priority SWMUs listed here. I'm not going to go over that again. Just to bring a quick update on where we stand on this. The field work has been completed. A list of all the tests that have been completed, we submitted the draft report to the EPA and NYSDEC on June 8th. We are currently awaiting comments on that document. Likewise, for the three moderate priority SWMUs identified here, Randy has shown you where they are on the map. We performed all the field work, submitted the draft to EPA and NYSDEC to review on August 5th. We are awaiting comments back on this document.

All the moderately low priority SWMUs identified here are under investigation. And we have completed the field work and are in the process of preparing the report. We are waiting for some final laboratory data. We expect this report to be issued sometime in late September. That report will go to the Army for internal review. Following the review, approximately 30 days later, we make that report available to the EPA for their review, and New York State.

The seven low priority SWMUs are identified here. The status of these investigations are, we have also completed the field work this summer. And they are

in process of preparing the pre-draft. We call it the pre-draft form, that will go the Internal Army Review. Thirty days after that, we will be submitting that document to the EPA and the State for review.

The item that I would really like to spend a little bit of time on we call the Action Memorandum for Soil Treatment. It's a primary decision document that identifies the area at the ash landfill that we believe is responsible for a lot of the impacts to the ground water. We have decided on an alternative. That alternative includes excavation of some materials, sizing, some washing of debris. We are talking about excavating a portion of the landfill, wash that debris that can't be processed through a thermal processer, low thermal desorption unit. We have some air pollution control equipment to be in compliance with all New York State regulations. Following compliance of that treatment of that soil, it will be placed back in the excavation pit. Ground water will also be pumped in the area of the excavation. That ground water will be stored temporarily on site in a temporary storage site. That will be disposed of off site at a hazardous waste licensed facility.

Some of the highlights of the action memoranda, I think, are important to talk about briefly here. That

the objectives we are trying to remove what we believe is an existing threat. It is a source of ground water contamination. As I have mentioned, there are some low levels of volatiles being admitted in that area. We are also providing the streamline RI/FS. The RI/FS is again, it's a CERCLA term that is used to define a series of steps and risk base management approach towards remediation, the treatment goals that we are -- the thermal desorption process unit are basically the New York State TAGM value. TAGM stands for Technical Action Guidance Memorandum. They are guidelines that have been established by the State of New York for the cleaning up of soil.

Our target compounds at the site are TEC (tricloroethylene); 1,2DCE (dichloroethylene); and also vinyl chloride. They are chlorinated solvents that were probably used a long time ago at the base.

We are estimating at this point approximately 23,000 cubic yards of material, roughly 35,000 tons of soil will be excavated and processed through our processers, then returned back into the ground.

As I mentioned, we are talking about what we call low temp thermal desorption. This is a process which the soil is heated and the volatiles are allowed to -- the chlorinated solvents we are talking about the

volatiles, they are allowed to basically evaporate or vaporize to the gas phase, swept through the processers and then destroyed or controlled in some kind of an after burner system prior to discharge into the air.

Just some milestones on the documents we described which is the Action Memorandum which is a decision document that determines what a selected alternative will be. In this case, we submitted a draft on December 3rd. We have agreed to submit a final for more additional comments from EPA and/or the State. That was submitted in May. Following that, we prepared plans and specifications. We call it Section C to describe the work that will be done, how it will be done at the site. That document was submitted final on June 17th. At this point, the Army of the Huntsville Division has turned the work over to the Omaha District. The Omaha District has a remedial contract with a contractor. They are now in the process of identifying a remedial contractor that will perform the work, finalize the contract terms and conditions, cost estimates, etc. Following all that work, the contractor will be on site. We expect it to be sometime in October of this year.

The area that we are concerned with is an area at the ash landfill site. We will call that the bend-in-the-road. You can't really see it that well, but it's in

your handout. It's aptly named because it happens to be the majority of the soil that we are having -- wanted to do some treatment or in this area called the bend-in-the-road, just for bearing, north is that way. This is roughly the Depot boundary, Seneca Lake is to the west which would be this way, and the main portion of the Depot would be to the east, that way. The big picture map we are talking about right here, you can see this little road bends here and that is a real good give away as to where it is. That little bend would be right -- right with here. So that's the area we are talking about.

We have done fairly extensive amounts of investigation for work soil gas, soil bores, sill steps, several ground monitoring wells. All of that information has been assimilated, interpreted, and we have identified two areas; Area A, Area B, that we believe are responsible for the impacts to the ground water and is the focus of our removal action.

The process flow diagram that we agreed was probably the most effective way to deal with this problem begins by some excavation, dewatering, to control the amount of water that is in the pit. When the soil is removed, we don't want ground water splashing all over the place. Again, the water will be stored temporarily

on site and disposed of off site in a licensed treatment facility. The soil will go through the segregation operation, large debris that can't be processed through the unit will be sprayed off. That debris will then go through some type of wash operation to make sure that there is no residual material attached to that. The soil then will be stockpiled temporarily on site and processed through the thermal treatment unit at the rate that the unit can deal with it. The air will then go through the baghouse to remove particulates. Following that, through the thermal oxidizer to reduce the oxygen to an acceptable level of discharge to the stack. The clean soil will be stockpiled temporarily and sampled to confirm the target levels have in fact been reached. Once we have the analytical data back from the lab, that soil will then be returned to the excavation. If the data indicates that the soil has not been satisfactorily treated, it will then be reprocessed back through the thermal incinerator until we reach our treatment goals.

To provide you with a little bit different depiction of what the low temperature thermal desorption unit kind of looks like is this from Canonie Environmental. A low temperature desorption process is pretty much the same type of unit. You have the feed hopper. That's what feeds into the rotary kiln, a large

direct fired rotary drum where the unit --where the soils are allowed to tumble through the unit being cleaned. As it gets to the end, the cleaned soils are then discharged through the conveyor to the stockpile storage. Then, if necessary, reprocessed. The air then follows through a series of air flow equipment as mentioned, the baghouse particulates removal. In this particular unit there is a venturi scrubber, some type of a wet scrubber. There is also, in this case, using activated carbon to control emissions.

And that process looks like this when things are moving. It's depicted here. Here the baghouse, as I mentioned, the feed conveyor, the clean soil in this case is discharged through the conveyor until -- to the cement mixture. In this particular case, the soils are solidified with the cement because of the high concentration of metal at this particular site. Which is unnecessary here.

I would also like to take a minute just to touch briefly on the status of the remedial investigation at the ash landfill site which is the same site that we are performing this expedited soil cleanup. We still have to go through the process of doing an RI/FS but the Army has -- because we have identified the area, the Army has determined that it's worthwhile to be aggressive and

clean up the soil that we know exists as a threat.

MR. HEALY: Let me interject. For those of you that might be interested, the ash landfill, as all the remaining SWMUs that we have discussed, at one point in time was in the preliminary assessment phase; which is the gathering of information. After that, there is enough suspicion that a site investigation was deemed required. Site investigation purpose is simply to confirm or deny a suspicion following a site investigation; if there is reason to go on, you do the remedial investigation and feasibility study. The purpose of which is to remediate whatever contamination may be down there. We are close to the end of the remedial investigation and the feasibility study. We have found these areas that are causing the problem which is why they are now going ahead with the remediation. Hopefully, that gives you a little bit of extra perspective.

MR. DUCHESNEAU: I think, if you look at the handout that is called a SWMU classification flow chart, this site is probably furthest along in that process. In other words, it is getting to the end of that classification flow process. We submitted the draft final remediation investigation on July 9th. It's been currently being reviewed by the EPA. The feasibility

study is scheduled for submittal at the end of next week.

The other important issue here related to that site is the ground water plume that we have identified as being present. Again, just to get your bearings here. The area at the bend-in-the-road is the area that we are concerned with. This soil remediation, as we would expect, coincides exactly where the areas of high ground water contaminants are located. I might also mention that the removal action of soil remediation will, to a large degree, eliminate the ground water problem at that area because, also in terms of excavating the soil, ground water will be removed and pumped, then treated. So, there will be some decrease in the contamination of ground water as a result of the soil process that we are and doing that I have already discussed.

We are looking at several options to control ground water. One of which involves the installation of trenches to collect ground water. The ground water will then be discharged to a main sump. This is just preliminary. I wanted to give you an idea of what kind of remedial strategies we are thinking about for ground water here. I have depicted areas of what we call the source area that is the focus of the soil remediation. I have overlaid the ground water plume. I think you can see clearly that there is a nice fit for where the --

where those higher levels and in-ground water coincide with the highest level of soil impacts.

The ground water collection trenches would be installed approximately in that area if it is determined necessary to do that. That is discharged to the main sump. That water will then be pumped to a sump to a treatment facility if necessary. It has potential to get the lower end of the plume, the lower concentration of ground water contamination down at the toe of the plume.

The type of treatment process that we are looking at and we will be performing a treatment study on involves UV oxidation which in this case ground water will be pumped from the trenches to some type of an equalization tank or settling tank to try to settle out the large particles from the ground water. Typically, we install an in-line filter to remove the smaller particles trapped in the ground water. Potentially a hardness removal will be required to protect the UV oxidizer which is a main destruction process removing TCE or DCE from the ground water. So that may be a possibility. We will know further what will be required after we do our treatability study. We are in the process of doing that now.

The process of destroying the TCE and the DCE dissolved in ground water involves the addition of

peroxide a generation of ozone in the contact chamber. It's a liquid oxidation process. It occurs in the liquid phase. There are no air discharges other than some ozone which can be controlled to a deoxygenator prior to discharge. But the advantage of this technique, the destruction of the liquid phase, there is no transfer to the atmosphere. It is possible that we may need to add liquid carbon and borsor (phonetic) after that as a populace to get the concentration down to the lowest level for the ground water to meet ground water standards. Then we expect to discharge this water, the surface water, possibly to a drainage ditch that eventually will lead to surface water body nearby. That water will of course be clean.

The other site that we are moving along on, the RI/FS process rapidly is the open burning ground. We submitted the draft final RI to the regulators for review. We have received comments back.

Randy, you are currently in the process of responding to comments. We expect this document to be actually, I think, we have submitted it already; right?

MR. CHAPLICK: What?

MR. DUCHESNEAU: The OB RI, that was submitted?

MR. CHAPLICK: Right.

MR. DUCHESNEAU: They submitted the final to

the regulators earlier this month, the feasibility study. They submitted a draft to the regulators on May 5th. We are currently awaiting comments from EPA.

The issues related to that site involves some areas of metal contamination, particularly lead. We have found high -- relatively high concentration of lead in some of the berms and in some of the areas around the area of Reeder Creek. That's pretty much all I have there.

Are there any questions?

MR. COOL: How much lead is along Reeder Creek?

MR. DUCHESNEAU: The concentrations of lead in sediments there, I believe, are relatively low. But they did exceed some of what they call the limit at that point for maximum vertebrae protection. I think they were the part per million type range. I don't remember the exact number.

MR. COOL: Has the area of the creek where it meets the lake been tested?

MR. DUCHESNEAU: No.

MR. HEALY: How many places have been tested between the OB and the OD grounds in the lake?

MR. DUCHESNEAU: I would say probably five to six sampling locations from the site to the lake.

MR. COOL: If it was washed to the creek, it

would go to the outlet and probably stay there.

MR. HEALY: Which outlet?

MR. COOL: Seneca Outlet.

MR. HEALY: I don't know. Would it -- would you expect it to make it that far?

MR. COOL: What would happen if it a precipitation ever washed off the surface in the creek and proceeded down the creek to the point where -- right where the stream levels out and --

MR. HEALY: It would settle out. It would stay in supported by the ground water or the water in the creek long enough to settle out. How far is the lake from there, Randy? How far down the creek do we get?

MR. DUCHESNEAU: It starts to go off post right where it crosses over 96A.

MR. CHAPLICK: The only place which we found was the OB-OD facility high level.

MR. DUCHESNEAU: The sampling point further down from that point, you are okay. Our approach was, if we found lead or whatever metals or whatever from that consistently down along Reeder Creek, then we would then feel as though there were a need to sample at the mouth of Reeder Creek and Seneca Lake. We found one hot spot. And hot spot probably isn't the right term. One spot right adjacent to the OB-OD area. That area had some

elevated contamination of metals. From that point down, we didn't find that. So the philosophy was, you know, there is no need to go sample the mouth at that point.

MR. COOL: This so-called hot spot, how did that lead get there, by precipitation events washing across?

MR. DUCHESNEAU: Runoff from the OB-OD ground.

MR. COOL: Came suspended after strong precipitation event?

MR. HEALY: It might not have stopped.

Randy, did we find lead in the sample of the pond puddles and things out there?

MR. CHAPLICK: On site, we had lead, yes.

MR. HEALY: Randy, did we find it in the water sample?

MR. CHAPLICK: In the sediments. It doesn't last that much in the water.

MR. DUCHESNEAU: It's not in the water. The water meets all the criteria.

MR. BATTAGLIA: We sampled the pond and surface puddles.

MR. DUCHESNEAU: That's something we can look at; something we can look at that might be worthwhile.

MR. COOL: Maybe one test down there, perhaps just before you get to the bridge.

MR. DURST: It's probably very seasonal in the spring when you get the heavy flow. And I am sure one of the peculiarities in the Reeder Creek is if you watched the creek, I think in late summer you would see the highest level.

MR. HEALY: One other thing, when you talk about -- when this came up before, is sampling at the mouth of the creek the right place to sample? Are there other places in Seneca Lake that we may be testing? Does that lake itself push the sediment someplace that we want to look at? We are of the opinion at this time, at least, that we wanted to first look at Reeder Creek, get some information back in, apply that information, find out if a tremendous amount can make it, to reach the creek from that point and go into the creek.

MR. COOL: Reeder Creek does have a dull area somewhere. It's shallow. The water is shallow because of the outloading of the creek.

MR. HEALY: But do you sample at the mouth? Do you sample along the creek?

MR. COOL: You are the engineer and I am the citizen at this point.

MR. DUCHESNEAU: You have approximately three miles of the creek between the OB grounds and the lake. Chances are it would not carry over the entire three

miles without being seen through us.

MR. HEALY: You don't need anything as to how large the Beaver dam is to the section stored to pick up the precipitation events, enter Reeder Creek, make it all the way down to the lake.

MR. COOL: When it enters, would it be spring, during spring run?

MR. DUCHESNEAU: There is variations. There would be a large variance of the peculiarities; ice that would enter the creek. At that time, all of it would have metals or wash it down because it cannot change paths. It is not iron selective. So the particularities that would fall out at the interim depositional environment would be picked up by the samples especially by the part per million number.

MR. COOL: Only if there was areas where perhaps the water is proceeding downstream as well as up in eddies and that sort of thing; otherwise, it wouldn't carry.

MR. DUCHESNEAU: Which I am sure that there are small eddies, areas along there.

MR. COOL: I don't know if that creek is caused by geography or geological sound bedrock.

MR. HODDINOTT: It's a pretty straight shot, you know. It's not much until you get down near the --

near on the East Lake Road.

MR. DUCHESNEAU: What I would say, we consider that we talk it up. See if there is really a need to do that. It's not something we can't do.

Are there any other questions other than that? I guess --

MR. CROOK: My name is Steve Crook with Law Environmental. I have a question. Are there any bedrock wells as part of the area we were just discussing or the one previous to that?

MR. DUCHESNEAU: We have an ash landfill site. We have four or five layers of bedrock wells, shallow bedrock wells and also deep water wells at the OB ground site. We had installed screen wells in what we call the weather shale portion of the bedrock. Again, the idea here was the open burning ground, if the weather shale wells indicated that there was a potential problem, then we would follow that up with some deeper bedrock work. The weather shale wells came back clean. And therefore, the conclusion was there was no need to do additional bedrock investigatory work at the ash landfill site.

Followed by a similar type of a brief we do some bedrock investigation packer test to try to identify in the zone in the deep bedrock portion that would yield water, the bedrock is very tight, it does not yield

water. What water we found was clean. So, the result of that bedrock investigation indicated that the ground water contamination is penetrated into the -- into the bedrock which is the shale.

MR. COOL: Your trench developed there, would be along the top of the bedrock?

MR. DUCHESNEAU: Right. That would be in the component portion of bedrock. We would excavate the shale as much as we could with excavating techniques. What we call the component rock, install the trench in that portion, take up to about a foot below the surface.

MR. COOL: Would be something like a French drain?

MR. DUCHESNEAU: Exactly, with a pipe in it. To intercept that flow of ground water perpendicular to the trench.

MR. ABSOLOM: I would love to open up to any general questions that anybody might have at this point.

Anybody have any other questions?

MR. DURST: I would just like to make a comment that I in general am quite impressed by the thoroughness of the study. As I said in the past, in some ways, as a resident, I am pleased to say that I feel a lot better as far as DEC and EPA oversight on this kind of activity.

I guess as a taxpayer, I think it's a little

bit of an overkill. I think more money is being spent that may be needed. In many respects, I am not sure maybe many of our back yards couldn't stand this kind of abuse.

MR. HEALY: Doctor, in response to that. I would like to point out what the Army is doing is what we are required to do based on law. It's not something that we are doing because we are enjoying doing this.

MR. DUCHESNEAU: I believe what we are trying to do is the most cost effective approach. And I understand that we have spent quite a bit of money. And the costs are extremely high. As you might know, particularly when you are talking about 350 buildings and lakes. You are talking about a wide range of variety of chemicals, organic or inorganic compounds. You are talking about drilling costs, sampling costs. I mean, it's just -- I can assure you that we have tried in our best effort here to try to make this streamlined and cost effective as possible. I mean, that's the numbers that they are only because that's what they are. I can't control laboratory costs type of thing.

MR. DURST: I can appreciate that.

MR. CHAPLICK: It's a process that has grown, but not at this particular site as the sites all over the country. The way Congress passed the law and EPA has

written regulations.

MR. COOL: There was discussion of secret records disposal areas. Has anyone qualified from a scientific end of that, is that end of the secret documents being pursued as a possible lead to certain waste disposal areas?

MR. BATTAGLIA: Well, I think he is talking about the other sites too. Primarily, as far as we talked, I think now we are getting -- I mentioned classified document incinerator where we incinerated papers in that area. We have identified actually three distinct areas; one is a burial pit which was excavated in '86. When they did the 800 row, cleanup materials from both those sites were disposed of in South Carolina which is a radio active waste burial area. That was all low level residue in the 800 row. No. 63 where they buried miscellaneous parts, metal parts, we dug that, that was drum, part of SEAD No. 12 which is two areas which the waste water training and burial pit. In and around that area, we found other things, things had been buried, things with geophysical works. When we were doing all of that up there, they were either parts or training items. And we didn't find anything as far as drums in the preliminary field work. We did not find any radio active contaminants. And we do still have some lab

work going on. And we will have data, well samples, that are being still processed in the labs, and also soil data, soil samples, that are being processed.

MR. COOL: Those locations were discovered through a search of the classified documents or were they discovered otherwise?

MR. BATTAGLIA: Really, otherwise. We did -- we have done some of this work with the -- we have a couple of documents from them that we have to send up to our headquarters. Whether or not some of -- all of the information in these documents will be released, I personally think it's all releasable. Based when they gave it to us, Mike was there. He doesn't have any clearance to see any classified documents. I don't think they actually saw anything that was classified. They did give us a list of information about the history of the site. Actually, a lot of this information can be justified why it should not be contaminated. Probably by the next TRC, we will get approval from headquarters. It will be a lot simpler if they give out what they gave us instead of kind of beating around the bush about the history of the area. We did dig up anywhere, all areas that we thought there might be something buried. We found a number of things. Some of the pictures in the field are a blessing on that from the -- from the higher

up pictures are worth a thousand words. It's a burial of the parts. There is also a report of all the field data and all the reports is going to be public knowledge, just like any other site out there. Some of the history also goes back to the forties and fifties when we had -- when we got somebody at Sandia involved in things out in other parts of the country. I actually talked to somebody that worked here back in the forties. Things about waste water tanks. We sampled and didn't find -- identify anything. We found out it was routinely used as a waste water tank. All these reports that I am talking about and the information will be released when we get headquarters approval to do that. Both from Public Affairs side of things and the confirm or deny situation; and both from the classified people and legal people. And the decision really is up to their -- up to them about all the historical information.

MR. HEALY: The half -- the other half of the question would be: Do you anticipate that there are any classified documents remaining that might be proof or provide other evidence as to burial sites, in your opinion?

MR. BATTAGLIA: No.

MR. HEALY: No is the answer?

MR. COOL: Very short, too.

MR. HEALY: I may live in Alabama, but I know how to interpret New Yorkers.

MR. DUCHESNEAU: I have talked with people in Sandia. They have clearance. They have certain -- some of the classified archives, the process they have gone through, that involves identifying documents. These are like forty, fifty CERCLA documents. Year documents. They pull them out of the archives. They go through a series of steps to get them declassified. Yes, there have been people at Sandia who have reviewed formerly classified documents and made them unclassified and that is a lot of the sources of what Randy is now discussing with you.

MR. HEALY: We don't care if it's unclassified or not. What we are doing is looking for waste problems; whether it's classified waste or not. That's where I am coming from. I don't remember if they are classified or not classified.

MR. DUCHESNEAU: As another follow-up to that, the areas that are known to have activities associated with the use of classified material have been thoroughly investigated by us. We have done our geophysical. We have identified the whole process that we described earlier has been done at the sites. As far as we know, that we have done thorough investigation of things that

would have been buried out there.

MR. HEALY: I think more directly, we have examined every document that we know is available, that we know is involved in the investigation.

MR. COOL: Meaning the Army?

MR. CHAPLICK: Well, it's been an Army base. What other source --

MR. COOL: We meaning your company.

MR. HEALY: Yes.

MR. CHAPLICK: We do not have security classification. We do not have looked at such documents.

MR. DUCHESNEAU: But again, the Sandia people have for us.

MR. ABSOLOM: Are there any other questions? If not, what I would like to do is establish the date for the next TRC for those of us with calendars. It is once a quarter, November time frame would be appropriate. I would like to go through, around the table, and see if possible the 16th of November, it's a Wednesday.

It would be here. Anybody has -- does anybody else have a conflict with that date? Kathleen has a conflict. The other reason it might be a good time, at that time the activity at the remediation site, at the removal site, would be ongoing. It may be -- at that time, maybe we would be able to give perhaps give a tour

of the site or at least take the TRC so they could in fact see what's going on to get a first-hand view of that area to see what's happening.

MR. COOL: Bring a VCR and save the tour, Steve.

MR. ABSOLOM: Does anybody have a problem with the 9th?

I recommend we do it on the 9th of November at 12:30 here at the NCO Club. The invitation letters will identify if we in fact put the tour together so you can dress appropriately. November, it could be a little bit cold, possibly snowing. Okay. If not, it's the 9th of November.

I would like to thank everyone for coming. The meeting is concluded.

For anyone who has comments on the removal action, there is a 30-day period that you can send your comments or questions, send them to Mr. Whitaker here at the Depot. We will get -- we'll address all the comments and questions.

The other point I would like to make is that there is a public meeting tonight and that everyone is invited to the public meeting. We are going to present the plan for the removal action at the ash landfill. So all of you are welcome to attend.

September 10th is the 30-day period.

The meeting is done.

* * * * *

REPORTER'S CERTIFICATION

I, Mary Grasek, do hereby certify that I reported in stenotype shorthand the Technical Review Committee meeting held on the 17th day of August, 1994;

That the transcript herewith numbered pages 1 through 72 is a true, accurate and correct transcript of those stenotype shorthand notes.

DATED AT: Rochester, New York

this day of September, 1994.

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Next TRC 11/19/94
1230

EIGHTH MEETING OF THE TECHNICAL REVIEW COMMITTEE

SENECA ARMY DEPOT ACTIVITY

17 AUGUST 1994

REMEDIAL INVESTIGATIONS

STATUS UPDATE

ASH LANDFILL
AND
OPEN BURNING GROUND
SITES

REMEDIAL INVESTIGATIONS

- RI REPORTS - DRAFT FINAL DOCUMENTS HAVE BEEN SUBMITTED. IF REGULATORS JUDGE RESPONSES TO PRIOR COMMENTS AS ACCEPTABLE, DOCUMENTS WILL BECOME FINAL.
- FS REPORTS - CURRENTLY DRAFT DOCUMENTS ARE BEING REVIEWED.
- RECORDS OF DECISION STILL EXPECTED BY EARLY ~~FY~~ CY 1995.

SOLID WASTE MANAGEMENT UNITS

STATUS UPDATE

SENECA'S

HIGH PRIORITY AREAS OF CONCERN

SITE INVESTIGATIONS

- DRAFT DOCUMENTS HAVE BEEN SUBMITTED FOR REGULATORY REVIEW.
- FINAL REPORTS ORIGINALLY EXPECTED BY NOVEMBER 1994... MORE LIKELY WILL BE EARLY 1995 DUE TO HIGHER PRIORITY DOCUMENT REVIEWS (I.E. RI'S AND FS'S).

SOLID WASTE MANAGEMENT UNITS

STATUS UPDATE

SENECA'S MODERATE PRIORITY AREAS OF CONCERN

SITE INVESTIGATIONS

- FIELD WORK RECENTLY COMPLETE AT ALL. PRELIMINARY DRAFT REPORT DUE SHORTLY.
- FINAL REPORTS ORIGINALLY EXPECTED BY LATE 1994 OR EARLY 1995... MORE LIKELY WILL BE FEBRUARY TO MARCH 1995 DUE TO HIGHER PRIORITY DOCUMENT REVIEWS (I.E. RI'S AND FS'S).

SOLID WASTE MANAGEMENT UNITS

STATUS UPDATE

FINALIZATION OF THE SWMU CLASSIFICATION STUDY

LIMITED SAMPLING

- FIELD WORK COMPLETE.

REPORT FINALIZATION

- REPORT FINALIZED FROM AN ARMY VIEWPOINT. NYSDEC AND EPA HAVE SOME CONCERNS THAT WILL REQUIRE ADDITIONAL WORK.