verizon

GTE Operations Support Incorporated
600 Hidden Ridge Drive (HQE03E60)
Irving, Texas 75038
(972) 718-4621

October 31, 2002

Mr. Robert Stewart
Region 1
Division of Environmental Remediation
New York State Department of Environmental Conservation
SUNY Campus Loop Bldg. 40
Stony Brook, New York 11790

Re: Former Sylvania Electric Products Facility, Hicksville, NY
Soils Remediation Program Work Plan
Site Number V-00089-1

Dear Mr. Stewart:

Enclosed are the September, 2002, comments received from the New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) together with our responses to those comments. Also attached is revision 2 (October 2002) of the Soil Remediation Program Work Plan for the Former Sylvania Electric Products Facility in Hicksville, NY incorporating the changes resulting from the Agency comments. Three-Dimensional maps depicting areas of excavation will be forwarded to the agencies following receipt of the analytical results from the soil boring program currently underway. In addition, revised Figures 1 and 3 will be forwarded at the same time.

If you have any questions or require additional information, please do not hesitate to contact me. I can be reached at (972) 718-4621, via facsimile (972) 719-0065, or e-mail at alvin.ludwig@verizon.com.

Sincerely,

Alvin E. Ludwig
Vice President - Controller

cc: Barbara Youngberg
Division of Solid and Hazardous Materials
Bureau of Pesticides and Radiation
New York State Department of
Environmental Conservation
625 Broadway
Albany, New York 12233-7255

William Gilday
Bureau of Environmental
Exposure Investigation
New York State Department of Health
Flannegan Square, Room 300
547 River Street
Troy, New York 12180-2216

B-1

Denise D'Ambrosio, Esq.
New York State Department of
Environmental Conservation
200 White Plains Road, 5th Floor
Tarrytown, NY 10591-5805

Jean M. Agostinelli
GTE Operations Support Incorporated
600 Hidden Ridge Dr. (HQE03E75)
Irving, Texas 75038

Carol Scholl
URS Corporation
One Continental Towers, Suite 1000
1701 Golf Road
Rolling Meadows, IL 60008

Gerard Burke
New York State Department of
Environmental Conservation
625 Broadway – 12th Floor
Albany, NY 12233-7013

Tim LeBarron
New York State Department of
Environmental Conservation
625 Broadway – 12th Floor
Albany, NY 12233-7010

Mr. Peter Witkowski
Department of Public Works
Nassau County
1550 Franklin Ave.
Mineola, NY 11501

Mr. Jeffrey Goldstein
Air Techniques Incorporated
70 Cantiague Rock Road
Hicksville, NY 11801

Michael W. Ander
URS Corporation
One Continental Towers, Suite 1000
1701 Golf Road
Rolling Meadows, IL 60008

Pam M. Cox
URS Corporation
One Continental Towers, Suite 1000
1701 Golf Road
Rolling Meadows, IL 60008

John Lovejoy
Bureau of Water Supply Protection
Nassau County Department of Health
240 Old Country Road
Mineola, NY 11501-4250

Kevin Carpenter
New York State Department of
Environmental Conservation
625 Broadway – 11th Floor
Albany, NY 12233-7015

Ms. Doreen Banks
Department of Recreation, Parks &
Support Services, Nassau County
Eisenhower Park Administration Bldg.
East Meadow, NY 11554

Ms. Jane Houdek
c/o Lorna Goodman
Nassau County
One West Street
Mineola, NY 11501

Mr. Stephen Spry
612 East 47th Street, 31st Floor
New York, NY 10017

Comments from Robert Stewart (September 24, 2002), NYSDEC, DER, Region 1
Telephone Number: (631) 444-0244
NYSDEC Site Number (V00089-1)

Comment:
1) Vertical and Horizontal Extent of the Excavation, Response to Comment 1
Due to the new soil data that will be retrieved under the soil boring work plan, new figures showing the extent of the excavation should be prepared as a separate submission after this new data becomes available. These revised figures would have to approved by the Department.

Response:
Agreed.

Comment:
Even though these revised figures will be submitted later, the revised work plan should summarize all the currently available sampling results which exceed the cleanup goals by the following categories: 1) radiological, 2) tetrachloroethene and trichloroethene, and 3) nickel. Due to the number of samples involved, it may be appropriate to submit three separate figures which illustrate the detections above the cleanup objectives.

Response:
We agree with the concept of updating the figures. New data collected during the Fall of 2002 will supplement the existing data and enhance our knowledge of the radiological and chemical conditions at the Site prior to remediation. We thus believe that a further revision would be of limited value now, but would be appropriate when the new data have been received. Following analysis and validation of the new data, new figures will be prepared in the categories of: 1) radiological, 2) tetrachlorethene and trichloroethene, and 3) nickel. The new figures will be submitted as an Addendum to the Work Plan.

Comment:
Please note that when you do eventually prepare the new figures showing the extent of the excavation, these figures should be in more detail than the colored map showing the depths of the proposed excavation which was in the jacket of the March 2002 work plan. The revised figures should include the soil boring locations and sample results which are being used to define the initial excavation.

Response:
Agreed.

Comment:
Looking at the figure showing the approximate depths of initial soil excavation, it appears that this figure does not include some samples which exceed at least one of the cleanup goals. Besides the sampling locations which were brought up in the Department's comments on the soil boring work plan, the following additional sample points should be reviewed before preparing the revised figures:
a) SB-64, proposed depth = 1'

Radiological:
SB-64 (18"-24"), U-238 = 79.99 pCi/g
Chemical:
SB-64 (96"-108"), PCE = 17 ppm

b) SB-98, proposed depth = 1'

Radiological:
In SB-98 (12"-24"), impacts deeper than the proposed depth are expected. Gamma screening results of 12,827 - 41,722 cpm for this interval suggest a significant impact above the clean-up goals.

c) SB-67, proposed depth = 2'

Chemical:
SB-67 (72"-88"), PCE = 170 ppm

d) SB-134, proposed depth = 0'

Chemical:
SB-134 (0'-4'), PCE = 2.5 ppm

e) SB-120, proposed depth = 4'

Chemical:
SB-120 (4'-8'), PCE = 92 ppm
Radiological:
SB-120 (12'-16'), U-238 = 136.3 pCi/g
A data qualifier of "JI" for this result indicates an estimated value. These numbers should be verified in the field.

f) SB-119, proposed depth = 4'

Radiological:
SB-119 (12'-16'), U-238 = 217.9 pCi/g
A data qualifier of "JI" for this result indicates an estimated value. These numbers should be verified in the field.

Response:
Additional borings during the October 2002 Soil Boring work will address the areas mentioned in this Comment and the information will be incorporated in the new figures as discussed in the previous Response.

Comment:
2) Your Response to Robert Stewart's Comment #9

a) Nickel Analysis in Closure/Verification Samples

This comment concerns comment # 9 on the January version of the work plan and your response to that comment regarding nickel analysis in the closure/verification sampling.

Nickel was reportedly used as a surface cover for many of the fuel elements. Historical information indicates that the liquid process wastes contained both uranium and nickel. (See GTEOSI's July 11, 1996 letter detailing historical operations at the site.) Therefore, we should expect some nickel in almost all areas with residual radiological contamination. Consequently, all verification samples must include sampling for nickel. (Please also see Gerard Burke comment #1.)

Response:
Agreed; nickel will be included in the verification sample analyses.

Comment:
b) Soil PID Screening of Verification Samples

PID screening of the verification samples to determine which samples are sent for off-site analysis will not be acceptable. (Please see Gerard Burke comment # 1.)

Although, the Department will not allow field screening of the verification samples to determine if these samples should be analyzed for VOCs, you make wish to use field screening for VOCs to give a preliminary estimate of how deep to excavate to remove the chlorinated solvent contamination. If you do, the Department would consider an action level of 50 ppm on the headspace sampling to be too high. The results in the supplemental investigation illustrate this point. For instance, SB-111 (0'-4') had only a 24.6 ppm reading on the headspace sampling while the VOC sample analyzed at the off-site laboratory detected 18 ppm of PCE. The Department would recommend an action level of 10 ppm on the headspace screening. However, the actual action level for this preliminary screening would be up to you since verification sampling will performed later to determine whether the cleanup objectives have been met.

Response:
On-Site screening is a necessity to guide selection for off-Site analyses. Because the PID readings can be influenced by soil moisture to produce false positives, an action level of 10 ppm will result in a large number of samples sent off-Site needlessly. We propose an action level of 25 ppm; if several PID readings in the 20 to 25 ppm range are found in one area, samples from that area will be sent off-Site for analysis. As noted, all samples used for verification of final status (as distinguished from those used during the work for screening purposes) will be submitted for off-Site analyses.

Comment:
4) Air Treatment System
The Department has received the completed Air 100 Form. However, details on the proposed air treatment system, including the proposed monitoring of the system, needs to be included in the work plan.

Response:
Agreed. The following will be included in the Work Plan:
The enclosure and air handling system have been designed for a nominal flow rate of 13,000 cubic feet per minute (CFM). This flow rate is adequate to maintain a capture velocity of a minimum of 100 feet per minute (FPM) with the main enclosure door fully open, and over 300 FPM with the main enclosure door lowered to within 4 feet of totally closed. The air velocity at the main enclosure door will be maintained at 100 fpm during excavation and loading activities in the enclosure. If the air handling system fails during these activities for any reason, the door/airlock will be fully closed. Air velocity entering the door/airlock will be measured periodically using a vane-type or other appropriate velometer capable of measuring air velocities of 0-400 FPM. Differential pressure (negative pressure) may also be monitored using a differential pressure manometer.

Comment:
5) Schedule, page 2
Please make appropriate changes to the schedule.

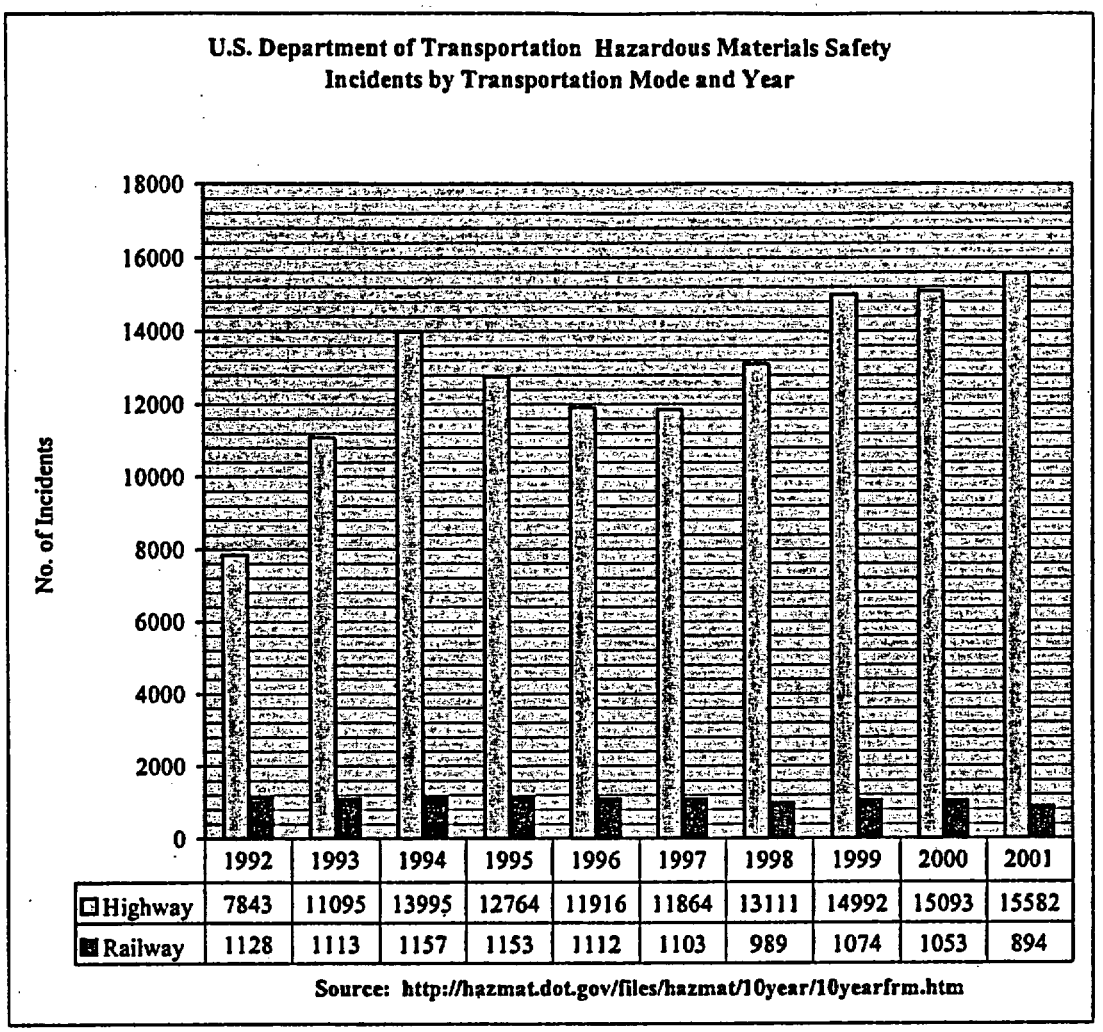
Response:
Agreed.

Comment:
6) Transportation of the Wastes, page 23
Please discuss the various other transportation options to ship the soils to Utah. The various shipping alternatives should be evaluated.

Response:
The Transportation of the Wastes appears on page 27 of the March 2002 Work Plan.
Several transportation options for the waste stream were considered. The packaging and transportation options evaluated are included in the attached Table 1, Packaging and Transportation.

Truck vs. Rail Incident Rates
In the selection of the methodology and transportation conveyance for the project, the incident rate for trucking versus rail transportation was considered.

According to the US DOT statistics, the number of truck crashes has been steadily increasing while train crashes are steady, if not slowly decreasing. Although trucks and railroads carry almost the same amount of hazardous materials, the trucking industry has nearly 14 times more hazardous material incidents. As an example, in 1997, combination trucks hauled about 96 billion ton-miles of hazardous materials, while railroads hauled an estimated 95 billion ton-miles of hazardous materials (Source: U.S. DOC Truck Inventory and Use Survey (TIUS) and FHWA Highway Statistics, ICC/STB Waybill Sample). While the per ton-miles hauled of hazardous materials for the trucking industry and railroads are similar, it is clear from the following table from the USDOT that the number of highway incidents far exceeds those of rail and, therefore, highway transportation creates a much higher level of risk to the public.



The prospect of shipping the waste exclusively over-the-road was categorically discounted due to the high number of truck trips required to maintain compliance with weight restrictions and the associated risk with the conveyance option (4 over-the-road shipments to 1 rail car).

After consideration of all the alternatives listed, it was determined that the use of soft-sided Lift-Liner™ packages (Option 8 from Table 1) and transportation via rail conveyance was the optimal solution for the project. The packaging provides minimum tare weights for maximum content capacity by weight. This allows for the minimal total number of packages and conveyances to be transported via high weight capacity rail gondolas for the more than 2,000 miles trip to the disposal site. The packaging provides the best waste management approach for the shipment of the project material.

Application of reusable containers is also a viable option, but the reduced content capacity by weight attributed to the package tare weight and thus overall reduced payload (attributed to the over-the-road restriction for the short drayage to the local siding for rail conveyance to disposal), increasing the quantity of packages required discount the use of intermodals as the primary package. Intermodals are, however, being used for limited debris and larger items.

Comment:
Please explain why you selected shipment of the wastes at the near railroad spur on West John Street as the preferred transportation alternative.

Response:
Various rail sidings were evaluated for the transfer of the truck hauled packages into rail conveyance equipment.

Rail siding options evaluated for the project included:

- Farmingdale (in Queens)
- Huntington (in Queens)
- Maspeth (in Queens)
- West John Street Team Yard (Hicksville, see Figure 5 of the Soil Remediation Work Plan)

The close proximity of the West John Street Team Yard in Hicksville yields the fewest over-the-road miles for the trucking haul of waste packages to transfer for shipment to Utah by rail and, thus, the least risk to the public. Additionally, the close-proximity allows project team members to: monitor the activities at the rail siding, provide support for loading operations, respond quickly if needed at the rail siding, and readily communicate between the project Site and loading operations at the rail siding. Also, use of the controlled "freight premises" only siding reduces potential public exposure and risk associated to alternative increased highway miles.

Comment:
The potential radiological exposures to the public from the shipment by truck from the site to the railroad spur should be evaluated. Additionally, potential radiological exposures to the public from the loaded railroad cars should be discussed. The precautions to ensure the safety of the communities surrounding the route should be discussed.

Response:
A. Precautions to ensure safety to surrounding communities

The uranium and thorium contaminants of concern at the Site yield a low external dose-rate potential, and are primarily an internal hazard attributed to their alpha radiation decay. Material packaging addresses the appropriate containment for contamination control, and eliminates the prospect of direct exposure to the public by the internal uptake potential of the alpha emitters.

Section 8.3 of the Work Plan, Material Management, pp. 26-28, delineates the controls and methodology to contain the waste and inhibit exposure. Key elements include:

- Security / limited access to the remediation Site;
- Positive control at the rail siding on West John Street to eliminate public access and inadvertent exposure;
- Segregation of clean from impacted material as practical;
- Containment / adequate controls during impacted material excavation;
- Immediate load-out of packages with impacted material using Lift-Liners™ (appropriate packages waste type and conveyance mode per DOT);
- Secured staging of waste packages on the remediation Site;
- Appropriate screening / radiological surveys of packages prior to loading onto trucks for shipment;

- Appropriate securing of packages on the flat-bed trucks;
- Covering of packages during truck conveyance to the rail siding;
- Prohibition of staging waste packages at the rail siding;
- Pre-use inspection of high-sided gondola rail cars;
- Placement of a 10-mil polyethylene liner in the gondola cars prior to loading;
- Appropriately trained crew performing the trans-loading of packages directly from the transfer trucks to the rail gondolas;
- Closure of the 10-mil polyethylene liner after completing the package load-out of the rail car, using a "burrito wrap" fashion and securing with elastic "bungee" cords prior to shipment; and
- Routine switch-out of loaded rail cars for empties to minimize the total packaged source term at the rail siding.

The methodology applies the ALARA principles of time, distance, and shielding, appropriate packaging of the low-toxicity material, limiting direct access, controlling the route for transport, providing additional shielding via high-sided rail gondolas, and limiting the total quantity of transport events by use of high weight-capacity rail service.

B. Potential exposure to public from waste soil transportation

With the precautions described above, the potential for public access or exposure to the waste materials during transport and trans-loading is very slight. The potential exposure to workers and the public during transportation activities at the Site were calculated using the TSD-DOSE computer code, jointly developed by Argonne National Laboratory (ANL) and M.H. Chew and Associates for the U.S. Department of Energy Office of Technical Services (EM-37). Site-specific parameters for the operations at the Hicksville Site were used to tailor the analysis to more realistic situation, while retaining the conservatism of the code.

TSD-DOSE is a computer program for estimating doses to facility workers and the surrounding public at Treatment, Storage, and Disposal (TSD) facilities from shipments of hazardous waste, which may contain small amounts of radionuclides. It is important to keep in mind when viewing the doses calculated and discussed below, that typical ambient background radiation from terrestrial and cosmic sources is between 50 and 200 mrem per year in the United States.

B-1. Potential exposure to public from truck shipments to the rail spur

Trucking will not affect area traffic patterns, as load-out and shipping will be performed in a turnaround area in the existing parking lot of the remediation site located on Cantiague Rock Road. The un-placarded, legal weight, flat bed freight trucks will haul the packages by turning left (south) down Cantiague Rock Road, left (east) onto West John Street, and right (south) into the fenced rail yard (Plan, Figure 5). Return of the emptied trucks will follow the reversed directions. Excavation and shipping campaigns will typically average no more than approximately 12 trucks per day and 2 rail cars per day.

The TSD-DOSE code was used to calculate the exposure to an individual in the vicinity of the truck, loaded with two Lift-Liner™ packages, each fully loaded with 24,000 pounds of waste soil. For this analysis, the soil in the waste containers was given a radionuclide concentration on the high side of the typical waste concentration expected on site (concentrations used in the analysis: 220 pCi/g of U-238 and U-234 and 40 pCi/g of Th-232).

The code analysis indicated a radiation dose of 0.03 mrem for an individual who spent one hour within 3 feet of the loaded truck bed and a dose of 0.005 mrem for an individual at 10 feet from the load for one hour. It

is highly unlikely that an individual member of the public would be as close as three feet from the loaded truck for anywhere in the neighborhood of an hour, even in the aggregate for the approximately 550 truck shipments. Thus the likely dose to an individual member of the public would be much less than even this minor fraction of the typical background dose in the US (50-200 mrem per year).

B-2. Potential exposure to public from loaded rail cars

Lift-Liner™ packages will be trans-loaded from flatbed truck trailers to the lined high-sided gondolas via appropriately rated crane and rigging. Loaded and manifested rail cars will be ordered to be switched out with empties by the local carrier (short line) routinely (up to daily) to limit the volume of material at the rail siding. Although the capacity exists to retain up to six or more rail cars, the presence of any rail cars will typically be of staged empties or partially loaded gondolas with their load-out in progress. The most conservative latency for switching of loaded rail cars is approximately three days, but is routinely expected to not exceed one day.

The TSD-DOSE code was used to calculate the exposure to an individual in the vicinity of the railcar, loaded with four Lift-Liner™ packages, each fully loaded with 24,000 pounds of waste soil. For this analysis, the soil in the waste containers was given a radionuclide concentration on the high side of the typical waste concentration expected on site (concentrations used in the analysis: 220 pCi/g of U-238 and U-234 and 40 pCi/g of Th-232).

The code analysis indicated a radiation dose of 0.001 mrem for an individual who spent one hour within 10 feet of the loaded railcar and a dose of 0.0002 mrem for an individual at 30 feet from the load for one hour. It is highly unlikely that an individual member of the public would be as close as 10 feet from the loaded rail for anywhere in the neighborhood of an hour, even in the aggregate for the approximately 130 railcar shipments. Thus the likely dose to an individual member of the public would be much less than even this minor fraction of the typical background dose in the US (50-200 mrem per year).

Comment:
Since there are no other viable remedial options which would allow treatment, solidification, or capping of the wastes, it may be worthwhile to bring up this point to show that transportation of the wastes cannot be avoided.

Response:
The decision to excavate soils for off-Site disposal as the remedial option was based on the fact that GTEOSI does not own all the Site properties and unrestricted use is the goal of the remediation. [Moreover, based on comments at public hearings already held, GTEOSI believes that the residents of the neighboring community prefer a remedy which will remove the materials from the Site, rather than capping or other on-Site remedies.] Therefore, the only feasible remedy is the removal of impacted soils by excavation.

Comment:
Estimates of the number of truckloads and freight car loads of the material should be included. The proposed time frame for the transportation of the wastes is needed. The number of trucks per day and railcars per day would be useful information. Would the trucking affect traffic patterns in the area? Will the wastes also be transported on the weekends? How will the Lift-Liners and intermodal containers by loaded at the railroad siding? Once the railroad cars are loaded at the railroad spur, how long will these cars sit before they are shipped? What is the maximum number of railcars that would be staged awaiting transportation? Please expand the work plan accordingly to answer the above questions.

Response:
Based on the project schedule and the estimated quantity of impacted material, approximately 531 truckloads of packages and 132 railcars will transport the material off-site. Shipments will occur over an approximate 6-month time frame.

During workdays when shipments occur, approximately 12 trucks per day and 2 rail cars per day will be used to transport the material.

Trucking will not affect area traffic patterns, as load-out and shipping will be performed in a turnaround area in the existing parking lot of the remediation site located on Cantiague Rock Road. The un-placarded, legal weight freight trucks will haul the packages left (south) down Cantiague Rock Road, left (east) onto West John Street, and right (south) into the fenced rail yard (Plan, Figure 5). Return of the emptied trucks will follow the reversed directions.

Although project activities are scheduled routinely for a 6-days per week performance for an enhanced overall duration, shipping campaigns are not planned for the weekends.

Lift-Liner™ packages will be transloaded from flatbed truck trailers to the lined high-sided gondolas via appropriately rated crane and rigging. The Lift-Liners™ are rated for 24,000 pounds and up to eight packages will be placed per gondola for rail shipment. The transload crew will consist of two riggers, a spotter, and crane operator, and positive radio communication will be available.

Intermodal packages will typically be conveyed by roll-off truck and placed near the rail flat car for crane lifting into place. Alternatively, intermodals may have occasion to be hauled by flatbed trailer, which will require crane removal and direct placement into the rail car. The articulated bulk commodity (ABC) rail cars are multi-positioned, and carry 6, 7, or 8 intermodal containers at a time, depending upon the package gross weight.

Loaded and manifested rail cars will be ordered to be switched out with empties by the local carrier (short line) routinely (up to daily) to limit the volume of material at the rail siding. Although the capacity exists to retain up to six or more rail cars, the presence of any rail cars will typically be of staged empties or partially loaded gondolas with their load-out in progress. The most conservative latency for switching of loaded rail cars is approximately three days, but is routinely expected to not exceed one day.

Dependent upon worst case scenarios for weather delays, rail scheduling snags, equipment failure, and/or mandated delays in receipt approval scheduling, the physical limit for loaded and staged rail cars is approximately six on-site at any one time. The routine frequency of switch-out (per previous bullet) infers more typically limiting the presence to approximately one and a partially loaded rail car at any time at the siding.

Comments from Kevin Carpenter, Bureau of Eastern Remedial Action, Division of Environmental Remediation
Telephone Number: (518) 402-9620

Comment:
Response to Robert Stewart Comment 6) The text adjustment to Appendix F, Section F.5 which states that "reasonable" attempts will be made to find the origin and destination of pipes. The subjective term

"reasonable" should be removed. Pipes related to historic disposal, and which may lead to subsurface disposal structures which have not been previously identified and sampled, should be investigated. Alternatively, a statement could be added that if "reasonable" attempts to find the origin and destination of pipes fails, then this will be addressed in future investigatory phases.

Response:
The following text adjustment will appear in Appendix F, Section F.5:
Reasonable attempts will be made to investigate the pipe and surrounding material/soil (as warranted) for impacts, but if "reasonable" attempts to find the origin and destination of pipes fails, then this will be addressed in future investigatory phases.

Comment:
Response to Robert Stewart Comment 8) Appendix H, Table H-3 there was no single "" apparent in the table to correspond to the note.*

Response:
The asterisk will be added to the header of column three "Analyses*".

Comment:
Response to Kevin Carpenter General Comment 1) The main point of the comment was that until the groundwater and/or deep unsaturated soil is addressed, the site will require some restrictions. This, however, may not result in restrictions that impact the contemplated use. This was not addressed in the response. This issue does not impact the technical approach for remediating shallow soil source areas described in the work plan and therefore may be resolved outside the forum of this work plan. Regarding the specific response, the groundwater which is found at significant depth below ground surface was impacted due to use and disposal of solvents. The high concentrations of dissolved chlorinated solvents in the groundwater have persisted for a long time. It is more than speculation that the solvents had to migrate through over 60 feet of unsaturated soils to impact groundwater. It is possible that, if excavation occurs in the source area (of VOC contamination), impacts above cleanup objectives could be found at depths where excavation is not contemplated or cannot occur conventionally.

Response:
Noted. GTEOSI also notes that the ongoing groundwater investigation will provide data addressing the points made and show whether, and the degree to which, solvent contamination resulted from historic operations and may have moved off Site. With additional data, appropriate conclusions can be drawn about any additional action to be taken at the Site or restrictions that may be needed.

Comment:
Response to Kevin Carpenter General Comment 2), Technically, Mr. Brathovde stamped the plan. Fifth Paragraph, Again, this soil remediation alone will not result in a No Further Action letter for the site. Also, it is presumed that "implemental" was supposed to be "implementable".

Response:
Correct, Mr. Brathovde stamped the March 2002 Work Plan. We are seeking a No Further Action letter for the soils at the Site. Data from the ongoing groundwater investigation will provide a basis on which to determine whether any other action will be required at the Site in relation to groundwater. We did mean "implemental" as the term implies "to give practical effect to and ensure of actual fulfillment by concrete measures."

Within exposed soil areas subject to traffic, dust suppression compounds such as magnesium chloride or other form of environmentally benign binding agent may be used. Other forms of dust suppression such as the use of long duration foams such as those manufactured by Rusmar Foam Technology may be used. These materials may also be used to minimize sloughing of exposed soil slopes within excavations. These compounds and their use specific to the project activity will be reviewed with the NYSDEC Site Representative prior to application.

Odor Suppression—Odor suppression compounds or foams will be used specific to the concentration, compound, and degree of control required.

Comment:
Response to Kevin Carpenter's Comment on Figure 1) If the figures are being used to guide the excavation, then presumably they are accurate. The Department needs to understand where and why the excavation is occurring. Daily availability for on-site review is acceptable.

Response:
Agreed.

Comments from Barbara Youngberg, Bureau of Radiation, DSHM
Telephone Number: (518) 402-8579

The Radiation Section has reviewed the above-referenced work plan. GTE has responded satisfactorily to most of our comments on the January 2002 draft. The only exceptions are discussed below, in our comments on the March 2002 draft.

Comment:
Part 380 Compliance

When the Radiation Section commented on the January 2002 draft, we informed GTE of the need to evaluate the potential for airborne emissions of radioactive materials. GTE's contractor has provided data on air monitoring performed during the test excavation last December. According to that data, during the test excavation, the airborne concentrations of alpha-emitting radionuclides in the work zone was about 10 times that measured at the upwind location. This confirms the potential for the radioactive contaminants to become airborne during the excavation process.

Under Section 380-3.4 of 6 NYCRR Part 380, a Radiation Control Permit is not required for emissions of radionuclides where the average annual concentration of regulated radioactive material in airborne emissions is less than ten percent of the concentration listed in Table II, Column 1, of subpart 380-11. The Table II, Column 1, values for U-234, U-235, U-238, and Th-232 range as low as 4 E-15 μCi/ml. Therefore, it is not practical for GTE to demonstrate that the emissions from the excavation enclosures would be below the permitting threshold. If this work is done under a voluntary agreement, we will issue a substantive Part 380 permit. Otherwise, a standard Part 380 would be required. Enclosed is a copy of our application guidelines for Part 380 permits. GTE should contact Jerry Riggi of the Bureau of Radiation (518-402-8579) to discuss the contents of the application, before beginning to prepare the application.

Response:
Concur. GTEOSI will use the application provided and will submit to NYSDEC for the appropriate substantive air emissions permit.

Comment:
Cleanup Criteria
The Radiation Section is still awaiting the new RESRAD runs to support the proposed cleanup criteria. We do not expect the criteria to change significantly, if at all, but we will not formally approve the criteria until the company demonstrates that the 10 mrem/yr guidance will be met with these criteria.

Response:
New RESRAD modeling to support the proposed soil cleanup criteria will be performed when laboratory analytical results of current soil boring program (October 2002) are available.

Comments on March 2002 Draft Work Plan

Comment 1: Section 9.2, Remediation Clean-Up Levels, Soils

Section 9.2 presents the cleanup criteria for radioactive materials at depths up to 16 feet below ground surface. In our comments on the January draft, we wrote, "If upon excavation to 16 feet, there exists soil which exceeds the target cleanup levels, all relevant information will be reviewed to determine the next step. Radiological data (surveys, sampling results), engineering / safety concerns, location, etc. will all weigh in on the final decision. All reasonable options for addressing any remaining contamination will need to be considered." However, the March draft of the work plan does not include a discussion of what will be done if contamination is found at depths greater than 16 feet bgs. Such a discussion should be added. As now written, the work plan could be misinterpreted to mean that no action at all will be taken below 16 feet. If unexpected contamination is encountered at greater depths, GTE must, at a minimum, consult with DEC and DOH to determine the best approach. We are aware of the limitations of excavating at those depths, but the decision to leave contaminants in place must be made based on the specific situation and the goal of keeping radiation exposures as low as reasonably achievable.

Response:
The following will be added to the text in Section 9.2:
"If upon excavation to 16 feet, there exists soil which exceeds the target cleanup levels, all relevant information will be reviewed to determine the next step. Radiological data (surveys, sampling results), engineering / safety concerns, location, etc. will all weigh in on the final decision. All reasonable options for addressing any remaining contamination will need to be considered. If unexpected contamination is encountered at greater depths, GTE will consult with DEC and DOH to determine the appropriate approach."

Comment 2: Appendix B Section 9.6
It is still our opinion that we recommend contacting the medical center about the possibility of the sick or injured person being radiologically contaminated and if so, confirming that they are prepared to handle that situation. Potential scenarios should be discussed and evaluated with medical center staff. It remains Verizon's responsibility to have an OSHA compliant Health and Safety Plan.

Response:
The GTEOSI health physicist will contact the Nassau County Medical Center's health physicist or emergency services director regarding this issue prior to initiating the remediation work and will explain the Site conditions and cleanup Work Plan to ensure the Medical Center is aware of the planned Site activities, contaminants of concern, and prepared for contingencies. GETOSI has an OSHA-compliant Health and Safety plan.

Comment 3: Typos
On page 21, in the first and third sentences of the last paragraph, an extra "S" has been added to the end of "MARSSIM."

Response:
Noted, thank you.

Comments from Gerard Burke, NYSDEC, Bureau of Construction Services, Division of Environmental Remediation
Phone Number: (518) 402-9814

Comment 1: *PID Screening of the Verification Samples*
The screening of the verification samples is unacceptable. All verification samples must be analyzed at an off-site laboratory for volatile organic compounds regardless of any field screening readings.

Response:
Agreed. On-Site screening is a necessity to guide selection for off-Site analyses. Because the PID readings can be influenced by soil moisture to produce false positives, an action level of 10 ppm will result in a large number of samples sent off-Site needlessly. We propose an action level of 25 ppm; if several PID readings in the 20 to 25 ppm range are found in one area, samples from that area will be sent off-Site for analysis. As noted, all samples used for verification of final status (as distinguished from those used during the work for screening purposes) will be submitted for off-Site analyses.

Comment 2: *Grid Sampling for the Verification Samples*
A grid system should be established and all grid sampling points should be analyzed for nickel, VOCs, and radiation. If areas outside of the grid appear contaminated, a discrete sample should be taken there.

Response:
All grid sampling points will be analyzed for nickel, VOCs, and radiation and the grid will encompass the limits of the apparently contaminated soils.

Mode	Conveyance		Package	Positive Attributes	Negative Considerations
	Primary Type / Qty	Interim (Drayage) Type / Qty	Type / Qty		
3) Truck, 2300 miles	Roll-off chassis OR Flat-bed / 623	N/A	Intermodal / 623 (25.4 CY cap, 7500# tare wt., 67,200# gross wt. limit) Meets haz waste pkg requirements per 49 CFR 173.240, and LLRW per 49 CFR 173.427 and IP-1 under 49 CFR 173.410	Versatile, durable package; Conservative package compliant if contaminant of concern found to be elevated; No transload required outside of project site; Control / maintenance of continuous shipping campaign as one IM per truckload per shipment; Can loop the packages for cycled re-use.	High mileage to disposal by direct trucking; Crane load-out of truck possibly required; High quantity of shipments and manifesting; Handling of packaging; Payload limited to < 45,000# per shipment; Tare weight pf package limits the net payload capacity; Lack of versatility for backhauls. Higher risk to the public than rail option.
4) Truck, 2300 miles	Flat-bed / 531	N/A	Lift Liner™ / 1062 (242 CF, 24,000# cap) 96" x 66" x 66" Lift Liner with Double Layer Inner Liner for 66" Lift Liner™ System; Meets IP-2 for Class 7 material per 49 CFR 173.24, 174.410, 173.411 when used properly	No exorbitant truck outer packaging tare weight to limit net payload, yielding fewer total shipments; Versatile, durable package; Conservative package compliant if contaminant of concern found to be elevated; Direct packaging in area; Controlled volumes for waste containment & shipment management (activity averaging); Little packaging tare weight, yielding fewer packages and fewer shipments; No transloading required; Versatility of back-hauls.	High mileage to disposal by direct trucking; Crane load-out of truck possibly required; High quantity of shipments and manifesting; Handling of packaging; Payload limited to < 45,000# per shipment. Higher risk to the public than rail option.

Mode	Conveyance		Package	Positive Attributes	Negative Considerations
	Primary Type / Qty	Interim (Drayage) Type / Qty	Type / Qty		
5) Rail, 2300 m + OTR 0.3 m	ABC car / 79 (@ 8 position)	Flat-bed / 623	Intermodal / 623 (25.4 CY cap, 7500# tare wt., 67,200# gross wt. limit) Meets haz waste pkg requirements per 49 CFR 173.240, and LLRW per 49 CFR 173.427 and IP-1 under 49 CFR 173.410I	Versatile, durable package; Conservative package compliant if contaminant of concern found to be elevated; Fewest quantity of total number of shipments by rail attributed to high-capacity ABC rail cars; Can loop the packages for cycled re-use; Available rail siding for transload only ~ 0.3 m from site. Lower risk to the public than truck option	Site not directly rail served; Frequent local truck hauls (drayage) required (2 IMs/load); Crane load-out of truck and transloading to rail car required; High quantity of shipments and manifesting; Handling of packaging; Payload limited to < 45,000# per local truck shipment; Tare weight pf package limits the net payload capacity.
6) Rail, 2300 m + OTR 0.3 m	ABC car / 153 (@ 4 position)	Flat-bed / 612	Seal-land / 612 (47 CY cap, 6900# tare wt., 67,200# gross wt. limit) 20' Sealand Type "Strong Tight" Cargo Container	Versatile, durable package; Taller package may ease some material type load-out; Conservative package compliant if contaminant of concern found to be elevated; High gross weight capacity makes the package suitable for specialty waste streams; Can loop the packages for cycled re-use; Available rail siding for transload only ~ 0.3 m from site. Lower risk to the public than truck option	Site not directly rail served: Frequent local truck hauls (drayage) required (2 IMs/load); Crane load-out of truck and transloading to rail car required; High quantity of shipments and manifesting; Handling of packaging; Payload limited to < 45,000# per local truck shipment; Tare weight pf package limits the net payload capacity.

			20' Sealand Type "Strong Tight" Cargo Container	if contaminant of concern found to be elevated; High gross weight capacity makes the package suitable for specialty waste streams; Can loop the packages for cycled re-use; Available rail siding for transload only ~ 0.3 m from site. Lower risk to the public than truck option	Crane load-out of truck and transloading to rail car required; High quantity of shipments and manifesting; Handling of packaging; Payload limited to < 45,000# per local truck shipment; Tare weight pf package limits the net payload capacity.

					limits the net payload capacity.
8) Rail, 2300 m + OTR 0.3 m	Gondola / 132 (@ 8 Lift Liners per rail car avg.)	Flat-bed / 531	Lift Liner™ / 1062 (242 CF, 24,000# cap) 96" x 66" x 66" Lift Liner with Double Layer Inner Liner for 66" Lift Liner™ System; Meets IP-2 for Class 7 material per 49 CFR 173.24, 174.410, 173.411 when used properly	Versatile, durable package; Conservative package compliant if contaminant of concern found to be elevated; Direct packaging in area; Controlled volumes for waste containment & shipment management (activity averaging); Little packaging tare weight, yielding fewer packages and fewer shipments; Can loop the rail cars for cycled re-use; Available rail siding for transload only ~ 0.3 m from site. Lower risk to the public than truck option	Site not directly rail served: Frequent local truck hauls (drayage) required (at ~ 2 packages per flat-bed trailer trucked per rail gondola package); Transloading of material required; High quantity of local shipments; Payload limited to < 45,000# per local truck shipment.

Comments from NYSDOH September 24, 2002
Please call William Gilday at (518) 402-7880 with any questions.
NYSDEC Site Number (V00089-1)

The Bureaus of Environmental Exposure Investigation (BEEI) and Environmental Radiation Protection (BERP) have reviewed GTEOSI's March 14, 2002 responses to agency comments and corresponding portions of the March 2002 revised Soil Remediation Program Work Plan. With respect to the responses to NYSDOH Comments, we offer the following. (Note: For ease of reference, we have maintained the same comment numbering system.)

Comment 1: Response accepted.

Comment 2: Response accepted.

Comment 3: The response is not clear as to how residual contamination will be modeled in the dose assessment in terms of surface area and cover material. It is our understanding, based on recent discussions, that the surficial area of proposed excavations will be used as the surface area input for residual contamination in the revised dose assessment modeling. We also understand that, consistent with GTEOSI's desire for unrestricted site use (excepting groundwater restrictions), no cover material will be used in the revised modeling.

Response:
New RESRAD modeling to support the proposed soil cleanup criteria will be performed when laboratory analytical results of the current soil boring program (October 2002) are available. A clearer explanation of the modeling geometry, parameters, and assumptions will be provided in the revised text.

Comment 4: The cleanup levels for soil at depths greater than 16 feet need to be addressed by NYSDEC, along with the proposal for a field decision based on ALARA. The levels should take into consideration the potential for future impact on ground water both radiologically and as a heavy metal. Depending upon the amount of residual contamination, a deed notification and/or restriction may be necessary to address the potential for future exposures.

Response:
This is a comment by NYSDOH directed to NYSDEC. GTEOSI notes that NYSDEC has addressed this concern in Barbara Youngberg's comment 1 on Section 9.2, Remediation Clean-Up Levels, Soils. As noted in that response, the following will be added to the text in Section 9.2:

"If upon excavation to 16 feet, there exists soil which exceeds the target cleanup levels, all relevant information will be reviewed to determine the next step. Radiological data (surveys, sampling results), engineering / safety concerns, location, etc. will all weigh in on the final decision. All reasonable options for addressing any remaining contamination will need to be considered. If unexpected contamination is encountered at greater depths, GTE will consult with DEC and DOH to determine the appropriate approach."

Comment 5: Response accepted.

Comment 6: The agencies and the Volunteer are in agreement that tetrachloroethene (PCE) concentrations in soil vapor should diminish significantly following the proposed soil removal. Nonetheless, this will need to be verified with soil vapor testing.

Response:
We will evaluate the need for soil vapor testing upon completion of source removal.

Comment 7: It is our understanding that the Soil Remediation Program Work Plan is intended to address tetrachloroethene (PCE), along with radioactive contaminants and nickel, in soil (see the Executive Summary and Section 9.2). The soil contamination is very likely the source of the soil vapor plume. If GTEOSI plans an additional program to specifically address soil vapor and indoor air issues, NYSDOH is not aware of it. It is our understanding that indoor air quality was tested in the 140 building because this building was situated over the greatest PCE concentrations in soil vapor. This does not necessarily indicate that the 140 building is the worst case scenario for indoor air quality impacts from the subsurface vapor plume. While proximity to contamination is a very important factor in assessing the potential for vapor intrusion, other factors such as pressure gradients and vapor communication between building interiors and the subsurface may be equally as important. These latter factors are influenced by ventilation patterns, air exchange rates, the nature of interior activities, and the integrity of floor surfaces and construction joints. For the record, of the six indoor air samples tested by GTEOSI (all within the 140 building) for PCE at detection limits low enough to allow adequate evaluation, only one or two of these were arguably within or similar to the range of typical background concentrations. Of the four that were significantly elevated above background concentrations, two (May 2001) were slightly above the NYS DOH guideline value for PCE in air and two (June 2001) were slightly below the guideline. As noted in our initial comment, post-remedial soil vapor monitoring will be necessary to evaluate the effectiveness of the remediation with respect to the elimination of PCE source areas and, consequently, the attenuation of residual PCE vapors.

Response:
We will evaluate the need for soil vapor testing upon completion of source removal.

Comment 8: See the above. As noted in our initial comment, post-remedial indoor air quality monitoring will be necessary for the on-site buildings.

Response:
We will evaluate the need for post-remedial indoor air quality monitoring upon completion of source removal.

Comment 9: Response acknowledged.

Comment 10: Response acknowledged.

Comment 11: GTEOSI should provide a basis for its statement that "radioactive levels provide appropriate protection for chemical toxicity of uranium."

Response:
The EPA maximum contaminant level (MCL) for uranium found in Title 40 CFR part 141 is based on the chemical toxicity of uranium in drinking water. The derivation of proposed cleanup criteria for uranium in soil included the exposure of an individual in the future through consumption of drinking water that was potentially contaminated with uranium. The proposed cleanup level for uranium in soil is such that the potential uranium concentration in groundwater does not exceed the EPA primary drinking water standard MCL. Thus the soil cleanup level, expressed in radiological units, is protective for the chemical toxicity of uranium. Text will be added to the work plan clarifying this basis.

Comment 12: We understand that the Tc-99 analysis of groundwater, rather than an analysis for Plutonium-239, was used as an indicator for recycled fuel. Since soil analysis for Pu-239 at lower

detection limits is planned, further analysis of groundwater for Tc-99 is not necessary. However, future testing of groundwater monitoring wells should be considered. At a minimum, analysis for uranium should be done with sufficient detection limits to allow for adequate comparison to the US EPA maximum contaminant level (MCL) for uranium.

Response:
Noted.

Comment 13: Response acknowledged.

Comment 14: We cannot accept the statement that the sample result showing levels of 14 pCi/g of U-238 is an anomaly since a sample taken by DOH 50 feet to the west also indicated elevated levels of U-238. We acknowledge that the level is below the proposed cleanup levels for this site. Our suggestion for additional study in the southeast section of the property near Air Techniques is based on the lack of data for this area. Samples obtained further east on the driving range did not show levels greater than the range of background; therefore additional study east of GCDR-1 is not necessary. It is doubtful that landscape soils brought on the range would have had elevated U-238 in only one location.

Response:
Additional borings have been conducted and soils will be analyzed during the soil boring investigation (October 2002) to address this area.

Comment 15: We agree that the Soil Remediation Program Work Plan need not be the forum to resolve this issue.

Comment 16: Response accepted; the Figure entitled "Approximate Soil Excavation Areas" that was transmitted with the revised Work Plan provides a much better level of detail than Figure 1 in the Plan.

Comment 17: The Community Air Monitoring Plan (Section B.6.5) is not entirely consistent with the provisions of the previously transmitted NYSDOH generic Community Air Monitoring Plan (gCAMP). Section B.6.5 should clearly state that continuous monitoring for VOCs will be done during work activities. The bullet for particulate monitoring under the Section B.6.5 heading should be modified, consistent with the NYSDOH (gCAMP), to state that dust suppression measures will be employed if the downwind particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than the background (upwind perimeter) particulate level (not 150 g/m^3). Section B.6.5.1 should be replaced with the provisions listed under Vapor Monitoring, Response Levels, and Actions in the NYSDOH gCAMP. The provisions listed under Particulate Monitoring, Response Levels, and Actions in the NYSDOH gCAMP should also be included in the Work Plan. Please note that the Particulate Monitoring provisions of the NYSDOH gCAMP also have applicability to the demolition of contaminated or potentially contaminated structures (see Section 8.1 of the Work Plan).

If work activities do occur within 20 feet of potentially exposed individuals or ventilation system intakes, then the special monitoring provisions in NYSDOH's initial comment should be implemented.

Response:
Section B.6.5 of Appendix B will be replaced with the following text.

B.6.5 Community Air Monitoring Plan

Real-time air monitoring for organic vapors and particulate levels at the perimeter of the work area will be conducted as follows:

Continuous monitoring will be conducted for organic vapors and particulates during all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. This specifically excludes structures or parts of structures known to be uncontaminated, such as the above-slab portions of the 140 Property. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring will be conducted for organic vapors and particulates during non-intrusive activities such as the collection of surface soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include sampling or other potentially emission-producing activities conducted adjacent to; the driving range, Cantiague Rock Road, or site buildings that are still occupied.

B.6.5.1 VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) will be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring will be performed using a photoionization detector (PID) with a data logger. The equipment will be calibrated at least twice daily utilizing a mixture of 100 ppm (nominal) isobutylene in air. The data will be logged at 15-minute intervals, however, if VOC levels exceed the action levels listed below on a sustained basis (>15 minutes continuous), then the following actions will be taken:

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities will be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities will resume with continued monitoring.

- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities will resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities will stop, except that vapor suppression may be employed as appropriate, and the reason for the elevated readings investigated.

- Additionally, the exhaust stack of the enclosure air-handling plant will be monitored using a Thermo TVA 1000 PID / FID with isokinetic sampling fitting. These measurements will be

evaluated under separate criteria to determine conformance with regulatory requirements regarding permitted emissions.

All 15-minute readings will be recorded and be available for State (DEC and DOH) personnel to review. Instantaneous readings, if any, used for decision purposes will also be recorded.

B.6.5.2 Particulate Monitoring, Response Levels, and Actions

Particulate concentrations will be monitored continuously during emission-generating operations at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level (MIE Data Ram or equivalent). The equipment will be equipped with an audible / visual alarm to indicate any exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work will continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work will be stopped, slowed, or modified and a re-evaluation of activities initiated. Work will resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

- Additionally, the exhaust stack of the enclosure air-handling plant will be monitored using an MIE Data Ram with isokinetic sampling fitting and inlet heater. These measurements will be evaluated under separate criteria to determine conformance with regulatory requirements regarding permitted emissions.

All readings will be recorded and be available for State (DEC and DOH) personnel to review.

Comment 18: Response acknowledged.

Comment 19: Response accepted.

Comment 20: Response accepted.

Comment 21: Response is acknowledged; however, additional information about radioactivity screening procedures (consistent with NYSDOH's initial comment) should be provided.

Response:
Information consistent with the original comment will be developed upon mobilizing for the field effort, when theoretical instrument efficiencies and sensitivities can be verified in practice. Forms in the instrumentation SOP (see Section 10.3 Surveys in Attachment 2 to Appendix B) include the information

for efficiency and MDA determinations taken directly from the MARSSIM (which came from NUREG-1507). The information on the forms is sufficient to verify that a given instrumentation is capable of adequately identifying and quantifying residual contamination at levels sufficiently below the applicable target criteria. Any instrumentation that does not meet these criteria will not be used for such contamination surveys.

Comment 22: The new Appendix C does not contain the emergency notification numbers. The response is acceptable pending inclusion of these numbers in the revised Plan.

Response:
Appendix C will contain the following:
MHF Logistical Solutions, Inc.
800 Cranberry Woods Dr.
Cranberry Twp., PA 16066
Phone: (724) 772-9800
Fax: (724) 772-9850

AFTER HOURS ANSWERING SERVICE (412) 369-4700

To protect the privacy of individuals, the calling tree will not be provided in the Work Plan as residential and mobile numbers are included. A 24-hour emergency contact list "calling tree" with individuals' names and numbers will be made available to the agencies, transportation contractors, and Site personnel.

Comment 23: Response accepted.

Comment 24: Response accepted.

Re: RESRAD Modeling in Support of Proposed Uranium and Thorium Cleanup Levels

Regarding GTEOSI's Responses to Comments 25 through 35, we look forward to reviewing the results from the additional iterations of the RESRAD modeling. With respect to Comment 27, we anticipate the presentation of the modeled concentrations of uranium at the water table surface and within the hypothetical well.

Response:
Revised RESRAD Modeling will be addressed when results of the current soil-boring program (October 2002) are available.

Re: Groundwater Issues

Regarding GTEOSI's Responses to Comments 36 through 44, we understand that groundwater issues will be addressed in the groundwater investigation and have been deferred from this soil remediation effort.

Additional Comments on the Work Plan

Comment 45: The addition of the list of acronyms and abbreviations is helpful.

Comment 46: All documents and submittals should have the NYSDEC volunteer site number (V00089-1) listed on the cover.

Response:
Agreed.

Comment 47: The reference for the after-hours reporting procedure in the Emergency Notification section (on page C-4) should probably be to Section C.7, not C.1.7.

Response:
We will move the reference.

Comment 48: The MHF Logistical Solutions Emergency Response Contact List "phone-tree" is no longer present in the revised Work Plan (formerly page C-6). The transportation contractors should be provided with copies of this List.

Response:

Appendix C will contain the following:
MHF Logistical Solutions, Inc.
800 Cranberry Woods Dr.
Cranberry Twp., PA 16066
Phone: (724) 772-9800
Fax: (724) 772-9850

AFTER HOURS ANSWERING SERVICE (412) 369-4700

To protect the privacy of individuals, the calling tree will not be provided in the Work Plan as residential and mobile numbers are included. A 24-hour emergency contact list "calling tree" with individuals' names and numbers will be made available to the agencies, transportation contractors, and Site personnel.

Comment 49: The PID or Mini Rae instruments (Section E-3, bottom of page E-2) should be checked against the calibrant gas several times during the day to monitor instrument drift and should be re-zeroed as necessary.

Response:
The instruments will initially be calibrated several times a day; if after a period of monitoring and conditions warrant, calibration will be conducted twice a day.
The following text will replace the current text at the bottom of page E-2:

Volatile Organic Compounds Survey Instruments

Survey instruments that will be used to field screen soil samples for exposure to volatile organic compounds include:

- A photoionization detector (PID - MultiRae Plus™, or equivalent), capable of detecting volatile organic compounds with an ionization potential of less than 10.6 eV will be used. This ionization potential range accounts for 70 percent of the VOCs on NYSDEC ASP Target Compound List (TCL). The two main solvents previously detected at the Site, PCE and TCE, have ionization potentials of 9.32 eV and 9.45 eV, respectively. A battery check and field calibration will initially be performed three times daily using 100 ppm isobutylene in air. If more than a 10% variance of response is noted between any two

calibrations, the calibration interval will be adjusted as necessary to keep variance <10%. This information will be recorded in field logbooks and on the calibration log sheets.

- Colorimetric tubes, ("Draeger tubes") will be used if elevated PID readings are noted in order to assess whether PCE, TCE, or benzene are present as part of the total VOC reading to ensure worker safety. Detection ranges are 2-250 ppm for TCE, 2-300 ppm for PCE, and 0.5 to 10 ppm for benzene.

Comment 50: Although Section E.3 only notes that the VOC survey instruments will be used to screen soil samples (page E-2), it is our understanding that these instruments will also be used to implement the CAMP provisions for VOC monitoring. This should also be noted at the bottom of page E-9 (as is noted for Air Particulates, top of page E-10).

Response:
The following text will replace the current text at the bottom of page E-9 and top of page E-10:

Air Monitoring

Air monitoring will be conducted to ensure that VOCs and airborne particulates do not exceed action levels for on-Site workers or create an unacceptable risk to the surrounding community. The air monitoring activities will be coordinated with the requirements set forth in the HASP, which includes the CAMP.

Volatile Organic Compounds

Total VOCs will be monitored in the worker's breathing zone and at the site perimeter using a photoionization detector (PID – MultiRae Plus or equivalent) to ensure that the HASP and CAMP Action Levels are met. Colorimetric tubes ("Draëger tubes") will be used to screen for benzene, PCE and TCE whenever elevated PID readings are noted. Personal and Site perimeter sampling for VOCs may also be conducted, as appropriate, using organic vapor badges, which will be analyzed according to appropriate NIOSH methods.

Airborne Particulates

Airborne dust particulates will be monitored in the breathing zone of workers and at the Site perimeter using real-time aerosol monitors (RAM) and portable air samplers, as described in the sections on work area air monitoring and the Community Air Monitoring Program (CAMP) in the HASP. Personal and Site perimeter air samples will be analyzed on site for alpha-emitting radionuclides. If these readings approach occupational or ambient air regulatory limits, they will be sent off-Site to a laboratory for isotopic analysis.

Comment 51: The reference for the operator's resume (page E-3) should probably be to Appendix I, not Appendix A.

Response:
Agreed.

Comment 52: It is unclear why the Indoor Baseline Screening Survey was deleted from Section E.4.1 (page E-4). We understood that this would be done as a matter of course before bringing contaminated equipment and materials into the 140 building (even if no indoor excavation activities will be conducted).

Response:
Agreed. We will do an Indoor Baseline Screening Survey and Section E.4.1 has been revised to include the survey description. No indoor excavation will be conducted. We do not intend as part of the soil remediation activities to bring contaminated equipment and materials into the 140 Property building.

Comment 53: Sections E.5 and E.5.1 each refer to a 6-meter square grid. The document should clarify if this is a 6 m x 6 m grid or a 6 m^2 grid.

Response:
The document will clarify that it is a 6 m x 6 m square grid.

I have also reviewed GTEOSI's Responses to NYSDEC's Comments and offer the following:

Re: R. Stewart Comment 5 and K. Carpenter Comment 2: Please forward copies of the information on the ventilation system, the air treatment system, and the monitoring provisions to this office when you receive the information.

Re: R. Stewart Comment 6: The response should state that "...reasonable attempts will be made to investigate the pipe and surrounding material/soil (as warranted) for impacts..."