

**ROOSEVELT MIDDLE SCHOOL REMEDIATION PROJECT
AUDIENCE QUESTIONS FROM THE
PUBLIC INFORMATION MEETING OF MAY 23, 2007**

The following questions were asked during the question and answer period at the May 23, 2007 public meeting. The responses given at the meeting are summarized below, with additional information provided where appropriate. Since the May 2007 meeting, the bulk of the remediation work has been completed at the site. An update on the remediation work will be presented during the next public meeting that has been scheduled for December 11, 2007. A formal meeting notice with details on the location and time of the meeting will be distributed before the meeting.

Questions 1 and 2 Are Related to Potential Exposures to Dust

Question 1: What about potential exposures to site workers to contaminated dust generated as a result of the soil excavations and construction activities?

Question 2: What about potential exposure to the surrounding community homes? How was dust from the contaminated site kept on the site and not carried by wind to other areas? What about the dust coming from trucks that leave the construction entrance?

Response to Questions 1 and 2:

The most important and the most extensive dust suppression methods have been and will continue to be centered on the soil excavation work being done in areas that are contaminated with pesticides to prevent potential exposure to contaminated dust particles and to prevent potential migration of the contaminants to nearby areas. It has been established that a portion of the subsurface soil in the areas with buried debris contained elevated concentrations of pesticides and, to a lesser extent, petroleum-related semi-volatile organic compounds. The following measures have been implemented to prevent migration of contaminated dusts in these areas:

- A community air monitoring plan that was approved by the DEC and DOH has been implemented. Dust levels and volatile organic contaminant concentrations in the air are measured with field instruments at two locations near the soil excavation work. The monitoring plan requires that work is stopped and corrective measures implemented if the levels detected exceed acceptable limits set in the plan. To date, no work stoppages have been required due to unacceptable air monitoring readings.
- The trucks loaded with contaminated soils that qualify as hazardous wastes are covered and the tires are cleaned with a pressure washer before the trucks leave the site.
- During dry conditions, the soils throughout the construction site are periodically wetted down to reduce dusts.

- All stockpiled soils that contain contaminants above the cleanup objectives are covered at the end of each day.

Areas around the building construction also have dust suppression methods to limit the amount of dust generated from the construction of the new building. In addition, a street sweeper is used to keep the streets by the construction entrances clean. The telephone number for the construction trailer was provided on hand-outs at the May 23, 2007 public meeting so that members of the community could call in with complaints about construction dust or tracking of dirt onto adjacent roadways. To date, no calls have been received regarding these issues.

Most of the contaminated soils, which were predominately located in the northern half of the site, have already been removed from the site. This action has significantly reduced the potential for exposures to site related contamination by the adjacent properties. To evaluate whether dusts contaminated with pesticides had migrated to adjacent residential properties during remediation and/or from former site operations, surface soil samples were collected at 11 sampling locations on April 13, 2007 and at two locations on June 13, 2007. The surface soils were sampled since this is where contaminated dusts or surface runoff from contaminated areas at the site would be most likely to accumulate. None of these samples contained pesticides above the residential cleanup objectives for the site. Consequently, potential future exposures to these surface soils are not a concern for any of the sampled properties. Based on the available data for the adjacent properties that were sampled, no further action is deemed necessary for these properties.

Question 3: What about potential exposures to student athletes using the athletic fields adjacent to the site?

Response 3: The athletic field for the high school is near to the rear area of the Middle School site where buried debris was found. Consequently, four surface soil samples were collected on the high school property on May 2, 2007 along a line parallel to and approximately 15 feet from the fence separating the two properties. Only trace levels of pesticides were detected in these samples, well below the residential cleanup objectives. Based on this data, no further action is necessary. These samples were collected near to the site since this would be the most likely location to find an accumulation of contaminated dusts or surface runoff from the site. Since essentially all of the pesticide contaminated soils have been removed except for some minor touch up work, there is no longer any potential for migration of contaminants from the site to the high school property.

In response to the public's concerns that were raised at the May 23, 2007 public meeting about potential exposures to students using the athletic fields, additional surface soil samples were collected at five points along the center of the football/soccer field on September 20, 2007. Results from these samples were similar to the previous results, showing only trace levels of pesticides, well below the residential cleanup objectives.

Questions 4, 5 and 6 Are Related to Contaminated Groundwater

Question 4: What about potential exposures to contaminated groundwater that is extracted from private wells near the site?

Response 4: As presented at the public meeting of May 23, 2007, the DEC has identified some limited contamination in off-site groundwater by chlordane that was detected in three out of the 22 earlier groundwater samples at one off-site sampling location. Resampling at the same location in October 2007 did not detect any pesticides. Additionally, dieldrin and chlordane were detected at very low concentrations slightly above their respective groundwater standards in a June 2007 groundwater sample that was collected by the southern property border. Based on the available data, this pesticide contamination is very limited so that only a few nearby properties located to the south or south-southeast of the site might have the potential to extract contaminated groundwater should these properties have a private well screened in the upper portion of the underlying groundwater.

The DEC has checked for permitted wells (wells that pump more than 45 gallons per minute) near the site in the direction of groundwater flow and none was found. To further evaluate this potential route of exposure, the DEC conducted a private well survey in September 2007 for selected homes near the site. A survey letter was sent to 43 properties in the direction of groundwater flow and located within one-eighth of a mile of the site. Based on the responses received, there are no active private wells in the survey area. One homeowner indicated that he has a private well that is not currently being used. The DOH and DEC are determining whether the sampling of this well is warranted.

Question 5: Will there be any more groundwater sampling at the site?

Response 5: To further evaluate groundwater quality, some additional groundwater samples were collected after the May 23 public meeting. As noted above, one groundwater sample was collected near the southern property border in June 2007. This sample was collected by the school district's consultants and was analyzed for pesticides. The sample was collected at a location suitable for evaluating the site's former sanitary system. Very low concentrations of a few pesticides were detected in this sample. Dieldrin and chlordane were detected slightly above their applicable groundwater standards. This contamination is considered to be minimal due to the low concentrations detected, the very limited mobility of the contaminants in groundwater, and the lack of any nearby receptors that might extract the contaminated groundwater.

In October 2007, the DEC collected off-site groundwater samples for pesticide analysis from three monitoring wells on the adjacent Roosevelt highway yard. These wells are in good locations to evaluate potential off-site groundwater impacts from the on-site areas that formerly contained the worst soil contamination by pesticides prior to remediation. No pesticides were detected in any of these samples.

Based on the above results and the previous groundwater sampling data, it has been concluded that the on-site and off-site groundwater impacts are minimal and do not require remediation or further evaluation.

Question 6: What about the MTBE in the monitoring wells? Any follow up sampling planned?

Response 6: MTBE was detected in a July 2003 groundwater sample that was collected from former on-site monitoring well MW-4 at a concentration of 53 parts per billion (ppb). This detection is above the applicable groundwater standard of 10 ppb for MTBE. This well, which was abandoned prior to building construction, was located in the vicinity of two former underground storage tanks (USTs) and the former fuel island where fuel was dispensed. One of the USTs in this area was a 4,000 gallon gasoline storage tank that was removed in February 2006. Some limited gasoline-related soil contamination was removed in March 2006 from the bottom of that tank excavation. This action has successfully remediated this spill. Since MTBE is a fuel additive that was used in gasoline, the DEC believe that the limited on-site groundwater contamination by MTBE is likely related to this old spill. Please note that other gasoline constituents, such as benzene, ethylbenzene, toluene, and xylenes, were not detected in the July 2003 groundwater sample further supporting that fuel-related groundwater contamination in this area is very limited. Since it is anticipated that natural attenuation processes will be sufficient to eliminate this minimal contamination within a relatively short period of time, no further sampling is planned.

Questions 7, 8 and 9 Are Related to Chlordane Contamination in Smith Pond

Question 7: In the presentation at the public meeting, it was stated that previous sampling results from Mullener Pond and Smith Pond have detected chlordane at similar concentrations in sediment samples and that DEC has concluded that this contamination is not related to the releases at the site. Where did the chlordane contamination in both ponds come from?

Response 7: Chlordane has been found in many of the freshwater bodies in Nassau and Suffolk Counties. Some water bodies are more contaminated than others for unknown reasons. The DEC believe that the most likely source of this chlordane contamination is the wide-scale use of this chemical for many applications up until 1988, when all uses were banned. It should be noted that chlordane was formerly the predominant chemical that was used to treat homes for termites. These old termite applications involved the application of considerable amounts of pesticide to place a treatment barrier that would act to prevent reinfestations. It is expected that some of the chlordane in these applications for properties near to water bodies either has runoff or migrated in the underlying groundwater to the nearby water bodies. Since chlordane does not break down readily, it is still present in the environment despite having been banned in 1988.

Question 8: Will there be resampling in Smith Pond?

Response 8: Proposed dredging in Smith Pond by Nassau County has been rescheduled to start in the spring of 2008. Because this dredging will remove some of the chlordane contaminated sediments in the pond, this removal action may be beneficial in reducing the chlordane concentrations in the fish. However, the overall effects of the dredging on the chlordane levels in the fish will take time. The Department plans to collect samples of the fish in approximately one and one-half years after the completion of the dredging to see if the fish advisory is still necessary. However, no water samples would be collected since they would not be useful because it is very rare that the water is contaminated by pesticides. The contaminants that affect the fish are predominantly found in the sediments. No additional sediment or water quality samples are currently planned.

Question 9: What contaminants were found in the pond north of Smith Pond (Mullener Pond), Smith Pond and south of Smith Pond in Freeport?

Response 9: Based on the knowledge of a representative from Nassau County Department of Public Works involved in the sampling of freshwater streams and ponds in his county, there has been no water quality or sediment samples collected from any of the interconnected freshwater bodies located to the south of Smith Pond.

The following contaminants were found in the fall 2003 sediment sampling from Smith Pond: chlordane up to 1700 parts per billion (ppb), DDT up to 200 ppb, DDD up to 200 ppb, DDE up to 93 ppb, an assortment of petroleum related semi-volatile organic compounds (known as polycyclic aromatic hydrocarbons {PAHs}) associated mostly with waste oils, and some elevated concentrations of arsenic, cadmium, copper, lead, and zinc above typical background concentrations of these heavy metals.

The following contaminants were found in 1989 sediment samples that were collected from Mullener Pond and analyzed for volatile organic compounds, pesticides and PCBs: chlordane up to 930 ppb, DDT up to 200 ppb, DDD up to 230 ppb, DDE up to 46 ppb, dieldrin up to 27 ppb, and PCBs up to 790 ppb (These samples were not analyzed for PAHs or heavy metals). This pond was dredged after this sampling, thereby removing this sediment contamination. The DEC is not aware of any more recent sampling of this pond.

Questions 10, 11, 12, 13 and 14 Are Related to the Soil Excavation

Question 10: Why remediate only 18 inches? Runoff alone may go further.

Response 10: All the contaminated soil above the soil cleanup objectives is being excavated regardless of the depth of the soil contamination. The "18 inches" refers to the minimum thickness of clean fill that will be placed on top of any soil that is found to be suitable for re-use at the site.

Question 11: In the hand out at the meeting it reads that reusable soil will be covered by 18 inches of clean soil. “Bob” mentioned eight inches in his presentation? Which is correct?

Response 11: All soils that qualify for re-use because they do not contain any contaminants above the soil cleanup objectives will be covered with a minimum of 18 inches of clean fill.

Question 12: What was the depth of the soil boring samples and what is the depth of the school foundation?

Response 12: It is assumed that this question involves the depth of the soil samples that were collected beneath the northern portion of the new school building where a large amount of buried debris was found prior to building construction. All the buried debris was removed and closure samples were collected from the bottom of the soil excavation to determine if all of the soil contamination had been successfully excavated. Since the depth of the excavation varied, the soil samples in this area were collected at different depths. Approximately 12 feet below ground surface was the deepest closure sample in this area. After the results of final closure samples from the bottom of the excavation were acceptable, the excavation was backfilled with clean fill and compacted. The foundation for the school building was placed on top of the clean fill. The foundation is approximately four feet deep.

Question 13: Can contaminants bleed into the new foundation?

Response 13: Since all of the soil contamination above the cleanup objectives was removed before the foundation was installed, there are no contaminants above the cleanup objectives left that could permeate into the new foundation.

Question 14: Why was the landfill not treated to the foundation? Breakdown can occur with the soil that you use to cover areas?

Response 14: All the landfilled debris under the buildings, regardless of whether it contained contaminants, was excavated before the foundation of the building was constructed. Closure samples from the bottom of these excavations were then taken to determine if the soils under the debris contained any contaminants above the soil cleanup objectives. Any residual soil contamination was also excavated. Since all the contamination has been removed, there is nothing left to breakdown. Any soils that were reused after the debris was removed were tested to ensure that they did not contain any contaminants above the cleanup objectives.

Miscellaneous Environmental Questions

Question 15: If DDT has limited mobility and samples taken in 1994, 2003, and 2004 were good, how were higher levels detected later?

Response 15: The earlier sampling did not sample the areas that turned out to contain the worst concentrations of pesticides. These areas were discovered later during building construction.

Question 16: What responsibility does the Town of Hempstead have with respect to the Middle School Site and its contamination?

Response 16: As the owner of their property, the Town of Hempstead may be responsible for remediating any soil contamination found on their property.

Question 17: When did DEC know about the problem on this site first?

Response 17: DEC was involved in cleaning out of a pesticide contaminated dry well and oil spill issues at the site in early 1990s. However, DEC wasn't aware of the magnitude of the problem at the site until February 2006 when DEC was notified of the extensive buried debris that was encountered during the installation of the new school building foundation.

Question 18: Did DEC involve the EPA? Could you provide a copy of the EPA finding and report recommendation for cleanup?

Response 18: DEC has a Remediation unit that handles chemical releases. Referral of this site to the EPA was not necessary since the New York State Education Department is remediating this site under the oversight of the DEC. However, the EPA has been kept informed of the status of remediation of on-site dry wells, which are regulated under the federal Underground Injection Control program.

Question 19: Why did DEC not get involved earlier? What about the work done before DEC involvement.

Response 19: The DEC were unaware of the magnitude of the problem until February 2006. DEC provided oversight from that point forward. At that juncture, all the available data were reviewed by the DEC and a Remedial Action Plan was developed under DEC oversight. Additional sampling has been requested by DEC, as needed, to fully characterize and adequately remediate the site.

Question 20: Why are there numerous sumps located in Roosevelt?

Response 20: It is assumed that this question refers to recharge basins around the area that receives storm runoff. These basins are connected to a network of storm drains in the streets to capture rainwater and allow it to replenish the underlying aquifer, which is the sole source of

drinking water in Nassau County. Without this drainage system, there would be street flooding. All communities in Nassau County have similar stormwater drainage systems with similar numbers of recharge basins.

Health Related Questions:

Question 21: Did you say you don't know what happened before, but maybe there was no problem? Are you satisfied that the problem is possibly going to be cleaned up?

Response 21: I believe this is in reference to the former daycare facility that was near the pesticide mixing property. As previously stated, we do not know how much pesticide contamination may have been in the area historically since no surface soil samples were ever collected from the daycare when it was active. Surface soil samples collected in the former daycare area after school construction began did not contain pesticide contamination at levels that would be considered an exposure concern.

Question 22: The children who attended pre-K, have they (all) been checked for exposure?

Response 22: The New York State Department of Health has not conducted or requested any testing of the children attending the former daycare facility to determine if they were exposed to pesticides. Based on the limited information we have, we have no reason to believe the children should be tested.

Question 23: The contaminants have been there for 50 years. How long before health effects start showing up?

Response 23: Unless an individual is in physical contact with a contaminant, health effects will not occur. If people come into contact with contaminants, health effects can occur immediately, (e.g., skin rash, burning sensation) or over a long period of time, (e.g., some cancers have latencies of 5-20 years or more).

State Education Department or Roosevelt School District Related Questions

Question 24: Since Nassau County contaminated the middle school site, shouldn't the State hold it responsible for cleaning up the site? Certainly, any private corporation would be held responsible.

Response 24: The State has discussed this issue with the County on several occasions, however no resolution has been reached at this time. We will continue to attempt to resolve this issue on behalf of the Roosevelt taxpayers.

Question 25: Who will assume liability for cleanup of the contaminated middle school site?

Response 25: SED has assumed responsibility for coordinating and monitoring the cleanup. State building aid will reimburse the school district for 98% of the cost of the remediation. The parties continue to talk about the remaining 2% liability.

Question 26: Why did we start building on this property knowing that it was contaminated?

Response 26: This property was the only parcel in the entire school community of a sufficient size to accommodate a new middle school. Additionally, it is adjacent to the existing high school, which allows for sharing some sports fields. The only other solution for acquiring sufficient property for the school would have been to condemn private residential or commercial property, which would have had a negative impact on taxpayers. In addition, although extensive testing conducted prior to the purchase of the land did identify certain areas of contamination, the full extent of the contamination was not known until excavation for the new school building foundation began. This contamination apparently resulted from significant dumping of debris and pesticide residues over many years. Such site uses were not documented in the available records and were not mentioned by County personnel who were interviewed during the initial site investigations; therefore, these portions of the site were not targeted during the testing. Nevertheless, although the newly discovered contamination was more extensive than the areas identified prior to the purchase of the land, the nature of the contamination (debris and pesticide residues) was not significantly different and could be cleaned up to below the New York State cleanup objectives appropriate for school use. As discussed in response to Question 29, all contamination was removed under the entire footprint of the building prior to construction.

Question 27: Is there any environmental contamination at the Underhill Avenue school site? Early work that starts at 6:00 a.m. and there is a security watch 24 hours per day.

Response 27: This project is the replacement of Ulysses Byas Elementary School. There is no environmental contamination on this site. Some soil was excavated and removed from the site because it could not be properly compacted to support the new school. It was replaced with new soil that could be compacted, and the facility is being constructed on top of the new soil. It is progressing on time. There were early vandalism problems at this site including the destruction of one of the contractors' excavators. Security is now present to maintain control. Work should not be starting prior to 7:00 a.m. Any violations should be brought to the attention of the construction managers at the site.

Question 28: Will any Federal funding be used for the project?

Response 28: No federal funding will be used on the Roosevelt construction projects.

Question 29: Now that there has been contamination found at the middle school, does any of the construction need to be removed, a cleanup performed, and construction replaced?

Response 29: All contamination was removed under the entire footprint of the building prior to construction. In addition, a thick vapor barrier was installed under the entire building, and beneath that a vapor extraction system was installed. The intent of this system is to draw out any potential vapors that accumulate under the vapor barrier and vent them above the roof line so that they do not enter the building. Both the vapor barrier and the vapor extraction system have been installed as a precaution even though no volatile organic compounds (VOCs) have been detected during the remediation.

Question 30: Why was an environmental assessment done and not an environmental impact statement?

Response 30: An environmental assessment (EA) is typically performed before an environmental impact statement (EIS) is written. The EIS is prepared based on the EA, among other considerations. There is a very comprehensive and detailed EIS for this project. The Roosevelt school board and the State Education Department acted as lead agencies for the environmental review process, and extensive research, discussion, and questions and answers were part of the public process.

Question 31: How will the drinking water come into the school?

Response 31: Public water is supplied by the Long Island Water Company. It enters the site through closed piping directly into the building and is not exposed to any contamination. The water supply pipe will enter the site from Konig Court and will be installed in a portion of the property that was formerly occupied by the pre-K facility and an empty lot, where no contamination has been found.

Question 32: What are the funding sources for the middle school project?

Response 32: The Roosevelt school district voters authorized the entire project on June 14, 2004. SED will reimburse the school district approximately \$180M of the total \$208.5M through state aid, leaving a local share balance of \$28.5M.

Question 33: Will contaminated dust get into the air ducts or walls while the school is being built?

Response 33: A community air monitoring plan that was approved by the DEC and DOH was implemented during construction. Dust levels and volatile organic contaminant concentrations in the air were measured with field instruments at two locations near the soil excavation work. The monitoring plan requires that work would be stopped and corrective measures be implemented if the levels detected exceed acceptable limits set in the plan. In addition, all open duct work was capped with plastic during construction to prevent contaminants from entering the

air distribution system. To date, no work stoppages have been required due to unacceptable air monitoring readings, consequently, these measures avoided the chance for contaminated dust to enter the building.

Question 34: How many students are expected to be attending the middle school?

Response 34: The new middle school is expected to house grades 6, 7, and 8 with a projected enrollment of 890 students.

Question 35: What is the life of a "plastic" vapor barrier and what is its tensile strength? What material are the vent pipes made of? How long will the system last? Was a steel sheet installed under the school slabs?

Response 35: The life expectancy of the plastic is longer than the life expectancy of the facility. It will not deteriorate. The tensile strength is 76.7 pounds per square inch and is designed to be penetrated and sealed at various locations to allow for utilities and structural steel. Once the penetrations are sealed, the entire under slab system is put under negative pressure, if necessary, to remove vapors. The vent pipes are made of heavy PVC plastic and will not deteriorate. There is no sheet steel under the slabs. The steel would rust and deteriorate.

Question 36: Schools should not be built on or near a hazardous waste site.

Response 36: This school was not knowingly built on or near a hazardous waste site. The remediation was so extensive that this site is no longer contaminated. It has been cleaned up to residential cleanup goals.