RECORD OF DECISION AMENDMENT
FORMER BOUCHARD JUNKYARD SITE

Town of New Lebanon / Columbia County / Registry No. 411014 September 2006

Prepared by the New York State Department of Environmental Conservation
Division of Environmental Remediation

1.0 INTRODUCTION

On March 31, 2004, the New York State Department of Environmental Conservation (Department) signed a Record of Decision (ROD) which selected a remedy to clean up the Former Bouchard Junkyard Site. The remedy originally selected was soil washing, where contaminated soil would be mixed with a surfactant and water to strip the contaminants from the soil. In the intervening time, the number of companies that use this technology has declined, and the cost of off-site disposal has come down. Therefore, the Department has selected excavation and off-site disposal as the amended remedy.

A public comment period ran from July 14, 2006 through August 12, 2006 and a public meeting was held on Wednesday, July 26, 2006 at the American Legion Hall, 7 Mill Road, New Lebanon, NY.

2.0 SITE INFORMATION

2.1 Site Description

The approximately 17-acre property is an irregularly shaped parcel of land that is relatively flat with a gentle downward slope to the southeast. The site is located in a rural community near the intersection of US Route 20 and New York State Route 22 (see Figure 1-1). The site is bounded on the north and east by Lovers Lane, on the south by US Route 20, and on the west by private residential property (see Figure 1-2). An abandoned railroad bed formerly bisected the site from west to east, but the only indication of it now exists on properties east and west of the site. Wyomanock Creek, a New York State Class C (TS) stream, is located southwest of the site and flows from southeast to northwest. Tributaries flow from north to south along the eastern and western boundaries of the site.

Three buildings are currently located at the site. At the time of the investigation, these buildings were rented by three businesses and occupied by employees and customers during business hours. The remainder of the property is mostly open field. South of the property, across US Route 20, are a construction company and residential properties. Residential properties are located to the north, east, and west of the site. Agricultural lands are situated to the northwest. This area is served by private homeowner wells.

2.2 Site History

The Former Bouchard Junkyard site is the location of a former automobile junkyard operated from before 1959 through February 1969 by Mr. Henri Bouchard. The junkyard was ordered closed in 1971 for operating without a licence. All salvage was removed from the site in the late 1970s.

In July 1998, General Electric (GE) provided the Department with an internal memorandum dated October 10, 1980, suggesting that drums of oil and pyranol (polychlorinated biphenyls or PCBs) had either been disposed or burned at the site. The property was purchased by the current property owner, Mr. Ralph Chittenden, in 1985. Since the removal of the junk cars, a theater group, automobile repair shop, and engineering company were tenants in the three buildings on-site, however, prior to GE's notification, much of the property not occupied by buildings was utilized for crops.

Historic aerial photographs suggest that the area at the east side of the site, behind the current Theater Barn building was filled some time before 1959. Apparent burn areas at the site can be observed in the aerial photographs. The automobile repair shop was located in the building that formerly served as the junkyard building. The buildings for the theater group and engineering company were constructed in 1989 and 1990, respectively. Some contaminated soil excavated during construction of these buildings was used as fill on a residential property just west of the former junkyard. This area of contamination is considered part of the site, even though it is on a different tax parcel.

2.3 Nature and Extent of Site Contamination

As described in the original ROD, many soil, groundwater, and sediment samples were collected to characterize the nature and extent of contamination. The contaminants of concern are polychlorinated biphenyls (PCBs) and pesticides, semivolatile organic compounds (SVOCs), and inorganics (metals).

The PCB of concern is Aroclor 1260. Polychlorinated biphenyls are a family of chemicals which were blended in different combinations (called Aroclors) according to their desired properties. Aroclor 1260 is a mixture of PCBs with a higher chlorine content. PCBs show a strong affinity to organic material, and so have essentially remained bound up in the upper soil layers. PCBs are not readily dissolved in water and are thus not expected to be found in groundwater or surface water unless associated with fine-grained material suspended in these media.

A number of pesticides were reported as detected in soil samples collected at the site. However, there is a strong correlation between the pesticide detections and the Aroclor 1260 detections, and it is probable that these results are false positives resulting from interference with the chemical pattern of Aroclor 1260 during the chemical analyses.

SVOCs present at the site are primarily polycyclic aromatic hydrocarbons (PAHs). PAHs are commonly associated with bituminous materials, such as asphalt pavement, or combustion. PAHs may occur at various areas across the site due to the former railroad bed or burning of automotive waste materials. On the Bouchard Junkyard site, PAHs do not occur in areas where the soil is not also contaminated with PCBs.

A number of metals are included in the chemical analyses of the environmental samples collected from the site. Metals occur naturally in soil and water at various concentrations. Simply because a metal is detected in an environmental sample does not automatically mean that it is a contaminant. Metal concentrations in the analytical samples are compared to levels commonly found in the region or in samples from locations near the site, but not affected by it (background samples). In many cases, even background samples collected for this site had metals concentrations above SGCs.

2.4 Summary of Human Exposure Pathways

This section describes the types of human exposures that may present added health risks to persons at or around the site. A more detailed discussion of the human exposure pathways can be found in Section 6 of the RI report.

An exposure pathway describes the means by which an individual may be exposed to contaminants originating from a site. An exposure pathway has five elements: [1] a contaminant source, [2] contaminant release and transport mechanisms, [3] a point of exposure, [4] a route of exposure, and [5] a receptor population.

The source of contamination is the location where contaminants were released to the environment (any waste disposal area or point of discharge). Contaminant release and transport mechanisms carry contaminants from the source to a point where people may be exposed. The exposure point is a location where actual or potential human contact with a contaminated medium may occur. The route of exposure is the manner in which a contaminant actually enters or contacts the body (e.g., ingestion, inhalation, or direct contact). The receptor population is the people who are, or may be, exposed to contaminants at a point of exposure.

An exposure pathway is complete when all five elements of an exposure pathway exist. An exposure pathway is considered a potential pathway when one or more of the elements currently does not exist, but could in the future.

Potential Human Exposure Pathways

1. Dermal contact, inhalation, and incidental ingestion exposures to PCBs in surface soil by workers and patrons of the existing on-site businesses. Those exposures are thought to be minimal due to the nature of the facilities.

2. Dermal contact, inhalation, and incidental ingestion exposures to PCBs in surface soil by residents of the residential property where contaminated soil from the former junkyard was used for fill.

3. Dermal contact, inhalation, and incidental ingestion exposures to PCBs in surface soil by future occupants of the property.

4. Direct contact, inhalation, and incidental ingestion exposures to future utility workers who may excavate and handle contaminated soil on- or off-site.

2.5 Summary of Environmental Assessment

This section summarizes the existing and potential future environmental impacts presented by the site. Environmental impacts include existing and potential future exposure pathways to fish and wildlife receptors, as well as damage to natural resources such as aquifers and wetlands.

The Fish and Wildlife Impact Analysis, which is included in the RI report, presents a detailed discussion of the existing and potential impacts from the site to fish and wildlife receptors. The following environmental exposure pathways and ecological risks have been identified:

1. Fish and wildlife communities could be exposed to site-related contaminants present in the shallow soils by several mechanisms: direct ingestion of soil, acute or chronic toxicity to soil organisms, vegetative uptake of contaminants from soil and related food web effects, and food web effects of ingesting soil organisms containing elevated body burden of contaminants.

2. Concentrations of SVOCs, several metals, and PCBs (Aroclor 1260) in aquatic sediments exceed the Department's sediment quality criteria. Fish and wildlife communities could be exposed to site-related contaminants present in the aquatic sediments by several mechanisms: acute or chronic toxicity to benthic organisms (macroinvertebrates), and accumulation and concentration through the food web to fish and fish-eating birds and mammals.

Wyomanock Creek provides valuable fish habitat. The other surface water resources on the site provide only limited habitat value due to their intermittent nature and lack of riparian cover.

2.6 Original Remedy

The original remedy selected was as follows:

1. Excavate up to 28,000 cubic yards of surface soil contaminated with PCBs greater than one part per million (from the surface to a depth of eighteen inches), 2,700 cubic yards of subsurface soil with PCBs greater than ten parts per million (depth greater than eighteen inches), and 3,800 cubic yards of aquatic sediments with PCBs greater than one part per million.

2. Physically separate large rocks and gravel from the excavated materials, since the contaminants are primarily associated with the fraction of soil which contains fine sand, silt, and clay (the "fines").

3. Treat the fines using soil washing, where water and a surfactant would strip the contaminants from the fines.

A surfactant is a substance, like detergent, which makes it easier to remove a contaminant bound to the soil.

4. Test the cleaned soil along with the previously removed rocks and gravel, and, if clean, backfill on-site. If concentrations of contaminants above cleanup goals remain, re-treat the soil as necessary.

5. Since soil washing is a relatively new technology for use with PCBs, a pilot test would need to be performed to determine if the site's characteristics are appropriate for this technology. Additionally, this study would determine the surfactant or combination of surfactants which would best remove the PCBs.

Due to the uncertainty in using a new technology, the Department selected a secondary remedial technology to be used if soil washing did not prove effective at removing the contamination. That technology was thermal separation, where soil would be excavated and heated to a temperature high enough to drive off the contaminants. Hot gases would be collected and processed to remove the contaminants, and the clean soil would be backfilled on the site.

3.0 REASON FOR CHANGES TO THE REMEDY

3.1 New Information

Early in the design process, some areas of the site were resampled to better define the areas that would need to be addressed. This resulted in a small increase in the amount of contaminated surface and sub-surface soil and a large decrease in the amount of aquatic sediment which will need to be handled.

We also asked our engineering consultant to identify potential bidders for soil washing. They canvassed companies associated with soil washing that were identified during the 2003 Feasibility Study and any others they could identify. Their inquiries indicated that many companies either no longer do soil washing or were out of business since 2003. Four potential soil washing companies were identified. Follow-up questions regarding the companies' ability to take on a project of this magnitude either as a prime or as a subcontractor further narrowed the field to two companies.

The cost estimates from the 2003 Feasibility Study for thermal desorption and excavation/off-site disposal were then updated. The original costs from 2003 and updated costs (present worth) are listed in the table, below.

Remedy Type	Estimated Cost (2003)	Estimated Cost (2006 Update)
Soil Washing	$5,536,000	NA
Thermal Desorption	$7,162,000	$7,708,000
Excavation/Off-Site Disposal	$7,106,000	$4,954,000

4.0 EVALUATION OF AMENDED REMEDY

4.1 Remedial Goals

Goals for the cleanup of the site were established in the original ROD. The goals selected for this site are to eliminate or reduce to the extent practicable:

- direct contact (dermal absorption, inhalation, and incidental ingestion) with surface and subsurface soil, and;
- migration by runoff of contaminants to surface water and sediment, and;
- infiltration of precipitation through contaminated soil and adverse impacts to groundwater, and;

- exposure of biota to contaminated sediment.

4.2 Evaluation Criteria

The criteria used to compare the remedial alternatives are defined in the regulation that directs the remediation of inactive hazardous waste sites in New York State (6 NYCRR Part 375). For each criterion, a brief description is provided. A detailed discussion of the evaluation criteria and comparative analysis is contained in the original Feasibility Study.

The first two evaluation criteria are called threshold criteria and must be satisfied in order for an alternative to be considered for selection.

1. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative's ability to protect public health and the environment. There will be no change to protection of human health and the environment between the original remedy and the new, proposed remedy.

2. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether a remedy will meet environmental laws, regulations, and other standards and criteria. In addition, this criterion includes the consideration of guidance which the Department has determined to be applicable on a case-specific basis. There will be no change to compliance with SCGs between the original remedy and the new, proposed remedy.

The next five "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

3. Short-term Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives. The proposed excavation remedy will be implemented slightly faster than the soil washing remedy. Since contaminated soil will be transported off-site for disposal rather than treated on-site, an increase in traffic can be expected during the implementation of the proposed new remedy.

4. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the engineering and/or institutional controls intended to limit the risk, and 3) the reliability of these controls. While soil washing would be expected to clean the contaminated soil to a PCB concentration below the soil cleanup standard, some PCBs would be expected to remain in the cleaned soil. With the proposed excavation remedy, targeted contaminated soil will be removed from the site. Clean soil (PCBs less than 0.1 ppm) will be brought in as backfill.

5. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility, or volume of the wastes at the site. Soil washing was expected to remove PCBs from the soil, concentrating them into a much smaller volume, though the toxicity and mobility would not be affected. Although excavation and off-site disposal will reduce the volume of contaminated soil *at the site*, it will not reduce the toxicity, mobility, or volume of waste to be ultimately disposed.

6. Implementability. The technical feasibility and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction of the remedy and the ability to monitor its effectiveness. For administrative feasibility, the availability of the necessary personnel and materials is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, institutional controls, and so forth. Excavation and off-site disposal will be much simpler to implement than the soil washing remedy from a technical standpoint. It will also be simpler to implement from an administrative standpoint, since there are only a few companies performing soil washing. Numerous companies are capable of digging up

contaminated soil and transporting it to a permitted disposal area.

7. Cost-Effectiveness. Capital costs and annual operation, maintenance, and monitoring costs are estimated for each alternative and compared on a present worth basis. Although cost-effectiveness is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the other criteria, it can be used as the basis for the final decision. The new, proposed remedy is expected to be less expensive than both the soil washing remedy, and the secondary thermal separation remedy.

This final criterion is considered a modifying criterion and is considered after evaluating those above. It is focused upon after public comments on the proposed ROD amendment have been received.

8. Community Acceptance. Concerns of the community regarding the proposed changes have been evaluated. The responsiveness summary (Appendix A) presents the public comments received and the manner in which the Department addressed the concerns raised. No significant public comments were received.

5.0 SUMMARY OF THE AMENDED REMEDY

The Department has elected to amend the Record of Decision (ROD) for the Former Bouchard Junkyard Site. The changes include excavation and off-site disposal of contaminated soil instead of soil washing. While the Department is still confident that soil washing could work at this site, difficulties with the contracting process would likely result with only two or fewer potential bidders. In addition, updated cost estimates reveal that excavation and off-site disposal has become a more attractive alternative from a financial standpoint. Excavation will also be easier to implement and will likely be completed in a shorter time. Excavation will, however, result in more local traffic for the short term.

The estimated present worth cost to carry out the amended remedy is $4,954,000. The estimated present worth to complete the original remedy was $5,536,000. The cost to construct the amended remedy is estimated to be $4,906,000 and the estimated average annual monitoring cost is $11,000.

The elements of the amended remedy are as follows:

1. A remedial design program will be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program.

2. Equipment will be mobilized on the site. Excavate and stockpile approximately 29,000 cubic yards of surface soil contaminated with PCBs greater than one part per million (from the surface to a depth of eighteen inches), 3,700 cubic yards of subsurface soil with PCBs greater than ten parts per million (depth greater than eighteen inches), and 450 cubic yards of aquatic sediments with PCBs greater than one part per million.

3. The stockpiled soil will be loaded onto covered vehicles and transported to a permitted disposal site.

4. The site will be restored by backfilling with clean soil (PCBs less than 0.1 ppm), grading, placement of topsoil, and seeding of excavated and/or filled areas.

5. An environmental easement will be imposed, in such form as the Department may approve, that will require compliance with the approved site management plan.

   The property owner will complete and submit to the Department a periodic certification until the Department notifies the property owner in writing that this certification is no longer needed. This submittal will contain certification that the institutional controls put in place, pursuant to the Record of Decision, are still in place, have not been altered, and are still effective.

6. A site management plan will be developed to address residual contaminated soils that may be excavated from the site during future redevelopment. The plan will require soil characterization and, where applicable, disposal/reuse in accordance with Department regulations.

7. As determined appropriate by the Department, water samples from on-site monitoring wells, water supply wells, and surface water will be collected periodically for laboratory analysis. This program will allow the effectiveness of the remedy to be monitored and will be a component of the operation, maintenance, and monitoring for the site.

6.0 HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the remedial investigation process, a number of Citizen Participation activities were undertaken to inform and educate the public about conditions at the site and the potential remedial alternatives. The following public participation activities were conducted for the site:

1. Repositories for documents pertaining to the site were established.

2. A public contact list, which included nearby property owners, elected officials, local media and other interested parties, was established.

3. A public meeting was held on July 26, 2006 to present and receive comment on the proposed ROD amendment.

4. A responsiveness summary (Appendix A) was prepared to address the comments received during the public comment period for the proposed ROD amendment.

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

Former Bouchard Junkyard
Town of New Lebanon, Columbia County New York
Site No. 411014

The Proposed Record of Decision Amendment for the Former Bouchard Junkyard site, was prepared by the New York State Department of Environmental Conservation (the Department) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on July 7, 2006. The proposed ROD amendment outlined the remedial measure proposed for the contaminated soil and sediment at the site.

The release of the proposed ROD amendment was announced by sending a notice to the public contact list informing the public of the opportunity to comment on the proposed remedy.

A public meeting was held on July 26, 2006, which included a presentation of the Remedial Investigation and the Feasibility Study, as well as a discussion of the proposed amended remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed amended remedy. These comments have become part of the Administrative Record for this site. The public comment period for the ROD amendment ended on August 12, 2006.

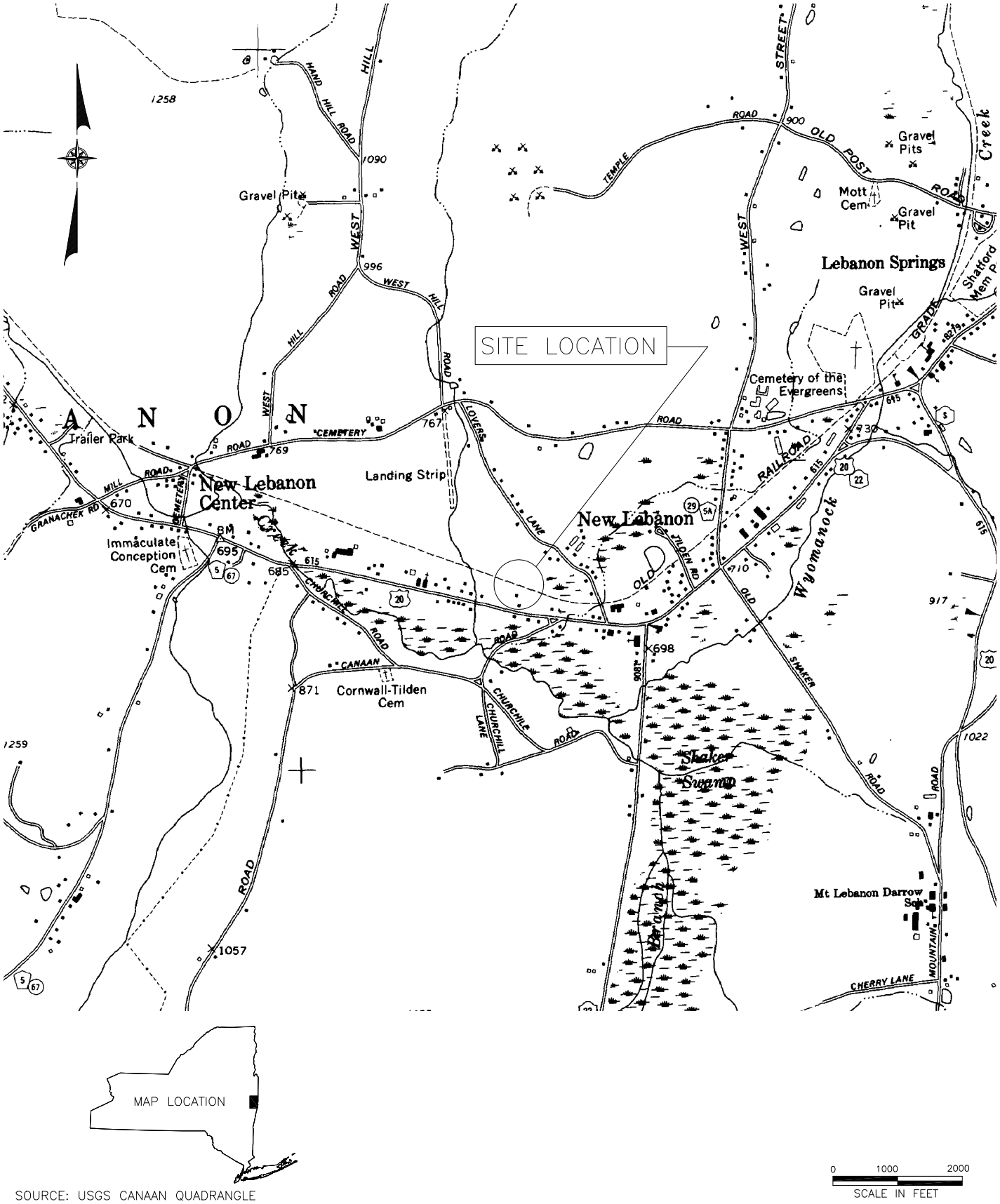
This responsiveness summary responds to all questions and comments raised during the public comment period. The following are the comments received, with the Department's responses:

COMMENT 1: Once the site is cleaned up, what restrictions on uses of the site will exist?

RESPONSE 1: The site will be cleaned to 1 ppm PCBs in the top 18 inches and 10 ppm PCBs in the subsurface. Because residual contamination less than 10 ppm PCBs will remain, any future site use would have to comply with the environmental easement imposed on the site. For example, if subsurface soil were excavated to erect a building, the soil dug up from deeper than 18 inches would need to be tested and properly managed, as necessary.

COMMENT 2: What will be the timing of the cleanup?

RESPONSE 2: Once the ROD amendment is finalized, remedial design would be completed by this fall. Bidding should take place this winter and the cleanup should take place next construction season (2007).



SOURCE: USGS CANAAN QUADRANGLE

0 1000 2000
SCALE IN FEET

BOUCHARD JUNKYARD SITE
NEW LEBANON, NEW YORK

SITE LOCATION

Dvirka and Bartilucci
Consulting Engineers

FIGURE 1–1

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BOUCHARD JUNKYARD SITE
NEW LEBANON, NEW YORK

SITE MAP

FIGURE 1–2

Dvirka and Bartilucci
Consulting Engineers
A Division of William F. Cosulich Associates, P.C.

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