

Department of Environmental Conservation

Division of Environmental Remediation

Record of Decision
Lyndonville West Avenue Site
Village of Lyndonville, Orleans County, New York
Site Number 8-37-002

March 2004

DECLARATION STATEMENT - RECORD OF DECISION

Lyndonville West Avenue Inactive Hazardous Waste Disposal Site Village of Lyndonville, Orleans County New York Site No. 8-37-002

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedy for the Lyndonville West Avenue site, a Class 2 inactive hazardous waste disposal site. The selected remedial program was chosen in accordance with the New York State Environmental Conservation Law and is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300), as amended.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the Lyndonville West Avenue inactive hazardous waste disposal site, and the public's input to the Proposed Remedial Action Plan (PRAP) presented by the NYSDEC. A listing of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

Assessment of the Site

Actual or threatened releases of hazardous waste constituents from this site, if not addressed by implementing the response action selected in this ROD, present a current or potential significant threat to public health and/or the environment.

Description of Selected Remedy

Based on the results of the Remedial Investigation and Feasibility Study (RI/FS) for the Lyndonville West Avenue site and the criteria identified for evaluation of alternatives, the NYSDEC has selected remedial action alternative 3. The components of the remedy are as follows:

- S Removal of drainage swale soils;
- S Capping of the landfill with a geocomposite clay liner (GCL) and asphalt;
- S Continued collection of landfill leachate; and,
- S Institutional controls.

New York State Department of Health Acceptance

The New York State Department of Health (NYSDOH) concurs that the remedy selected for this site is protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

Date

Dale A. Desnoyers, Director
Division of Environmental Remediation

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RECORD OF DECISION

Lyndonville West Avenue Site
Village of Lyndonville, Orleans County New York
Site No. 8-37-002
March 2004

SECTION 1: SUMMARY OF THE RECORD OF DECISION

The New York State Department of Environmental Conservation (NYSDEC), in consultation with the New York State Department of Health (NYSDOH), has selected this remedy for the Lyndonville West Avenue site. The presence of hazardous waste has created significant threats to human health and/or the environment that are addressed by this proposed remedy. As more fully described in Sections 3 and 5 of this document, historic operations at both the former DuPont plant site (currently Monroe Electronics) and the landfill area on West Avenue have resulted in the disposal of hazardous wastes, including arsenic and various pesticides. These wastes have impacted the drainage swale soils. In addition, these wastes were also disposed of in the landfill area at the site, resulting in:

- a significant threat to human health associated with potential exposure to arsenic and various pesticides in the drainage swale soils and landfill area soils.
- a significant environmental threat associated with the potential impacts of contaminants to Johnson Creek.

To eliminate or mitigate these threats, the NYSDEC has selected the following remedy:

- A geocomposite clay liner (GCL) on the landfill to be paved over with asphalt in the level area to facilitate continued use for storage;
- Excavation and off-site disposal of drainage swale soils;
- Continued operation of the landfill leachate collection and disposal system;
- Site fencing along the north slope of the landfill; and,
- Site access and environmental easements. Environmental easements will limit future use to commercial and industrial usage and require adherence to the Soils Management Plan.

The selected remedy, discussed in detail in Section 8, is intended to attain the remediation goals identified for this site in Section 6. The remedy must conform with officially promulgated standards and criteria that are directly applicable, or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, criteria and guidance are hereafter called SCGs.

SECTION 2: SITE LOCATION AND DESCRIPTION

The Lyndonville West Avenue site is located in the Village of Lyndonville in Orleans County. The site consists of several properties in the northwestern portion of the Village (see Figure 1 and

Photo 1). The drainage swale originates behind the current Monroe Electronics facility and flows east approximately 1100 feet (Figure 2). Currently, the drainage enters a new storm sewer installed by DuPont and the Village of Lyndonville; however, historically it flowed under the former railroad tracks, drained through the landfill, and entered the storm sewer under West Avenue. The landfill is located adjacent to the former railroad and east of the main building on the H.H. Dobbins, Inc. (Dobbins) property. The landfill is approximately 2 acres in size. The site is located in a mixed light industrial and residential neighborhood.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

Activities on the properties date back to the 1920s. Barry Lime and Sulphur Company, Inc. began operations at the 100 Housel Avenue property (currently Monroe Electronics) in the early 1920s with the production of lime and sulfur solutions and dust mixtures. These mixtures contained pesticides and were intended for agricultural applications. DuPont purchased Barry Lime and Sulphur in 1943 and continued with the formulation of agricultural sprays and dusts until approximately 1954. Waste lime and sulfur sludge from Barry Lime and Sulphur Company and DuPont was disposed in the landfill. These wastes also contained arsenic and pesticides.

The drainage swale was contaminated by sloppy housekeeping practices (e.g. - sweeping pesticide products out the back door, etc.).

3.2: Remedial History

In 1985, the NYSDEC listed the site as a Class 2a site in the Registry of Inactive Hazardous Waste Disposal Sites in New York (the Registry). Class 2a is a temporary classification assigned to a site that has inadequate and/or insufficient data for inclusion in any of the other classifications. In 1994, the NYSDEC listed the site as a Class 2 site in the Registry. A Class 2 site is a site where hazardous waste presents a significant threat to the public health or the environment and action is required.

As described above, the water in the drainage swale flowed through the landfill to the West Avenue storm sewer system. The drainage swale collects surface runoff for a large area south of the former railroad line. A storm sewer line was constructed through the landfill materials over the years to avoid drainage problems as landfilling activities continued. Residents along certain sections of West Avenue complained of sulfide (rotten egg) odors emanating from storm sewer grates along West Avenue for many years. Numerous investigations were conducted by NYSDEC and the United States Environmental Protection Agency (USEPA) between 1978 and 1993. Detectable but relatively low concentrations of arsenic, copper, DDT, DDD, and DDE were found to be widespread. Much of this is considered to be representative of background conditions within a historically agricultural area.

The largest contributor to nuisance sulfide odors along West Avenue was leachate generated from the landfill, which discharged to the West Avenue storm sewer. In 2000 and 2001, DuPont and the Village of Lyndonville installed additional storm water controls to reduce the volume of drainage through the landfill and eliminate the discharge of leachate to the West Avenue storm

sewer system. As part of this work, DuPont constructed a landfill leachate collection system that collects and stores the landfill leachate pending transport to an off-site treatment and disposal facility. Operation of this system since January 2001 has eliminated discharge of the leachate to the West Avenue storm sewer system. Since the elimination of the discharge to the West Avenue storm sewer system, there have been no complaints of sulfide odors by residents.

SECTION 4: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The NYSDEC and DuPont entered into a Consent Order on April 11, 1997. This order required DuPont to conduct a "Supplemental Environmental Assessment." On December 13, 2000, the NYSDEC and DuPont entered into a second order for DuPont to implement a full remedial program.

SECTION 5: SITE CONTAMINATION

A remedial investigation/feasibility study (RI/FS) has been conducted to evaluate the alternatives for addressing the significant threats to human health and the environment.

5.1: Summary of the Remedial Investigation

The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The RI was conducted between July 1997 and November 1997, and supplemental work was completed in June 2001. In addition, soil samples were obtained in October 2002 in preparation for the feasibility study. The field activities and findings of the investigation are described in the July 21, 1998 Supplemental Environmental Assessment (SEA) Report, the September 6, 2001 Supplemental Remedial Investigation Report, and the March 2003 Soil Delineation Sampling Report.

The following activities were conducted during the investigations:

- Research of historical information;
- Installation of 11 soil borings and 5 monitoring wells for analysis of soils and groundwater as well as physical properties of soil and hydrogeologic conditions;
- Collection of over 150 soil samples including drainage swale sediments and surface soils for arsenic delineation;
- Sampling of 5 new and existing monitoring wells;
- A survey of public and private water supply wells in the area around the site;
- Collection of approximately 3 surface water samples;

- Collection of air samples for analysis of hydrogen sulfide.

To determine whether the soil and groundwater contains contamination at levels of concern, data from the investigation were compared to the following SCGs:

- Groundwater, drinking water, and surface water SCGs are based on NYSDEC “Ambient Water Quality Standards and Guidance Values” and Part 5 of the New York State Sanitary Code.
- Soil SCGs are based on the NYSDEC “Technical and Administrative Guidance Memorandum (TAGM) 4046; Determination of Soil Cleanup Objectives and Cleanup Levels”.

Based on the RI results, in comparison to the SCGs and potential public health and environmental exposure routes, certain media and areas of the site require remediation. These are summarized below. More complete information can be found in the RI report.

In addition to the pesticide and inorganic contamination present at the site, there is known volatile organic compound (VOC) contamination at the Monroe Electronics facility. The original site definition for the Lyndonville West Avenue site included the former plant site, currently Monroe Electronics. However, the investigations performed indicated that pesticide and inorganic contamination was not present in consequential amounts on the actual plant site. Therefore, the site boundary description was redefined. The Lyndonville West Avenue site now consists of the drainage swale beginning behind the current Monroe Electronics building and heading east, as well as the Landfill on the Dobbins property. The Monroe Electronics property has been listed as a separate inactive hazardous waste site (Monroe Electronics, site #837013) in order to address the VOC contamination. This site is being addressed separately from the Lyndonville West Avenue site.

5.1.1: Site Geology and Hydrogeology

The soils beneath the study area were characterized during the advancement of soil borings and installation of monitoring wells. Three major types of stratigraphic units were identified during the SEA:

- S Relatively uniform, tan, fine to medium sand (1 to 13 feet in thickness)
- S Brown/tan/gray, low permeability lacustrine clay (8 to 9 feet in thickness)
- S Brown/red rock and sandy glacial till (3 to 4 feet in thickness)

A perched water zone was identified within the sand layer above the clay layer. The clay layer was observed beneath the sand layer throughout the entire study area. Two soil borings from the SEA were advanced to a depth beyond the clay unit to further characterize overburden stratigraphy. Bedrock was encountered 3 to 4 feet below the glacial till.

5.1.2: Nature of Contamination

As described in the investigation reports, many soil, groundwater and sediment samples were collected to characterize the nature and extent of contamination. As summarized in Table 1, the main categories of contaminants that exceed their SCGs are pesticides and inorganics (metals).

Inorganics of concern at the site are arsenic and copper. Pesticides of concern include DDT, DDD, and DDE. All of these compounds are prevalent in the Lyndonville area due to the agricultural history. This investigation targeted elevated levels of these compounds in the drainage swale and landfill.

5.1.3: Extent of Contamination

This section describes the findings of the investigation for all environmental media that were investigated.

Chemical concentrations are reported in parts per billion (ppb) for water and parts per million (ppm) for soil. For comparison purposes, where applicable, SCGs are provided for each medium.

Table 1 summarizes the degree of contamination for the contaminants of concern in landfill waste, landfill leachate, surface soil, subsurface soil, surface and storm water, and groundwater and compares the data with the SCGs for the site. The following are the media which were investigated and a summary of the findings of the investigation.

Waste Materials

Four soil boring were advanced into the landfill on July 22 and 23, 1997 (Figure 3). A total of seven samples were obtained. Analysis was performed for pesticides, metals and toxicity characteristic leaching procedure (TCLP). Results for landfill wastes are presented in Table 1.

Elevated levels of arsenic (up to 340 ppm), DDD (up to 15.9 ppm), DDE (up to 20.9 ppm), and DDT (up to 31.9 ppm) were present in the landfill waste material. The TCLP samples on the waste itself did not indicate that it was characteristically hazardous.

Surface Soil (0-2 inches)

Historic site investigations did not indicate that there were any compounds of concern present at the site other than pesticides, arsenic and copper. (Except as noted above regarding the Monroe Electronics property VOCs). Nevertheless, several surface soil samples were analyzed for the full Target Compound List (TCL) of compounds which includes volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, PCBs, and inorganic compounds.

Ten (10) surface soil samples were initially obtained throughout the site (Figure 4). Many additional samples were taken to better define the limits of arsenic contamination.

One VOC, acetone, was detected above guidance values in one surface soil sample located in a drainage area west of the site. The guidance value for acetone is 200 ppb and it was detected at a level of 580 ppb. This sample was not obtained from the drainage swale or the landfill and is not considered a contaminant of concern for this site.

Several SVOCs were detected in surface soil samples. The highest levels were present in the samples directly adjacent to the former railroad tracks. The presence of SVOCs adjacent to industrialized areas and railroads is not uncommon. SVOCs are not considered chemicals of concern for this site.

The highest concentrations of the pesticides DDD, DDE, and DDT were found in the drainage swale surface soil. Arsenic was found at consistently high levels in the drainage swale, up to 2,060 ppm. A total of 38 surface soil samples were obtained and analyzed for arsenic.

Subsurface Soil

Seven soil borings were installed on the Monroe Electronics property (Figure 5) and four borings were installed in the landfill (Figure 3). As discussed above, the investigations on the Monroe Electronics property did not reveal a consequential amount of pesticides or inorganics. The four borings in the landfill were discussed above in the Waste Material section.

In order to better define the extent of arsenic contamination, DuPont obtained over 100 soil samples in the drainage swale. The maximum level of arsenic detected in the drainage swale subsurface soil was 4,060 ppm.

Groundwater

Five groundwater monitoring wells were installed (Figure 6). The wells were sampled twice in 1997 and once in 2001. No contamination above SCGs were detected in the wells.

Surface Water

Surface water samples were taken in the drainage swale (when there was water present) and in the storm drain on West Avenue.

Arsenic, DDD, DDE, and DDT were detected at the highest levels in the sample taken where the drain exits the landfill (SW-4a). The next highest levels detected were in SW-5. SW-5 was obtained from the manhole where the landfill drain connected to the storm sewer on West Avenue. The surface water samples presented in Table 1 were obtained prior to the rerouting and collection of the landfill drainage discussed in Section 3.2 above. Currently, DuPont collects all flow through the landfill and properly disposes of it off-site.

5.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the RI/FS. As was discussed in Section 3.2 above, DuPont, in conjunction with the Village of Lyndonville, made changes and improvements to the storm water drainage system in the vicinity of the site. In addition, DuPont currently collects any water flow through the landfill and properly disposes of it off-site. This has resulted in the elimination of landfill leachate into the storm sewer system on West Avenue.

5.3: 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.

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.

At this site, contamination exists in surface and subsurface soil within the topographic boundaries of the drainage ditch, and in waste material deposited in the landfill area currently under the Dobbins Apple storage area. For a complete exposure pathway to occur, persons would have to come into contact with the soil or waste material. Currently, the only completed point of exposure is for drainage swale soil. Exposure to arsenic contaminated soil could occur through maintenance activities within the topographic boundaries of the ditch, or from erosion and re-deposition of ditch soil during unusual storm events. Although there are homes nearby, the ditch is not readily accessible to residents, and workers at adjacent businesses are unlikely to enter the ditch. Landfill leachate from the waste material is currently collected and disposed of off site. All homes and businesses in the area are served by public water. Complete pathways could occur in the future during subsurface construction activities, or contact with landfill leachate if the collection system fails.

In summary, under the current site use scenario, the possibility of contact with contaminated soil exists, while the possibility of contact with waste materials and landfill leachate is minimal and unlikely.

5.4: Summary of Environmental Impacts

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.

Johnson Creek is the main environmental receptor in the site area. Both the drainage swale and the landfill used to drain into the West Avenue storm sewer, which ultimately discharges to Johnson Creek. However, currently, the flow through the landfill is being collected by DuPont and properly disposed of off-site.

The West Avenue storm sewer discharges to the ground surface east of Main Street and flows approximately 200 feet to Johnson Creek. Samples obtained at this outfall in 2001 did not reveal elevated levels of contaminants.

This PRAP proposes continued collection of the landfill leachate as well as removal of contaminated drainage swale soils. Although current impacts have not been noted, there is the

potential that Johnson Creek could be impacted in the future if landfill leachate is no longer collected or the drainage swale soils are not addressed.

SECTION 6: SUMMARY OF THE REMEDIATION GOALS

Goals for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375-1.10. At a minimum, the remedy selected must eliminate or mitigate all significant threats to public health and/or the environment presented by the hazardous waste disposed at the site through the proper application of scientific and engineering principles.

The remediation goals for this site are to eliminate or reduce to the extent practicable:

- exposures of persons at or around the site to arsenic and pesticides in drainage swale soil and landfill materials; and
- the release of contaminants from drainage swale soils and landfill materials into surface water through storm water erosion.

SECTION 7: SUMMARY OF THE EVALUATION OF ALTERNATIVES

The selected remedy must be protective of human health and the environment, be cost-effective, comply with other statutory requirements, and utilize permanent solutions, alternative technologies or resource recovery technologies to the maximum extent practicable. Potential remedial alternatives for the Lyndonville West Avenue Site were identified, screened and evaluated in the FS report which is available at the document repositories identified in Section 1.

A summary of the remedial alternatives that were considered for this site are discussed below. The present worth represents the amount of money invested in the current year that would be sufficient to cover all present and future costs associated with the alternative. This enables the costs of remedial alternatives to be compared on a common basis. As a convention, a time frame of 30 years is used to evaluate present worth costs for alternatives with an indefinite duration. This does not imply that operation, maintenance, or monitoring would cease after 30 years if remediation goals are not achieved.

Many samples were obtained from near the site and from other areas of Lyndonville. The arsenic levels present in many of these samples reflect arsenic levels commonly found in old orchards not impacted by plant activities. Arsenic levels in orchards are often above natural background levels due to the historic application of pesticides containing lead arsenate. Assigning an arsenic cleanup level in the drainage swale area would not be appropriate since excavations would then extend into the adjacent old orchard fields. Therefore, for Remedial Action Alternatives (RAAs) RAA1 through RAA4, the drainage swale will be delineated topographically, i.e. - DuPont will address those areas that could reasonably have been impacted by site operations (Figure 7).

7.1: Description of Remedial Alternatives

The following potential remedies were considered to address the contaminated soils at the site.

No Action Alternative

<i>Present Worth:</i>	\$0
<i>Capital Cost:</i>	\$0
<i>Annual OM&M:</i>	\$0

The No Action Alternative is evaluated as a procedural requirement and as a basis for comparison. This alternative would leave the site in its present condition and would not provide any additional protection to human health or the environment.

Alternative #RAA1

Alternative #RAA1—Landfill Cover (Existing Gravel), GCL Cover for Northern Slope, and Drainage Swale Removal (Figure 8)

<i>Present Worth:</i>	\$808,426
<i>Capital Cost:</i>	\$367,656
<i>Annual OM&M:</i>	\$54,719

RAA1 would include the existing gravel cover (or an equivalent technology approved by the NYSDEC) for the landfill, a geocomposite clay liner (GCL) cover for the north slope of the landfill, removal of the drainage swale soil, and the use of institutional controls to further reduce the potential for direct contact by trespassers and site workers. The existing leachate collection system would also be maintained as part of this alternative.

The GCL material is a special liner designed for use as a cover on landfills. It consists of a clay layer sandwiched between two geosynthetic membranes.

Institutional controls would include the development of a Site Management Plan (SMP). The SMP would require a fence along the northern slope of the landfill area; continued maintenance of the cover; restriction of intrusive activities within the landfill, such as excavation, (unless personal protective equipment and other safety measures were in place); and, an annual certification by the current owner that all institutional controls are in place and are still protective of human health and the environment. An environmental easement would be put in place that requires adherence to the SMP and maintains the commercial / industrial use designation for the property.

Fencing and installation of the GCL cover on the northern slope can be accomplished with standard construction practices. The construction duration could be completed in a period of approximately 1 to 2 months.

Alternative #RAA2

Alternative #RAA2—Landfill Cap (Asphalt), GCL Cover for Northern Slope, and Drainage Swale Removal (Figure 9)

<i>Present Worth:</i>	\$1,028,637
<i>Capital Cost:</i>	\$645,008
<i>Annual OM&M:</i>	\$47,625

RAA2 would include an asphalt cap (or an equivalent technology approved by the NYSDEC) for the landfill to prevent water infiltration into the landfill mass, thereby reducing the amount of landfill drainage and allowing for the continued use of the landfill surface for storage of apple crates, etc. In addition, a GCL cover would be placed on the northern slope of the landfill, and the drainage swale soils would be removed. This alternative would also include the existing leachate collection system and the institutional controls listed in RAA1.

The fence, asphalt cap, and GCL cover can be installed with common construction methods and materials. Construction could be accomplished in a period of approximately 1 to 3 months.

Alternative #RAA3

Alternative #RAA3—GCL Landfill Cap to be paved with asphalt and Drainage Swale Removal (Figure 10)

<i>Present Worth:</i>	\$1,179,750
<i>Capital Cost:</i>	\$796,121
<i>Annual OM&M:</i>	\$47,625

RAA3 would include a GCL cap (or an equivalent technology approved by the NYSDEC) for the landfill to prevent water infiltration into the landfill mass, thereby reducing the amount of landfill drainage. The level portion would be paved allowing for the continued use of the landfill surface for storage of apple crates, etc. The drainage swale soils would be removed. This alternative would also include the institutional controls listed in RAA1. The landfill cap would consist of the following components from bottom to top:

- S Existing gravel/fill cover ranging from two to eight feet across the landfill
- S GCL cover
- S Gravel/fill cover ranging from nine to twelve inches
- S Asphalt surface to allow continued use of the property for storage.

The fence, GCL cap, and asphalt surface can be installed with common construction methods and materials. The construction duration could be completed in a period of approximately 3 to 5 months.

Alternative #RAA4

Alternative #RAA4—Landfill and Drainage Swale Removal (Figure 11)

<i>Present Worth:</i>	\$5,648,432
<i>Capital Cost:</i>	\$5,648,432
<i>Annual OM&M:</i>	\$0

RAA4 would remove material from the landfill and drainage swale. The excavated material would be transported to an off-site disposal facility. Removal of the material would eliminate the potential for direct contact by trespassers or site workers. This alternative would not require site access controls or environmental easements described for the previous alternatives because all the material would have been removed from the site. The current leachate collection system would also be shut down due to the removal of landfill material.

This alternative would require the excavation of approximately 25,500 cubic yards of landfill and drainage swale material. This removal alternative would be completed within approximately 5 to 9 months.

7.2 Evaluation of Remedial Alternatives

The criteria to which potential remedial alternatives are compared are defined in 6 NYCRR Part 375, which governs the remediation of inactive hazardous waste disposal sites in New York State. A detailed discussion of the evaluation criteria and comparative analysis is included in the FS report.

The first two evaluation criteria are termed “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.
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 NYSDEC has determined to be applicable on a case-specific basis.

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.
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.
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.
6. Implementability. The technical 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.
7. Cost-Effectiveness. Capital costs and 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 costs for each alternative are presented in Table 2.

This final criterion is considered a “modifying criterion” and is taken into account after evaluating those above. It is evaluated after public comments on the Proposed Remedial Action Plan have been received.

8. Community Acceptance - Concerns of the community regarding the RI/FS reports and the PRAP have been evaluated. The responsiveness summary (Appendix A) presents the public comments received and the manner in which the NYSDEC addressed the concerns raised.

In general, the public comments received were supportive of the selected remedy. Several comments were received, however, pertaining to the possibility of the leachate collection system discharging directly into the Village sanitary sewer system rather than being collected and trucked off site. This possibility will be further explored during the design phase. This would not constitute a significant change in the remedy selection.

SECTION 8: SUMMARY OF THE SELECTED REMEDY

Based on the Administrative Record (Appendix B) and the discussion presented below, the NYSDEC has selected Alternative RAA3 as the remedy for this site. The elements of this remedy are described at the end of this section.

The selected remedy is based on the results of the RI and the evaluation of alternatives presented in the FS.

Alternative RAA3 is being selected because, as described below, it satisfies the threshold criteria and provides the best balance of the primary balancing criteria described in Section 7.2. It will achieve the remediation goals for the site by eliminating direct contact exposure to contaminated soils in the drainage swale and the landfill.

All of the remedial action alternatives except no action are protective of human health and the environment and meet the remedial action objectives for the site.

RAA1 does not reduce the potential for migration of impacted material as well as RAA2, RAA3, and RAA4 because the existing gravel cover would allow more rain and surface water infiltration to occur. This would result in an increased amount of landfill leachate that would need to be managed and may also lead to the collapse of the landfill sides.

RAA2 and RAA3 are the same except that in RAA3 the GCL barrier layer covers the entire landfill area. The extended GCL barrier layer in RAA3 will provide extra protection from exposure to landfill contents as well as reduce the amount of landfill drainage that will need to be managed. This technology is more dependable and requires less maintenance as the protective layer (GCL) is not exposed and is not directly subjected to traffic.

RAA4 offers the most long-term protection; however, implementation of RAA4 will result in significant short-term impacts to the community due to increased truck traffic, prolonged construction noise, and potential odors. RAA4 is also the highest cost alternative with an

estimated present worth cost of \$5,648,432 which is over five times higher than the cost for RAA3.

RAA3 offers appropriate protection and can be quickly and easily implemented at a cost that is reasonable compared to the other alternatives.

The estimated present worth cost to implement the remedy is \$1,179,750. The cost to construct the remedy is estimated to be \$796,121 and the estimated average annual operation, maintenance, and monitoring costs for 30 years is \$47,625.

The elements of the selected 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. Excavation and off site disposal of drainage swale soils.
3. A GCL liner (or an equivalent technology approved by the NYSDEC) will be placed on the landfill and the level portion paved with asphalt.
4. The collection and removal of the landfill drainage will continue until the NYSDEC determines that continued collection is not necessary.
5. Development of a site management plan to: (a) address residual contaminated soils that may be excavated from the site. The plan will require soil characterization and, where applicable, disposal/reuse in accordance with NYSDEC regulations; (b) require continued collection and removal of the landfill drainage until the NYSDEC determines that continued collection is not necessary; and (c) identify any use restrictions.
6. The property owner will provide an annual certification, prepared and submitted by a professional engineer or environmental professional acceptable to the Department, which will certify that the institutional controls and engineering controls put in place, are unchanged from the previous certification and nothing has occurred that would impair the ability of the control to protect public health or the environment or constitute a violation or failure to comply with any operation an maintenance or soil management plan.
7. Imposition on the property owner of an institutional control in the form of an environmental easement that will: (a) require compliance with the approved site management plan, (b) limit the use and development of the property to commercial or industrial uses only; and, (c) require the property owner to complete and submit to the NYSDEC an annual certification.

SECTION 9: 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:

- Repositories for documents pertaining to the site were established.

- A public contact list, which included nearby property owners, elected officials, local media and other interested parties, was established.
- Several fact sheets were sent to the public contact list.
- Several public meetings were held, including a public meeting held on March 9, 2004 to present and receive comment on the PRAP.
- A responsiveness summary (Appendix A) was prepared to address the comments received during the public comment period for the PRAP.

TABLE 1
Nature and Extent of Contamination
Exceedances of Standards, Criteria, and Guidance Values (SCGs)
Sampling results from:
1997 DuPont Supplemental Environmental Assessment (SEA) Sampling;
2001 DuPont Supplemental Remedial Investigation Sampling; and,
2002 DuPont Soil Delineation Sampling

LANDFILL WASTE	Contaminants of Concern	Concentration Range Detected (ppm)^a	SCG^b (ppm)^a	Frequency of Exceeding SCG	
PCB/Pesticides	DDD	ND to 15.9	2.9	1 of 7	
	DDE	ND to 20.9	2.1	1 of 7	
	DDT	ND to 31.9	2.1	1 of 7	
	Inorganic Compounds	arsenic	4.4 to 340	7.5 or SB	3 of 7
		copper	15 to 461	25 or SB (25 used)	3 of 7
DRAINAGE SWALE SURFACE SOIL	Contaminants of Concern	Concentration Range Detected (ppm)^a	SCG^b (ppm)^a	Frequency of Exceeding SCG	
Volatile Organic Compounds (VOCs)	acetone	ND to 0.580	0.2	1 of 5	
	Semivolatile Organic Compounds (SVOCs)	benzo(a)anthracene	0.11 to 2.7	0.224	2 of 4
		benzo(a)pyrene	ND to 2.8	0.061	3 of 4
		benzo(b)fluoranthene	0.19 to 4.1	1.1	1 of 4
		benzo(k)fluoranthene	0.059 to 1.4	1.1	1 of 4
		chrysene	0.15 to 2.9	0.4	2 of 4
		dibenzo(a,h)anthracene	ND to 0.49	0.014	1 of 4
PCB/Pesticides	DDD	0.0051 to 37.6	2.9	1 of 13	
	DDE	0.032 to 5.3	2.1	2 of 13	
	DDT	ND to 6.2	2.1	1 of 13	
	Beta-BHC	ND to 0.26	0.2	1 of 13	
	Inorganic Compounds	arsenic	7.5 to 2,060 ppm	7.5 or SB	26 of 38
		copper	9.9 to 247	25 or SB	1 of 13

SUBSURFACE SOIL	Contaminants of Concern	Concentration Range Detected (ppm)^a	SCG^b (ppm)^a	Frequency of Exceeding SCG
PCB/Pesticides	DDD	ND to 3	2.9	1 of 16
	DDT	ND to 23.4	2.1	1 of 16
Inorganic Compounds	arsenic	2.4 to 4,060	7.5 or SB	68 of 153
	copper	8.1 to 296	25 or SB	3 of 16
DRAINAGE SWALE & STORM SEWER WATER	Contaminants of Concern	Concentration Range Detected (ppb)	SCG^b (ppb)	Frequency of Exceeding SCG
PCB/Pesticides	4,4'-DDD	ND to 1.83	0.000007 (surface water)	3 of 5
	4,4'-DDE	ND to 0.266	0.000011 (surface water)	4 of 5
	4,4'-DDT	ND to 1.02	0.000011 (surface water)	2 of 5
Inorganic Compounds	arsenic	ND to 770	150 (surface water)	1 of 5
GROUNDWATER	Contaminants of Concern	Concentration Range Detected (ppb)^a	SCG^b (ppb)^a	Frequency of Exceeding SCG
No Exceedances				

^a ppb = parts per billion, which is equivalent to micrograms per liter, ug/L, in water;
ppm = parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;

ND = not detected

NA = not applicable

^b SCG = standards, criteria, and guidance values

SB= Site Background

Table 2
Remedial Alternative Costs

Remedial Alternative	Capital Cost	Annual OM&M	Total Present Worth (30 years)
No Action	\$0	\$0	\$0
RAA1	\$367,656	\$54,719	\$808,426
RAA2	\$645,008	\$47,625	\$1,028,637
RAA3	\$796,121	\$47,625	\$1,179,750
RAA4	\$5,648,432	\$0	\$5,648,432



Photo 1
Lyndonville West
Avenue

Date unknown

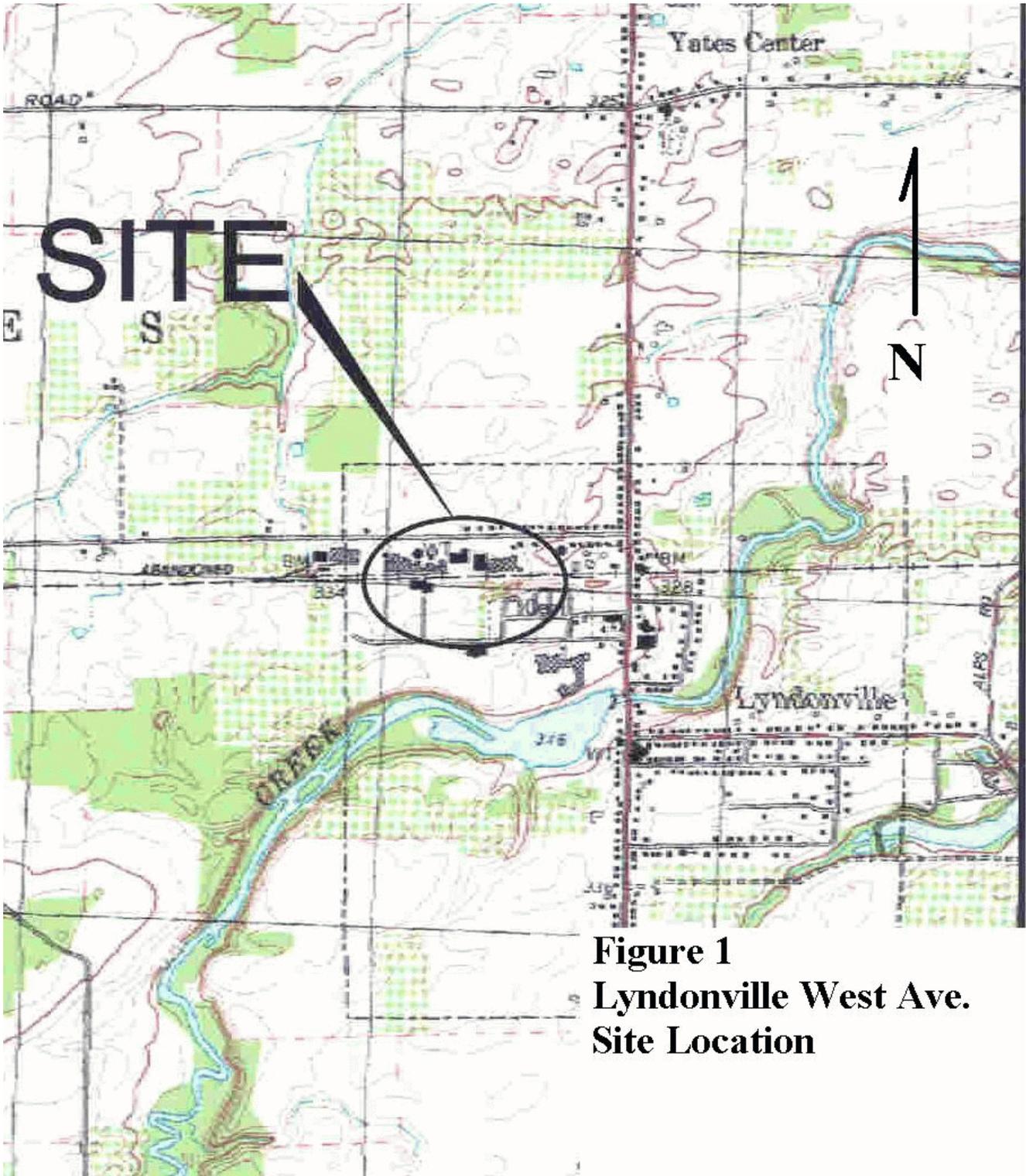


Figure 1
Lyndonville West Ave.
Site Location

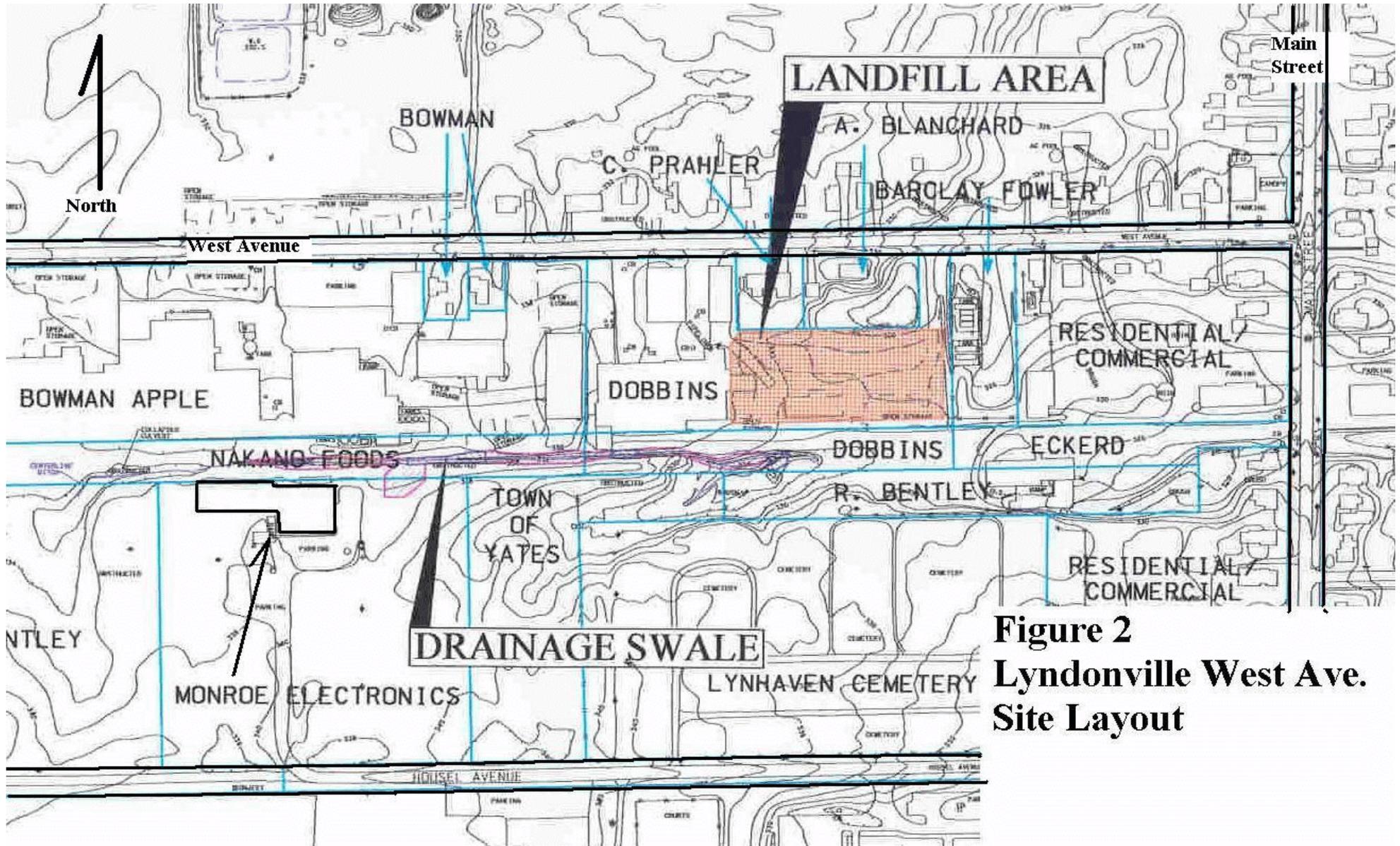


Figure 2
Lyndonville West Ave.
Site Layout

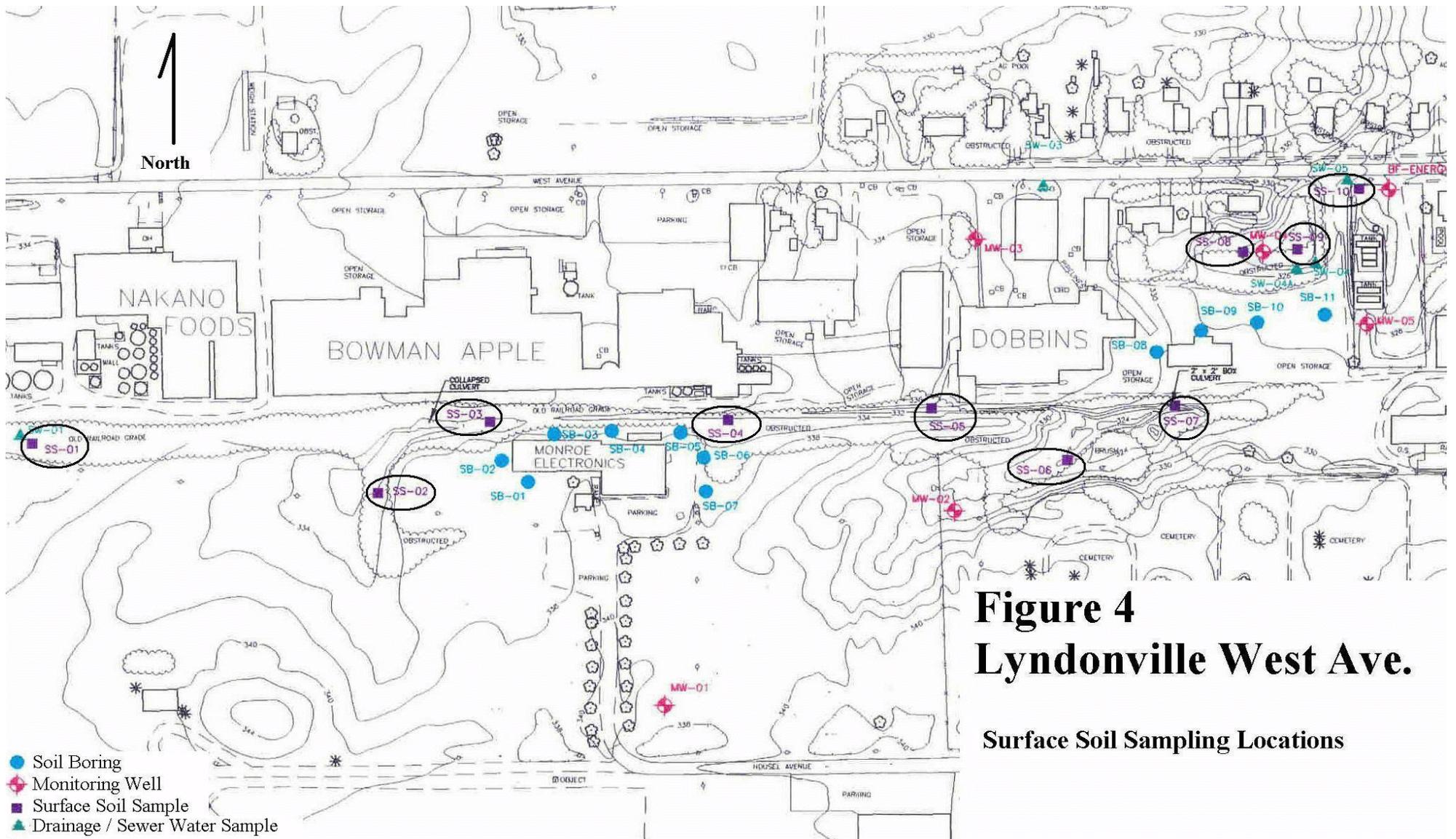


Figure 4
Lyndonville West Ave.

Surface Soil Sampling Locations

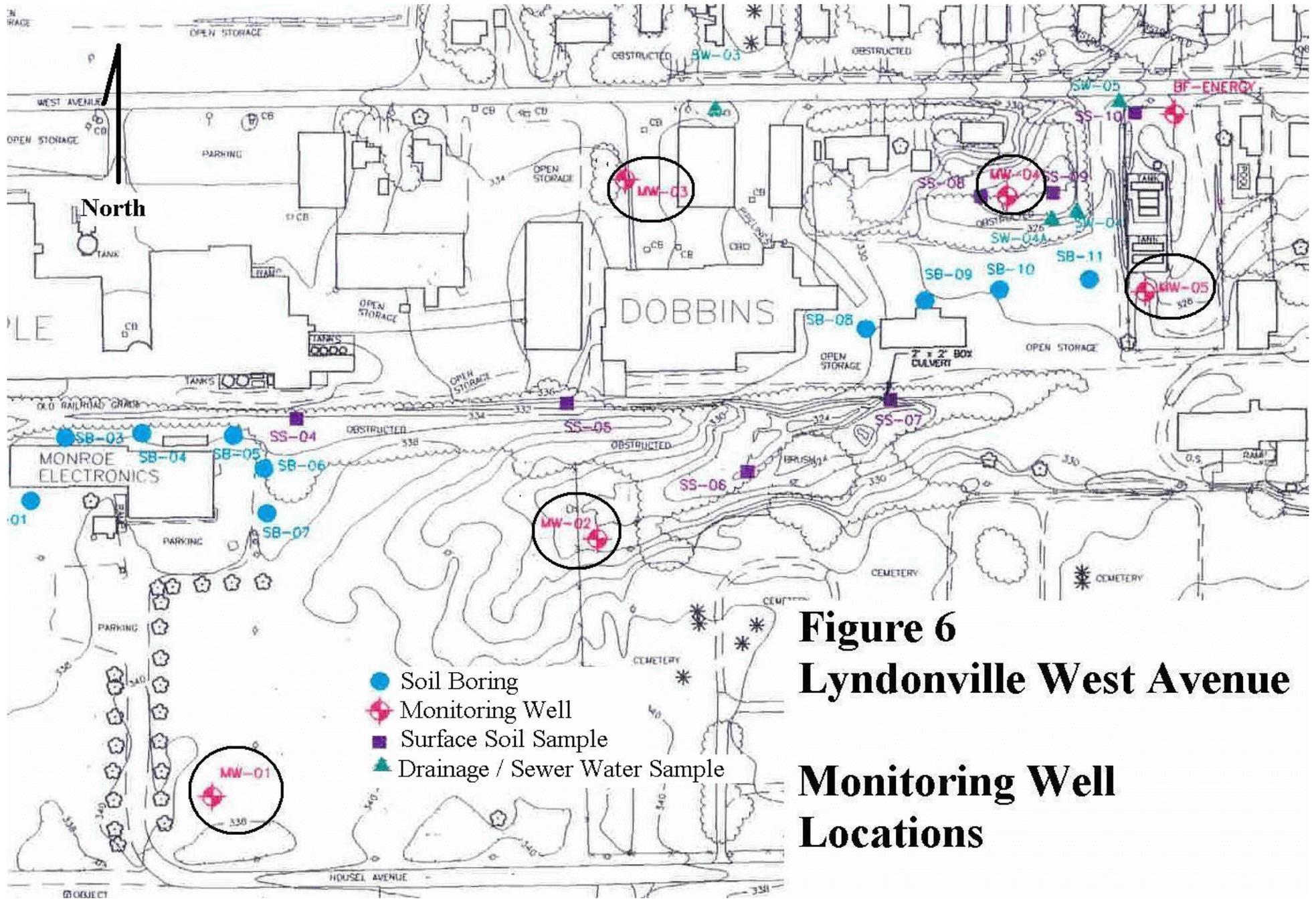


Figure 6
Lyndonville West Avenue
Monitoring Well
Locations

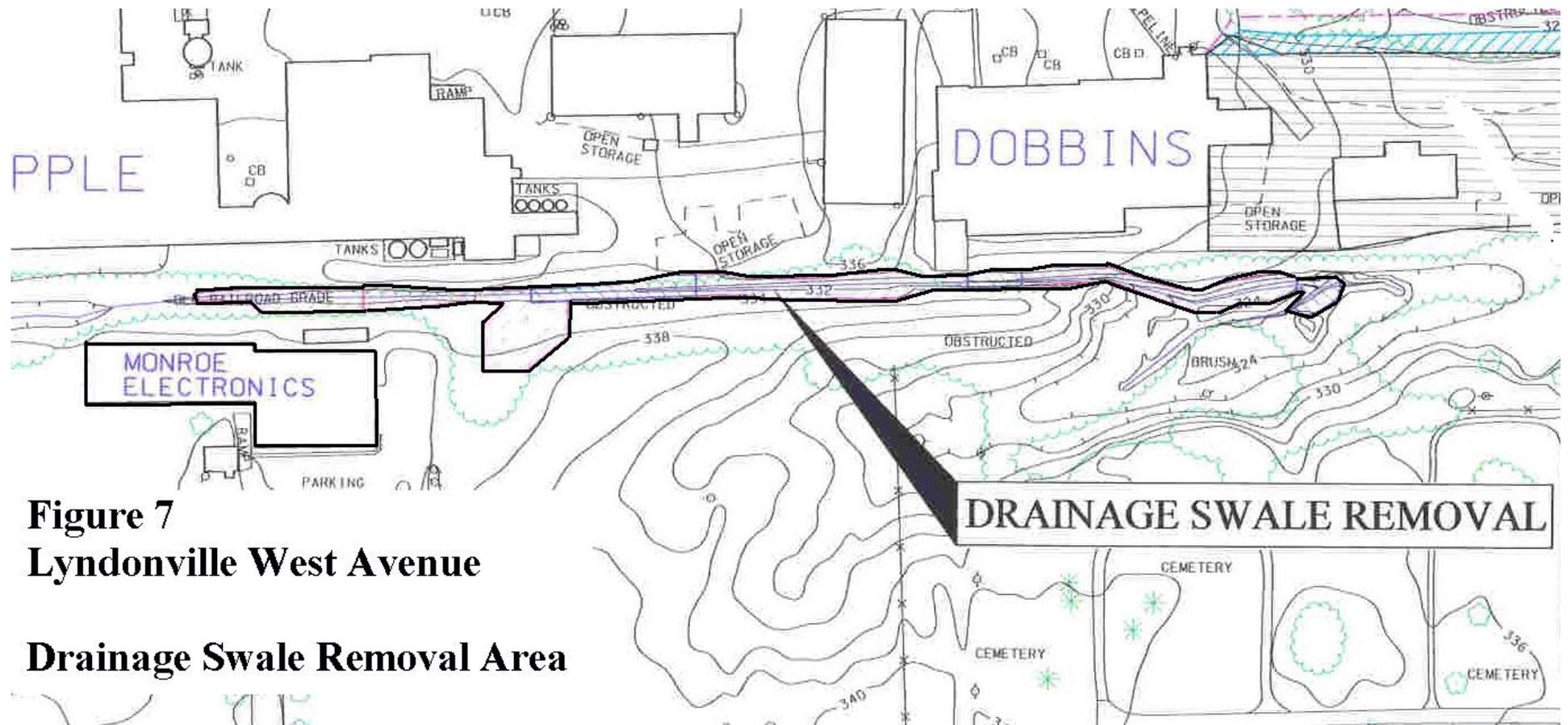


Figure 7
Lyndonville West Avenue
Drainage Swale Removal Area

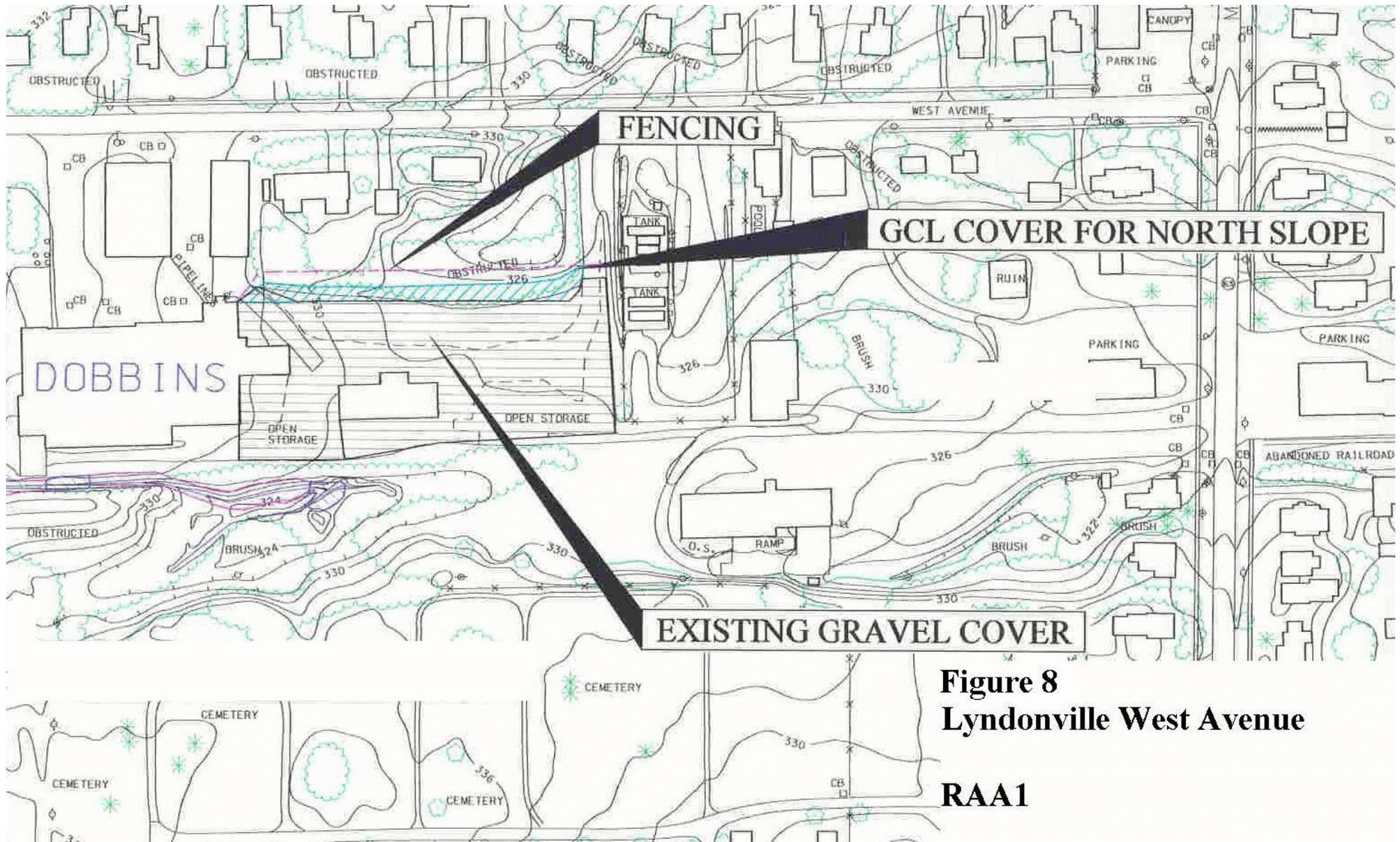


Figure 8
Lyndonville West Avenue

RAA1

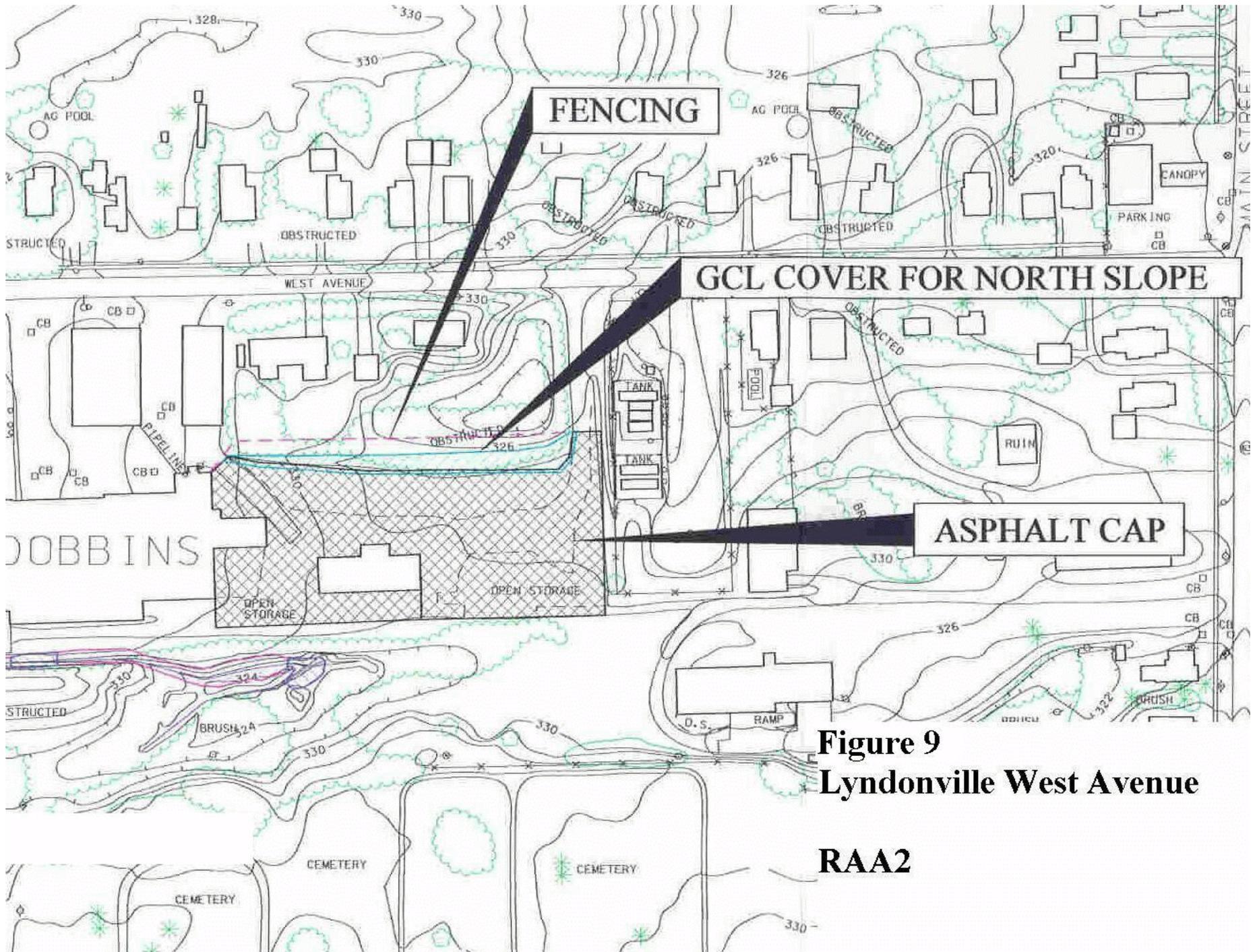


Figure 9
Lyndonville West Avenue

RAA2

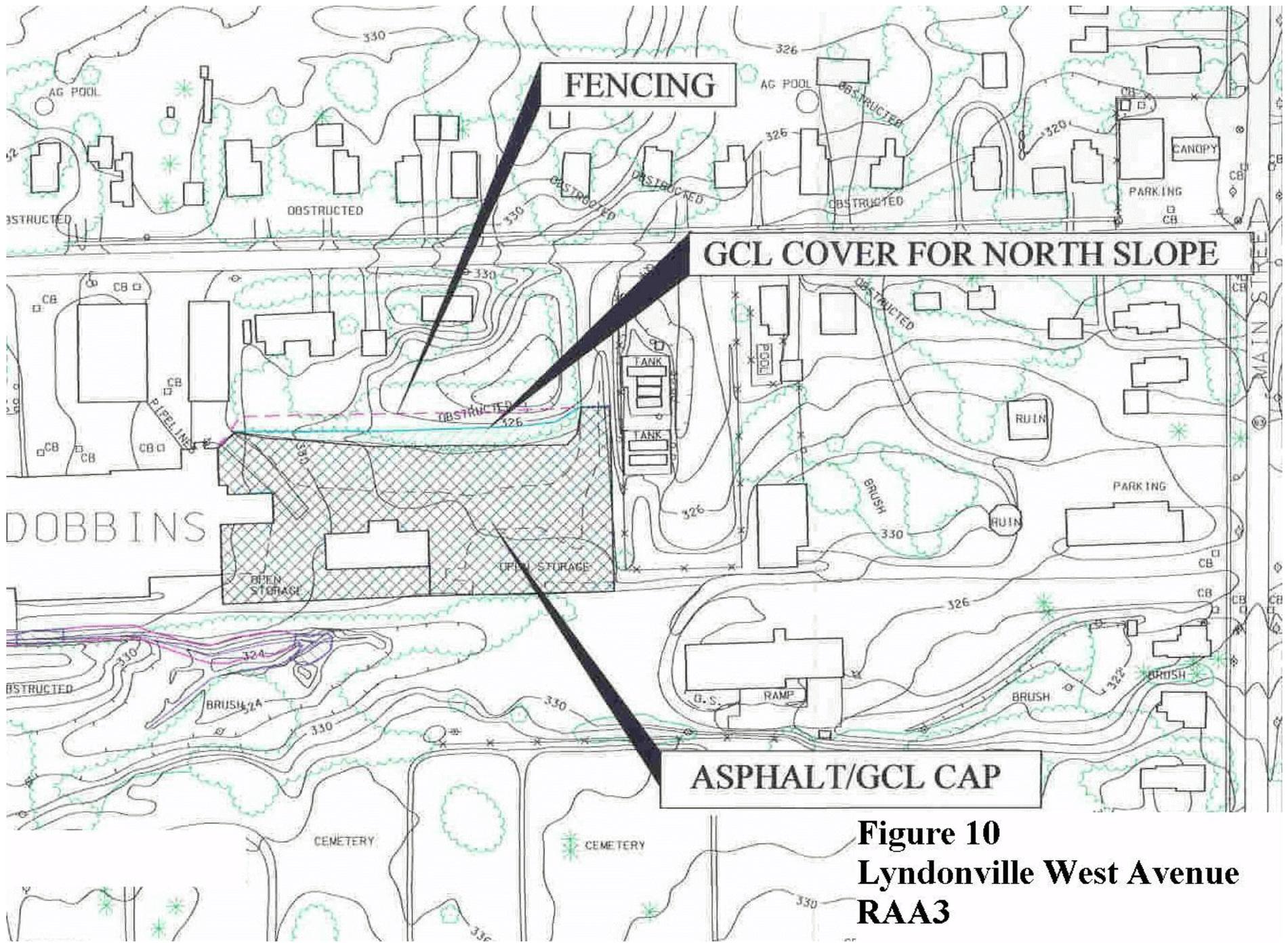


Figure 10
Lyndonville West Avenue
RAA3

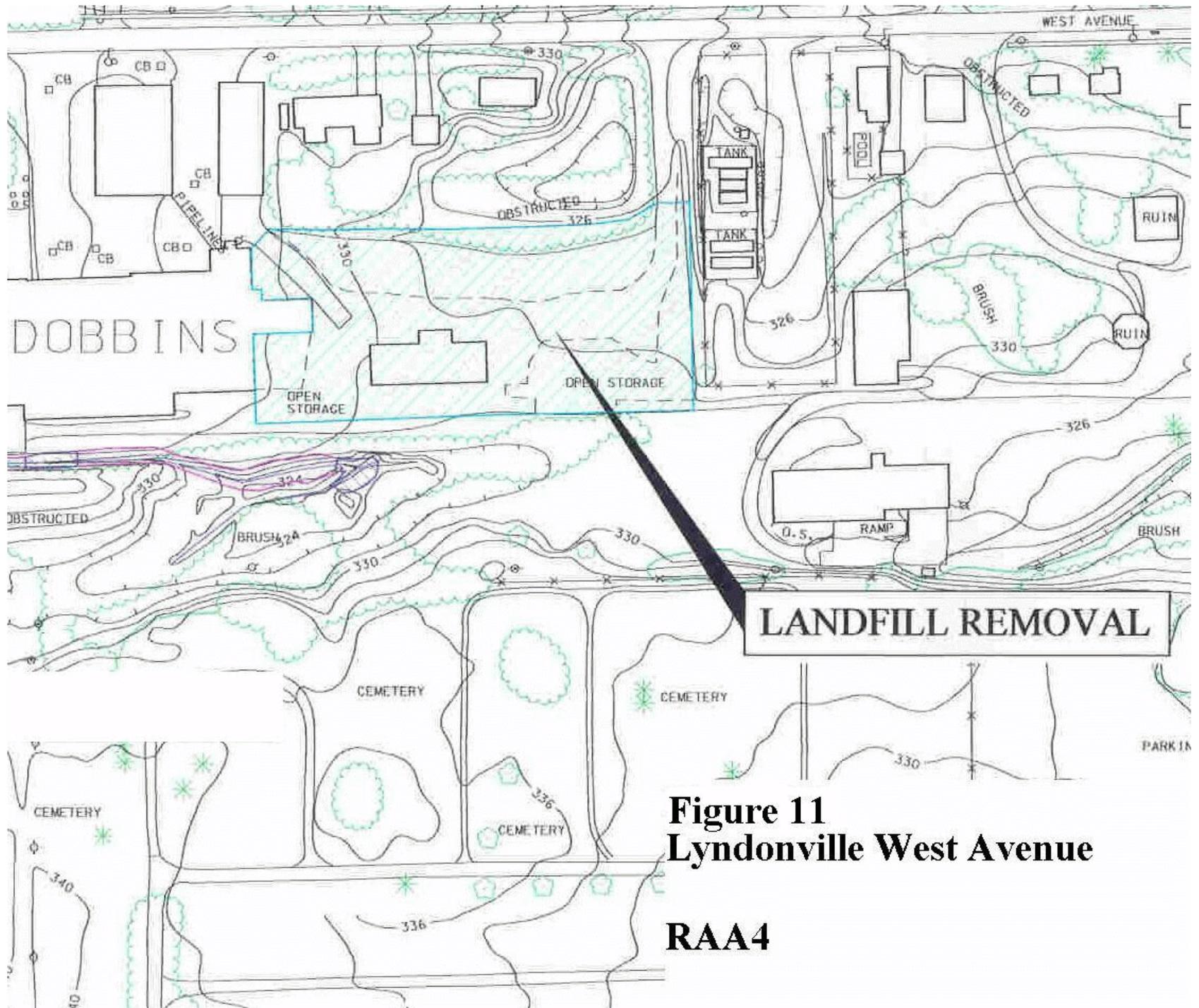


Figure 11
Lyndonville West Avenue

RAA4

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

**Lyndonville West Avenue
Village of Lyndonville, Orleans County, New York
Site No. 8-37-002**

The Proposed Remedial Action Plan (PRAP) for the Lyndonville West Avenue site, was prepared by the New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on February 26, 2004. The PRAP outlined the remedial measure proposed for the contaminated soil at the Lyndonville West Avenue site.

The release of the PRAP 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 March 9, 2004, which included a presentation of the Remedial Investigation (RI) and the Feasibility Study (FS) as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. The public comment period for the PRAP ended on March 27, 2004.

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

Comment 1: You took some samples from the test well on my property [former Barclay and Fowler property to the east of the landfill]. Did you find any elevated levels of contaminants there? I have a drainage ditch inside the fence, did you test there? Would this ditch get runoff for the storm drain? Was there an access road there for quite awhile? Is it used to keep leachate from flowing towards my direction?

Response 1: No elevated levels of contaminants were detected in the test well on this property. The drainage ditch on that property was not tested. Flow from the landfill area does not lead onto the property in question. It is not known how long the access road has been present.

Comment 2: Is it a monetary consideration whether to cap the landfill versus excavating and removing the contamination?

Response 2: Monetary considerations are a factor after other criteria are considered. When remedial alternatives are equal in the protection of human health and the environment, then the costs involved may be considered.

Comment 3: When the remedy is completed, will the percentages of contamination be down to a number that is healthful?

Response 3: Contaminants in the landfill will remain at the current levels. However, they will be isolated from any contact. Contaminants in the drainage swale will be completely removed.

Comment 4: My main concern is the leachate collection system. It puts our kids and future generations at risk for health problems. It needs to be maintained forever into perpetuity. Who will maintain the system—DuPont or the village? Is there a trust fund in place to maintain it? Would Mr. Dobbins maintain the leachate collection system?

Response 4: DuPont will be required to maintain the treatment system. However, Dobbins, as the property owner, will also be responsible to certify to the NYSDEC annually that the system is being properly maintained. If, in the future, DuPont or the owner fail to maintain the system, then the NYSDEC would intervene and make arrangements for the proper maintenance. There is no trust fund in place for maintenance.

Comment 5: Regarding the \$46,000 a year cost to maintain the leachate collection system—do these costs include hauling away the leachate, maintaining the charcoal filters & canisters, electricity, and pumps? What is the total operating and maintenance costs?

Response 5: The total operation and maintenance cost is \$47,625. This includes all costs associated with the continued operation of the system.

Comment 6: Is someone going to monitor the levels of leachate coming out, once the landfill is capped?

Response 6: DuPont will be responsible for monitoring the leachate and periodically removing leachate from the collection system.

Comment 7: Is there an alarm system on the leachate collection system?

Response 7: Yes, there is an alarm system on the leachate collection system. It consists of an auto-dialer that has been programmed with a sequence of telephone numbers.

Comment 8: Would the 10 inch pipe under the landfill eventually deteriorate? That pipe is currently collecting the leachate. If the pipe deteriorates or collapses, the leachate would stop flowing to the collection system. Where would this leachate come out of the dump if the pipe deteriorates? Would there be an increase of flow if there's a breach of the cap?

Response 8: If the leachate collection system fails, then DuPont would be required to repair the system. If leachate begins to seep from the landfill in other areas, then DuPont would be required to make the necessary repairs. An increase in leachate generated is possible if the cap is breached due to the increased amount of rain water infiltration.

Comment 9: Is there a guarantee that the 10 inch pipe will also be monitored? All these issues need to be addressed and guaranteed. If not, all this stuff needs to be taken away, so it won't migrate again. This is my main concern and comment and I'd like to see this written on paper in the ROD, that the maintenance is important, the system will be monitored, and I stated why I'd like to see it monitored.

Response 9: There is no way to monitor the 10 inch pipe under the landfill. At this point, the only known leachate migration pathway is through this pipe into the collection system. As stated above, if the system fails, then DuPont is responsible for repairs. If DuPont or other responsible parties

refuse, then the NYSDEC would intervene and make arrangements for the proper repairs and maintenance.

Comment 10: Who would we call if the leachate collection system fails, if the well is overflowing? Is it the village?

Response 10: You should contact DuPont, if possible. However, also contact the NYSDEC Region 8 office to ensure proper follow up or if DuPont can not be reached. In an emergency, contact the local emergency personnel.

Comment 11: We don't want to leave these problems for the next generations to fix.

Response 11: Understood. With proper operation and maintenance, the proposed remediation should remain protective of human health and the environment.

Comment 12: How many cubic yards will be removed from the swale south of the railroad bank?

Response 12: Approximately 1,189 cubic yards of soil will be removed from the swale.

Comment 13: The waiver DuPont applied for, to put in one vent per acre for the landfill venting to reduce odors-- will that waiver be accepted by the DEC? DuPont was thinking of us when requesting this waiver, this should reduce the odors we've experienced.

Response 13: The question refers to a reference in the FS to the NYSDEC Part 360 Landfill regulations requiring an exemption or equivalency determination for the landfill to not utilize a vapor handling system. The concern is whether the odors from the sulfur sludge in the landfill would off-gas into the community. Due to the limited amount of organic material placed in the landfill and the amount of time that has passed since the landfill has been utilized, the NYSDEC does not anticipate the need for a vapor management system.

Comment 14: In Appendix A, there were 2 samples LYN-S 91 & 92, which measured 95 & 110 ppm [arsenic]. Could you show me where these samples were taken? I'd like to request these areas be removed from consideration as background samples.

Response 14: These samples were obtained in the adjacent field to the south of the drainage swale. It is common to discard anomalously high or low levels when computing an average background level; however, these levels do accurately represent an old orchard area immediately adjacent to the drainage swale. Therefore, background numbers were not utilized to determine the extent of soil removal. Soil in the drainage swale will be removed based on the limits of the swale, not on comparison to background levels. Essentially, DuPont will remove soil from those areas that could reasonably have been impacted by site operations.

Comment 15: How does the landfill liner work?

Response 15: The geocomposite clay liner (GCL) consists of two layers of a plastic-like membrane with a layer of clay between. This is rolled onto the prepared landfill surface and covered with soil. Asphalt will then be placed on top of this. The GCL liner will prevent water from infiltrating the

landfill, thus reducing the amount of landfill leachate generated. The asphalt will protect the liner and provide a working surface for continued use as a storage area for Dobbins.

Comment 16: How will you contain the surfaces of the landfill with the liner? Its not flat. What about the sides versus the top of the landfill? How will you contain the sides of the landfill, beneath the surface?

Response 16: Some regrading of the landfill will be necessary in order to properly place the GCL cap. The final design of the cap will be generated by DuPont and reviewed and approved by the NYSDEC.

Comment 17: How much material will be taken off the top of the landfill to put the cap on?

Response 17: This detail will be ascertained during design.

Comment 18: What will you do with the Dobbins building?

Response 18: The building currently on the Dobbins property will remain. The cap will be designed around the building. Currently, the building serves to prohibit water infiltration into the landfill. If the building is ever removed, then that area will need to be tied into the landfill cap system.

Comment 19: Will gravel come through the landfill membrane?

Response 19: The membrane will be placed in a manner that will minimize the possibility of the membrane tearing.

Comment 20: How long will it take to construct the remedy? When would the start date be?

Response 20: Construction would take approximately 3 to 5 months. Work could begin in the fall of 2004 or spring 2005.

Comment 21: On page 11, plan 2 & 3-- will both plans make the site safe? Do both plans keep the water out of the site? Is Plan 3 insurance upon insurance?

Response 21: The comment refers to the alternative with an asphalt cap verses a GCL cap with asphalt covering the GCL. As stated in the ROD, both alternatives would keep the water out of the landfill; however, the GCL cap is less prone to cracking and is better protected than an asphalt-only cap. The NYSDEC feels the GCL cap is preferable.

Comment 22: Look at all the water freezing and thawing now, and how the roads look. If cold water gets under the GCL layer and under the asphalt cap, will the water freeze and crack and would the asphalt cap degrade on a yearly basis? Looking out for the health and welfare of people around here, maybe there's a better alternative? You wouldn't want the asphalt cap to be cracking and degrading and needing repairs every year.

Response 22: This is one of the reasons that the choice of an asphalt-only cap alone was not made. The asphalt-only cap will need to be designed and maintained so water does not easily get under it to cause such deterioration; however, the GCL layer will be beneath the asphalt and a soil layer and should be protected from such deterioration.

Comment 23: Comment: you already discussed a PRAP—it sounds to me like you’ve already decided what remedy you want to use.

Response 23: The PRAP presents the NYSDEC and NYSDOH’s preferred alternative. Changes to the preferred remedy or even selection of another remedy are considered after review of public comments.

Comment 24: How much landfill leachate flow are you getting now? Fifty gallons a day? Two gallons? And where do you put it or bring it?

Response 24: Approximately 800,000 gallons of leachate has been collected since the system began operating in January 2001. This makes, on average, approximately 200,000 to 300,000 gallons per year (volumes vary seasonally and a daily volume estimate is less accurate compared to annual amounts). The holding tank is pumped into a tanker truck and taken for discharge under permit to the City of Niagara Falls waste water treatment plant.

Comment 25: Is there a possibility to make improvements to our sewage treatment plant to handle the leachate collection system? That way our village could do the O&M and we wouldn’t have to worry about the maintenance of the leachate collection system. Who could look into that? That would be a good long range & secure treatment option.

Response 25: DuPont explored the possibility of sending untreated leachate to the POTW when the leachate collection system was being designed. Due to local POTW concerns at the time with respect to arsenic and hydrogen sulfide this option was not pursued further for technical or cost practicability. Currently, the proposed remedy calls for continued collection and off-site disposal of leachate. Potential treatment of leachate via the Lyndonville waste water treatment system would need to be further evaluated between DuPont and the POTW. If a suitable proposal to treat the leachate is available, then the NYSDEC would consider such alternative.

Comment 26: Are there proven results on the GCL liners? Have you heard of any problems encountered with them at other landfills? What company manufacturers these liners?

Response 26: Membrane liners, including GCL liners, have been successfully used in many places. Problems with membrane liners are typically a result of poor installation or design practices, not problems with the liners themselves. Several manufacturers make these liners. The exact brand of liner to be used in Lyndonville is not yet known.

Comment 27: I’m wondering about the protective suits the men wear when they maintain the collection system and empty the tanks. What are they trying to keep out? What are they protecting themselves from?

Response 27: It is a common health and safety precaution for workers to wear protective suits when performing such job duties. The leachate contains low levels of arsenic and pesticides. It is an industry-wide standard to take such precautionary measures when handling such material.

Robert B. Genau, of DuPont, submitted a letter (dated March 22, 2004) which included the following comments:

Comment 28: As NYSDEC states (Section 8, fourth paragraph), "All of the remedial action alternatives except no action are protective of human health and the environment and meet the remedial action objectives for the site". DuPont believes that RAA2 is the most appropriate remedial alternative to meet the remedial action objectives for the site.

Response 28: As discussed in Response 21 above, the GCL cap would be less prone to cracking and is better protected than an asphalt-only cap. Furthermore, inspection and maintenance of the asphalt-only cap would be hindered by the presence of numerous stored apple crates on the site. The NYSDEC believes that the GCL cap would be less prone to failure and, therefore, more appropriate for this site.

Comment 29: (Should RAA2 not be selected as the final remedy) In order to allow remedy flexibility within the context of the Record of Decision to allow for an alternate, but equally protective RAA3 remedy, please consider the following text revision (*italics and underlined*) to the first paragraph describing Alternative #RAA3. This could potentially allow for use of an "impermeable" asphalt cap (different than a standard asphalt cap). This technology if pursued would need to be reviewed and approved by the NYSDEC.

"RAA3 would include a GCL cap (*or an equivalent technology*) for the landfill to prevent water infiltration into the landfill mass..."

Response 29: Agreed. The text has been revised to state:

"RAA3 would include a GCL cap (*or an equivalent technology approved by the NYSDEC*) for the landfill to prevent water infiltration into the landfill mass..."

Comment 30: In Section 8, point 7, start of paragraph - please consider the following text revision to ensure clarification of the intent of this statement as the property use/deed restriction and any environmental easement must be put in place by the property owner. Again, the text modification suggested in highlighted in *italics and underlined*,

"*Imposition on the property owner* of an institutional control in the form of a..."

Response 30: Agreed. The text has been revised as requested.

Comment 31: RAA2 and RAA3 can each be implemented within a construction season, and are both protective of human health and the environment and meet remedial action objectives for the site. The estimated additional 2 months to implement RAA3 over RAA2 may have large negative cost implications for the ongoing operation of the current business operation at the site. This should be considered in selecting the final remedial action for the landfill.

Response 31: This has been considered. The possible use of another, equivalent technology (comment 29 above) may allow for a shorter construction time. This may be decided in the design stage. However, the NYSDEC has determined that the asphalt-only cap (RAA2) is not appropriate for this site.

APPENDIX B

Administrative Record

Administrative Record

Lyndonville West Avenue

Site No. 8-37-002

1. Proposed Remedial Action Plan for the Lyndonville West Avenue site, dated February 2004, prepared by the NYSDEC.
2. Order on Consent, Index No. B8-0474-95-10, between NYSDEC and DuPont, executed on April 11, 1997.
3. Order on Consent, Index No. B8-0474-99-02, between NYSDEC and DuPont, executed on December 13, 2000.
4. "Phase I Investigation Report", November 1983, prepared by Wehran Engineering.
5. "Final Draft Site Inspection Report", September 9, 1988, prepared by NUS Corporation for USEPA.
6. "Preliminary Site Assessment Task 1 Report", July 1992, Prepared by Ecology and Environment Engineering.
7. "Supplemental Environmental Assessment Work Plan", November 1996, prepared by DuPont.
8. Fact Sheet, May 1997, prepared by NYSDEC.
9. "Fact Sheet, May 1997 Sample Results", September 1997, prepared by NYSDOH
10. Fact Sheet, April 1998, prepared by NYSDEC.
11. "Supplemental Environmental Assessment Report", July 21, 1998, prepared by DuPont.
12. "Petition to Delist Portions of the Lyndonville West Avenue Site", July 1999, submitted by Duke, Holzman, Yaeger & Photiadis (representing Dobbins)
13. "Supplemental Remedial Investigation Work Plan". July 1999, prepared by DuPont.
14. Letter dated November 16, 1999 from NYSDEC to Duke, Holzman, Yaeger & Photiadis (representing Dobbins) - approving partial delist of Lyndonville West Avenue site.
15. Fact Sheet, December 1999, prepared by NYSDEC.
16. Fact Sheet, January 2001, prepared by NYSDEC.
17. "Supplemental Remedial Investigation Report", September 6, 2001, prepared by DuPont.
18. "2002 Soil Delineation Sampling DuPont Lyndonville West Avenue Site", March 14, 2003, prepared by DuPont.
19. "Focused Feasibility Study (FS) Report", November 2003, prepared by DuPont.