NEW YORK STATE
DEPARTMENT OF

ENVIRONMENTAL
CONSERVATION

Public Availability Session:

Thursday, May 13, 1999
3 - 5 P.M.

East Greenbush Town Hall
224 Columbia Turnpike
East Greenbush, NY 12061

Public Comment Period:

April 30, 1999
thru
May 30, 1999

Fact Sheet

Sterling Drug - Site 3
Rensselaer County
April 1999

Explanation of Significant Difference to the Sterling - Site 3 Record of Decision

Remedial investigations and feasibility studies have been completed for Operable Unit 1of the Sterling Drug - Site 3 Landfill (see page 2 for description of Operable Units). An Explanation of Significant Difference (ESD) has been prepared for public review and comment. This Fact Sheet provides site background information, a summary of the site conditions, a summary of the proposed change to the Record of Decision, and information on how you can participate in the process.

Citizen Participation

A Public Availability Session has been scheduled (as detailed in the sidebar at left) as part of the citizen participation program for this site. The Public Availability Session provides an opportunity for you to learn more about the site and the ESD directly from New York State Department of Environmental Conservation (NYSDEC) staff.

Information regarding the change in this remedy, including the engineering analysis performed by North Pastoria Environmental Corporation, (NPEC), is available in the administrative record documenting selection of the remedy. These documents, design progress documents, and monitoring data are available for public inspection at the information repositories listed below.

Document Repositories. Three locations provide you access to project information:

NYSDEC
Central Office
50 Wolf Road
Albany, NY 12233-7010
(518) 457-5637
Attn.: David Tromp,
Project Manager

NYSDEC
Region 4 Headquarters
1150 North Westcott Road
Schenectady, New York 12306
(518) 357-2045
Attn.: Eric Hamilton,
Regional Hazardous Waste
Remediation Engineer

East Greenbush
Town Library
225 Columbia Turnpike
Rensselaer, NY 12144
(518) 477-7476
Attn.: Nola Reise

For More Information. Call or write the following staff for more information about Remedial Programs at the Sterling - Site 3

David Tromp, Project Manager
Div. of Hazardous Waste Remediation
NYSDEC, 50 Wolf Road
Albany, NY 12233-7010
(518) 457-5637

Or call NYSDEC's Hazardous Waste Site Toll-Free Information Number:
1-800-342-9296

STERLING DRUG - SITE 3 UPDATE

Site Background

Site 3 is a 7-acre former industrial landfill used by Sterling Winthrop Inc. (Sterling) from 1956 to 1977 for the disposal of wastes from manufacturing of pharmaceuticals at its nearby Rensselaer plant, as well as wastes from the Sterling Winthrop Research Institute. Solvents (such as benzene, toluene, 1,2 dichloroethane, xylenes, phenol, and 4-Methylphenol), pharmaceutical intermediates, product returns (e.g. Phisoderm® cleanser and Phisoderm® shampoo), still bottoms, oils and wood were landfilled at the site until 1977, when a cover of sandy clay and gravel was placed over the wastes. In 1984 a security fence was placed around the former landfill to exclude public access.

Pursuant to a 1984 Agreement/ Determination between NYSDEC and Sterling Winthrop (amended in 1986), Sterling conducted a Remedial Investigation/ Feasibility Study (RI/FS) and an Interim Remedial Measure (IRM). The IRM consisted of the removal of approximately 8500 drums of solvents and wastes, with surrounding contaminated soils, during 1989 and 1990. These materials were disposed of off-site in an approved disposal facility. Ongoing field investigations and pilot studies culminated in the final Feasibility Study Report recommending the following actions to address remaining contamination in soil and groundwater:

- in-situ soil treatment through vacuum extraction; a pilot system with vapor extraction was effective to treat residual contamination in landfill soils;
- groundwater extraction and treatment, which was shown to effectively contain groundwater contamination on site;
- landfill capping after vacuum extraction treated soils to NYSDEC cleanup goals, or extraction was considered ineffective.
- long-term monitoring of on-site and off-site wells, and
- as a floodplain management measure, a berm was to be installed around the perimeter of the site to divert floodwaters away from, and minimize any disruption of the landfill.

The NYSDEC March 1992 Record of Decision (ROD) endorsed the above remedy.

Current Status - Operable Unit 1

As noted earlier, approximately 8500 drums of chemicals were removed during the 1989-90 drum removal. The permanent full-scale vacuum extraction and groundwater treatment components of the remedy have been constructed and are in operation. The most recent sampling of monitoring wells both on and off site shows the groundwater extraction to be effectively containing the major contaminant of concern, benzene, within site limits. The landfill cap is close to 95% design. While the cap is not required by the ROD to conform to 6NYCRR Part 360, Solid Waste Management Facilities Regulations, the specifications in Part 360 (1993) for a municipal solid waste landfill cap are being used as guidelines in its design. The cap will be impermeable, limiting infiltration of rain and snow melt into landfill waste and further leaching of contaminants to groundwater. A final cover of soil and vegetation will protect the moisture barrier of plastic or clay and further prevent the possibility of future contact with wastes by humans and animals. The cap will be graded to drain all precipitation and swales will convey water away from the site.

Current Status - Operable Unit 2

Operable Unit 2 (OU2) is an off-site plume of predominantly ethyl ether which is being slowly attenuated through diffusion and the natural movement of groundwater. It is not affected by the berm issue.

EXPLANATION OF SIGNIFICANT DIFFERENCE SUMMARY:

Description of Significant Difference

The significant difference is the deletion of the flood protection berm around the landfill at Site 3. In lieu of berm installation, the landfill cap is being designed to withstand flood inundation (as described on Page 3 of this Fact Sheet). The responsible party for the site, 360 North Pastoria Environmental Corporation (NPEC), a wholly owned subsidiary of Kodak, has provided financial assurance for any flood repairs or improvements found necessary.

Basis for Significant Difference

The March 1992 ROD, in its declaration, stated the remedy for Site 3 would include *"installation of flood plain management system to protect the landfill from potential disruption during a flood event. A flood retention berm will be installed around the perimeter of the site to direct flood waters away from the Site and minimize disruption of the cap. The berm and the cap will be designed to enhance surface water runoff."* Site flood protection in the ROD was to have been designed for a 100-year flood event. Floods are fairly common in the locale of Site 3; in January 1996 part of the site (as described below) was affected when the Hudson River ran out of its banks due to unseasonal weather and an ice jam. Floodwaters covered the area west of Papscanee Creek to a depth of five feet, inundating groundwater treatment equipment and other site facilities. On the east bank of Papscanee Creek, however, the VE system and the landfill itself, both on a higher elevation, were only marginally impacted by the advancing waters. It is also theorized that the Creek bed, rarely full, helped divert waters away from the waste. Based on the elevation of floodwaters, the consultant for NPEC has estimated the flood to have been a "35-year" event by United

States Geologic Service (USGS) methods.

During design of the landfill cap, and utilizing knowledge from the 1996 flood, the responsible party and NYSDEC have reexamined how to implement landfill flood protection. As a specific means of flood risk protection, the berm has been determined to be of limited effectiveness, in addition to probably exacerbating certain flood hazards.

In an April 27, 1998 letter to NYSDEC, NPEC has outlined the following concerns:
(The consultant for NPEC has provided engineering analysis to support these conclusions.)

1. A well designed vegetative cover on its own will provide acceptable protection for the landfill cap from potential erosive forces caused by flooding of the Hudson River or Papscanee Creek. NPEC has proposed a selected mixture of grass types to ensure a dense coverage that is erosion resistant to flow velocities of up to 5 to 7 feet per second.

2. In the absence of a berm, the velocities of flood waters are expected to be sufficiently low, as to produce minimal scour and the cap would not be impacted. At the Site's distance from the river, flow velocities would not likely exceed four feet per second. The selected grass cover for the cap is a mixture of species recommended for waterways, and can sustain flows up to seven feet per second - more than measured in the center of the river during past flood events.

3. Wastes will be removed from the banks of Papscanee Creek and placed within the landfill area. The volume of removed waste will be replaced by compacted clean fill material. This will negate any potential exposure of any waste material to the surface water caused by erosion.

4. During flood events, seepage of water under a berm and into the waste below the cap could result in an unbalanced water pressure below the cap in the absence of water on top of the cap. A sufficient imbalance of forces could cause the cap to lift, and thereby damaging it.

5. Installation of a flood retention berm would hinder runoff from leaving the landfill, both in non-flood periods and following a flood event, unless provisions such as pumps or positive drainage were provided.

6. A berm pierced by culverts to allow for passage of water to or from the landfill (in flood conditions) would serve the purpose of reducing the velocity of flood waters to a negligible value. However, too much reduction of flow velocity may result in significant deposition of sediments, which could destroy vegetation on the cap.

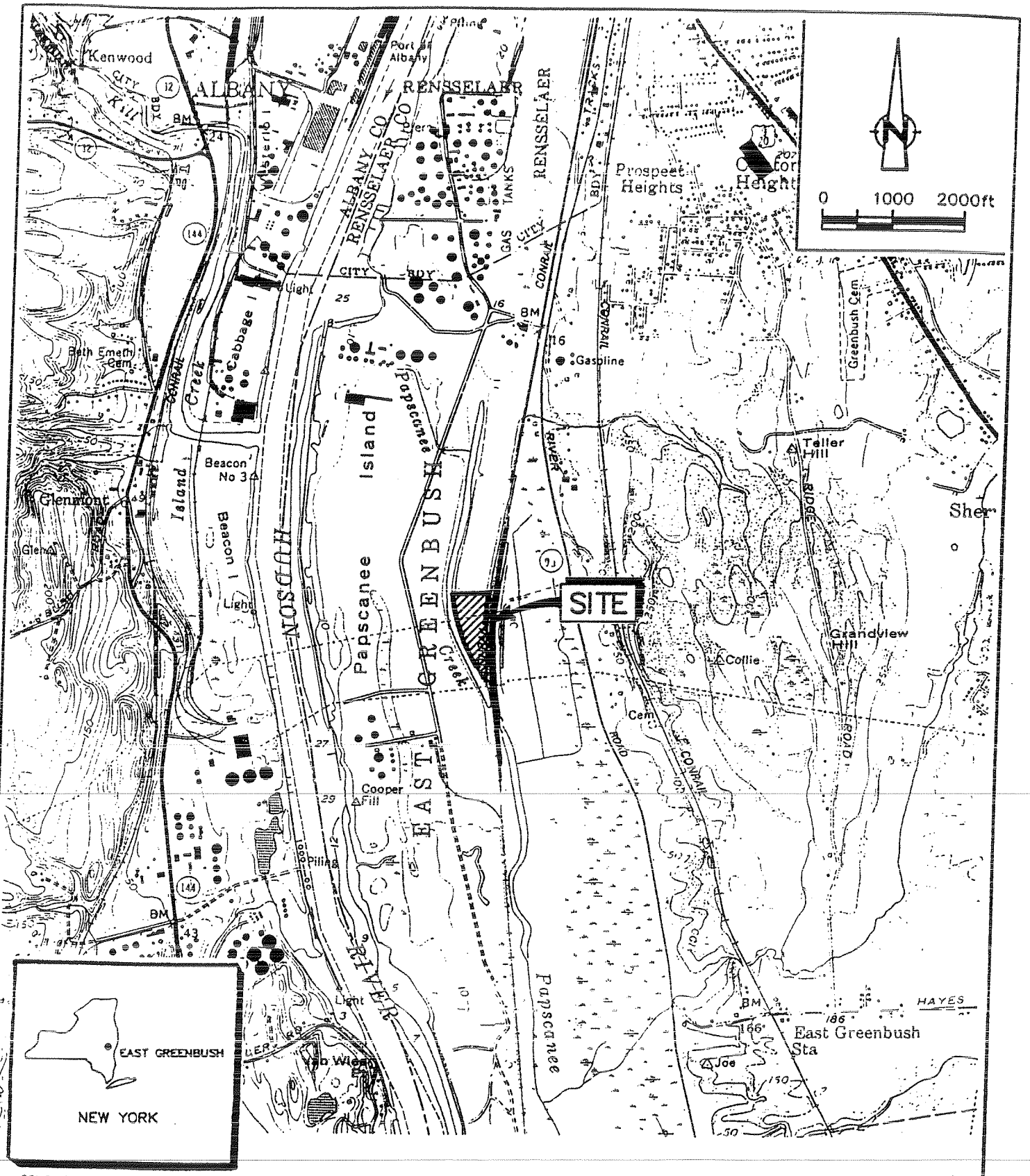
7. A berm would decrease the capacity of the flood plain to store water. Although it is expected that the impact would be small, it would still require approval of the United States Army Corps of Engineers.

8. The proposed design incorporates the use of rip rap along the bank of the creek for toe protection, along with bioengineered brush above the rip rap. The rip rap will protect the toe of the cap from the fastest moving waters of the creek or river (when flooding conditions exist). The bioengineered brush is used for reinforcement of naturally growing grass/brush, which will aid against soil erosion during any high water events.

NPEC has indicated separately that it can provide financial assurance to address any future repairs or preventive controls found necessary for the life of the remedy.

AFFIRMATION OF THE STATUTORY DETERMINATIONS:

On evaluation of the change in the remedy to eliminate the flood retention berm, the NYSDEC believes, and the New York State Department of Health concurs, that the change in remedy does not detract from the protectiveness to human health and the environment (and in some respects will enhance protectiveness), complies with federal and State requirements that are applicable, or relevant and appropriate to this remedial action. In addition, the selected remedy continues to utilize permanent solutions to the maximum extent practicable for the site.



SOURCE:
U.S.G.S. TOPOGRAPHIC MAP QUADRANGLE
DELMAR AND EAST GREENBUSH, N.Y.

figure 1.1

SITE LOCATION
STERLING SITE 3
Rensselaer, New York

CRA

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