SUPERFUND PRELIMINARY SITE CLOSE-OUT REPORT

PETER COOPER CORPORATION (MARKHAMS) SUPERFUND SITE

TOWN OF DAYTON, NEW YORK

NOVEMBER 2008

Prepared by

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Peter Cooper Corporation (Markhams) Superfund Site
Cattaraugus County
Town of Dayton, New York

I. INTRODUCTION

The United States Environmental Protection Agency (EPA) has determined that construction activities at the Peter Cooper Corporation (Markhams) Superfund Site (Site) have been completed in accordance with the *Close-Out Procedures for National Priorities List Sites (OSWER Directive 9320.2-09A-P).*

Based upon field observations associated with EPA and NYSDEC's construction oversight and the October 24, 2008 final inspection of the Site by EPA and New York State Department of Environmental Conservation (NYSDEC), EPA has determined that the potentially responsible parties (PRPs) have constructed the remedy (consolidation and capping) in accordance with the December 2006 Record of Decision (ROD) and the approved remedial design as modified by as-built documentation. EPA has also determined that no further response actions other than maintenance of the cap and cover and long-term groundwater monitoring are necessary. The PRPs have initiated the activities necessary to achieve performance standards and site completion. Human exposures and contaminated groundwater releases are under control.

II. SUMMARY OF SITE CONDITIONS

Site Location and Description

The Peter Cooper Corporation (Markhams) Superfund Site (Site) is located off Bentley Road, approximately six miles south of the Village of Gowanda in the Town of Dayton, Cattaraugus County, New York (see Figure 1). As shown in Figure 2, the Site is approximately 103 acres in size and is bordered to the northwest by Bentley Road, to the northeast by a wooded property and farm field, to the southeast by a railroad right-of-way, and to the southwest by hardwood forest. Site access is restricted by a locked cable gate at the Bentley Road entrance. Surrounding property is rural, consisting of small farm fields, open meadow and forests.

The majority of the Site is characterized by mature hardwood tree cover, as well as open fields. An approximately 15 to 20-acre area within the central and southeast portion of the Site contained several covered/vegetated waste fill piles arranged in an elliptical pattern. The fill piles varied in size and elevation, with base dimensions ranging from approximately 1,100 - 160,000 square feet and elevations of 5 to 15 feet above surrounding grade. The total area covered by fill piles (base area) was approximately 7 acres.

No structures are present on the property, with the exception of a natural gas wellhead located east of the access drive.

Background

The Site was used for the disposal of wastes remaining after the manufacturing process from the Peter Cooper Corporations (PCC), a former animal glue and adhesives plant located in Gowanda, New York. Materials disposed at the Site were reported to consist of "cookhouse sludge," residue pile material and vacuum filter sludge. Cookhouse sludge was so named because of a cooking cycle that occurred just prior to extraction of the glue. It was derived primarily from chrome-tanned hides obtained from tanneries and leather finishers. Residue pile material is described as air-dried cookhouse sludge, which was stabilized to a fairly dry, granular form. Vacuum filter sludge is produced during dewatering of cookhouse sludge. The waste material has been shown to contain elevated levels of chromium, arsenic, zinc, and several organic compounds.

PCC purchased the Site in 1955 and sold the Site, among other assets including its corporate name, in 1976 to a foreign company, Rousselot Gelatin Corporation, and its parent, Rousselot, S.A. of Paris, France. Rousellot Gelatin subsequently changed its name to the Peter Cooper Corporation. From approximately 1955 until September 1971, it was reported that approximately 9,600 tons of waste material from the Gowanda plant were placed at the Site over an approximately 15-acre area.

In addition, PCC transferred approximately 38,600 additional tons of waste materials from the Gowanda plant to the Site pursuant to a New York State Supreme Court Order (8th J.D. Cattaraugus County) dated June 1971. PCC arranged the material into several waste piles approximately 20 feet high and covering a total of approximately seven acres, mostly in the original disposal area. In 1972, the waste piles were graded and covered with six inches of soil or stabilized residue, followed by seeding to promote cover vegetation.

The NYSDEC completed preliminary site investigations in 1983 and 1985 and identified the presence of arsenic, chromium and zinc in soil samples. In 1986, pursuant to a Consent Order with NYSDEC, PCC commissioned the performance of a Remedial Investigation and Feasibility Study (RI/FS) at the Site. The RI, which was completed in 1989, indicated the presence of total chromium, hexavalent chromium and arsenic above background levels in waste materials and some adjacent soils. The FS for the Site was completed in March 1991. The FS recommended a remedial alternative involving consolidation, compaction, and covering of the waste materials.

At this time, the Site did not meet the New York State statutory definition for an inactive hazardous waste disposal site and NYSDEC could not use State funds to implement a remedial program. Consequently, the NYSDEC removed the Site from its Registry of Inactive Hazardous Waste Disposal Sites and transferred the Site to EPA for further evaluation.

In 1993, EPA conducted a Site Sampling Inspection, which included the collection and analysis of soil and surface water samples from the Site. Chromium and arsenic were detected in soils above

background concentrations within the waste piles. In 1999, EPA determined a Hazard Ranking System score for the Site so that it could be evaluated for potential listing on the National Priorities List (NPL). The Site was added to the NPL on February 3, 2000.

On September 29, 2000, EPA issued a Unilateral Administrative Order (UAO) to several potentially responsible parties (PRPs) to perform the RI/FS for the Site, subject to EPA oversight. The PRPs performed the RI/FS from 2001 to 2006 and the final RI and FS reports were submitted to EPA in February 2005 and August 2006, respectively. The results revealed the presence of arsenic, chromium, zinc, and several volatile organic compounds in soil and groundwater which were above EPA's risk range. However, the results also indicated that the area of groundwater contamination was limited to a relatively small area, under the waste piles.

Based upon the results of the RI/FS, a Proposed Plan, and a Public Meeting; a Record of Decision (ROD) was signed in December 2006. The remedy selected was consolidation of various waste/fill piles into a single waste/fill area, followed by capping with a low permeability soil cover. Specifically, the ROD called for:

- Consolidating the waste/fill piles into seven acres or less, followed by capping the consolidated wastes with a low permeability soil cover, consistent with the requirements of 6 NYCRR Part 360, including seeding with a seed mixture to foster natural habitat. Waste piles moved during consolidation will be replaced by native soil. Removal of waste/fill piles will insure that any remaining soil contaminants will be within background concentrations.

- Imposing institutional controls in the form of an environmental easement/restrictive covenant filed in the property records of Cattaraugus County that will at a minimum require: (a) restricting activities on the Site that could compromise the integrity of the cap; and (b) restricting the use of groundwater as a source of potable or process water unless groundwater quality standards are met.

- Developing a site management plan that provides for the proper management of all remedy components post-construction, such as institutional controls, and also includes: (a) monitoring of groundwater to ensure that, following the soil consolidation and capping, the contamination is attenuating and groundwater quality continues to improve; (b) an inventory of any site use restrictions; (c) necessary provisions for ensuring the easement/covenant remains in place and is effective; (d) provision for any operation and maintenance required of the components of the remedy; and (e) the owner/operator or entity responsible for maintenance of the Site to complete and submit periodic certifications concerning the status of the institutional and engineering controls for the Site.

- Evaluating site conditions at least once every five years to ensure that the remedy continues to protect public health and the environment.

In 2008, EPA concluded Consent Decree negotiations with the PRPs related to the performance of the design and implementation of the remedy called for in the ROD. On February 19, 2008, the Consent Decree was entered in United States District Court (approved by the Judge). On March 12, 2008 Benchmark Environmental Engineering and Science PLLC (Benchmark) was approved as the supervising contractor to conduct the remedial design and construction work at the Site.

Remedial Construction Activities

In accordance with the requirements of the Consent Decree and the Statement of Work, the PRPs prepared a Remedial Design (RD) Report which was approved by EPA on July 3, 2008. The RD report outlined the following remedial construction measures: mobilization, site preparation, waste/fill consolidation and grading, and cover system (barrier layer material placement and compaction, topsoil and seeding, and passive gas venting).

Zoladz Construction Company, Inc. was approved as the subcontractor for the Remedial Action (RA) and mobilized to the site on July 30, 2008. A field trailer with temporary power and lighting was installed at the site as per the project specifications. A project sign was erected with the name of the site and pertinent contact information.

Site preparation work included clearing, grubbing and access improvements required for consolidation and covering work. To facilitate heavy equipment access to the site, the access drive extending from Bentley Road to the northwestern limit of the waste fill was reestablished and shored up with NYSDEC–approved aggregate material. In addition to the access drive, clearing was performed in and around the area of the waste consolidation to allow equipment access. Trees, shrubs, brush and stumps within the clearing limits were removed, mulched and hauled offsite to facilitate construction work. Vegetation was stripped from the surface of the waste fill where cover soils were placed. The vegetative layer as well as the excess soil generated from the clearing work was disposed beneath the cover soils.

Waste/fill consolidation involved relocation of the various waste/fill piles located at various areas across the center of the site into a single area. Waste/fill that was located within the consolidation footprint was graded and recompacted to conform to the selected subgrade contouring. Waste/fill located outside of the selected consolidated footprint were excavated, hauled and compacted within the consolidated area. Regraded and consolidated waste/fill were placed in maximum 12-inch lifts and compacted with roller to 90% modified density.

A total of approximately 40,000 cubic yards of waste/fill was consolidated and compacted. The waste fill consolidated area has a footprint of approximately four acres, with an average peak elevation (including cover soil) of 14 feet above surrounding grade.

Landfill Cap Construction

The final cap includes all the construction components in the approved Remedial Design Report. The final landfill cap meets the grading requirements of 6 NYCCR Part 360-2.13(q)2(ii) that requires that the barrier component of the cap have a slope of no less than 4 percent to promote positive drainage and no more than 33 percent to minimize erosion.

Cover System

The final cover system was constructed to function with minimum maintenance, promote drainage, and minimize erosion. The cover system was designed with an 18-inch thick recompacted low permeability (less than 1 x 10^{-6} cm/sec) soil barrier layer and 6 inches of topsoil. The cover system was installed from September 24 –October 14, 2008.

Barrier layer

Material evaluation of the barrier layer off-site borrow source was performed in accordance with the Construction Specifications and Construction Quality Assurance Project Plan (CQAPP). Samples of the barrier layer soils were collected from a virgin borrow source located in the Town of Ellington, NY. Results indicated that the borrow source material met appropriate standards and was acceptable for use at the site.

Barrier soil was placed and compacted to provide a thickness of 18 inches across the final waste surface. Barrier layer soil was compacted with rollers. Smooth drum rollers were used for temporary sealing of the lifts and for the stockpiled soils.

Topsoil, Seeding and Tree Planting

The topsoil layer is the uppermost component of the cover system. Its functions are to protect the underlying layer from mechanical damage and (in conjunction with a vegetative cover) to protect against erosion. Following the final grading and compaction of the barrier layer, topsoil was placed to a depth of six inches (after placement and rolling). Topsoil was placed and graded to a smooth, even surface and was rolled and raked to remove ridges and fill in depressions, ruts and low spots. Grade stakes were used to verify the thickness of the topsoil layer.

A conservation seed mixture was used to foster a natural habitat and minimize maintenance requirements. All seed was place by the hydro seeding process. The process entailed blending together seed, water, fertilizer, fiber mulch, and lime in a tank and applying through a spraying hose.

Fifty trees, including 25 hardwood trees, 13 poplars and 12 birch trees were replanted at various locations across the Site to provide shelter for the wildlife and stimulate repopulation of the wooded areas outside of the consolidated area.

Passive Gas Venting

Passive gas venting involved the installation of passive gas venting through the waste/fill to relieve gas buildup beneath the cover system. Passive gas venting wells were installed in accordance with guidelines at a density of approximately one well per acre (5 wells). The gas venting wells were constructed of 40-inch diameter Schedule 40 PVC with 180 degree (gooseneck) risers and bird screens. The gas venting wells were installed at 5 feet into the waste and were screened in a 3-foot diameter annular space.

Final Inspection

On October 24, 2008, a final inspection was conducted. No deficiencies or punch list items were identified during the final inspection. Based on the results of the inspection, it was determined that the Site construction was complete; the remedy was implemented consistent with the ROD. The final inspection concluded that the PRPs constructed the remedy in accordance with the RD plans and specifications, and no further response (other than maintenance of the cap and cover, and long-term groundwater monitoring) is anticipated.

Institutional Controls

The ROD requires the implementation of institutional controls (ICs). The ICs involve filing of an Environmental Easement to restrict the use of on-site groundwater as a source of potable or process water (unless groundwater quality standards are met) and to restrict activities on the Site that could compromise the integrity of the cap.

The owner of record of the Site, Peter Cooper Corporation (PCC) is an inactive Delaware Corporation. A search for potential corporate successors was conducted and none were found. The PRPs consistent with the obligation to use reasonable best efforts to implement the ICs: commenced an action in Supreme Court, Cattaraugus County, against the Peter Cooper Corporation to secure an Order from the court to provide the PRPs with access to the Site and to give permission to implement the ICs by filing the Easement in the Office of the Clerk of Cattaraugus County. The Court granted legal access to the Site on July 1, 2008. ICs are expected to be established by December 2008.

III. DEMONSTRATION OF CLEANUP ACTIVITY QUALITY ASSURANCE AND QUALITY CONTROL

RA activities at the Site were undertaken in a manner consistent with the ROD and with the RD plans and specifications, as modified by the as-built documentation. All applicable EPA and NYSDEC quality assurance and quality control (QA/QC) procedures and protocols were incorporated into the RD. All procedures and protocols followed during the RA are documented in the RD reports and the sample analyses were performed at state-certified laboratories.

The QA/QC program used throughout the RA was rigorous and in conformance with EPA and NYSDEC standards; therefore, EPA and NYSDEC have determined that all analytical results are accurate to the degree needed to assure satisfactory execution of the RA, and that they are consistent with both the ROD and the RD plans and specifications, as modified by the as-built documentation.

IV. ACTIVITIES AND SCHEDULE FOR COMPLETION

The activities that remain to be completed for the Site include finalization of the Site Management (SM) Plan (including a soil management plan as well as an operation and maintenance (O&M) Plan), File Environmental Easement, Finalization of RA Report, performance of long-term monitoring, performance of five-year reviews, preparation of a Final Close-Out Report, and deletion of the Site from the NPL. These activities will be completed according to the following schedule.

Activity	Responsible Organization	Estimated Completion
Submission of Draft SM Plan	PRP Contractor	November 2008
Approval of SM Plan	EPA/NYSDEC	December 2008
File ICs	PRP	December 2008
Submission of Draft RA Report	PRP Contractor	December 2008
Approval of RA Report	EPA/NYSDEC	January 2009
Conduct Five-Year Review	EPA/NYSDEC	July 2013
Approve Final Close-Out Report	EPA/NYSDEC	April 2015
Deletion from NPL	EPA/NYSDEC	June 2015

V. SUMMARY OF REMEDIATION COSTS

The estimated cost to implement the selected remedy in the 2006 ROD was capital cost of $1.04 million and annual O&M costs were identified at $15,000. With regard to the costs related to the site remediation, the PRPs were not required by the terms of the Consent Decree to make cost information available. However, the PRPs have estimated the capital cost was $1.1 million to complete the RA at the Site.

VI. FIVE-YEAR REVIEW

Hazardous substances remain at this Site above levels which would allow for unlimited use and unrestricted exposure. Pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act, Section 121(c), EPA must conduct five-year reviews. The first Five-year Review Report will be completed prior to July 2013, which is five years from the initiation of construction for the remedy.

Approved:

Walter E. Mugdan, Director
Emergency and Remedial Response Division

Nov. 25, 2008
Date

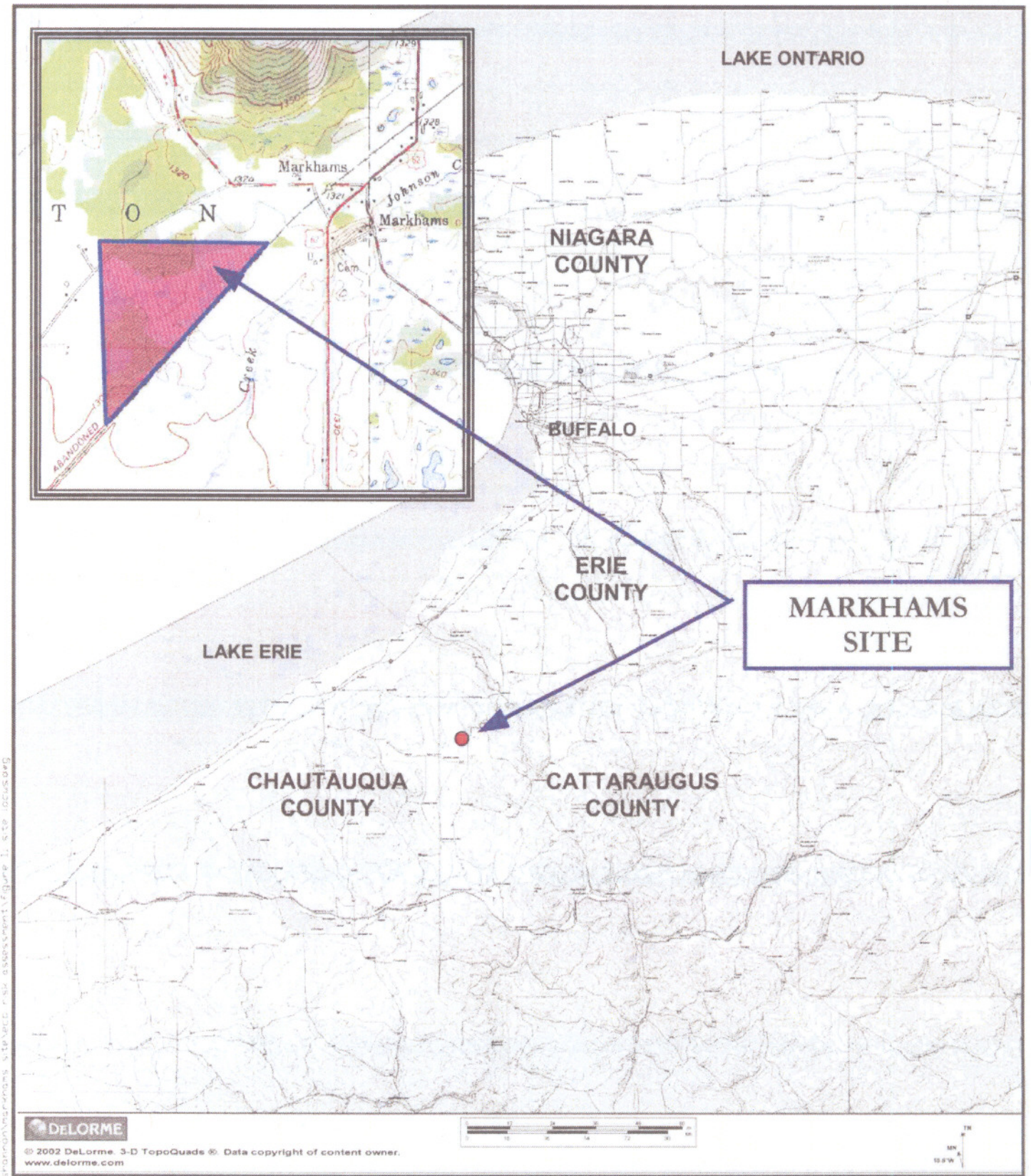

FIGURE 1
SITE LOCATION MAP

PETER COOPER MARKHAMS SITE
MARKHAMS, NEW YORK

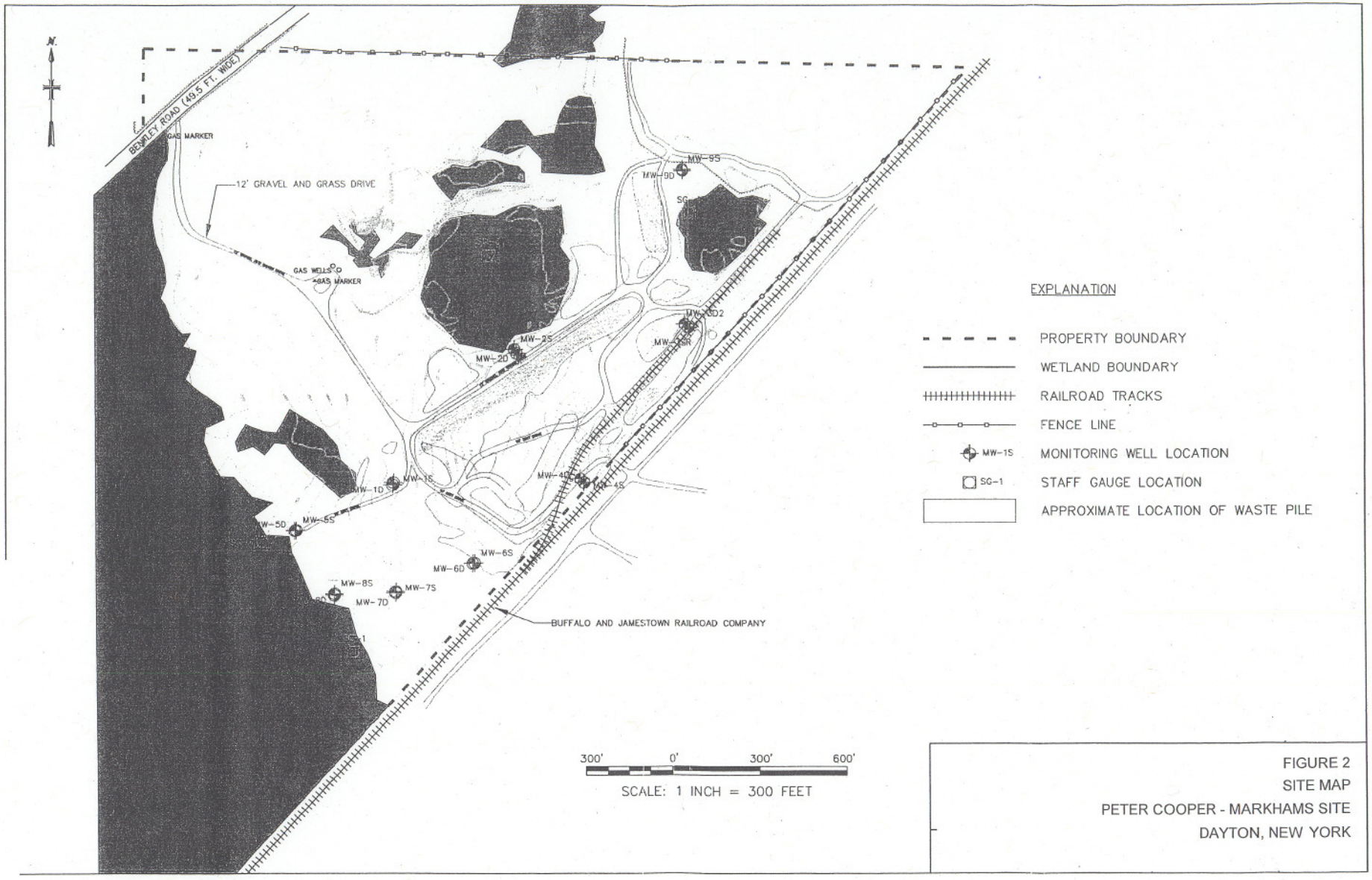

FIGURE 2
SITE MAP
PETER COOPER - MARKHAMS SITE
DAYTON, NEW YORK