STATEMENT OF BASIS

REGION III
ID # PAD 000
429 589

G.R.O.W.S. Landfill
Morrisville, Pennsylvania
Signed August 2014

Facility/Unit Type:	**Hazardous/Municipal Waste Landfill**
Contaminants:	**Heavy metals and organic chemicals**
Media:	**Groundwater and soil**
Proposed Remedy:	**Continued compliance with the terms and conditions of the PADEP Municipal Solid Waste Operating Permit No. 100148 and PADEP RCRA Post-Closure Permit No. PAD 000 429 589.**

I. INTRODUCTION

The United States Environmental Protection Agency (EPA) has prepared this Statement of Basis to solicit public comment on its proposed remedy for the G.R.O.W.S. Landfill (Facility). The Facility is a closed municipal waste landfill (Landfill) which is subject to EPA's Corrective Action program under the Solid Waste Disposal Act, as amended, commonly referred to as the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Sections 6901 et seq.

The Facility is a closed municipal waste landfill subject to a PADEP Municipal Solid Waste Operating Permit No. 100148 (Solid Waste Permit) and a RCRA Post-Closure Permit No. PAD 000 429 589 (RCRA Permit). The Facility's permitting requirements include the operation and maintenance of the groundwater monitoring system, maintenance of landfill caps, operation and maintenance of the leachate collection system, and compliance with and maintenance of institutional controls. EPA has determined that that all necessary corrective action for the Facility has already been implemented under the PADEP Solid Waste and RCRA Permits.

EPA is providing a 45-day public comment period on this Statement of Basis and may modify its proposed remedy based on comments received during this period. EPA will announce its selection of a final remedy for the Facility in a Final Decision and Response to Comments (Final Decision) after the comment period has ended.

Information on the Corrective Action program as well as a fact sheet and the Government Performance and Results Act Environmental Indicator Determinations for the Facility can be found by navigating to http://www.epa.gov/reg3wcmd/correctiveaction.htm.

The Administrative Record for the Facility contains all documents on which EPA's proposed remedy is based. See Section VIII for information on how you may review the Administrative Record.

II. FACILITY BACKGROUND

The Facility is located at Bordentown Road and New Ford Mill Road, Falls Township, Bucks County, PA. It is situated on approximately 457 acres of land at a bend in the Delaware River. The landfill areas occupy approximately 316 acres of the Facility. It is surrounded by the Pennsbury Manor State Park and the Delaware River to the south, man-made lakes to the west and northwest, and industrial property to the east and northeast (Figures 1 and 2).

The Facility is owned and operated by Waste Management Disposal Services of Pennsylvania, Inc. The Solid Waste Permit was originally issued in 1970 and modified and renewed numerous times throughout the years, with the last renewal occurring in February 2000. Authority to dispose of waste under the February 2000 renewal expired in February 2010, although the Solid Waste Permit remains in effect for the purpose of complying with the closure and post closure requirements. The Old GROWS portion of the Facility is also subject to the post-closure requirements of the RCRA Permit, originally issued by PADEP in April 1993 and last renewed in December 2003. The RCRA Permit has been administratively extended pending action on the post closure permit renewal application that was submitted on June 2013 and is currently under review by PADEP.

The Landfill consists of multiple landfill areas as shown on Figure 2 and described immediately below. As landfill areas were added, the new areas overtopped the edges of the filled areas to create a single graded contour. All of the landfill areas are closed and have a cover that consists of a cap, drainage layer and vegetated soil cover.

Old Hughes Area – This area covers approximately 35 acres. It received municipal waste during the 1960s. It is unlined and is overlain by subsequent expansions of the Landfill.

Old GROWS Landfill Area (Old GROWS) – This area covers approximately 54 acres. It was constructed with an asphalt liner and a leachate collection system. It operated from 1970 until 1983. It received primarily municipal waste. Some industrial waste, including hazardous waste, was co-disposed with the municipal waste.

Slag Expansion Areas A through D – These areas cover approximately 27 acres and expanded the northern and eastern edges of Old GROWS. They operated from 1985 until 1989, receiving municipal and non-hazardous industrial waste. The areas were constructed with a double liner and leachate collection.

Hughes Expansion Areas I through IV – These areas cover approximately 29 acres and expanded the southern edge of Old GROWS overtopping most of Old Hughes. They operated from 1988 until 1994, receiving municipal and non-hazardous industrial waste. The areas were constructed with a double liner and leachate collection.

Western Expansion Area – This 80-acre area operated from 1990 until 1998, receiving municipal and non-hazardous industrial waste. It was constructed with a double liner and leachate collection.

Eastern Expansion Area – This 80-acre operated from 1992 until 2010, receiving municipal and non-hazardous industrial waste. It was constructed with a double liner and leachate collection.

Southwest Expansion Area – This 5.2-acre area operated from 2000 until 2010, receiving municipal and non-hazardous industrial waste. It was constructed with a double liner and leachate collection.

Northeast Expansion Area – This 28-acre area operated from 2002 until 2010, receiving municipal and non-hazardous industrial waste. It was constructed with a double liner and leachate collection.

The Landfill is partially underlain by dredge spoils and steel processing slag that were disposed of on the Facility property prior to landfilling operations.

III. SUMMARY OF ENVIRONMENTAL HISTORY

The operations at the Facility are regulated by the PADEP under both the hazardous waste program and the solid waste program. The permitting requirements are specified in the Solid Waste Permit and RCRA Permit. The permitting requirements include continued inspection, maintenance, monitoring, and assessment of the landfill caps, groundwater monitoring systems, leachate collection and treatment system, and gas recovery system. The permits also impose land-use restrictions to prevent exposure to contamination and protect the integrity of the caps, groundwater monitoring systems, leachate collection and treatment system, and gas recovery system. Operations at the Facility are restricted to inspection, maintenance, and monitoring by authorized personnel.

The Facility is a closed landfill. The closure requirements for Old GROWS are contained in the RCRA Permit. The closure requirements for the remainder of the Facility are contained in the Solid Waste Permit. All Landfill areas have a final cover in place, consisting of a cap, drainage layer and vegetated soil cover. Some of the older areas of the Landfill have a clay cap while the remaining areas have a geosynthetic cap.

The Facility has a comprehensive groundwater and surface water monitoring system for both the RCRA and municipal waste areas. The entire Facility's monitoring well network consists of 22 wells; 3 upgradient wells and 19 downgradient wells. Of these, 8 are RCRA post closure monitoring wells; 1 upgradient well and 7 downgradient wells. Three surface water points are also sampled quarterly with 1 upgradient point and 2 downgradient points. Groundwater is monitored quarterly for indicator parameters, metals and organic compounds. Current monitoring results show no organic compounds in the groundwater. Indicator parameters and metals, primarily sodium, chloride, iron and manganese, are detected at elevated levels. The

elevated levels are similar in both the upgradient and downgradient wells, and are attributed to former slag disposal and salt storage operations near the Facility.

Leachate from all of the landfill areas is collected and transported by pipe to an on-site treatment system. Up to 60,000 gallons per day of pretreated leachate can be discharged by pipe to the Morrisville Wastewater Treatment Plant, while the remainder of the leachate is discharged to the Delaware River after complete treatment in the on-site treatment plant.

IV. STATE OVERSIGHT

The Facility has operated under Pennsylvania permitting authorities since 1970. In 1984, EPA granted the Commonwealth of Pennsylvania (Commonwealth) authorization to operate a state hazardous waste program in lieu of the federal program pursuant to Section 3006(b) of RCRA, 42 U.S.C. Section 6926(b). The PADEP (formerly the Pennsylvania Department of Environmental Resources) has overseen the operation, environmental monitoring, and closure of the landfill areas at the Facility for over 40 years. PADEP activities include:

- routine inspections and groundwater compliance and monitoring evaluations throughout the operating history of the Facility and during the closure period;
- review of closure plans to determine compliance with permit requirements, and oversight of closure construction;
- review of monitoring data to determine compliance with permit requirements;
- review of annual financial assurance cost estimates and mechanisms; and
- evaluation of compliance with land-use restrictions.

PADEP is not authorized for the Corrective Action Program under Section 3006 of RCRA. Therefore, EPA retains all authority in the Commonwealth for RCRA Corrective Action. EPA has determined that that all necessary corrective action for the Facility has already been implemented under the PADEP Solid Waste and RCRA Permits.

Under the Government Performance and Results Act (GPRA), EPA has set national goals to address RCRA corrective action facilities. Under GPRA, EPA evaluates two key environmental clean-up indicators for each facility: (1) Current Human Exposures Under Control and (2) Migration of Contaminated Groundwater Under Control. In 2001, EPA determined that there were no unacceptable exposures to contamination at the Facility and that the migration of contaminated groundwater was under control. The environmental indicator determinations are available at www.epa.gov/reg3wcmd/ca/pa.htm. In addition, EPA has reviewed the closure and post-closure measures taken at the Facility under the Solid Waste and RCRA Permits. On-going groundwater sampling shows that releases from the Facility are controlled by the cap structures and leachate collection system.

V. PROPOSED REMEDY

EPA's proposed remedy for the Facility is continued compliance with the terms and conditions of the PADEP Municipal Solid Waste Operating Permit No. 100148 and PADEP RCRA Post-Closure Permit No. PAD 000 429 589.

VI. EVALUATION

EPA has determined the Facility's Solid Waste and RCRA Permits protect human health and the environment in both the short-term and long-term, and achieve EPA's cleanup objectives at the Facility as long as the necessary operation, maintenance and monitoring activities required by those permits are performed and land and groundwater use restrictions required by those permits are maintained.

VII. FINANCIAL ASSURANCE

EPA is proposing that the financial assurance in place under the PADEP permits, surety bonds in the amount of $53,440,045, satisfies the financial assurance requirement. In addition, the mechanisms in place under the PADEP permits to evaluate and modify the financial assurance on an annual basis are sufficient.

VIII. PUBLIC PARTICIPATION

Interested persons are invited to comment on EPA's proposed remedy. The public comment period will last 45 calendar days from the date that the notice is published in a local newspaper. Comments may be submitted by mail, fax, e-mail, or phone to Ms. Maureen Essenthier, at the address listed below.

A public meeting will be held upon request. Requests for a public meeting should be made to Ms. Maureen Essenthier at the address listed below. A meeting will not be scheduled unless one is requested.

The Administrative Record contains all the information considered by EPA for the proposed remedy at this Facility. The Administrative Record is available at the following location[s]:

U.S. EPA Region III
1650 Arch Street
Philadelphia, PA 19103
Contact: Ms. Maureen Essenthier (3LC30)
Phone: (215) 814-3416
Fax: (215) 814 - 3113
Email: essenthier.maureen@epa.gov

IX. INDEX TO ADMINISTRATIVE RECORD

- PADEP Solid Waste Permit No. 100148, renewed 2/9/2000
- PADEP RCRA Permit No. PAD 000 429 589, renewed 12/22/2003
- G.R.O.W.S. Landfill RCRA Corrective Action Environmental Indicator – Migration of Contaminated Groundwater Under Control, 1/8/2001
- G.R.O.W.S. Landfill RCRA Corrective Action Environmental Indicator – Current Human Exposure Under Control, 1/8/2001
- G.R.O.W.S. Landfill 2013 Annual Operating Report, 6/30/2013
- Groundwater Monitoring Reports
  - First Quarter Sampling Event 2014
  - Fourth Quarter Sampling Event 2013
  - Third Quarter Sampling Event 2013
  - Second Quarter Sampling Event 2013
  - First Quarter Sampling Event 2013

Date: 8-11-14

Catherine A. Libertz for
John A. Armstead, Director
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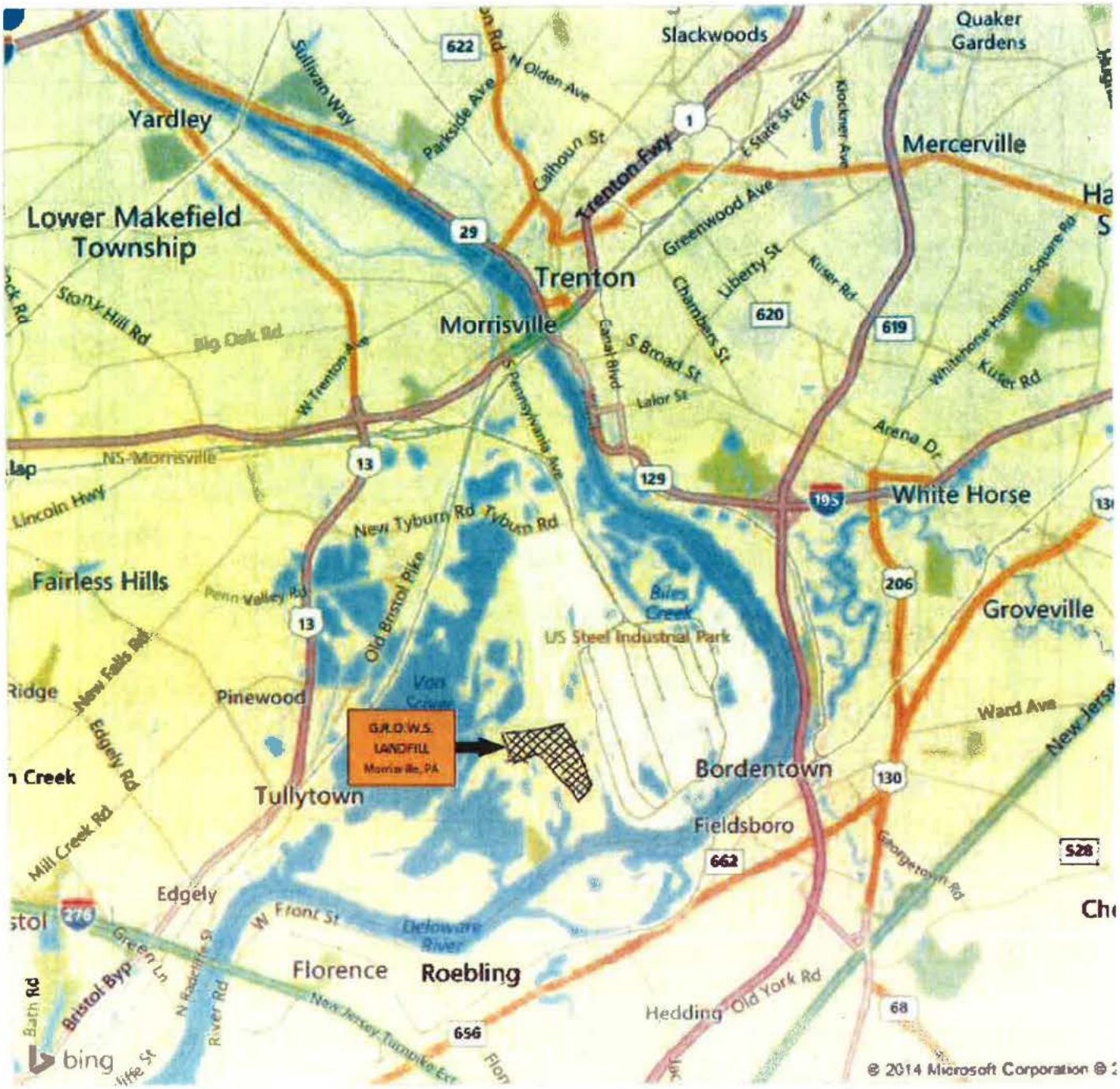
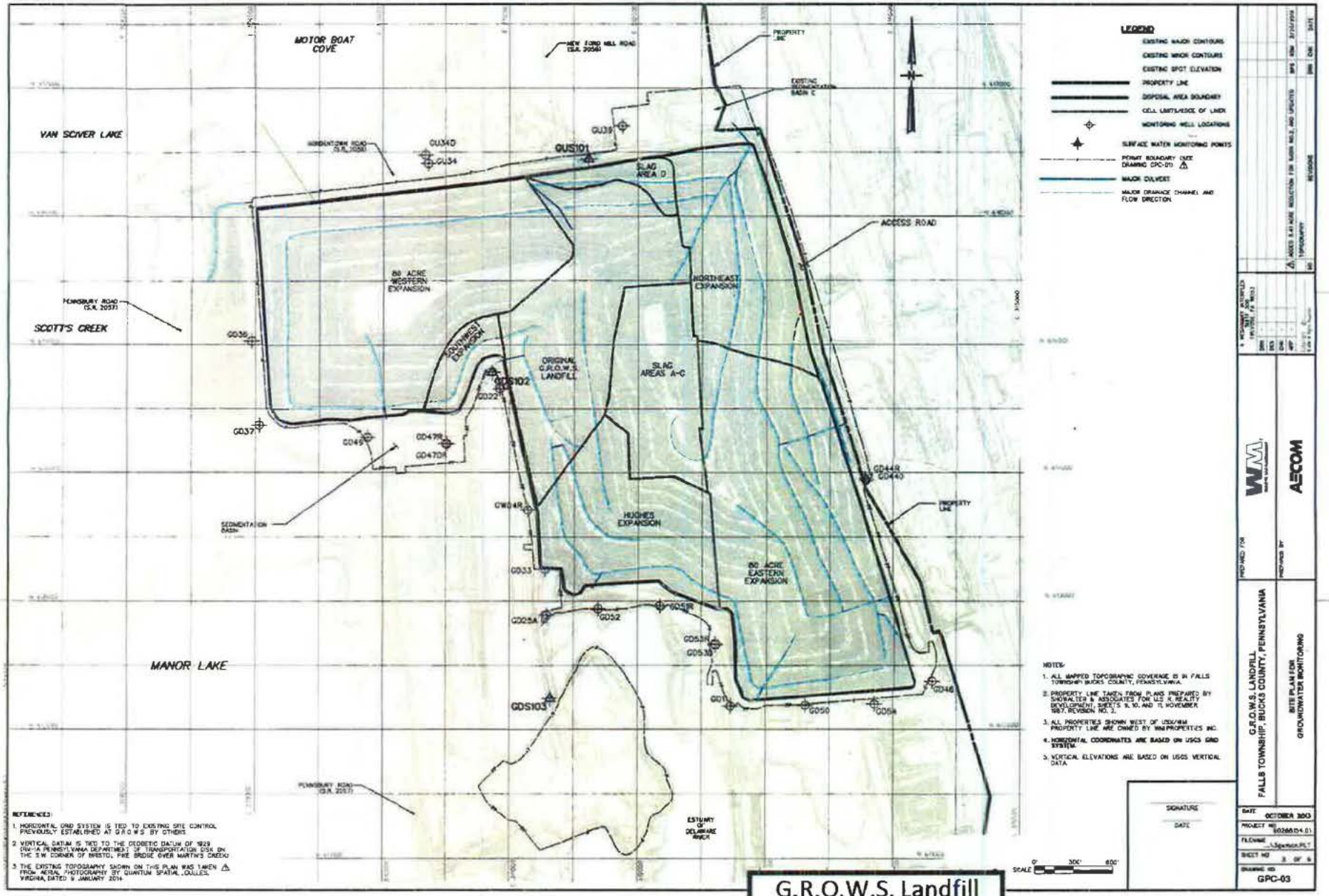
US EPA, Region III



G.R.O.W.S. Landfill

FIGURE 1



G.R.O.W.S. Landfill

FIGURE 2