



STATEMENT OF BASIS

REGION III
ID # PAD 014 391 874

Company Procter & Gamble Paper Products
Mehoopany, Pennsylvania
Signed July 2015

Manufacturing Facility/Former Hazardous Waste Storage

Heavy metals

Groundwater and soil

**Continued compliance with the terms and conditions of the
PADEP Solid Waste Permit No. 30016**

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 Procter & Gamble Paper Products Company (Procter & Gamble) facility located on Route 87, Mehoopany, PA 18629 (Facility).

The Facility 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 Corrective Action program requires that facilities subject to certain provisions of RCRA investigate and address releases of hazardous waste and hazardous constituents, usually in the form of soil or groundwater contamination, that have occurred at or from their property.

EPA's proposed remedy for the Facility is continued compliance with the PADEP Solid Waste Permit No. 300016.

EPA is providing a 30-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 Procter & Gamble 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

Procter & Gamble is located in a rural area on Route 87 at Meshopany Ridge Road, Washington Township, Wyoming County, PA. The Facility is situated on approximately 1100 acres, of which 350 are developed along the north bank of the Susquehanna River. (Figures 1 and 2)

The plant was constructed in 1965 as a pulp, paper, and diaper mill. The pulp mill ceased operations in 1999. The plant still manufactures paper products with pulp from off-site sources.

The Facility is an operating manufacturing plant with a closed hazardous waste storage facility, a closed residual waste landfill, and operating residual waste treatment impoundments. The Facility is subject to Pennsylvania Department of Environmental Protection (PADEP) Solid Waste Permit No. 300016 (Solid Waste Permit). The permitting requirements include the operation and maintenance of the groundwater monitoring system and the leachate collection system, and maintenance of the landfill cap.

The Facility operated as an interim status hazardous waste storage facility from July 1981 until July 1992. At that time Procter & Gamble converted to a hazardous waste generator status, with storage of hazardous waste in containers for less than 90 days.

Current or past solid waste management units include the following (Figure 2):

Hazardous Waste Storage Area – The hazardous waste storage area, which was clean closed in 1992, consisted of a 24-foot by 36-foot enclosed storage building on a concrete pad protected by a 6-inch concrete curb. A collection sump, with no outlet, was located in a corner of the building to provide protection against spill releases. Hazardous waste was stored in 55-gallon drums prior to off-site disposal.

Carney Flats Landfill - The landfill is an unlined residual waste landfill. It has operated under PADEP oversight since 1970, when it was first permitted. It covers approximately 33 acres on the east side of the manufacturing plant, adjacent to Carney Creek and the Susquehanna River. It received waste wood, pulp mill solids and sludges from 1969 until 1991. It was closed in 1993 with the construction of a multi-layer geosynthetic/soil cap and a vegetative cover, and the installation of a leachate collection infiltration trench.

Residual Waste Impoundments – Waste impoundments are used to treat process waste prior to discharge. Effluent from the residual waste impoundments is combined with the sanitary waste effluent for discharge to the NPDES-permitted outfall.

The facility's residual waste treatment operation consist of:

- Two pulp basins with double synthetic liners and leak detection systems,
- Two paper basins with clay/synthetic liners and rock layers,
- Two ash basins with bentonite/clay liners under a concrete base and asphalt side wall, and
- An unlined graver basin for treating river water.

All basins have schedules for cleanout and integrity testing.

East Field – A 6 acre field, east of Carney Creek, was used prior to 1987 to dry waste paper fiber. The dried fibers were subsequently removed and the area is now vegetated.

The Facility has a comprehensive groundwater monitoring system for the closed landfill and the residual waste treatment impoundments. The groundwater is monitored at 10 wells; 3 upgradient, and 7 downgradient wells (Figure 3). Groundwater was monitored on a quarterly schedule initially; starting in 1994 for the landfill wells, and in 2001 for the impoundment wells. In 2002, monitoring frequency was reduced to semi-annually, with the approval of PADEP. In 2012, monitoring of the landfill area wells was reduced to annually. Groundwater samples are currently analyzed for metals and indicator parameters.

The groundwater shows elevated levels of arsenic in three downgradient wells, and manganese in all seven downgradient wells and one upgradient well.

III. SUMMARY OF ENVIRONMENTAL HISTORY

The operations at Procter & Gamble are regulated by the PADEP under both the hazardous waste program (ID # PAD 013 391 874) and the solid waste program (Solid Waste Permit Number 300016).

The following environmental investigations and remedial actions were conducted at the facility with PADEP oversight.

Hazardous Waste Storage Area – The interim status storage area was clean-closed in 1992. No contaminant releases had occurred from the storage area. The closure activities were performed in accordance with the PADEP-approved closure plan. Closure actions included: removing all stored waste, cleaning the building, characterizing and disposing of the cleaning residues, and certifying the closure procedures. PADEP approved the closure certification on December 21, 1993.

Carney Flats Landfill – In 1991, Procter & Gamble submitted a comprehensive site characterization and a closure plan for the landfill to PADEP. The site characterization included an evaluation of the waste boundaries, geology, and hydrogeology; and sampling and assessment of groundwater, surface water, and soil. To complete the site characterization, Procter & Gamble submitted a Benthic Macroinvertebrate Study of the Susquehanna River in 1992.

Based on the findings of the site characterization, the landfill was closed in 1993 in accordance with the PADEP-approved closure plan.

Post-closure care began in 1994, in accordance with the PADEP-approved post-closure plan. Groundwater monitoring included quarterly sampling and analysis for volatile organic compounds, metals, and indicator parameters. Based on improvement in the groundwater quality, PADEP approved two modifications to the monitoring requirements. In 2002, the monitoring frequency was reduced to semi-annually. In 2012, the monitoring frequency was reduced to annually, and analysis for volatile organic compounds was eliminated.

The 1991 site assessment showed that groundwater in the shallow zone was impacted in a narrow band downgradient of the landfill, between the landfill and the Susquehanna River. The groundwater quality data show continued improvement over time since the landfill closure. Current groundwater data show that concentrations of arsenic and manganese exceed EPA Region 3 Screening Levels for tap water.

Arsenic concentrations in downgradient wells average 40 ug/l, compared to the EPA screening level of 10 ug/l. Manganese concentrations average 2,000 ug/l, compared to the EPA screening level of 430 ug/l. Manganese was detected in both upgradient and downgradient wells in similar concentrations, indication that manganese may be naturally occurring in the geology.

Groundwater discharges to the Susquehanna River, where a large dilution factor (up to 1,000 times) reduces concentrations to below levels of concern. Additionally, annual aquatic insect surveys in the Susquehanna River indicate no significant effect on macroinvertebrates. No supply wells intercept the contaminated groundwater. Therefore, there is no complete exposure pathway for the contaminated groundwater.

Residual Waste Impoundments – Groundwater monitoring wells were installed in 2000 and sampling commenced in 2001. Monitoring requirements included quarterly sampling and analysis for volatile organic compounds, metals, and indicator parameters. Based on monitoring results, PADEP modified the requirements in 2012 to reduce the monitoring frequency to semi-annually and to eliminate analysis for volatile organic compounds.

As with the groundwater quality downgradient of the Carney Flats Landfill, current groundwater data show that concentrations of arsenic and manganese exceed EPA Region 3 Screening Levels for tap water.

Arsenic concentrations exceed the EPA screening standard in only one downgradient well, MW-23, with recent concentrations averaging 20 ug/l compared to the EPA screening level of 10 ug/l. Manganese concentrations averaged 2,000 ug/l, compared to the EPA screening level of 430 ug/l. Manganese was detected in both upgradient and downgradient wells in similar concentrations, indication that manganese may be naturally occurring in the geology.

Groundwater discharges to the Susquehanna River, where a large dilution factor (up to 1,000 times) reduces concentrations to below levels of concern. Additionally, annual aquatic insect surveys in the Susquehanna River indicate no significant effect on macroinvertebrates. No supply wells intercept the contaminated groundwater. Therefore, there is no complete exposure pathway for the contaminated groundwater.

East Field – Prior to 1987 this area was used to dry paper waste. An analysis of the waste material showed no contaminants of concern.

IV. CORRECTIVE ACTION OBJECTIVES

EPA's Corrective Action Objectives for the specific environmental media at the Facility are the following:

1. Soils

For the 33 acres occupied by the closed landfill, EPA’s corrective action objective is to contain the waste beneath the multi-layered covers to control exposure to any hazardous constituents in that waste.

2. Groundwater

EPA expects final remedies to return usable groundwater to its maximum beneficial use within a timeframe that is reasonable given the particular circumstances of the project. For projects where aquifers are either currently used for water supply or have the potential to be used for water supply, EPA will use the National Primary Drinking Water Standard Maximum Contaminant Levels (MCLs) promulgated pursuant to Section 42 U.S.C. §§ 300f et seq. of the Safe Drinking Water Act and codified at 40 CFR Part 141).

While arsenic and manganese are found in concentrations that exceed the EPA screening levels, the contaminants do not pose a threat to human health or the environment. No water supply wells intercept the contaminated groundwater. Groundwater discharges to the Susquehanna River, where a large dilution factor (up to 1,000 times) reduces concentrations to below levels of concern. Additionally, annual aquatic insect surveys in the Susquehanna River indicate no significant effect on macroinvertebrates

EPA’s Corrective Action Objective for Facility groundwater is to assure that the contaminants do not migrate past the current area of contamination, in the shallow groundwater zone immediately downgradient of the landfill and impoundments. This objective will be achieved by continued compliance with the landfill closure requirements and the treatment impoundment operating requirements.

V. PROPOSED REMEDY

EPA’s proposed remedy is continued compliance with the existing Solid Waste Permit Number 300016

VI. EVALUATION OF PROPOSED REMEDY

Threshold Criteria	Evaluation
1) Protect human health and the environment	The primary human health and environmental threats posed by the landfill and impoundments are related to direct contact with the waste and any hazardous constituents leaching to the groundwater. These threats have been mitigated by the closure and post-closure requirements of the landfill and the operating requirements of the impoundments.

	<p>Procter & Gamble is required to maintain the landfill cap and to operate and maintain the groundwater monitoring system and the leachate collection and treatment system. The Facility is also required to monitor, test and maintain the treatment impoundments.</p> <p>Nonetheless, the continued operation of the leachate collection and treatment system will ensure continued protection of human health and the environment. Furthermore, groundwater is not used as a potable water source within the area of potential impact.</p>
2) Achieve media cleanup objectives	<p>EPA's proposed remedy meets the cleanup objectives based on assumptions regarding current and reasonably anticipated land and water resource use(s). The landfill post-closure requirements and the Facility operating procedures restrict access to the landfill and impoundments. Groundwater monitoring confirms there are no significant impacts to groundwater. Annual macroinvertebrates surveys in the Susquehanna River indicate no significant impact to the river. The multi-layered cover over the landfill and the Solid Waste Permit requirements will prevent human and environmental exposure to the wastes remaining in the landfill.</p>
3) Remediating the Source of Releases	<p>While waste remains in place in the closed landfill, the Solid Waste Permit requires landfill leachate to be collected and treated so it does not contaminate the groundwater. In addition, groundwater monitoring and site inspections continue under PADEP-approved post-closure requirements to detect any releases that may occur in the future.</p>

Balancing Criteria	Evaluation
1) Long-Term Effectiveness	<p>EPA has determined the Facility's Solid Waste Permit protects human health and the environment in long-term, and achieves EPA's cleanup objectives at the Facility as long as the necessary operation, maintenance and monitoring activities required by the permit are performed and land and groundwater use restrictions required by the permit are maintained.</p>

2) Reduction of Toxicity, Mobility, or Volume of Hazardous Constituents	The reduction of toxicity, mobility and volume of hazardous constituents has already been achieved by the installation of the landfill cap, and construction and operation of the leachate collection and treatment system.
3) Short-Term Effectiveness	EPA's proposed final remedy does not involve any activities, such as construction or excavation that would pose short-term risks to workers, residents, and the environment.
4) Implementability	EPA's proposed remedy is already implemented. The necessary components of the existing landfill cap; the groundwater, surface water and leachate monitoring systems; and the leachate collection and treatment systems are in place and are currently operational.
5) Cost	The capital costs associated with the installation of the existing landfill cap; the groundwater and surface water monitoring systems; and the leachate collection and treatment systems have already been incurred. The Facility has provided financial assurance for post-closure costs under the Solid Waste Permit.
6) Community Acceptance	EPA will evaluate Community acceptance based on comments received during the public comment period, and will address any comments in the Final Decision.
7) State/Support Agency Acceptance	PADEP has reviewed and concurs with EPA's proposed remedy for the Facility. EPA will address all comments received by the State during the public comment period in the Final Decision.

VII. FINANCIAL ASSURANCE

EPA is proposing that the financial assurance in place under the Solid Waste Permit, surety bonds in the amount of \$6,450,103, satisfies the financial assurance requirement. In addition, the mechanisms in place under the Solid Waste Permit 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 30 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:

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

Impoundment Groundwater Monitoring System 34nd Sampling Round, PADEP Form 14Rs and Laboratory QC Summary Reports, Procter and Gamble Paper Products Company, May 2015

Impoundment Groundwater Monitoring System 34nd Sampling Round, Laboratory Analytical results Tables and Trends Graphs, Procter and Gamble Paper Products Company, May 2015

Impoundment Groundwater Monitoring System 33rd Sampling Round, PADEP Form 14Rs and Laboratory QC Summary Reports, Procter and Gamble Paper Products Company, October 2014
- Including P&G letter summary letter report, dated 12/26/2014

Carney Flats Landfill Groundwater Monitoring System 54th Sampling Round, PADEP Form 14Rs and Laboratory QC Summary Reports, Procter and Gamble Paper Products, October 2014

Carney Flats Landfill Groundwater Monitoring System 54th Sampling Round, Laboratory Analytical Results Tables and Trend Plots, Procter and Gamble Paper Products, October 2014
- Including P&G letter summary letter report, dated 12/216/2014

Impoundment Groundwater Monitoring System 32nd Sampling Round, PADEP Form 14Rs and Laboratory QC Summary Reports, Procter and Gamble Paper Products Company, May 2014
- Including P&G letter summary letter report, dated 6/30/2014

PADEP approval of Hazardous Waste Storage Area Closure Certification, Procter and Gamble Paper Products Company, PADER letter dated 12/21/1993

Hazardous Waste Storage Area Closure Certification, Procter and Gamble Paper Products Company, Weston letter dated 3/31/1993

PADEP approval of Hazardous Waste Storage Area Closure Plan, Procter and Gamble Paper Products Company, PADER letter dated 7/16/1992

Hazardous Waste Storage Area Closure Plan, Procter and Gamble Paper Products Company, February 1992

Post-Closure Groundwater Monitoring Plan for the Carney Flats Landfill, Procter and Gamble, February 1993

PADEP Solid Waste Permit No. 30016, modified 8/26/1992 (Carney Flats Landfill Closure)

PADEP approval of Carney Flats Landfill Closure Plan, Procter and Gamble Paper Products Company, PADER letter dated 8/26/1992

1991 Benthic Macroinvertebrate Studies in the Susquehanna River for Procter and Gamble Company, Academy of Natural Sciences of Philadelphia, July, 24, 1992

Comprehensive Site Characterization Report for the Carney Landfill, Procter and Gamble Company Carney Landfill Closure Program, June 1991

Engineering Closure Plan for the Carney Flats Landfill, Procter and Gamble Company, Mehoopany, PA, June 1991

Waste Analysis Report, Paper Basin Material from Procter & Gamble, 12/4/1989

Date:

Original signed 7/29/2015

John A. Armstead, Director
Land and Chemicals Division
US EPA, Region III