



UNITED STATES

ENVIRONMENTAL PROTECTION AGENCY

REGION III

STATEMENT OF BASIS

EMLENTON WAX

EMLENTON, PENNSYLVANIA

EPA ID NO. PAD004337127

## TABLE OF CONTENTS

SECTION	PAGE
I. Introduction.....	1
A. Facility Name.....	1
B. Proposed Decision.....	2
C. Importance of Public Input.....	2
II. Facility Background.....	2
III. Summary of the Environmental History .....	3
IV. Evaluation of EPA’s Proposed Decision.....	6
V. Institutional Controls.....	7
VI. Environmental Indicators.....	8
VII. Financial Assurance.....	8
VIII. Public Participation .....	8

### **I. Introduction**

#### **A. Facility Name**

The United States Environmental Protection Agency (EPA) has prepared this Statement of Basis (SB) for the former Emlenton Wax Facility located at 1001 Hill Street, Emlenton PA 16373 (hereinafter referred to as the Facility).

The Facility is subject to the Corrective Action program under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) of 1976, and the Hazardous and Solid Waste Amendments (HSWA) of 1984, 42 U.S.C. §§ 6901 to 6992k. The Corrective Action program is designed to ensure that certain facilities subject to RCRA have investigated and cleaned up any releases of hazardous waste and hazardous constituents that have occurred at their property.

Information on the Corrective Action program as well as a fact sheet for the Facility can be found at <http://www.epa.gov/reg3wcmd/correctiveaction.htm>.

EPA has prepared this SB after reviewing all available site data and has determined that no additional characterization or remediation is necessary for the Facility to satisfy its federal RCRA Corrective Action obligations. Based on its review, EPA has selected its proposed remedy for the Facility and is now providing opportunity for public comment and review.

#### **B. Proposed Decision**

As the remedy for the Emlenton Wax Facility, EPA is proposing the compliance with and maintenance of institutional controls. In EPA's February 2003 Final Guidance on Completion of Corrective Action Activities at RCRA Facilities, 68 Fed. Reg. 8757 (February 25, 2003), a determination that the cleanup objectives for a facility have been met and all that remains is compliance with and maintenance of institutional controls, is referred to as a "Corrective Action Complete with Controls" determination. A Corrective Action Complete with Controls determination is appropriate at this Facility because protection of human health and the environment has been achieved, and institutional controls are necessary for long-term protection. The proposed institutional controls are detailed in Section V, below. These controls will provide assurance that the land use, as anticipated when the remedy was proposed, does not change without additional investigation or work and prior notification to the EPA.

This SB summarizes information that can be found in greater detail in the work plans and reports reviewed by EPA and the Pennsylvania Department of Environmental Protection (PADEP), which can be found in the Administrative Record (AR).

### **C. Importance of Public Input**

Before EPA makes a final decision on its proposal for the Facility, the public may participate in the remedy selection process by reviewing this SB and documents contained in the AR for the Facility. The AR contains the complete set of reports that document Facility conditions, including a map of the Facility, in support of EPA's proposed decision. EPA encourages anyone interested to review the AR. The AR is available for public review at the EPA Region III office, the address of which is provided in Section VIII, below.

EPA will address all significant comments received during the public comment period. If EPA determines that new information or public comments warrant a modification to the proposed decision, EPA will modify the proposed decision or select other alternatives based on such new information and/or public comments. EPA will approve its final decision in a document entitled the Final Decision and Response to Comments (FDRTC).

## **II. Facility Background**

The Facility is located at 1001 Hill Street in Emlenton, Richland Township, Venango County, Pennsylvania. The Facility is bordered by a cemetery and undeveloped land to the north-northeast, residential development to the east-southeast, and the Allegheny River to the west. The Facility covers approximately 45 acres.

The Facility began operations as an oil refinery in 1891 as the Emlenton Refining Company. In 1931, the Emlenton Refining Company, along with 18 other oil refining and marketing businesses, merged their operations to create the Quaker State Oil Refining Company (Quaker State). In 1981, Quaker State ceased oil-refining operations at the Emlenton Facility and began operations as a wax plant. In 1990, Quaker State sold the Facility to the Petrowax PA Corporation, a subsidiary of US Petroleum. On February 25, 1993, Petrowax voluntarily filed for relief pursuant to Chapter 11 of the United States Bankruptcy Code. In June 1995, Petrowax emerged from bankruptcy, was recapitalized, and changed its name from Petrowax to Astor Corporation. In 1997, Allied Signal Inc. purchased the Astor Corporation, including the Emlenton Facility. In 1999, Allied Signal, Inc. merged with Honeywell Corporation to create

Honeywell International, Inc. Honeywell International, Inc. (Honeywell) is the current owner of the Facility. Throughout the ownership changes, the Facility continued operations as a wax plant until February 2000 when production ceased. Since that time, all buildings, including storage tanks and refinery operational equipment at the Facility have been demolished except for a garage at the Hill Street entrance and a groundwater treatment system building. In 2006 the Facility granted an easement to the Allegheny Valley Trails Association to construct a recreational trail on top of the former railroad bed that transverses the Facility and parallels the Allegheny River. The remaining property at the Facility is vacant.

### **III. Summary of Environmental History**

In 1990, two wells installed and sampled by Geraghty & Miller, the Facility's consultant, indicated the presence of hydrocarbon-related compounds in groundwater beneath the Facility. In 1991, environmental investigations at the Facility began with a hydrogeologic investigation by Geraghty & Miller in which several monitoring wells were installed and soil borings taken to assess groundwater quality and determine the extent of contamination in both groundwater and soil. Total Petroleum Hydrocarbons (TPH) and benzene, toluene, ethylbenzene, and xylenes (BTEX) were detected in several soil and groundwater samples on the downgradient side of the Facility.

In 1992, additional soil samples were taken and monitoring wells were installed by Geraghty & Miller at the Facility for further characterization. As a result of these characterizations, the Facility was divided into north and south areas. The north area was impacted by a separate phase liquid (SPL) exhibiting characteristics of kerosene, jet fuel, fuel oil, and heavier oils, while the south area was impacted by SPL exhibiting characteristics of kerosene and gasoline.

Recovery wells were installed in 1991 (south area) and 1992 (north area) by Geraghty & Miller to recover floating hydrocarbon in groundwater in both areas and to contain BTEX-contaminated groundwater beneath the south area. These objectives were outlined in the Geraghty & Miller 1993 Phase III Hydrogeologic Investigation and Proposed Abatement Plan, which included routine monitoring to evaluate the abatement measures. Expansions to the recovery system would be proposed to PADEP if the system were found to be inadequate. PADEP found the investigation and abatement plan to be acceptable; therefore, the SPL recovery and groundwater containment system continued to operate for another 16 years.

In July 2000, EPA and the US Army Corps of Engineers (USACE), acting as EPA's consultant, conducted an Environmental Indicator (EI) inspection at the Facility to determine whether human exposures to contamination and migration of contaminated groundwater were under control at the Facility. EPA and USACE inspected several Solid Waste Management Units (SWMU) at the Facility, most of which had already been closed under PADEP supervision due to the cessation of production in February 2000. In August 2002, as a result of this inspection, EPA determined that both human exposures to any contamination and migration of any contaminated groundwater were under control at the Facility.

From 2003 to 2006, additional site characterization efforts were conducted at the Facility. These efforts included the delineation of an area of impacted surface soil requiring excavation; the characterization of the contents of the Former Waste Disposal Area (FWDA), which was

found to contain ash, metal debris, wax, bottles, and other general types of trash; an assessment of the efficacy of the groundwater recovery and treatment system; and several rounds of underground pipe excavation and removal activities.

In January 2005, the Facility submitted a Notice of Intent to Remediate to PADEP pursuant to the Pennsylvania Land Recycling and Environmental Remediation Standards Act, (Land Recycling Act or Act 2), 35 P.S. §6026.101. In 2006, a third recovery well was installed at the Facility to help recover remaining SPL beneath the northern part of the Facility. In June 2007, a Remedial Investigation and Risk Assessment (RIRA) was submitted to EPA and PADEP by MACTEC, the Facility's consultant, and was revised in September 2008, due primarily to concerns regarding assumptions used in the risk assessment. The RIRA proposed the attainment of a combination of the Commonwealth's non-residential Statewide Health Standard (SHS) and Site Specific Standard (SSS) for contaminants detected at the Facility (for more information on these standards and the Act 2 process, see PADEP's Land Recycling website at [http://www.portal.state.pa.us/portal/server.pt/community/land\\_recycling\\_program/](http://www.portal.state.pa.us/portal/server.pt/community/land_recycling_program/)).

Maximum concentrations of arsenic in soil and benzene and trimethylbenzene in both soil and groundwater at the Facility were found at concentrations above the non-residential SHS. This discovery led to a risk assessment to determine the site-specific level of risk. Concentrations used in the risk assessment were conservative (i.e., highest levels were used) to ensure protection of human health and the environment throughout the entire Facility. The risk assessment demonstrated that risk levels from contamination at the Facility were acceptable for both non-residential use at the Facility and recreational use of the Rails to Trails paved pathway that passes through the Facility. In December 2008, PADEP approved the RIRA.

In October 2008, URS, the Facility's consultant, conducted an evaluation of the Facility's groundwater recovery system. URS concluded that the recovery system had recovered SPL to the maximum extent practicable. From February to May 2009, URS conducted a shutdown of the system and closely monitored the Allegheny River, groundwater levels at the Facility, and the potential for the appearance of any sheens on the river.

Evidence of sheens on the river was observed on one occasion in two separate areas during a weekly stream walk by URS personnel in April 2009. Sorbent booms were placed in the river as a precautionary measure. A response effort began immediately and determined that one of the sheens was a bio-sheen associated with a boggy area and iron seeps along the shore and was not the result of a petroleum seep. The second area was confirmed as a petroleum seep, believed to have occurred as a result of the shutdown of the groundwater recovery system. Exploratory trenches were dug in the area to determine if any source area for the petroleum contamination existed. The excavations revealed loosely joined, vitrified clay tile pipes that contained small amounts of weathered residual petroleum. These pipes and the surrounding impacted soil were excavated from the area. The area was backfilled and a phyto-barrier of hydrocarbon-degrading native plants and trees was installed in this area of the Facility as an additional protective measure.

To date, no further impacts have been observed along the riverbank. As a result, the groundwater recovery system is no longer needed as a remedial component and remained shut down since May 2009. Further details concerning the groundwater recovery system and remedial efforts after its shutdown are described in the June 2009 Groundwater Recovery System

Evaluation Report by URS.

In March 2009, URS submitted a Cleanup Plan to PADEP to address remedial actions as specified in the RIRA. The Cleanup Plan specified the methods for excavation and disposal of approximately 140 cubic yards of surface soil contaminated with trimethylbenzene, the continuation of the groundwater recovery system shutdown evaluation, the implementation of institutional controls at the Facility, and the installation of a vegetative cover for closure of the FWDA. In May 2009, an amended approach to the closure of the FWDA was proposed in an effort to maintain the current slope stability and reduce the amount of stormwater infiltration into the area. This amended approach required the installation of a stormwater management channel; removal of topsoil in order to compact, fill, and grade the disposal cell; and restoration of topsoil and re-vegetation of the cap area. In July 2009 revisions to the Cleanup Plan were made by URS to address comments from EPA and PADEP. In August 2009, the Cleanup Plan was approved by PADEP.

In September 2009, URS submitted the Final Report, which summarized the completion of remedial activities, demonstration of attainment, and implementation of the post-remediation care plan. Approximately 192 tons of impacted surface soils from the area contaminated with trimethylbenzene were excavated and disposed of off-site. The excavation area was backfilled with 230 tons of clean fill, graded and seeded (further details of this remedial effort are described in the July 2009 SAB-17 Area Excavation Completion Report by URS). The amended approach to the closure of the FWDA described above was completed by URS in August 2009. As a result of the excavation of the SAB-17 area and post-excavation confirmation sampling conducted by URS, Facility soils met a combination of the Statewide Health and Site Specific Standards, and groundwater beneath the Facility met the Site Specific Standard, under Act 2.

The post-remediation care plan includes an initial 2 ½-year inspection and maintenance schedule (monthly for six months, then annually) that focuses on verifying the integrity of the FWDA surface soils and vegetative cover, operation of the FWDA stormwater management channel, and maintenance of the phyto-barrier that was installed along the Facility riverbank. Future inspections and any major modifications to these areas of the Facility will be discussed with PADEP prior to implementation to ensure that the Facility maintains attainment of the SHS and SSS under Act 2 as specified in the RIRA. In November 2009, the Final Report was approved by PADEP.

Because the Facility currently meets non-residential SHS and SSS, the proposed final remedy includes several activity and use limitations as described in the Environmental Covenant (and summarized under Institutional Controls below) that prohibit use of groundwater beneath the Facility and prohibit the Facility from being used for any residential or residential-style purposes, excluding the existing recreational Rails to Trails easement.

#### **IV. Evaluation of EPA's Proposed Decision**

This section provides a description of the criteria EPA uses to evaluate proposed remedies under the Corrective Action Program. The criteria are applied in two phases. In the first phase, EPA evaluates three criteria, known as Threshold Criteria. In the second phase, EPA uses seven balancing criteria to select among alternative solutions, if more than one is proposed. The Facility has demonstrated that the current conditions meet the threshold criteria established

by EPA. Because EPA is not selecting among alternatives, a complete evaluation of the balancing criteria is not necessary.

The following is a summary of EPA's evaluation of the Threshold Criteria:

**1. Protect Human Health and the Environment** - Honeywell has remediated on-site soils to PADEP's non-residential SHS or SSS. Since current and anticipated land use is non-residential, ICs have been implemented at the Facility which restrict use of Facility property to non-residential uses to ensure that human health and the environment will remain protected.

**2. Achieve Media Cleanup Objectives** - EPA's proposed remedy meets the appropriate cleanup objectives based on assumptions regarding current and reasonably anticipated land and water resource use(s). Most contaminant concentrations identified in Facility soils meet the applicable non-residential SHS. For soil contaminant concentrations exceeding the non-residential SHS, the risk assessment demonstrates that contaminant concentrations are below acceptable non-residential risk-based levels; therefore, these soil contaminants meet the SSS. Contaminant concentrations in groundwater beneath the Facility were also shown to meet the SSS in the risk assessment. Although there are no longer buildings on the Facility that are occupied by workers, potential indoor air impacts from vapor intrusion of soil and/or groundwater contamination were also evaluated and shown in the risk assessment to be below acceptable non-residential risk-based levels. Because the SHS or SSS has been achieved in all media at the Facility, conditions at the Facility are protective of human health and the environment for current and reasonably anticipated non-residential uses.

**3. Remediating the Source of Releases** - In all remedy decisions, EPA seeks to eliminate or reduce further releases of hazardous wastes or hazardous constituents that may pose a threat to human health and the environment. The Facility has remediated the sources of releases by undergoing an extensive subsurface pipe investigation and removal/capping effort to remove any remaining sources of contamination from the Facility. All known storage tanks, refinery operational equipment, and buildings (except the garage and groundwater remediation system building) have been demolished and removed from the Facility. Two areas of groundwater impacted by SPL were pumped and treated for over 14 years until further SPL removal was impractical; any remaining SPL is likely to become entrained and/or degraded by the installed phyto-barrier. The FWDA was re-graded and a stormwater channel constructed to minimize infiltration into the waste materials. Approximately 192 tons of contaminated soil in an area primarily contaminated with trimethylbenzene were excavated and disposed of off-site, which eliminated a potential source for further groundwater contamination.

## **V. Institutional Controls**

ICs are generally non-engineered mechanisms such as administrative and/or legal controls that minimize the potential for human exposure to contamination and/or protect the integrity of a remedy. Under this proposed remedy, some concentrations of contaminants will remain in the groundwater and soil at the Facility above levels appropriate for residential and domestic uses. As a result, the proposed remedy will require the Facility to implement ICs in order to restrict use of the Facility property and groundwater to prevent human exposure to contaminants while such contaminants remain in place.

The current land use restrictions being implemented at the Facility are contained within an Environmental Covenant which was executed by Honeywell and approved by PADEP on November 9, 2009 pursuant to the Pennsylvania Uniform Environmental Covenants Act, 27 Pa.C.S. §§ 6501-6517. The restrictions are binding on Honeywell during its ownership period, any future owners during their ownership period, and any tenants or licensees of any portions of the Facility. The Environmental Covenant includes the following activity and use restrictions:

1. No person may withdraw or make use of any groundwater underneath the Property for any purposes unless and until such groundwater meets the applicable Pennsylvania Land Recycling and Environmental Remediation Standards Act of 1995 (Act 2) standards and written approval for such groundwater use is obtained from the PADEP. This restriction shall not preclude the extraction of groundwater for any necessary investigational or remedial activities approved by the PADEP.
2. No person may use or occupy any portion of the Property, either temporarily or permanently, for any residential use of any kind or nature (including without limitation, use by individuals or families for purposes of personal living, dwelling, or overnight accommodations, whether such uses are in single family residences, apartments, duplexes, or other multiple residential dwellings, trailers, trailer parks, camping sites, motels, hotels, or other dwelling use of any kind); or any child care, school, nursing home or recreational area use or other residential-style facilities as identified in Section 103 of Act 2 of 1995; provided, for avoidance of doubt, this requirement shall not be deemed to bar the use of the Rails to Trails Area.
3. Former Waste Disposal Area. (i) The persons obligated to comply with the activity and use restrictions shall have a continuing duty to maintain the vegetative cover and surface drainage systems at the Former Waste Disposal Area and ancillary or accessory equipment, structures, or enclosures, if any;  
  
(ii) No person shall develop the Former Waste Disposal Area without prior written approval from the PADEP;  
  
(iii) No person shall perform excavation activities in or within 50 feet of the Former Waste Disposal Area without prior written approval from the PADEP.

In addition to the above restrictions, the Environmental Covenant requires the owner and each subsequent owner to submit, to the PADEP or EPA, written documentation regarding the transfer of the property, any proposed changes in use of the property, and the filing of applications for building permits for the property or proposals for any site work affecting the contamination on the property.

If the Facility fails to meet its obligations under the Environmental Covenant, or EPA or PADEP, in its sole discretion, deems that additional ICs are necessary to protect human health or the environment, both agencies have the authority to enforce the Environmental Covenant and/or require additional ICs.

## **VI. Financial Assurance**



EPA is not requiring financial assurance given the amount of inspection and maintenance that must be performed as part of the final remedy of the Facility. Post-remedial care expenses are projected to be less than \$20,000 annually.

## **VII. Environmental Indicators**

EPA has set national goals to address RCRA corrective action facilities. Accordingly, for every RCRA facility, EPA evaluates two key environmental clean-up indicators: (1) Current Human Exposures Under Control and (2) Migration of Contaminated Groundwater Under Control. The Facility met these indicators on August 20, 2002.

## **VIII. Public Participation**

Interested persons are invited to comment on EPA's proposed decision. The public comment period will last thirty (30) calendar days from the date that notice is published in a local newspaper. Comments may be submitted by mail, fax, e-mail, or phone to Mr. Griff Miller at the address listed below.

A public meeting will be held upon request. Requests for a public meeting should be made to Mr. Griff Miller 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 decision at this Facility. The Administrative Record is available at the following location:

U.S. EPA Region III  
1650 Arch Street  
Philadelphia, PA 19103  
Contact: Mr. Griff Miller (3LC30)  
Phone: (215) 814-3407  
Fax: (215) 814 - 3113  
Email: [miller.griff@epa.gov](mailto:miller.griff@epa.gov)