



UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION III
STATEMENT OF BASIS
FORMER KEYSTONE CHEMICAL COMPANY
GIRARDVILLE, PENNSYLVANIA
PAD 000 647 735

I. Introduction

The United States Environmental Protection Agency (EPA) has prepared this Statement of Basis (SB) to solicit public comment on its proposed decision for the former Keystone Chemical Company facility located on Rapp Road in Girardville, Pennsylvania (Facility). EPA's proposed decision for the Facility consists of institutional controls (ICs) which are designed to minimize the potential for human exposure to contamination. The proposed ICs restrict land use to non-residential purposes and prohibit groundwater use beneath the Facility since contamination remains at the Facility above levels considered protective for unlimited use. This SB highlights key information relied upon by EPA in making its proposed remedy.

The Facility is subject to EPA's 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 *et seq.* (Corrective Action Program). 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. The Commonwealth of Pennsylvania (Commonwealth) is not authorized for the Corrective Action Program under Section 3006 of RCRA. Therefore, EPA retains primary authority in the Commonwealth for the Corrective Action Program.

The Administrative Record (AR) for the Facility contains all documents, including data and quality assurance information, on which EPA's proposed remedy is based. See Section IX, Public Participation, for information on how you may review the AR.

II. Facility Background

The Facility property consists of approximately 50 acres and is surrounded mainly by surface mines and wooded areas. Residential areas are located north, south, and west of the Facility. A location map and facility layout are attached as Figures 1 and 2, respectively.

The Facility property was originally used for the disposal of coal refuse but was also mined for coal in the early 1970s. In 1978, the property was leased to the Keystone Chemical Company who operated a waste oil recovery operation and an impoundment in which stabilized sludge was disposed. The Facility ceased waste disposal activities after a May 1982 inspection by the Pennsylvania Department of Environmental Protection (PADEP) found serious deficiencies in the construction and maintenance of the impoundment. The Facility was sold to Van Dexter Manufacturing, Inc. in October 1982. Van Dexter continued to operate the Facility under the name Keystone Chemical Company as a hazardous waste treatment facility and transfer station until 1986, when all operations ceased under an Order issued by PADEP. The Facility is currently owned by Girard Estate and is vacant. All of the operational structures have been demolished, wastes deposited in the impoundment were removed, and the clean closure of the Facility was approved by PADEP in 1993.

III. Summary of Environmental Investigation

A.T. Kearney performed a Phase I and II RCRA Facility Assessment of the Facility in

1986 on behalf of EPA. Eleven solid waste management units (SWMUs) were identified and assessed. A.T. Kearney recommended corrective measures for some of the SWMUs as follows:

- Abandoned Tank Storage Area – Storage containers should be characterized, cleaned out, and disposed of as appropriate.
- Former Waste Stabilization Area – Surface soils should be characterized to determine potential impacts of transfer of waste materials from this SWMU to Impoundment A.
- Underground Witness Tanks – Witness tanks should be removed, and soil samples should be taken to determine if releases had occurred.
- Fuel Blending Aboveground Storage Tanks (AST) – Contents of ASTs should be characterized.
- Impoundment A – Impoundment should remain closed, waste material deposited in impoundment should be removed, and soil borings and groundwater wells should be drilled and soil and groundwater sampled for contaminants

As part of the decommissioning and closure of the Facility, several of the recommendations were performed by Stout Environmental. Remaining storage containers in the Abandoned Tank Storage Area were removed from the Facility and disposed off-site; the witness tanks and associated piping were cleaned, removed, and disposed off-site; fuel blending ASTs were removed and disposed off-site; and stabilized sludges and liquid wastes were removed from Impoundment A. No record of soil sample results were found from either the Former Waste Stabilization Area or the vicinity of the Underground Witness Tanks; however, after the Facility had removed previously deposited wastes and properly cleaned and closed the Facility, PADEP granted closure certification to the Facility in March 1993.

In addition, the Facility's groundwater monitoring network, which was constructed in 1983 and initially sampled in 1984, was expanded and sampled quarterly from 1987 to 1992 to provide evidence to substantiate closure of the Facility. PADEP collected split-samples from the July 1992 groundwater sampling event. No volatile organic chemicals were present except for trace concentrations of chloroform and toluene, which were likely a result of poor decontamination procedures by the sampling team and not indicative of contamination from the Facility. Dissolved concentrations of arsenic, cadmium, chromium, lead, and mercury were either not detected or below applicable EPA Maximum Contaminant Levels (MCLs), codified at 40 CFR Part 141. Dissolved concentrations of iron, manganese, and sulfate were detected above EPA's secondary drinking water standards in both upgradient and downgradient wells, which PADEP suggested was most likely due to acid mine drainage from upgradient sources. PADEP therefore concluded that the Facility likely was not a significant contributor to degraded groundwater in the vicinity of the Facility.

In February 2009, an Environmental Indicator Inspection Report was conducted at the Facility by URS Corporation on behalf of EPA. This report summarized information from the previous Phase I and II reports and from the groundwater monitoring network during the period 1984 to 1992, in addition to summarizing information on hazardous waste inspections and mine subsidence investigations that ultimately led to the permanent closure of the Facility.

EPA conducted a site visit in May 2011 as a follow-up to the Environmental Indicator

Inspection. Solid Waste Management Units and Areas of Concern described in the 2009 inspection were reviewed; no evidence of any releases was observed. As a result of this site visit, EPA determined that both Environmental Indicators had been met at the Facility (see VII, below).

IV. Corrective Action Objectives

EPA's Corrective Action Objectives for the Facility are the following:

Soils

EPA's corrective action objective for soils at the Facility is the attainment of Pennsylvania's Non-Residential Statewide Health Standards (SHSs), codified in 25 Pa. Code Section 250.305. EPA has determined that attainment of Pennsylvania's Non-Residential SHSs for soils is protective of human health and the environment for individual contaminants at the Facility. The Non-Residential SHSs meet or are more conservative than EPA's acceptable risk range for non-residential use.

Groundwater

EPA's corrective action objectives for groundwater at the Facility are:

1. to reduce contaminant levels throughout the groundwater to MCLs and
2. to prevent off-site migration of contaminants while levels remain above MCLs.

V. Proposed Remedy

Institutional Controls

ICs are non-engineered instruments such as administrative and/or legal controls that minimize the potential for human exposure to contamination and/or protect the integrity of the remedy by limiting land or resource use. Because contaminants will remain in the soil and groundwater at the Facility above levels appropriate for residential uses, institutional controls will be established to restrict the Facility to non-residential uses. EPA proposes, as a minimum, the following land and groundwater use restrictions:

1. The Facility property shall not be used for residential purposes unless it is demonstrated to EPA, in consultation with PADEP, that such use will not pose a threat to human health or the environment or adversely affect or interfere with the selected remedy and EPA, in consultation with PADEP, provides prior written approval for such use; and
2. Groundwater at the Facility shall not be used for any purpose other than to conduct the operation, maintenance, and monitoring activities required by EPA and/or PADEP, unless it is demonstrated to EPA, in consultation with PADEP, that such use will not pose a threat to human health or the environment or adversely affect or interfere with the selected remedy and EPA, in

consultation with PADEP, provides prior written approval for such use.

The components of EPA's proposed remedy may be enforceable through an order, permit, or through an Environmental Covenant pursuant to the Pennsylvania Uniform Environmental Covenants Act, 27 Pa.C.S. §§ 6501-6517 ("UECA") to be recorded with the deed for the Facility property. If the Facility fails to meet and maintain its obligations under any such enforceable mechanism, or if EPA, in its sole discretion, deems that additional operation and maintenance and monitoring activities and/or institutional controls are necessary to protect human health or the environment, EPA has the authority to require and enforce additional corrective actions.

VI. Evaluation of EPA's Proposed Remedy

This section provides a description of the criteria EPA used to evaluate the proposed remedy consistent with EPA guidance. The criteria are applied in two phases. In the first phase, EPA evaluates three remedy threshold criteria as general goals. In the second phase, for those remedies which meet the threshold criteria, EPA then evaluates seven balancing criteria to determine which proposed remedy alternative provides the best relative combination of attributes.

A. Threshold Criteria

1. Protect Human Health and the Environment

Prior to the decommissioning and closure activities at the Facility, the primary human health and environmental threats posed by contaminated soils at the Facility were related to direct contact with those soils. Additional threats were related to the potential for migration of contamination in the soils via soil erosion, surface water run-off and leaching to the ground water. Since the Facility removed wastes that had been deposited in the impoundment, decommissioned all process equipment and buildings, and demolished most structures, there are no remaining large, discrete sources of waste from which constituents would be released to the environment. Based on the results outlined in the 2009 Environmental Indicator Inspection Report, EPA has determined that the Facility's decommissioning and closure activities are protective of human health and the environment provided that land and water use restrictions are implemented and maintained.

The Environmental Indicator Inspection report evaluated all relevant exposure pathways, including the potential for vapor intrusion into present or future buildings. With respect to groundwater, low levels of contaminants remain in shallow groundwater beneath the Facility. PADEP determined, and EPA agrees, that these contaminants are likely a result of acid mine drainage and not indicative of contamination from past operations at the Facility. There are no human health threats associated with shallow groundwater contamination because it is not used as a drinking water source in the vicinity of the Facility. The Shenandoah Municipal Water Authority provides public water to the Facility and neighboring residential areas. The groundwater use restriction described in Section V.2. above will be incorporated into an enforceable mechanism such as a permit, order, or an environmental covenant that will restrict the use of contaminated groundwater for any purpose.

2. Achieve Media Cleanup Objectives for Soil and Groundwater

Soil core samples taken beneath the impoundment indicated that the soil was not impacted by disposal operations at the Facility. Furthermore, the Facility cleaned, decommissioned, removed, and/or demolished and disposed of all process equipment and structures under PADEP oversight. The Facility achieved closure certification by PADEP in 1993. EPA believes that these remedial efforts have demonstrated attainment of industrial soil cleanup objectives for current and reasonably anticipated future uses of the Facility property.

The last groundwater sampling event in 1992 contained some exceedances of metals above secondary standards; however, these exceedances were from both upgradient and downgradient wells and were deemed by PADEP to be a result of acid mine drainage from the surrounding area and mine pools beneath the Facility. Even though there are no current consumptive uses of the contaminated groundwater, it is EPA's goal that groundwater be restored to drinking water standards to be protective of potential future use. Until groundwater is restored to drinking water standards, EPA's proposed remedy requires the implementation and maintenance of institutional controls to ensure that Facility property is not used for residential purposes and groundwater beneath Facility property is not used for any purpose.

3. Remediating the Source of Releases

In all proposed remedies, 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. As shown in the Environmental Indicator Inspection report, the Facility met this objective by removing wastes deposited at the Facility and achieving closure of the impoundment from PADEP in 1993, in addition to removing all process buildings and most structures upon Facility closure. There are no remaining large, discrete sources of waste from which constituents would be released to the environment. Therefore, EPA has determined that this criterion has been met.

B. Balancing/Evaluation Criteria

1. Long-Term Effectiveness

The proposed remedy will maintain protection of human health and the environment over time by controlling exposure to the hazardous constituents remaining in soils and groundwater. EPA's proposed remedy requires the compliance with and maintenance of land use and groundwater use restrictions at the Facility. EPA anticipates that the land use and groundwater use restrictions will be implemented through an environmental covenant to be recorded with the deed for the Facility property. The environmental covenant would run with the land and, as such, would be enforceable by EPA and the Commonwealth against future land owners.

2. Reduction of Toxicity, Mobility, or Volume of the Hazardous Constituents

The reduction of toxicity, mobility and volume of hazardous constituents at the Facility has already been achieved by removing all potential sources of contamination through the clean closure of the Facility in 1993.

3. Short-Term Effectiveness

EPA's proposed remedy does not involve any additional activities, such as construction or excavation, that would pose short-term risks to workers, residents, and the environment. In addition, EPA anticipates that the land use and groundwater use restrictions will be fully implemented shortly after the issuance of the Final Decision and Response to Comments (FDRTC).

4. Implementability

EPA's proposed remedy is readily implementable. EPA does not anticipate any regulatory constraints in requiring the Facility to record an environmental covenant with the deed to the Facility property, if that is the enforceable mechanism utilized by the Facility.

5. Cost

EPA's proposed remedy is cost effective. The cost to comply with EPA's proposed remedy is minimal.

6. Community Acceptance

EPA will evaluate Community acceptance of the proposed remedy during the public comment period and will be described in the FDRTC.

7. State/Support Agency Acceptance

EPA will evaluate Commonwealth acceptance based on comments received from PADEP during the public comment period and will be described in the FDRTC.

VII. Environmental Indicators

EPA sets national goals to measure progress toward meeting the nation's major environmental goals. For Corrective Action, EPA evaluates two key environmental indicators for each facility: (1) current human exposures under control and (2) migration of contaminated groundwater under control. The Facility met these indicators on June 10, 2011.

VIII. Financial Assurance

EPA has evaluated whether financial assurance for corrective action is necessary to implement EPA's proposed remedy at the Facility. Given that EPA's proposed remedy does not require any further engineering actions to remediate soil, groundwater or indoor air contamination at this time and given that the costs of implementing institutional controls at the Facility will be *de minimis*, EPA is proposing that no financial assurance be required.

IX. Public Participation

Before EPA makes a final decision on its proposal for the Facility, the public may participate in the decision selection process by reviewing this SB and documents contained in the Administrative Record (AR) for the Facility. The AR contains all information considered by EPA in reaching this proposed remedy. It is available for public review during normal business hours at:

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

Interested parties are encouraged to review the AR and comment on EPA's proposed remedy. The public comment period will last thirty (30) calendar days from the date that notice is published in a local newspaper. You may submit comments by mail, fax, or e-mail to Mr. Griff Miller. EPA will hold a public meeting to discuss this proposed remedy upon request. Requests for a public meeting should be made to Mr. Miller.

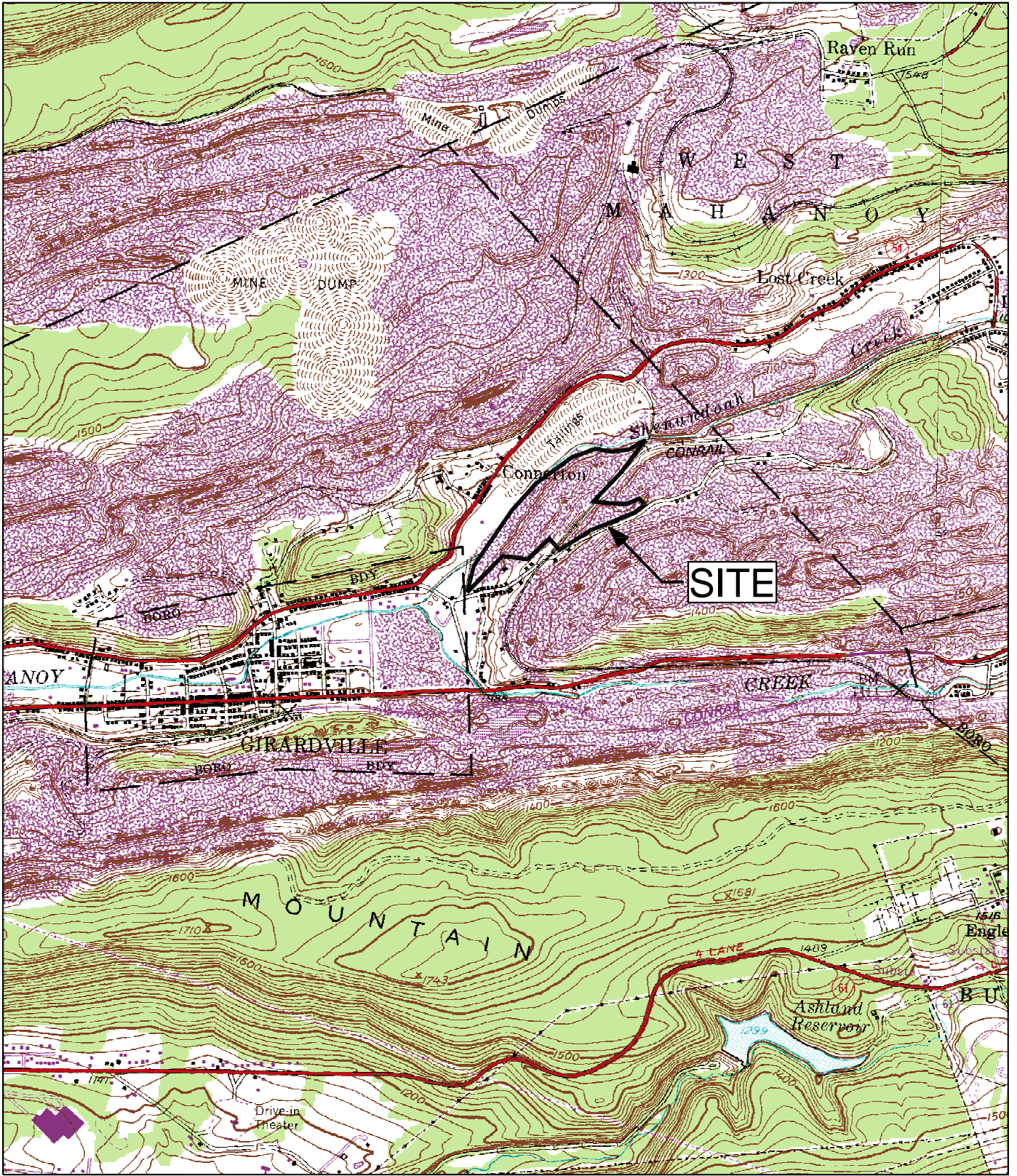
EPA will respond to all relevant comments received during the comment period. If EPA determines that new information warrant a modification to the proposed remedy, EPA will modify the proposed remedy or select other alternatives based on such new information and/or public comments. EPA will announce its final decision and explain the rationale for any changes in the FDRTC. All persons who comment on this proposed decision will receive a copy of the FDRTC. Others may obtain a copy by contacting Mr. Miller at the address listed above.

List of Attachments


Figure 1: Site Location Map
Figure 2: General Layout of Facility

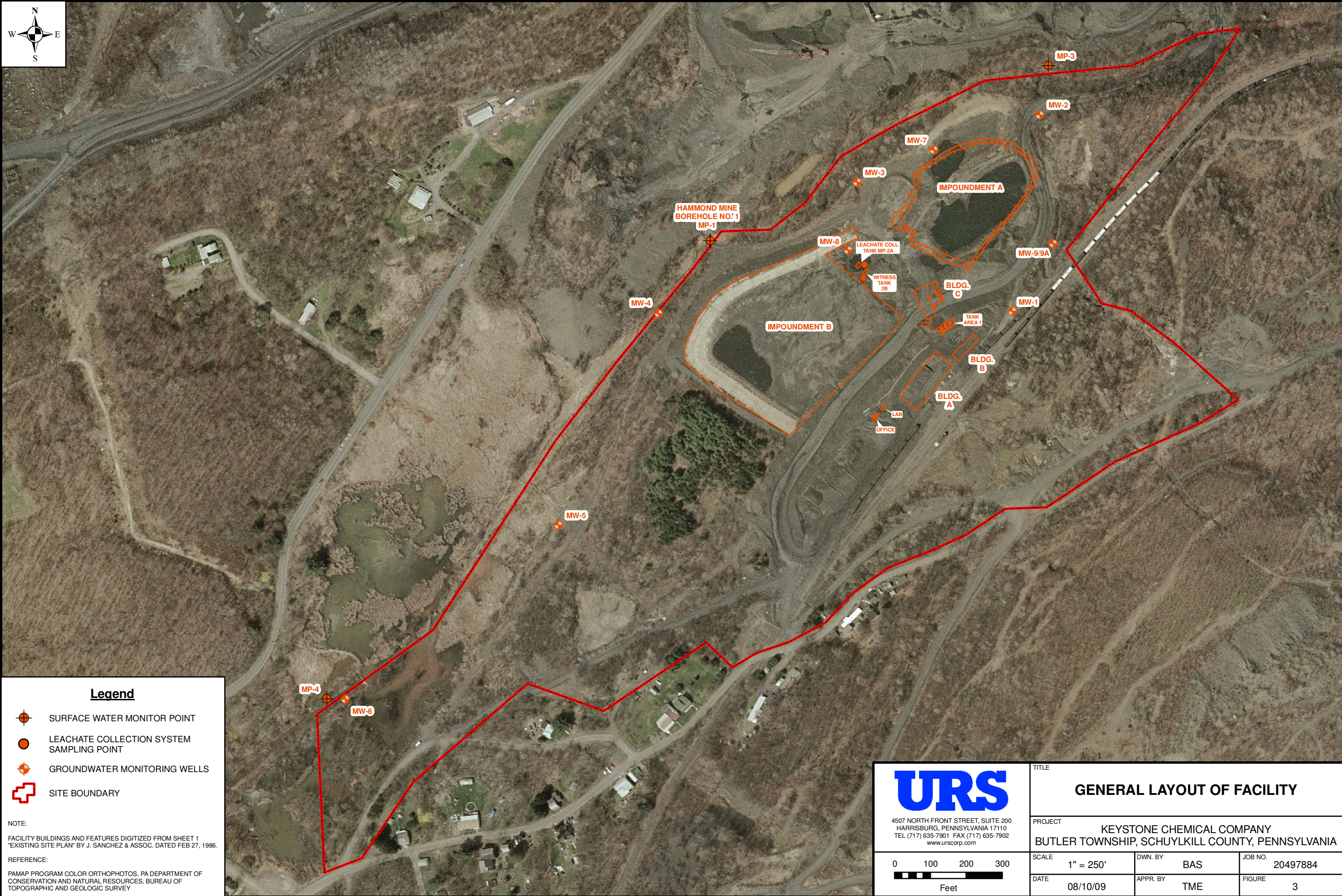
Date: _____

Abraham Ferdas, Director
Land and Chemicals Division
US EPA, Region III







REFERENCE:
 A Portion of USGS 7.5 Minute Topographic Map;
 Ashland Quadrangle, Pennsylvania;
 1953, Photorevised 1969 & 1976.

TITLE			
SITE LOCATION MAP			
PROJECT			
Keystone Chemical Company			
		4507 NORTH FRONT STREET, SUITE 200 HARRISBURG, PENNSYLVANIA 17110 (717) 635-7901 FAX (717) 635-7902 www.urscorp.com	
SCALE	AS SHOWN	DWN. BY	AWJ
DATE	5/12/07	APPR. BY	
		JOB NO.	20497884
		FIG. NO.	1



Legend

-  SURFACE WATER MONITOR POINT
-  LEACHATE COLLECTION SYSTEM SAMPLING POINT
-  GROUNDWATER MONITORING WELLS
-  SITE BOUNDARY

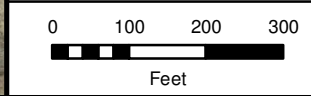
NOTE:
 FACILITY BUILDINGS AND FEATURES DIGITIZED FROM SHEET 1
 "EXISTING SITE PLAN" BY J. SANCHEZ & ASSOC. DATED FEB 27, 1986.

REFERENCE:
 PAMAP PROGRAM COLOR ORTHOPHOTOS, PA DEPARTMENT OF
 CONSERVATION AND NATURAL RESOURCES, BUREAU OF
 TOPOGRAPHIC AND GEOLOGIC SURVEY

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 TEL (717) 635-7901 FAX (717) 635-7902
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TITLE GENERAL LAYOUT OF FACILITY			
PROJECT KEYSTONE CHEMICAL COMPANY BUTLER TOWNSHIP, SCHUYLKILL COUNTY, PENNSYLVANIA			
SCALE 1" = 250'	DWN. BY BAS	JOB NO. 20497884	
DATE 08/10/09	APPR. BY TME	FIGURE 3	