STATEMENT OF BASIS

REGION III
ID #
PAD003010113

Former Turbine Airfoil Designs, Inc.

Harrisburg, Pennsylvania
Signed August 2014

Facility/Unit Type:	**Closed Manufacturing Plant**
Contaminants:	**VOCs and SVOCs**
Media:	**Groundwater, soil**
Proposed Remedy:	**Compliance with and maintenance of institutional controls**

I. INTRODUCTION

The United States Environmental Protection Agency (EPA) has prepared this Statement of Basis (SB) to solicit public comment on its proposed remedy for the Former Turbine Airfoil Designs (Facility), 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.

EPA is providing a 30-day public comment period on this SB 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 for the Facility can be found by navigating http://www.epa.gov/reg3wcmd/correctiveaction.htm.

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

II. FACILITY BACKGROUND

The Facility is located at 1400 North Cameron Street, Harrisburg, Pa. The Facility is bordered to the north and south by commercial/industrial properties, to the west by railroad tracks owned by Norfolk Southern and to the east by Paxton Creek, as shown in Figure 1. The Facility is owned by the1400 N Cameron Inc. It has a total area of 18.62 acres, that is developed with various improvements including main manufacturing building, an outdoor covered hazardous and non-hazardous waste storage area, a guard gate and aboveground storage tanks (ASTs), as shown in Figure 2.

Harrisburg Steel Corporation (HSC) owned the Facility property from 1916 to 1942. HSC operated the plant and manufactured high pressure gas cylinders and demolitions bombs and shells without live charges. The Defense Plant Corporation purchased the Facility in 1943 and improved the Facility property and the operations. In 1949 the Commonwealth of Pennsylvania (Commonwealth) purchased the Facility from the Reconstruction Finance Corporation. In 1951, the US Air Force notified the Commonwealth that the Facility was required for national security and was used to manufacture airplane engines. The Capital Region Economic Development Corporation purchased the Facility in March 2006. NL Ventures purchased the Facility in April 2006 and leased the Facility to Turbine Airfoil Designs Inc. which manufactured airplane parts until January 10, 2010. In 2012, 1400 N Cameron Inc purchased the Facility. There are no operations (manufacturing or commercial) at the Facility.

Areas of Investigation

Area	Description
AOC 1	AOC 1 is located on the Northeast corner of the manufacturing plant, see figure 3. This area had 4 fuel oil underground storage tanks (USTs) and 1 unleaded gasoline UST. USTs were removed from the Facility and closed under PADEP's Tank Program in 1986. During an inspection in 2009, this Area had 9 55-gallon drums labeled, "environmental sampling waste." They were subsequently removed from the Facility.
AOC 2	AOC 2 is located on the western side of the Facility. See figure 3. This Area had 2 fuel oil USTs. The USTs were removed from the Facility and closed under PADEP's Tank Program in 1986.
AOC 3	AOC 3 is located on the south side of the manufacturing plant. See figure 3. This Area had 1 fuel UST. The UST was removed from the Facility and closed under PADEP's Tank Program in 1986.
AOC 4	AOC 4 is located on the east side of the manufacturing plant. See figure 3. This Area had 3 fuel oil USTs. USTs were removed from the Facility and closed under PADEP's Tank Program in 1986.
AOC 5	AOC 5 is located on the west side of the manufacturing plant. See figure 3. This Area had 3 fuel oil aboveground storage tanks (ASTs) and one trichloroethylene (TCE) AST. This Area currently has one empty AST that has a secondary containment.
AOC 6	AOC 6 is located on the north side of the Facility. See figure 3. This Area had 2 waste oil ASTs. During the 2010 Environmental Indicator Inspection the concrete in the Area was noted to be in good condition with hairline cracks. The AST has been removed.
AOC 7	AOC 7 is located on the southeastern corner of the manufacturing plant. See figure 3. This Area had one pad-mounted electrical transformer.
AOC 8	AOC 8 is located on the north side of the Facility. See figure 3. This Area had been used to store drums. The Area is covered and has a fence. When this Area was used for storage of drums there were 2 sections: non-hazardous and hazardous. During the 2010 Environmental Indication Inspection the concrete was noted to have minor stains and hairline cracks along with frozen water in the floor drain.
Landfill	HSC had dumped slag material over the Facility property.
Vapor Intrusion	During the 2007 Baseline Environmental Report, soil vapor sampling was conducted due to the potential for soil and groundwater contaminates to vaporize.
Groundwater	Currently the Facility has 8 groundwater monitoring wells. The groundwater runs toward Paxton creek and has water table levels that range from approximately 9.5 feet to 20.8 feet below ground surface (bgs).

Throughout the Facility history, there were two major releases to Paxton Creek (see figure 3 for location). The releases were subsequently cleaned up under PADEP oversight. Groundwater monitoring wells closest to Paxton Creek, MW-1, MW-3 and MW-8, showed no contaminants at concentrations above 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.

III. SUMMARY OF ENVIRONMENTAL INVESTIGATIONS

Area	Description
AOC 1	Two soil samples were collected during the 2007 Baseline Environmental Report. Both samples showed no contamination above EPA resident soil screening levels.
AOC 2	Three soil samples were collected during the 2007 Baseline Environmental Report. All samples showed no contamination above EPA resident soil screening levels.
AOC 3	Two soil samples were collected during the 2007 Baseline Environmental Report. Both samples showed no contamination above EPA resident soil screening levels.

AOC 4	One soil sample was collected during the 2007 Baseline Environmental Report. The sample showed no contamination above EPA resident soil screening levels.
AOC 5	Five surface soil samples and one subsurface sample were collected during the 2007 Baseline Environmental Report. The samples showed benzo(a)pyrene at a concentration of 1.57 mg/kg (the highest concentration at AOC 5), which is above the EPA residential screening level of 0.015 mg/kg, and above the EPA industrial screening level to 29 mg/kg. The samples showed benzo(a)anthracene at a concentration of 1.43 mg/kg (the highest concentration at AOC 5) which is above the EPA residential screening level (0.15 mg/kg), but below the EPA industrial soil screening level (2.90 mg/kg).
AOC 6	Two surface soil samples were collected during the 2007 Baseline Environmental Report. Benzo(a)pyrene (1.65 mg/kg) and benzo(a)anthracene (1.31 mg/kg) were at concentrations above their respective residential screening levels, but below their respective industrial screening levels.
AOC 7	Two surface soil samples were collected and analyzed for polychlorinated biphenyls (PCBs) during the 2007 Baseline Environmental Report. None of the target PCBs were detected above the laboratory reporting limits.
AOC 8	Two surface soil samples were collected during the 2007 Baseline Environmental Report. The sample showed that TCE (6.5mg/kg) was above the applicable residential soil screening level (0.94 ug/kg)) and total chromium (365 mg/kg) was above the applicable residential screening level for Chromium (VI) (0.30 mg/kg)
Landfill	Ten surface soil samples were collected during the 2007 Baseline Environmental Report and tested for PCBs and RCRA metals. No PCBs were detected. Total Chromium was above the residential screening levels. The highest concentration of total chromium was 329 mg/kg which is above the residential screening level for Chromium (VI).
Vapor Intrusion	Two rounds of soil gas testing were done during the 2007 Baseline Environmental Report for VOCs and SVOCs. The sampling showed that detections were discovered, but detections were below PADEP non-residential MSC.EPA does not yet have soil or groundwater screen levels for vapor intrusion. EPA calculates an indoor air concentration from known groundwater data. EPA analysis confirmed that current levels of TCE in groundwater are below levels of concern for the vapor pathway.
Groundwater	Groundwater samples from all wells were taken in 2006, 2007 (two rounds), 2012 and 2014. During the 2012 sampling TCE was detected at 31.1 ug/L in MW-2, this is above the MCL and above past concentrations of TCE. In 2014, a round of ground water sampling was done to see if TCE had decreased or increase. In MW-2 TCE had decreased to 2.07 ug/L and in MW-5 had gone from 15.9 ug/L (2012) to 12.6 ug/L (2014). In 2014, sampling noted that approximated ½ foot of separate phase liquid (SPL) was located in MW-6. In previous groundwater investigations this well did have SPL that was pumped out. However, recovery ceased when no too little product was being recovered. Monitoring well down gradient of MW-6 is MW-8 showed no evidence of SPL. Since no SPL was found in downgradient wells, it is believed that the SPL is not traveling.

Because some contamination remain in the soil and groundwater at the Facility above levels appropriate for residential uses, an Environmental Covenant pursuant to the Pennsylvania Uniform Environmental Covenants Act, Act No. 68 of 2007, 27 Pa. C.S. §§ 6501 – 6517, (UECA) was approved by PADEP and recorded on the deed to the Facility property on July 11, 2008 (2008 Covenant). Under the Environmental Covenant, NL Ventures and all future owners are restricted from using Facility property for residential purposes and from using groundwater for any purpose.

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. The Facility met these indicators on June 23. 2014. The environmental indicator determinations are available at http://www.epa.gov/reg3wcmd/ca/pa.htm.

IV. CORRECTIVE ACTION OBJECTIVES

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

A. Soils

EPA's Corrective Action Objective for soils is to attain the applicable EPA non-residential screening levels for soils and to control exposure to the hazardous constituents remaining in soils over EPA residential screening levels.

B. Groundwater

EPA's Corrective Action Objectives for Facility groundwater is to restore the groundwater to drinking water standards and until such time as drinking water standards are restored, to control exposure to the hazardous constituents remaining in the groundwater by requiring compliance with and maintenance of groundwater use restrictions at the Facility to prevent migration of contaminants while levels remain above Federal MCLs.

V. PROPOSED REMEDY

A. EPA's proposed remedy for soils consists of continued compliance with the 2008 Covenant. That covenant restricts Facility property from being used for residential purposes.

B. EPA's proposed remedy for groundwater consists of monitored natural attenuation until drinking water standards are met and compliance with and maintenance of groundwater use restrictions, at the Facility to prevent exposure to TCE while that contaminant remains above its MCL. Monitoring at the Facility has shown that the contaminants are effectively being addressed by natural attenuation. Specifically, the extent of contamination in groundwater is not increasing and concentrations of contaminants are declining over time. The highest samples of groundwater is 15 µg/L. EPA calculates that the MCL for TCE (5 µg/L) will be achieved in 4 years.

EPA's proposed remedy for groundwater also includes continued compliance with the 2008 Covenant. That Environmental Covenant restricts Facility groundwater from being used for potable and agricultural purpose.

VI. EVALUATION OF PROPOSED REMEDY

Threshold Criteria	Evaluation
1) Protect human health and the environment	The Facility remediated on-site soils to non-residential standards. Since current and anticipated land use is non-residential, land and groundwater use restrictions have been implemented at the Facility to restrict future property uses to ensure that human health and the environment will remain protected. These conditions are enforceable under the 2008 Covenant and provide long–term assurance that the exposure assumptions used in developing EPA's proposed remedy are not changed.
2) Achieve media cleanup objectives	EPA's proposed remedy meets the cleanup objectives based on assumptions regarding current and reasonably anticipated land and water resource use(s). Facility soils meet EPA's non-residential screening levels and EPA's proposed monitored natural attenuation will attain the media cleanup criterion by restoring groundwater to drinking water standards.
3) Remediating the Source of Releases	In its RCRA Corrective Action 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. As summarized above and documented in the AR, the Facility met this objective by removing underground storage tanks, excavating contaminated soil, and performing confirmatory sampling. There are no known or suspected 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.

Balancing Criteria	Evaluation
4) 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 at the Facility. EPA's proposed remedy requires the compliance with and maintenance of land use and groundwater use restrictions at the Facility. The land use and groundwater use restrictions have already been implemented through the 2008 Covenant which runs with the land and as such will be enforceable against future land owners.
5) 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, as demonstrated by the data from the groundwater monitoring and confirmations samples taken after the soil removal.
6) Short-term effectiveness	EPA's proposed remedy does not involve any activities, such as construction or excavation that would pose short-term risks to workers, residents, and the environment. In addition, the land and groundwater use restrictions have already been implemented in the 2008 Covenant.
7) Implementability	EPA's proposed remedy is readily implementable. The 2008 Covenant has already been recorded and the components of EPA's proposed remedy are in place.
8) Cost	EPA's proposed remedy is cost effective. The remaining costs associated with this proposed remedy are minimal. The 2008 Covenant has already been recorded and the components of EPA's proposed remedy are in place.
9) Community Acceptance	EPA will evaluate Community acceptance of the proposed remedy during the public comment period, and it will be described in the Final Decision and Response to Comments.
10) State/Support Agency Acceptance	PADEP has reviewed and concurred with the proposed remedy for the Facility.

VII. 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 or groundwater at this time and given that the 2008 Covenant has already been recorded and the components of EPA's proposed remedy are in place, EPA is proposing that no financial assurance be required.

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 notice is published in a local newspaper. Comments may be submitted by mail, fax, e-mail, or phone to Ms. Catheryn Blankenbiller at the address listed below.

A public meeting will be held upon request. Requests for a public meeting should be made to Ms. Catheryn Blankenbiller 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. Catheryn Blankenbiller (3LC30)
Phone: (215) 814-3464
Fax: (215) 814 - 3113
Email: Blankenbiller.Catheryn@epa.gov

Date: 8.28.14

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

IX. INDEX TO ADMINISTRATIVE RECORD

-Hazardous Waste Permit Application Part A, Prepared by TRW, for EPA, December 1980;

-Environmental Indicator Inspection Report for Turbine Airfoil Designs, Inc., Prepared by Michael Baker Jr., Inc, for PADEP and EPA, September 2010;

-RCRA Corrective Action Environmental Indicator RCRIS code (CA725) Current Human Exposures Under Control, by EPA signed July 23, 2014;

-RCRA Corrective Action Environmental Indicator RCRIS code (CA725) Migration of Contaminated Groundwater Under Control by EPA., signed July 23, 2014;

-Baseline environmental Report prepared for Turbine Airfoil Design by Alliance environmental services submitted to PADEP on September 20, 2007

-Environmental Covenant on 1400 North Cameron Street, Harrisburg PA signed by PADEP in 2008;

-2012 Analytical groundwater sampling results prepared by Herbert, Rowland and Grubic Inc;

-Groundwater sampling Letter Report prepared by Baker submitted to PADEP and EPA in 2014;

-Turbine Airfoil Designs Vapor intrusion weight of evidence evaluation to file prepared by Andrew Clibanoff on September 27, 2011.

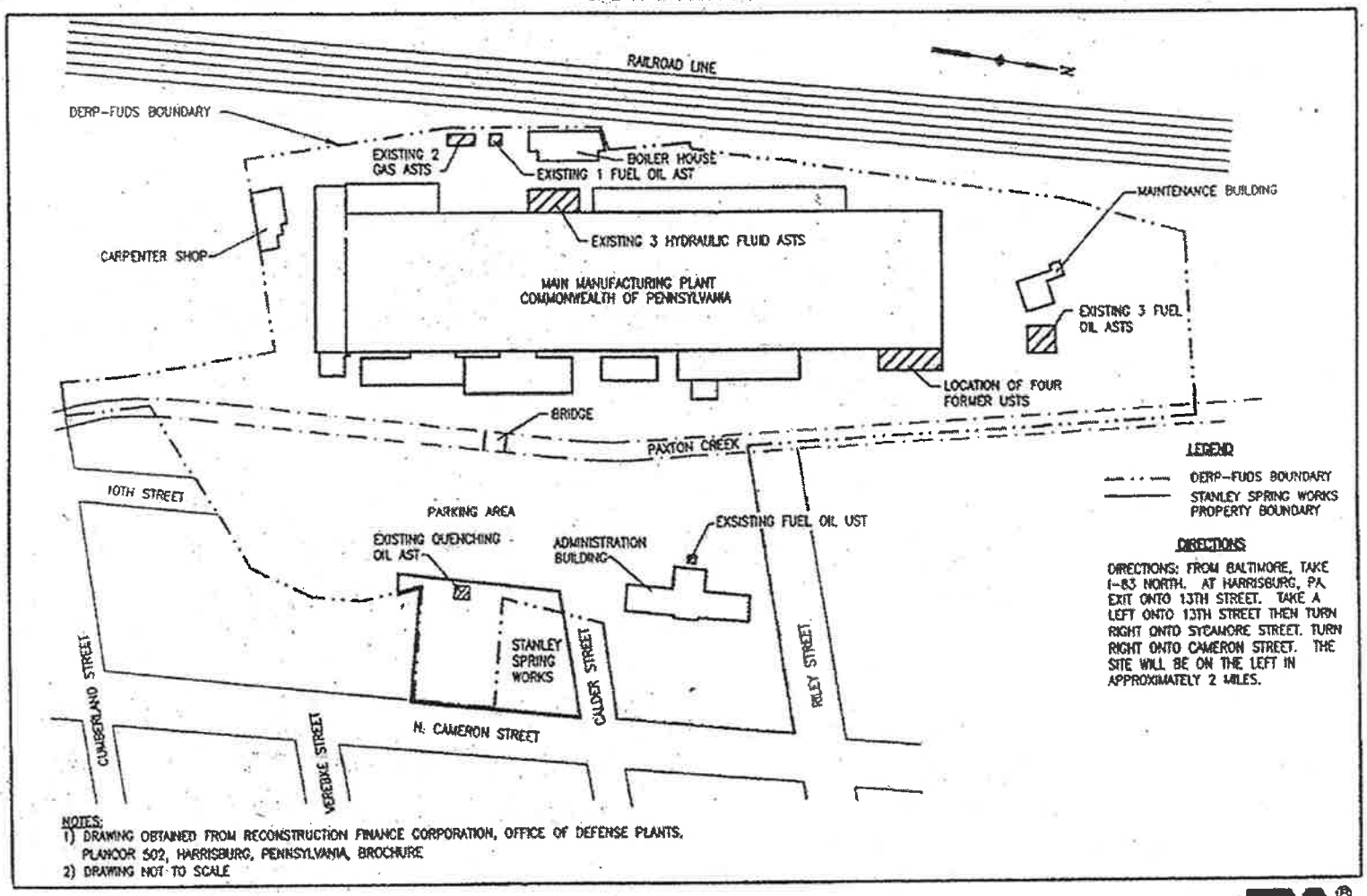
-Memorandum to file: Calculating time for TCE to get to 5 µg/L at Former Turbine Site on August 19, 2014.

Source: Google maps

LAT=40°16'30"N
LON=76°52'52"W

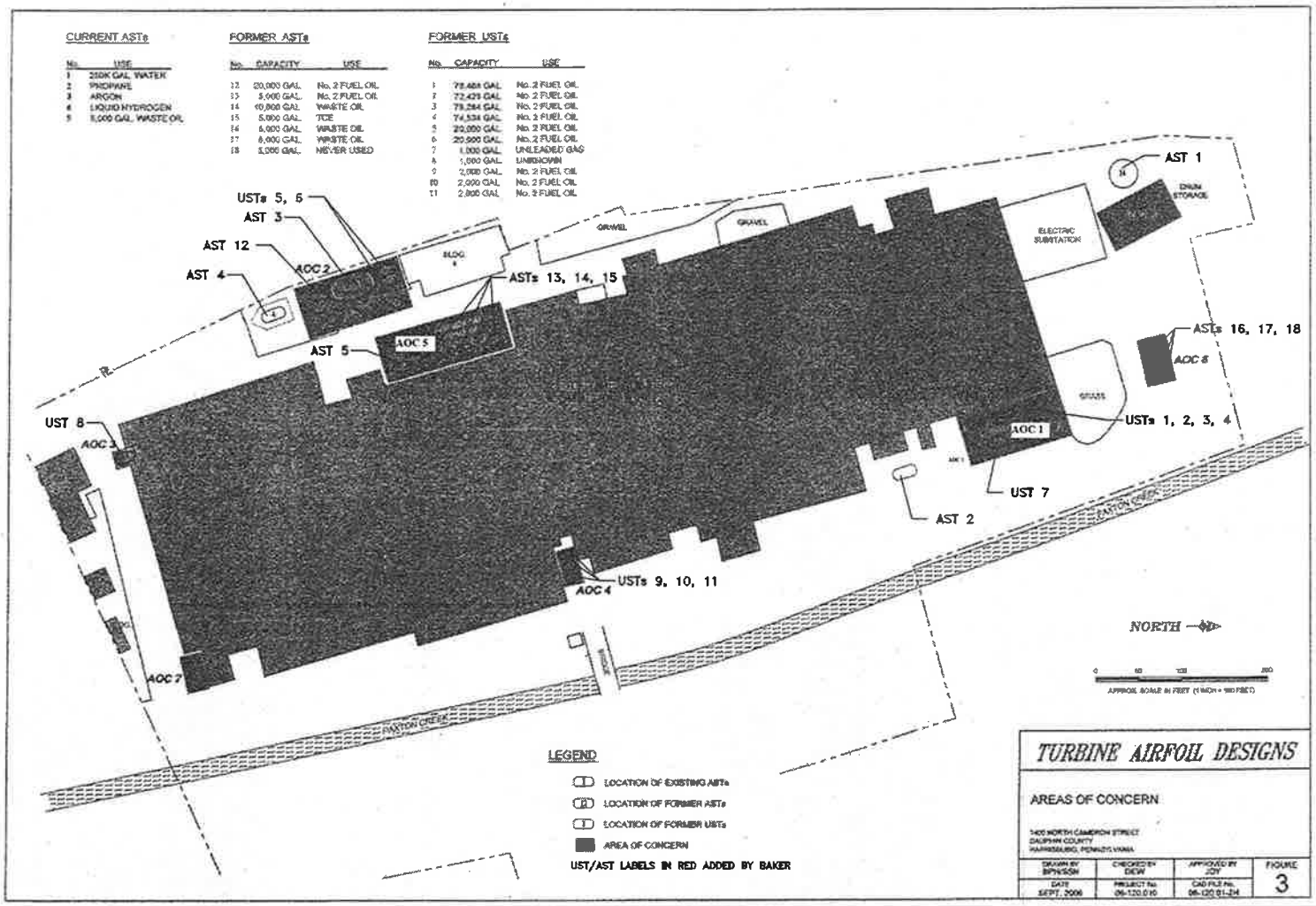
SCALE: 1"=300'	DATE: JULY 2010	Baker MICHAEL BAKER JR., INC. MOON TOWNSHIP, PENNSYLVANIA	FIGURE 1: FACILITY LOCATION MAP TURBINE AIRFOIL DESIGNS, INC. 1400 NORTH CAMERON STREET HARRISBURG, PENNSYLVANIA 17110
S.O. NO.: 118044	FILE: 118044-TAD-01		
DSN/DWN: TE/WJH	CHK: TE		

ATTACHMENT B
SITE MAP
HARRISBURG STEEL CORPORATION, PLANCOR 502
SITE NO. C03PA1073



SOURCE: DERP-FUDS INVENTORY PROJECT REPORT
(DEPARTMENT OF THE ARMY. 1986)

SCALE: AS SHOWN	DATE: JUNE 2010	MICHAEL BAKER JR., INC. MOON TOWNSHIP, PENNSYLVANIA	FIGURE 2: FACILITY LAYOUT TURBINE AIRFOIL DESIGNS, INC. 1400 NORTH CAMERON STREET HARRISBURG, PENNSYLVANIA 17110
S.O. NO.: 118044	FILE: 118044-TAD-02		
DSN/DWN: TE/WJH	CHK: TE		



SOURCE: BASELINE ENVIRONMENTAL REPORT (AES, 2007)

SCALE: AS SHOWN	DATE: JUNE 2010	Baker MICHAEL BAKER JR., INC. MOON TOWNSHIP, PENNSYLVANIA	FIGURE 3 : AOC LOCATION MAP TURBINE AIRFOIL DESIGNS, INC. 1400 NORTH CAMERON STREET HARRISBURG, PENNSYLVANIA 17110
S.O. NO.: 118044	FILE: 118044-TAD-04		
DSN/DWN: TE/WJH	CHK: TE		