



STATE OF DELAWARE

**DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL**

DIVISION OF WASTE AND HAZARDOUS SUBSTANCES

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NEW CASTLE, DELAWARE 19720

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**REMEDIA  
TION  
SECTION**

**RCRA CORRECTIVE ACTION  
LONG-TERM STEWARDSHIP INSPECTION**

**FACILITY:** (Former) Atlantic Coast Environmental, Inc.  
225 (State) College Road  
Dover, Delaware 19904

**EPA ID:** DED000796300

**DATE OF ASSESSMENT:** October 29, 2021

**DATE OF REPORT:** April 29, 2022

**DNREC REPRESENTATIVES:** Alison Kiliszek, Engineer IV, CAPS  
Lawrence D. Matson, PG; Hydrologist IV; RS  
Jeff Martin, Hydrologist II, RS

**EPA REPRESENTATIVES:** Not Present

**FACILITY REPRESENTATIVES:** Matt Brainard, Program Manager, Brightfields, Inc.  
Nick Bradley, CHMM; Environmental Analyst; Brightfields, Inc.

**REPORT SUBMITTED TO:** Christopher Brown, Program Manager II, RS

**REFERENCE:** Atlantic Coast Environmental, Inc, File Code: 70  
2022 0429 70 GEN 2021 ACE LTS Memo Report DED000796300

*AKK 5/3/22*

*JRM for LDM 5/3/22*

*JRM 5/3/22*

*CLB*

An inspection team consisting of representatives of Delaware’s Department of Natural Resources and Environmental Control (DNREC), Division of Waste and Hazardous Substances (WHS) and representatives of the property owner conducted a Long-Term Stewardship (LTS) inspection at the (former) Atlantic Coast Environmental, Inc. (ACE) Resource Conservation and Recovery Act (RCRA) Corrective Action (CA) Facility located at 225 (State) College Road in Dover, Delaware (EPA ID No. 000796300, “the Facility”) on October 29, 2021, to determine compliance with Institutional Controls (IC), and the condition and maintenance of the Engineering Controls (EC). The ECs consist of fencing to secure the facility, the engineered hazardous waste landfill cap, and the associated stormwater conveyance

swale. The only IC currently applicable to the Facility is an Activity and Use Limitation (AUL) restricting use of the Facility property solely to non-residential use types. The AUL was established via an Environmental Covenant.

An Operations & Maintenance Inspection (OAM) was performed concurrently and will be reported under separate cover.

### **BACKGROUND:**

The ACE Facility began operation in the early 1980s as a hazardous waste solidification and consolidation facility. Operations ceased and Facility closure activities were performed through the late 1980s and early 1990s which resulted in a small hazardous waste landfill with an engineered cap to limit exposure and stormwater infiltration to relatively low concentrations of polychlorinated biphenyls (PCB) and methylene chloride residually contaminated soils. A Post-Closure Permit was first issued in 1997. Due to complexities associated with changes in Facility ownership and limited financial resources of the Facility Operator, the Facility fell into disrepair and Facility representatives became non-responsive to DNREC's communications. The most recent Post-Closure Permit (HW17A02) expired in 2017; however, renewal of the Post-Closure Permit or assessment of the 30-year post-closure period was hindered by the Owner's non-responsiveness and the Operator's limited financial resources. In 2021, the Facility Owners contacted DNREC to pursue Brownfield Program funds for the redevelopment of the adjacent Eastern Disposal Rubble Pit site regulated under Delaware's Hazardous Substance Cleanup Act (HSCA). As the redevelopment at the adjacent Brownfields site is planned to extend and occupy the entirety of the ACE Facility, the Facility Owners are currently cooperating with DNREC to return the Facility to physical compliance.

Decades of inactivity at the Facility, the Facility Operator's limited financial resources, and the Facility Owner's absenteeism resulted in the Facility being largely overgrown with vegetation, rendering it insufficiently accessible for appropriate inspection. In a letter dated June 9, 2021, DNREC provided the Facility Owner a list of requirements to return the Facility to compliance, to maintain compliance, then to progress the Facility toward redevelopment. (The date on the letter is a typographical error. The letter was sent on July 9, 2021, and received by a Facility Owner Representative on July 14, 2021.) The letter also provided provisions which may be considered for potential inclusion in a future Environmental Covenant. A copy of this letter was subsequently provided to the EPA, Region 3.

The referenced letter required that the Owner prepare the Facility for inspection primarily by appropriately managing vegetation so the Facility and its associated features (landfill cap, monitoring wells, perimeter fence line) were accessible for observation and inspection. By request, DNREC performed a pre-inspection site visit on Monday, September 27, 2021, to provide additional guidance to the Facility Owner representatives. On September 27<sup>th</sup>, a four- to six-foot (4-6-ft.) wide path had been cleared of vegetation around the interior perimeter of the Facility fence line allowing for somewhat reasonable observation of the fence itself and of monitoring wells MW-1, MW-1D, MW-2 (old), MW-2R, MW-3 (old), MW-3D, and MW-3R. The engineered hazardous waste landfill cap and the associated stormwater conveyance swale, monitoring wells MW-4 and MW-7, and all monitoring wells exterior to the Facility fence line were not able to be observed due to excessive vegetation. Select photographs taken during this pre-inspection site visit by the Facility Owner representatives are included herein. This LTS Report summarizes the findings of the LTS Inspection performed on October 29, 2021.

The LTS inspection team consisted of Alison Kiliszek, Lawrence D. Matson, and Jeff Martin. Jeff Martin has served as the Project Officer since March of 2021; Lawrence Matson was the previous Project Officer and is the current Project Hydrologist. Alison Kiliszek is an engineer with DNREC's solid waste landfill

group with expertise in landfill construction and landfill (capping) systems. For the purpose of this inspection, steel-toed shoes and insect repellent were deemed appropriate personal protection equipment for the areas in which the inspection took place. During the LTS Inspection, the weather was predominantly cloudy with rain beginning as the inspection concluded; temperatures ranged from high 60s°F to low 70s°F.

Attachment 1 is an aerial photograph indicating the extent of the Facility, the Facility fence line, and the engineered hazardous waste landfill cap; it was produced by the EPA. Attachment 2 consists of a Facility map produced by AECOM for DNREC in 2019. Attachment 3 presents a cross-section of the engineered hazardous waste landfill cap system. A site map dated 1987 and depicting the stormwater conveyance swale location is provided as Attachment 4. Select photographs taken during the September 27th pre-inspection site visit and the October 29th LTS Inspection comprise Attachment 5.

### **INSTITUTIONAL CONTROLS**

Based upon a review of DRGHW and Post-Closure Permit HW17A02, there currently are no permit-specified ICs, such as a Post-Closure Plan, to which the Facility is subject and/or obligated to comply. The previous Post-Closure Permit for the Facility was issued to the now-defunct operator and has expired; RCRA obligations are being assumed by the current Facility Owner.

Future plans for the oversight of the ACE Facility include establishing an Operations & Maintenance Plan to address the care and maintenance, and associated documentation thereof, of the ECs, and an Environmental Covenant to maintain appropriate regulatory oversight

Review of the current deed for the Facility property indicates the Facility is subject to an Environmental Covenant. An Environmental Covenant is considered an IC. The Environmental Covenant establishes an AUL for the Facility. AULs are also ICs.

The current Deed In Lieu Of Foreclosure for the ACE Facility accepted by the Kent County, Delaware, Recorder of Deeds Office for filing on November 18, 2011, and recorded at Deed Book 6009, Page 140 , contains the following provision and excerpt of the referenced Environmental Covenant establishing an AUL for the Facility as follows:

*THE INTEREST CONVEYED HEREBY IS SUBJECT TO AN ENVIRONMENTAL COVENANT, DATED AUGUST 2008 RECORDED IN THE OFFICIAL RECORDS OF KENT COUNTY RECORDER OF DEEDS ON AUGUST 25, 2008, IN BOOK 4619, PAGE 91. THE ENVIRONMENTAL COVENANT CONTAINS THE FOLLOWING ACTIVITY AND USE LIMITATIONS*

*Use Restriction. Use of the property shall be restricted solely to those non-residential use types permitted within Commercial, Manufacturing, or Industrial Districts, respectively, as such district types and uses (including, without limitation, ancillary or accessory uses) are described and permitted, respectively, pursuant to the City of Dover Code in effect as of the date of this Declaration.*

**Observations:** At the time of the LTS Inspection on October 29, the Facility appeared as a neglected defunct industrial property. Two aged concrete masonry unit (CMU) structures are present at the

site. These structures are original to ACE's operation of the Facility. Otherwise, the earthen engineered hazardous waste landfill cap, security fence, and monitoring wells are the only additional "structures" currently present at the Facility.

No evidence of residences or of residential use, permanent or transitory, was observed at the ACE Facility during the LTS inspection, or during any other recent site visit.

However, in reviewing the Facility property deed, the referenced 2008 Environmental Covenant, and associated documents, an applicable Corrective Environmental Covenant was found to have been recorded in 2011. The 2008 Environmental Covenant references three tax parcels, one of which is the parcel the ACE Facility primarily occupies. The 2011 Corrective Environmental Covenant indicates that inclusion of the parcel the ACE Facility primarily occupies was erroneous and corrects said error. The Corrective Environmental Covenant states:

*Whereas, on August 25, 2008, former owner Kent Stoarge Facilities LLC/Lorex LLC filed an Environmental Covenant in Volume 4619, Page 91 for Kent County tax parcel numbers ED-05-06700-02-5300, ED-05-06700-02-5400, and ED-05-06700-02-5500. ED-05-06700-02-5500 was incorrectly identified, and should have been identified as ED-05-06700-02-5600. This Corrective Environmental corrects that error; ...*

It should be noted that the parcel the ACE Facility primarily occupies is ED-05-06700-02-5500. It should also be noted that the plain language of the 2011 Corrective Environmental Covenant neither terminates the 2008 Environmental Covenant, nor does it indicate the 2011 Corrective Environmental Covenant supersedes the 2008 Environmental Covenant. Further, the current deed for the ACE Facility property was not updated or corrected to either remove the reference to the 2008 Environmental Covenant or to reference the 2011 Corrective Environmental Covenant.

## **ENGINEERING CONTROLS**

Three (3) engineering controls are present at the ACE Facility,

1. Security fencing;
2. Engineered hazardous waste landfill cap, and;
3. Associated stormwater conveyance swale.

### **Security Fencing:**

Section 7.0 of the ACE Post-Closure Plan describes the Facility security as:

1. *The ACE facility ... has been completely surrounded by a 6-foot-high chain link security fence, topped with barbed wire.*
2. *The security fence is intended to prohibit access ... by trespassers.*
3. *The security fence surrounding the ACE facility has two access gates which are locked. One gate is located at the southwestern corner of the property, and the other 50 feet east of the first gate along the southern fence line.*

Section 7.0 also references signage associated with the security fencing. The ACE Facility security fence line location is depicted on Attachment 1.

**Observations:** During the September 27, 2021, site visit, the Facility fence line was observed in several locations (four to five) to have been elevated above the ground surface sufficiently to allow

access beneath the fence and into the Facility. This occurred where trees growing proximal to the fence line were wind-felled during past storm events. When the trees fell, their associated root mass lifted the fence. At the time of the LTS Inspection on October 29, these elevated lengths of fence had been repaired by slightly re-routing new fencing around the wind-felled tree root masses. Compliant signage was observed posted at each of the Facility entry gates.

However, an approximate 12- to 16-foot gap in the Facility fence line was observed during the LTS inspection. This gap was not due to treefall, but rather the fencing was intentionally removed to provide access to the monitoring wells located exterior to the Facility fence line. The gap was located approximately southwest of monitoring wells MW-5 and MW-5D (old) and east of monitoring wells MW-2 (old) and MW-2R, as depicted on Attachment 2.

### **Engineered Hazardous Waste Landfill Cap:**

Section 2.3 of Attachment 2 to Post-Closure Permit HW17A02 described the engineered hazardous waste landfill cap as:

*An 40-foot by 40-foot cap was constructed at the facility over an area which included the location of the former Waste Pile Storage Unit measuring 20-feet by 40-feet. A 7-foot-thick cap was constructed consisting of a 2.0 foot thickness of compacted clay, a 30 mil Hypalon membrane, non-woven geotextile, an 1.5-foot-thick sand drainage layer, and 3.5 feet of imported backfill. A vegetative cover was established by seeding upon completion of the cap construction. The vegetative cover was observed to be well established during following site visit.*

*The cap includes 4 horizontal to 1 vertical (4:1) earthen side slopes and a relatively small upper surface area, approximately 40 feet by 40 feet graded to a 1 to 3 percent slope. The vegetative cover and small slopes provide for stable slope conditions and minimization of erosion.*

The cap was constructed in 1988, and the capped area is depicted on all of the included maps.

**Observations:** During the September 27, 2021 site visit, the engineered hazardous waste landfill cap was obscured from observation due to an excess of vegetative growth. During the LTS inspection, the observed location, elevation, slopes, and overall general condition of the engineered hazardous waste landfill cap visually appeared to be consistent with reported design specifications suggesting that the structural integrity of the engineered hazardous waste cap system has persisted. However, in preparing the Facility for inspection, the contractors had completely denuded the cap of vegetation.

### **Associated Stormwater Conveyance Swale:**

Continuing the quote above:

*An adjacent drainage swale was constructed along the southern and eastern edges of the former Waste Pile Storage Unit, providing further control of stormwater and erosion.*

The approximate location of the associated storm water conveyance swale is depicted on Attachment 4. Additional details regarding the construction and specifications of the associated surface water conveyance swale have not been located within the Facility's files. Based upon current observations, the swale originally may have been one to three feet (1-3 ft.) wide and one to two feet (1-2 ft.) deep, constructed of native soils with no additional surficial liner (such as concrete), and filled with rip-rap to curb erosion.

**Observations:** During the September 27, 2021 site visit, the storm water conveyance swale associated with the engineered hazardous waste landfill cap was obscured from observation due to an excess of vegetative growth. During the LTS inspection, the associated storm water conveyance swale was nearly unlocatable due to excessive vegetation and excessive accumulation of sediments in the swale. The swale was approximately located based the intermittent presence of rip-rap exposed through the accumulated sediments; its location appeared consistent with that presented in Attachment 4. For its intended purpose, the swale appeared non-viable.

### **CONCLUSIONS/RECOMMENDATIONS:**

Based upon a review of DRGHW and Post-Closure Permit HW17A02, there currently are no ICs to which the Facility is subject and/or obligated to comply. Future plans for the oversight of the ACE Facility include establishing an Operations & Maintenance Plan to address the care and maintenance, and associated documentation thereof, of the ECs, and an Environmental Covenant to maintain appropriate regulatory oversight.

The ACE Facility is subject to a non-residential AUL established via deed reference and an environmental covenant. The Facility was determined to be in compliance with the AUL and Environmental Covenant, both considered ICs. However, it does not appear to have been DNREC's intent to subject the ACE Facility to these controls and limitations. Therefore, DNREC representatives intend to collaborate with the ACE Facility Owner to have the deed reference to the 2008 Environmental Covenant removed from the deed for the ACE Facility property or to update the current deed reference to the 2008 Environmental Covenant with a revised deed reference to the 2011 Corrective Environmental Covenant that excludes the parcel the ACE Facility primarily occupies. Correction of the Environmental Covenant reference in the ACE Facility property deed may be delayed until an Environmental Covenant specific to the ACE Facility has been prepared and is ready for recording in an attempt to be efficient, cost-effective, and less onerous.

The ECs at the ACE facility suffer from long-term neglect. The security fence and the stormwater conveyance swale were observed to be in non-functional condition. The cap, though denuded, appeared to be intact. In post-inspection communications with the Facility Owner representative, instruction was provided as follows:

#### **Security Fencing:**

- *Replace the 12- to 16-foot gap in the fence with a chain-link gate, thus securing the Facility while also providing access (as needed) to the wells outside the Facility fence line; or*
- *Replace the 12- to 16-foot gap with fencing (no gate), then clear vegetation outside of the fence line to provide access from the access road to the exterior wells.*

#### **Engineered Hazardous Waste Landfill Cap:**

- *Please provide an approximately eight-foot (8-ft.) wide margin free of significant, potentially intrusive vegetation along the southeast margin of the engineered hazardous waste landfill cap as a protective buffer area to proactively minimize the potential for intrusive woody vegetation growth into the cap.*
- Cap re-vegetation:
  1. *Lightly grade or "dress" the cap to ensure positive drainage from the cap (may require the import of soil)*
  2. *Appropriately re-vegetate the cap to minimize erosion (may require the import of top soil)*

- *Commonly grasses are utilized as an acceptable vegetation cover*
- *Alison Kiliszek, Engineer, CAPS, WHS, DNREC is available as a valuable resource with regard to appropriate grading and vegetation. She is copied on this e-mail for your convenience.*

**Associated Stormwater Conveyance Swale:**

- *Please remove accumulated sediments and vegetation from the drainage swale to allow for the efficient conveyance of stormwater away from the cap area.*
  - *The rip-rap currently comprising the swale (excluding the associated sediments and vegetation) may be re-used to protect the swale from erosion. The import of additional rip-rap may be necessary.*

To date, the tasks associated with the fencing have been completed, and the top of the engineered hazardous waste landfill cap was re-seeded and erosion control blankets were applied. Tasks pending completion include seeding and application to the slopes of the engineered cap and restoration of the functionality of the storm water conveyance swale. The Facility Owner representative has been provided a deadline of May 13, 2022, to complete these pending tasks.

CLB/JRM  
JRM-2022-001

## ATTACHMENT 1



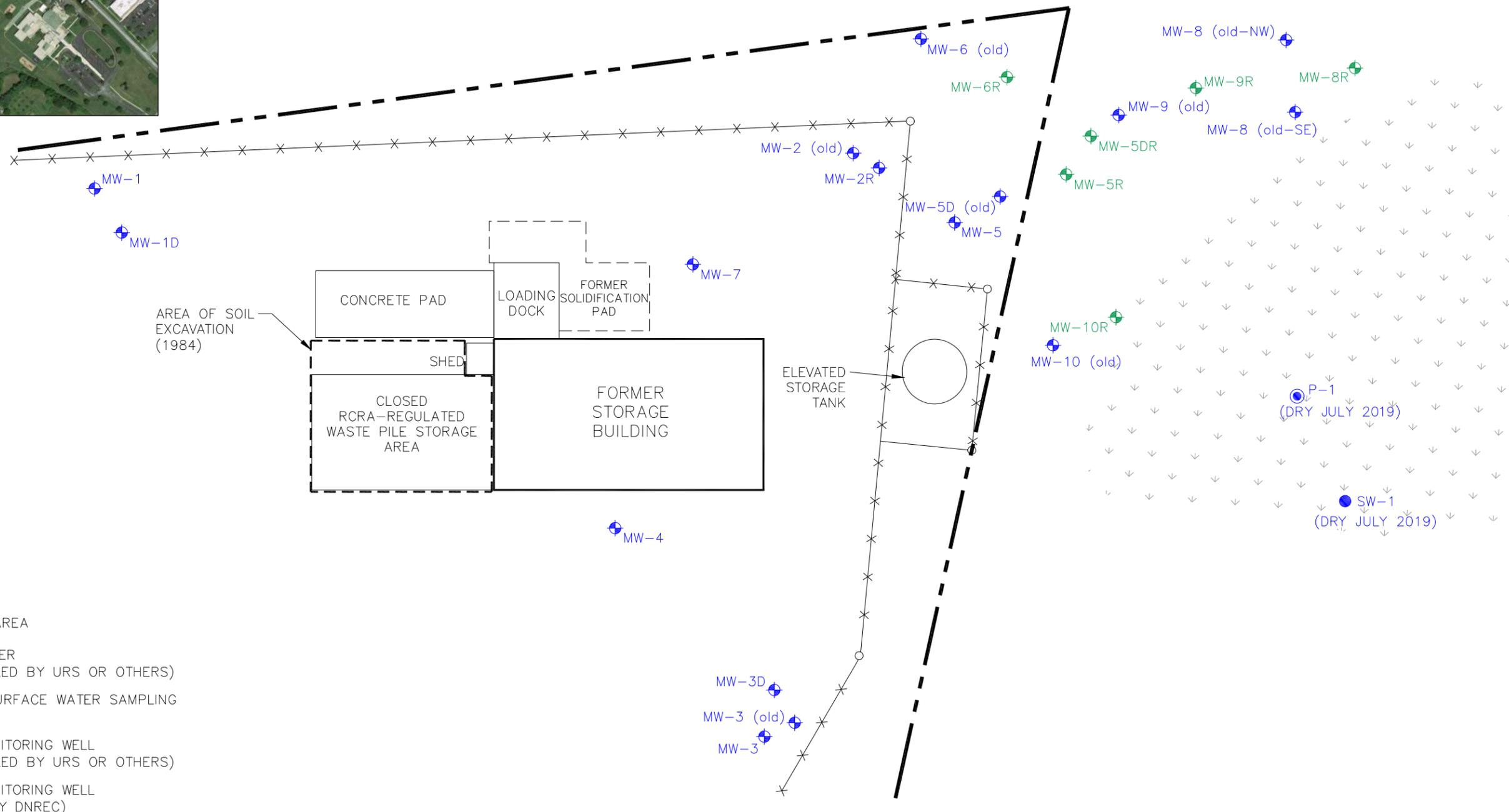
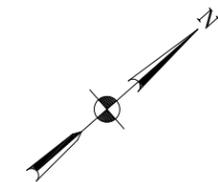
**Atlantic Coast Environmental**  
**225 State College Rd**  
**Dover DE 19901**  
**EPA ID# DED000796300**

-  Leased Parcel (Entire Facility)
-  Fence Line
-  Waste Pile Cap



## ATTACHMENT 2

File: C:\Users\BarryK\Documents\Atlantic Coast Environmental\Fig 2 - Site Plan - Well Coordinates.dwg Layout: Site Plan User: barryk Plotted: Sep 09, 2019 - 1:21pm Xref's:



**LEGEND**

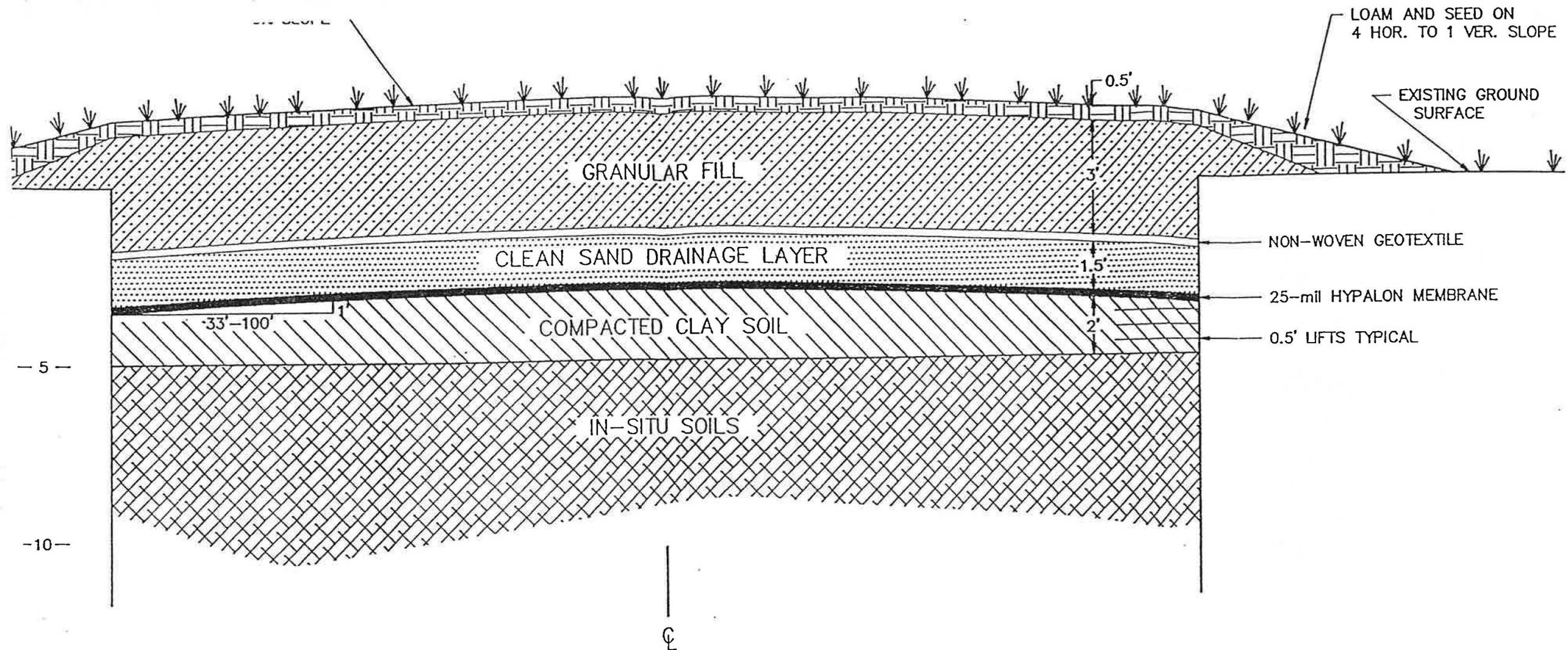
- PROPERTY LINE
- x
x
 CHAIN LINK FENCE
- v
v
 SEASONALLY WET AREA
- P-1 SHALLOW PIEZOMETER (PRE-2016 INSTALLED BY URS OR OTHERS)
- SW-1 STAFF GAUGE - SURFACE WATER SAMPLING LOCATION
- ⊕ MW-1 GROUNDWATER MONITORING WELL (PRE-2016 INSTALLED BY URS OR OTHERS)
- ⊕ MW-5R to MW-10R GROUNDWATER MONITORING WELL (INSTALLED 2016 BY DNREC)

**NOTE:**  
WELLS MW-5, MW-5D, MW-6, MW-8, MW-9 & MW-10 REMOVED BY THIRD PARTY IN 2013



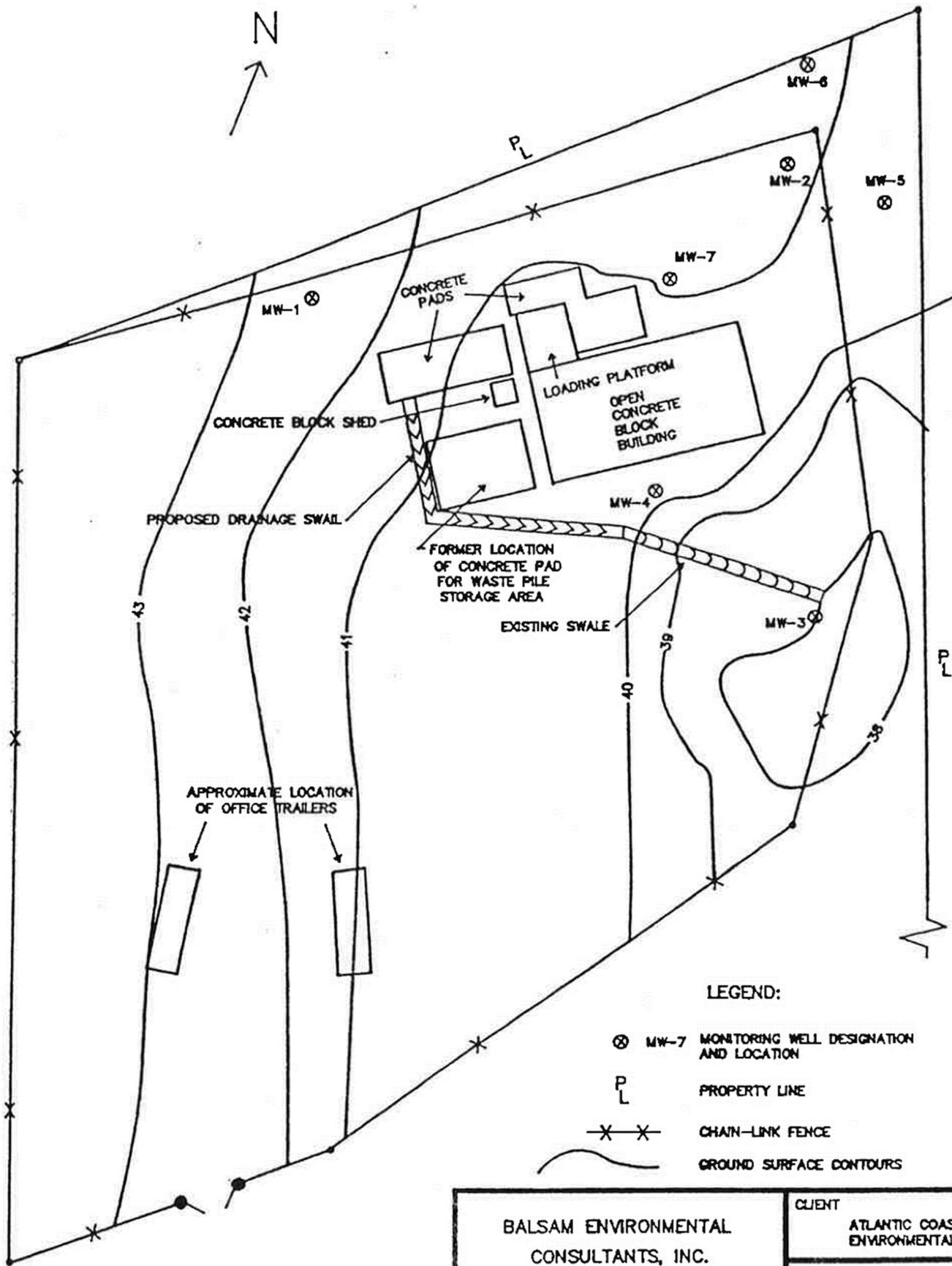
Former Atlantic Coast Environmental, Inc. Facility College Road Dover, Delaware			<b>SITE PLAN</b>
DATE: 09/19	DRWN: K.P.B.	CHKD: BA/BEE	<b>FIGURE 2</b>

## ATTACHMENT 3



			CLIENT:	
			ATLANTIC COAST ENVIRONMENTAL	
			TITLE:	
			WASTE PILE CLOSURE CROSS-SECTION	
DATE:	DRAWN:	CHECKED:	PROJECT:	
5/11/88	D.J.P.	G.M.G.	ACE	
SCALE:	FILE NO.:	YED:	FIGURE NO.:	PROJECT NO.:
NONE	D.J.P.	100%		

## ATTACHMENT 4



**NOTES:**

1. MODIFIED FROM PLAN PROVIDED BY EARL D. SMITH, DOVER, DELAWARE, DATED 5-28-82; REVISED 6-4-84; ORIGINAL SCALE: 1" = 50'
2. GROUND SURFACE CONTOURS SUPERIMPOSED FROM A PLAN DRAWN BY EARL D. SMITH, LAND SURVEYOR, DATED SEPT. 2, 1982

<b>BALSAM ENVIRONMENTAL CONSULTANTS, INC.</b> Salem, N.H.			CLIENT ATLANTIC COAST ENVIRONMENTAL	
			TITLE SITE PLAN	
DATE 3/17/87	DRAWN BY AW	CHECKED ESW	PROJECT ACE	
APPROXIMATE SCALE 1" = 50'	DESIGNED ESW	APPROVED LCS	FIGURE NO. 1	FIG. 2-3

## ATTACHMENT 5

## Inspection Photographs



**Photograph No. 1:** Wind-felled tree damage to Facility security fencing on September 27, 2021.

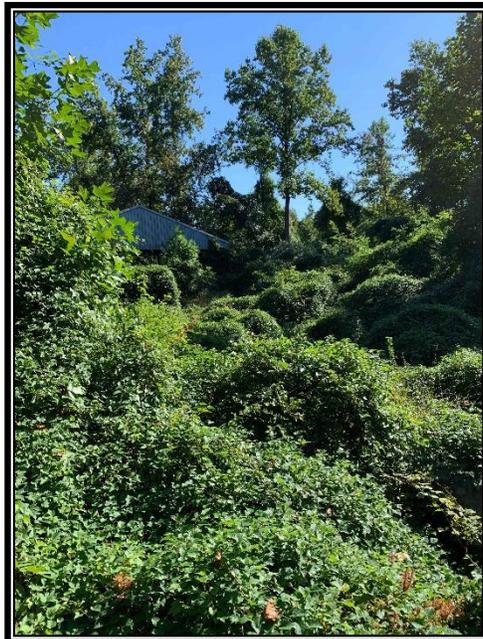


**Photograph No. 2:** Wind-felled tree damage to Facility security fencing on September 27, 2021.

## Inspection Photographs



**Photograph No. 3:** Northeasterly view of the 12- to 16-foot gap in the Facility Security fence on March 29, 2022.



**Photograph No. 4:** Northeasterly view of the engineered hazardous waste landfill on September 27, 2021.

## Inspection Photographs



**Photograph No. 5:** Easterly view of the engineered hazardous waste landfill cap on October 29, 2021.



**Photograph No. 6:** Northerly view of the engineered hazardous waste landfill cap on October 29, 2021.

## Inspection Photographs



**Photograph No. 7:** Northeasterly view of the hazardous waste landfill cap on March 29, 2022, with erosion control blankets applied.



**Photograph No. 8:** Northern view of the hazardous waste landfill cap on March 29, 2022, with erosion control blankets applied.

## Inspection Photographs



**Photograph No. 9:** Northeasterly view of the swale location along the southeasterly margin of the landfill on October 29, 2021.



**Photograph No. 10:** Easterly view of the swale at the easterly corner of the landfill on October 29, 2021.

## Inspection Photographs



**Photograph No. 11:** View of the sediment accumulated within the swale along the southwesterly margin of the landfill on the October 29, 2021.



**Photograph No. 12:** Easterly view of the swale along the southwesterly margin of the landfill on March 29, 2022.