

STATE OF DELAWARE

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

DIVISION OF WASTE AND HAZARDOUS SUBSTANCES 391 LUKENS DRIVE NEW CASTLE, DELAWARE 19720

PHONE: (302) 395-2600

RCRA CORRECTIVE ACTION LONG-TERM STEWARDSHIP INSPECTION

FACILITY:	INV Performance Materials, LLC (Invista) 25876 DuPont Road Seaford, Delaware 19973			
EPA ID:	DED002348845			
DATE OF INSPECTION:	October 10, 2023			
DATE OF REPORT:	November 30, 2023			
DNREC REPRESENTATIVES:	Jeff Martin, Hydrologist II, CAPS $\frac{SPM}{W^{20}}$			
EPA REPRESENTATIVES:	Not Present			
FACILITY REPRESENTATIVES:	Kevin Mastaw, P.E., Environmental Engineer, Invista			
REPORT SUBMITTED TO:	Qazi Salahuddin, Ph.D., Program Administrator, RS			
VIA:	Ross Elliot, P.G., Acting Program Manager II, RS			
REFERENCE:	INV Performance Materials, LLC. File Code: 70 2023 1130 70 GEN INV LTS Report DED002348845			

A representative of Delaware's Department of Natural Resources and Environmental Control (DNREC), Division of Waste and Hazardous Substances (WHS) and a representative of the property owner conducted a Long-Term Stewardship (LTS) inspection at the INV Performance Materials LLC (Invista) Resource Conservation and Recovery Act (RCRA) Corrective Action (CA) Facility located at 25876 DuPont Road/400 Woodland Road, Seaford, in Sussex County, Delaware (EPA ID No. DED002348845, "the Facility") on October 10, 2023, to determine compliance with Institutional Controls (IC), and the condition and maintenance of the Engineering Controls (EngC). A 2014 amended Environmental Covenant (EC) establishes ICs limiting and/or restricting land use, land disturbance, and groundwater withdrawal and use. A 2014 Administrative Order on Consent (AOC) incorporating a 2006 Record of Decision (ROD) establishes an EngC consisting of a protective soil cover eliminating physical contact with exposed debris. Delaware's *Regulations Governing Hazardous Waste* (DRGHW) also requires establishment of security measures limiting unauthorized access of regulated facilities; such security

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measures are considered an EngC. The ICs and EngCs are applicable only to specific designated regulated areas of the Facility. A Groundwater Monitoring Evaluation inspection (GME) was performed concurrently and will be reported under separate cover.

BACKGROUND

The Invista Facility manufactures nylon. It is the world's first, thus oldest, nylon-producing operation. A site-wide map of the Facility is provided in Attachment 1. The Facility was originally developed by DuPont in the 1930s. Operations at the Facility were powered by on-site coal-fired generation of electricity. Also included in Facility operations were in-house laboratory services. Predominantly, solid and hazardous waste at the Facility currently under DNREC's regulatory purview can be attributed to historical nylon production, electrical generation, and laboratory operations. Electrical power at the Facility is currently sourced from off-site generation. Waste minimization efforts have significantly reduced, but not eliminated, solid and hazardous waste generated by Facility activities. Current Facility-generated solid and hazardous wastes are temporarily stored on-site in accordance with applicable regulations pending transport for appropriate off-site treatment and/or disposal.

Amongst others, the Facility currently holds a site-specific National Pollutant Discharge Elimination System (NPDES) permit for discharges from the Facility's pre-configured modular waste water treatment system to the Nanticoke River, and a Solid Waste permit for a Coal Ash Landfill in post-closure. Historical and current Corrective Actions at the Facility under the purview of DRGHW are performed under authority of the aforementioned EC. This LTS inspection was performed in accordance with the provisions of DRGHW and the applicable associated EC and AOC/ROD. However, the Coal Ash Landfill regulated under solid waste regulations sits atop a Solid Waste Management Unit (SWMU) governed by DRGHW and the terms of the EC and AOC/ROD. Similarly, environmental sampling performed at the Facility under the auspices of DRGHW and the associated site-specific instruments consider the requirements of the NPDES permit.

For the purpose of this inspection, steel-toed shoes were deemed appropriate personal protection equipment (PPE) for the areas in which the inspection took place. During the LTS Inspection, the weather was mostly sunny with a few clouds and temperatures ranged approximately from high 60°F to low 70°F.

ENGINEERING & INSTITUTIONAL CONTROLS

Table 1 (Attachment 3) summarizes the ICs and EngCs by SWMU as established via DRGHW, the AOC/ROD, and the EC, and as considered during the LTS inspection. The referenced authoritative instruments impose ICs and EngCs on a SWMU-by-SWMU basis. The SWMUs to which ICs and EngCs apply are SWMUs 1, 6, 7, 12, 13, 16, 17, and 19. The SWMU locations are depicted on the two SWMU maps, one for the northern portions of the facility and a second for the southern portions, provided in Attachment 1. In addition, the EC places ICs on a portion of Hoopers Landing Golf Course, adjacent to and owned by the Invista Facility. The AOC/ROD provides a brief description of the SWMUs, as follows for the applicable SWMUs. SWMUs 1, 6, 13, and 17 are or were landfills; SWMU 17 is specifically a coal ash landfill. SWMUs 7, 12, and 16 were settling ponds and/or retention basins. SWMU 19 and a portion of Hooper's Landing Golf Course are coal ash disposal areas. A protective soil cover and security fencing comprise the EngCs considered in the course of this LTS inspection. The ICs consist of land-use (non-residential only), land-disturbance, and groundwater-use [via Groundwater Management Zones (GMZ)] restrictions and limitations. Table 1 provides specifics as to the applicability of specific ICs and EngCs at or to specific SWMUs. Maps provided in Attachment 2 illustrate where land-use and land-

disturbance limitations have been established, and where groundwater use has been restricted. Please note the included GMZ Boundary Map neglects to include SWMU 12 as one of the areas where groundwater withdrawal is prohibited except for environmental monitoring purposes.

Engineering Controls

Two EngCs are applicable at the above-listed SWMUs or a subset thereof. These consist of security fencing and a protective soils cover. DRGHW §264.14 states "The owner or operator must prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons ... onto the active portion of this facility" The AOC/ROD requires implementation of "a protective soils cover ... over exposed debris ... to prevent potential physical hazards." The security fencing requirement applies to all SWMUs but not Hooper's Landing Golf Course, as the golf course is not considered a portion of the Facility. A protective soil cover is required to be maintained at SWMUs 13, 16, and 17.

With regard to the required security fencing, Kevin Mastaw, Invista's Environmental Engineer who accompanied the DNREC representative for the LTS inspection, indicated the entirety of Invista's approximately 500-acre Facility is fenced. Additionally, Invista employs a security staff to monitor access to the Facility. During the LTS inspection, the DNREC representative did not observe and inspect the complete length of fencing around all approximately 500 acres, but those lengths of fencing coincidentally and/or randomly observed appeared sufficiently integrous and competent to exclude unauthorized individuals. Facility conditions reported by Mr. Mastaw, as well as those observed by DNREC personnel, strongly suggest Invista is in compliance with DRGHW §264.14.

Institutional Controls

The potential ICs consist of land-use, land-disturbance, and groundwater-withdrawal and -use restrictions. Provision 5.[a.] of the EC states "Use ... shall be restricted solely to those non-residential uses permitted within Commercial, Manufacturing, or Industrial Districts ... pursuant to the Delaware Code[.]" Provision 5.[b.] of the EC states there "shall be no digging, drilling, excavating, grading, constructing, earth moving, or any other land disturbing activities at depths greater than 2 feet[.]" Provision 5.[c.] of the EC states except "for environmental monitoring purposes, no groundwater shall be withdrawn from any well within the GMZ." A 2008 Memorandum of Agreement (MOA) between DNREC's Division of Air and Waste Management (AWM), now known as the Division of Waste and Hazardous Substances (WHS) and DNREC's Division of Water Resources (DOW) established two GMZs at the Invista Facility.

SWMU-SPECIFIC OBSERVATIONS

The following SWMU-specific discussions are presented based upon the number of restrictions applicable to each SWMU, from most to least. SWMUs that are presented together have similar restrictions. Attachment 4 presents selected photographs taken during the LTS inspection.

<u>SWMU 13</u>

The AOC/ROD describes SWMU 13 as "Solid Waste Landfill C" (Photograph Nos. 1 and 2).

Security fencing, as required by DRGHW, and a protective soil cover, as required by the AOC/ROD, comprise the EngCs at SWMU 13. Facility conditions reported by Mr. Mastaw, as well as those observed by DNREC personnel, strongly suggest Invista is in compliance with DRGHW security requirements. Observations made while traversing accessible portions of SWMU 13 on foot and by vehicle did not

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reveal any exposed debris such as concrete, bricks, wood, etc. SWMU 13 appeared highly vegetated. Based upon observed conditions, Invista appears to have implemented and sufficiently maintained a protective soils cover at SWMU 13.

The ICs at SWMU 13 consist of land-use, land-disturbance, and groundwater-withdrawal and -use restrictions, as specified above. SWMU 13 is located within one of the two GMZs.

During the inspection, DNREC personnel did not observe any development, residential or otherwise, at SWMU 13. No evidence of digging, drilling, excavating, grading, constructing, earth moving, or any other land disturbing activities at depths greater than two feet were observed within SWMU 13 by DNREC personnel during the inspection. Associated with required annual groundwater monitoring, DNREC observed groundwater withdrawal from wells 12MW-14S and 12MW-15S, located within the mapped bounds of SWMU 13.

The observed lack of residential development and observed lack of digging, drilling, excavating, grading, constructing, earth moving, or any other land disturbing activities complies with the terms of the EC. Because the EC provides an exception to the groundwater restrictions for environmental monitoring purposes, the groundwater withdrawal and use observed in SWMU 13 also complies with the terms of the EC.

SWMU 1

The AOC/ROD describes SWMU 1 as "Solid Waste Landfill A" (Photograph No. 3).

Security fencing comprises the EngC at SWMU 1. Facility conditions reported by Mr. Mastaw, as well as those observed by DNREC personnel, strongly suggest Invista is in compliance with DRGHW security requirements.

The ICs at SWMU 1 consist of land-use, land-disturbance, and groundwater-withdrawal and -use restrictions, as specified above. SWMU 1 is located within one of the two GMZs established in 2008.

During the inspection, DNREC personnel did not observe any development, residential or otherwise, at SWMU 1. No evidence of digging, drilling, excavating, grading, constructing, earth moving, or any other land disturbing activities at depths greater than two feet were observed within SWMU 1 by DNREC personnel during the inspection. Groundwater withdrawal from SWMU 1 was not observed during the inspection.

The observed lack of residential development; the observed lack of digging, drilling, excavating, grading, constructing, earth moving, or any other land disturbing activities, and the observed lack of groundwater withdrawal and use within SWMU 1 complies with the terms of the EC.

SWMUs 6 & 19

The AOC/ROD describes SWMU 6 as "Solid Waste Landfill B" (Photograph Nos. 4 and 5) and SWMU 19 as a "Former Coal Ash Disposal Area" (Photographs Nos. 6 and 7).

Security fencing comprises the EngC at SWMUs 6 and 19. Facility conditions reported by Mr. Mastaw, as well as those observed by DNREC personnel, strongly suggest Invista is in compliance with DRGHW security requirements.

The ICs at SWMUs 6 and 19 consist of land-use and land-disturbance restrictions, as specified above. During the inspection, DNREC personnel did not observe any development, residential or otherwise, at

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SWMUs 6 and 19. No evidence of digging, drilling, excavating, grading, constructing, earth moving, or any other land disturbing activities at depths greater than two feet were observed within SWMUs 6 and 19 by DNREC personnel during the inspection.

The observed lack of residential development and the observed absence of digging, drilling, excavating, grading, constructing, earth moving, or any other land disturbing activities within SWMUs 6 and 19 complies with the terms of the EC.

SWMUs 7 & 12

The AOC/ROD describes SWMU 7 as the "Utility Ash Settling Ponds" (Photograph No. 8) and SWMU 12 as "Retention Ponds" (Photograph No.9).

Security fencing comprises the EngC at SWMUs 7 and 12. Facility conditions reported by Mr. Mastaw, as well as those observed by DNREC personnel, strongly suggest Invista is in compliance with DRGHW security requirements.

The IC at SWMUs 7 and 12 consist of a groundwater-withdrawal and -use restriction, as specified above. SWMUs 7 and 12 are located within one of the two GMZs established in 2008. Associated with required annual groundwater monitoring, DNREC observed groundwater withdrawal from well 7MW-19S, located within or proximal to SWMU 7. No groundwater withdrawal or use from SWMU 12 was observed. Because the EC provides an exception to the groundwater restrictions for environmental monitoring purposes, the groundwater withdrawal and use observed in SWMU 7 complies with the terms of the EC. As observed, the absence of groundwater withdrawal from SWMU 12 also aligns with the requirements of the EC.

SWMUs 16 & 17

The AOC/ROD describes SWMU 16 as a "Trade Waste Retention Pond" (Photograph Nos. 1, 2, 10, 11, and 12) and SWMU 17 as "Coal Ash Landfill" (Photograph Nos. 1, 12, and 13) The Coal Ash Landfill is primarily regulated as a solid waste unit under Solid Waste Post-Closure Permit SW-09/01

Security fencing and a protective soil cover comprise the EngCs at SWMUs 16 and 17. Facility conditions reported by Mr. Mastaw, as well as those observed by DNREC personnel, strongly suggest Invista is in compliance with DRGHW security requirements. Observations made while traversing accessible portions of SWMUs 16 and 17 on foot and by vehicle did not reveal any exposed debris such as concrete, bricks, wood, etc. SWMU 16 appeared highly vegetated; vegetation at SWMU 17 is regularly managed in accordance with Solid Waste Post-Closure Permit SW-09/01. Based upon observed conditions, Invista appears to have implemented and sufficiently maintained a protective soils cover at SWMUs 16 and 17.

While walking the Coal Ash Landfill, stormwater was observed ponded within the northwesterly stormwater conveyance swale (Photograph No. 14). The quantity of ponded stormwater was not excessive, but was not insignificant. This violation of Invista's solid waste post-closure permit for the Coal Ash Landfill is being managed as such, a violation of the their solid waste permit rather than non-compliance with DRGHW, the AOC/ROD, or the Invista EC.

No ICs have been established for SWMUs 16 and 17.

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Golf Course

The EC establishes restrictions upon "the coal ash beneath the golf course expansion area" (Photograph No.15) as depicted on the included Restriction Locations map.

No EngCs have been established for the golf course.

The ICs at the applicable portion of the golf course consist of land-use and land-disturbance restrictions, as specified above.

The westerly portion of the golf course, the portion reported to be underlain by coal ash, was observed from Woodland Road. During the inspection, DNREC personnel did not observe any residential development at the golf course. No evidence of digging, drilling, excavating, grading, constructing, earth moving, or any other land disturbing activities were observed at the golf course by DNREC personnel during the inspection.

While the golf course land is owned by Invista, Invista does not operate the golf course. Invista leases the land to the City of Seaford, who operates the golf course. As such, DNREC personnel visited the Hooper's Landing Golf Course club house at 1019 West Locust Street in Seaford and spoke to Mr. Greg Thomas, Superintendent, via telephone. Mr. Thomas stated he is aware of the two-foot disturbance depth restriction, and such restriction has been incorporated into the city's lease with Invista. Mr. Thomas indicated they occasionally disturb surficial soils for operations such as irrigation system maintenance. He reported they do not disturb soils deeper that approximately 18 inches.

The observed absence of residential development and observed and reported absence of digging, drilling, excavating, grading, constructing, earth moving, or any other land disturbing activities to depths greater than two feet at the golf course complies with the terms of the EC.

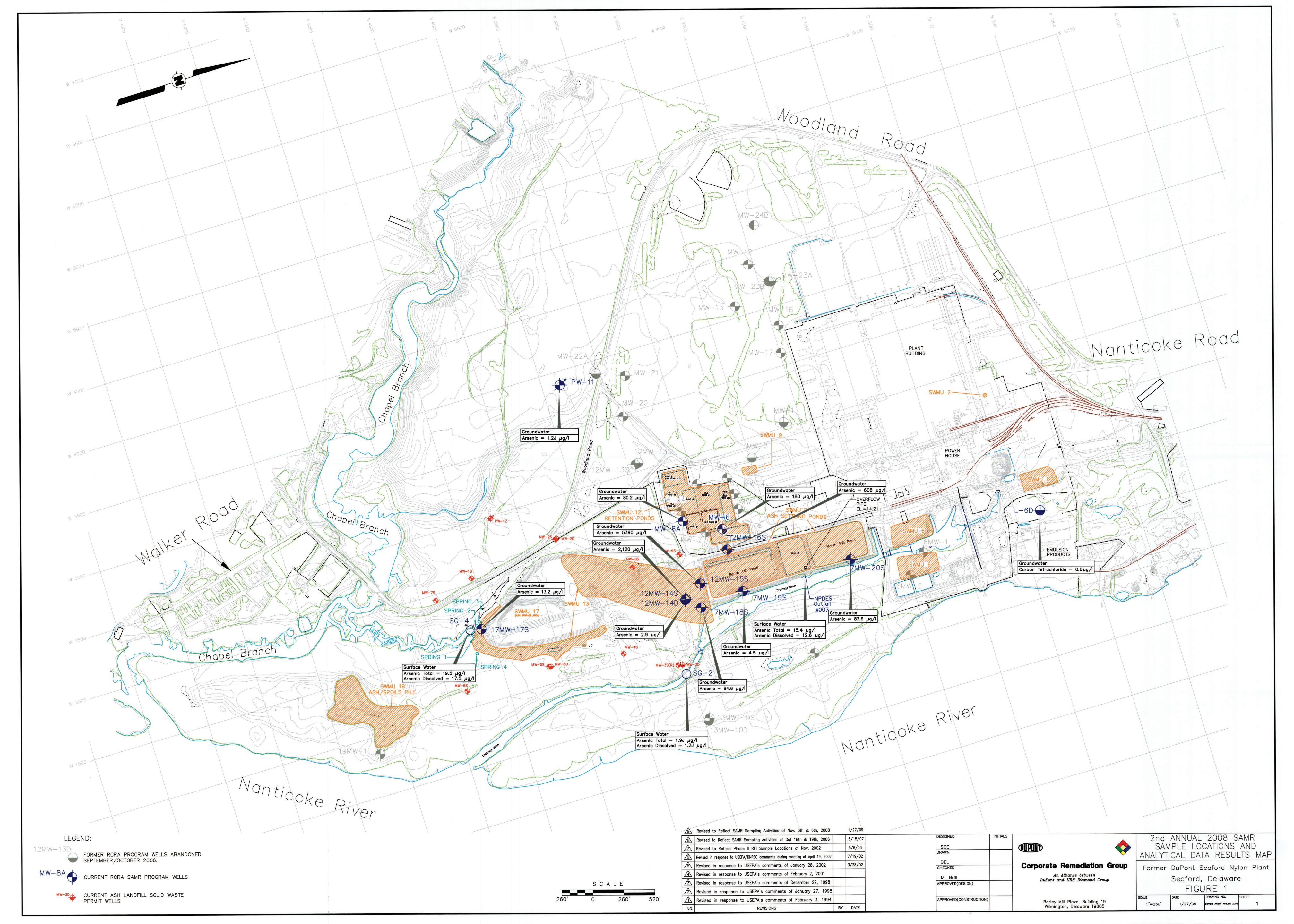
CONCLUSIONS & RECOMMENDATIONS

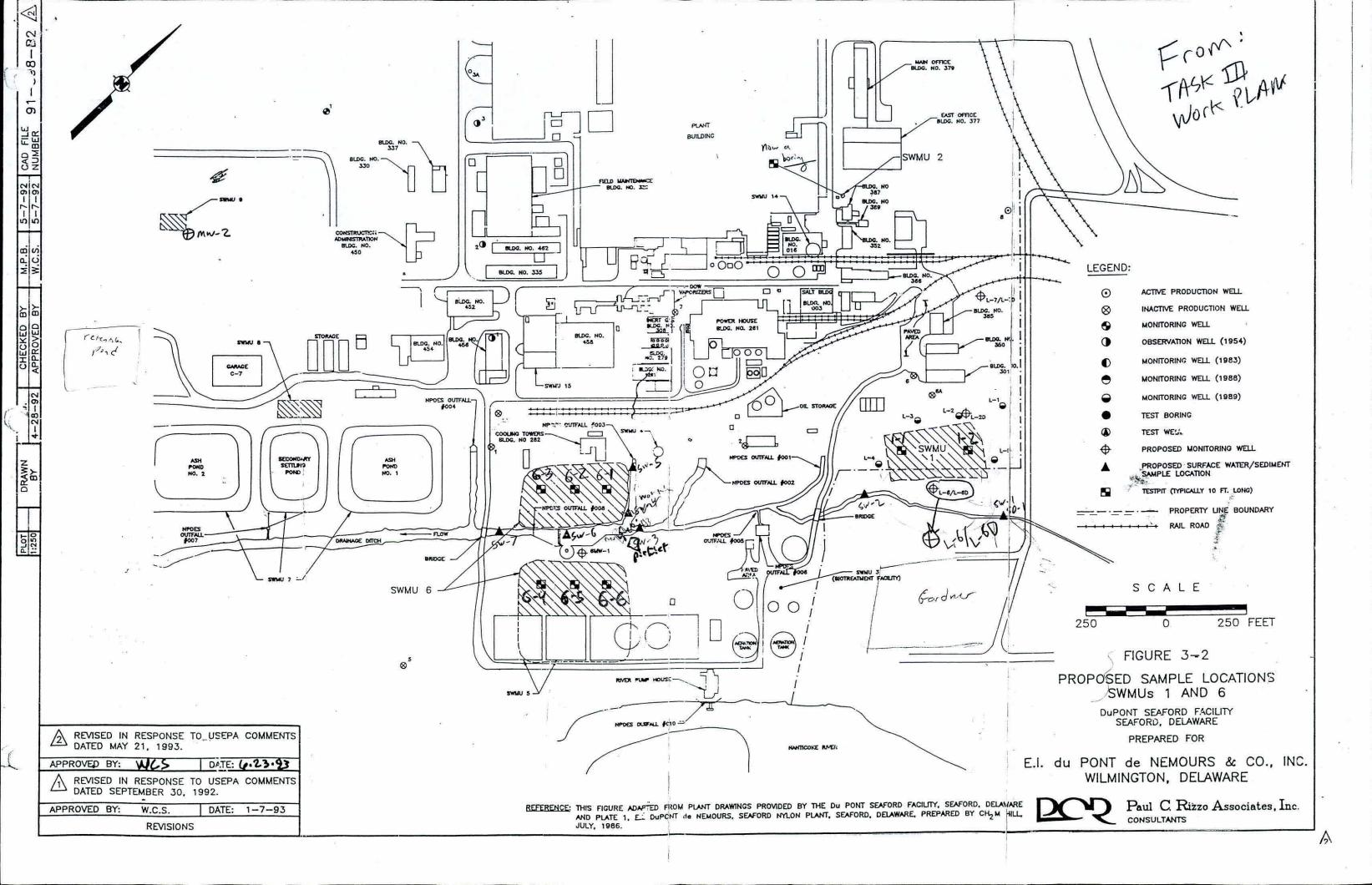
Based upon the observed and reported conditions of the specific SWMUIs discussed herein, Invista appears to have appropriately implemented EngCs and ICs, and EngCs appear to have be sufficiently maintained to sustain effectiveness. A single non-compliant condition was observed consisting of ponding within the Coal Ash Landfill stormwater conveyance swales, which has been and continues to be addressed under the purview of Delaware's *Regulations Governing Solid Waste* (DRGSW). No recommendations with regard to Invista's EngCs and ICs are warranted at this time based upon conditions observed.

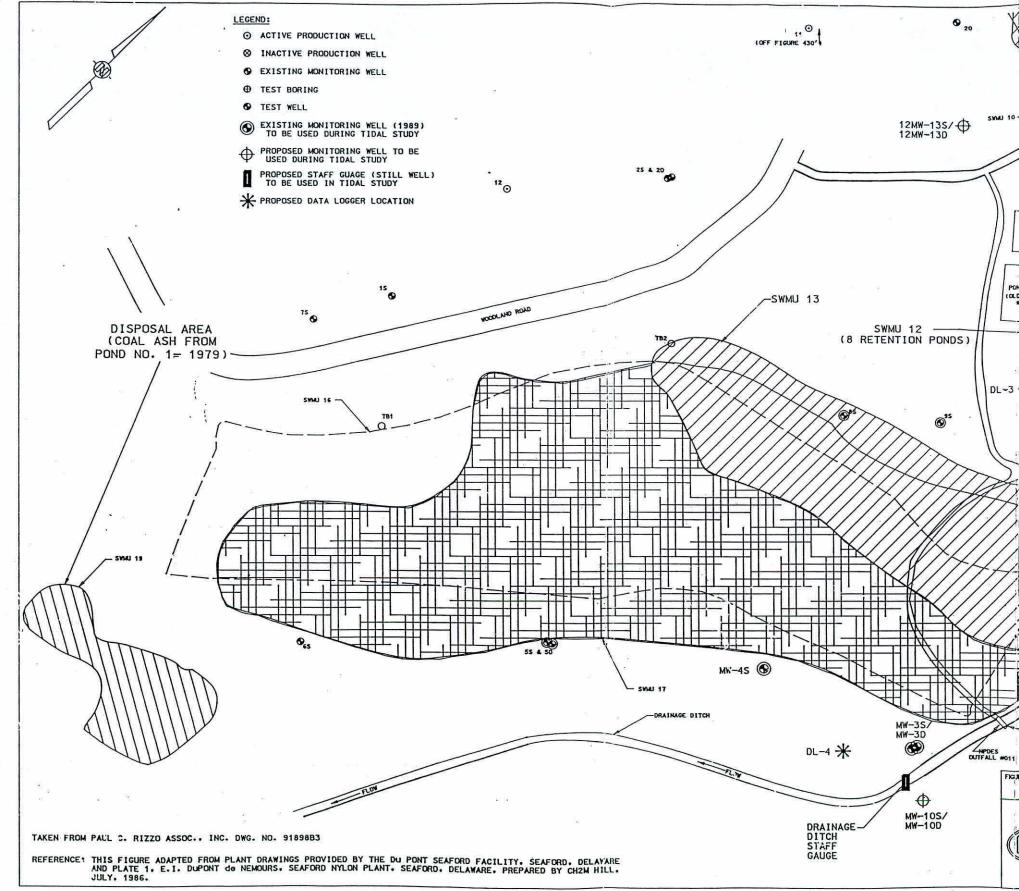
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ATTACHMENT 1

SITE-WIDE & SWMU MAPS







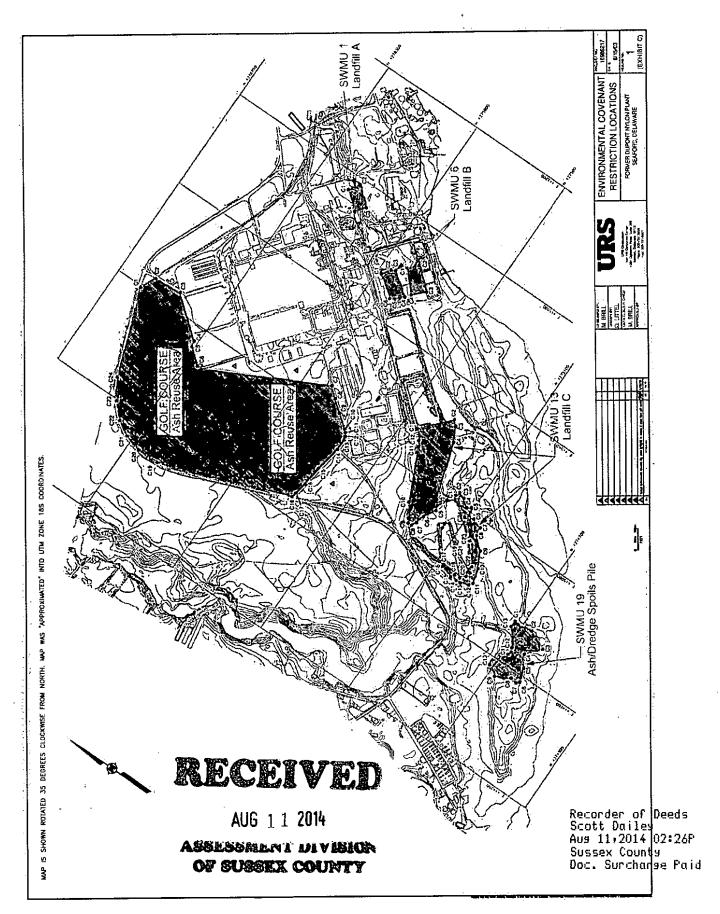
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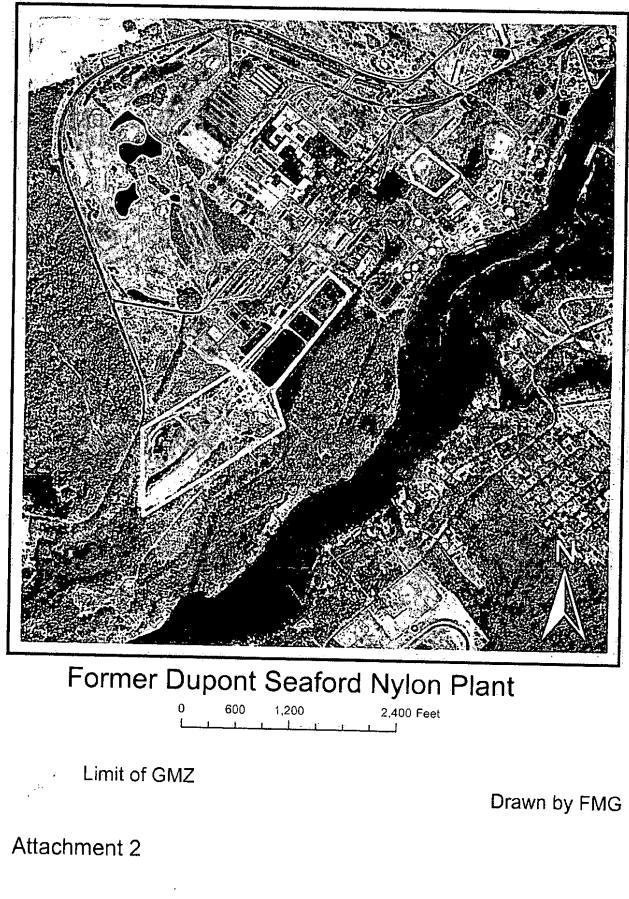
ATTACHMENT 2

RESTRICTED AREAS & GMZ MAPS

EXHIBIT C



GMZ Boundary Map



ATTACHMENT 3

TABLE

SWMU ¹	SWMU Description	Security/ Fencing ²	Protective Soil Cover ³	Non-Residential Land Use ⁴	No Land Disturbance ⁵	Groundwater Use Restricted ⁶	
Authority /	Instrument	DRGHW ² §264.14	AOC^3 / ROD^3		EC^4		
Contr	Control Type		EngC^7		IC^{8}		
1	Landfill	Х		Х	Х	Х	
6	Landfill	Х		Х	Х		
7	Settling Ponds	Х				Х	
12	Rentention Basins	Х				Х	
13	Landfill	Х	Х	Х	Х	Х	
16	Retention Basin	Х	Х				
17	Ash Landfill	Х	Х				
19	Coal Ash Disposal	Х		Х	Х		
Golf Course	Coal Ash Disposal			Х	Х		

Table 1. Summary of Engineering and Institutional Controls

1. SWMU - Solid Waste Management Unit

2. Delaware's *Regulations Governering Hazardous Waste* (DRGHW) §264.14 - "The owner or operator must prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons ... onto the active portion of this facility ..."

3. Invista'a Administrative Order on Consent (AOC) containing Invista's Record of Decision (ROD) requires implementation of "a

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Welling (Chile their [Cering (Watter Management Zones (GMZ)].

8. IC - Institutional Control

ATTACHMENT 4

SELECT INSPECTION PHOTOGRAPHS



Photograph No. 1: From SWMU 17, northerly view of SWMUs 13 and 16 where no evidence of residential development, land disturbance, groundwater withdrawal (other than for environmental monitoring), or exposed debris was observed.



Photograph No. 2: Westerly view of SWMUs 13 and 16 where no evidence of residential development, land-disturbing activities, groundwater withdrawal (other than environmental monitoring), or exposed debris was observed.



Photograph No. 3: Southeasterly view of SWMU 1 where no evidence of residential development, land-disturbing activities, or groundwater withdrawal was observed.



Photograph No. 4: Westerly view of the northern portion of SWMU 6, where no evidence of residential development or land-disturbing activities was observed.



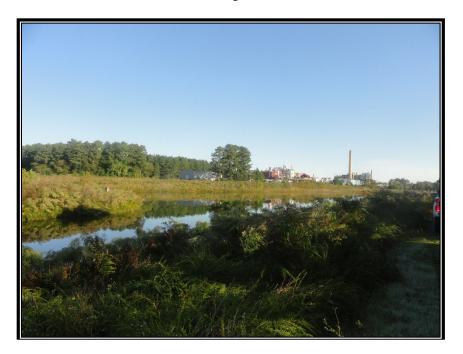
Photograph No. 5: Northerly view of the southern portion of SWMU 6, where no evidence of residential development or land-disturbing activities was observed.



Photograph No. 6: Southeasterly view of the northern extent of SWMU 19, where no evidence of residential development or land-disturbing activities was observed.



Photograph No. 7: Easterly view of interior portions of SWMU 19, where no evidence of residential development or land-disturbing activities was observed.



Photograph No. 8: Northerly view across the southern portion of SWMU 7, where no evidence of groundwater withdrawal (other than for environmental monitoring) was observed.



Photograph No. 9: Westerly view of SWMU 12 where no evidence of groundwater withdrawal (other than for environmental monitoring) was observed.



Photograph No. 10: Northerly view of a northern portion of SWMU 16, where no evidence of residential development, land-disturbing activities, or exposed debris was observed.



Photograph No. 11: Southerly view of a northern portion of SWMU 16, where no evidence of residential development, land disturbing activities, or exposed debris was observed.



Photograph No. 12: Westerly view across SWMU 17 into SWMU 16, where residential development, land disturbance, groundwater use (other than environmental monitoring), or exposed debris was not observed.



Photograph No. 13: Southerly view of SWMU 17, a landfill with a solid waste permit, where no evidence of residential development, land disturbance, groundwater use (other than environmental monitoring), or exposed debris was observed.



Photograph No. 14: Northerly view of ponding in a stormwater swale along the northwesterly margin of SWMU 17, a coal ash landfill. The ponding was addressed as non-conformance with Solid Waste Post-Closure Permit SW-09/01.



Photograph No. 15: Easterly view of the portion of the Hooper's Landing Golf Course underlain by coal ash where no evidence of residential development or land-disturbing activities was observed.