

## DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

### RCRA Corrective Action Environmental Indicator (EI) RCRIS Code (CA725) Current Human Exposures Under Control

**Facility Name:** Veolia ES Technical Solutions, LLC  
**Facility Address:** 1 Eden Lane, Flanders, Mount Olive Township,  
Morris County, New Jersey 07836  
**Facility EPA ID#:** NJD 980 536 593

#### Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EIs) are measures being used by the Resource Conservation and Recovery Act (RCRA) Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved) to track changes in the quality of the environment. The two EIs developed to date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

#### Definition of “Current Human Exposures Under Control” EI

A positive “Current Human Exposures Under Control” EI determination (“YE” status code) indicates that there are no unacceptable human exposures to “contamination” (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all contamination subject to RCRA corrective action at or from the identified facility [i.e., site-wide]).

#### Relationship of EI to Final Remedies

While final remedies remain the long-term objectives of the RCRA Corrective Action program, the EIs are near-term objectives, which are currently being used as program measures for the Government Performance and Results Act of 1993 (GPRA). The “Current Human Exposures Under Control” EI is for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and does not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program’s overall mission to protect human health and the environment requires that final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

#### Duration / Applicability of EI Determinations

EI determination status codes should remain in the Resource Conservation and Recovery Information System (RCRIS) national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

#### Facility Information

The Veolia ES Technical Solutions, LLC (Veolia) facility is located on Eden Lane in Flanders, Mount Olive Township, Morris County, New Jersey. The property occupies approximately six acres. Surrounding land use includes light industrial, residential, wooded areas and farms. See Attachment 1 for site location map and Attachment 2 for site plan.

Veolia is a commercial environmental services company specializing in the classification, packaging and transportation of solid and hazardous waste. Veolia services a variety of industries including research and development, pharmaceutical and biotechnical, general manufacturing, educational institution, hospitals and government agencies. The facility underwent change of ownership and operated under the names Advanced Environmental Technology Corporation, Advanced Environmental Technology Services, Onyx Environmental Services, LLC and, presently, Veolia ES Technical Solutions, LLC.

Hazardous waste operations at Veolia date back to 1988. The New Jersey Department of Environmental Protection (NJDEP) issued a hazardous waste facility permit to Advanced Environmental Technology Corporation on June 30, 1988. The permit authorized the new facility to accept containerized solid and hazardous waste from off-site generators for storage prior to transfer to off-site treatment, storage and disposal facilities. Hazardous waste was authorized to be stored in drums or any Department of Transportation approved containers in the shipping and receiving area and in up to 18 trailers around the loading dock and 12 trailers in the trailer parking area. The total volume of hazardous waste authorized to be stored at the facility was limited to 2,300 55 gallon drums or the equivalent volume for other authorized containers. The permit also authorized the repacking of small containers of laboratory chemicals.

Concurrent with the 1988 NJDEP hazardous waste facility permit, the United States Environmental Protection Agency (EPA) issued a Hazardous and Solid Waste Amendments Permit (HSWA permit) to Advanced Environmental Technology Corporation on August 31, 1988. The HSWA permit required annual certification that any generation of hazardous waste be minimized to the extent practicable, comply with land disposal restrictions, notify EPA of any newly identified solid waste management units and take corrective action to mitigate any releases to the environment.

NJDEP has modified and renewed the hazardous waste facility permit, with the most recent renewal on November 22, 2006, authorizing Veolia to store containers holding hazardous waste in the shipping and receiving area and in 39 trailers up to a maximum capacity of 187,000 gallons. The volume of hazardous waste storage authorized in the shipping and receiving area is up to 14,740 gallons, and in trailers parked around the loading dock and in the designated trailer parking areas up to 172,260 gallons. There is no disposal of solid or hazardous waste at the facility. All wastes received at the facility are shipped off site in containers to authorized treatment, storage and disposal facilities.

1. Has **all** available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from solid waste management units (SWMUs), regulated units (RUs), and areas of concern (AOCs)), been **considered** in this EI determination?

If yes - check here and continue with #2 below.

If no - re-evaluate existing data, or

If data are not available skip to #6 and enter IN (more information needed) status code

### **Summary of Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs):**

RCRA regulated units at Veolia consist of the permitted shipping and receiving area and storage trailers. AOCs at the site consisted of two fuel oil underground storage tanks. No other SWMUs or AOCs have been identified at Veolia. (Ref. 1, 2 & 5)

### **Shipping and Receiving Area and Storage Trailers**

The Veolia facility began hazardous waste storage operations in 1988. Upon acceptance of containerized hazardous waste at the facility for storage and transfer, the waste is placed in either a trailer destined for an ultimate treatment/storage/disposal facility, the shipping and receiving area or a storage trailer. (Ref. 3)

Veolia is authorized to store containers holding hazardous waste in the shipping and receiving area and in 39 trailers up to a maximum capacity of 187,000 gallons. The volume of hazardous waste storage authorized in the shipping and receiving area is 14,740 gallons. The volume authorized to be stored in trailers parked around the loading dock and in the designated trailer parking areas is 172,260 gallons. There is no disposal of solid or hazardous waste at the facility. All wastes received at the facility are shipped off site in containers to authorized treatment, storage and disposal facilities. (Ref. 4)

Containerized waste stored in the shipping and receiving area and in trailers requires adequate aisle space of eighteen inches between rows of containers to allow for unobstructed movement of personnel and emergency equipment. Trailers storing waste must be parked in one of the designated trailer parking areas. The maximum number of trailers is thirty nine, parked around the loading dock and in the trailer parking areas. (Ref. 4)

Containerized waste that is placed in a trailer destined for an ultimate treatment, storage and disposal facility is not allowed to be held in the trailer for longer than ten working days after the accumulation start date. The accumulation start date is the date that the eighteen inches of aisle space between rows of containers is no longer maintained in the trailer. Any waste previously designated for shipment off-site but not shipped out within ten working days must be off-loaded and placed into the shipping and receiving area or a storage trailer. (Ref. 4)

### **Fuel Oil Underground Storage Tanks**

Two underground storage tanks were located outside the Veolia building for the purpose of supplying heating oil for facility operations. A 1,000 gallon tank that was used to store number 2 heating oil was located at the southwestern corner of the loading dock. A 6,000 gallon number 2 heating oil tank was located at the southeastern corner of the Veolia building. The tanks were removed on August 25 and 26,

1998. Closure was conducted in accordance with a closure plan and a tank closure report was completed in September 1998. (Ref. 5, 6 & 7)

**References:**

1. EPA HSWA Permit for Advanced Environmental Technology Corporation, dated August 31, 1988.
2. E-mail from Zafar Billah, NJDEP, to Barry Tornick, EPA, regarding AETS/Veolia/Onyx, dated September 11, 2009.
3. NJDEP Hazardous Waste Facility Permit for Advanced Environmental Technology Corporation, dated June 30, 1988.
4. NJDEP Hazardous Waste Facility Permit for Veolia ES Technical Solutions, LLC, dated November 22, 2006.
5. Tank Closure and Remedial Investigation Report, AETS, 1 Eden Lane, prepared by Vectre Corporation, dated September 1998.
6. Underground Storage Tank Facility Certification Questionnaire, dated September 8, 1998.
7. Letter from Vincent Krisak, NJDEP, to James Bell, AETS, regarding Area of Concern, dated January 20, 1999.

2. Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be “contaminated”<sup>1</sup> above appropriately protective risk-based levels (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

Media	Yes	No	?	Rationale/Key Contaminants
Groundwater		X		
Air (indoors) <sup>2</sup>		X		
Surface Soil (e.g., <2 ft)		X		
Surface Water		X		
Sediment		X		
Subsurface Soil (e.g., >2 ft)		X		
Air (Outdoor)		X		

  X   If no (for all media) - skip to #6, and enter YE, status code after providing or citing appropriate levels, and referencing sufficient supporting documentation demonstrating that these levels are not exceeded.

       If yes (for any media) - continue after identifying key contaminants in each contaminated medium, citing appropriate levels (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

       If unknown (for any media) - skip to #6 and enter IN status code.

**Rationale:**

**Groundwater & Surface/Subsurface Soil**

Veolia was a newly constructed facility in 1988. It was built on a vacant lot. There was no prior use of the land or any contamination present on the property. Soil investigations and site inspections were conducted by the facility consultant during the design stage of the facility from 1985 to 1987. A certification signed and sealed by a professional engineer, stated that there was no evidence of any prior industrial, commercial, residential or agricultural use, or any evidence of soil contamination. Also an affidavit from the facility was submitted which documented that the six-acre property was never used for

<sup>1</sup> “Contamination” and “contaminated” describe media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based “levels” (for the media, that identify risks within the acceptable risk range).

<sup>2</sup> Recent evidence (from the Colorado Department of Public Health and Environment, and others) suggests that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

any purpose which could contaminate the property with hazardous materials. Based upon this submitted documentation, EPA determined in the HSWA permit that corrective action would not be required for the facility unless new information became available indicating that a corrective action investigation was warranted. (Ref. 1)

The hazardous waste facility permit was first issued by NJDEP in 1988. The permit was modified and renewed, with the most recent renewal in 2006. The permit authorized the facility to store hazardous waste in containers in the shipping and receiving area and in trailers in the loading dock and designated trailer parking area. (Ref. 2 & 3)

The facility was newly constructed in 1988 with areas designed to store hazardous waste. All of the facility operations are indoors or inside trailers, which are parked in contained areas constructed with curbing and drains. All loading and unloading areas consist of steel reinforced concrete pads. The indoor shipping and receiving area is completely enclosed and stores waste containers on pallets on a concrete floor. The flooring consists of steel reinforced concrete that has been sealed with a chemical resistant epoxy. The floor is slightly sloped to a trench drain with a berm located at the upper portion of the storage area. (Ref. 4)

The outdoor operations are conducted within a secondary containment/diversion system consisting of outdoor storage bays and storage pads, trench drains, curbing and a containment basin. The entire system is constructed of steel reinforced concrete. Each containment area is sloped to a trench drain with either a berm or curb at the upper portion of the storage area. All trench drains discharge to a concrete containment basin at the northeast side of the facility. Each trench drain has a control valve that can be closed in the event of a spill or discharge, thereby reducing the risk of spreading the contaminants to other containment areas. All trench drains remain open and thus the trench drains and the containment basin are one continuous secondary containment system with a total capacity of 44,887 gallons. (Ref. 4)

The valve controlling the containment basin remains closed at all times. Stormwater that comes in contact with the active portion of the facility is collected via the trench drains into the containment basin. The stormwater is discharged in accordance with a New Jersey Pollutant Discharge Elimination System (NJPDES) permit after documenting that there is no visible sheen on the collected water, and that there have been no reported spills into the containment system. (Ref. 4)

The concrete containment pad, trench drains and concrete containment basin are inspected daily for cracks or other type of failure. If cracks are noted they are filled and sealed to ensure secondary containment is maintained. In the event that hazardous materials are discharged to the containment areas, the areas are required to be properly cleaned and decontaminated. All materials generated from this activity are required to be handled and disposed in accordance with all applicable regulations and requirements. (Ref. 4)

The facility is inspected daily by facility personnel to ensure that there are no leaking containers, that containers are in good condition and that aisle space between stored containers is adequate. (Ref. 4) There have been no significant leaks, spills or discharge events from hazardous waste operations at the facility. (Ref. 5)

Removal of the two fuel oil underground storage tanks referenced in Question number 1 was completed on August 25 and 26, 1998. An UST facility certification was submitted in notifying NJDEP that the tanks were removed. (Ref. 6) Tank piping was drained, product was removed from the tanks using a vacuum truck and the tanks were cleaned of surficial residue. Five 55 gallon drums of number 2 heating oil and one 55 gallon drum and 1-cubic yard box of oily debris were removed from the tanks and disposed of properly. (Ref. 7)

The underground tanks were uncovered using an excavator, pipes were disconnected from the top of the tanks and the tanks were lifted from the excavations and rendered inoperable by cutting a two-foot hole in one end. The tanks were shipped off-site for recycling. Inspections of the tanks and excavations revealed no corrosion holes in the tanks, no visual or olfactory evidence of contamination and PID readings indicated no measurable volatile organic vapors in the excavations. (Ref. 7)

Fourteen soil samples were collected from the tank excavations and submitted to a certified laboratory for analysis. The samples were collected to assess the condition of the soil surrounding the tanks. Analytical results of the soil samples showed detectable concentrations of TPHCs in three of the samples, at 33.2 mg/kg, 80.5 mg/kg and 124 mg/kg, at depths of 7.5 feet, 11 feet and 11 feet below ground surface, respectively. The concentrations were below NJDEP standards and no further action was required for the closure of the tanks. (Ref. 7) On January 20, 1999, NJDEP acknowledged the completion of the site investigation and determined that no further action was necessary for the remediation of the underground storage tanks. (Ref. 8)

In regard to protective equipment for workers, facility personnel at Veolia are required to wear supplied work uniforms, safety glasses and steel-toed boots when handling hazardous materials. In addition to the uniforms, personnel are trained in the use of personal protective equipment (PPE), respiratory protection and the use of air monitoring equipment to prevent undue exposure to hazardous waste. (Ref. 4)

To prevent exposure to hazardous waste for off-site receptors (e.g., trespassers), a six (6) foot chain link fence topped with barbed wire surrounds the active portion of the facility. An electronic gate is used to control entry to the active portion of the facility. Signs with the phrase "Danger-Unauthorized Personnel Keep Out" are posted at each entrance to the active portion of the facility and at several locations along the security fence. The signs are visible from a distance of at least twenty-five (25) feet from the posted area. Also, there are security personnel, 24-hour surveillance cameras and a 24-hour telephone answering service to direct any calls in case of an emergency. (Ref. 4)

#### **Air (Indoors)**

Since there is no groundwater contamination or significant soil contamination as stated above, indoor air has not been considered to be an impacted media at this site

#### **Surface Water/Sediment**

There are no surface water bodies on site.

#### **References:**

1. EPA HSWA Permit for Advanced Environmental Technology Corporation, dated August 31, 1988.
2. NJDEP Hazardous Waste Facility Permit for Advanced Environmental Technology Corporation, dated June 30, 1988.
3. NJDEP Hazardous Waste Facility Permit for Veolia ES Technical Solutions, LLC, dated November 22, 2006.
4. Permit Renewal Application for Onyx Environmental Services, LLC, prepared by Onyx, September 2003.
5. E-mail from Zafar Billah, NJDEP, to Barry Tornick, EPA, regarding AETS/Veolia/Onyx, dated September 11, 2009.
6. Underground Storage Tank Facility Certification Questionnaire, dated September 8, 1998.
7. Tank Closure and Remedial Investigation Report, AETS, 1 Eden Lane, prepared by Vectre Corporation, dated September 1998.
8. Letter from Vincent Krisak, NJDEP, to James Bell, AETS, regarding Area of Concern, dated January 20, 1999.

3. Are there **complete pathways** between “contamination” and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table  
*Potential **Human Receptors** (Under Current Conditions)*

“Contaminated” Media	Residents	Workers	Day-Care	Construction	Trespasser	Recreation	Food <sup>3</sup>
Groundwater	-	-	-	-	-	-	-
Air (indoor)	-	-	-	-	-	-	-
Surface Soil (e.g. < 2 ft)	-	-	-	-	-	-	-
Surface Water	-	-	-	-	-	-	-
Sediment	-	-	-	-	-	-	-
Subsurface Soil (e.g., > 2 ft)	-	-	-	-	-	-	-
Air (outdoor)	-	-	-	-	-	-	-

Instruction for Summary Exposure Pathway Evaluation Table:

1. Strike-out specific Media including Human Receptors’ spaces for Media which are not “contaminated” as identified in #2 above.
2. Enter “yes” or “no” for potential “completeness” under each “Contaminated”Media – Human Receptor combination (Pathway).

Note: In order to focus the evaluation to the most probable combinations some potential “Contaminated” Media - Human Receptor combinations (Pathways) do not have check spaces. These spaces instead have dashes (“-”). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary.

- \_\_\_ If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter “YE” status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).
- \_\_\_ If yes (pathways are complete for any “Contaminated” Media - Human Receptor combination) - continue after providing supporting explanation.
- \_\_\_ If unknown (for any “Contaminated” Media - Human Receptor combination) - skip to #6 and enter “IN” status code.

**Rationale:**

See response to Question #2, which specifies skipping to Question #6 for completion of the EI documentation.

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<sup>3</sup> Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish)



4. Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be **significant**<sup>4</sup> (i.e., potentially “unacceptable”) because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable “levels” (used to identify the “contamination”); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable “levels”) could result in greater than acceptable risks?

- \_\_\_ If no (exposures cannot be reasonably expected to be significant (i.e., potentially “unacceptable”) for any complete exposure pathway) - skip to #6 and enter “YE” status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to “contamination” (identified in #3) are not expected to be “significant.”
- \_\_\_ If yes (exposures could be reasonably expected to be “significant” (i.e., potentially “unacceptable”) for any complete exposure pathway) - continue after providing a description (of each potentially “unacceptable” exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to “contamination” (identified in #3) are not expected to be “significant.”
- \_\_\_ If unknown (for any complete pathway) - skip to #6 and enter “IN” status code.

**Rationale:**

See response to Question #2, which specifies skipping to Question #6 for completion of the EI documentation.

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<sup>4</sup> If there is any question on whether the identified exposures are “significant” (i.e., potentially “unacceptable”) consult a Human Health Risk Assessment specialist with appropriate education, training, and experience.

5. Can the “significant” **exposures** (identified in #4) be shown to be within acceptable limits?

- \_\_\_\_\_ If yes (all “significant” exposures have been shown to be within acceptable limits) - continue and enter “YE” after summarizing and referencing documentation justifying why all “significant” exposures to “contamination” are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).
  
- \_\_\_\_\_ If no (there are current exposures that can be reasonably expected to be “unacceptable”) - continue and enter “NO” status code after providing a description of each potentially “unacceptable” exposure.
  
- \_\_\_\_\_ If unknown (for any potentially “unacceptable” exposure) - continue and enter “IN” status code.

**Rationale:**

See response to Question #2, which specifies skipping to Question #6 for completion of the EI documentation.

6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

  X   YE - Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the Veolia ES Technical Solutions, LLC facility, EPA ID Number NJD980536593, located on Eden Lane in Flanders, Mount Olive Township, Morris County, New Jersey, under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

       NO - "Current Human Exposures" are NOT "Under Control."

       IN - More information is needed to make a determination.

**Completed by:** \_\_\_\_\_ **Date:** \_\_\_\_\_  
Alan Straus, Project Manager  
RCRA Programs Branch  
EPA Region 2

**Reviewed by:** \_\_\_\_\_ **Date:** \_\_\_\_\_  
Barry Tornick, New Jersey Section Chief  
RCRA Programs Branch  
EPA Region 2

**Approved by:** Original signed by: \_\_\_\_\_ **Date:** December 7, 2009  
Adolph Everett, Chief  
RCRA Programs Branch  
EPA Region 2

**Locations where references may be found:**

References reviewed to prepare this EI determination are identified after each response. Reference materials are available at the U.S. EPA Region 2, RCRA Records Center, located at 290 Broadway, 15<sup>th</sup> Floor, New York, New York, and the New Jersey Department of Environmental Protection (NJDEP) Office located at 401 East State Street, Records Center, 6<sup>th</sup> Floor, Trenton, New Jersey 08625. The NJDEP makes available its public records through formal request under the Open Public Records Act (OPRA).

**Contact telephone number and e-mail:** Alan Straus  
(212) 637-4160  
[straus.alan@epa.gov](mailto:straus.alan@epa.gov)

**FINAL NOTE: THE HUMAN EXPOSURES EI IS A QUALITATIVE SCREENING OF EXPOSURES AND THE DETERMINATIONS WITHIN THIS DOCUMENT SHOULD NOT BE USED AS THE SOLE BASIS FOR RESTRICTING THE SCOPE OF MORE DETAILED (E.G., SITE-SPECIFIC) ASSESSMENTS OF RISK.**

**Attachments**

The following attachments have been provided to support this EI determination.

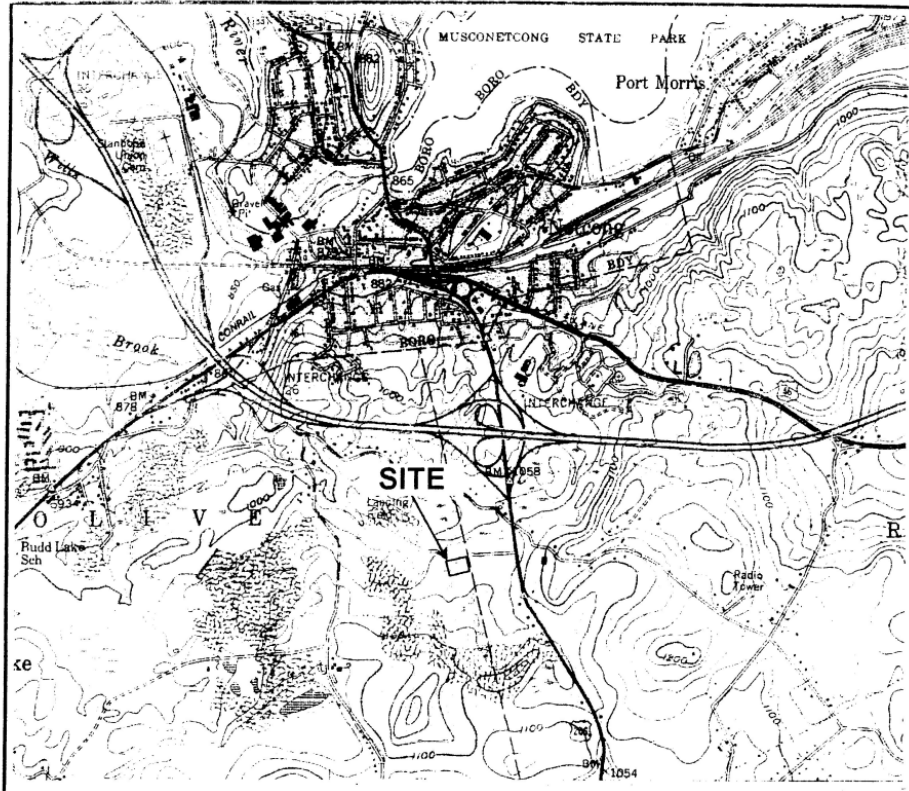
Attachment 1 - A site location map of Veolia ES Technical Solutions, LLC, located on Eden Lane in Flanders, Mount Olive Township, Morris County, New Jersey.

Attachment 2 - Facility map (Site Plan) of Veolia ES Technical Solutions, LLC showing the former locations of the underground storage tanks.

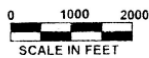
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**Attachment 1**

Site location map of Veolia ES Technical Solutions, LLC, located on Eden Lane in Flanders, Mount Olive Township, Morris County, New Jersey



SOURCE: U S G S Stanhope, N.J.  
7.5 Minute Quadrangle



Site Location Map	
AETS, Inc. 1 Eden Place	
Flanders	New Jersey
Scale as Shown	
FIGURE NUMBER	PROJECT NUMBER
1-1	AETS-V2
	

### Attachment 2

Facility map (Site Plan) of Veolia ES Technical Solutions, LLC showing the showing the former locations of the underground storage tanks.

