

**FINAL ENVIRONMENTAL IMPACT STATEMENT FOR THE
CATSKILL/DELAWARE UV FACILITY
METHODOLOGIES**

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3.13. HAZARDOUS MATERIALS

3.13.1. Introduction

The objective of the hazardous materials investigation is to determine whether the proposed actions at the Eastview Site or associated off-site work locations could result in people or the environment suffering an increased exposure to hazardous materials. Any substance is considered a hazardous material if exposure to it would pose a threat to human health or the environment. These substances could include heavy metals, volatile organics, semivolatile organic compounds, methane, polychlorinated biphenyls (PCBs), and other substances deemed hazardous or toxic by the United States Environmental Protection Agency (USEPA) and/or the New York State Department of Environmental Conservation (NYSDEC). The following section outlines the methodology used to achieve the goal of identifying the potential for exposure to hazardous materials and the significance of that exposure.

All analyses were conducted in accordance with the American Society of Testing and Materials (ASTM) *Standard Practice for Environmental Site Assessment: Phase I Environmental Site Assessment Process (ASTM E1527-00)*, *Phase II Environmental Site Assessment (ASTM E 1903-97)*, and the City of New York's *City Environmental Quality Review (CEQR) Technical Manual (October 2001)*.

3.13.2. Baseline Conditions

3.13.2.1. Existing Conditions

Existing conditions with respect to hazardous materials were assessed by conducting Phase I Environmental Site Assessments (ESAs) in accordance with CEQR and ASTM guidelines. The full Phase I ESA reports are included in [Appendix F](#); references for these reports are:

- *Phase I Environmental Site Assessment, Eastview Property, Mount Pleasant and Greenburgh, New York*; Hazen and Sawyer/CDM, March 2004; and
- *Phase I Environmental Site Assessment, Kensico Reservoir Site: Upper Effluent Chamber, Lower Effluent Chamber, Screen Chamber, Boat Hole, Siphon Chambers and Fluoridation Pit; Valhalla, New York*; Hazen and Sawyer/CDM; March 2004.

Each of the sites and surrounding areas were visually inspected, and property histories were reviewed using available historical mapping and local agency building information. A records search of Federal, State, and local agency files was conducted to identify hazardous materials issues over a broad study area that included the project sites and surrounding properties within at least a one-eighth mile radius.

Records were investigated through direct contact with government agencies and via electronic database searches. Records searched included: the USEPA National Priority List (NPL); the USEPA Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database of sites planned for or under investigation; the Emergency Response

Notification System (ERNS); the Toxic Release Inventory System (TRIS); the Permit Compliance System of Toxic Wastewater Discharges (WWD); the USEPA list of Resource Conservation and Recovery Act (RCRA) hazardous waste generators and transporters; the New York State Department of Environmental Conservation (NYSDEC) list of inactive hazardous waste disposal sites; the NYSDEC list of reported spill incidents; the NYSDEC list of chemical and petroleum bulk storage tanks; the NYSDEC active solid waste facility register; the NYSDEC Inactive Hazardous Waste Disposal Sites; NYSDEC Major Oil Storage Facilities; and NYSDEC Air Discharge Facilities. In addition, local records from the Towns of Mount Pleasant and Greenburgh were accessed to obtain any information pertaining to property ownership and utility connections for the Eastview Site and surrounding properties.

Visual inspections of all accessible areas for the project site and off-site facilities were performed to identify potential sources of contamination and to update information derived from the database search of environmentally regulated sites. The sites were inspected for underground and above ground storage tanks and areas where hazardous materials or wastes may have been used, stored, treated, generated, and/or disposed, such as maintenance, manufacturing, or retail and commercial facilities (e.g., gas stations, dry cleaners), as well as vehicle storage facilities, debris piles, and areas of uncontrolled dumping. The visual inspections also identified areas of soil staining, odors, or stressed vegetation, which could be signs of contamination. In addition, a limited survey of asbestos and lead paint was conducted at each site.

Where available, the analysis examined information on subsurface conditions (geology and hydrogeology), including data from any previous borings performed at or near the project site and off-site facilities. The potential for off-site contaminants to migrate onto the sites was considered with reference to local surface and subsurface drainage patterns and the nature of the proposed action (e.g., excavation). Limited soil and groundwater sampling was conducted in the areas of the proposed construction at the Eastview Site. Soil borings were advanced using hollow stem augers and samples were collected using split spoon samplers. Soil samples were inspected for evidence of contamination in the field, and selected samples were sent for laboratory analysis. Groundwater samples were collected from existing on-site observation and monitoring wells for laboratory analysis. Soil samples were analyzed for volatile organic compounds by USEPA method 8260, semi-volatile organic compounds by USEPA method 8270, metals by USEPA method 7000 series, and pesticides and PCBs by USEPA method 8080. Groundwater samples were analyzed for volatile organic compounds by USEPA method 624, semi-volatile organic compounds by USEPA method 625, metals by USEPA method 7000 series, and pesticides and PCBs by USEPA method 608.

3.13.2.2. Future Without the Project

The potential for changes in the hazardous material conditions in the Future Without the Project was evaluated in light of any land use changes proposed for the project site and off-site facilities and their corresponding study areas. For the Eastview Site, the property would be anticipated to remain under NYCDEP ownership as it has for over 50 years, but several independent NYCDEP projects may be constructed on the site, as discussed in [Section 4.13, Hazardous Materials](#). The analysis describes the hazardous materials that may be introduced to the project site by these projects and determines whether construction of each project may be affected by potential contamination on site.

3.13.3. Potential Impacts

3.13.3.1. Potential Project Impacts

This section explains the methodology used to assess potential environmental impacts from hazardous materials and chemicals that would be used in the disinfection process and laboratory testing at the proposed UV Facility, and the safeguards to protect public safety and the environment during delivery, handling, storage, and use of any chemicals on-site. Potential exposure to contaminated soils and groundwater is addressed below in the potential construction impacts section.

As stated earlier, potential hazardous material impacts are considered significant if the proposed facility results in the potential for human or environmental exposure to contaminants, and the risks cannot be mitigated effectively.

3.13.3.1.1. Regulations

Impacts were assessed in the context of regulations promulgated by local, State, or Federal government that serve as a basis for the identification, classification, handling, and storage of hazardous materials, and for the generation, discharge, and disposal of hazardous wastes. The following Federal and State regulations apply:

1. Resource Conservation and Recovery Act (RCRA) - This Federal act regulates the generation, treatment, storage, disposal, and transport of hazardous wastes. Under RCRA, hazardous wastes are substances that are chemically reactive, ignitable, corrosive, or toxic as measured by the Toxicity Characteristic Leaching Procedure.
2. Comprehensive Environmental Response Compensation and Liability Act (CERCLA) and Superfund Amendments and Reauthorization Act (SARA) - CERCLA, which was amended by SARA, provides procedures for containing and remediating releases of hazardous substances to the environment, and for identifying and remediating sites contaminated with hazardous substances. Title III of SARA, the Federal Emergency Planning and Community Right-To-Know Act, allows public access to information about local use of hazardous chemicals and requires the user to develop chemical spill emergency procedures (40 CFR 300). Under SARA, Title III users must report the storage of hazardous materials quantities to NYSDEC and USEPA when on-site quantities are above certain thresholds.
3. Occupational Safety and Health Administration (OSHA) Regulations - This agency was created by Congress in 1970 and promulgates regulations and standards to ensure worker safety in the workplace.
4. U.S. Department of Transportation - This department addresses the listing and transportation requirements for hazardous materials under 49 CFR Part 171 and 172.
5. New York State Department of Conservation (NYSDEC) - NYSDEC regulations pertaining to hazardous materials and hazardous waste closely parallel Federal

regulations. These regulations are set forth in Volume 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (NYCRR) Part 371.

6. Oil Spill Prevention, Control and Compensation Act of 1977, the Petroleum Storage Act of 1986, and the Hazardous Substance Bulk Storage Act of 1986 - These acts are the basis for regulations that ensure proper storage of petroleum and hazardous substances as well as procedures for addressing spills and leaks of these materials. New York State has primacy for enforcing these regulations through the Official Compilation of Codes, Rules and Regulations of the State of New York (NYCRR). The Westchester County Department of Health has delegated authority related to management of petroleum bulk storage requirements under Article XXV of the Westchester County Sanitary Code.
7. Asbestos Regulation - The NYCDEP, pursuant to Local Laws 76/1985 and 80/1987, specifies requirements for building surveys, laboratory analyses, professional certifications, and asbestos abatement. The New York State Department of Labor and the USEPA administer National Emissions Standards for Hazardous Air Pollutants (NESHAP), which also regulate asbestos activities.

3.13.3.1.2. Mercury in UV Lamp

Mercury-containing UV lamps are proposed to be used as part of the proposed UV Facility. Potential releases of mercury resulting from breakage of the lamps were evaluated to address potential exposure via several scenarios. This evaluation included potential exposure resulting from breakage of the lamps while on line and the potential effects of subsequent consumption to consumers. Additionally, the evaluation addressed potential dermal and airborne exposure to workers within the facility related to maintenance and handling of the lamps.

3.13.3.1.3. Process-Related Chemicals and Bulk Storage

A list of process-related chemicals to be used at the facility was compared to the list of “hazardous chemicals” under 40 CFR Part 370 and 6 NYCRR, and “listed hazardous wastes” in 40 CFR Part 261.11 of the Federal hazardous waste regulations and the New York State hazardous waste management regulations 6 NYCRR Part 371. Based on this comparison and the anticipated volumes of chemicals to be used/disposed, the need for compliance with the various regulations (see [Section 4.13.3.2](#)) was assessed. The anticipated measures for storage, handling, and disposal of the chemicals was discussed in the context of the applicable regulations.

3.13.3.2. Potential Construction Impacts

Hazardous materials and petroleum products to support construction activities would be introduced to the Eastview Site and off-site locations. The type and nature of the materials was described, as well as the planned measures to ensure that they are properly handled and stored.

Soil excavation and dewatering would be required for construction of the proposed facility. The likelihood that these activities would result in exposure to hazardous materials/petroleum products was assessed based on findings of the Phase I ESA. Results from the limited soil and groundwater

sampling were compared to regulatory guidance values and standards to determine if any such exposures would result in an unacceptable risk to human health or the environment. The guidance values and standards considered included:

- Recommended Soil Cleanup Objectives from *NYSDEC Technical and Administrative Guidance Memorandum #4046 Determination of Soil Cleanup Objectives and Cleanup Levels*; and
- Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations from *NYSDEC Division of Water Technical and Operation Guidance Series (1.1.1)*.

Proposed measures to ensure protection of on-site construction workers and the environment from exposures to hazardous materials were described. These measures were considered when evaluating the potential construction impacts.

3.13.4. Mitigation

Site remediation techniques would be developed based on the Phase 1 and Phase 2 investigations, the severity of the potential exposure, the nature of the proposed action, and consultation with appropriate regulatory agencies. Site-specific Remediation Plans may include techniques to contain, remove, or treat specific hazardous materials along with Health and Safety Plans designed to protect construction workers and the general public. If contaminated material is to be removed or discharged from a site, all Federal, State, and Local regulations would be followed regarding transportation and disposal.

A risk-based approach would be used in determining the proper course of mitigation at each specific site or facility where management of hazardous materials may be an issue. The risk-based approach would evaluate the current and proposed future land use of the site along with the proposed action (e.g., excavation, construction) against known contaminants of concern (COC) and potential exposure pathways in determining what remedial course of action, if any, is appropriate for that particular site or facility. Each site-specific Remediation Plan would be based on knowledge of the COC and actual or potential exposure pathways. Each site-specific Remediation Plan would address and mitigate both short-term (during implementation of the Plan) and long-term (after the remedy is complete) human health and environmental exposure risks.