

APPENDIX: HAZARDOUS MATERIALS

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LIST OF FACILITIES, ACTIVITIES, OR CONDITIONS REQUIRING ASSESSMENT

1. A facility, on or adjacent to a tax lot, which generates (including small quantity generators), stores, treats, or disposes of hazardous waste, as defined by RCRA and regulated by EPA and/or DEC.
2. A facility, on or adjacent to a tax lot, which manufactures, produces, prepares, compounds, processes uses, repackages or disposes of hazardous chemicals, as defined under New York City's Community Right-to-Know Law, N.Y.C. Admin. Code tit. 24, Ch. 7 (1992).
3. A facility, on or adjacent to a tax lot, which is included on the following list:
 - Adhesives and sealants manufacture
 - Advertising displays manufacture
 - Agricultural machinery manufacture (including repairs)
 - Aluminum manufacture or aluminum produces manufacture
 - Aircraft manufacture (including parts)
 - Airports Appliance (electrical) manufacture
 - Art goods manufacturer
 - Asphalt or asphalt products manufacture
 - Athletic equipment manufacture
 - Automobile and other laundries
 - Automobile manufacture
 - Automobile rental establishments
 - Automobile wrecking establishments
 - Automobile service stations
 - Battery manufacture
 - Bicycle manufacture
 - Blacksmith shops
 - Boat repair
 - Boat fuel sales
 - Boat storage
 - Business machine manufacture
 - Camera manufacture
 - Canvas or canvas products manufacture
 - Carpet cleaning establishments
 - Carpet manufacture
 - Cement manufacture
 - Ceramic products manufacture
 - Charcoal manufacture
 - Chemical compounding or packaging
 - Chemical manufacture
 - Cleaning or cleaning and dyeing establishments
 - Clock manufacture
 - Clothing manufacture
 - Coal products manufacture
 - Coal sales or storage
 - Coke products manufacture
 - Coil coating
 - College, university, trade school laboratories
 - Construction machinery manufacture
 - Copper forming or copper products manufacture
 - Cosmetics or toiletries manufacture
 - Dental instruments manufacture
 - Dental laboratories
 - Disinfectant manufacture
 - Drafting instruments manufacture
 - Dry cleaning establishments
 - Dumps
 - Electric power or steam generating plants
 - Electric power substations

- Electric and electronic components manufacture
- Electric appliance manufacture
- Electric supplies manufacture
- Electroplating or stereotyping
- Engraving or photo-engraving
- Exterminators
- Explosives manufacture
- Felt products manufacture
- Felt products bulk processing, washing or curing
- Fertilizer manufacture
- Filling stations
- Film manufacture
- Fire stations
- Foundries ferrous or non-ferrous
- Fuel sales
- Fungicides manufacture
- Fur tanning, curing, finishing or dyeing
- Furniture manufacture
- Garbage incineration, storage or reduction
- Gas manufacture, storage
- Gasoline service stations
- Generating plants, electric or steam
- Glass manufacture
- Glue manufacture
- Golf courses
- Graphite or graphite products manufacture
- Gum and wood chemicals manufacture or processing
- Hair products manufacture
- Hardware manufacture
- Heliports
- Incineration or garbage reduction
- Ink or ink ribbon manufacture
- Insecticides manufacture
- Inorganic chemicals manufacture
- Iron and steel manufacture
- Jewelry manufacture
- Junk yards
- Laboratories, medical, dental, research, experimental
- Leather tanning, curing, finishing or dyeing
- Linoleum manufacture
- Luggage manufacture
- Lumber processing
- Machine shops including tool, die, or pattern making
- Machine tools manufacture
- Machinery manufacture or repair
- Mechanical products manufacture
- Medical appliance manufacture
- Medical instruments manufacture
- Medical laboratories
- Metals manufacture including alloys or foil
- Metal casting or foundry products
- Metal finishing, plating, grinding, polishing, cleaning, rust-proofing, heat treatment
- Metal ores reduction or refining
- Metal product treatment or processing
- Metal reduction, refining, smelting or alloying
- Metal treatment or processing
- Mining machinery manufacture
- Mirror silvering shops
- Motorcycle manufacturer
- Motor freight stations
- Musical instruments manufacture
- Newspaper publishing
- Non-ferrous metals manufacture
- Office equipment or machinery repair shops

- Oil, public utility stations for metering or regulating oil sales
- Oil storage
- Optical equipment manufacture
- Organic chemicals manufacture
- Orthopedic appliance manufacture
- Ore mining
- Paint and ink manufacture
- Paper and pulp mills
- Paper products manufacture
- Pesticides manufacture
- Petroleum or petroleum products refining
- Petroleum or petroleum products storage and handling
- Pharmaceutical products manufacture or preparation
- Photographic equipment and supplies manufacture
- Plastics and synthetic products manufacture and processing
 - Plastics raw manufacture
 - Plumbing equipment manufacture
 - Porcelain enameling
 - Precision instruments manufacture
 - Printing and publishing
 - Pumping stations, sewage
 - Radioactive waste disposal services
 - Railroad equipment manufacture
 - Railroad rights-of-ways, substations
 - Railroad freight terminals, yards or appurtenances
 - Refrigerating plants
 - Rubber processing of manufacture
- Rubber products manufacture
- Sewage disposal plants, pumping stations
- Ship or boat building repair yards
- Shipping waterfront
- Shoes manufacture
- Sign painting shops
- Silver-plating shops
- Silverware manufacture, plate or sterling
- Slag piles
- Soap and detergent manufacture
- Soldering shops
- Solvent extraction
- Steam electric power plants
- Steel products manufacture
- Tar products manufacture
- Textiles bleaching, products manufacture or dyeing
- Textile mills
- Thermometer manufacture or assembly
- Tile manufacture
- Timber products manufacture
- Tool or hardware manufacture
- Toys manufacture
- Trailer manufacture
- Transit substations
- Truck manufacture
- Trucking terminal or motor freight stations
- Turpentine manufacture
- Varnish manufacture
- Vehicles manufacture
- Venetian blind manufacture
- Welding shops
- Wood distillation

DOCUMENTS DESCRIBING NEW YORK STATE AND FEDERAL ANALYTICAL METHODOLOGY

The NYSDEC Division of Environmental Remediation provides guidance on sampling, analysis and quality assurance in its DER-10 Technical Guidance for Site Investigation and Remediation. The guidance can be obtained from the NYSDEC Division of Environmental Remediation at the following web page: <https://www.dec.ny.gov/regulations/2393.html>

Guidance on soil cleanup objectives are provided by the NYSDEC in Part 375 Remedial Program Soil Cleanup Objectives. The guidance can be found at the following web page: https://www.dec.ny.gov/docs/remediation_hudson_pdf/part375.pdf

Guidance on ambient water quality standards are provided by the NYSDEC in Technical and Operational Guidance Series (TOGS). The guidance can be found at the following web page: <https://www.dec.ny.gov/regulations/2384.html>

Guidance on soil vapor and vapor intrusion is provided New York State Department of Health (NYSDOH), Center for Environmental Health, Bureau of Environmental Exposure Investigation. "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York." October 2006. The guidance and its updates can be found at the following web page: https://www.health.ny.gov/environmental/indoors/vapor_intrusion

The analytical methods of solid matrices are published in USEPA SW-846: Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. The test methods and its updates can be found at the following web page: <https://www.epa.gov/hw-sw846>

Wastewater and drinking water analytical methods are provided by the USEPA Office of Water. Regulations and guidance can be found at the following web page: <https://www.epa.gov/cwa-methods> and <https://www.epa.gov/dwanalyticalmethods>

The analytical methods for collection and analysis of environmental vapor samples are published in USEPA Center for Environmental Research Information, Office of Research and Development. "Compendium Method TO-15: Determination of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Canisters And Analyzed By Gas Chromatography/Mass Spectrometry (GC/MS)." January 1999. The guidance can be found at the following web page: <https://www.epa.gov/sites/production/files/2019-11/documents/to-15r.pdf>

Guidance documents for the preparation of a Quality Assurance Project Plan (QAPP) is available from USEPA's Quality Program. Guidance can be found at the following web page: <https://www.epa.gov/quality>

Examples of the Required Level of Effort for Phase II ESAs at Typical Sites

Recognized Environmental Concerns	Contaminant of Concern	Geophysical Survey (GPR) recommended	Waste & Surface Samples	Soil Sampling				Groundwater Sampling		
				Preferred Method	# of Probes	Suggested Depths	Groundwater Sampling	Preferred Method	Comments	Estimated Range of Phase II Costs
Single UST	Product Stored	Yes	Soils/Sediments near line and remote or direct fill port	Soil Probes	2 per tank (minimum of)	Into water table or 10 ft below tank bottom	Yes – variable depths	Temporary well points-upgradient and downgradient	1	Low
Multiple USTs	Product Stored	Yes	Soils/Sediments near lines and remote or direct fill port(s)	Soil Probes	2 per tank or tank cluster (minimum of)	Into water table or 10 ft below tank bottom	Yes-variable depths	Temporary well points-upgradient and downgradient	1	Medium
Former Drum Storage Area	Product Stored	Yes	Surface soils, stained soils	Soil Probes	1 per ten drums stored or 1 per 0.25 acre	3 depths (1 ft bgs, 5 ft bgs, and water table)	Yes-variable depths	Temporary well points	1.2	Medium
Area of Suspect Fill Material	Various	Yes – If Phase I shows UST/AST history	Surface soils/ waste piles	Soil Probes	1 per 0.25 acre	2 depths (surface and 5 feet into native or natural material including)	Yes-variable depths	Temporary well points for small sites, wells for large sites	3	Medium depending on size of area
Drywells/ Leachpools	Products Used on Site	Yes – for on-site drains/sumps	Bottom sediments	Soil Probes	1 per suspect location	3 depths (bottom, 5 feet below bottom & water table	Yes	Temporary well points adjacent to leachpool/drywell		Low
Former Drycleaners	VOC's	No	Surface soils, stained soils	Soils Probes or borings	As above per suspect location	As above per condition	Yes	Temporary well point		Medium to High depending on site conditions
Former Gasoline Stations	VOC's, SVOC's, metals	Yes	Surface soils, stained soils	Soil Probes	As above per suspect location	As above per condition	Yes-variable depths	Temporary well point - upgradient and downgradient	1.2, 4	Medium to High depending on site conditions
Junk Yard/ Automobile Salvage	VOC's, SVOC's, metals	Yes	Surface soils, stained soils	Soil Probes	1 per suspect location, areas of stained soils	Surface soils proposed excavation depths	Yes-variable depths	Temporary well point- upgradient and downgradient	4	Medium depending on size of area
Metal Plating/ Finishing	Metals, cyanide, VOC's, SVOC's	Yes	Surface soils, stained soils, ACM	Soil Probes/ borings	1 per suspect location	Surface soils proposed excavation depths, watertable	Yes-variable depths	Minimum of one upgradient and two downgradient temporary well points	4	High
Small Industrial Sites (1 to 2 acres)	Various-Products Used	Yes	Surface soils, stained soils, ACM	Soil Probes/ borings	1 per suspect location	Surface soils proposed excavation depths, watertable	Yes	Additional temporary well points at potential One upgradient and two downgradient well points		High
Large Industrial Sites (2+ acres)	Various-Products Used	Yes	Surface soils, stained soils, ACM	Soil Probes & borings	1 per suspect location	Surface soils proposed excavation depths, watertable	Yes	Minimum of one upgradient and two downgradient temporary well points Additional well pointss at potential recommended	4	Very High
Comments: Monitoring Wells needed if free products is found Nearby catchbasins and drywells should also be examined Fill materials should be adequately characterized for disposal Fuel oil, waste oil tanks and any drywells should be investigated				Key to Estimated Phase II Costs: Low- \$1,000 to \$15,000 Medium-\$15,000 to \$30,000 High-\$30,000 to \$50,000 Very High- \$50,000 plus Note this is only a guide to potential costs. If significant contamination is found the costs to determine the nature and extent of the contamination rise dramatically.						