WASTE MANAGEMENT OF NEW YORK CHAFFEE FACILITY

AREA 7/8 DEVELOPMENT

6 NYCRR PART 360 PERMIT MODIFICATION APPLICATION

PART I: INTRODUCTION

PURPOSE AND SCOPE

This document presents the Waste Management of New York , LLC (WMNY), application to the New York State Department of Environmental Conservation (NYSDEC) for a solid waste management facility permit modification for the Chaffee Facility Area 7/8 Development pursuant to the requirements of 6 NYCRR Part 360 - Solid Waste Management Facilities (Part 360 or §360) and 6 NYCRR Part 363 – Landfills (Part 363 or §363). The Area 7/8 Development is located at WMNY's Chaffee Facility which is on the west of Route 16 in the Town of Sardinia, Erie County, New York.

This application has been prepared in accordance with the applicable requirements of Part 360 and Part 363. In particular, the application addresses the pertinent requirements of:

- Subpart 360.16: Contents of Applications, Generally;
- Subpart 363-4: Landfills Permit Applications:
- Subpart 363-5: Landfills Siting Requirements;
- Subpart 363-6: Landfills Design, Construction, and Certification Requirements

FACILITY BACKGROUND AND PROJECT OVERVIEW

WMNY presently operates the Chaffee Facility under Part 360 Solid Waste Management Permit No. 9-1462-00001/00006 (existing Part 360 permit). The Area 7/8 Development is a lateral development of the Chaffee Facility to the south of the existing landfill areas (Western, Valley, and Closed Landfills) and includes a vertical development overlying portions of the Western Landfill Development, Valley Fill, and the Closed Landfill. The engineering design for the Western Landfill Development was detailed in the February 2005 permit application. The approved Western Landfill Development consists of six double lined landfill cells covering approximately

57.3 acres. The engineering design for the 13.7-acre Valley Fill that connects the Western Landfill to the Closed Landfill was detailed in the December 2012 approved permit application. The Closed Landfill covers an approximately 51-acre area and was operated between 1958 and 2010. The closed landfill has been capped with an engineered cover system and contains leachate and landfill gas collection systems.

This application is for the proposed Area 7/8 Development at the Chaffee Landfill and was prepared in conformance with the permit application requirements contained in the NYS Part 360 and Part 363 Regulations. The proposed landfill Area 7/8 development project combined with the existing Chaffee Landfill and associated infrastructure will occupy approximately 270 acres of the 500 acres within the project area.

The approved design capacity of the proposed landfill cell development would remain unchanged from the current 2770 tons per day (TPD) disposal rate. As seen in Sheet 7 of the Engineering Drawings., the new waste footprint of the proposed landfill cell development is approximately 19.1 acres and the total developed area (including existing cell area, perimeter berms, roads and leachate storage tanks) is approximately 270 acres. The cell development is contiguous with the existing landfill and would add approximately 28.6 acres of permitted landfill cell area, including a 9.5-acre "overliner area" where lined cell area will be constructed and waste will be placed on the south slope of the existing closed landfill. WMNY is also seeking an increase in the existing maximum permitted Landfill height by 30 feet; the existing maximum elevation of 1658 feet NAVD 88 would increase to 1688 feet NAVD 88.

In addition, WMNY is proposing to develop two new on-site soil borrow areas of approximately 13.8 acres and 10.0 acres, from which soils would be excavated for Landfill construction and operation, one located to the north of the existing landfill on the north side of Hand Road, and the other to the south of the cell development area. The majority of soil from these proposed borrow areas will be used for landfill construction with a lesser amount used for daily and intermediate cover. The soil borrow operations are described in the Borrow Area Use Plan (BAUP), part of the 6 NYCRR Part 360/363 Permit Application, and the borrow areas are located as shown on Sheet 4 of the Engineering Drawings.

The project will also include ancillary operations and facilities, and the reconfiguring of the stormwater ponds.

The proposed cell development will add approximately 5.1 million cubic yards of disposal capacity which will extend the site life by $7 \pm \text{years}$, depending on the actual future rate of waste receipt. Daily operational and support activities are planned to remain at the current level of activity. This permit modification does not increase the permitted rate of waste receipt (approved design capacity) or the rate of soil importation.

Once the permit modification is approved, WMNY will continue to submit detailed construction plans and technical specifications to the NYSDEC in accordance with the requirements of Part 363-6 for review and approval prior to commencement of construction for each landfill development feature.

ORGANIZATION OF APPLICATION

This application consists of nine individual Parts, organized in three three-ring binders, Volume 1 through 3 respectively, including a set of 39 Engineering Drawings, which are separately bound. The general contents of the application are described within this introductory section. Each application Part includes its own table of contents, references and appendices, as appropriate. This Introduction is Part I of the application.

Part I of the application provides several administrative elements for the permit modification, as follows:

- Appendix A of Part I contains the NYSDEC Part 360 Application Form for a Solid Waste Management Facility Permit modification;
- Appendix B of Part I provides an application compliance checklist that cross-references the applicable requirements of Part 360 and Part 363 with the location within the application where the regulatory requirement is addressed;

Part II of the application provides the Engineering Report for the Area 7/8 Development, in accordance with the requirements of Part 363-4.3. The Engineering Report describes the Area 7/8 Development design and provides engineering analysis and technical information.

Part III of the application provides the Engineering Drawings, in accordance with the requirements of Part 363-4.2, which while bound and presented on 11x17 paper, are also provided on full-size engineering plan sheets under separate cover.

Part IV of the application provides the Hydrogeologic Report for the Area 7/8 Development, in accordance with the requirements of Part 363-4.4. This report is bound separately.

Part V of the application provides the Construction Quality Assurance/Construction Quality Control (CQA/CQC) Plan, in accordance with the requirements of Part 363-4.5. The effective CQA/CQC plan for the site has been revised to reflect the current regulations, current construction procedures at the site and/or specific project elements required by the proposed Area 7/8 Development. WMNY will use this plan to monitor the construction of the landfill.

Part VI of the application provides the Facility Manual for the Chaffee Landfill, in accordance with the requirements of Part 363-4.6. The effective Operations and Maintenance Manual and Contingency Plans are revised to reflect operation and maintenance procedures associated with the Area 7/8 Development and reflect contingency procedures associated with the landfill development. The Facility Manual provides detailed information regarding day-to-day facility operations and various support operations that are provided by WMNY to ensure proper and effective operations. It also outlines measures that will be undertaken by facility personnel to promptly and effectively respond to potential adverse incidents or conditions, to limit the effects of any such incidents or conditions.

Part VII of the application is the Environmental Monitoring Plan for the Chaffee Landfill. The effective Environmental Monitoring Plan is revised to reflect environmental monitoring procedures associated with the Area 7/8 Development. The Environmental Monitoring Plan provides detailed information regarding landfill gas and water quality monitoring.

Part VIII of the application is the Borrow Area Use Plan (BAUP) for the proposed South Borrow Area and Borrow Area C, which will support the development of the Area 7/8 Development and the continued operations of the landfill. The BAUP outlines how the borrow areas will be developed, operated, and eventually reclaimed.

Part IX of the application is the Stormwater Pollution Prevention Plan for the Chaffee Landfill. The current Stormwater Pollution Prevention Plan is revised to reflect stormwater management and monitoring procedures associated with the Area 7/8 Development. The Stormwater Pollution Prevention Plan provides detailed information regarding stormwater management. This report is bound separately.

The application and its various Parts have been prepared under the supervision of, and certified by, a New York State Licensed Professional Engineer, as indicated on the cover sheet of the application and on each of the engineering drawings.





CHAFFEE LANDFILL

10860 Olean Road Chaffee, NY 14030 (716) 496-5000 (716) 496-7325 (Fax)

March 27, 2019

Ms. Lisa Czechowicz New York State Department of Environmental Conservation 270 Michigan Avenue Buffalo, New York 14203-2999

RE: Chaffee Landfill Southern Expansion

Dear Ms. Czechowicz:

Enclosed are three copies of the Revised Application Form for a Solid Waste Management Facility Permit for the proposed Chaffee Facility Southern Expansion submitted by Waste Management of New York, L.L.C.

At the time of the submittal of the initial Part 360 Application Form on February 15, 2019, the Engineer for the project was yet to be determined. An Engineer has been determined. Mr. Robert A. Holmes, P.E. with Cornerstone Engineering, Geology, and Land Surveying, PLLC (Cornerstone) will be responsible for the design of the Southern Expansion, and the preparation and certification of any supporting information required to be submitted with the application. The full Part 360 application will be submitted under the stamp and signature of Mr. Holmes as required by the Part 360.6 of the regulations. WMNY and Cornerstone will work with the Department of Environmental Conservation Staff to ensure that the application documentation submitted contain the information necessary to complete the permit application. It should be noted that the Full Environmental Assessment Form submitted on February 15, 2019 has not been revised.

Should you have any questions, or require any additional information, please call me at (716) 492-3411.

Sincerely,

Michael D Mahar Senior District Manager



DEPARTA	MENT USE ONLY
DEC APPLICATION NO.	
ACTIVITY NUMBER(S)	

Division of Materials Management APPLICATION FOR A SOLID WASTE MANAGEMENT FACILITY PERMIT

Please read all instructions before completing this application

Reset Form

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Email	mmahar@wm.c	om		Email	mmahar@v				.Holmes@Corn			14024
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Appendix B

Application Compliance Checklist

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
SUBPART 360 GE	NERAL REQUIREMENTS					
360.1	Purpose and applicability	NA	NA	NA	NA	NA
360.2	Definitions	NA	NA	NA	NA	NA
360.3	References	NA	NA	NA	NA	NA
360.4	Transition	NA NA	NA NA	NA NA	NA NA	NA NA
360.5	Severability	NA NA	NA NA	NA NA	NA NA	NA NA
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360.6	Submission requirements and use of professional engineers and certified laboratorie	-	-	-	-	-
360.6(a)	Engineering related documents, except quarterly and annual reports, submitted under any provision of this Part or of Parts 361, 362, 363, 365, or Subpart 374-2 of this Title for a permitted facility must be submitted under the stamp and signature of a professional engineer licensed and currently registered to practice in the State of New York. All documents submitted to the department must be submitted in print as well as in an electronic format acceptable to the department.	Whole Application	All	All	All	All
360.6(b)	Any laboratory tests or analyses required under this Part and Parts 361, 362, 363, and 365 of this Title, including those for which the commissioner of the New York State Department of Health issues certificates of approval, must be performed by a laboratory certified to perform those tests or analyses pursuant to the New York State Department of Health Environmental Laboratory Approval Program (ELAP) or Clinical Laboratory Evaluation Program (CLEP), unless otherwise specified in this Part or Parts 361 – 365 of this Title.	Part V - 2.2	-	-	-	-
360.7	Inspection of facilities	NA	NA	NA	NA	NA
360.8	Prohibited siting	-		-		-
360.8(a)	Special flood hazard areas. Person(s) must not construct a new facility or expand an existing one, in a special flood hazard area, unless provisions acceptable to the department have been made to prevent flooding of the facility and to prevent the constriction of floodwaters. The facility must not pose a significant hazard to human life, wildlife, fisheries, or land or water resources.	Part II - 2.4.1	-	-	-	Part III - Sheet 3
360.8(b)	Endangered Species. Person(s) must not construct a facility or laterally expand an existing one in a manner that causes or contributes to the taking of any endangered or threatened species or to the destruction or adverse modification of their critical habitat.	Part II - 2.4.2	-	-	-	-
360.8(c)	Wetlands. Person(s) must not construct a new facility or laterally expand an existing one within the boundary of either state or federally regulated wetlands, unless the required permits are obtained from the U.S. Army Corps of Engineers and/or the department.	Part II - 2.4.3	-	-	-	Part III - Sheet 3
360.9	Prohibited Activities	NA	NA	NA	NA	NA
360.10	Variances	NA	NA	NA	NA	NA
360.11	Comprehensive Recycling Analysis	NA	NA	NA	NA	NA
360.12	Beneficial use	NA	NA	NA	NA	NA
360.13	Special requirements for pre-determined beneficial use of fill material	NA	NA	NA	NA	NA
360.14	Exempt facilities	NA	NA	NA	NA	NA
360.15	Registered facilities, transporters and collection events	NA NA	NA	NA NA	NA NA	NA NA
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360.16	r crimic application requirements and permit provisions	-	•	-	•	•
360.16(a)	Submission, signature and verification of applications for facility or waste transporter permits. All applications for permits must be submitted in either an electronic format acceptable to the department or print. They must be signed by the applicant as follows:		-	-	-	-
	corporations: by a duly authorized principal executive officer of at least the level of	Part I	-	-	-	-
360.16(a)(1)	vice president;					
360.16(a)(1) 360.16(a)(2)	vice president; partnership or limited partnership: by a general partner;	NA	NA	NA	NA	NA
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REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

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Vicinity map. A vicinity map (a minimum scale of 1:24.000) that delinates coning and land use, communities of disproportional impact, residences, principal aquifers, primary aquifers, surface waters, wetlands, access roads, and other existing and proposed features on the property and within one-half mile of the perimeter of the property of the road of the property and vithin one-half mile of the perimeter of the property of the road of the property and vithin one-half mile of the perimeter of the road proposed features on the property and within one-half mile of the perimeter of the property of the location of the proposed facility and its acreage, and the location of any State or federally regulated wetland or special flood hazard area, including 100-year flood elevations and location of any floodways pursuant to Part 582 of this Title, on the property and within 800 feet of the enrimeter of the property; the location of all public and private water wells, monitoring well, surface water bodies, roads, residences, public areas and buildings, including the identification of any buildings which are owned by the applicant or operator, on the property and within 800 feet of the property. ### Part III-580.16(c)[2](iii)(c) the location of all proposed structures, appurtenances, screening, fences, gates, roads, parking areas, and areas designated for management of waste; ### Boa.16(c)[2](iii)(d) the location of solity of the proposed structures, appurtenances, screening, fences, gates, roads, parking areas, and areas designated for management of waste; ### Boa.16(c)[2](iii)(d) the location of solity of the proposed structures, appurtenances, screening, fences, gates, roads, parking areas, and areas designated for management of waste; ### Boa.16(c)[2](iii)(d) ### Boa.16(c)[2](iiii)(d) ### Boa.16(c)[2](iii)(d) ### Boa.16(c)[2](iii)(d) ### Boa.16(c)[2](iii	360.16(c)(2)(i)	Regional map. A regional map (having a minimum scale of 1:62,500) that delineates the location of the proposed facility, the location of the closest population centers, communities of disproportionate impact, and transportation systems including	_	-	-	-	
size plan. A site plan having a minimum scale of 1:2,400 with five-foot contour intervals (ten-foot intervals for land application facilities) that shows: The location of the proposed facility and its acreage, and the location of any State or federally regulated wetland or special flood hazard area, including 100-year flood elevations and location of any floodways pursuant to Part \$30 c. 9 this Title, on the property and within 800 feet of the perimeter of the property; The location of all public and private water wells, monitoring well, surface water bodies, roads, residences, public areas and buildings, including the identification of any buildings which are owned by the applicant or operator, on the property and within 800 feet of the perimeter of the property; Seo.16(c)(2)(iiii)(c) the location of all proposed structures, appurtenances, screening, fences, gates, roads, parking areas, and areas designated for management of waste; Seo.16(c)(2)(iiii)(d) the location of all proposed structures, appurtenances, screening, fences, gates, roads, parking areas, and areas designated for management of waste; Seo.16(c)(2)(iiii)(d) the dirainage characteristics of the proposed acleuity and of the property on which it is proposed to be located, identifying the direction of stormwater, ditches, and drainage swales together with any drainage controls that exist or will be implemented with facility construction; Seo.16(c)(2)(iiii)(e) the location of soil borings, if applicable; Wasting and proposed elevation contours; Part III	360.16(c)(2)(ii)	Vicinity map. A vicinity map (having a minimum scale of 1:24,000) that delineates zoning and land use, communities of disproportionate impact, residences, principal aquifers, primary aquifers, surface waters, wetlands, access roads, and other existing and proposed features on the property and within one-half mile of the perimeter of	-	-	-	-	
federally regulated wetland or special flood hazard area, including 100-year flood elevations and location of any floodoways pursuant to Part S02 of this Title, on the property and within 800 feet of the perimeter of the property; be location of all public and private water wells, monitoring well, surface water bodies, roads, residences, public areas and buildings, including the identification of any buildings which are owned by the applicant or operator, on the property and within 800 feet of the perimeter of the property; 60.16(c)(2)(iiii)(c) the location of all proposed structures, appurtenances, screening, fences, gates, roads, parking areas, and areas designated for management of waste; 60.16(c)(2)(iiii)(d) the drainage characteristics of the proposed facility and of the property on which it is proposed to be located, definiting the direction of stormwater, ditches, and drainage swales together with any drainage controls that exist or will be implemented with facility construction; 800.16(c)(2)(iiii)(e) the location of soil borings, if applicable; 800.16(c)(2)(iiii)(f) existing and proposed elevation contours; 800.16(c)(3)(iiii)(f) existing and proposed elevation contours; 800.16(c)(3)(iii)(f) existing and proposed elevation contours; 800.16(c)(3)(iii)(f) existing and proposed elevation contours;	360.16(c)(2)(iii)	Site plan. A site plan having a minimum scale of 1:2,400 with five-foot contour	-	-	-	-	-
the location of all public and private water wells, monitoring well, surface water bodies, roads, residences, public areas and buildings, including the identification of any buildings which are owned by the applicant or operator, on the property and within 800 feet of the perimeter of the property; 360.16(c)(2)(iii)(d) the location of all proposed structures, appurtenances, screening, fences, gates, roads, parking areas, and areas designated for management of waste; 360.16(c)(2)(iii)(d) the dirange characteristics of the proposed facility and of the property on which it is proposed to be located, identifying the direction of stormwater, ditches, and drainage swales together with any drainage controls that exist or will be implemented with facility construction; 480.16(c)(2)(iii)(f) existing and proposed elevation contours; 480.16(c)(2)(iii)(f) existing and proposed elevation co	360.16(c)(2)(iii)(a)	federally regulated wetland or special flood hazard area, including 100-year flood elevations and location of any floodways pursuant to Part 502 of this Title, on the	_	-	-	-	Sheets 4,
roads, parking areas, and areas designated for management of waste; 360.16(c)(2)(IIII)(d) the drainage characteristics of the proposed facility and of the property on which it is proposed to be located, identifying the direction of stormwater, ditches, and drainage swales together with any drainage controls that exist or will be implemented with facility construction; the location of soil borings, if applicable; 360.16(c)(2)(IIII)(f) existing and proposed elevation contours; the direction of prevailing winds; and soil of the direction of prevailing winds; and soil of (c)(2)(IIII)(h) an individual licensed to practice land surveying in the State of New York, of the property on which the facility is proposed to be located. An engineering Report An engineering report that contains a comprehensive description of the existing site conditions, a full engineering analysis of the facility including engineering drawings and specifications submitted as part of the engineering report must depict process flows, dinewinsons, elevations, floor plans, and cross-sectional views of the facility including all structures, areas designated for unloading, sorting, processing, storage, and loading, and other waste management areas and equipment. Engineering drawings and specifications and anticipated performance. Engineering drawings and submitted as part of the engineering report must depict process flows, dimensions, elevations, floor plans, and cross-sectional views of the facility including engineering drawings and specifications and onther waste management areas and equipment. Engineering drawings and specifications and other waste management areas and equipment. Engineering drawings and specifications and other waste management areas and equipment. Engineering drawings and specifications and an engineering report must depict process of the site. A noise assessment to demonstrate compliance with th	360.16(c)(2)(iii)(b)	bodies, roads, residences, public areas and buildings, including the identification of any buildings which are owned by the applicant or operator, on the property and	_	-	-	-	
proposed to be located, identifying the direction of stormwater, ditches, and drainage swales together with any drainage controls that exist or will be implemented with facility construction; 360.16(c)(2)(iii)(e) the location of soil borings, if applicable; 360.16(c)(2)(iii)(f) existing and proposed elevation contours; existing and proposed elevation contours; existing and proposed elevation contours; the direction of prevailing winds; and except in the case of land application facilities, the property boundaries, certified by an individual licensed to practice land surveying in the State of New York, of the property on which the facility is proposed to be located. Engineering Report An engineering report that contains a comprehensive description of the existing site conditions, a full engineering analysis of the facility including engineering calculations and all raw data, a description of the overall process, including design criteria, engineering calculations and anticipated performance. Engineering drawings and specifications submitted as part of the engineering report must depict process flows, dimensions, elevations, floor plans, and cross-sectional views of the facility, including all structures, areas designated for unloading, sorting, processing, storage, and loading, and other waste management areas and equipment. Engineering drawings must contain information on known site conditions and projected use of the site. A noise assessment to demonstrate compliance with the Leq Energy Equivalent Sound levels proscribed in subdivision 360.19(j), below. If the noise assessment indicates the Leq Energy Equivalent Sound levels will be exceeded, a noise monitoring and control plan to mitigate or monitor sound levels must be included in the application as part of the facility manual.	360.16(c)(2)(iii)(c)		-	-	-	1	
360.16(c)(2)(iii)(f) the location of soil borings, if applicable;	360.16(c)(2)(iii)(d)	proposed to be located, identifying the direction of stormwater, ditches, and drainage swales together with any drainage controls that exist or will be	_	-	-	-	Sheets 25 -
existing and proposed elevation contours; the direction of prevailing winds; and accept in the case of land application facilities, the property boundaries, certified by an individual licensed to practice land surveying in the State of New York, of the property on which the facility is proposed to be located. Engineering Report An engineering report that contains a comprehensive description of the existing site conditions, a full engineering analysis of the facility including engineering calculations and all raw data, a description of all equipment to be used, including design criteria, engineering calculations and anticipated performance. Engineering drawings and specifications submitted as part of the engineering report must depict process flows, dimensions, elevations, floor plans, and cross-sectional views of the facility, including all structures, areas designated for unloading, sorting, processing, storage, and loading, and other waste management areas and equipment. Engineering drawings must contain information on known site conditions and projected use of the site. A noise assessment to demonstrate compliance with the Leq Energy Equivalent Sound levels proscribed in subdivision 360.19(j), below. If the noise assessment indicates the Leq Energy Equivalent Sound Levels will be exceeded, a noise monitoring and control plan to mitigate or monitor sound levels must be included in the application as part of the facility manual.	360.16(c)(2)(iii)(e)		-	-	-	-	
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an individual licensed to practice land surveying in the State of New York, of the property on which the facility is proposed to be located. Engineering Report An engineering report that contains a comprehensive description of the existing site conditions, a full engineering analysis of the facility including engineering calculations and all raw data, a description of the overall process, including flow diagrams, and a functional description of all equipment to be used, including design criteria, engineering calculations and anticipated performance. Engineering drawings and specifications submitted as part of the engineering report must depict process flows, dimensions, elevations, floor plans, and cross-sectional views of the facility, including all structures, areas designated for unloading, sorting, processing, storage, and loading, and other waste management areas and equipment. Engineering drawings must contain information on known site conditions and projected use of the site. A noise assessment to demonstrate compliance with the Leq Energy Equivalent Sound levels proscribed in subdivision 360.19(j), below. If the noise assessment indicates the Leq Energy Equivalent Sound Levels will be exceeded, a noise monitoring and control plan to mitigate or monitor sound levels must be included in the application as part of the facility manual.	360.16(c)(2)(iii)(g)	the direction of prevailing winds; and	-	-	-	-	
Baco.16(c)(3) Engineering Report An engineering report that contains a comprehensive description of the existing site conditions, a full engineering analysis of the facility including engineering calculations and all raw data, a description of the overall process, including flow diagrams, and a functional description of all equipment to be used, including design criteria, engineering calculations and anticipated performance. Engineering drawings and specifications submitted as part of the engineering report must depict process and loading, all structures, areas designated for unloading, sorting, processing, storage, and loading, and other waste management areas and equipment. Engineering drawings must contain information on known site conditions and projected use of the site. 360.16(c)(3)(ii) A noise assessment to demonstrate compliance with the Leq Energy Equivalent Sound levels proscribed in subdivision 360.19(j), below. If the noise assessment indicates the Leq Energy Equivalent Sound Levels will be exceeded, a noise monitoring and control plan to mitigate or monitor sound levels must be included in the application as part of the facility manual.	360.16(c)(2)(iii)(h)	an individual licensed to practice land surveying in the State of New York, of the					
conditions, a full engineering analysis of the facility including engineering calculations and all raw data, a description of the overall process, including flow diagrams, and a functional description of all equipment to be used, including design criteria, engineering calculations and anticipated performance. Engineering drawings and specifications submitted as part of the engineering report must depict process flows, dimensions, elevations, floor plans, and cross-sectional views of the facility, including all structures, areas designated for unloading, sorting, processing, storage, and loading, and other waste management areas and equipment. Engineering drawings must contain information on known site conditions and projected use of the site. 360.16(c)(3)(ii) A noise assessment to demonstrate compliance with the Leq Energy Equivalent Sound levels proscribed in subdivision 360.19(j), below. If the noise assessment indicates the Leq Energy Equivalent Sound Levels will be exceeded, a noise monitoring and control plan to mitigate or monitor sound levels must be included in the application as part of the facility manual.	360.16(c)(3)	Engineering Report	Part II	-	-	-	-
A noise assessment to demonstrate compliance with the Leq Energy Equivalent Sound levels proscribed in subdivision 360.19(j), below. If the noise assessment indicates the Leq Energy Equivalent Sound Levels will be exceeded, a noise monitoring and control plan to mitigate or monitor sound levels must be included in the application as part of the facility manual.	360.16(c)(3)(i)	conditions, a full engineering analysis of the facility including engineering calculations and all raw data, a description of the overall process, including flow diagrams, and a functional description of all equipment to be used, including design criteria, engineering calculations and anticipated performance. Engineering drawings and specifications submitted as part of the engineering report must depict process flows, dimensions, elevations, floor plans, and cross-sectional views of the facility, including all structures, areas designated for unloading, sorting, processing, storage, and loading, and other waste management areas and equipment. Engineering drawings must contain information on known site conditions and projected use of	Part II	Part II - All	Part II - All	Part II - All	Part III - All
	360.16(c)(3)(ii)	A noise assessment to demonstrate compliance with the Leq Energy Equivalent Sound levels proscribed in subdivision 360.19(j), below. If the noise assessment indicates the Leq Energy Equivalent Sound Levels will be exceeded, a noise monitoring and control plan to mitigate or monitor sound levels must be included in	2.2.2/DESIS	-	-	-	-
	360.16(c)(4)		Part VI				

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
360.16(c)(4)(i)	Waste control plan. The waste control plan describing:	Part VI - 4	-	-	-	-
360.16(c)(4)(i)(a)	the facility's service area, both inside and outside New York State, including a list of all planning units or Native American tribes or nations within New York State and counties, provinces or tribes or nations outside of New York State;		Part VI - Table 4-1	-	-	-
360.16(c)(4)(i)(b)	the waste that will be accepted at the facility including the type, source, quantity, and, as required for a particular waste stream in Parts 361, 362, 363, or 365 of this Title, analytical results. The description of the quantity must specify the expected average and maximum daily and annual amounts, on a weight and volume basis, and must be specified for each individual type of waste and for the total amount of waste accepted:	Part VI - 4.1, 4.2	-	-	-	-
360.16(c)(4)(i)(c)	authorized locations where wastes, including residues, are transported when they leave the facility and what arrangements exist or will exist (contracts, etc.) that verify receiving entities will accept the waste;	NA	NA	NA	NA	NA
360.16(c)(4)(i)(d)	inspection, education, and contractual measures to ensure that the facility receives and treats only authorized waste, including a program to identify, control, segregate, quarantine, record, store, and dispose of unauthorized waste;		-	-	-	-
360.16(c)(4)(i)(e)	if friable asbestos-containing waste is accepted at the facility, a detailed waste plan specific to that waste must be included that outlines the procedures for managing the waste;	Part VI - 4.2.7	-	-	-	-
360.16(c)(4)(i)(f)	if recyclables are managed at the facility, a detailed plan must be included that describes the types of recyclables that will be recovered, the procedures that will be used for recovery and storage of the recyclables and the disposition of recyclables when they leave the facility;	NA	NA	NA	NA	NA
360.16(c)(4)(i)(g)	the procedures that will be used for managing mercury-added consumer products that are separately delivered to the facility; and	NA (Part VI - 4.2.4)	NA	NA	NA	NA
360.16(c)(4)(i)(h)	in the case of a landfill, a municipal waste combustor, or a transfer facility, a detailed plan must be included that:		-	-	-	-
360.16(c)(4)(i)(h)(1)	l'	Part VI - 4.3	-	-	-	-
360.16(c)(4)(i)(h)(2)		Part VI - 4.3.1	-	-	-	-
360.16(c)(4)(ii)	Operations and maintenance plan. The plan must include the following:	-	-	-	-	-
360.16(c)(4)(ii)(a)	a description of the overall operation of the facility, including procedures to be followed during start-up and scheduled and unscheduled shutdown of operations;	Part VI - 5	-	-	-	-
360.16(c)(4)(ii)(b)	the type, purpose, size, capacity, and associated detention times for all waste handling, storage, and processing equipment and structures, including back-up facilities and equipment;	Part VI - 5.6	-	Part VI -B	-	-
360.16(c)(4)(ii)(c)	a process flow diagram for waste during normal operation. The flow diagram must indicate the average and maximum quantity of waste handled on a weight and volume basis;		NA	NA	NA	NA
360.16(c)(4)(ii)(d)	a description of all machinery, equipment, and structures used in waste management operations of the facility, including the design capacity;	Part VI - 5.6	-	Part VI -B	-	-
360.16(c)(4)(ii)(e)	a description of the drainage system used for the collection and storage of leachate and the method and location used for disposal of the leachate;	Part VI - 8.2	-	-	-	-
360.16(c)(4)(ii)(f)	the monitoring, maintenance and inspection procedures related to waste management;	Part VI - 4.2.6.7, 5.6.1, 6.2, 8.2.2.5, 8.2.3.4	-	Part VI - A	-	-
360.16(c)(4)(ii)(g)	a description of the actions to be taken in response to significant interruptions to the facility's normal operations;	Part VI - 5.1.3, 11.2, 15	-	-	-	-
360.16(c)(4)(ii)(h)	the schedule of operation including the days and hours when the facility will be open to accept and transfer waste, and the days and hours when operations will occur within the facility;	Part VI - 5.1.1	-	-	-	-
360.16(c)(4)(ii)(i)	a list of all equipment and instruments requiring calibration and a schedule of proposed calibration intervals;	Part VI - 5.6	-	Part VI -A	-	-

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX		PLANS
360.16(c)(4)(ii)(j)	the estimated maximum daily traffic flow to and from the facility, the type and size of vehicles, and the maximum number of vehicles that can be accommodated on site;	Part VI - 5.1.2	-	-	Part VI - Figures 1-1, 1-2	-
360.16(c)(4)(ii)(k)	where treatment of waste will occur at the facility, a detailed description of each treatment method and unit, including the operating parameters that will be attained to achieve the intended treatment and the frequency, location, and method for monitoring the operating parameters;		-	-	-	-
360.16(c)(4)(ii)(l)	a discussion of compliance with the operating requirements that are identified in section 360.19 and Parts 361, 362, 363, and 365, and Subpart 374-2 of this Title;	Part VI	-	-	-	-
360.16(c)(4)(ii)(m)	the location of all facility records related to the permit; and	Part VI - 1.2	-	-	-	-
360.16(c)(4)(ii)(n)	a description of the operation of a residential drop-off area, if applicable, for non-commercial vehicles to unload waste and recyclables.	Part VI -12	-	-	-	-
360.16(c)(4)(iii)	Training plan. A training plan that identifies all of the facility's personnel by title and responsibilities and that describes the training program, both classroom and on-the job, that will be used to educate each individual on the procedures necessary to ensure compliance with the requirements applicable to the facility, including but not limited to the plans and procedures identified in this section and all authorizations, permits, and approvals that will be required for the facility; and that describes the training that will be provided and all procedures and equipment that will be used during emergencies, contingencies and standard operations.	Part VI - 17	1	-	-	-
360.16(c)(4)(iv)	Emergency Response Plan. An emergency response plan must include the following.	Part VI - 15	-	-	-	-
360.16(c)(4)(v)	a noise monitoring and control plan, if required pursuant to subparagraph (c)(3)(ii) of this subdivision, must include the following:	Part VI - 18				
360.16(c)(4)(vi)	Closure plan. A closure plan that specifically identifies how the facility will comply with the requirements for closure in section 360.21 of this Part and any closure requirements in Parts 361, 362, 363, and 365, and Subpart 374-2 of this Title.	Part VI - 16				
360.16(c)(5)	State and Local Plan Consistency. A demonstration that the facility is consistent with the goals and objectives of:	DSEIS Text	-	-	-	-
360.16(c)(5)(i)	the New York State solid waste management policy identified under subdivision (1) of ECL section 27-0106, with an emphasis on diversion from thermal treatment and disposal;					
360.16(c)(5)(ii)	the New York State solid waste management plan; and					
360.16(c)(5)(iii)	the department-approved Local Solid Waste Management Plan (LSWMP) in effect, if one exists, for the municipalities in the facility's service area.					
360.16(c)(5)(iv)	for those municipalities in the service area that do not have a LSWMP in effect, an identification that the municipalities have a department-approved CRA in effect.	NA	NA	NA	NA	NA
360.16(c)(6)	If a facility requiring a permit includes facilities or collection events which would qualify as an exempt or registered facility or collection event, those operations must be described in the permit application.	NA	NA	NA	NA	NA
360.16(d)	New applications submitted by or on behalf of a municipality for a permit under Part 362 or 363 of this Title will not be complete until a LSWMP is in effect for the municipality.		-	-	-	-
360.16(e)	In addition to the criteria outlined in subdivision 621.3(e) of this Title, a permit can be denied or revoked based upon the unsuitability of the owner, operator or applicant, as set forth in this subdivision. In addition to any other available grounds, the department can, consistent with the policies of article 23-A of the Correction Law, and the provisions of section 70-0115 of the ECL, deny, suspend, revoke or modify any permit, renewal or modification after determining in writing that such action is required to protect the public health or safety. Some of the factors the department can consider in arriving at such determination include:	NA	NA	NA	NA	NA
360.16(f)	Permit modifications. An application to modify a permit must include a description of the proposed modification, a description of the impacts of the proposed modification on the facility, and a demonstration that, under the modified permit, the facility will comply with applicable parts of this Title.	Whole Application/ Title V Permit	-	-	-	-
360.16(g)	Permit Renewals	NA	NA	NA	NA	NA
360.16(h)	Facilities at or near sites undergoing a remedial program.	Part I - 12	-	-	-	-

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
360.16(h)(1)	If a facility permitted under this Part is proposed to be located at or within 150 feet of the boundary of a site undergoing a remedial program, the applicant must submit an report that discusses the potential impacts of the facility on the remedial program for that site. For the purposes of this subdivision, a remedial program is any activity defined in 6 NYCRR 375-1.2 and subject to ECL Article 27 Title 13 (Inactive Hazardous Waste Disposal Sites), ECL Article 27 Title 14 (Brownfields Cleanup Program sites), ECL Article 56 Title 5 (Environmental Restoration Project sites), ECL Article 52 Title 3 (Hazardous Waste Site Remediation Projects), ECL Article 27 Title 9 (RCRA Corrective Action Program) or the department's Voluntary Cleanup Program, or in Navigation Law Section 176 (Spill Response Program for the cleanup of petroleum discharges). The proposed facility must not interfere significantly with any potential, ongoing or completed remedial program.	Part I - 12	-	-	-	-
360.16(h)(2)	If a new facility or an expansion of an existing facility is proposed to be located at an inactive hazardous waste site classified as a P site by the department, the applicant must submit as part of a complete application, sufficient information to enable the department to classify the site in question as Class 1, 2, 3, 4 or 5 or to delete the site from the Registry of Inactive Hazrdous Waste Disposal Sites.	NA	NA	NA	NA	NA
360.16(i)	Duration of permits. A permit issued pursuant to this Part will be issued for a period not to exceed ten years.	-	-	-	-	-
360.16(j)	Supervision and certification of construction. The construction of a facility and each stage of construction of a facility must be undertaken under the supervision of an individual licensed to practice engineering in the State of New York. Upon completion of construction, that individual must certify in writing that the construction is in accordance with the terms of the department-issued permit. Operation of the facility and any stage in the operation of a facility cannot commence until approval from the department is received.	-	-	-	-	-
360.17	Nonspecific facilities	NA	NA	NA	NA	NA
360.18	Research, development, and demonstration registrations and permits	NA	NA	NA	NA	NA
360.19	Operating requirements	-	-	Part VI	•	-
360.20	Environmental monitoring services	-	-	Part VI	-	-
360.21	Closure requirements	-	-	Part VI	-	-
360.22	Financial assurance	-	-	Part VI	-	-

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
SUBPART 363 L						
4.1	Unless otherwise exempt, the owner or operator of a landfill must obtain a permit from the department. In addition to the criteria found in section 360.16 of this Title, a permit application for a landfill must contain the information enumerated in this Subpart:	- Whole Application	- All	- All	All	- All
4.2	Engineering Drawings	-	-	-	-	-
4.2(a)(1)	Maps and drawings. Maps and drawings using the following format and containing the following information must be submitted:	-	-	-	-	Part III
4.2(a)(1)	a regional map that provides the location of the facility and the location of and distance to any airports located within six miles of the facility;	-	-	-	-	Part III - Sheet 3
4.2(a)(2)	a vicinity map that delineates zoning and land use, communities of disproportionate impact, residences, principal aquifers, primary aquifers, surface waters, access roads, and other existing and proposed features on the facility and within one mile of the facility; and a wind rose identifying the prevailing wind direction based on the nearest local source of meteorological data; and	-	-	-	-	Part III - Sheet 3
4.2(a)(3)	a site plan and drawings of the facility that show:	-	-	-	-	-
4.2(a)(3)(i)	property boundaries;	-	-	-	-	Part III - Sheets 4, 5
4.2(a)(3)(ii)	off-site and on-site utilities, including electric, gas, stormwater and sanitary systems;	-	-	-	-	Part III - Sheet 6
4.2(a)(3)(iii)	right-of-way easements including noise easements;	-	-	-	-	Part III - Sheet 6
4.2(a)(3)(iv)	the names and addresses of contiguous property owners;	-	-	-	-	Part III - Sheets 4, 5
4.2(a)(3)(v)	the location of soil borings, excavations, test pits, gas venting structures, wells, piezometers, environmental and facility monitoring points and devices, benchmarks and permanent survey markers. With the exception of benchmarks and permanent survey markers, each location must be identified in accordance with a numbering system acceptable to the department. All horizontal locations must be accurate to the nearest tenth of a foot and all vertical locations must be accurate to the nearest 100th of a foot as measured from the ground surface and top of well casing;	-	-	-		Part III - Sheet 6
4.2(a)(3)(vi)	a delineation of the total facility area, including planned staged development of the landfill's construction and operation, and the lateral and vertical limits of previously filled areas (if applicable);	-	-	-	-	Part III - Sheets 4, 5, 31-33
4.2(a)(3)(vii)	the location and identification of on-site sources of cover materials;	-	-	-	-	Part III - Sheets 4, 5
4.2(a)(3)(viii)	the location and identification of special waste (such as, alternative operating cover materials or select fill materials) handling areas;	-	-	-	-	Part III - Sheets 4, 5
4.2(a)(3)(ix)	on-site buildings, leachate storage and conveyance systems, landfill gas management system components, roads, and parking areas; and	-	-	-	-	Part III - Sheets 4, 5, 6
4.2(a)(3)(x)	site topography with five-foot minimum contour intervals.	-	-	-	-	Part III - Sheet 4
4.2(b)	Engineering drawings of the landfill in both plan and cross-sectional views, depicting: how the facility will be constructed, operated and closed; areas of potential environmental impact; and the ability of the design, construction, operation, and closure of the facility to comply with the applicable requirements of this Part. If the landfill is to be constructed in stages, the initial permit application must contain the conceptual design for the entire landfill and the detailed construction drawings for the initial stage to be constructed. The engineering drawings must include, at a minimum:	-	-	-	-	-
4.2(b)(1)	the original undeveloped site topography before excavation or placement of waste, if available;	NA	NA	NA	NA	NA
4.2(b)(2)	the existing site topography (if different from the original undeveloped site topography) including the location and approximate thickness and nature of any existing waste;	-	-	-	-	Part III - Sheet 4
4.2(b)(3)	the elevations of the known or interpolated seasonal high groundwater table, and the wells from which data were taken to establish the seasonal high groundwater table, using a 100-foot square grid, including surface elevation, bedrock elevation, depth to bedrock, and groundwater flow direction at each well;	-	-	-	-	Part III - Sheets 12, 13

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
4.2(b)(4)	the known and interpolated bedrock elevations, the upper and lower limits of any					Part III -
	confining overburden deposits, and all boreholes, test pits, wells, and other points used	-	-	-	-	Sheets 12, 13
4.2(b)(5)	to supply this information using a 100-foot square grid; the proposed limits of excavation delineating the base elevations of the liner and					
4.2(0)(3)	leachate collection and removal system and pore pressure relief system if present, using		_	_	_	Part III -
	a 100-foot square grid;					Sheets 12, 13
4.2(b)(6)	the details for all components of the final cover and the final cover elevations for each					Part III -
	100-foot square grid intersection;	-	-	-	-	Sheets 12, 13
4.2(b)(7)						
	the details for all components of the liner system, anchor trenches and leachate					Part III -
	collection and removal system, including all critical grades and elevations of collection pipe inverts and drainage envelopes, manholes, cleanouts, valves, sumps, leachate flow	-	-	-	-	Sheets 7 - 24
	control and metering devices, and drainage blanket thicknesses;					
4.2(b)(8)	the berms, dikes, ditches, drainage swales, culverts, sedimentation ponds, recharge					Part III -
	basins and other devices used to divert, collect or control surface water run-on or run-	-	-	-	-	Sheets 25 -
	off;					30
4.2(b)(9) 4.2(b)(10)	the groundwater dewatering systems;	NA	NA	NA	NA	NA
4.2(0)(10)	the landfill gas management system used for collecting, treating, venting and monitoring					
	the decomposition gases generated within the landfill, including any active landfill gas					
	collection system components, including the condensate conveyance lines and storage facilities. Detailed plans of any active gas collection system must adequately delineate,					
	in plan and in cross-sectional views, the location and grades of all landfill gas collection					Part III -
	lines and landfill gas control lines, locating and showing all critical elevations of the			-		Sheets 34 -
	collection pipe inverts, cleanouts, condensate knockout sumps, and valves. Layout of the					39
	system structure must be included, showing equipment locations; sampling locations;					
	on-site drainage structures; and extraction well location, depth of placement, and					
	construction materials;					
4.2(b)(11)	the location of groundwater monitoring wells;	-	-	-	Part VII - Figure 2	-
4.2(b)(12)	the location of geophysical and geochemical monitoring devices or structures, if needed;	NA	NA	NA	NA	NA
4.2(b)(13)	the location of leachate storage, treatment and disposal system including the leachate					Part III -
	conveyance network and secondary containment system required in section 363-6.20 of	-	-	-	-	Sheets 4, 5,
	this Part; and					18 - 24, 31 - 33
4.2(b)(14)	the plans detailing the construction staging area if proposed, and facility entrance area					Part III -
	including gates, fences and signs.	-	-	-	-	Sheets 31-33
4.2(c)						
	Operational drawings for the facility depicted in plan and cross-sectional views, showing:	-	-		-	-
4.2(c)(1)	generalized fill progression drawings depicting fill progression for the life of the facility,					Part III -
	identifying the depth, location and sequence of fill progression, and including the elevation of the liners, leachate collection and removal system, landfill gas management	-	-	-	-	Sheets 7 - 24,
	system and projected final waste mass;					31 - 33
4.2(c)(2)	detailed fill progression drawings depicting fill progression for the first operational					Dowt III
	phase, identifying the placement of waste including special waste areas, lift thickness,	_	_	_	_	Part III - Sheets 7 - 24,
	and compacted thickness of operating and final cover; landfill gas management system;					31 - 33
4.2(c)(3)	and on-site roadways and traffic patterns; and a survey control drawing depicting a method of survey baseline and elevation control					
4.2(0)(3)	and identifying the location and description of a permanent surveying benchmark and					
	other critical facility monitoring locations and appurtenances for each 25 acres of the	I NA	NA	NA	NA	NA
	developed facility.					
4.3	Engineering Report	-	-	-	-	-
4.3(a) 4.3(a)(1)	A site description and analysis of the proposed facility including the following:	-	-	-	-	-
¬.J(a)(⊥)	A brief description of the type and amount of waste, in tons, accepted by the facility,					
	specifying the anticipated maximum amount of wastes to be accepted on a daily and					
	annual basis, including those wastes anticipated to be accepted for use as alternative	Part II - 2.5.3	-	-	-	-
1	operating cover, the anticipated maximum in-place density of waste to be placed in the					
	landfill, and the proposed maximum amount of waste and alternative operating cover					
	that will be placed in the landfill.		1			

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
4.3(a)(2)	A description of the number, types and specifications of all machinery and equipment needed to effectively operate the facility at the proposed rate of waste acceptance, and all proposed structures and areas designated for unloading, processing, sorting, storage, and loading.	Part VI - 5.6	-	Part VI -B	-	-
4.3(a)(3)	A description of the materials and construction methods that demonstrate compliance with the requirements in Subpart 363-6 of this Part and are used for the placement of:	-	-	-	-	-
4.3(a)(3)(i)	each monitoring well pursuant to the requirements of section 363-4.4(k) of this Part;	Part VII - 3.1	-	-	-	-
4.3(a)(3)(ii)	the landfill gas management system;	Part II - 11	-	-	-	Part III - Sheets 34 - 39
4.3(a)(3)(iii)	the leachate conveyance, storage, treatment and disposal system;	Part II - 8	-	-	-	Part III - Sheets 18 - 24
4.3(a)(3)(iv)	the cover system; and	Part II - 6.1 / Part VI - 6.1.4				Part III - Sheet 30
4.3(a)(3)(v)	the liner and leachate collection and removal system. The description must also include the precautions that will be taken to prevent frost action upon the composite liner system in areas where waste will not be placed within one year of department approval of construction certification;	Part II - 5	-	-	-	Part III - Sheets 7-11, 18-24
4.3(a)(4)	A description of post-construction care measures to be taken to ensure that the construction materials noted in paragraph (3) of this subdivision meet the specifications and comply with the requirements of Subpart 363-6 of this Part from the time of construction completion to the beginning of landfill operation.	Part VI - 16	Part VI - Tables 16- 1, 16-2	-	-	-
4.3(a)(5)	A comprehensive and detailed description of each of the following features of the operation of the landfill gas management system:	-	-	-	-	-
4.3(a)(5)(i)	a year-by-year estimate of the quantities of landfill gas that will be generated during the active life and post-closure care period, including a year-by-year estimate of greenhouse gas emissions;		-	-	-	-
4.3(a)(5)(ii)	how landfill gas will be managed;	Part II - 11.2	-	-	-	-
4.3(a)(5)(iii)	how any landfill gas condensate generation will be minimized, disposed, and/or recirculated into the landfill waste mass;	Part II - 3.3.3, 3.4.3, 11.2 / Part VI - 10.1	-	-	-	-
4.3(a)(5)(iv)	all machinery, equipment, and construction materials to be used at the facility, including the equipment design capacity;		-	-	-	-
4.3(a)(5)(v)	how the landfill gas management system will be designed, constructed and maintained so as not to interfere with the integrity of the proposed or existing landfill final cover system; and		-	-	-	-
4.3(a)(5)(vi)	a description of how the landfill gas management system will effectively control landfill decomposition gas-related odors.	Part II - 11.2	-	-	-	-
4.3(b)	A landfill liner subbase settlement analysis that:	Part II - 9.1	-	Part II - B	-	-
4.3(c)	A structural integrity and overall slope stability analysis. The analysis must demonstrate the structural integrity and overall stability of the landfill site, the subgrade, each component of the liner, leachate collection and removal system, and final cover system, and must include:	Part II - 9.2	,	Part II - B	-	-
4.3(d)	A seismic stability analysis. Any facility located in a seismic impact zone, must include a seismic stability analysis. The seismic stability analysis must address the serviceable life of the landfill, its internal components and its related appurtenances and must demonstrate that:	Part II - 9.2	-	Part II - B	-	-
4.3(e)	A description and analysis of the leachate collection and removal system that includes:	-	-	-	-	-
4.3(e)(1)	An evaluation of leachate generation data, including:	Part II - 8.2	-	Part II - B	-	-
4.3(e)(2)	A description of how the components of the landfill liner and leachate collection and removal system will:	Part II - 8.3	-	-	-	-
4.3(e)(3)	An estimate of the maximum daily volume of leachate generated, and a demonstration that the leachate head on the primary liner system will not exceed 12 inches per the provisions of paragraph 363-6.6(a)(3), and that the maximum daily volume of leachate that may infiltrate through the primary liner will not exceed the allowable primary liner leakage rate of 20 gallons per acre per day in accordance with provisions of paragraph 363-7.1(f)(7).	Part II - 8.1, 8.2, 8.3	-	Part II - B	-	-

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
4.3(f)	Design information for a stormwater/run-off conveyance system. This information must demonstrate that the stormwater detention/retention basin system is designed to manage a 100-year, 24-hour design storm from the landfill site without sustaining damage. This must include an evaluation of impacts on the stormwater/run-off conveyance system which would be anticipated as from a 500-year storm to inform a contingency plan for such an event.	Part II - 10	-	Part II - B	-	Part III - Sheets 26 - 28
4.3(g)	A mined land use plan. If the facility plans to use on-site excavation of operating cover material for the landfill, and construction of that landfill will not result in the reclamation of the area from which the operating cover material is to be removed, the facility must submit a mined land use plan with information that demonstrates compliance with the applicable requirements of Part 422 of this Title. A mined land use plan is not required if the facility plans to perform on-site excavation of material to be used as operating cover for the landfill and the landfill will be situated upon and result in the reclamation of the area from which the operating cover material is to be removed. Operating cover material excavated on-site may not be used off-site unless the applicant has first obtained a mining permit pursuant to Part 422 of this Title;	Part VIII	-	•	-	Part VIII - Plan Set
4.3(h)	Facility closure and post-closure design plan. The facility's closure and post-closure	-	-	-	-	-
4.3(h)(1)	design plan must include at a minimum: closure design;	Part II - 6.1	_		_	-
4.3(h)(2)	post-closure water quality monitoring program;	Part II - 6.2.1	-	-	-	-
4.3(h)(3)	an operation and closure plan for the leachate collection, treatment, and storage facilities;	Part II - 6.2.2	-	-	-	-
4.3(h)(4)	an operation and closure plan for the landfill gas management system; and	Part II - 6.2.3	-	-	-	-
4.3(h)(5)	any proposed and alternative end uses for the site.	Part II - 6.6	-	-	-	-
4.4 4.4(a)	Hydrogeologic Investigation A hydrogeologic investigation report is required and must contain the following:	- Part IV	-	-	-	-
	A description of the geology and hydrology of the existing or the facility in sufficient detail to determine the suitability of the site for the disposal of waste. The report must be submitted under the stamp and signature of a professional geologist or professional engineer licensed and currently registered to practice in the State of New York. The scope and extent of the hydrogeologic investigation must be based on the hydrogeologic complexity of the site and the ability of the site to restrict contaminant migration, and include:	Part IV - 5	-	-	-	-
4.4(a)(1)(i)	an understanding of groundwater and surface water flow and how it relates to local and regional patterns, including a groundwater table elevation map with groundwater flow direction calculated from hydraulic head measurements;	Part IV - 5.2	Part IV - Table 4	ī	Part IV - Figures 16 -20	Part IV - Sheets P-7 - 10
4.4(a)(1)(ii)	a definition of the critical stratigraphic section;	Part IV - 6.2	-	-	Part IV - Figure 25	-
4.4(a)(1)(iii)	the establishment of an environmental monitoring system capable of readily detecting a contaminant release from the facility; and	Part IV - 7 / Part VII	-	-	-	-
4.4(a)(1)(iv)	a description of the engineering properties of the site, which provide the basis for the design and construction of the facility including the; and contingency plans relating to groundwater or surface water contamination or gas migration.		Part IV - Table 2	Part IV -B.3, C	-	-
4.4(a)(2)	Raw field data, analytical calculations, maps, flow nets, cross-sections, interpretations (with alternative interpretations where applicable), and conclusions. All maps, drawings and diagrams must have a minimum scale of 1:24,000, unless otherwise approved by the department. The description must include:		-	Part IV -B - E	Part IV - Figures 1 - 24	Part IV - Sheets P-1 - 10
4.4(a)(2)(i)	Regional geology. A discussion of the regional geology demonstrating how the regional geology relates to the facility's geology and the location of nearby sensitive environments must include:		-	-	Part IV - Figure 6	-
4.4(a)(2)(i)(a)	bedrock stratigraphy and structural geology, including formation and member names, geologic ages, rock types, thicknesses, the units' mineralogical and geochemical compositions and variabilities, rock fabrics, porosities, bulk permeabilities, and other distinctive features;	Part IV - 4	-	-	-	-
4.4(a)(2)(i)(b)	glacial geology, including a discussion of the formation, timing, stages, and distribution of glacial deposits, advances and retreats, and hydrologic characteristics of the surficial deposits, such as kames, eskers, outwash moraines, etc.;	Part IV - 4	-	-	Part IV - Figure 6	Part IV - Sheet 1
4.4(a)(2)(i)(c)	major topographic features, their origin and their influence upon drainage basin characteristics; and	Part IV - 4, 5.2	-	-	-	-

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
4.4(a)(2)(i)(d)	surface water and groundwater hydrologic features, including surface drainage patterns, recharge and discharge areas, wetlands and other sensitive environments, inferred regional groundwater flow directions, aquifers, aquitards and aquicludes, primary water supply and principal aquifers, public water supply wells, and private water supply wells identified in the water supply well survey; any known peculiarities in surface water and groundwater geochemistry; and any other relevant features.	Part IV - 4, 5	-	-	Part IV - Figures 6, 7	-
4.4(a)(2)(ii)	Facility geology. Hydrogeologic conditions at the facility in three dimensions and their relationship to the proposed facility. The report must:	Part IV - 5	Part IV - Table 1	-	-	-
4.4(a)(2)(ii)(a)	define site geology, surface water and groundwater flow, and must relate site-specific conditions to the regional geology;	Part IV - 5, 6	-	-	Part IV - Figures 9 - 12	Part IV - Sheets P-3 - 6
4.4(a)(2)(ii)(b)	describe the potential impact the facility may have on surface and groundwater resources and other receptors, including changes in hydrogeologic conditions that may occur with site development, and the potential for and effects of off-site contaminant migration;	Part IV - 5, 6	-	-	-	ı
4.4(a)(2)(ii)(c)	describe hydrogeologic conditions in sufficient detail to construct a comprehensive understanding of groundwater flow that can be quantified and verified through hydrologic, geochemical, and geophysical measurements;	Part IV - 5, 6	-	-	-	-
4.4(a)(2)(ii)(d)	provide sufficient data to specify the location and sampling frequency for environmental monitoring points, form the basis for contingency plans regarding groundwater and surface water contamination and explosive gas migration, and support the design of the	Part IV - 7 / Part VII	-	-	1	-
4.4(a)(2)(ii)(e)	specifically discuss all units in the critical stratigraphic section. This evaluation must include maps, cross-sections, other graphical representations, and a detailed written analysis of the following:	Part IV - 6	-	-	Part IV - Figure 25	-
4.4(a)(2)(ii)(e)(1)	all hydrogeologic units (e.g., aquifers, aquitards and aquicludes), and how they relate to surface water and groundwater flow. This must include all hydrogeologic data collected during the site investigation and explain and evaluate the hydrologic and engineering properties of the site and each specific unit; and	Part IV - 5	-	-	-	-
4.4(a)(2)(ii)(e)(2)	local groundwater recharge and discharge areas, high and low groundwater tables and potentiometric surfaces for each hydrogeologic unit, vertical and horizontal hydraulic gradients, groundwater flow directions and velocities, groundwater boundary conditions, surface water and groundwater interactions, and an evaluation of existing	Part IV - 5	-	-	-	-
4.4(b)	Any aspect of the site investigation that deviates from these requirements of this section must be identified and justified in the site investigation report and must be approved by the department.	Part IV - 3	-	Part IV - A	-	-
4.4(c)	The applicant must employ current, standard, and generally accepted procedures in obtaining the required hydrogeologic information.	Part IV - 3	-	Part IV - A	-	-
4.4(c)(1)	The department may approve of alternative or innovative methods; however, the department may initially require redundant technologies to prove the reliability of a new method.	Part IV - 3	-	Part IV - A	-	1
4.4(c)(2)	A professional geologist licensed and currently registered to practice in the State of New York State, having experience in similar hydrogeologic investigations, must supervise all procedures in a manner that ensures the accuracy of the data and precludes environmental degradation.	Part IV - Certification		-	,	-
4.4(c)(3)	The location of all installations, geophysical and geochemical surveys, and seismic lines for the proposed investigation must be shown on a map with the same scale and coordinate grid system used in the application.	-	-	-	Part IV - Figures 2,	Part IV - Sheet P1
4.4(d)	Literature search. A comprehensive search for pertinent and reliable information concerning regional and site-specific hydrogeologic conditions is required. The literature search must include, as available, records and reports of the Department of Health, the Department of Transportation, the U.S. Soil Conservation Service, and the New York State Geological Survey; basin planning reports, groundwater bulletins, water supply papers, professional papers and other open file reports of the U.S. Geological Survey; bulletins, circulars, map and chart series, memoirs and other publications of the New York State Geologic Survey; publications and bulletins of the Geological Society of America and other professional organizations; publications of the EPA and the department; college and university reports; and aerial photography and remotely sensed imagery.	Part IV - 3.2, 9	-	Part IV - G	-	-

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
4.4(e)	Surficial geologic mapping. The facility must be mapped to determine the distribution of surficial deposits on and surrounding the site based on information from the hydrogeologic investigation, field evaluations, and field confirmation of all interpretations made on the site itself. The surficial geological map must be submitted under the stamp and signature of a professional geologist or professional engineer licensed and currently registered to practice in the State of New York.	Part IV - 3.3, 5	1	Part IV - G	Part IV - Figure 10	Part IV - Sheet P4
4.4(f)	Test pits. Test pits may be used to determine shallow stratigraphy. The test pits must be logged by a professional geologist or engineer licensed to practice in the State of New York, and with experience in similar hydrogeologic investigations. Logs must be kept and include: elevations; surface features before excavation; depth of the test pit and of all relevant horizons or features; moisture content of units; standard soil classifications, stratigraphy, soil structure, bedrock lithology, and brittle or secondary structures in soil and bedrock; active seepage; and a sketch showing these features for each test pit. Test pits must be promptly backfilled and compacted with the excavated materials. The department may require that undisturbed soil samples be taken and tested in accordance with paragraph 363-4.4(I)(2) of this Subpart.	Part IV - 3.3	-	Part IV - B.1	-	-
4.4(g)	Water well surveys. A survey of public and private water wells within one mile downgradient and one-quarter mile upgradient of the facility must be conducted. Surveys must obtain, where available, the location of wells, which must be shown on a map with their approximate elevation and depth, name of owner, age and usage of the well; stratigraphic unit screened; well construction; static water levels; well yield; perceived water quality; and any other relevant data that can be obtained.	Part IV - 3.10, 4.3	-	Part IV - F	Part IV - Figure 5	-
4.4(h)	Geophysical and geochemical surveys. The department may require the use of geophysical and geochemical methods, such as electromagnetic, resistivity, seismic surveys, remote sensing surveys, downhole geophysics, isotope geochemistry, and soil gas analysis to justify the interpretations and conclusions of the site investigation report, to provide information between boreholes, and to aid in the siting of wells. The geophysical and geochemical surveys must be submitted under the stamp and signature of a professional geologist or professional engineer licensed and currently registered to practice in the State of New York.	-	-	-	-	-
4.4(i)	Tracer studies. The department may require the use of tracer studies to aid in understanding groundwater flow, including:	-	-	-	-	-
4.4(i)(1)	Where a site overlies limestone or dolostone bedrock or karst environments. Tracer studies must identify areas of groundwater flow from the facility attributed to secondary permeability, any recharge or discharge areas on and surrounding the site, groundwater storage, and seasonal variations of water levels; and	-	-	-	-	-
4.4(i)(2)	To monitor sites with existing contamination, in accordance with subdivision 363-5.1(g)(2) of this Part.	-	-	1	-	-
4.4(j)	Site investigation work plan. The site investigation work plan must clearly define the scope of the intended investigation, all methods used in investigating the hydrogeologic conditions of the site and any specific hydrogeologic questions to be addressed.	Part IV	-	Part IV - A	-	-
4.4(k)	Monitoring wells and piezometers.	Part IV	-	Part IV - B	-	-
4.4(I)	Geologic sampling.	Part IV	-	Part IV - B	-	-
4.4(m)	Logs.	Part IV	-	Part IV - B	-	-
4.4(n)	In situ hydraulic conductivity testing. In situ hydraulic conductivity testing must be done in all monitoring wells and piezometers, unless otherwise approved by the department. The testing method used must not introduce contaminants into the well. If contamination is known or suspected to exist, all water removed must be properly managed. Hydraulic conductivities may be determined using pump tests, slug tests, packer tests, tracer studies, isotopic geochemistry, thermal detection, or other suitable methods.		Part IV - Table 2	Part IV - D	-	-
4.5	CQA/CQC Plan	-	-	Part V	-	-
	The CQA and CQC plan must address the observations and tests that will be used before, during, and upon completion of construction to ensure that the construction materials and activities meet the requirements of Subpart 363-6 of this Part. For each specified phase of construction, this plan must include:	_	-	-	-	-

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
4.5(a)	Delineation of responsibilities. A delineation of the responsibilities of all personnel involved in implementing the CQA and CQC plan. A specific chain of command for both the CQA and CQC inspectors and the project engineer must be identified. The minimum number of CQA and CQC officers and supporting personnel to be provided must be described for each major phase of construction.		-	-	-	-
4.5(b)	Personnel Qualifications. A description of the required level of experience, training, and certification for the contractor, installation crew, and CQA and CQC officers and inspectors. In addition, a description of any professional, financial, or other relationships between the project engineer, the facility owner or operator, and the construction contractor(s), and a demonstration that they are capable of operating independently and without influence must be included.	Part V - 2	1	-	-	,
4.5(c)	Inspection activities. A description of all field observations, tests, equipment, and calibration procedures for field testing equipment that will be used.	Part V	-	Part V - A	-	-
4.5(d)	Sampling strategies. A description of all construction material sampling protocols, including sample size, methods for determining sample locations and frequency of sampling.	Part V	-	Part V - A	-	-
4.5(e)	Documentation. A description of the recordkeeping requirements for CQA and CQC activities. This must include daily summary reports, inspection data sheets, problem identification and corrective measures reports, acceptance reports, and final documentation.	Part V	1	Part V - A	-	-
4.5(f)	A certification that the CQA and CQC plan is referenced in appropriate construction contract documents.	Part V - 1.0	-	-	-	-
4.6	Facility Manual	-	-	Part VI	-	-
	The facility manual must: refer to engineering drawings and reports prepared in accordance with this Subpart as appropriate; describe the anticipated day-to-day facility operations throughout the active life of the landfill; address appropriate sequencing of all major landfilling activities; demonstrate how the landfill will meet the operating and reporting requirements enumerated in Subparts 363-7 and 363-8 of this Part; and include the following information:	-	-	-	-	-
4.6(a)	Sustainability plan. The sustainability plan must describe how the landfill will be designed and operated in a manner that will conserve and sustain natural resources. The sustainability plan must describe how natural resources and airspace will be conserved through use of concepts such as front-end diversion of recyclables, reduced disposal of organic wastes, reduction in greenhouse gas emissions, utilization of alternative operating cover materials, alternative energy or materials resource production, promote rapid waste mass stabilization, utilize landfill reclamation, or other sustainable landfill management techniques. The sustainability plan must be updated and submitted to the department no less than every five years.	Part VI - 2.0	-	-	-	-
4.6(b)	Post-construction care plan. The post-construction care plan must describe procedures to ensure that the post-construction care requirements will be maintained prior to initial operation.	Part VI - 3.0	-	-	-	-
4.6(c)	Fill progression and placement plan. The fill progression and placement plan must include:	-	-	-	-	-
4.6(c)(1)	a description of the procedures and precautions to be taken during the placement of the first five-foot lift of select waste above the liner and leachate collection system describing the select waste, its placement, and operation of collection vehicles and compaction equipment to prevent damage to the liner system;	Part VI - 5.2	-	-	-	-
4.6(c)(2)	a description of the landfill's fill progression, addressing and detailing typical daily cell progression and lift height, fill sequence, and provisions for subsequent development of the landfill, referring to engineering drawings and	Part VI - 5.3, 5.5	-	-	-	Part III - Sheets 31 - 32
4.6(c)(3)	reports prepared in accordance with this Subpart;					

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
4.6(c)(4)	a daily log of wastes received at the landfill that includes the location of each day's operation in accordance with the fill progression plan;	Part VI - 5.4	-	-	-	-
4.6(c)(5)	a depiction of the final grades as described in the approved closure plan; and	-	-	-	-	Part III - Sheet 9
4.6(c)(6)	the location of vertical and horizontal gas collection lines.	Part II - 11 / Part VI - 10.1	-	-	-	Part III - Sheets 34, 35
4.6(d)	Waste control plan. The waste control plan must include:	-	-	-	-	-
4.6(d)(1)	a description of the landfill's receiving and monitoring process for waste;	Part VI - 4.1, 4.3.1	-	-	-	-
4.6(d)(2)	identification and handling procedures for wastes requiring special handling or treatment (e.g., friable asbestos-containing waste, sludges, drill cuttings, etc.);	Part VI - 4.2	-	-	-	-
4.6(d)(3)	procedures to identify wastes that have low-permeability or low shear-strength and a description of methods to be used to blend these wastes with other wastes to minimize waste mass instability and maximize leachate movement through the waste mass; and	Part VI - 4.2.6	-	-	-	-
4.6(d)(4)	a program for detecting and preventing the disposal of unauthorized wastes at the facility. This program must include, but not be limited to:	Part VI - 4.1, 4.3				
4.6(e)	Cover material management plan. The cover material management plan must include:	-	-	-	-	-
4.6(e)(1)	material specifications for operating, intermediate, and final cover;	Part VI - 6.1	-	-	-	-
4.6(e)(2)	identification of the quantities required for each type of cover material, and its on-site storage location; and	Part VI - 6.3	-	-	-	-
4.6(e)(3)	the method of cover material placement, compaction, anticipated permeability and density.	Part VI - 6.1	-	-	-	-
4.6(f)	Environmental monitoring plan. The environmental monitoring plan must include:	Part VII	-	-	-	-
4.6(f)(1)	a description of the critical stratigraphic section;	Part IV / Part VII - 2	-	-	-	-
4.6(f)(2)	a description of all proposed monitoring points, including leachate, underdrains, groundwater, surface water, and sediment;	Part VII - 3	Part VII - Table 1	-	Part VI - Figure 2	-
4.6(f)(3)	the analyses to be performed;	Part VII - 3	Part VI - Tables 2A - 2D	-	-	-
4.6(f)(4)	a description of the statistical methods to be used;	Part VII - 4	-	-	-	-
4.6(f)(5)	reporting requirements;	Part VII - 7	-	-	-	-
4.6(f)(6)	a site plan with topographic contours which depicts the location of all proposed monitoring points in relation to facility boundaries, surface water bodies, and property boundaries; and		-	-	Part VI - Figure 2	-
4.6(f)(7)	an implementation plan that contains a sampling schedule, the sequence of landfill construction, a schedule for the construction of the groundwater monitoring wells, and a schedule for initiation of the existing water quality and operational water quality monitoring programs, and a contingency water quality monitoring plan which specifies trigger mechanisms for its initiation		-	-	-	-
4.6(f)(8)	Sampling design requirements. The environmental monitoring plan must comply with the following	Part VII	-	-	-	-
4.6(f)(8)(i)	Groundwater sampling. Groundwater monitoring wells must be capable of detecting facility-derived groundwater contamination within the critical stratigraphic section.		-	Part VII - B	Part VI - Figure 2	-
4.6(f)(8)(ii)	Surface water and sediment sampling. The environmental monitoring plan must include monitoring points for all surface water bodies that may be significantly affected by a contaminant release from the facility. Sampling activities at these monitoring points must include surface water, and may include sediment if determined necessary by the department.	Part VII - 3	-	-	Part VI - Figure 2	-
4.6(f)(8)(iii)	Leachate sampling. The location of all leachate sampling points at the facility must be described.	Part VII - 3	-	-	Part VI - Figure 2	-

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
4.6(f)(8)(iv)	Water supply well sampling. If sampling and analysis of water supply wells is to be performed, then the sampling frequency and analysis for water supply wells should be determined on a case-by-case basis in conjunction with the Department of Health and/or the local health department.	-	-	-	-	-
4.6(f)(9)	Water Quality Monitoring Programs. A water quality monitoring program must be implemented for all environmental monitoring points specified in the environmental monitoring plan. As described in this subdivision, the water quality monitoring program must be tailored to the site to establish existing water quality prior to disposal of waste, operational water quality during operation of the site, the post-closure period, and the custodial care period, and, if contamination is detected at the site, contingency water quality.		1	,	-	-
4.6(f)(9)(i)	Existing water quality. The facility must establish an existing water quality database to characterize the site geochemistry.	Part VII - 4	-	-	-	-
4.6(f)(9)(ii)	Operational water quality. The operational water quality monitoring is conducted during the operation, closure, and post-closure periods of the facility must be described. The operational water quality monitoring must be designed to distinguish facility-derived contamination from the existing water quality at the site using the trigger values established pursuant to item 363 4.6(f)(9)(i)('b')('4')('ii') of this section. The minimum requirements for operational water quality monitoring are:	Part VII - 4	-	-	-	-
4.6(f)(9)(iii)	Contingency water quality. A contingency water quality monitoring, as described in this paragraph, which must be conducted when a significant increase over the existing water quality value has been detected pursuant to clause 363-4.6(f)(9)(ii)('e') of this section for one or more of the routine or baseline parameters listed in the Water Quality Analysis Tables in subdivision 363-4.6(h) of this Subpart. All contingency water quality monitoring plans are subject to department approval, and must include the following:		-	-	-	-
4.6(f)(10)	Reporting Requirements. Unless more rapid reporting is required to address an imminent environmental or public health concern, the owner or operator of the facility must report all water quality monitoring results to the department within 90 days of the conclusion of the sample collection. The report must include:	Part VII - 7	-	-	-	-
4.6(f)(10)(i)	a table showing the sample collection date, the analytical results (including all peaks even if below method detection limits [MDLs]), designation of upgradient wells and location number for each environmental monitoring point sampled, potentiometric data, applicable water quality standards, and groundwater protection standards if established, MDLs, and Chemical Abstracts Service (CAS) numbers for all parameters;	Part VII - 7	-	-	-	-
4.6(f)(10)(ii)	tables or graphical representations comparing current water quality with existing water quality and with upgradient water quality. These comparisons may include Piper diagrams, Stiff diagrams, tables, or other analyses;	Part VII - 7	-	-	-	-
4.6(f)(10)(iii)	a summary of the contraventions of State water quality standards, significant increases in concentrations above existing water quality, any exceedances of groundwater protection standards, discussion of results, and any proposed modifications to the sampling and analysis schedule necessary to meet the requirements of paragraph (3) of this subdivision;	Part VII - 7	-	-	-	-
4.6(f)(10)(iv)	all AQA/AQC documentation required pursuant to subdivision 363-4.6(g) of this section must be submitted to the department in a form acceptable to the department;	Part VII - 7	-	-	-	-
4.6(f)(10)(v)	the annual report must contain a summary of the water quality information presented in subparagraphs (ii) and (iii) of this paragraph with special note of any changes in water quality which have occurred throughout the year;	Part VII - 7	-	-	-	-
4.6(f)(10)(vi)	the data quality assessment report required pursuant to paragraph 363-4.6(g)(5) of this section;	Part VII - 7	-	-	-	-

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
4.6(f)(10)(vii)	an updated historical water quality monitoring table for each parameter that has been detected at least once at one or more monitoring points. Each table must include a column for each monitoring point, a row for each sampling date, detected concentrations, data qualifiers, detection limits associated with each non-detect, and summary statistics including, but not limited to means, standard deviations, medians, 10th and 90th percentiles. Submission of this table may be limited to the annual monitoring report;	Part VII - 7	-	-	-	-
4.6(f)(10)(viii)	a graph showing time versus concentration for each parameter that has exceeded a groundwater quality standard or a trigger value at each affected monitoring point. Submission of these graphs may be limited to the annual monitoring report; and	Part VII - 7	-	-	-	-
4.6(f)(10)(ix)	updated groundwater contour maps and an evaluation of landfill operation impacts on groundwater elevations and flow patterns. Submission of these maps may be limited to the annual monitoring report, unless otherwise required by the department.	Part VII - 7	-	Part VI - A	-	-
4.6(g)	Site analytical plan. The site analytical plan must describe the method of sample collection and preservation, chain of custody documentation, analyses to be performed, analytical methods, data quality objectives, procedures for corrective actions, and procedures for data reduction, validation and reporting. The site analytical plan will pertain to existing water quality monitoring programs, operational water quality monitoring programs, and a contingency water quality monitoring program that specifies trigger mechanisms for its initiation. The site analytical plan must comply with the following:	Part VII - 5	Part VII - Table 3	-	-	-
4.6(g)(1)	Data quality objectives. Analytic quality assurance (AQA)/analytic quality control (AQC). The site	Part VII	-	-	-	-
4.6(g)(2)	analytical plan must include a discussion of the AQA/AQC for the sampling program associated with the facility and must be sufficient to ensure that the data generated by the sampling and analysis activities are of a quality commensurate with their intended use and the requirements of the department. The discussion must detail the AQA/AQC goals and protocols for each type of environmental monitoring to be performed at the facility. Elements must include a discussion of the quality objectives of the project, enumeration of AQC procedures to be followed, and reference to the specific standard operating procedures that will be followed for all aspects of the environmental monitoring program.		-	-	-	-
4.6(g)(3)	Field sampling procedures.	Part VII - 5	-	-	-	-
4.6(g)(4)	Laboratory procedures.	Part VII - 6	-	-	-	-
4.6(g)(5)	Data quality assessment. At the conclusion of each sampling event and analysis of the samples collected, data quality assessment must occur. A data quality assessment report must be submitted with the results from each sampling event. Data quality assessment must occur in two phases – data validation and data usability analysis.	Part VII - 7	-	-	-	-
4.6(h)	Water quality analysis tables.	Part VII - 7	Part VII - Tables 2A - 2D	-	-	-
4.6(i)	Leachate management plan. The leachate management plan must include:	-	-	-	-	-
4.6(i)(1)	a description of how the landfill will be constructed, operated, and closed in a manner that minimizes the generation of leachate, except in those cases where the department has approved the recirculation of leachate for waste mass stabilization enhancement, and how the migration of leachate into surface water or groundwater will be prevented;	Part VI - 6.1.4, 8, 16	-	-	-	-
4.6(i)(2)	a description of operational methods to minimize the occurrence of perched leachate trapped above the leachate collection and removal system and surface seeps of leachate from above-grade landfill operations;		-	-	-	-
4.6(i)(3)	a schedule for biennial video inspection and annual maintenance of the primary and secondary leachate collection and removal system.	Part VI - 8.2	-	Part VI - A	-	-
4.6(i)(4)	a schedule for the monitoring and recording of the secondary leachate collection and removal system flow data to determine the presence, quantity, nature and significance of any liquid detected;	Part VI - 8.6	-	-	-	-

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
4.6(i)(5)	a discussion of the specific design and operational features related to the					
	system, including leachate monitoring and sampling, locations of all leachate	Part VI - 8				
	sampling points, alarm systems and maintenance, and any required back-up	Part VI - 8	-	-	-	-
	equipment; and					
4.6(i)(6)	if heads to receive the control of the heads to receive the control of the contro	Part II - 6.2.2 /				
	if leachate recirculation is proposed, the leachate management plan must	Part VI - 8,	-	-	-	-
	include:	16.1.2				
4.6(j)	Odor control plan. The odor control plan must include:	Part VI - 9	-	-	-	-
4.6(k)	Gas monitoring and emission control plan. The gas monitoring and emission					
	control plan must include:	-	-	-	-	-
4.6(k)(1)	a description of the day-to-day operation of the landfill gas management system					
	with respect to operation of odor and emission controls;	Part VI - 9, 10.2	-	-	-	-
4.6(k)(2)	a description of any air quality monitoring, including monitoring for fugitive					
	landfill odor and air emissions; and	Part VI - 9, 10.2	-	-	-	-
4.6(k)(3)	, , , , , , , , , , , , , , , , , , , ,					
- ()(-)	for a landfill with an appurtenant landfill gas-to-energy facility or other landfill					
I	gas recovery facility, a discussion of how the landfill's odor and air emission	Part VI - 10.3	-	-	-	-
	controls are integrated with a recovery facility.					
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
4.6(I)	Winter and inclement weather operation plan. A description of how winter and					
	inclement weather operations will be conducted, including identification of the					
	specific actions to be taken to prevent frost action on the liner system in places	Part VI - 11	-	-	-	-
	where waste will not be placed within one year of construction certification					
	approval.					
4.6(m)						
(,	Residential drop-off operation plan. A description of the operation of a					
	residential drop-off area, if applicable, for non-commercial vehicles to unload	Part VI - 12	-	-	-	-
	waste and recyclables at an area other than the landfill working face.					
4.6(n)	A radioactive waste detection plan. The radioactive waste detection plan must					
4.0(11)	include procedures for detecting radioactive material; operation and					
	·					
	maintenance documents for radiation detectors which address proper	Part VI - 14	-	-	-	-
	equipment placement for effective operation and include setting of					
	investigation alarm setpoint settings and calibration methods; and response					
4.6(-)	procedures to be implemented if radioactive waste is detected.					
4.6(o)	Emergency response plan. An emergency response plan must include a	-	-	-	-	-
	description of, at a minimum, the actions to be taken in response to:					
4.6(o)(1)	uncontrolled explosive landfill gases detected on-site or beyond the property		-	-	-	-
4 14-1	boundary;	15.2				
4.6(o)(2)	unexpected events during the construction and operation of the landfill gas					
	management system, including the equipment to be utilized to maintain proper	Part VI - 15.1,	-	-	-	-
	landfill gas venting and control when normal operations cease; and	15.3, 15.4				
4.6(o)(3)	unexpected events during the subsequent construction and/or daily operation		-	-	-	-
4 >	of the landfill's leachate collection and removal system.	15.3, 15.4				
4.6(p)	Conceptual closure, post-closure care, custodial care, and end use plan. The					
	conceptual closure, post-closure care, custodial care, and end use plan must	-	-	-	-	-
	include:					
4.6(p)(1)	a site plan that shows proposed final contours, property lines, storm water					
	drainage system, streams and water courses, roads, structures and, if		_	_	_	Part III -
	applicable, the groundwater and leachate treatment system, air pollution					Sheet 9
	control system and any active landfill gas collection system;					
4.6(p)(2)	typical details of final cover system components and facility structures;	_	_	_	_	Part III -
						Sheet 30
4.6(p)(3)	a description of how the sequential closure of areas of the landfill is expected to	Part VI - 6.1.4,				
	progress in concert with the fill progression schedule, including effects of landfill	16.2	-	-	-	-
	reclamation activities if proposed;	10.2				
4.6(p)(4)	an estimate of the greatest number of landfill cells which, at any given point					
	during the lifetime of the facility, will have received waste but not undergone	Part VI - 16	-	-	-	-
	final closure:					
14 C(-)(F)	an estimate of the maximum volume of waste and alternative operating cover					
4.6(p)(5)	all estimate of the maximum volume of waste and alternative operating cover	Part VI - 16			1	

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
4.6(p)(6)	sufficient information upon which to estimate closure costs and post-closure and custodial care monitoring and maintenance costs. This information must be based upon the requirements of Subpart 363-9 of this Part, including a rolling 30-year post-closure care period, and must include estimates of:	_	Part VI - Tables 16- 1, 16-2	-	-	-
4.6(p)(7)	a conceptual end use for the site, if proposed.	Part VI - 16.5	-	-	-	-

TABLE I-C

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
SUBPART 363 I	ANDFILLS					
5.1	Siting Requirements	-	-	-	-	-
	In addition to the requirements of section 360.8 of this Title, the following siting requirements apply to all new landfills and expansions of existing landfills regulated under this Part:	-	-	-	-	-
5.1(a)	Bedrock and Unconsolidated Deposits	Part II - 2.4.4	-	-	-	-
5.1(b)	The site must not be in proximity to any existing mines, caves or other anomalous features that may alter groundwater flow, unless it can be demonstrated to the department that a containment failure of the landfill would not result in contamination entering the features.	Part II - 2.4.5				
5.1(c)	Agricultural Land	Part II - 2.4.6	-	-	-	-
5.1(d)	Primary water supply aquifers, principal aquifers, and public water supplies.	Part II - 2.4.7	-	-	-	-
5.1(e)	Aircraft Safety	Part II - 2.4.8	-	Part II - B	-	-
5.1(f)	Unstable areas. New landfills or expansions of existing landfills must not be located in unstable areas that are susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of the landfill structural components designed to prevent releases from the landfill. These may include:	Part II -	-	-	-	-
5.1(g)	Unmonitorable or unremediable areas. New landfills must be located at sites that will allow environmental monitoring and site remediation to be conducted before off-site impacts occur.		-	-	-	-
5.1(g)(1)	Identification of these sites must be based upon the ability to:	-	-	-	-	-
5.1(g)(1)(i)	sufficiently characterize groundwater and surface water flow to determine upgradient and downgradient directions;	Part II - 2.4.10 / Part IV - 5 and 6	-	-	-	-
5.1(g)(1)(ii)	install environmental monitoring points that will detect releases from the entire landfill;	Part II - 2.4.10 / Part IV - 7 / Part VII	-	-	-	-
5.1(g)(1)(iii)	characterize and define a release from the landfill; and	Part II - 2.4.10 / Part VII	-	-	-	-
5.1(g)(1)(iv)	determine what corrective actions may be necessary to respond to a contaminant release, and carry out those corrective actions.	Part II - 2.4.10 / Part VII	-	-	-	-
5.1(g)(2)	Lateral expansions of existing landfills that are already contaminating groundwater may be allowed by the department if the proposed area can be constructed in compliance with the regulations. This may be demonstrated using remedial actions at the existing site resulting in a demonstrated improvement in groundwater quality, and any additional monitoring requirements needed to demonstrate the integrity of the expansion area such as leak detection lysimeters installed beneath the liner, statistical triggers of groundwater monitoring, tracers, additional monitoring wells surrounding the site, and any other monitoring methods required by the department.	Part II - 2.4.10 / Part VII	-	-	-	-
5.1(h)	Fault areas. New landfills and lateral expansions of existing landfills must not be located within 200 feet of a fault that has had displacement in Holocene time unless the owner or operator demonstrates to the department that an alternative setback distance of less than 200 feet will not result in damage to the structural integrity of the landfill and will be protective of public health and the environment.	Part II - 2.4.11	-	-	-	-

TABLE I-C

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
5.1(i)	Seismic impact zones. New landfills and lateral expansions of existing landfills must not be located in seismic impact zones, unless the owner or operator demonstrates to the department that long-term containment structures, including liners, leachate collection and removal system, leachate storage system, and surface water control system, are designed pursuant to the requirements of subdivision 363-4.3(d) of this Part.	Part II -	-	-	,	-

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
SUBPART 36	3 LANDFILLS					
6.1	General Requirements	-	-	-	-	-
6.1(a)	Applicability. Except as described by the transition requirements of section 360.4 of this Title, all new landfills, lateral and vertical expansions of existing landfills, and subsequent development at existing landfills must conform to the requirements set forth in this Subpart.	-	-	-	-	-
6.1(b)	The owner or operator must submit engineering reports, design drawings, and specifications for all new construction of landfill components described in this Subpart prior to construction. Construction must not commence before written approval is received from the department.	Whole Application	All	All	All	All
6.1(c)	The landfill liner and leachate collection and removal system must be designed and constructed to effectively protect surface and groundwater resources from uncontrolled releases of landfill leachate. The components of the liner system must be placed to achieve a minimum slope of no less than two percent, except along leachate collection pipes, which must have a minimum slope of one percent.	Part II - 5.2, 9.1 / Part V	-	-	-	Part III - Sheets 14 - 16, 18, 24
6.1(d)	Any geomembrane, geosynthetic clay liner (GCL), geosynthetic drainage layer, geocushion or other geosynthetic material installed on landfill side slopes must be designed to minimize shear stresses and to withstand the calculated tensile forces acting upon the geosynthetic materials by the transfer of anticipated destabilizing forces to the landfill subgrade. At a minimum, the design must consider the maximum friction angle of any soil-geosynthetic or geosynthetic-geosynthetic interface, along with seepage forces expected in the side slope soil drainage layer in the primary leachate collection and removal system, to ensure that overall slope stability is maintained and to meet the factor-of-safety requirements specified in paragraph 363-4.3(c)(3) of this Part.	Part II - 9.2 / Part V - 8	-	-	-	-
6.1(e)	For lateral expansions adjacent to existing landfills that do not meet the liner system requirements of this Part (i.e., the existing liner system is single composite and the expansion requires double composite), any encroachment on the existing landfill's side slope must be designed and constructed to meet the liner system requirements of this Part.	NA	NA	NA	NA	NA
6.1(f)	Landfills must be designed to minimize the need to decommission existing monitoring wells and to install new monitoring wells as a result of progressive cell construction into areas where monitoring wells are located.	Part IV - 7.0	-	-	-	Part III - Sheets 34,35
6.1(g)	A pre-construction meeting must be held prior to commencement of construction. This meeting must include, at a minimum:	Part V - 1.0	1	-	-	-
6.1(h)	The owner or operator must notify the department at least seven days prior to each of the following activities:	Part V - 1.0	1	-	-	-
6.2	Horizontal Separation Requirements	-	-	-	-	-
6.2	The minimum horizontal separation between the edge of placed waste and the property line must be 100 feet for any landfill, except for landfills in Nassau and Suffolk Counties where the minimum separation must be 50 feet.	Part II - 2.5.1	-	-	-	-
6.3	Groundwater Separation	-	-	-	-	-
6.3	In cases where the base of the constructed liner system is less than five feet above the seasonal high groundwater elevation, the department will require additional groundwater suppression systems to ensure that groundwater does not come in contact with the lowest portion of the landfill liner. At sites where perched water is encountered, the department will determine with respect to groundwater separation distances whether separation distances will be measured from the perched zone or the non-perched water table. The nature of the materials making up this separation, whether natural or backfilled, is subject to department approval. This minimum five feet separation requirement may be reduced or waived upon demonstration of selection of a suitable landfill site, as defined under section 363-5.1(a) of this Part and, that the proposed activity will have no significant adverse impact on the overall stability of the landfill, the environment, or natural resources and that the landfill's performance will be consistent with that which is expected from the application of this Part. In these cases, the department will require additional groundwater suppression systems to ensure that the seasonal high groundwater table does not come in contact with the lowermost portion of the landfill liner during construction, and until the hydrostatic pressures are equalized by weight of the liner system and/or waste.	Part IV - 8	-	-	-	-
6.1	Redrock Senaration					
6.4	Bedrock Separation	-	-	-	-	-

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
6.4	A minimum of ten feet of vertical separation is required between bedrock and the base of the constructed liner at all points along the liner system, except as provided in paragraph 363-6.11(a)(4). The material between the base of the constructed liner and bedrock, whether natural or backfilled and must consist of low permeability soils with silty and clayey characteristics and with the ability to attenuate and absorb contaminants and is subject to department approval.	Part IV - 8	-	-		-
6.5	Landfill Subgrade	-	-	-	_	-
6.5(a)						
	The liner and leachate collection and removal system must be placed on a landfill subgrade that consists of an in-situ soil layer or select fill that is graded and prepared for landfill construction. A foundation-bearing capacity, stability and settlement analysis must be performed in accordance with subdivisions 363-4.3(b), (c), and (d) of this Part.	Part II - 9	-	-	-	-
6.5(b)	Materials required. The landfill subgrade material must be free of visible organic material and consist of on-site soils, or select fill approved by the department. There must be a minimum thickness approved, pursuant to section 363-6.4 of this Part, below the landfill liner system consisting of low permeability soils with silty and clayey characteristics and which exhibit no large-scale, permeable deposits which could result in migration of contaminants off-site prior to detection and remediation.	Part IV - 5	-	-	-	-
6.5(c)	Construction requirements. The subgrade must be sufficiently dry to allow for construction activities and structurally sound to ensure that the first lift and all succeeding lifts of soil placed over it can be adequately compacted to the design requirements and to ensure stability of the landfill.	Part V - 3.3	-	-		-
6.5(d)	Certification requirements. Before any material is placed over the landfill subgrade:	-	-	-	-	-
6.5(d)(1)	the project engineer must inspect the exposed surface to evaluate the suitability of the subgrade and to ensure that the surface is properly compacted, smooth, and uniform, and must ensure that elevations are consistent with the department-approved drawings; and	Part V - 3.3	-	-	-	-
6.5(d)(2)	the subgrade must be tested for density and moisture content at a minimum frequency of nine tests per acre.	Part V - 3.3	-	-	-	-
6.6	Liner System and Final Cover Requirements	-	-	-	-	•
6.6(a)	Double composite liner system. Except as otherwise described in this Part for monofills and C&D debris landfills, all landfills regulated under this Part must have a double composite liner system that consists of a primary leachate collection and removal system, a geocushion, a primary composite liner constructed of a geomembrane liner and a GCL, a secondary leachate collection and removal system, a geocushion, and a secondary composite liner system constructed of a geomembrane liner and two feet of low permeability soil. The landfill must be designed and constructed to meet or exceed the following liner system requirements:	-	-	-	-	-
6.6(a)(1)	On slopes less than or equal to ten percent, the liner system must consist of a double composite liner system which meets the following requirements:	-	-	-	-	-
6.6(a)(1)(i)	the primary composite liner must be comprised of a nominal 60 mil or thicker high density polyethylene (HDPE) geomembrane placed above and in direct and uniform contact with an appropriately specified GCL. In landfills located within the deep recharge area of Nassau or Suffolk County, the primary geomembrane must be a nominal 80 mil or thicker HDPE geomembrane; and	Part V - 6	-	-	-	-
6.6(a)(1)(ii)	the secondary composite liner must be comprised of a nominal 60 mil or thicker HDPE geomembrane placed above and in direct and uniform contact with a minimum two-foot-thick low-permeability soil layer that has a remolded hydraulic conductivity of 1x10 ⁻⁷ centimeter per second or less.	Part V - 6	-	-	-	-
6.6(a)(2)	On slopes greater than ten percent, the liner system must consist of a double liner system which meets the following requirements:	-	-	-	-	-
6.6(a)(2)(i)	from the toe of the slope to five vertical feet up the side slope, the primary liner must meet the double composite liner requirements of subparagraph 363-6.6(a)(1)(i) of this section. Above five vertical feet up the side slope, the primary liner may be constructed of a nominal 60 mil HDPE or thicker geomembrane. For landfills located within the deep recharge area of Nassau or Suffolk County, the primary geomembrane must be a nominal 80 mil or thicker HDPE geomembrane; and	-	-	Part V - A	-	-
6.6(a)(2)(ii)	the secondary composite liner must meet the requirements of subparagraph 363-6.6(a)(1)(ii) of this subdivision.	-	-	Part V - A	-	-

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
6.6(a)(3)	The liner system must include a primary leachate collection and removal system that is designed to maintain no more than 12 inches of leachate depth (head) above the primary liner, except during 24-hour, 25-year storm events and except in sump areas. The leachate collection and removal system must be designed to function with proper maintenance throughout the active life, post-closure period, and custodial care period of the landfill.	Part II - 8.3.1	-	Part V - A	-	-
6.6(a)(3)(i)	The primary leachate collection and removal system must be a minimum of two feet thick.	-	-	Part V - A	-	-
6.6(a)(3)(ii)	On slopes less than or equal to ten percent, the 24 inches of primary leachate collection and removal system must have a hydraulic conductivity of 1.0 centimeter per second or greater. Alternatively, the upper 12 inches of primary leachate collection and removal system may have a hydraulic conductivity of 0.1 centimeter per second or greater if the lower 12 inches has a hydraulic conductivity of one centimeter per second or greater.	ı	1	Part V - A	-	1
6.6(a)(3)(iii)	On slopes greater than ten percent, the entire 24 inch thickness of the primary leachate collection and removal system must have a hydraulic conductivity of 0.1 centimeter per second or greater.	-	-	Part V - A	-	-
6.6(a)(4)	The liner system must include a secondary leachate collection and removal system placed between the primary and secondary liners with a design capacity of at least 1,000 gallons per acre per day and a maximum detection time of 24 hours using steady state flow calculations in a saturated medium.	Part II - 8.3	-	Part II - B / Part V - A	ı	1
6.6(a)(4)(i)	On slopes less than or equal to ten percent, the secondary leachate collection and removal system must include a geosynthetic drainage layer and a minimum of one foot of soil drainage media with a hydraulic conductivity of 0.1 centimeter per second or greater, and a maximum leachate depth (head) of one inch.	Part II - 8.3	-	Part II - B / Part V - A	-	-
6.6(a)(4)(ii)	On all slopes greater than ten percent, the secondary leachate collection system may be constructed of a geosynthetic drainage layer system designed to meet the hydraulic and mechanical needs of the landfill with a head that does not exceed the thickness of the confined drainage layer.	Part II - 8.3	-	Part II - B / Part V - A	-	-
6.6(b)	C&D debris landfills, papermill sludge monofills, and municipal waste combustor ash monofills. Except in Nassau or Suffolk County, the minimum liner requirement for landfills used for the disposal of C&D debris, papermill sludge, or municipal waste combustor ash is a single composite liner comprised of a nominal 60 mil or thicker HDPE geomembrane placed above and in direct and uniform contact with a minimum two-foot-thick low-permeability soil layer that has a remolded hydraulic conductivity of 1x10-7 centimeter per second or less. Above the composite liner, a leachate collection and removal system is required that meets the requirements of paragraph 363-6.6(a)(3) of this section. The department may require additional liner components or other restrictions depending upon the waste to be disposed, monitorability of the site, or other site conditions.	NA	NA	NA	NA	NA
6.6(c)	Other industrial waste monofills. Except in Nassau or Suffolk County, monofills used solely for the disposal of solid waste resulting from industrial operations other than those described above are subject to the double composite liner requirements described in subdivision 363-6.6(a) of this section and section 363-6.7 of this Subpart, unless the applicant demonstrates that an alternative liner system is justified. The department may impose additional or less stringent requirements on these monofills based on the pollution potential of the waste. For those monofills where the applicant demonstrates that an alternative liner system is justified, the need for a formal variance is waived.	NA	NA	NA	NA	NA
6.6(d)	Final cover system. Except as otherwise described in this Part, all landfills must have at a minimum a final cover system that consists of a composite barrier layer, barrier protection and drainage layer, and topsoil layer meeting the requirements of sections 363-6.15 through 363-6.18 of this Subpart and Subpart 363-10 of this Part. The final cover system must be	Part II - 6.1	-	-	-	-
6.7	designed to preclude precipitation from entering the landfill and be capable of preventing landfill gas migration to the atmosphere. Components of Double Composite Liner System					

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

C 7/ \/4\	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
6.7(a)(1)	Primary composite liner. The primary composite liner must be constructed using a GCL which restricts flow through the GCL equal to or better than a compacted soil liner with a hydraulic conductivity of 1 x 10^{-7} centimeters per second or less and which is constructed with bentonite demonstrating chemical and physical stability. The GCL must be placed below and in direct and uniform contact with the primary geomembrane liner. The carrier geotextile of the GCL must be a material that will inhibit the migration of bentonite into the secondary leachate collection and removal system.	Part V - 8	1	Part V - Appendix A	-	1
6.7(a)(2)	Secondary composite liner. The secondary composite liner must be constructed using a minimum two-foot-thick soil liner placed below and in direct and uniform contact with the secondary geomembrane liner. The soil component of the secondary composite liner must:	Part II - 5.2	-	Part V - Appendix A	-	-
6.7(b)	Construction requirements. The project engineer must ensure that the installation of the soil and/or GCL components of the liner system conforms to the following minimum requirements:	-	1	-	-	1
6.7(b)(1)	GCL liner components	-	-	-	-	-
6.7(b)(1)(i)	All GCLs must be placed in accordance with requirements specified in paragraphs 363-6.8(b)(2) through (4) of this Subpart and without damaging any component of the secondary leachate collection and removal system. The GCL must be placed at a slope of no less than two percent except for along the leachate collection pipes which must have slopes of no less than one percent. The GCL must be placed at a slope of no greater than 33 percent in any direction.		-	Part V - A	-	-
6.7(b)(1)(ii)	GCL field seams must be primarily oriented parallel to the line of maximum slope (i.e., oriented along, not across the slope).	-	-	Part V - A	-	-
6.7(b)(1)(iii)	All GCL field seams must be made using bentonite and a minimum 12-inch overlap, and must be made in accordance with the manufacturer's specifications as approved by the design engineer.	-	-	Part V - A	-	-
6.7(b)(1)(iv)	The GCL must not be installed during a precipitation event. Installed GCLs must be covered by the approved geomembrane by the end of the day they are installed and must be loaded with at least one foot of soil within 60 days of installation. Any GCL that becomes hydrated after it is installed and before it is covered with an approved geomembrane must be removed, unless the project engineer determines, and certifies in construction certification report, that the degree of hydration will allow the overlying geomembrane and soil material to be placed without affecting the performance of the installed GCL and that its properties are compliant with the approved specifications.	-	-	Part V - A	-	-
6.7(b)(2)	Soil liner components	-	-	-	-	-
6.7(b)(2)(i)	The soil component of the liner system must be placed at a slope of no less than two percent in directions perpendicular to leachate collection pipes, and no less than one percent in directions parallel to the leachate collection pipes. The soil component of the liner system must be placed at a slope of no greater than 33 percent in any direction.	-	-	Part V - A	-	-
6.7(b)(2)(ii)	During compaction, proper control of the moisture content, lift thickness, compactive energy/kneading action, placement operations and other details necessary to effectively destroy soil clods, eliminate lift interfaces and avoid mixing with subgrade soils must be maintained. The final compacted thickness of each lift must not exceed eight inches. Placement of the first lift of the soil component of the liner system must prevent mixing of the soil liner system materials and subgrade.	-	-	Part V - A	-	-
6.7(b)(2)(iii)	The moisture content and compacted density of the soil component of the liner system must be maintained at all times within the range identified in the moisture-density-permeability relation developed in accordance with subparagraph 363-6.7(c)(2)(v) of this section to ensure that the remolded lift hydraulic conductivity is less than or equal to 1×10^{-7} centimeters per second.	-	-	Part V - A	-	-
6.7(c)	Certification requirements	-	-	-	-	-
	IF a CCI a the anniest annies and annies and the thete		_	I -	I -	-
6.7(c)(1) 6.7(c)(1)(i)	For GCLs, the project engineer must certify that: all GCL sheets used in liner system construction have been inspected by the manufacturer and at the job site for needles and sheet defects; and	Part V - 8.2.1	-	-	-	-

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
6.7(c)(2)	For soil barrier components, the project engineer must certify the quality control testing of any soil liner materials, document that the specified material meets the approved engineering drawings, engineering report, CQA and CQC plan, and project specifications. The hydraulic conductivity requirement for the soil liner material must be less than or equal to 1 x 10-7 centimeters per second. Before and during construction of the soil component of the liner system, the results of the following testing at a minimum must be reviewed and accepted by the project engineer prior to placement:	-	-	Part V - A	-	-
6.7(c)(3)	Quality assurance testing of soil components required under this paragraph must be compared to and evaluated against the quality control testing of paragraph (2) of this subdivision where applicable.	-	-	Part V - A	-	-
6.8	Geomembrane Liners	-	-	-	-	•
6.8(a)	Materials required. The geomembrane base liner material must be constructed of HDPE polymer that is acceptable to the department. Geomembrane base liners constructed of other polymers may be approved by the department based on the equivalent design requirements of Section 363-6.21 of this Part if demonstrated to have equivalent chemical resistance, construction durability, and service life expectancy.	Part V - 6	-	-	-	-
6.8(b)	Construction requirements	-	-	-	-	-
6.8(b)(1)	The geomembrane in both the primary and secondary composite liner systems must be installed in direct and uniform contact with the underlying low-permeability soil layer or GCL in a manner that eliminates waves and creases and must be field seamed to control fluid migration from the landfill.	Part V - 6.3.2, 6.3.3	-	-	-	-
6.8(b)(2)	Geomembranes must be installed at a minimum slope of two percent, except slopes parallel to the leachate collection pipe must have a minimum slope of one percent.	Part II - 9.1	-	Part V - A	-	-
6.8(b)(3)	The surface of the supporting soil upon which the geomembrane will be installed must be free of stones, organic matter, cracks, irregularities, protrusions, loose soil, and any abrupt changes in grade.	Part V - 6.3.1	-	Part V - A	-	1
6.8(b)(4)	The anchoring system must be constructed as shown on the approved engineering drawings to eliminate potential liquid leakage into the secondary leachate collection and removal system by, at a minimum	-	-	-	-	Part III
6.8(b)(5)	Field seams must be constructed in accordance with the following:	-	-	-	-	-
6.8(b)(5)(i)	field seams must be oriented parallel to the line of maximum slope (i.e., oriented along, not across the slope). In corners and irregularly shaped locations, the number of field seams must be minimized. The number of horizontal seams must be minimized. Horizontal seams must be more than five feet from the toe of slope in either direction.	Part V - 6.3.2	-	Part V - A	-	-
6.8(b)(5)(ii)	field seams must be primarily made by using a dual-track thermal fusion seaming method. Extrusion welding of field seams must be minimized to the extent practical;	Part V - 6.1	-	Part V - A	-	-
6.8(b)(5)(iii)	the seam area must be free of moisture, dust, dirt, debris, and foreign material before seaming;	Part V - 6.3.3	-	Part V - A	-	-
6.8(b)(5)(iv)	field seaming is prohibited when either ambient air or sheet temperature is below 32° F, when the sheet temperature exceeds 158° F, when the ambient air temperature is above 120° F, during periods of sustained winds in excess of 20 miles per hour, or during periods of precipitation; and	Part V - 6.3.3	-	Part V - A	-	-
6.8(b)(5)(v)	the field crew foreman of the liner installer must have a documented minimum qualification of installing at least 50 acres of previous landfill or comparable geosynthetic systems, on a minimum of five different projects. Each welding machine must be operated by a welding technician who has been certified to operate the welder by a certification program acceptable to the department.	Part V - 2.1.4	-	Part V - A	-	-
6.8(c)	Certification requirements	-	-	-	-	-
6.8(c)(1)	The project engineer must certify that the results of the quality control testing for all geomembranes meet the requirements of the approved engineering drawings, reports, and specifications before the installation of any geomembrane, including the following information:	-	-	-	-	-
6.8(c)(2)	The project engineer must review the appropriate documentation to certify that the quality control testing of any fabricated factory seams of geomembrane sheets took place at the factory in accordance with the following requirements:	NA (Part V - 6.1)	NA	NA	NA	NA
6.8(c)(3)	The project engineer must certify that quality assurance testing was performed in the field during liner installation demonstrating that the liner conforms to the approved engineering drawings, reports, and specifications and the following requirements:	-	-	-	-	-

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SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
6.8(c)(3)(i)	For each lot number of geomembrane material that arrives at the site, a sample must be collected and archived	Part V - 6.2.2	-	Part V - A	-	-
5.8(c)(3)(ii)	All geomembrane must be visually inspected for uniformity, damage, imperfections, holes, cracks, thin spots, foreign materials, tears, punctures, and blisters. Any imperfections must be immediately repaired and reinspected.	Part V - 6.3.2	-	Part V - A	-	-
5.8(c)(3)(iii)	The project engineer must ensure that trial seams are constructed and destructive seam tests are performed:	-	-	-	-	ı
5.8(c)(3)(iv)	The entire length of all field seams must be nondestructively tested in accordance with the procedures listed in this subparagraph using a test method acceptable to the department. The project engineer or designated representative must:	Part V - 6.3.5	-	Part V - A	-	1
6.8(c)(3)(v)	Destructive testing must be performed on the geomembrane liner seams in accordance with the following requirements using test methods acceptable to the department:	Part V - 6.3.6	-	Part V - A	-	-
5.8(c)(3)(vi)	Upon completion of geomembrane seaming, patching, or reconstruction, post-construction care of the installed geomembrane must commence and, at a minimum, include timely covering and temporary weighting using sandbags, as necessary, to prevent damage from wind uplift, construction, or other sources.	-	-	Part V - A	-	-
6.8(c)(3)(vii)	After placement of the soil drainage layer, an electrical resistivity leak location evaluation, and/or other geomembrane liner integrity evaluation approved by the department, must be conducted on areas of both the primary and secondary liners with slopes of ten percent or less by a person independent of the geomembrane installer. All discovered liner defects must be repaired, and a written report of the findings and verification of repairs must be submitted to the department with the construction certification report required in section 363-6.19 of this Subpart.	Part V - 6.4	-	Part V - A	-	-
6.9	Geocushion Material	-	-	-	-	-
6.9	An appropriately designed and specified geocushion of sufficient weight to prevent deformation and damage must be placed above any geomembrane.	Part V - 7	-	Part V - A	-	-
6.9(a)	Materials requirements. Only needle-punched, nonwoven geocushion material may be used. Documentation must be provided by the manufacturer indicating that each roll has been inspected at the point of manufacturing for the presence of broken needles using an in-line metal detector. Every roll accepted at the site must be labeled with the manufacturer's name, including geotextile style and type, lot and roll numbers, and roll dimensions (length, width, and gross weight). The geocushion material must be demonstrated to be chemically compatible with waste and leachate with which it will come in contact.	Part V - 7	-	Part V - A	-	-
5.9(b)	Construction requirements	-	-	-	-	-
6.9(b)(1)	All rolls of geocushion materials received and stored at the landfill must be enclosed in protective wrapping that is opaque and waterproof. Outdoor storage of rolls must not exceed manufacturer's recommendations or nine months, whichever is less. For storage periods longer than nine months, rolls must be stored off the ground under an additional cover or tarp beyond the manufacturer's wrapping or be placed within an enclosure.	-	-	Part V - A	-	-
5.9(b)(2)	During placement, stones, excessive dirt, or moisture must not be entrapped either within or beneath the geocushion materials.	-	-	Part V - A	-	-
5.9(b)(3)	The geocushion materials must be placed with minimal wrinkles or folds.	Part V - 7.3	-	-	-	-
5.9(b)(4)	Geocushion materials must be connected or seamed together using methods approved by the department.	Part V - 7.3	-	-	-	-
5.9(c)	Certification requirements. The project engineer must provide:	Part V - 7.2	-	-	-	_
5.10	Soil Drianage Layers	-	<u> </u>	<u> </u>	-	
5.10	In addition to the requirements of subdivision 363-6.6(a) of this Subpart, all soil drainage material used in the primary and secondary leachate collection and removal systems of the landfill must conform to the following requirements.	-	-	-	-	-
5.10(a)	Materials required. The soil drainage layer must be free of any organic material, have less than five percent by weight pass the No. 200 sieve after placement, and have no more than 15 percent calcium carbonate equivalent as determined by appropriate test methods using a solution with a pH representative of landfill leachate.	Part V - 9.2.1	-	Part V - A	-	-
6.10(b)	Construction requirements.	-	-	-	-	-
	The soil drainage layer must be placed in a manner to minimize defects to the underlying	Dort V 0	_	Part V - A	_	
6.10(b)(1)	geomembrane or other geosynthetic materials.	Part V - 9		Tare V		
5.10(b)(1) 5.10(b)(2) 5.10(c)	geomembrane or other geosynthetic materials. The soil drainage layer must be placed in a manner to achieve a minimum slope of two percent. Certification requirements	Part V - 9	-	Part V - A	-	-

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
6.10(c)(1)	The project engineer must approve the quality control testing results of any soil drainage materials and ensure that the materials meet the placement, hydraulic conductivity, and thickness requirements of section 363-6.6 of this Subpart and the requirements of subdivision 363-6.10(a) of this section.	Part V - 9.3.1	-	Part V - A	-	1
6.10(c)(1)(i)	A particle size analysis of the soil drainage layer material must be submitted to the project engineer for approval for each borrow source prior to installation, and during installation at a frequency of at least one test for every 1,000 cubic yards of material placed.	Part V - 9	-	Part V - A	-	-
6.10(c)(1)(ii)	A laboratory constant-head permeability test for a soil drainage layer sample must be submitted to the project engineer for approval for each borrow source prior to installation and at a frequency of at least one test for every 2,500 cubic yards of material delivered, and after placement at a frequency of at least one test for every 2,500 cubic yards of material placed	Part V - 9	-	Part V - A	-	-
6.10(c)(1)(iii)	The project engineer must certify that the requirements of paragraphs 363-6.6(a)(3) and (4) of this Subpart are met.	Part V - 9	-	Part V - A	-	-
6.10(c)(2)	The project engineer must certify that post-construction care procedures are carried out which, at a minimum, protect the soil drainage layers from fines related to water and wind-borne sedimentation.	Part V - 9	-	Part V - A	-	-
6.10(c)(3)	Quality assurance testing must ensure that the material is placed in accordance with the requirements of the engineering drawings, reports, and specifications.	Part V - 9.4	-	-	-	-
6.11	Leachate Collection Pipes	-	-	-	-	•
6.11(a)	The following requirements apply to leachate collection pipes.	-	-	-	-	-
6.11(a)(1)	The primary and secondary leachate collection and removal system and the gas collection condensate piping system must be designed and built to allow for representative sampling of leachate and condensate and to operate with proper maintenance without clogging during the landfill's active life and post-closure care period. The primary collection pipe network must be sized for peak flow attributed to a 24-hour-25-year storm to be removed from the landfill cell within seven days or less.	Part II - 8	-	-	-	-
6.11(a)(2)	All leachate collection pipe networks located in the primary and secondary leachate collection and removal systems must be designed to allow for accessibility of equipment for effective video monitoring, routine cleaning and maintenance of key collection lines in each separately operating cell	Part II - 8	-	-	-	-
6.11(a)(3)	All leachate conveyance lines, gas condensate lines and appurtenances, including manholes, sumps, and metering pits located outside the liner system of the landfill must be designed to have double containment and must be constructed to provide for effective leak detection and collection.	Part II - 8.4	-	-	-	-
6.11(a)(4)	Leachate conveyance lines, gas condensate lines and appurtenances including manholes, sumps, and metering pits located outside the landfill liner system are not required to maintain the minimum separation of five feet from the seasonal high groundwater table, and are not required to maintain the minimum separation of ten feet from bedrock.	-	-	-	-	-
6.11(b)	Materials required. The leachate collection pipes must:	-	-	-	-	-
6.11(b)(1)	be a minimum of eight inches in inside nominal diameter for primary pipes and six inches in inside nominal diameter for secondary pipes;	Part II - 8	-	Part V - A	-	-
6.11(b)(2)	have adequate structural strength to support the maximum static and dynamic loads and stresses that will be imposed by the overlying material, including the drainage layer, liners, waste material, and any equipment used in the construction and operation of the landfill; and	Part II - 8.3.3	-	-	-	-
6.11(b)(3)	be chemically compatible with leachate.	Part II - 8	-	-	-	-
6.11(c)	Construction requirements. Leachate collection pipes must be installed in accordance with the requirements of the approved engineering drawings, reports, and specifications and must be designed to have a minimum slope of one percent.	Part V - 9.3.4	-	-	-	-
6.11(d)	Certification requirements. The project engineer must certify that the requirements of paragraphs 363-6.6(a)(3) and (4) of this Subpart are met and that all leachate collection pipes are cleaned, debeaded and inspected upon completion of construction using video inspection equipment or other methods acceptable to the department to verify that the system is free of obstructions and construction-related debris.	Part V - 9.4	-	-	-	-
6.12	Geosynthetic Drainage Layers	-	-	-	-	-
6.12(a)	Geosynthetic drainage layers must comply with the following.	-	-	-	-	-

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
6.12(a)(1)	Any geosynthetic drainage layers designed for use in a groundwater suppression system or a	ILAI	TABLES	AFFEINDIA	TIGUNES	FLANS
	leachate collection and removal system must meet the structural and hydraulic transmissivity design requirements using actual boundary conditions at the maximum adjusted design load for a minimum period of 100 hours, modified to take into consideration the long-term conditions for creep representative of site conditions, and other reduction factors.	Part II - 8	-	Part II - B / Part V - A	-	-
6.12(a)(1)(i)	For hydraulic flow capacity calculations, the design engineer must use a factor of safety of at least three, and consider the reduction in transmissivity due to creep, biological clogging, and chemical clogging.	Part II - 8	-	Part II - B	-	-
6.12(a)(1)(ii)	The chemical and physical resistance of the geosynthetic drainage material must be adequate so that its hydraulic transmissivity is not adversely affected by waste placement or leachate.	-	1	Part V - A	-	1
6.12(a)(2)						
	Any geosynthetic drainage layers designed for use in a final cover system for either drainage or gas venting must meet the transmissivity design requirements using actual boundary conditions at the maximum adjusted design load for a minimum period of 100 hours, and appropriate reduction factors and must consider any proposed landfill end use structures.	Part II - 8	-	Part II - B / Part V - A	-	-
6.12(a)(2)(i)	For hydraulic flow capacity calculations, the design engineer must use a factor safety of at least three.	-	-	Part II - B	-	-
6.12(a)(2)(ii)	The hydraulic design of the geosynthetic drainage layer should be performed using the saturated hydraulic conductivity of the barrier protection layer.	-	-	Part II - B	-	-
6.12(b)	Construction requirements	-	-	-	-	-
6.12(b)(1)	Geosynthetic drainage layers must not be seamed or fastened horizontally more than once per length of side slope. If horizontal seams are necessary, they must be staggered between adjacent rolls. The geosynthetic drainage layers must be seamed or fastened together in accordance with industry standards.	-	-	Part V - A	-	-
6.12(b)(2)	The geosynthetic drainage layer must be installed in accordance with the procedures set forth in paragraphs 363-6.8(b)(2) through (4) and subparagraph 363-6.8(b)(5)(iii) of this Subpart.	-	-	Part V - A	-	-
6.12(b)(3)	If a geosynthetic drainage layer is specified in the primary leachate collection and removal system, a 24-inch soil drainage layer is required which meets the minimum requirements of section 363-6.10 of this Subpart.	-	-	Part V - A	-	-
6.12(b)(4)	If a geosynthetic drainage layer is specified in the secondary leachate collection and removal system, a 12-inch soil drainage layer which meets the requirements of section 363-6.10 of this Subpart is required in all areas where the liner slope is less than ten percent.	-	-	Part V - A	-	-
6.12(c)	Certification requirements. The project engineer must certify the following information as part of certification.	-	-	-	-	-
6.12(c)(1)	Results of applicable geosynthetic quality control testing required in paragraph 363-6.8(c)(1) of this Subpart.	Part V - 9	-	Part V - A	-	-
6.12(c)(2)	Results of hydraulic transmissivity testing performed in a laboratory in accordance with subdivision 363-6.12(a) of this Part including confirmation that the head within the leachate collection and removal layer will remain less than the thickness of that layer for the design flow of 1,000 gallons per acre per day in the secondary leachate collection and removal system is met.	Part V - 9	-	Part V - A	-	-
6.12(c)(3)	That the construction quality assurance staff have performed visual inspections for any depressions or irregularities on all installed products.	Part V - 9	-	Part V - A	-	-
6.12(c)(4)	That post-construction care procedures were carried out to protect the geosynthetic drainage layer from the intrusion of fines related to water-borne and wind-borne sedimentation.	Part V - 9	-	Part V - A	-	-
6.13	Filter Layer Criteria	NA	NA	NA	NA	NA
6.14	Intermediate Cover	-	-	-	-	-
6.14	An intermediate cover must be constructed of a geomembrane or soil layer which will inhibit precipitation from entering the waste mass, contain leachate outbreaks, and inhibit migration of decomposition gases.	Part VI - 6.1.3	-	-	-	-
6.14(a)	Materials required	Part VI - 6.1.3	1	-	-	-
6.14(b)	Construction requirements. Intermediate cover geomembranes must be seamed in accordance with the manufacturer's recommendations, and must be installed on top of operating cover.	Part VI - 6.1.3	-	-	-	-
6.15	Gas Venting	-	-	-	-	-
6.15	The project engineer must demonstrate that landfill gas will be adequately controlled and removed from the landfill in a manner to ensure the overall stability of the landfill and its final cover system, and to reduce the concentration and pressure gradient of explosive gases to control gas migration.	Part II - 6.1	-	-	-	-

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
6.16	Final Cover - Composite Barrier Layer	-	-	-	-	-
6.16(a)	After a landfill ceases to accept waste as specified in section 363-10.3 of this Part, a final cover consisting of a composite barrier must be installed. The project engineer must consider the projected service life of the final cover system, settlement, erosion, and seepage forces in the overall stability of the final cover system.	Part II - 6.1	-	Part II - B	-	1
6.16(a)(1)	The composite barrier layer must consist of a GCL and a separate geomembrane.	Part II - 6.1	-	-	-	-
6.16(a)(1)(i)	GCL. The GCL must be specified by the project engineer upon demonstrating both physical and chemical stability of the bentonite used in the GCL. The GCL component of the composite cover must meet the requirements of paragraph 363-6.7(b)(1) and subdivision 363-6.7(c) of this Subpart.	Part V - 8	-	-	-	-
6.16(a)(1)(i)(a)	On slopes equal to or greater than 25 percent and for side slope terraces on those slopes, the GCL component of the composite barrier may be eliminated.	Part V - 8	-	-	-	-
6.16(a)(1)(ii)	Geomembrane barrier layer of composite cover. The barrier layer must be constructed to limit precipitation migration into the landfill.	Part V - 6	-	-	-	-
6.16(a)(1)(ii)(a)	The geomembrane material must be chemically and physically resistant to materials it contacts, and be able to accommodate the expected forces and stresses such as those caused by settlement of waste.	Part V - 6	-	-	-	-
6.16(a)(1)(ii)(b)	A geomembrane comprised of linear low-density polyethylene polymer must have a nominal thickness of 40 mils or thicker. A geomembrane comprised of HDPE must have a nominal thickness of 60 mils or thicker.	Part V - 6	-	-	-	1
6.16(b)	Construction requirements	-	-	-	-	-
6.16(b)(1)	GCL. GCLs must be constructed in accordance with paragraph 363-6.7(b)(1) of this Part.	Part V - 8	-	-	-	-
6.16(b)(2)	Geomembrane barrier layer. Geomembrane barrier layers must be constructed in accordance with the requirements of 363-6.8(b) of this Part with the following exceptions:	Part V - 6	-	-	-	-
6.16(c)	Certification Requirements. Certification for the installation of a composite barrier layer must be conducted in accordance with the same conditions found in paragraph 363-6.8(c) of this section, except for the electrical resistivity testing provisions of subparagraph 363-6.8(c)(3)(vii) of this section.	Part V - 6	-	-	-	-
6.17	Final Cover - Barrier Protection and Drainage Layer	-	-	_	-	-
6.17	A barrier protection layer must be constructed in accordance with the provisions of this section. The barrier protection layer must protect the geomembrane barrier layer from root penetration, be stable for the specified slopes and resist erosion.	Part II - 6.1	-	Part V - A	-	-
6.17(a)	Construction requirements. The barrier protection layer, including any drainage layer, must consist of a minimum of 12 inches of soil where cool season vegetation is specified or a minimum of 18 inches of soil where warm season vegetation is specified. One hundred percent of the soil used to construct the lower six inches of this layer must pass a two-inch sieve	Part II - 6.1	-	Part V - A	-	-
6.17(b)	A drainage layer constructed of either a soil layer or geosynthetic drainage layer must be installed between the barrier layer and the barrier protection layer unless stability analysis meeting the requirements of 363-4.3(c)(3)(iv) indicates that a drainage layer is not required. If a geosynthetic drainage layer is utilized, it must be designed and constructed in accordance with the requirements in section 363-6.12 of this Subpart.	Part II - 6.1	-	Part II - B	-	-
6.18	Final Cover - Topsoil	-	-	-	-	-
6.18	A topsoil layer must be designed and installed over the landfill, unless the department approves a geosynthetic designed to serve as the uppermost layer of the final cover system.	-	-	Part V - A	-	-
6.18(a)	Materials required. The topsoil or alternative material layer must be suitable to maintain vegetative growth.	-	-	Part V - A	-	-
6.18(b)	Construction requirements. The topsoil or alternative material layer must be at least six inches thick. A thicker layer will be required, if either of the following conditions exist:	-	-	Part V - A	-	-
6.19	Construction Certification	-	-	-	-	-
6.19	The certification required in subdivision 360.16(j) of this Title must include a report prepared by the project engineer which demonstrates that the landfill was constructed in accordance with the department-approved engineering design and permit requirements, and the report must include the following:	Part V - 11	-	-	-	-
	must include the following.					

REGULATORY SUMMARY TABLE FOR APPLICATION 6 NYCRR PART 360 SOLID WASTE MANAGEMENT FACILITIES

SECTION	REQUIREMENT/REGULATION	TEXT	TABLES	APPENDIX	FIGURES	PLANS
6.20(a)						
	Except as described in the transition requirements in section 360.4 of this Title, only a					
	storage tank system may be used to store leachate. The aboveground and on-ground					
	leachate storage tank system must be capable of containing a minimum of three consecutive	Part II - 8.2.1		Part II - B	- NA	
	months combined primary and secondary leachate flow based on calculations required by	Part II - 8.2.1	-	Part II - B	-	-
	subdivision 363-4.3(e) of this Part unless an alternate storage and transport system is					
	approved by the Department, and must have a secondary containment system capable of					
	retaining leachate in the event of a leachate spill.					
6.21	Equivalent Design Standards and Use of Waste as Construction and Operational Material	NA	NA	NA	NA	NA
6.22	Survey Control and Location Coordinates	-	-	-	-	-
6.22(a)	One permanent survey benchmark of known elevation measured from a United States Geological Survey (USGS) benchmark must be established and maintained for each 25 acres of developed landfill, or part thereof, at the site. This benchmark must be the reference point for establishing vertical elevation control. One permanent survey benchmark of known elevation measured from a United States Geological Survey (USGS) benchmark must be established and maintained for each 25 acres of developed landfill, or part thereof, at the site. This benchmark must be the reference point for establishing vertical elevation control.		-	-	,	-
6.22(b)	One permanent survey benchmark of known elevation measured from a United States Geological Survey (USGS) benchmark must be established and maintained for each 25 acres of developed landfill, or part thereof, at the site. This benchmark must be the reference point for establishing vertical elevation control.	Part V - 5	-	-	-	-