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CWM Chemical Services, LLC.

6 NYCRR Part 361 Permit Application

Residuals Management Unit 2

Model City Facility
1550 Balmer Road
Model City, Niagara County, New York

April 2003
Revised August 2009
Revised September 2012
Revised February 2013
Revised July 2013
Revised August 2013
Revised November 2013

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Revised August 2013
Revised November 2013

Tables

Figures

Appendices

ARCADIS

Residuals Management Unit 2
Part 361 Siting Certification Applicaton

April 2003
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Revised September 2012
Revised February 2013
Revised July 2013
Revised August 2013
Revised November 2013

Preface

This Part 361 application contains a number of statements regarding the Department's and CWM's interpretations of the New York Hazardous Waste Facility Siting Law, in NYECL Art. 27, Title 11, and the interpretation of that law in the New York Hazardous Waste Facility Siting Plan adopted by the Department in October 2010. In CWM's view, the Siting Plan does not conform to all of the provisions and requirements in the Siting Law, and, therefore, it is necessary to interpret how the Siting Plan and Siting Law should be applied to this application. In preparing this application, CWM has included its interpretations of how the Siting Plan and Siting Law should be applied and interpreted by the Siting Board in its review of this application. As is the case with all other opinions and/or conclusions set forth in this application, CWM recognizes that the Siting Board has the statutory responsibility to interpret and apply to this application, the Siting Law and Siting Plan, as guided by the Siting Board's collective judgment, subject to judicial review at the request of any interested party.

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Part 361 Siting Certification Applicaton

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1. Certificate and Permit Application

The purpose of this document is to provide a Facility Siting Board the appropriate information with which to evaluate the siting of a new hazardous waste management unit, designated as Residuals Management Unit 2 (RMU-2). The unit will replace depleted hazardous and industrial non-hazardous waste land disposal capacity within the boundaries of CWM Chemical Services, LLC's (CWM's) (Applicant) existing permitted industrial hazardous waste facility at Model City, New York (Model City Facility). This information is provided for the Facility Siting Board appointed pursuant to Title 11 of Article 27 of the Environmental Conservation Law (ECL) and Title 6 of New York Codes, Rules and Regulations (6 NYCRR) Part 361. Based upon all the information provided, the Facility Siting Board shall render a decision to grant, deny or grant upon such terms, conditions, limitations or modifications thereof as the Facility Siting Board may deem appropriate, a Certificate of Environmental Safety and Public Necessity.

The following information has been provided to complete the certificate application as required by 6 NYCRR Part 361.3(e). This Part 361 Site Certificate Application shall be inclusive of complete applications referenced herein.

1.1 Complete Applications

Various federal, state and local permit actions are required prior to commencing construction of the proposed unit. These permit actions are:

Federal Permits

- Toxic Substances Control Act (TSCA) for approval to dispose of polychlorinated biphenyl (PCB) items.
- Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1251, et seq.)) for impacts to jurisdictional waters of the US (wetlands).

At the federal level, the facility proposed by CWM is governed by regulations established pursuant to the Resource Conservation and Recovery Act (RCRA) as amended by the Hazardous and Solid Waste Amendments (HSWA), for which permitting authority in New York State (NYS) has been delegated to the New York

State Department of Environmental Conservation (NYSDEC), and TSCA, administrated by the United States Environmental Protection Agency (USEPA).

Because the proposed facility will be receiving TSCA wastes, a Federal PCB Disposal Approval Request is required. To apply for a TSCA Disposal Approval, the owner must submit an “Initial Report” containing the following information: location of the management unit, detailed description of the unit, an Engineering Report describing the manner in which the unit complies with the TSCA design requirements, a list of the sampling and monitoring equipment available, anticipated waste volumes, descriptions of waste materials other than TSCA wastes anticipated to be disposed in the unit, operation plan for the unit and other permits or approvals required. Prior to granting written approval, the USEPA may impose additional conditions that must be met to ensure safe operation of the facility. The Initial Report must be submitted to USEPA Region 2 in New York, New York. Final approval cannot be obtained prior to construction and engineering certification of the constructed unit.

The United States Department of the Army (Army) and the United States Environmental Protection Agency (EPA) established policy and procedures pursuant to which they would undertake federal enforcement of the dredged and fill material permit requirements ("Section 404 program") of the Clean Water Act (CWA). The U.S Army Corps of Engineers (USACE) and EPA have enforcement authorities for the Section 404 program.

A jurisdictional wetlands determination for the proposed project site has been requested from the USACE and an application for a permit in accordance with Section 404 of the Clean Water Act (CWA) was submitted to the USACE for project impacts to jurisdictional wetlands on November 18, 2003. The request for jurisdictional determination was updated and resubmitted to the USACE on July 6, 2009. A jurisdictional determination was received from the USACE on September 13, 2011. Approximately 2.5 acres of jurisdictional wetlands, as determined by the USACE, are located within the RMU-2 development area. An updated Section 404 CWA permit application was submitted on July 8, 2013. A permit for filling waters of the US is required prior to construction activities and implementation of mitigation measure in accordance with the permit.

New York State Permits

- 6 NYCRR Part 373 – Hazardous Waste Permit to Construct/Operate a Hazardous Waste Management Facility (HWMF);
- 6 NYCRR Part 361 – Certificate of Environmental Safety and Public Necessity;
- 6 NYCRR Part 201 – Air Permit to Construct/Operate an HWMF;
- 6 NYCRR Part 633/Article 24 – State Freshwater Wetlands Permit;
- Section 401 of the CWA – Water Quality Certification; and
- Revision to the State Pollutant Discharge Elimination System (SPDES) Discharge Permit pursuant to 6 NYCRR Part 750 (Clean Water Act [CWA] and ECL Article 17, Titles 7 and 8).

The NYSDEC has indicated that they will be treating the RMU-2 application as a major permit modification to the existing Sitewide 6 NYCRR Part 373 Permit (RMU-2 modification application).

The USEPA has also delegated permitting authority to the NYSDEC with respect to the Clean Air Act and the Clean Water Act. The state equivalent permit is issued under 6 NYCRR Part 201 (air) and Section 401 of the CWA (water quality certification). Upon NYSDEC determination that the 6 NYCRR Part 373 RMU-2 modification application and the Parts 361 and 633/Article 24,and CWA Section 401 applications are complete, they will be consolidated for processing consistent with 6 NYCRR Parts 621 and 624.

The NYSDEC has promulgated changes to 6 NYCRR Part 201 regulations effective on February 22, 2013. Based on the emissions estimates for the facility's current Air Pollution Control Minor Facility Registration and the new regulations, the NYSDEC has indicated that CWM must submit a State Facility Permit Application in accordance with 6 NYCRR Part 201-5 within six months of receipt of the NYSDEC determination to submit a complete state facility permit application. CWM received this notification on March 11, 2013 and will prepare and submit a Part 201 Application for the facility by September 11, 2013. Upon issuance of a State Facility Permit, a revised Part 201 Application will be submitted for RMU-2.

6 NYCRR Part 361.3(e)(1) (Certificate and permit application procedures) indicates that "the certificate application shall consist of completed applications for all permits and other entitlements required under the ECL for the proposed facility, unless the applicant shows good cause not to submit any such application at this time". The promulgation of new regulations by the NYSDEC during the application process for proposed RMU-2 is good cause for a completed Part 201 application to not be submitted at this time.

In July 2013, CWM submitted a Permit Modification Request to revise the current SPDES Permit #NY0072061 for the Model City Facility based on the development of RMU-2. The NYSDEC is currently in the process of revising CWM's individual SPDES Permit. The NYSDEC issued a draft SPDES permit in January 2010 for public comment. Based on comments received on the January 2010 draft SPDES permit, the NYSDEC has indicated a revised draft SPDES permit will be issued for another round of public comment. The draft SPDES Permit will likely contain a number of modifications. During the public comment period for the next revised draft SPDES Permit, CWM will include a comment requesting to further modify the SPDES permit to include RMU-2 development. The requested revision will include modifications to the Storm Water Flow Schematic & Monitoring Locations diagram of the draft SPDES Permit to add RMU-2, remove Facultative Ponds 3 and 8 upon closure, add new Facultative Pond 5, and revise surface water flow directions. No other modifications to the SPDES Permit are anticipated for the development of RMU-2.

Authorization under the NYSDEC General Permit for Stormwater Discharges of Construction Activity (GP-0-10-001, effective January 29, 2010) will be required prior to development of RMU-2. It is anticipated that the modification of the Model City individual SPDES permit for the facility will include provisions for stormwater management from construction activities. As such, coverage under GP-0-10-001 specifically for construction will not be required. If the modification of the facility's individual SPDES permit does not occur prior to the start of construction of RMU-2, CWM will pursue coverage under GP-0-10-001 specifically for construction activities. Regardless of whether the construction of RMU-2 is covered under GP-0-10-001 or a modified individual sitewide SPDES permit, a Storm Water Pollution Prevention Plan (SWPPP) will be prepared for RMU-2 development.

The following table summarizes the Federal and State permit applications (including related State mandated submissions) required for the project and the latest submittal date:

Federal	Application Description	Date Latest Submittal
	Toxic Substances Control Act (TSCA) for approval to dispose of PCB items	July 8, 2013
	Section 404 of the Clean Water Act (CWA)	July 8, 2013

State	Application Description	Date Latest Submittal
	6 NYCRR Part 373 – Hazardous Waste Permit to Construct/Operate a Hazardous Waste Management Facility (HWMF)/Modification to Sitewide Part 373 Permit	August 28, 2013
	6 NYCRR Part 361 – Certificate of Environmental Safety and Public Necessity	July 8, 2013
	State Environment Quality Review Act (SEQRA), Article 8 of the New York Environmental Conservation Law, and Part 617 of 6 NYCRR, Draft Environmental Impact Statement (DEIS)	July 8, 2013
	6 NYCRR Part 201 – Air Permit to Construct/Operate an HWMF	Permit Modification Request to be submitted upon issuance of Sitewide State Facility Permit
	Section 401 of the CWA – Water Quality Certification	July 8, 2013
	6 NYCRR Part 633/Article 24 – State Freshwater Wetlands Permit	July 8, 2013
	Revision to the State Pollutant Discharge Elimination System (SPDES) Discharge Permit pursuant to 6 NYCRR Part 750 (Clean Water Act [CWA] and ECL Article 17, Titles 7 and 8)	July 9, 2013

As shown on the summary table above, CWM has submitted all complete applications with the exception of the Part 201 Application.

Towns of Porter Permits & Approvals

Town of Porter Permits and Approval required for the project may include the following:

- Building Permits;
- Grading and Drainage Plan Approval;

- Review Stormwater Pollution Prevention Plan and accept a Professional Engineers certification that the plan meets requirements
- Site Plan Approval
- Special Use Permit

1.2 Draft Environmental Impact Statement

In accordance with the requirements the State Environment Quality Review Act (SEQRA), Article 8 of the New York Environmental Conservation Law, and Part 617 of 6 NYCRR, a Draft Environmental Impact Statement (DEIS) was prepared for the Model City Facility in 1979 and a Final Environmental Impact Statement (FEIS) with SEQRA Findings was issued in 1981. Each subsequent modification to the Model City Facility has required an additional DEIS, FEIS and Findings Statement. Accordingly, a DEIS has been prepared for the construction of the proposed RMU-2 and is submitted with this application. The DEIS for the proposed RMU-2 was prepared by ARCADIS, Rochester, New York.

1.3 Expected Sources of Hazardous and Industrial Non-Hazardous Wastes, Methods of Transportation and Routes

The proposed unit will replace depleted existing hazardous and industrial non-hazardous waste land disposal capacity at the Model City Facility. Waste sources for RMU-2 will be essentially the same as the waste sources for previous on-site land disposal units (i.e., federal and state Superfund cleanups; Brownfields, RCRA, TSCA, and other types of cleanups; waste-brokers and industrial sources throughout the Erie-Niagara County region, NYS, and Northeast United States). A majority of the wastes received at CWM in the past six years consists of remediation wastes from Superfund, Brownfields, RCRA, TSCA, and other types of cleanups. CWM expects that a majority of the waste received for disposal in RMU-2 will be from sources throughout the Erie-Niagara County region, New York State, and Northeast United States. However, this does not preclude CWM from receiving waste from outside of Northeast United States including from Canada. CWM may receive waste from Canada, Puerto Rico, US Virgin Islands and other US commonwealths or territories. The top five states that accounted for approximately 90-percent of the CWM waste receipts over the past six years include New York (approximately 45-percent), New Jersey (approximately 17-percent), Massachusetts (approximately 13-percent), Connecticut (approximately 10-percent),

and Pennsylvania (approximately 3-percent). CWM expects similar waste receipts in the future. Truck transport is the sole means of delivery of wastes to the site. Independent and CWM-approved trucks deliver 100% of all wastes received at the site.

The Model City Facility is located in the Towns of Lewiston and Porter in Niagara County, New York, on Balmer Road between Lutts and Porter Center Roads. All active areas of the Model City Facility are located within the Town of Porter. The primary access routes to the facility are the NYS Thruway (I-90), I-290, I-190, NYS Route 104, NYS Route 18 and Balmer Road. Regional and local maps depicting the location of the Model City Facility are presented on Figures 1 and 2Approximately 90% of all shipments (including supplies and products) to the site use these routes; the remainder use local roads to reach the site. . In accordance with CWM's Transporter Rules and Regulations (Appendix A), waste transporters are required to use the designated route to the Model City Facility. However, deviations from the above routes may result from temporary re-routing of traffic (e.g., due to road repairs and other construction activities, police emergency routing). NYS Thruway (I-90) provides Niagara County with access to the New England states to the east and to the states to the south and west. Four bridges in the Buffalo-Niagara Falls area provide direct connections to Canada.

As a condition of accepting hazardous wastes transported to the Model City Facility, CWM requires all waste transporters to use the designated route to the Model City Facility. This requirement is imposed on all waste transporters, whether directly under contract to CWM or not. All vehicles whether loaded or empty that convey hazardous material to or from the Model City Facility are required to proceed along NYS Route 104, then north on NYS Route 18 (Creek Road) approximately 5 miles to Balmer Road. Vehicles then turn right onto Balmer Road and proceed 2 miles to the Model City Facility main entrance and guardhouse. The designated route to the Model City Facility is shown on Figure 1. Vehicles that are conveying hazardous materials from the Model City Facility, or that have unloaded hazardous materials at the Model City Facility, must follow the reverse directions when exiting the facility, with the exception that up to eight empty trucks may exit eastbound on NYS Route 93. Deviations from the designated route may be made only after prior approval by the Model City Facility Manager, or the Manager's designee. Deviations from the designated route are permitted only in emergency situations. The required route and restrictions regarding times of delivery are presented in Appendix A.

All transporters are required by CWM to execute a "Transporter Agreement and Certification" form (Appendix A) that obligates them to follow the designated route. The form also requires the transporter to immediately notify CWM and appropriate governmental authorities should a spill or release occur while in transit.

The designated route was selected by CWM in conjunction with local authorities in recognition that other routes, such as the Robert Moses Parkway, which does not allow truck traffic and other roads less compatible with respect to truck traffic. Restriction of vehicular traffic entering and exiting the Model City Facility to the designated route provides alternative access to the facility for emergency vehicles in the event that a major accident or other occurrence makes access to the facility via the designated route difficult. The applicant estimates that the maximum additional distance that emergency vehicles would travel if alternate routes were used to gain access to the facility would be somewhere between 1 and 2 miles.

The amount of truck traffic and traffic safety with respect to trucks hauling hazardous waste to the Model City Facility has been a concern of the public, especially with respect to the Lewiston-Porter Schools located on NYS Route 18, south of Balmer Road (i.e., on the designated transportation routes). To address these concerns and mitigate potential traffic impacts, the Model City Facility entered into the Citizens Advisory Committee (CAC) Agreement in 1993. The last version of the CAC Agreement, dated September 23, 1997, is included in Appendix L of the DEIS. Previously possible alternate traffic routes to the Model City Facility were evaluated by the CAC. None were identified because the potential alternate roads were not adequately designed for heavy truck traffic.

Section 4.6.5 and Appendix K of the DEIS provides details of traffic studies performed for the facility which includes information on road construction (e.g., widths, bearing capacities, etc.), traffic controls (e.g., signs, lights, etc.), neighborhoods (e.g., residential, commercial, etc.) and significant landmarks (e.g., schools, public property, etc.) along the proposed designated route.

1.4 Design and Capacity of Facility

RMU-2, designed to occupy 43.5 acres (based on proposed outside toe of the mechanically stabilized earth [MSE] wall) outside and adjacent to the existing Residuals Management Unit 1 (RMU-1) footprint, on hydrogeologically suitable land, will provide replacement land disposal capacity for depleted capacity at the Model City

Facility. The proposed unit was designed as a land-disposal unit employing state-of-the-art hazardous waste disposal technology, exceeding USEPA requirements in the final rule (Federal Register, Volume 57, No. 19) with respect to hazardous waste landfill liner system design, promulgated January 29, 1992. The design incorporates compacted clay soils, synthetic liners, leachate collection/management systems and an engineered final cover system.

The maximum amount of hazardous and industrial non-hazardous waste projected for disposal in RMU-2 is 41,650 tons per month. This figure is based upon the maximum 500,000-ton-per-year disposal projection by CWM for the Model City market area. CWM proposes to receive for land disposal RCRA hazardous wastes that qualify for land disposal under 40 Code of Federal Regulations (CFR) Part 268, TSCA wastes, characteristic hazardous wastes that have been pretreated (stabilized) and are no longer characteristic hazardous and industrial non-hazardous waste streams identified in the Part 373 modification application for RMU-2. It is anticipated that the waste mix, by volume and type, will vary from month to month.

Total gross air space of the unit will be 4,030,700 cubic yards, which includes non-waste components, such as daily and intermediate cover, and access roads. Thus, approximately 3,737,300 cubic yards of net waste capacity will be available. Minimum expected life of the unit is approximately 11.1 years. Variations in the rate of incoming waste will affect the estimated life of the unit.

The dimensions of the unit were determined after an analysis of the environmental setting. When completed, RMU-2 will be an irregular-shaped pyramidal mound, with three horizontal to one vertical (3H:1V) waste slopes, beginning at an existing grade of approximately 320 feet mean sea level (msl) to a top elevation of approximately 440 feet msl. The cutoff wall, which is constructed below the landfill's liner system, will result in a maximum excavation depth of approximately 25 feet below existing grade (295 feet msl). Depth is approximate because the cutoff wall will be keyed 1 foot into the glaciolacustrine clay layer, rather than to a particular elevation. Construction of the leachate collection sumps will result in a maximum excavation depth of approximately 3.5 feet below baseliner grades. Maximum depth of waste placement will be at an approximate elevation of 306.3 feet msl (Cell 16), or approximately 14 feet below existing grade. Maximum height of waste placement will be approximately 118 feet above existing grade (Cell 18), with maximum height of the final cover at approximately 120 feet above existing grade. The landfill will be surrounded by an MSE wall with a maximum top elevation of 350.0 feet msl. The outside sideslope of the MSE wall will

be faced with welded wire baskets filled with rock and will have a slope gradient of 1H:4V. The inside sideslope of the MSE wall will have a slope gradient of 3H:1V to provide adequate liner system stability and meet regulatory requirements. The Model City Facility layout and proposed location of RMU-2, top of vegetative cover grades and a cross-section of the proposed unit are presented on Figures 3, 4, and 5 respectively.

The RMU-2 liner system has been designed to meet or exceed the requirements for hazardous waste landfills as specified in 6 NYCRR Part 373-2.14, entitled "Secure Landburial Facilities." The regulations in this section require that new landfills on which construction commences after January 29, 1992, or lateral expansions of existing landfills on which construction commences after July 29, 1992, have two or more liners and a leachate collection system above and between adjacent liners. As shown on Figure 6, the RMU-2 liner system consists of the following components (in descending order):

- *Primary Leachate Collection System*
    - 1 foot of operations layer stone on the cell floors and 2 feet of operations layer stone on the sideslopes;
    - A layer of non-woven geotextile on the cell floors;
    - 1 foot of granular drainage material on the cell floors, with an 8-inch-diameter perforated leachate collection pipe along the cell centerline; and
    - A layer of geocomposite on the cell floors and sideslopes.
- *Primary Liner System*
    - An 80-mil textured high-density polyethylene (HDPE) geomembrane on the cell floors and sideslopes;
    - A geosynthetic clay liner (GCL) layer on the cell floors, extending a minimum of 15 feet up the sideslopes, that provides a maximum equivalent hydraulic conductivity equal to or less than 1.5 feet of compacted clay with a hydraulic conductivity of 1×10^{-7} centimeters per second (cm/sec); and

- *Secondary Leachate Collection System*

  - A layer of non-woven geotextile on the cell floors.

  - 1 foot of granular drainage material on the cell floors, with an 8-inch-diameter perforated leachate collection pipe along the cell floor centerline; and

  - A layer of geocomposite on the cell floors and sideslopes.

- *Secondary Liner System*

  - An 80-mil textured HDPE geomembrane on the cell floors and sideslopes; and

  - 3 feet of compacted glacial till or other suitable clay having a maximum hydraulic conductivity of 1 x 10^{-7} cm/sec on the cell floors and sideslopes.

As described above, the RMU-2 liner system is similar to that used in RMU-1, with the exception of the substitution of GCL for compacted clay in the primary liner system. The design of the liner system subbase grades, leachate collection systems and leachate pumping system are discussed in greater detail in the *RMU-2 Engineering Report* (ARCADIS, January, 2003, Revised August, 2009, Revised February, 2013).

1.5 Type and Volume of Waste

Based on past history and future projections, CWM anticipates that the following generalized types of waste will be accepted for RMU-2:

- Heavy metal wastes, such as wastewater treatment residues, filter cakes and air pollution control dusts;

- PCB-contaminated soils and decommissioned transformers formerly containing PCB dielectric fluid;

- General wastes, such as off-specification chemicals and other hazardous wastes listed in 6 NYCRR Part 373 that meet the Federal Land Disposal Restrictions (LDR);

- Filter cake from solid/liquid separation processes in the on-site wastewater treatment plant;
- Wastes that have been stabilized in order to meet the LDR;
- Stabilized incinerator ash and residues from the pretreatment of wastes;
- Soil and debris from Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) or RCRA cleanups;
- Soil containing heavy metals;
- Soil with organics that meet the alternate soils standards;
- Sandblast grit, with paint chips with metals;
- Industrial non-hazardous wastes, including;
    - Petroleum product spill cleanup soil and debris;
    - Construction and demolition debris;
    - Non-regulated fly ash, bottom ash and baghouse dust;
    - Non-K088 aluminum processing wastes;
    - RCRA empty crushed drums;
    - Asbestos wastes;
    - Characteristic wastes treated by either CWM or the generator to remove the characteristic;
    - Fluorescent light ballasts and small capacitors;
    - Transformer carcasses;

- Outdated, spent or off-spec virgin chemicals (e.g., epoxy resins, Styrofoam, silica gel, copper sulfate); and

- Non-hazardous industrial sludge and filter cake.

Appendix B presents the current list of hazardous materials managed at the Model City Facility, as presented in the site Waste Analysis Plan included in the RMU-2 Part 373 Permit Modification Application. Wastes will be accepted in accordance with TSCA, RCRA and LDR regulations in force at the time that RMU-2 is in operation. Industrial non-hazardous wastes will be accepted in accordance with the Part 373 Permit for RMU-2.

1.6 Need for Facility and Consistency with the Hazardous Waste Facility Siting Plan

1.6.1 The Hazardous Waste Facility Siting Law

The Hazardous Waste Facility Siting Law, in ECL § 27-1103.2.a, provides that the hazardous waste facility siting criteria shall take into account the consistency of the subject application with the Siting Plan adopted pursuant to § 27 1102. In addition, § 27-1105.3(f) provides that, upon final adoption of the Hazardous Waste Facility Siting Plan pursuant to Section 27-1102, the Siting Board should deny an application "if it is not consistent with such plan or if the need for such facility is not identified in such plan and the board finds that the facility is not otherwise necessary or in the public interest." Thus, to grant a Siting Certificate, the Siting Board must find that: (1) the proposed facility is consistent with the Siting Plan, or (2) if the need for such facility is not specified in the Siting Plan, that the proposed facility is otherwise necessary or in the public interest.

As provided in ECL § 27-1102.1, the purpose of the Siting Plan, inter alia, is "to assure the availability of industrial hazardous waste treatment, storage and disposal facilities which:

(a) have adequate capacity for the destruction, treatment or secure disposition of all hazardous wastes that are reasonably expected to be generated within the state in the next twenty years

(b) are within the state or outside the state in accordance with an interstate agreement or regional agreement or authority

(c) comply with all federal and state requirements governing such facilities

(d) comply with the preferred hazardous waste management practices hierarchy established pursuant to section 27-0105 of this article."

As specified in § 27-1102.2(f), the Siting Plan must include, inter alia, a determination of the number, size and type of new or expanded facilities "which will be needed for the proper long term management of hazardous waste consistent with the assurances required pursuant to" § 27-1102.1. Upon adoption of the Siting Plan, the Department is directed to establish a schedule for developing any new or expanded facilities identified as necessary in the Siting Plan. § 27-1102.7.

As contemplated by § 27-1102, the purpose of the Siting Plan is to assure adequate treatment and disposal capacity to meet New York's needs over the next 20 years and to do so with in-state facilities and/or through interstate agreements assuring New York's access to facilities in other states.[1] Section 27-1102 was enacted in 1987, at least in part, to enable New York to make the capacity assurance demonstration required by § 104(c)(9) of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9604(c)(9), in order to qualify New York hazardous waste sites for federal Superfund money.

1.6.2 The Siting Plan

1.6.2.1 *The Plan's Approach to Self-Assurance*

On October 18, 2010, the Department adopted the Siting Plan. Since significant changes in the USEPA's approach to the CERLCA capacity assurance demonstration requirements have occurred during the more than 20 years that § 27-1102 has been in effect, the Siting Plan concluded that it was not necessary to have a plan that addressed the in-state capacity self-assurance required in §§ 27-1102.1 and 27-1102.2(f), determining, instead, that New York can rely on nationwide capacity to meet its future hazardous waste disposal needs.

[1] No such agreements exist, and none are contemplated.

In making that determination, however, the Siting Plan did not address how that interpretation of the need requirements in § 27-1102.1 would impact the Siting Board's assessment of the very same requirement in § 27-1105.3(f). (Sections 27-1102.1 and 27-1105.3(f) were parts of the same 1987 amendment to the Siting Law.)

As a predicate to its adoption of the Siting Plan, the Department completed a GEIS. The GEIS, at p. 2, states that:

> "The primary purpose and benefit of the Plan is to assure the availability of facilities that are necessary for the proper management of hazardous waste in New York State and provide guidance to State Agencies, Authorities and Siting Boards in the discharge of their responsibilities on this topic. Any lack of sufficient capacity for the environmentally sound management of hazardous waste could conceivably result in increased improper management of hazardous waste and in increased costs to hazardous waste generators in New York State."

The Siting Plan is to be used as guidance by any Siting Board in reviewing a proposal for a new or expanded hazardous waste management facility (GEIS at pp. 2-3). To the extent that there is any conflict between the Siting Plan and the applicable law or regulations, the Siting Board's obligation is to follow the statutory and regulatory requirements.

The GEIS, at p. 3, explained the Department's approach to developing the Siting Plan as follows:

> "In 1987, the need for new or expanded hazardous waste TSD facilities was a particular concern of the Legislature. Therefore, the Department was directed to develop a Plan to provide guidance to decision-making entities and to assure the availability of industrial hazardous waste TSD facilities. However, hazardous waste management as an industry has evolved dramatically since the criteria for this Plan was established in 1987. At that time, the State believed that it was necessary to achieve self-sufficiency for the management of hazardous wastes generated within the State. The hazardous waste management industry, the associated regulation of this industry, and the status of solid waste under the

> Commerce Clause of the U.S. Constitution which impacts interstate transportation, were still in their infancy and evolving."

The GEIS (id.) further notes that since 1987, the industry has significantly matured, regulations have matured and the industry has become more regional in character. While those changes have occurred, the statutory language enacted in 1987 has not been amended or repealed. The Siting Board is required to apply the law as properly interpreted.

To the extent that the Siting Plan concludes that it is not necessary to assure in-state disposal capacity to meet the "need" requirement in § 27-1102.1, the same is true for the "need" requirement in § 27-1105.3(f). The policy reasons for interpreting § 27-1102.1 stated in the Plan and the GEIS, apply to the same needs requirement in § 27-1105.3(f). Thus, to be consistent with the guidance in the Siting Plan, § 27-1105.3(f) should be interpreted as if in-state need is not a requirement that an applicant must demonstrate. Rather a proposed facility is consistent with the Siting Plan if it is demonstrated that there is a national market for the services to be provided by the proposed facility and the proposed facility will meet the applicable Siting criteria and technical requirements. In addition, the Siting Board must consider whether the application is consistent with the Siting criteria in ECL § 27-1103 and 6 NYCRR § 361.7.

1.6.2.2 *The Siting Plan*

As described in the Siting Plan, in the 1980s, Congress and the USEPA, through CERCLA, attempted to require states to be self-sufficient or to enter into interstate agreements, but Congress did not authorize states to erect barriers to interstate commerce. Supreme Court decisions related to interstate commerce confirmed that solid and hazardous wastes are a commodity, and states cannot act to inhibit interstate transportation, treatment and disposal. No state can limit the movement of hazardous waste into or out of its borders. As a result, the USEPA has focused on the availability of national capacity rather than assessing state self-sufficiency.

The Plan concludes that it is extremely difficult to assess the in-state need for additional TSD facilities over the next 20 years. However, because New York generators can rely on the interstate market for TSD facilities, the Siting Plan determined that it is not currently necessary for New York State itself to initiate the

siting of additional in-state facilities because New York can rely on the private sector to do so:

> "The Plan contemplates that siting proposals will originate from companies based on their own scientific, technical, environmental, regulatory, social and economic considerations. The Siting Plan embraces the market forces that have served to assure adequate hazardous waste management capacity and does not discourage the consideration of private sector siting proposals that meet the requirements of the ECL and regulations, including the siting criteria in 6 NYCRR 361. (Plan p. 6-8)."

While the Siting Plan concluded that "no schedule for siting any new or expanded hazardous waste TSD facilities is needed," it also concluded that "neither the Statute or Siting Plan precludes the consideration of applications at any time for any new or expanded facilities in any part of the State." (Plan p. 8-3).

The Siting Plan explains the State's reliance on the USEPA's national capacity assessment as follows:

1. RCRA created a "cradle to grave" hazardous waste management system for all newly generated hazardous wastes, and it created standard, baseline national regulations applicable to all hazardous waste generators, transporters and TSD facilities in all of the states. RCRA allows states to be authorized by the USEPA to implement the RCRA program.

2. New York has been authorized to implement most of the RCRA Subtitle C (hazardous waste management) program in New York, and the State has expressly determined by statute that the State's regulatory program is expected be consistent with the federal RCRA regulatory program.[2]

3. By meeting New York State regulatory and permitting requirements, New York facilities also meet federal regulatory and permitting requirements for hazardous waste management. Facilities located in the other states are

[2] See ECL § 27-0911 expressing the intent that the State's hazardous waste regulatory program be consistent with the federal RCRA program.

similarly regulated by a combination of State and federal regulatory requirements. As a result, interstate agreements or multi-State regional authorities, referenced in the Siting Law establishing the basis for development of the Siting Plan, are not necessary to assure proper management of hazardous waste. Pursuant to federal and State regulations, generators are generally required to ship waste only to a TSD facility authorized by RCRA C or an equivalent State program. Plan at p. Intro. 6.

4. "To obtain approval of USEPA for its hazardous waste management program, a State program must be consistent with the federal program. Federal regulation states at 40 CFR 271.4(a): 'Any aspect of the State program which unreasonably restricts, impedes, or operates as a ban on the free movement across the State's border of hazardous wastes from or to other States for treatment, storage, or disposal at facilities authorized to operate under the federal or approved State program shall be deemed inconsistent.'" Id.

5. "The federal regulation goes on to state at 40 CFR 271.4(b): 'Any aspect of State law or of the State program which has no basis in human health or environmental protection and which acts as a prohibition on the treatment, storage or disposal of hazardous waste in the State may be deemed inconsistent.' To continue to be an authorized State, New York must meet the requirements of these federal regulations. This Plan is written to be consistent with these federal mandates." Id.

6. The "Plan looks at the management of hazardous waste generated in New York State from the perspective of present industry practices, recognizes that State borders are not a major factor in the business or regulatory approach to hazardous waste management. The Plan also takes into account the impact of national hazardous waste management capacity and hazardous waste importation and exportation. A commercial TSD facility managing hazardous waste, be it by storage, recycling, treatment, incineration, or landfilling, looks well beyond the State's borders for prospective clients. By the same token, a New York State hazardous waste generator evaluates options both inside and outside of New York to find the most effective and economical method for managing its hazardous waste. This includes consideration of availability of the required management option, transportation and handling costs, and other factors." Id. at 6-7.

7. "Through this evaluation process, recognizing the current realities of the hazardous waste industry, the Plan's findings, recommendations and guidance reflect a national perspective in determining the hazardous waste management needs of New York State." Id. at 7

The Siting Plan provides the following guidance to the Department and the Siting Board:

> "Any decision regarding hazardous waste facility siting must not result in the State's delegated hazardous waste management program becoming inconsistent with federal requirements pursuant to 40 CFR 271.4(b), including the requirement that '[a]ny aspect of … the State program which has no basis in human health and environmental protection, and which acts as a prohibition on the treatment, storage or disposal of hazardous waste in the State may be deemed inconsistent.' New York's requirements for the siting of any new or expanded hazardous waste facilities in the State must accordingly be read in the context of this federal requirement.(p. 9-4)."

This guidance is consistent with the statutory directive that New York's hazardous waste regulatory program be consistent with the federal RCRA program. ECL 27-0911.

With the guidance in the Siting Plan indicating that the in-state needs demonstrations in both §§ 27-1102.1 and 27 1103.5(f) are not a requirement in the Siting certificate process, there should be no potential for a Siting Board determination to be inconsistent with 40 CFR 271.4(b) or ECL 27-0911.

1.6.3 New York's Disposal Needs

As indicated in the Siting Plan, New York expects to continue generating primary and remedial wastes requiring land disposal. At p. 3-31, the Plan states that primary hazardous waste generation in the State over the next 20 years is expected to remain at current levels or decline slightly. The Plan, at p. 3-32, projects that remedial wastes requiring land disposal will continue to be generated over the next 20 years, but the total quantity of such wastes cannot be estimated.

Tables 5-1(a-e), pp. 5-1 to 5-4, present the quantity of hazardous wastes generated in 2002, 2004, 2005, 2007 and 2008, which was shipped offsite by larger quantity generators broken down by management method. For the years indicated, the quantity of hazardous wastes sent offsite for land disposal average 110,858 tons/year. Table 5-2 shows that there is one land disposal facility in the State, i.e., the CWM facility. The data in Table 5-1 includes waste from remedial projects. (p. 5-6). *"Statewide, two thirds of the waste generated in the state shipped offsite for land disposal in 2005 went to the in state facility." (Id.).*

As indicated in Table 3-4 (p. 3-13), between 1996 and 2008, New York generated 1,122,922 tons of remedial hazardous waste that was shipped offsite for land disposal, an average of 86,379 tons/year. Of that amount, 776,668 tons were disposed of in state, representing 69% of the total amount sent for land disposal. Table 3-5 (pp. 3-17 to 3-18) also shows the volume of remedial waste generated in state and managed in state for the years 2001 through 2008. The total hazardous waste generated and land disposed for that period is 546,010 tons with 400,556 tons, or 73%, land disposed in state.

As stated in the Plan: "*the need for off site disposal at a hazardous waste landfill of select portions of the contaminated materials from remedial cleanup actions is a reality."* (p. 6-2). In CWM's view, the same is currently also true for certain primary hazardous wastes.

CWM's Model City facility is a fully permitted RCRA and TSCA (PCB) treatment, storage and land disposal facility. As designed, RMU-2 meets all of the applicable RCRA and TSCA regulatory requirements and the related State regulations, including 6 NYCRR Parts 361 and 373.

The federal land disposal restriction rules (LDRs) are fully implemented in New York. (Id. at 4-1). CWM's RMU-1 meets all of the LDR criteria. (Id. at 1-18). The New York goal is to phase out land disposal of hazardous wastes, other than treated residuals posing no significant threat to public health of the environment. (Id. at 4 6). The RMU-2 application is consistent with that goal.

The Siting Plan does not preclude the siting of new or expanded facilities sponsored by the private sector. RMU-2 is a private sector proposal and is consistent with the Siting Plan.

The Siting Plan emphasizes the need for any Siting Board determination to be consistent with 40 CFR 271.4(a) and (b) in order for New York to maintain the status of its hazardous waste regulatory program as a USEPA-approved RCRA-delegated program. By meeting the Siting criteria in 6 NYCRR 361.7, as well as the technical RCRA requirements in 6 NYCRR Part 373, RMU 2 is consistent with the federal RCRA program and protective of public health and the environment. As such, RMU 2 is consistent with the Plan.

1.6.4 RMU-2 is Otherwise Necessary or in the Public Interest

If ECL 27-1102.1 was literally applied, requiring New York to be self-sufficient, the Siting Plan would have determined that New York needs new or expanded in-state hazardous waste land disposal capacity because CWM's RMU 1, the only commercial land disposal facility in the State (and in the northeast United States), will be out of capacity by the time RMU 2 can complete the siting and permitting process and then be constructed.

While the USEPA and the Department's current emphasis is on national capacity, that approach is also committed to relying entirely on the private sector to determine where and when to build new or expanded facilities. Moreover, in order to avoid inconsistency with 40 CFR 271.4(b), the absence of any capacity self-assurance "need" cannot form the basis for denying the RMU-2 application. Maintaining New York's status as a USEPA-approved RCRA delegated program is in the public interest as reflected in ECL § 27-0911. If it is determined that RMU-2 meets all of the applicable RCRA standards and it receives an acceptable siting score under 6 NYCRR 361.7, granting RMU-2 a Siting certificate would be in the public interest.

CWM's RMU 1 has captured a very large percentage of the New York market for offsite land disposal of hazardous wastes qualifying under the LDRs. It has also captured a significant portion of the market for land disposal in the northeast United States. Because of its location, RMU 1 provides a significant transportation advantage as compared to its competitors in Michigan and Indiana, except for those few generators who can arrange rail transportation. The shorter transport distance results in lower transport costs and lower greenhouse gas emissions.

The Siting Plan determined that it is reasonable and appropriate to rely on the private sector to continue to build capacity to serve the national market. In order to rely on the free market and the private sector to continue to construct and operate facilities, it is

necessary to allow the free market forces to operate unburdened and unrestricted by artificial regulatory requirements unrelated to public health and the environment.

CWM has proposed to site and operate RMU-2 at the Model City, Niagara County Facility for several reasons:

1. CWM has invested over $100 million in the necessary infrastructure and related facilities to properly support a land disposal facility, and it is a prudent and efficient use of the company's resources to maximize the utilization of those facilities and resources to the fullest extent possible.

2. There is properly zoned land area available at the Model City site to accommodate RMU-2, and the local hydrogeologic setting is well suited for a land disposal facility.

3. There is a continuing, relatively stable market for land disposal services consistent with the LDRs, and CWM believes that it can effectively compete in that market.

4. CWM employs an experienced, well trained work force, essentially all of whom reside in the local area.

5. The CWM Model City Facility and RMU-1 are a part of the hazardous waste treatment and disposal capacity currently available within New York State, as well as within the national marketplace described in the Siting Plan. RMU-1 was included in the USEPA's 1999 capacity assessment. In many instances, hazardous wastes destined for land disposal in RMU-1 are first treated at the Model City Facility in order to meet the land disposal restriction rules ("LDRs") prior to disposal. As noted in the Siting Plan GEIS, the toxicity and mobility of the treated residuals that are land disposed are dramatically reduced. However, as recognized in ECL § 27-1102.2(d), land disposal capacity for treated residuals and certain remediation wastes remains necessary.

6. Each waste stream destined for disposal at the Model City Facility must be pre-approved by the Department. In order to obtain that approval, the waste generator, except in the case of certain remediation wastes, must demonstrate that it has an effective waste reduction program in place. Presumably the same requirement would be included in any permit issued for RMU-2.

7. The hazardous wastes disposed at the Model City Facility are either exempt from or are fully compliant with the LDRs.

8. As indicated in the December 10, 1993 Siting Board decision for RMU-1, the Siting Board viewed RMU-1 as a valuable waste management and economic resource for the State of New York. The Siting Board expressly found:

   > "The proposed RMU-1 facility constitutes a critical environmental management resource for New York State. …

9. The facility also constitutes a significant economic development resource providing New York businesses with a cost-effective disposal site for treated waste materials and serving as a disposal site for treated remedial wastes. These functions will support the need of existing industry and should enable the reuse of old, abandoned industrial sites for new economic activity."

10. As a matter of public policy and as one of the nation's largest generators of hazardous wastes and as the location of two current major Superfund cleanup projects that may generate in excess of 6 million tons of contaminated sediments requiring land disposal, most likely at an out-of-state facility or a newly constructed facility in-state, New York should shoulder a share of the responsibility for providing a measure of the hazardous waste treatment and disposal capacity that will be needed in the future to deal with both in-state- and out-of-state-generated wastes, particularly where the Siting Plan GEIS noted New York's status as a substantial net exporter of solid and hazardous wastes.

11. If RMU-2 is not permitted, those generators currently using the Model City Facility will be required to transport their wastes greater distances for disposal in Indiana, Michigan or elsewhere. With a decrease in competition resulting from a decrease in available capacity, prices are likely to rise. The longer hauling distances will consume larger volumes of diesel fuel and will result in an increase of greenhouse gas emissions. If RMU-2 is not permitted and one assumes that the same 85,248 tons of in-state generated wastes that were land disposed at RMU-1 in 2007 would be transported to the next closest facility in Wayne, Michigan, it would be necessary for New York generators to travel an additional 514 miles (round trip) per load of waste. These longer hauling distances would annually consume approximately 350,000 additional

gallons of diesel fuel at an approximate annual cost of $1.4 million (assuming an average cost of $4.00 per gallon for diesel fuel). The consumption of the additional diesel fuel would also annually contribute approximately 3,917 tons (expressed in terms of carbon dioxide emissions) of additional greenhouse gas emissions to the atmosphere. Given the large number of generators and the relative volume from each, rail transportation is not a viable option. As a result, a denial of the RMU-2 applications would be contrary to the public policies supporting energy conservation and the minimization of greenhouse gas emissions.

12. As described in the DEIS for RMU-2, the Model City Facility provides significant jobs and economic benefits to the local Western New York economy. Most of those jobs and benefits would be lost if RMU-2 is not permitted.

13. Building a new state-of-the-art hazardous waste TSD facility is far more technically complicated and expensive than simply constructing the land disposal unit itself. In addition to the need for a site, utilities and good access, a hazardous waste TSD facility requires a comprehensive assessment of site hydrogeologic conditions, the establishment of complex groundwater, surface-water and air monitoring systems, the construction of structures for containment and treatment of wastes and leachate, the construction of specialized support facilities, additional lands to provide adequate buffers to the surrounding community and specialized trained staff. Given the substantial investment in infrastructure that would be required to build a completely new hazardous waste facility at any greenfield site, it is virtually certain that the private sector would not endeavor to permit a new site for such a facility. In fact, no such facility is currently proposed in the eastern portion of the United States. Construction of a completely new hazardous waste TSD facility would include all of the direct capital costs associated with a unit such as RMU-2, plus upwards of $40 million more to develop the aforementioned infrastructure components. In addition, siting and permitting a completely new hazardous waste TSD facility would likely take 10 years or more to complete. As a result, the RMU-2 expansion proposal is the only viable option for providing continued in-state hazardous waste disposal capacity to serve a statewide, regional and national market.

14. New York's expressly stated policy is to rely on the private sector to propose, construct and operate facilities to assure future hazardous waste management capacity. If RMU-2 is demonstrated to meet the applicable requirements in the ECL and related regulations, including the Siting criteria, a denial of the RMU-2 application would be inconsistent with this State policy.

1.7 Facility Closure

At the end of the useful life of the unit, RMU-2 will be closed in accordance with the requirements of the NYSDEC and applicable regulations. A final cover system will be installed when the unit has reached capacity. The final cover system will consist of (from top to bottom) 6 inches of vegetated topsoil, 18 inches of unclassified fill, a geocomposite drainage layer, a 40-mil textured HDPE geomembrane, a GCL, and 6 inches of gradable soil (refer to Figure 6A for details). The cap will be tied into the perimeter berm as to totally encapsulate and isolate the waste placed in the unit.

In general, closure procedures will include decontamination of heavy equipment directly involved in waste handling operations and movement of that equipment to other Waste Management, Inc. (Waste Management) sites for use. If the equipment is not intended for use at another Waste Management site, or in other activities at the Model City Facility, it will be land-disposed in RMU-2. Roads that exclusively serve RMU-2 will be thoroughly swept, and the sweepings will be disposed on site or in another suitable facility. The unit will be contoured to design grades and revegetated, as necessary, to prevent erosion and ponding of precipitation. As required by 6 NYCRR Part 373-2.7(b), CWM will take all necessary steps to prevent the occurrence of threats to human health and the environment. Post-closure monitoring and maintenance activities will include continued groundwater quality monitoring, leachate collection and final cover inspection and maintenance. CWM will provide this post-closure care in perpetuity. Detailed procedures and the associated costs of closure and post-closure of RMU-2 are provided in the 6 NYCRR Part 373 Permit Modification Application accompanying this submittal.

Procedures guaranteeing implementation of the closure and post-closure plans are provided through financial assurance mechanisms established by CWM. The financial assurance mechanisms guarantee the availability of financial resources to the NYSDEC to implement the closure and post-closure procedures by a third party if CWM is unable to implement the procedures. CWM presently uses a surety bond and a letter of credit to provide financial assurance for closure and post-closure care in the

amounts determined pursuant to 6 NYCRR Part 373-2.8, as adjusted annually. These mechanisms designate the NYSDEC as the beneficiary and provide adequate funding for closure and perpetual post-closure care.

1.8 Location and Boundaries of Proposed Site

CWM's Model City Facility is located in the Towns of Lewiston and Porter in Niagara County, New York. The Model City Facility is situated along Balmer Road, 1.9 miles east of the intersection with NYS Route 18 (Creek Road). The facility encompasses approximately 710 acres of rural land, of which, 630 acres are permitted for hazardous waste treatment, storage and disposal activities. RMU-2 will be sited within the existing Model City Facility. The area required for RMU-2 will be approximately 43.5 acres and will be situated entirely within the Town of Porter, directly west of the existing RMU-1 landfill. The unit will be bounded on the north by the Stabilization Facility and an access road to the Stabilization Facility. The unit will be bounded to the south by an access road and to the east by RMU-1 (Figure 3). The unit will be bounded to the west by SLF 1-6, an open field where the closed Fire Water Pond was formerly located, an area designated as the Process Area, and the facility's Leachate Tank Farm. Approximate distances to the property boundaries are 2,100 feet to the north, 3,100 feet to the east, 70 feet to the south, and 3,200 feet to the west.

Distances from the proposed unit to closest public roads are 2,110 feet (minimum) to the north and 2,880 feet (minimum) to the east, which are the right-of-ways of Balmer Road and Porter Center Road, respectively. The siting of the unit complies with all applicable regulatory setbacks.

The proposed location of RMU-2 will require the relocation of existing CWM support facilities, as follows:

- The Empty Trailer Parking Area will be eliminated and the Full Trailer Parking Area will be relocated to the west to replace the existing area lost by the construction of RMU-2.

- The Stabilization Trailer Parking Area will be relocated to an area north of RMU-2.

- The trailer transfer ramps for the secure landfill (SLF) 10 Leachate Holding Building and SLF 1-11 Oil/Water Separator Building will be relocated to other sides of those buildings.

- The Emergency Response Garage will be relocated to the existing truck wash building located north of M Street, west of the proposed RMU-2 landfill.

- The Heavy Equipment Maintenance and Rolloff Repair Building will be relocated to the area north of Facultative (Fac) Ponds 1 and 2.

- The Drum Management Building will be relocated to an area east of the existing RMU-1 landfill.

- Onsite water supply pipes will be relocated around the proposed RMU-2 landfill.

In addition, the proposed RMU-2 site includes land currently occupied by two Fac ponds designated as Fac Pond 3 and Fac Pond 8. Fac Pond 8, located immediately west of RMU-1, is currently out of service and undergoing closure. This area will be totally consumed within the RMU-2 footprint. Fac Pond 3, located west of Fac Pond 8, is currently used for storage of treated wastewater. Wastewater stored in Fac Pond 3 is discharged to the Niagara River following approval of the pre-qualification testing described in the CWM State Pollutant Discharge Elimination System (SPDES) Permit. This area will be entirely consumed within the RMU-2 footprint as well. Fac Ponds 3 and 8 will be permanently closed. In order to compensate for the treated wastewater volume reduction due to the removal of Fac Ponds 3 and 8, a new Fac Pond 5 will be constructed between SLF-12 and SLF-7 to serve as the final qualification pond. The existing Fac Pond 1/2 will remain in service.

During excavation activities to achieve RMU-2 design subgrade elevations, the possibility of encountering contaminated soils within the Glacial Till layer exists. This potential contamination may be chemical (i.e., volatile organic compounds) or radiological. The environmental impacts associated with the excavation of contaminated soils and the mitigation measures to minimize these impacts are discussed in the RMU-2 DEIS (ARCADIS, April 2003, Revised August 2009, March 2012, February 2013, and November 2013).

1.9 Property Ownership

The Model City Facility began operations in 1971 as Chem-Trol Pollution Services, Inc. Activities included reclamation of waste oils, distillation of spent solvents, aqueous waste treatment and land disposal. In 1973, the stock of Chem-Trol was purchased by SCA Services, Inc. The Chem-Trol name was retained until late 1978/early 1979, at which time the corporate name changed to SCA Chemical Waste Services, Inc. In 1981, the name was changed to SCA Chemical Services, Inc. In October 1984, WM Acquiring Corporation, owned jointly by Waste Management, and Genstar, Inc., acquired SCA Services, Inc., of which SCA Chemical Services, Inc. was a subsidiary. Through an October 1986 corporate reorganization, SCA Chemical Services, Inc. became a wholly owned subsidiary of Chemical Waste Management, Inc., itself majority-owned by Waste Management. Waste Management is based in Houston, Texas. In July 1988, the corporate name was changed to CWM Chemical Services, Inc. CWM Chemical Services, Inc. became a limited liability company in January 1998 and became CWM Chemical Services, LLC, the current owner and operator of the Model City Facility.

The owner's authorized representative is:

Michael Mahar, District Manager
CWM Chemical Services, LLC
1550 Balmer Road
Model City, New York 14107

1.10 Facility Operator

CWM will operate RMU-2.

1.11 Local Zoning and Land Use Regulations

The Town of Porter has zoned the portion of the Model City Facility situated within the town for heavy industrial use surrounded by a general industrial zone. In these areas, residential uses are not permitted. The small portion of the Model City Facility located in the Town of Lewiston is zoned “Industrial-No Housing Permitted” or “Industrial-Housing Permitted.” The heavy industrial zoning designation of the Town of Porter, in which RMU-2 will be located, allows hazardous waste disposal operations. Land to the south, beyond the industrial zones, is zoned by the Town of Lewiston to permit “one-

family residential large lot requirement" interspersed with agricultural areas. Refer to Figure 7 for major land features and population centers within a 5-mile radius of the Model City Facility.

When RMU-2 reaches capacity, it will be closed, capped and seeded, and the appropriate deed restriction will be recorded. Thereafter, the unit will remain part of the Model City Facility, and the only land use for the unit will be for maintenance activities. Access to the area will be restricted to authorized personnel during the post-closure period. Statutory and regulatory requirements will restrict the site's potential uses.

1.12 Other Information Concerning Impacts on Health, Safety and Welfare on Neighboring Populations

Adverse local impacts on health, safety and welfare associated with the operation of the proposed unit are minimal and, with the exception of the possibility of a transportation mishap, are confined to the Model City Facility itself. In addition, a number of impacts will be beneficial (e.g., support of the local economy, tax contributions, environmentally sound waste disposal). The potential impacts to human health and the environment of the project are discussed in the DEIS for RMU-2.

An Exposure Information Report (EIR) was prepared specifically for the existing permitted RMU-1 unit in June 1992. It discussed the potential for the public to be exposed to hazardous waste constituents through various pathways due to assumed release scenarios. The following includes a summary of the major points of the EIR, which are considered by CWM to be applicable to the proposed RMU-2. An updated EIR was included in the April 2003 DEIS and the August 2009, March 2012 and February 2013 revisions.

Potential human exposure via the air pathway can be classified as either low-level long-term or short-term. Long-term exposures include emissions of Hazardous Air Pollutants (HAPs), volatile organic compounds (VOCs) and particulates. HAPs and VOCs are present in the landfill units and landfill leachate at the Model City Facility. Air monitoring by CWM of the existing facility indicates that all exposure levels of the facility's employees are several orders of magnitude below the Threshold Limit Value (TLV) levels as established by the American Conference of Governmental Industrial Hygienists. TLVs refer to airborne concentrations of substances and represent conditions under which workers may be repeatedly exposed, day after day, without adverse effect.

The NYSDEC has promulgated changes to 6 NYCRR Part 201 regulations effective on February 22, 2013. Based on the emissions estimates for the facility's current Air Pollution Control Minor Facility Registration and the new regulations, the NYSDEC has indicated that CWM must submit a State Facility Permit Application in accordance with 6 NYCRR Part 201-5 within six months of receipt of the NYSDEC determination to submit a complete state facility permit application. CWM received this notification on March 11, 2013 and will prepare and submit a Part 201 Application for the facility by September 11, 2013. Upon issuance of a State Facility Permit, a revised Part 201 Application will be submitted for RMU-2.

Estimated emissions of HAPs and VOCs from the proposed RMU-2 leachate collection system and lift station were previously calculated for the 6 NYCRR Part 201 Air Permit Application in 2009. The total amount of VOCs estimated to be emitted from the proposed RMU-2 is 2.33×10^{-8} tons per year. Comparison of this figure to the value established in 6 NYCRR Part 231 of 50 tons per year for a facility to be considered a major source of VOCs, indicates that emissions of VOCs from RMU-2 are minor. Similarly, the calculated RMU-2 HAPs emissions of 4.57×10^{-7} tons per year is well below the 25 tons per year major source threshold. This evaluation will be included in a revised Part 201 Application upon issuance of the State Facility Permit.

Four possible mechanisms that can generate dust emissions (i.e., particulate) at the site were identified as construction activities, traffic, wind erosion and deposition of dusty waste in the management unit cells. The potential for human exposure to inhalation of particulate is considered to be small. A review of the history of site operations from 1973 to present shows that there have been only a small number of incidents of air emissions. Most of these incidents resulted from accidental mixing of wastes, which occurred early in the site's operational history and emissions from the aqueous waste treatment plant. More recently, particulate emissions have resulted from the placement of dusty loads during dry, windy periods. Measures have been implemented to prevent the mixing of incompatible wastes, and the facility Dust Control Plan has been established to mitigate particulate emissions from the placement of dusty loads. Potentially dusty wastes are identified upon receipt at the Model City Facility and wetted down during disposal in the landfill to suppress the dust. Therefore, the accidental mixing of waste and particulate emissions resulting from the placement of dusty loads, are considered to be low-probability events. The facility spill prevention and response procedures, as contained in the Spill Prevention, Control and Countermeasures (SPCC) Plan, included in Appendix D, and the facility Contingency Plan, included in the RMU-2 Part 373 Permit Modification Application, will adequately

control the potential for human exposures via the air pathway as a result of short-term releases. Respirable particulate monitoring data collected to date by CWM have been well below state and federal standards for PM-10 Particulate.

Particulate air dispersion modeling was completed in 2009 (*Air Dispersion Modeling Report, Ambient Air Quality Impact Analysis* [August 2009 by Conestoga-Rovers & Associates]). The most significant potential emission sources, including RMU-1 and the Stabilization Facility, were modeled. Based on the results of the air dispersion models of ground level concentrations at on-site and off-site receptor locations for PM-10 and PM-2.5, emissions from the Model City Facility are not predicted to exceed, or significantly approach, applicable USEPA and NYSDEC standards. The six existing ambient air monitoring stations were determined to adequately measure and represent the condition of airborne particulates at CWM.

Potential human exposure via the surface-water pathway can be classified as long-term exposure from effluent discharge, short-term exposure from overfilling of the facultative ponds or releases due to leaks and spills.

The Model City Facility discharges the aqueous portion of treated wastewater into the Niagara River in accordance with CWM's SPDES Permit conditions and effluent limitations. The potential for human exposure to hazardous constituents from the scheduled effluent discharges is considered small. Releases to the surface water could potentially occur in the event that the Fac ponds were overfilled. Preventative measures that have been implemented (e.g., maintaining and monitoring freeboard, inspection schedules) make impoundment overfilling a low-probability event.

Releases to the surface water could also occur from on-site leaks and spills. Leaks and spills are generally confined to small containment areas, and the hazardous material is removed and treated or disposed on site. The facility maintains a large inventory of equipment for containing and cleaning up on-site and off-site spills. CWM's SPDES Permit also contains conditions and effluent limitations for surface-water discharges. As noted above, CWM has developed two plans that minimize the potential for human exposure to hazardous waste constituents and potentially hazardous materials. The SPCC Plan is a proactive plan that identifies the potential for spills of petroleum products and releases of PCB waste oil. The SPCC Plan includes measures to control any releases of these materials. The facility Contingency Plan establishes specific responsibilities and procedures in the event of a release of hazardous materials or wastes. The responsibilities and procedures in these plans

address reporting requirements, evacuation procedures, specific spill control procedures and descriptions of available spill response equipment and its location. The Contingency Plan is further discussed later in this section. Due to the measures described above, the potential for human exposure to hazardous constituents from short-term releases is considered to be small.

Potential human exposure via the groundwater pathway could occur as a result of potential leachate releases from operating and closed landfills or releases from Fac ponds. There is no evidence of any overall groundwater contamination or specific plumes of contamination associated with any past or current site operations in the uppermost confined aquifer (Glaciolacustrine Silt/Sand layer). There is some evidence of groundwater contamination in the saturated zone above the aquifer that has been associated with past activities at the site. However, there is no evidence of significant movement of contaminants within the saturated zone. Based on the results of existing monitoring data analyses and the 1985 Hydrogeologic Characterization (Golder Associates [Golder]), current operations at the site present no actual, and only a small potential for, human exposure to hazardous substances via the groundwater pathway.

Details of the documented groundwater or soil contamination at the Model City Facility-related investigations and corrective measures studies and corrective measures currently being conducted are provided in Attachment E, “Corrective Action Requirements,” of the current Sitewide Permit.

To assess future exposures to groundwater contaminants, estimated breakthrough times for leachate from several areas of the site were reviewed. The 1985 Hydrogeologic Characterization (Golder, 1985) report estimated the breakthrough times in two cross-sections of the site. The northwest section has an estimated breakthrough time of 590 years, and the southeast section has an estimated breakthrough time of 440 years for the leachate to travel from the top of the water table to the top of the Glaciolacustrine Silt/Sand aquifer.

Leachate from RMU-2 will be piped to the Model City Facility’s leachate treatment system using double-walled pipelines to provide containment in the event that the primary carrier line develops a leak. Additionally, the piping system is pressure tested prior to use to check for leaks. During operation, the RMU-2 transfer pipelines will be automatically monitored for leaks in the secondary and the primary carrier pipes. Pumps will be shut off if a leak is detected. As a result, the chance that a leak in the system will go undetected is considered extremely remote.

For reference purposes, during RMU-1 permitting, it was assumed that one of the underground, single-walled pipelines (no longer in operation) could rupture and leak, undetected, for 1 year. An analysis of this scenario was conducted to determine the amount of leachate that would move off site via groundwater and potentially present a hazard to off-site populations. In the modeled worst-case scenario, the leachate was assumed to contain the chemicals occurring at greater than 1 part per million in representative leachate from SLF-11. The hazardous constituents were conservatively assumed to travel with the same velocity as the groundwater.

Two geologic scenarios were analyzed: 1) a leak confined to the water table in the Upper Till units (considered the most likely scenario) and 2) a leak transported instantaneously to the uppermost aquifer, the Glaciolacustrine Silt/Sand unit (considered a possible, but highly unlikely event). The leachate line leak was assumed to occur and to continue undetected for 1 year.

Under both geologic scenarios, the leachate was found to be confined to the immediate area of the leak. It was estimated that it would take approximately 55,555 and 223 years, respectively, for leachate in Scenarios 1 and 2 to migrate off site from the area of RMU-1. Therefore, a conservative modeling approach indicates that off-site groundwater contamination as a result of a rupture of a leachate pipeline of RMU-1 is unlikely. The same analysis is considered applicable to the proposed RMU-2. It is noted that all single-walled piping previously used for landfill leachate at the Model City Facility has been closed and replaced with double-walled piping.

Potential spills of hazardous wastes can occur during transportation from the waste generator to the Model City Facility. Emissions of particulates and volatile chemicals can potentially occur as the result of an off-site traffic accident involving a truck carrying hazardous wastes to the Model City Facility. Emissions from such an accident were modeled from a scenario in which a car collides with a truck hauling a bulk load of hazardous waste destined for the Model City Facility. The accident was assumed to occur on NYS Route 18 in front of the Lewiston-Porter School, and the receptors were assumed to be 100 meters from the accident site. It was assumed that the entire contents of the truck were spilled onto the roadside, and the spilled material lay uncontrolled for 1 hour.

From the many types of waste expected to be placed in RMU-1, four were chosen as having the worst potential environmental impact based on the waste's hazardous constituents and/or physical characteristics. The wastes were:

1. Baghouse dust from leaded glass manufacturing. This dusty waste contains cadmium and lead.

2. Spent potliner from aluminum reduction. This dusty waste contains cyanides and fluorides.

3. Mercury-contaminated debris from chlor/alkali production; and

4. Waste polyvinyl chloride (PVC) filtercake from PVC production. This waste contains vinyl chloride monomer, which can volatilize from the waste.

The USEPA's preferred air dispersion model, AERMOD, was used to model releases from spilled wastes, using conservative assumptions regarding waste characterization and environmental factors (i.e., worst-case hourly meteorological conditions from a 5-year data set). The predicted ambient air concentrations of the constituents were compared to the NYSDEC's 2010 NYS Short-Term Guideline Concentrations (SGCs) and applicable current ambient standards.

Under worst-case hourly meteorological conditions for a 5-year period, emissions of hazardous constituents from an accident involving a truck hauling certain wastes and spilling its load should not result in concentrations that exceed the NYS SGCs or the current ambient standards. The results of the modeling analysis showed that for all four waste types described above, the predicted impacts for the estimated emissions were below the SGCs and the current ambient standards (i.e., lead).

Due to the conservative approach used in the modeling process and the concentrations of the constituents in the wastes, the results are considered worst-case and should be interpreted with caution. For example, the approach ignored several factors that would serve to limit actual exposures, such as the effect of shelters-in-place of the potentially exposed receptors and the adherence of spilled waste to soil along the roadside. Details of the transportation accident modeling can be found in the 2012 EIR, which is an appendix to the RMU-2 DEIS.

The Model City Facility's accident record is discussed in detail in Section 2.3. Based on an analysis of the transportation routes and past history, the potential for human exposure to hazardous constituents from a transportation-related spill event is considered to be extremely small.

As required by state and federal hazardous waste regulations, detailed procedures to respond to and mitigate on-site emergencies are described in the facility Contingency Plan. The facility Contingency Plan is updated on a regular basis to include any facility modifications and improved methodologies. This document has recently been updated and resubmitted with the Part 373 Permit Modification Application for RMU-2. The following summarizes the key components of the Contingency Plan:

- Descriptions and locations of all wastes and other materials handled at the facility;
- Types of potential emergencies;
- Identification of personnel responsible for evaluation of incidents and implementation of the plan;
- Methods to assess the severity of incidents;
- Location and descriptions of on-site emergency response equipment;
- Methods to notify facility personnel and outside response agencies, including the names and phone numbers of all outside agencies; and
- Methods to contain and control incidents.

As required by regulations, all personnel working in process areas receive regular training with respect to applicable portions of the plan. The Contingency Plan has been distributed to all local emergency agencies that could be requested to respond to Model City Facility incidents. Response agreements with these agencies are currently in place for the existing site operations and will be expanded to include RMU-2. Coordination agreements have been established with these local agencies to confirm the agencies' willingness to respond when requested, and to confirm that agency personnel have reviewed the Contingency Plan. The plan has been submitted to the following local agencies: Niagara County Department of Health (DOH), local hospitals, medical centers and local fire and police departments. The Contingency Plan also includes a complete list of personnel and agencies to which the Contingency Plan has been distributed. The Niagara County Sheriff's Department and the Youngstown Volunteer Fire Company have been designated as the primary emergency police and fire authorities, with the others acting as support agencies.

A comprehensive analysis of traffic studies and traffic noise impact studies was performed as part of the DEIS. Appendix K of the DEIS includes the traffic analysis studies and Appendix G includes the traffic noise impact assessment.

The amount of truck traffic and traffic safety with respect to trucks hauling hazardous waste to the Model City Facility has been a concern of the public, especially with respect to the Lewiston-Porter Schools located on NYS Route 18, south of Balmer Road (i.e., on the designated transportation routes).

To address these concerns and mitigate potential traffic impacts, the Model City Facility entered into the CAC Agreement in 1993. The last version of the CAC Agreement, dated September 23, 1997, is included in Appendix L of the DEIS and includes the following requirements related to the community traffic concerns:

- CWM established a telephone hotline number for community complaints concerning traffic and associated activities at the Model City Facility.

- CWM participates in a quarterly (or as needed) review of complaints, problems and concerns related to the Model City Facility with designated representatives of Porter, Lewiston, Niagara County, the School District and ROLE.

- CWM provides advance notice to Porter, Lewiston, Niagara County and the School District concerning any expected unusual traffic activities at the Model City Facility.

- CWM has implemented and adheres to the Site Operations Plan. All parties reserve the right by mutual agreement to make modifications to the Site Operations Plan.

- CWM has established and maintains a direct telephone line between the Model City Facility and the Lewiston-Porter Central School District Administration.

- CWM has participated with the School District in reviewing the emergency evacuation plans of the school district to address potential worst case incidents at the Model City Facility or in the transportation of hazardous waste on NYS Route 18, past the school campus.

- CWM reports all violations of applicable transportation regulation and law annually to the Niagara County District Attorney and the Town of Lewiston Police Department.

The last CAC Agreement technically expired on July 28, 2008. However, CWM continues to implement these requirements. CWM and the CAC meet as needed to review the conditions and effectiveness of the CAC Agreement. CWM is willing to negotiate appropriate conditions as part of a new CAC Agreement for RMU-2 to provide similar restrictions to mitigate potential traffic impacts. Previously,as part of the RMU-1 CAC process, possible alternate traffic routes to the Model City Facility were jointly evaluated. None were identified because the potential alternate roads were not adequately designed for heavy truck traffic.

2. Siting Considerations

In accordance with 6 NYCRR Part 361.7, the Facility Siting Board in making its determination to grant, conditionally or otherwise, or to deny a certificate, is required to consider various specified siting criteria, and to assign ratings to the criteria based on three distinct situations relative to such criteria, using site-specific information. The ratings are as follows:

- Situation 1 is considered to be the most favorable with respect to siting requirements;
- Situation 2 is considered less favorable; and
- Situation 3 is considered least favorable.

The following subsections present each specific siting consideration set forth in 6 NYCRR Part 361.7. CWM's suggested rating for that criterion is indicated in parentheses. Information supporting the criterion rating is provided.

It should be noted that in addition to the construction of RMU-2 under the proposed action, several existing Model City Facility structures and operational areas that currently exist within the proposed RMU-2 footprint would be required to be abandoned at their existing locations and relocated to areas within the Model City Facility. These existing structures and operational areas include:

- Drum Management Building
- Empty Trailer Parking Area
- Full Trailer Parking Area
- Stabilization Trailer Parking Area
- Emergency Response Garage
- Heavy Equipment and Facility Maintenance/Rolloff Repair Building
- McArthur and "M" Streets

- Various aboveground and belowground utilities and communications services
- Meteorological (MET) tower
- Unloading ramps for the SLF-10 Leachate Building and SLF-11 Oil/Water Separator Building
- Closure of Fac Ponds 3 and 8 and the construction of Fac Pond 5

While the abandonment and relocation of the aforementioned structures and operational areas were considered, where applicable, in CWM's suggested ratings below, according to ECL 27-1105.2.(d)[3], RMU-2 itself should be the Siting Board's focus in assessing the Siting criteria for the certificate.

2.1 Population Density in the Vicinity of Proposed Site

2.1.1 The Residential and Non-Residential Population with 0.5 Mile of the Site Boundary (Rating: 1)

Land use in the vicinity of the Model City Facility is primarily industrial, military and agricultural. Within 1 mile of the centroid of the Model City Facility (the centroid is at 43 degrees, 13 minutes, 10 seconds latitude and 78 degrees, 58 minutes, 08 seconds longitude), the estimated population density is less than 1 person per 2 acres, as calculated from the 1980 United States Geological Survey (USGS) quadrangle maps.

During a May 2002 field survey, Blasland, Bouck & Lee, Inc. (BBL) located 23 residential households and four non-residential businesses within 0.5 mile of the site boundary. There has been no increase in residence structures since that time. The nearest residence is approximately 2,200 feet northeast from the site boundary, near

[3] ECL 27-1105.2 - Notwithstanding the provisions of subdivision one of this section, the following industrial hazardous waste treatment, storage and disposal facilities shall not be subject to the provisions of this title: .(d) Additional facilities, other than land disposal facilities, to be located at the site of an existing facility, the operation of which will be substantially similar to that of the existing facility with respect to the mode of waste management and the type and quantity of hazardous waste being managed.

the intersection of Balmer and Porter Center Roads. The non-residential businesses consisted of an auto repair shop, an auto collision shop, a scrap/junkyard and a farm. Using the total number of households documented by BBL, combined with an estimated average of 2.40 people per household (2010 U.S. Census data for Niagara County), the residential population within 0.5 mile of the site boundary was estimated to be 55 people. This population density is considered very low.

According to the 2010 U.S. Census, there are approximately 99,120 housing units in Niagara County. Housing starts for the period 1980 to 2010 were 14,120 units. As reported in the 2010 U.S. Census, the number of units in the Town of Lewiston and the Town of Porter is 6,610 and 3,103, respectively. The following provides town populations for areas surrounding the Model City Facility based on the 2010 U.S. Census:

- Hamlet of Ransomville: 1,419
- Town of Lewiston: 16,262
- Village of Lewiston: 2,701
- Town of Porter: 6,771
- Village of Youngstown: 1,935
- Tuscarora Indian Reservation: 1,152

2.1.2 The Projected Population and the Rate of Growth for the Area within 0.5 Mile of the Site Boundary during the 20-Year Period Following Initial Site Operation (Rating: 1)

The zoning designation for the land adjacent to the site is primarily industrial, with the only residential property located to the southwest and east. The residential area is interspersed with agricultural districts. Although some of the industrial districts do not prohibit residential development, these areas typically do not foster residential growth.

The Town of Porter census data for 1970, 1980, 1990 and 2000 showed the following population trend:

- 1970 to 1980: 2.4% population decrease

- 1980 to 1990: 1.9% population decrease
- 1990 to 2000: 2.7% population decrease
- 2000 to 2010: 2.2% population decrease

The Town of Lewiston's census data for 1970, 1980, 1990, 2000 and 2010 showed the following population trend:

- 1970 to 1980: 2.1% population increase
- 1980 to 1990: 4.7% population decrease
- 1990 to 2000: 5.2% population increase
- 2000 to 2010: 0.03% population increase

As seen, the population growth in the Town of Porter has decreased between 1970 and 2010. It is not anticipated that the minor population growth in the Town of Lewiston will be discernible in the immediate vicinity of the Model City Facility. Present land use and zoning will act to deter residential development within 1 mile of the RMU-2 centroid.

Despite this continuing general trend of declining population in the area, the NYS Office of Planning Services previously projected an increase in population for both towns through the year 2010 (SEC Donahue, June 1992). The Town of Porter, within which approximately 95% of the Model City Facility lies, was expected to increase by 2.9% by 2010, as compared to a projected Niagara County increase of 3.1%. The Town of Lewiston, which borders the southern end of the Model City Facility, was projected to increase by 6.8% by the year 2010. Previously, the Southern Tier West Regional Planning and Development Board predicted from 1990 to 2020, there will be a population decrease for Niagara County projected at 1.15%. Additionally, according to the U.S. Census data, the total population within Niagara County decreased 1.5% from 2000 to 2010 (from 219,844 in 2000 to 216,469 in 2010). Based on the data presented above, it is anticipated this decrease will continue until 2030 and beyond. It is still anticipated, however, that the majority of growth predicted for Lewiston will take place in the area of the Village of Lewiston and not near the Model City Facility (approximately 7 miles from the facility). There are no facilities that would be used by a

non-residential population within 0.5 mile. The population within 0.5 mile of the proposed RMU-2 is not expected to increase significantly above current levels.

2.2 Population Adjacent to Transport Route

2.2.1 The Residential and Non-Residential Population for the Areas within 0.5 Mile of the Anticipated Transport Routes (between the site entrance and the limited access interstate highway serving the site) (Rating: 3)

The transportation route for wastes to the Model City Facility is via the NYS Thruway (I-90), I-290, I-190, NYS Route 104, NYS Route 18 and Balmer Road. Routes I-90, I-290 and I-190 are limited-access interstate highways, whereas NYS Route 104, NYS Route 18 and Balmer Road are primarily two-lane undivided roads. In the immediate vicinity of the Model City Facility, waste haulers are required to follow NYS Route 104 to NYS Route 18 north and then east on Balmer Road. This transportation route is approximately 10 miles from I-90 to the waste-receiving gate at the Model City Facility.

The USGS Quadrangle for Lewiston, New York (1980) showed more than 470 structures (excluding schools and churches) within 0.5 mile of the transportation route (SEC Donahue, June 1992). Information from the Town of Lewiston's Building and Zoning office, provided during RMU-1 permitting in 1992, indicated that there were at least an additional 522 dwelling units. No significant housing developments have been completed since that time. Using an average of 2.40 people per housing unit (2010 census for Niagara County), there are approximately 2,330 people within 0.5 mile of the transportation route.

The population adjacent to the transportation route is considered high (i.e., more than 1,500 persons).

2.2.2 The Projected Population and Rate of Growth for Areas within 0.5 Mile of the Transport Routes During the 20-Year Period Following Initial Site Operation (Rating: 1)

The NYS Office of Planning Services previously projected a population decrease of 1.15% for Niagara County during the period from 1990 through 2020. Recent U.S. Census data showed a population decrease of 1.5% from 2000 to 2010, consistent with the previous NYS Office of Planning Services projections. Proposed development records of the Town of Lewiston's Building and Zoning office indicated that there were no proposed developments within 0.5 mile of NYS Route 18 and NYS Route 104.

Proposed development records of the Town of Porter's Building and Sanitation Office indicated that there were two proposed developments (i.e., single residence houses) within 0.5 mile of Balmer Road.

The population within 0.5 mile of the transport route, based on current information available from NYS and the Towns of Lewiston and Porter, is not expected to increase above current levels for the 20-year period following initial site operation.

2.3 Risk of Accident in Transportation

2.3.1 Mode of Transportation (Rating: 1)

Transportation to the site will be by heavy-duty trucks operated by licensed hazardous waste haulers. The Federal Emergency Management Agency (FEMA), the United States Department of Transportation (USDOT) and the USEPA developed a publication entitled "Handbook of Chemical Hazard Analysis Procedures" in 1990 (hereinafter, "FEMA Handbook") as a guide to local emergency planning agencies and other entities involved in estimating the likelihood and severity of hazardous materials releases, including releases occurring during transportation of hazardous materials. Within the FEMA Handbook, for planning purposes, estimates of the probability of transportation accidents by mode of transportation (e.g., truck, rail, ship) are presented for planning purposes. The estimates are derived from various sources of data, including the Office of Technology Assessment's "Transportation of Hazardous Materials" study, published in 1986.

The FEMA Handbook presents the following mode-specific accident rates for transportation of hazardous materials: truck, 2×10^{-6} accidents per truck mile (FEMA Handbook, pg. 11-8); rail, 3×10^{-6} accidents per train mile (6×10^{-7} accidents per railroad car mile) (FEMA Handbook, pg. 11-15); and marine, 1×10^{-5} accidents per vessel mile (FEMA Handbook, pg. 11-22). Additionally, the FEMA Handbook states that a truck accident will release approximately 1,000 gallons of hazardous material 60% of the time, while a rail car accident will release 3,000 gallons per car of hazardous material 60% of the time (additionally, FEMA suggests that it should be assumed that, for train accidents, 20% of the cars making up the train will be involved). Thus, on a per-truck, per-train and per-vessel basis, truck transport has the lowest associated accident rate per mile traveled. Additionally, on a per-accident basis, truck accidents will also result in the smallest release of hazardous material.

In the 2010 NYS HWFSP, the NYSDEC included an analysis of transportation routes and risks as it relates to actual routes used by generators to existing or potentially suitable sites for industrial TSDFs. The NYSDEC found that the amount of hazardous waste spilled each year while transported by truck or at the terminal facility is small when compared to the total amount of hazardous waste transported. The NYSDEC further stated that the amount was "miniscule" when compared to the quantities of hazardous substances (e.g., gasoline, chemical feedstocks) shipped daily across the nation. Additionally, according to the Siting Plan, the USEPA (in a June 1984 publication, "Assessing the Releases and Costs Associated with Truck Transport of Hazardous Waste") estimates that hazardous waste transportation spills represent only approximately 1% of the hazardous materials spilled each year as a result of truck transportation.

A 1982 study, conducted by the Niagara County Legislature, estimated that, along NYS Route 18 from NYS Route 104 to Balmer Road (which accounts for the majority of the designated transport route) there is an expected frequency of one hazardous material transportation accident every 33.4 years. In addition, the information presented in Table 1, concerning accident data provided from previous CWM records between 1985 and 1989, shows that haulers transporting waste to CWM averaged 2.2 reportable accidents per million miles driven. Table 1A presents accident data for the period 2004 to 2008, provided to CWM by the top five haulers currently transporting waste to CWM. The data show 0.48 reportable accidents per million miles driven (averaged). CWM is committed to maximizing the safe transport of hazardous wastes through its safety restrictions and training requirements for all transporters hauling wastes to the Model City Facility. CWM's Model City Transporter Rules and Regulations are included as Appendix A. It is not possible to use any transportation mode to the site other than trucks and, therefore, accident rates for other modes (e.g., freight train, barge/boat, plane) have not been considered.

The risk of environmental impairment or human exposure to hazardous wastes being transported to the Model City Facility is further minimized by the fact that the New York State Department of Transportation (NYSDOT) requires all transporters to maintain the appropriate shipping papers, which include emergency telephones numbers and emergency response information. Many transporters maintain their own formal Emergency Response Plan to facilitate quick and effective responses to a transportation incident involving the spill of hazardous waste.

Transporters provide their drivers with a comprehensive driver-training program that includes training in emergency response measures; proper operation of equipment; (such as the vehicle itself and emergency respirators, extinguishers and protective clothing); hazardous waste handling procedures; manifesting requirements; log and maintenance form preparation; defensive driving and placarding, marking, labeling, packaging and loading requirements. Drivers also complete safety training sessions that include Federal Safety Regulations, Federal Hazardous Materials Regulations and use of the USDOT Emergency Response Guide. In addition, drivers are given yearly re-training required under the provisions of the RCRA.

CWM's concern for safe and environmentally sound hazardous waste transportation extends to CWM's contract haulers. The CWM's Model City Transportation Rules and Regulations (Appendix A) impose numerous training and safety requirements on the contract haulers. These requirements include:

- Compliance with all federal, state and local safety laws and rules;
- Compliance with all CWM's safety operating rules and regulations;
- Completion of 24 hours of safety training as required by 29 CFR 1910.120 for all employees working at an active hazardous waste site;
- All employees must be medically qualified to perform their work tasks and to wear a respirator;
- In the event of a transportation incident, the contractor employees shall take immediate action to protect human health, property and the environment;
- All waste materials will be properly classified, packaged, marked and placarded in accordance with all applicable laws and regulations;
- All contractor-owned equipment will be maintained and operated in a safe manner; and
- The contractor shall maintain and operate its equipment so as not to mix waste materials with other materials or otherwise cause the alteration of the characteristics or components of the waste material.

TABLE 1

ACCIDENT REPORT DATA **
FOR TRANSPORTERS USED BY CWM MODEL CITY, YEARS 1985-1989

Non-CWM Trucks	Miles Traveled (millions)	USDOT Reportable Accidents*
1989	825.44	1907
1988	192.54	432
1987	155.00	338
1986	135.71	295
1985	126.33	233

Notes:

* Includes personal injury and fatal accidents. For purposes of this report, USDOT Reportable Accident is defined as an accident involving damages in excess of $1,000.00 or personal injury. Personal injury is defined as an injury that requires treatment of the victim away from the accident scene.

NYS has a lower damage figure of $250 for a reportable accident to the NYSDOT. During the years 1985 to 1989, there were no accidents reported to the NYSDOT other than those listed above.

**Based on CWM study of non-CWM trucking accidents.

TABLE 1A

ACCIDENT REPORT DATA **
FOR TOP 5 TRANSPORTERS USED BY CWM MODEL CITY, YEARS 2004-2012

Year	Miles Traveled (millions)	USDOT Reportable Accidents*
2004	3.49	1
2005	3.33	3
2006	3.65	2
2007	3.62	1
2008	4.55	2
2009	3.02	1
2010	2.36	1
2011	3.25	5
2012	2.89	6

Notes:

* Includes personal injury and fatal accidents. For purposes of this report, USDOT Reportable Accident is defined as an accident involving damages in excess of $1,000.00 or personal injury. Personal injury is defined as an injury that requires treatment of the victim away from the accident scene.

NYS has a lower damage figure of $250 for a reportable accident to the NYSDOT. During the years 1997 to 2001, there were no accidents reported to the NYSDOT other than those listed above.

**Based on CWM study of non-CWM trucking accidents.

There are currently 11 transporter violations, listed in Appendix A, for which transporters may be penalized. The penalty for a first offense includes a warning to the driver and hauling contractor, as well as with a request to attend a transporter training class presented by CWM. A second offense by the same driver within a 3-month period will result in a 1-month ban from the site for that driver, as well as with required attendance at a transporter training class presented by CWM before returning to the site. If a transporter has three or more offenses in a 3-month period, a designated management representative from the transporter will be required to attend the CWM transporter training class. The transporter will also be banned from the site for a total of 4 weeks within a 6-month period from the date of the third violation. Transportation-related violations and total penalties issued in 2006 through 2012 are summarized in Table 2.

Contract hauler trucks are equipped with a safety kit and spill containment equipment. Spill containment equipment may include an over-pack drum, drum bungs, a bung wrench, mil plastic sheeting, absorbent, a shovel and a broom. A safety kit may include personal protection items, as well as a first-aid kit, eye wash kit, fire extinguisher and an emergency response guide book that contains instructions on proper responses to hazardous material spills. CWM requires all transporters hauling hazardous waste to the Model City Facility to carry safety equipment for personal protection.

The mode of transportation used (i.e., trucks) has a low associated accident rate compared to other transport modes (i.e., freight train, barge/boat, and plane), which are not used at the Model City Facility. Historical data for the Model City Facility demonstrate a low accident rate for trucks. Accident rates for the proposed RMU-2 are expected to be consistent with these low rates due to the ongoing transporter programs discussed above.

2.3.2 Length of Transport Route (Rating: 2)

The transportation criteria found in 6 NYCRR Part 361.7(b)(2) defines the “transport route” as “the route(s) between the site entrance and the interstate/limited access highway interchange(s) over which the wastes will be delivered to the site.” Because Route I-190 is a four-lane, high-speed, limited-access route, the transport route of concern is considered to be from the site entrance, along the designated route, to the intersection of Route I-190. This route is approximately 8.6 miles long and is considered of moderate length.

2.3.3 Accident Rate of Transport Route (Rating: 1)

NYSDOT accident data previously obtained during RMU-1 permitting for NYS Route 104, NYS Route 18 and Balmer Road were reviewed and compared to more recent data. Table 3 lists the number of accidents, vehicle miles traveled per year in millions and the length of the road segment studied for the 9-year period between 1983 and 1991. Table 3A lists the number of accidents for the 9-year period between 2003 and 2011 for these same routes. The data reveal that the accident rate of the transportation route (between the site and the interstate limited access highway interchange) is comparatively low and that the number of accidents for these routes has decreased in recent years.

TABLE 2

TRANSPORTER VIOLATIONS OF
CWM TRANSPORTER RULES AND REGULATIONS

Violation	Violations in 2006	Violations in 2007	Violations in 2008	Violations in 2009	Violations in 2010	Violations in 2011	Violations in 2012**
Leaking vehicles (DEC)	21	26	16	27	15	22	23
Violations involving transporter permit (DEC)	3	5	6	1	3	6	3
No permit number on trailer	6	7	9	4	2	2	1
Plate number on trailer but not on permit	10	4	1	6	3	3	3
CWM not an authorized destination	3	12	3	0	2	0	0
Improper placarding (DEC)	0	0	0	0	0	0	0
Entering the Towns of Lewiston and Porter at times other than during normal operating hours*	10	9	6	2	6	2	5
Traveling off the designated route*	0	1	7	2	5	4	6
Parking or standing on the designated route*	4	2	6	1	0	2	1
Convoying*	1	1	6	0	0	0	0
Blackout violation*	7	6	4	8	4	9	4
Overweight vehicles	0	0	0	0	0	0	0
Total Violations	**65**	**73**	**64**	**51**	**40**	**50**	**45**
Total Loads	8,087	9,104	10,190	7,100	4,400	6,400	8,500
DEC Penalties Issued for Violations NYSDEC Fines Issued	$46,150	$73,250	$41,250	$50,750	$21,500	$26,200	$38,500
CWM letters sent to major violators	21	19	31	12	15	15	14
Number of transporters banned by CWM from the Model City Facility	2	0	1	0	0	1	1

Notes:
* - These violations are considered major (most serious) violations. Penalties are assessed by CWM
** - Preliminary Data
Rows marked "DEC" are violations imposed by the NYSDEC.

TABLE 3

NEW YORK STATE DEPARTMENT OF TRANSPORTATION
MOTOR VEHICLE ACCIDENT DATA (1983 to 1991)

NYS RT 104[4]
FROM RT I-190 TO NYS RT. 18 Road Length = 2.3 miles

	PROPERTY DAMAGE ONLY (AND NON-REPORTABLE)[2]	PROPERTY DAMAGE AND PERSONAL INJURY	FATALITY	TOTAL
1991[6]	8(*)[7]	2	*	10
1990[6]	1(*)[7]	0	*	1
1989	5(5)	8	0	18
1988	2(13)	12	0	27
1987	4(15)	10	0	29
1986	3(8)	8	1	20
1985	11(14)	8	0	33
1984	3(3)	7	0	13
1983	1(9)	10	0	20

7.414 MILLION VEHICLE MILES TRAVELED PER YEAR BASED UPON
1985 and 1986 NYSDOT TRAFFIC COUNTS.

NYS RT 18[4]
FROM NYS RT 104 TO BALMER ROAD
Road Length = 5.1 miles

	PROPERTY DAMAGE ONLY (AND NON-REPORTABLE)[2]	PROPERTY DAMAGE AND PERSONAL INJURY	FATALITY	TOTAL
1991	10(*)[7]	5	*	15
1990	10(*)[7]	2	*	12
1989	3(7)	5	0	17
1988	3(13)	9	0	25
1987	2(14)	10	1	27
1986	3(12)	10	0	25
1985	3(9)	7	0	19
1984	1(9)	5	1	16
1983	4(16)	14	0	34

7.658 MILLION VEHICLE MILES TRAVELED PER YEAR BASED UPON
1988 NYSDOT TRAFFIC COUNTS.

TABLE 3

NEW YORK STATE DEPARTMENT OF TRANSPORTATION
MOTOR VEHICLE ACCIDENT DATA
(Continued)

BALMER ROAD
FROM NYS RT 18 TO END

	PROPERTY DAMAGE ONLY (AND NON-REPORTABLE)[2]	PROPERTY DAMAGE AND PERSONAL INJURY	FATALITY	TOTAL
1987	0(1)	0	0	1
1986	0(2)	2	1	5
1985	0(4)	3	0	7
1984	0(1)	0	0	1
1983	0(0)	1	0	1

AVERAGE ANNUAL DAILY TRAFFIC (AADT) = 1,1393

NOTES:

1. 1989 data include the period of January to July 1989 only.
2. Non-reportable accidents are defined as accidents with property damage of less than $250 and no injuries requiring medical attention.
3. Based upon 1985 Niagara County Highway Department of Traffic Count.
4. Data received from the NYSDOT, March 1988.
5. Data received from the NYS Thruway Authority, February 1990.
6. 1991 data was obtained from Bettigole Andrews and Clark, Inc., 1993, Traffic Analysis Study.
7. Andrews & Clark study did not break down reportable and non-reportable categories.

* Data not available from the Andrews and Clark, Inc. study.

TABLE 3A

NEW YORK STATE DEPARTMENT OF TRANSPORTATION
MOTOR VEHICLE ACCIDENT DATA (2003 to 2011)

NYS ROUTE 104
From Route I-190 to NYS Route 18

Year	Fatal	Injury	Property Damage Only	Non-Reportable	Totals
2003	0	4	5	2	11
2004	0	1	1	1	3
2005	0	3	4	11	18
2006	0	5	5	5	15
2007	0	7	3	2	12
2008	1	2	6	7	16
2009	0	7	5	3	15
2010	0	4	7	2	13
2011	0	9	12	11	32
TOTALS	*1*	*42*	*48*	*44*	*135*

NYS ROUTE 18
From NYS Route 104 to Balmer Road

Year	Fatal	Injury	Property Damage Only	Non-Reportable	Totals
2003	0	4	3	5	12
2004	0	3	3	1	7
2005	0	7	3	4	14
2006	0	7	5	5	17
2007	0	4	12	7	23
2008	0	2	7	9	18
2009	0	2	7	2	11
2010	0	3	4	4	11
2011	0	5	12	8	25
TOTALS	*0*	*37*	*56*	*45*	*138*

TABLE 3A

NEW YORK STATE DEPARTMENT OF TRANSPORTATION
MOTOR VEHICLE ACCIDENT DATA
(Continued)

BALMER ROAD
From NYS Route 18 to End

Year	Fatal	Injury	Property Damage Only	Non-Reportable	Totals
2003	0	1	1	0	2
2004	0	1	1	0	2
2005	0	1	0	0	1
2006	*	*	*	*	*
2007	0	1	1	0	2
2008	0	0	1	0	1
2009	0	0	4	0	4
2010	0	0	0	0	0
2011	0	1	6	0	7
TOTALS	*0*	*5*	*14*	*0*	*19*

NOTES:

Data received from the NYSDOT- July, 2009. Non-reportable accidents are defined as accidents with property damage of less than $250 and no injuries requiring medical attention.

* - The NYSDOT does not have data for Balmer road from January 1, 2006 to December 31, 2006.

Balmer Road had a total of 15 accidents between the approximate 4.5-year period from January 1983 to July 1987, eight of which were considered to be non-reportable by the NYSDOT. (A non-reportable accident is less than $250 damage and no injuries requiring medical assistance off-site.) The January 1983 to July 1987 data indicates an average of 3.3 accidents per year. This compares to a total of 19 accidents for the 9-year period from 203 to 2011, none of which were considered to be non-reportable by the NYSDOT. This indicates an average of 2.1 accidents per year. NYS Route 18 had a total of 190 accidents during the 9-year period from 1983 to 1991, 80 of which were considered to be non-reportable. This compares to a total of 138 accidents for

the 9-year period from 2003 to 2011, 45 of which were considered to be non-reportable. NYS Route 104 had a total of 171 accidents between 1983 and 1991, 67 of which were considered to be non-reportable. This compares to a total of 135 accidents from 2003 to 2011, 44 of which were considered to be non-reportable. These comparisons indicate that the total number of accidents has remained the same or decreased over these routes for the period from 2003 to 2011 as compared to the period from 1983 to 1991.

From January 2003 to December 2011, NYS Route 18 ranged from seven to 25 total accidents annually (includes fatal, injury, property damage and non-reportable accidents), and NYS Route 104 ranged from 3 to 32 total accidents annually (includes fatal, injury, property damage and non-reportable accidents). Of these accidents, 32.5% of the total accidents were non-reportable for NYS Route 104 and 32.6% for NYS Route 18. These rates compare to an overall state average of 1.63 to 3.12 accidents per million miles traveled. Compared to the state average, these routes have low accident rates.

CWM has implemented the following transportation control procedures for vehicles making hazardous waste deliveries to the Model City Facility. These procedures would apply to deliveries of waste to RMU-2. It is important to note that the procedures described below would be applicable year-round.

Communication of traffic, road and weather conditions to independent contract haulers and other drivers (e.g., generator employee-drivers) can be established through either or both of the following:

1. CWM is in daily contact with most of the dispatchers for the independent contract haulers. During these contacts, directions on re-routing or postponing scheduled deliveries can be given by CWM to the company's dispatcher. For example, during particularly severe, localized weather conditions, CWM would contact the particular dispatcher as soon as conditions warranted so that the driver could be given instructions on transporting the wastes, including re-routing or postponing the delivery.

2. CWM personnel will also be in contact with the waste shippers to arrange for the pickup and delivery of waste materials to the landfill. If the waste materials are to be transported by drivers under contract to the shipper, appropriate cautions regarding traffic, road and weather conditions in the general vicinity of

the Model City Facility, including the postponing or interrupting of deliveries when reasonably warranted, can be communicated to the shipper at the time the wastes are scheduled for shipment.

In extreme cases of inclement weather or adverse traffic conditions, other authorities besides CWM will exercise control over the actions of drivers enroute with waste materials. For example, thruway and local road closings and detours around accident scenes or road construction would alter the transportation of wastes where conditions made transportation in the area unwise or unsafe.

2.3.4 Structures within 0.5 Mile of the Transportation Route (Rating: 3)

Although population along the transportation route is not excessively high, the route does pass within 0.5 mile of the Lewiston-Porter Central Schools. In addition, the 1980 USGS Lewiston, New York Quadrangle map indicates that there are approximately 470 structures within 0.5 mile of the transportation route (SEC Donahue, June 1992). Information from the Town of Lewiston's Building and Zoning office, provided during RMU-1 permitting in 1992, indicated that there were at least an additional 522 dwelling units. CWM is not aware of any significant new housing developments along the transportation route since that time.

2.3.5 Transportation Restrictions (Traffic Intersections, Traffic/Railroad Intersections, Tunnels, Bridges and Toll Booths) (Rating: 2)

Tables 4 and 5 list all potential traffic restrictions identified along the designated transport route based on a survey conducted by BBL in March 2002, updated June 2009. These tables show that there are 35 traffic restrictions in 8.8 miles. This results in an average of approximately four restrictions per mile.

TABLE 4

POTENTIAL TRAFFIC RESTRICTIONS:
BALMER ROAD

Right	Miles from CWM's Truck Entrance Gate	Left
Lutts Road	1.1	No Crossroad
Trailer Park Entrance/Exit	2.0	N/A
Trailer Park Entrance/Exit	2.1	N/A
Creek Road	2.6	Creek Road

TABLE 5

POTENTIAL TRAFFIC RESTRICTIONS:
CREEK ROAD (NYS Route 18) AND NYS ROUTE 104

Right	Miles from CWM's Truck Entrance Gate	Left
Calkins Road	2.8	No Crossroad
No Crossroad	3.2	Lewiston-Porter School North Entrance
No Crossroad	3.5	Lewiston-Porter School Center Entrance
No Crossroad	3.8	Lewiston-Porter School South Entrance
Pletcher Road	Crossroad (4.1)	Pletcher Road
Thornwood Road	4.6	No Crossroad
No Crossroad	4.8	Swann Road
No Crossroad	5.1	Madison Street
No Crossroad	5.2	Jefferson's Way
No Crossroad	5.4	Washington Drive

Right	Miles from CWM's Truck Entrance Gate	Left
Raymond Drive	5.9	No Crossroad
Scovell Drive	6.3	No Crossroad
NYS Route 104 Overpass	Hwy. Overpass (6.6)	NYS Route 104 Overpass
NYS Route 18 to NYS Route 104 Connecting Road	6.7	NYS Route 18 to NYS Route 104 Connecting Road/Hillside Drive Intersection
Ridgeview Avenue	6.8	No Crossroad
Hillview Court	6.9	No Crossroad
Hillview Court	7.0	No Crossroad
Cayuga Drive	7.1	No Crossroad
Walker Drive	7.2	No Crossroad
NYS Route 104 Overpass	Hwy. Overpass (7.4)	NYS Route 104 Overpass
N/A	7.7	Merge NYS Route 18 & NYS Route 104
Mountain View Drive	Crossroad (8.0)	Mountain View Drive
No Crossroad	8.1	NYS Route 265
Homestead Road	8.2	No Crossroad
Fort Gray Drive	8.3	No Crossroad
No Crossroad	8.4	Meadowbrook Drive
Kenneth Drive	8.4	No Crossroad
Barton Drive	8.5	No Crossroad
Merge Route I-190 Exit Ramp to NYS Route 104	8.7	N/A
Route I-190 Overpass	Hwy. Overpass (8.7)	Route I-190 Overpass
N/A	8.8	Entrance Ramp Onto Route I-190

2.3.6 Nature and Volume of Wastes Being Transported (Rating: 3)

Based on the maximum projected annual volume of 500,000 tons, the average monthly amount of gate receipts of hazardous and industrial non-hazardous waste projected for land disposal is approximately 41,667 tons. The types of waste to be accepted have already been described in both general terms and by waste codes in Section 1.5. As referenced earlier, waste transporters utilize a Transportation Emergency Response Plan to facilitate quick and effective responses to a transportation incident involving the spill of hazardous waste. In the event of an accidental spill, drivers will follow the procedures set forth in this plan on off-site roads. Implementation of these procedures will minimize adverse environmental impacts and exposure risks.

2.4 Proximity to Incompatible Structures

2.4.1 Proximity to Airports (Rating: 1)

There are no airport runways within 2 miles of the site. The closest runway to the site is the Dolansky landing strip located approximately 2.9 miles east of the Model City Facility property boundary. Thus, the site of the proposed facility is very favorable with respect to this criterion.

2.4.2 Proximity to Other Incompatible Structures (Rating: 2)

The closest sensitive receptor is a residence located approximately 0.8 miles northeast of the proposed location of RMU-2 (also being approximately 0.4 miles from the property boundary of the Model City Facility). There are no hospitals, churches, commercial centers or nursing homes within several miles of the Model City Facility. The Lewiston-Porter Central Schools are approximately 2 miles southwest of the Model City Facility.

2.5 Utility Lines

2.5.1 Proximity to Major Utility Lines (Rating: 1)

A set of high-power utility lines is located outside the western property boundary of the Model City Facility. However, these lines are located 0.8 miles from the site of the proposed RMU-2 unit and at least 0.3 miles from any CWM support facilities. The generation, transportation, treatment, storage or disposal of hazardous wastes at the

site will not interfere with, cause damage to or otherwise disrupt the operation of these utility lines. Relocation of the utility lines is not necessary. The operation of previous landfills at the Model City Facility has not interfered with the utility lines. Thus, the operational history of landfilling activities at the Model City Facility demonstrates that such operations at RMU-2 will not interfere with these utility lines.

2.6 Municipal Effects

2.6.1 Consistency with the Intent of Master Land Use Plan (Rating: 2)

The Model City Facility property located within the Town of Porter is zoned for heavy industrial use. The proposed RMU-2 unit will be located entirely within the Town of Porter in an area zoned "heavy industry." No associated treatment, storage and disposal activities will take place within the Town of Lewiston. Hazardous waste disposal facilities are a specifically permitted use within the heavy industrial zone of the Town of Porter. With respect to zoning, siting of the proposed unit is consistent with the specific intent and overall approach of the master land use plan.

On November 8, 2010, the Town Board of the Town of Porter adopted a revised Zoning Law, which inter alia repealed the former Zoning Law (1986). There were no substantive changes to the zoning regulations applicable to the Model City Facility. The operations area of the Model City Facility is zoned M-3, heavy industrial, and is surrounded by land zoned M-2, general industrial.

According to the Comprehensive Plan, 2004 Update, the CWM and surrounding properties is zoned industrial and will continue to be zoned industrial. The Comprehensive Plan also indicates that the Town should maintain zoning of the land surrounding the current landfill site for uses that would contain the uses within the existing M-3 boundary. The siting of RMU-2 within the existing operational area zoned M-3; heavy industrial is consistent with the specific intent of the master use plan which does indicate that CWM's operations should be confined to the current M-3 zone.

The present site of the Model City Facility was originally part of a United States Department of Defense (USDOD) installation known as the Lake Ontario Ordinance Works. Areas in Lewiston and Porter in the immediate vicinity of the Model City Facility site have been used or are used for the following:

1. Research and development of rocket fuels

2. NIKE missile site
3. Radar station
4. Preliminary work on the lunar landing module
5. U.S. Army and National Guard maneuvers
6. Detonation of out-of-date explosives
7. Research and development of high-energy rocket fuel propellants
8. Agriculture
9. Automobile salvage
10. Sanitary landfill
11. Miscellaneous light commercial operations
12. Storage of low-level nuclear waste from the Manhattan Project

2.6.2 Consistency with Local Laws, Ordinances, Rules and Regulations (Rating: 1)

As noted above, the siting of the proposed facility is consistent with local laws, ordinances, rules and regulations. In addition, CWM will apply for the necessary local excavation permit and special use permit.

2.6.3 Public Expense/Revenue Tradeoffs (Rating: 1)

Public revenues associated with permit fees, property and business taxes, and employee salaries and taxes should far exceed public expenses that are likely to be incurred. The Model City Facility provides its own security and safety services. In addition, CWM provides training for local fire and ambulance districts that may be called upon in the event of fire or emergency at the Model City Facility.

The cost of establishing and maintaining a comprehensive regulatory program for RMU-2 will be borne by CWM as the permitee. Regulatory program fees are

established in ECL §72-0101 *et seq*. Special assessments are established in ECL §27-0923. ECL §72-0201 subjects every person who holds a permit, certificate or approval under a state environmental regulatory program to the payment of the fees specified in Article 72.

During 2007 through 2012, the following taxes, fees and expenditures to local and state jurisdictions were distributed by CWM:

	2007	2008	2009	2010	2011	2012
School Tax	$479,377	$487,160	$474,745	$440,637	$477,455	$481,345
Property Tax	$253,942	$247,896	$261,670	$273,091	$279,402	$309,248
Gross Receipts Tax	$852,673	$993,086	$662,394	$455,256	$646,401	$894,192
Host Community Fee	$2,100,000	*	*	*	*	*
NYSDEC Operating Program Fees	$315,180	$290,180	$295,055	$344,063	$349,171	$349,171 estimate
NYSDEC Monitor Reimbursement**	$528,000	$553,500	$558,000	$604,000	$563,000	$513,000
NYS Sales Tax****	$339,579	$235,048	$278,698	$215,297	$231,985	$196,508
Contributions to Local Charities	$34,915	$33,296	$33,020	$375,681***	$45,254	$42,351
Erie and Niagara County Suppliers, Contractors, Haulers	$3,285,492	$5,026,693	$6,115,557	$6,374,261	$6,791860	$5,226,666
Site Payroll	$4,985,310	$5,101,951	$4,679,482	$4,618,588	$4,481,002	$4,087,492
Total Contributions to Local and State Economies	$13,174,428	$12,986,810	$13,358,621	$13,700,874	$13,865,530	$12,099,973

(*) Host Community Fee will be paid upon operation of RMU-2.
(**) Includes two Operations Monitors, one Construction Monitor and one Regional Engineer.
(***) Includes a one-time contribution ($320,000) from Waste Management Corporate Charity Golf Tournament.
(****) Self-Assessment only.

In addition, CWM will provide financial assurance guarantees to cover closure and perpetual post-closure care costs.

In summary, the public revenues associated with the Model City Facility will far exceed the public expenses that are likely to be incurred over the short- and long-term.

2.7 Contamination of Ground and Surface Waters

2.7.1 Ground and Surface-Water Aspects (Rating: 2)

From a hydrogeological standpoint, the proposed RMU-2 site is in an optimum location, as specified in 6 NYCRR Part 373-2.14(b)(1-3). The regional geological characteristics and local stratigraphy provide excellent protection of the uppermost aquifer.

The design of RMU-2 incorporates state-of-the-art technology for liner and leachate collection systems, thereby surpassing the January 29, 1992 USEPA-promulgated final rules governing the design of hazardous waste landfill liners and maintaining containment of leachate within the unit. No impacts to groundwater as a result of construction of RMU-2 are expected. The potential impacts to groundwater are associated with operation of the unit, primarily resulting from production of landfill leachate and potential spills of hazardous wastes. Section 1.4 provides a description of the RMU-2 liner system design. Monitoring of the secondary leachate collection system would provide indication of a potential breach of the primary liner system. Additionally, a series of groundwater monitoring wells will be utilized to provide early indication of potential contamination, which would be subsequently addressed before it could significantly migrate. New groundwater monitoring wells will be installed around the perimeter of RMU-2, in addition to some existing wells located between RMU-1 and the proposed RMU-2, which may need to be abandoned and reinstalled closer to RMU-1. The double-lined composite design in a geologically suitable location and the extensive groundwater monitoring system are the basis for the “no-impact” conclusion.

Leachate is produced by infiltration and percolation of water or liquids through the land disposal unit. However, the unit’s leachate collection system is designed to prevent release of leachate to the groundwater by directing the leachate to collection sumps from which it is pumped out of the landfill. Any leachate that is generated within the unit will require treatment by the on-site aqueous wastewater treatment system prior to discharge to the Niagara River. The discharge of treated effluent from the Model City

Facility is governed by the conditions established in CWM's SPDES Permit. The permit specifies that the wastewater must be adequately treated and pre-qualified before it is discharged to the Niagara River. The pre-qualification criteria include chemical analyses and biotoxicity testing. Discharges meeting permit limitations will have no significant impacts on water quality.

Environmental Design & Research, P.C. (EDR) has prepared a Wetlands Delineation Report (April 2003). This report identifies no impact to State Freshwater Wetlands and less than 2 acres of federal wetlands within the RMU-2 footprint and areas occupied by relocated facilities. The less than 2 acres of wetlands are comprised of manmade roadside ditches and isolated pockets. EDR updated the RMU-2 wetlands delineation in April 2009. The investigation areas were redefined based on the current scope of the RMU-2 project (i.e., slightly redesigned landfill footprint and new locations of relocated facilities) as compared to the 2003 investigation. The results of this investigation are described in the Wetland Delineation Report, RMU-2 Landfill Expansion Area, dated June 2009, which is included in Appendix D of the DEIS. Again, EDR concluded that the RMU-2 project would have no impact to state wetlands and impact less than 2 acres of federal wetlands, pending confirmation by the United States Army Corps of Engineers (USACE). EDR again updated the RMU-2 wetlands delineation in April 2011 to include an area within the RMU-2 development area that was not included in the previous delineations. Results of this supplemental delineation are described in the *Supplemental Wetland Delineation Report, RMU-2 Landfill Expansion Area*, dated April 2011. Again, EDR concluded that the RMU-2 project would have no impact to state wetlands and impact less than 2 acres of federal wetlands, pending confirmation by the USACE.

During the detailed design of the site grading plan for the New Drum Management Building, a supplemental wetlands delineation was performed in the proposed area by EDR in July 2012. The supplemental delineation indicated that a wetland on the north side of the development area extends beyond the delineated area and outside of the study area into an NYSDEC-protected wetland (RV-8).

On November 7, 2012, CWM subsequently requested a jurisdictional determination from the NYSDEC that no state freshwater wetlands would be impacted by the construction of RMU-2, including the New Drum Management Building area. Based on a field delineation by an NYSDEC wetlands biologist, the NYSDEC determined that a portion of the new Drum Management Building Development will be in the 100-adjacent area of a state freshwater wetland (RV-8). Additionally, the NYSDEC issued

a determination that no other state freshwater wetlands or 100-adjacent areas are in the RMU-2 development area. The EDR supplemental wetlands delineation and the jurisdictional determinations from the NYSDEC are also included in the DEIS.

A jurisdictional determination was received from the USACE on September 13, 2011. Approximately 2.5 acres of jurisdictional wetlands, as determined by the USACE, are located within the RMU-2 development area. Copies of relevant correspondence between the USACE and CWM and between the NYSDEC and CWM related to federal and state wetlands are included in Appendix G.

The USACE has indicated that mitigation measures will be necessary for impacts to wetlands in the RMU-2 development area. A revised application for a permit in accordance with Section 404 of the Clean Water Act (CWA) was submitted to the USACE and NYSDEC on July 8, 2013 for project impacts to jurisdictional wetlands. Compensatory mitigation may be accomplished through one of the following three ways: Mitigation Banks, In-Lieu Fee Mitigation or Permittee-Responsible Mitigation. CWM will pursue a permittee-responsible mitigation through construction of replacement wetlands at an onsite location west of Facultative Pond 1 and 2. Preliminary indications are that the USACE will require approximately 4 acres of compensatory wetlands be restored onsite to mitigate the impacts of the development of RMU-2 and that a restrictive covenant be implemented to restrict development of the mitigation area. The revised Section 404 application will be a joint application with a request for NYSDEC Section 401 water quality certification and a State Article 24 application for impacts to NYSDEC freshwater wetlands.

To mitigate for the unavoidable permanent loss of wetlands within the Project area, CWM is proposing the creation of a 4.3-acre successional wetland on a 21-acre parcel of land owned by CWM immediately west of the Fac Ponds 1 & 2. This parcel is currently dominated by successional deciduous forest, but also includes areas of disturbed land used for topsoil stockpiles, successional old field, and approximately 5 acres of forested and emergent wetland communities. The successional wetlands to be created on-site will be designed to succeed from scrub-shrub into forested wetlands. This represents a mitigation ratio of approximately 1.7 to 1 (mitigation to impact) for direct impacts to wetlands/streams.

CWM shall place a perpetual deed restriction, in the form of a conservation easement, on the mitigation site to protect the compensatory wetland mitigation area and adjacent

uplands in perpetuity and guarantee its preservation. The conservation easement will protect a total of 15.94 acres.

The mitigation of impacts to the 100-foot adjacent area for development of the New Drum Management Building will be accomplished by the construction and maintenance of a vegetated buffer between the buildings operational area and the New York State Freshwater Wetland RV-8.

Based on operational experience at the Model City Facility, no history of on-site flooding and flood-related problems have been identified since the Model City Facility began operations in 1972 as Chem-Trol Pollution Services, Inc. Additionally, FEMA Flood Insurance Rate Maps for the proposed area of RMU-2 have not been printed due to the fact that the area has been considered an area of minimal flooding.

2.7.2 Runoff (Rating: 2)

The topography of the proposed location of RMU-2 is relatively flat and naturally drains towards the north-northwest. Site drainage will be modified from the current conditions during the construction and operation of RMU-2. During operation of RMU-2, precipitation falling in active cells will be treated as leachate and will be pumped to Model City Facility's aqueous wastewater treatment plant. Precipitation in cells under construction (i.e., not containing waste) will be directed to Model City facility's existing surface-water drainage system.

During operation of RMU-2, surface-water runon will be prevented by the perimeter berm that will encompass the entire unit. Precipitation falling on the crest of the perimeter berm, or in the active portion of the unit, will be directed to the leachate collection system in the active cells and managed as leachate. The leachate collection system has been designed to accommodate the precipitation from a 24-hour, 25-year precipitation event. Thus, there will be no runoff from active portions of the unit.

Precipitation falling on the cover system after closure will be directed to the surface-water management system. Such non-contact water from the unit will be directed to existing retention basins (Figure 3). Waters collected in the basins will be tested in accordance with Model City Facility's surface-water monitoring plan and SPDES Permit before and during release to a tributary of Fourmile Creek. This surface-water management system will prevent the runoff of any contaminated surface water from the unit.

2.7.3 Hydrogeological Characteristics (Rating: 1)

Soil conditions at the proposed location of RMU-2 are extremely favorable for the siting of a landfill. A hydrogeologic study conducted by Golder (1985; updated in 1988 and 1993) indicates that the entire Model City Facility is underlain with 30 to 60 feet of low-permeability silts and clays, which overlie the Queenston Shale bedrock. The units making up the soil – the Upper Tills, Middle Silt Till and Glaciolacustrine Clay – have been classified as aquitards and restrict infiltration into the uppermost aquifer, which is in the Glaciolacustrine Silt/Sand stratum. A subsurface investigation and boring program conducted as part of the design effort for RMU-2 verified the presence of these units at the proposed location of RMU-2. The results and findings of this investigation are presented in the report titled *Letter Report on Geotechnical Investigation for Proposed Residuals Management Unit Number 2 - Western Expansion Area* (Golder, December 2002). A copy of this report is presented in Appendix A of the *RMU-2 Engineering Report* (ARCADIS, April 2003, Revised 2009) and is discussed in Section 2 therein. Additional hydrogeologic investigations were performed in 2004 and 2009 by Golder to obtain additional geological and subsurface stratigraphy data specific to the proposed RMU-2 location. In general, the 2002 Golder report, as well as additional data collected in 2004 and 2009, confirmed the geologic and hydrogeologic findings presented in the previous 1985, 1988 and 1993 site-wide investigations.

The design of the RMU-2 unit incorporates a base design that allows the unit to be separated from the uppermost aquifer by the full thickness of a dense layer of silt and clay known as the Glaciolacustrine Clay layer. This layer has very low horizontal (5 x 10^{-8} cm/sec) and vertical (2 x 10^{-8} cm/sec) permeability. Consequently, in the unlikely event of a release from the double-liner system, the Glaciolacustrine Clay layer would greatly inhibit the horizontal and vertical flow of the leachate from reaching the uppermost aquifer. Specific details of the hydrogeological characteristics of the site are described in the 6 NYCRR Part 373 Permit Modification Application and the *RMU-2 Engineering Report*. Table 6 presents the most recently updated geometric mean hydraulic conductivity's determined by Golder (1993) for each unit discussed in the *RMU-2 Engineering Report,* as well as the underlying bedrock units.

TABLE 6

GLACIAL FORMATION PROPERTIES

Unit	Geometric Mean Hydraulic Conductivity [cm/sec] (1)	Number of Tests	Type of Tests
Upper Tills (Upper Alluvium)	$k_h = 3 \times 10^{-6}$ $k_v = 1 \times 10^{-5}$	4 1	Field Laboratory
Upper Tills (Upper Clay and Upper Silt Tills)	$k_h = 3 \times 10^{-6}$ $k_v = 2 \times 10^{-8}$ (2)	182 6	Field Laboratory
Middle Silt Till	$k_h = 3 \times 10^{-6}$ $k_v = 1 \times 10^{-7}$	5 2	Field Laboratory
Glaciolacustrine Clay	$k_h = 5 \times 10^{-8}$ $k_v = 2 \times 10^{-8}$	54 29	Field/Laboratory Laboratory (3)
Glaciolacustrine Silt/Sand	$k_h = 1.6 \times 10^{-5}$ $k_v = 1.6 \times 10^{-5}$ (5)	87 50	Field Field (4)
Basal Red Till	$k_h = 4 \times 10^{-8}$ $k_v = 3 \times 10^{-8}$	2 4	Field Laboratory
Shallow Rock	$K = 1 \times 10^{-5}$	11	Field
Deep Rock	$K = 5 \times 10^{-6}$	3	Field

Notes:

(1) k = Bulk hydraulic conductivity
k_h = hydraulic conductivity in the horizontal direction
k_v = hydraulic conductivity in the vertical direction
(2) k_v estimated to be 6×10^{-7} cm/sec due to structural discontinuities in the Upper Tills (see Sections 6.1.7 and 7.4 of "1993 Hydrogeologic Characterization Update" (Golder 1993)
(3) Undisturbed boring samples
(4) Field tests performed in Revised Groundwater Monitoring System wells
(5) k_v is assumed equal to k_h for the coarse portion of the Glaciolacustrine Silt/Sand unit (subunit 1)

2.8 Water Supply Sources

2.8.1 Relationship to Water Supply Sources (Rating: 2)

The proposed site is located favorably because it is not in close proximity to:

- Public or private drinking-water supplies or livestock water supplies;
- Public or private bodies of recreational water; and

- Agricultural, commercial or industrial water supplies.

BBL contacted the Town of Porter Water Authority and the Niagara County DOH. Neither was able to confirm the existence of public drinking water wells nor surface impoundments in close proximity to the site. According to these agencies, drinking water is provided to the area via a municipal public water supply provided by the Niagara County Water District that carries treated Niagara River water. BBL believed the likelihood of the existence of any such wells to be very low due to poor groundwater quality and quantity (see Golder, Hydrogeologic Characterization, March 1985).

More information on well locations exists in the Environ Corporation, 1985, 1987, EIR for the SCA Chemical Services, Inc. facility, Model City, New York. This report states that a group of eight wells along Balmer Road, within 1 mile of the site boundary, are the closest drinking water wells to the Model City Facility. All of these wells are no longer in use, and public water from the Niagara River is the source of drinking water.

A detailed investigation to determine the presence of all public, private and irrigation wells within an approximate 1 mile radius of the Model City Facility was conducted by Golder Associates in 2008. Information was compiled from the NYSDEC, NYSDOH, Niagara County DOH, the Town of Porter and the Town of Lewiston. The data indicated that there are 26 wells within the 1 mile radius, only six of which are active. The six active wells are used for irrigation purposes and not for potable water supply.

No recreational water is believed to exist within 0.5 mile of the site because streams in this area are mostly intermittent with some stretches of Class C waters per 6 NYCRR Part 825.3. Class C streams are limited to fishing as their best form of recreation. However, due to natural conditions, the waters may not support fish propagation.

The design and operation of the unit will preclude any migration of material from the proposed unit. Groundwater monitoring wells will verify the non-migration. Therefore, no potential threat to regional water supply sources is anticipated.

2.9 Fires and Explosives

2.9.1 Minimum Distance (Rating: 1)

No explosives are, nor will be, accepted by the Model City Facility. Distances from the site to residential, commercial and industrial buildings; public highways and railways are substantially greater than the minimum established in the American Table of Distances for Storage of Explosives, by the Institute of Makers of Explosives (Table 7).

TABLE 7

MINIMUM DISTANCES FOR STORAGE OF EXPLOSIVES*

Volume of Explosives in Pounds	Required Minimum Distance+ from Inhabited Building	Required Minimum Distance+ from Public Highway	Required Minimum Distance+ from Railroad or Highway with more than 3,000 Vehicles per Day
100	400	160	300
1,000	850	330	636

Notes:
+ Distance in feet from explosive material to the indicated receptor.
* Excerpt from "American Table of Distances from Storage of Explosives," Safety Library Publication #2, by the Institute of Makers of Explosives, May 1983.

2.9.2 Fire Departments and Emergency Medical Services (Rating: 2)

On-site emergency response and emergency medical services are provided by the Model City Facility. The Model City Facility maintains an alarm system, communication system and emergency response equipment. On-site equipment enables facility personnel to react and respond to most minor emergency incidents that might occur. The safety and emergency equipment located at the site is described in CWM's Contingency Plan.

The facility's Emergency Response Team is trained in fire-fighting and hazardous materials emergencies. The City of Niagara Falls Emergency Response Unit also has a Hazardous Materials Team.

In addition, the site is in an area serviced by organized voluntary fire departments and emergency medical teams. The Model City Facility is serviced by the volunteer fire companies of Youngstown, Ransomville, Lewiston and Wilson. The four fire companies were contacted, and the following information was obtained regarding manpower and equipment:

- Ransomville Fire Company (located approximately 8 miles from the Model City Facility):
  92 members
  4 pumpers
  1 ambulance

- Youngstown Fire Company (located approximately 3 miles from the Model City Facility):
  56 members
  2 pumpers
  1 pumper/rescue truck combination
  1 grass-fire truck
  1 hose reel truck
  1 pick-up truck with air trailer
  1 ambulance

- Lewiston Fire Company (located approximately 5 miles from the Model City Facility):
  74 members
  3 pumpers
  1 aerial unit
  1 ambulance
  1 rescue truck

- Wilson Fire Company (located approximately 7 miles from the Model City Facility):
  56 members
  3 pumpers
  1 brush-fire truck
  1 tanker
  1 ambulance
  water rescue equipment

A number of trained public agencies are available to respond to on-site emergencies. Response agreements with these agencies are currently in place for the existing site operations and will be expanded to include RMU-2. These agreements are further discussed in the Contingency Plan section of the Part 373 Permit Modification Application and in Section 1.12, above.

As a part of the Contingency Plan, the names and telephone numbers of all outside agencies and procedures to contact these agencies are listed. Each outside agency is given a copy of the Contingency Plan, and a coordination agreement is established, which certifies that the agency is familiar with the plan and agrees to respond when requested. Lead agencies are established to avoid confusion when more than one agency is called. The Niagara County Sheriff's Department and the Youngstown Volunteer Fire Company have been designated as the primary police and fire authorities.

2.9.3 Proximity to Fire Department and Fire Fighting Water Supply (Rating: 2)

The proposed location of RMU-2 is within 0.5 mile of the on-site emergency response equipment available at the Model City Facility. The available on-site equipment includes a hose-tender truck, and the Town of Porter water supply has been extended to the Model City Facility. There is one main line, which runs through the Model City Facility. The 12-inch line supplies 30 to 60 pounds per square inch of pressure and can supply up to 10,000 gallons of water per minute. CWM has installed fire hydrants throughout the Model City Facility for fire protection purposes; this represents a suitable fire-fighting water supply. The Model City Facility is 3 to 5 miles of the nearest fire department.

2.10 Air Quality

2.10.1 Atmospheric Stability (Rating: 2)

Factors that impact atmospheric stability include mixing height, time of day, season and wind speed. The combination of these producing the highest level of instability is most acceptable. Of these factors, mixing height is perhaps of most significance. Mixing height is defined as the height above the surface through which relatively vigorous atmospheric mixing occurs. Mixing heights experience a large diurnal variation, as well as seasonal variations. For the Buffalo area, mean annual mixing heights are 630 meters; mean annual afternoon mixing heights are 1,275 meters. Average wind speeds are 6.1 meters per second (m/sec) and 7.6 m/sec, respectively. These conditions allow for generally good dispersion of near-surface atmospheric emissions (Holzworth, 1972).

Furthermore, large bodies of water, such as Lake Ontario, tend to increase instability within several miles of the shore, increasing the vertical dispersion of air pollutants. Occasionally, the lake effect can serve to reduce horizontal dispersion of pollutants.

Lake-effect vertical mixing and moderate to brisk winds result in atmospheric conditions near the site that are favorable for the dispersion of pollutants. This is supported by the fact that atmospheric conditions in the area are historically neutral to unstable 50% of the time. Further evidence of the good stability conditions (i.e., stable) may be seen by reviewing the air quality status of the region. The area is well in compliance with the NYS Ambient Air Quality Standards for sulfur dioxide, total suspended particulates, carbon monoxide, ozone, nitrogen dioxide and lead. Additional historical on-site monitoring has demonstrated compliance with industrial particulate standards and NYSDEC acceptable ambient levels for numerous VOCs and PCBs. Section 3.4.2 of the RMU-2 DEIS presents additional detail regarding air quality.

2.10.2 Prevailing Wind Direction (Rating: 1)

The exposure of residents and sensitive areas in the vicinity of the site to Model City Facility emissions depends on the prevailing wind direction for the area. Sites located in the predominant downwind direction from populated areas are most acceptable. The closest sensitive residential receptors are located approximately 0.4 mile northeast of the Model City Facility along Balmer and Porter Center Roads, where sparse housing is located. The Lewiston-Porter Central Schools are located approximately 2 miles west-southwest of the site. Areas of highest density residential population and other sensitive areas are located southwest and west of the site. Historical on-site meteorological data shows that winds are predominantly from the southwest quadrant and, therefore, the areas of highest density population and other sensitive areas are upwind of the site. Figure 8 shows typical wind rose data for the period January 1, 1994 to December 31, 1994.

2.10.3 Wind Speed (Rating: 2)

Increased wind speed will increase the dispersion of pollutants and tend to result in decreased ground-level concentrations. Hence, the frequency distribution of wind speeds at a site is indicative of the general potential concentration of pollutants. Wind speeds in the project area are moderate, and seasonal variation is slight. The annual average wind speed is approximately 12 miles per hour (mph); summer and winter

wind speeds average approximately 14.5 and 10 mph, respectively. Further discussion of the climatological characteristics of the area is provided in Section 3.4.1 of the RMU-2 DEIS.

Monitoring data collected at the Model City Facility by CWM during the period from 2006 through 2011 is presented in Table 8. The occurrence of wind speeds of 0 to 3.5, 3.5 to 8 mph, and greater than 8 mph are presented on a percentage basis for each month of each year. As shown, a wind speed of between 3.5 and 8 mph occurs the greatest percentage of the time. See Figure 8 for average wind speeds from January 1, 1994 to December 31, 1994.

TABLE 8

WIND SPEED DATA SUMMARY
2006 TO 2011
CWM CHEMICAL SERVICES, LLC
MODEL CITY, NEW YORK

Month & Year	Criteria		
	0 to ≤3.5 mph (%)	> 3.5 to < 8.0 mph (%)	≥ 8 mph (%)
Jan-06	6	42	52
Feb-06	4	36	60
Mar-06	16	42	42
Apr-06	17	67	16
May-06	6	84	9
Jun-06	20	67	13
Jul-06	14	69	17
Aug-06	26	68	6
Sep-06	20	63	17
Oct-06	10	45	45
Nov-06	23	60	17
Dec-06	6	26	68

TABLE 8

WIND SPEED DATA SUMMARY
2006TO 2011
CWM CHEMICAL SERVICES, LLC
MODEL CITY, NEW YORK
(Continued)

Month & Year	Criteria		
	0 to ≤3.5 mph (%)	> 3.5 to < 8.0 mph (%)	≥ 8 mph (%)
Jan-07	3	40	57
Feb-07	7	21	72
Mar-07	16	32	52
Apr-07	3	47	50
May-07	39	55	6
Jun-07	20	60	20
Jul-07	24	69	7
Aug-07	26	68	6
Sep-07	40	40	20
Oct-07	19	52	29
Nov-07	6	50	44
Dec-07	10	48	42

TABLE 8

WIND SPEED DATA SUMMARY
2006 TO 2011
CWM CHEMICAL SERVICES, LLC
MODEL CITY, NEW YORK
(Continued)

Month & Year	Criteria		
	0 to ≤3.5 mph (%)	> 3.5 to < 8.0 mph (%)	≥ 8 mph (%)
Jan-08	3	42	55
Feb-08	7	58	38
Mar-08	3	55	42
Apr-08	3	70	27
May-08	6	71	23
Jun-08	3	90	7
Jul-08	23	71	6
Aug-08	39	58	3
Sep-08	53	37	10
Oct-08	26	42	32
Nov-08	13	60	27
Dec-08	6	24	68

Month & Year	Criteria		
	0 to ≤3.5 mph (%)	> 3.5 to < 8.0 mph (%)	≥ 8 mph (%)
Jan-09	11	38	51
Feb-09	13	40	42
Mar-09	18	34	31
Apr-09	11	32	51
May-09	22	37	34
Jun-09	36	52	10
Jul-09	22	50	16
Aug-09	2	3	1
Sep-09	38	38	15
Oct-09	30	38	32
Nov-09	37	45	18
Dec-09	14	51	34

TABLE 8

WIND SPEED DATA SUMMARY
2006TO 2011
CWM CHEMICAL SERVICES, LLC
MODEL CITY, NEW YORK
(Continued)

Month & Year	Criteria		
	0 to ≤3.5 mph (%)	> 3.5 to < 8.0 mph (%)	≥ 8 mph (%)
Jan-10	16	38	46
Feb-10	10	40	49
Mar-10	18	50	32
Apr-10	20	42	38
May-10	31	46	23
Jun-10	23	50	27
Jul-10	25	60	15
Aug-10	30	51	18
Sep-10	26	40	34
Oct-10	23	36	41
Nov-10	31	34	34
Dec-10	7	34	59

Month & Year	Criteria		
	0 to ≤3.5 mph (%)	> 3.5 to < 8.0 mph (%)	≥ 8 mph (%)
Jan-11	15	43	42
Feb-11	22	27	50
Mar-11	13	39	48
Apr-11	20	36	44
May-11	27	46	26
Jun-11	25	50	25
Jul-11	28	51	21
Aug-11	35	47	18
Sep-11	34	50	15
Oct-11	31	40	29
Nov-11	14	33	53
Dec-11	16	46	38

2.11 Areas of Mineral Exploitation

2.11.1 Risk of Subsidence (Rating: 1)

There are no records of any subsurface mineral exploitation in the immediate project vicinity. Therefore, risk of subsidence is extremely low.

2.12 Preservation of Endangered, Threatened and Indigenous Species

2.12.1 Development and Operational Impacts on Endangered, Threatened and Indigenous Species or Critical Habitat (Rating: 1)

The proposed location for the site and the location of relocated support facilities consist almost entirely of previously disturbed areas and some second growth wooded areas. An aerial photograph, dated 1938, shows the area now occupied by the Model City Facility as farmland. In the early 1940s, the USDOD acquired the land and converted it to industrial use. No unique or critical habitats have been identified as present on the proposed site of RMU-2 or the proposed site of relocated support facilities. In addition, when contacted for prior Environmental Impact Statements for the Model City Facility, NYSDEC staff have stated that there are no recent records of rare or endangered species known in the Niagara County area (the most recent record is one of small skullcaps from 1930 within 1.5 miles of the RMU-2 site, according to the New York Natural Heritage Program). Thus, the development and operation of the proposed RMU-2 unit will not jeopardize the continued existence of endangered, threatened or indigenous species by destruction or adverse modification of their habitat. Additional information is presented in Section 3.5.5 of the RMU-2 DEIS.

2.13 Conservation of Historic and Cultural Resources

2.13.1 Proximity to Historical or Cultural Resources (Rating: 1)

In 1979, a cultural resource survey of the Model City Facility was undertaken to identify and evaluate any prehistoric or historic sites located in the area of the facility (Hart & Associates, 1979). The survey indicated that there are no known prehistoric or historic sites located within at least 0.5 mile of the Model City Facility. Further study is not indicated.

The nearest significant cultural resource is Our Lady of Fatima Shrine (Fatima Shrine), which is located approximately 1.9 miles southwest of the project site on Swann Road approximately 0.6 miles from the intersection of Swann and Creek Road (NYS Route 18). The Fatima Shrine is located on 15 acres of land and features a dome basilica 55 feet high and 100 feet in diameter. Visitors to the Fatima Shrine may ascend an outside stairway to the top of the basilica dome. Two observation binocular stations are located at the top of the basilica dome for viewing the surrounding countryside.

The visual analysis presented in the RMU-2 DEIS also focused on the potential impact to the Fatima Shrine. The question of the potential impact to the Fatima Shrine has been raised in previous projects at the Model City Facility (i.e., SLF-12 and RMU-1 construction). The viewshed analysis presented in the RMU-1 DEIS indicated that the Fatima Shrine would be screened from RMU-1 by several stands of trees. To verify this, the Fatima Shrine was visited during March 1992, while the trees were still leafless, to observe first-hand whether the trees can potentially screen RMU-1. Photographs taken from the top of the shrine looking toward the Model City Facility showed that the trees immediately to the northeast of the shrine extend 15 to 20 feet above the shrine and effectively screen the view to the northeast (Figure 9). Additionally, a visibility assessment conducted by EDR of Syracuse, New York in November 2007 indicated that RMU-2 would have no visual impacts to the Fatima Shrine. Photographic documentation of the viewshed from the Fatima Shrine is provided in the DEIS.

NYS Route 18 offers a clear, flat roadway for more than 1.4 miles in either direction from the Swann Road intersection. Visitors proceeding south along NYS Route 18 will have to execute a left turn onto Swann Road from NYS Route 18. While there is no turning lane for left turns, the shoulder along NYS Route 18 is paved and is wide enough to permit cars to pass left-turning vehicles and avoid extended traffic backup. Travelers proceeding from the Fatima Shrine west on Swann to NYS Route 18 have a clear, unobstructed view of the intersection in either direction. A traffic study conducted for RMU-1 permitting in March 1993 by Bettigole Andrews and Clark, Inc. and an updated Traffic Impact Study performed by Wendel Companies in 2011 (both included in Appendix E) concluded that the level of service (LOS) for intersections, including NYS Route 18 and Pletcher Road, Balmer Road and the CWM entrance gate and NYS Route 18 and Balmer Road, would continue to operate at levels “A” or “B” for most periods. The only exception would be vehicles traveling eastbound on Pletcher Road (toward NYS Route 18), which would operate at LOS “C” during the morning peak hour

of 7:00 AM to 8:00 AM. It should be noted that the 2011 Wendel study included an analysis and resulting LOS utilizing the maximum number of trucks allowable for transportation of waste to the Model City Facility during peak hours. Section 4.6.5 of the DEIS provides a full discussion of the traffic impacts of RMU-2. Visitor access to the Fatima Shrine will not be significantly affected.

The Tuscarora Indian Reservation is located approximately 3.5 miles south of the proposed project site and is situated on the heights of the Lewiston escarpment. Although it is possible that the very top of the completed elevation of RMU-2 may be visible from the northern-most border of the reservation during certain times of the year (when there is no foliage), it is not anticipated that site operations (e.g., truck movement) will impact this cultural resource.

In June 2012, the New York State Office of Parks, Recreation and Historic Preservation (NYSHPO) performed a review of the proposed RMU-2 project and determined that RMU-2 will have No Effect upon cultural resources in or eligible for inclusion in the National Register of Historic Places. A copy of the letter provided by the NYSHPO, including the No Effect determination, is provided as an appendix to the RMU-2 DEIS.

Because the development and operation of the proposed RMU-2 is not expected to adversely affect the preservation or use of significant historic or cultural resources, siting of the Model City Facility at the proposed location is considered favorable with respect to this criterion.

2.14 Open Space, Recreational and Visual Impacts

2.14.1 Proximity to Open Space and Recreational Resources (Rating: 1)

Sites are most acceptable where the development and operation of proposed facilities are not expected to adversely affect the presence or use of existing or proposed open space and recreational resources. Local recreational resources within the vicinity of the Model City Facility include Fourmile Creek State Park, Fort Niagara State Park (Old Fort Niagara), Joseph Davis State Park, Artpark, the Tuscarora Indian Reservation and the Fatima Shrine. With the exception of the Fatima Shrine, all of the above-mentioned resources are located several miles or more from the Model City Facility and are accessed by routes other than the designated route for Model City Facility vehicles

(NYS Route 18 from NYS Route 104). Construction and operation of the unit should, therefore, have no impact on any of these recreational resources.

2.14.2 Relationship to Scenic Views or Vistas (Rating: 1)

There are no scenic points or vistas in the immediate area of the Model City Facility. The nearest scenic point would be the Niagara escarpment, located approximately 3 miles south of the Model City Facility. Although the proposed unit will likely be visible from the escarpment based on a viewshed map constructed for the area (Figure 4-1 of the RMU-2 DEIS), any possible effect would be minimal due to the distance to the Model City Facility and will be of short duration (only during operation of the unit). Once the unit has reached capacity, it will be capped and vegetated. At that time, it will blend in with the rest of the scenery and, thus have little or no impact on the view from the escarpment. Because the development and operation of the proposed unit will not adversely affect the view of scenic points, vistas or other visually pleasing elements, the proposed location is considered favorable with respect to this criterion. Section 4.8 of the RMU-2 DEIS provides an in-depth discussion of visual impacts for the area in general (in addition to impact to scenic views and vistas).

2.14.3 Degree to Which Proposed Facilities Are Readily Noticeable to Passerby (Rating: 1)

As presented in Section 4.8 of the RMU-2 DEIS, a viewshed analysis of the surrounding area, considering the construction of RMU-2, was performed by EDR. The analysis predicts that the completed RMU-2 would not be visible from locations east of the site on Porter Center Road, north of the site, on Balmer Road, or from the intersection of Porter Center and Balmer Roads. Additional details are presented in the RMU-2 DEIS.

2.15 Preliminary Siting Evaluation

A summary of the siting criteria ratings discussed above in Sections 2.1 through 2.14 is presented in Table 9. The worksheet presents CWM's proposed criteria ratings for each siting consideration and establishes a siting consideration score in accordance with the guidelines for evaluating the relative importance of each criterion, as outlined in Appendix I of 6 NYCRR Part 361.

TABLE 9
PRELIMINARY SITING EVALUATION WORKSHEET FOR RMU-2

Siting Consideration	Criteria	% of Siting Consideration Weight	Rating (1,2, or3)	Siting Criteria Scores	Sum of Criteria Score	Siting Consideration Weight	Siting Consideration Score
Population Density	Population within 0.5 miles of the site boundary.	1a. 70%	1	0.7			
	The projected population and the rate of growth for the area within 0.5 miles of the site boundary during the 20 year period following initial site operation.	b. 30%	1	0.3	1.0	10	10.0
Population Adjacent to Transport Route	Population for areas within 0.5 miles of anticipated transportation routes.	2a. 70%	3	2.1			
	The projected population and the rate of growth for areas within 0.5 miles of the transport routes within the 20 year period following initial site operation.	b. 30%	1	0.3	2.4	7	16.8
Risk of Accident in Transportation	Mode of transportation.	3a. 10%	1	0.1			
	Length of transport route.	b. 15%	2	0.3			
	Accident rate of transport route.	c. 20%	1	0.2			
	Structures within 0.5 miles of the transportation route.	d. 10%	3	0.3	2.1	10	21.0
	Transportation restrictions.	e. 15%	2	0.3			
	Nature and volume of waste being transported.	f. 30%	3	0.9			
Proximity to Incompatible Structures	Proximity to airports.	4a. 50%	1	0.5			
	Proximity to other incompatible structures.	b. 50%	2	1.0	1.5	3	4.5
Utility Lines	Proximity to major utility lines.	5. 100%	1	1.0	1.0	1	1.0
Municipal Effects	Consistency with the intent of master use plan.	6a. 10%	2	0.2			
	Consistency with local laws, ordinances, rules, and regulations.	b. 10%	1	0.1	1.1	4	4.4
	Public expense/revenue tradeoffs.	c. 80%	1	0.8			

TABLE 9
PRELIMINARY SITING EVALUATION WORKSHEET FOR RMU-2
(Continued)

Siting Consideration	Criteria	% of Siting Consideration Weight	Rating (1,2, or3)	Siting Criteria Scores	Sum of Criteria Score	Siting Consideration Weight	Siting Consideration Score
Contamination of Ground and Surface Waters	Ground and surface water aspects.	7a. 40%	2	0.8	1.6	18	28.8
	Runoff.	b. 20%	2	0.4			
	Hydrogeological characteristics.	c. 40%	1	0.4			
Water Supply Sources	Relationship to water supply sources.	8. 100%	2	2.0	2.0	8	16.0
Fire and Explosions	Minimum distance.	9a. 50%	1	0.5	1.5	9 adjusted down from 11	13.5
	Fire Department and emergency medical services.	b. 20%	2	0.4			
	Proximity to fire department and fire fighting water supply. A suitable water supply shall be as recommended by the NYS Department of State Office of Fire Prevention & Control.	c. 30%	2	0.6			
Air Quality	Atmospheric stability.	10a. 20%	2	0.4	1.5	12	18.0
	Prevailing wind direction.	b. 50%	1	0.5			
	Wind Speed.	c. 30%	2	0.6			
Areas of Mineral Exploitation	Risk of subsidence.	11 100%	1	1.0	1.0	3	3.0
Preservation of Endangered, Threatened and Indigenous Species	Developmental and operational impacts on endangered, threatened and indigenous species or critical habitat.	12. 100%	1	1.0	1.0	6	6.0
Conservation of Historic and Cultural Resources	Proximity to historical or cultural resources.	13. 100%	1	1.0	1.0	4	4.0
Open Space, Recreational and Visual Impacts	Proximity to open space and recreational resources.	14a. 50%	1	0.5	1.0	5 adjusted up from 3	5.0
	Relationship to scenic views or vistas.	b. 30%	1	0.3			
	Degree to which proposed facilities are readily noticeable to passers-by.	c. 20%	1	0.2			

Score Total: 152.0

2.16 Consistency with New York Hazardous Waste Facility Siting Plan

Section 27-1102 of the New York ECL directs the NYSDEC to develop the NYS HWFSP. The HWFSP establishes a framework for public and private actions to comply with the state's treatment, storage and disposal requirements for hazardous wastes over the next 20 years. The NYSDEC and all siting boards are to use the HWFSP in reviewing permit applications from owners/operators of TSDFs. ECL Section 27-1105(f) provides, in part, that the Facility Siting Board should deny an application "upon final adoption of the statewide hazardous waste facility siting plan established pursuant to Section 27-1102 of this title, if it is not consistent with such plan or if the need for such facility is not identified in such plan and the board finds that the facility is not otherwise necessary or in the public interest."

The NYSDEC prepared and published for comment several drafts of the proposed NYS HWFSP: 1988, 1989, 1991, 2008 and 2009. The 2010 final NYS HWFSP is discussed in Section 1.6 and included in Appendix C of this application.

This application reflects CWM's assessment of the markets (i.e., hazardous and industrial nonhazardous) that it proposes to serve and its business judgment as to the best way to provide such services in the most cost-effective way. This application is consistent with the NYS HWFSP, as further detailed in Section 1.6.2 of this application.

2.17 Comparison of Suggested RMU-2 Criterion Ratings to RMU-1 Siting Board Criterion Ratings

It should be noted that the criterion ratings in the preceding discussion are those suggested by CWM and may not agree with the criterion ratings that will ultimately be arrived at by the Siting Board convened for RMU-2. In fact, the Siting Board for RMU-1 established several criteria ratings different from those proposed in CWM's certificate application for RMU-1. Table 10 presents a comparison of the proposed RMU-2 siting criteria ratings with those of the RMU-1 Facility Siting Board. The following sections discuss those criteria (referencing 6 NYCRR Part 361) for which the proposed RMU-2 rating differs from that of the previous RMU-1 rating (set by the Facility Siting Board) for the same criterion. CWM's justification for a different rating is also presented. The complete text of the RMU-1 Facility Siting Board's decisions, dated December 10, 1993 is presented in Appendix F.

TABLE 10

COMPARISON OF PROPOSED RMU-2 SITING CRITERIA RATINGS
WITH RMU-1 SITING BOARD CRITERIA RATINGS

Siting Consideration	Criteria	CWM Proposed RMU-2 Rating	Siting Board RMU-1 Rating
Population Density	Population within 0.5 mile of the site boundary	1	1
	The projected population and the rate of growth for the area within 0.5 mile of the site boundary during the 20-year period following initial site operation	1	2
Population Adjacent to Transport Route	Population for areas within 0.5 mile of anticipated transportation routes	3	3
	The projected population and the rate of growth for areas within 0.5 mile of the transport route during the 20-year period following initial site operation	1	3

TABLE 10

COMPARISON OF PROPOSED RMU-2 SITING CRITERIA RATINGS
WITH RMU-1 SITING BOARD CRITERIA RATINGS
(Continued)

Siting Consideration	Criteria	CWM Proposed RMU-2 Rating	Siting Board RMU-1 Rating
Risk of Accident in Transportation	Mode of transportation	1	3
	Length of transport route	2	2
	Accident rate of transportation route	1	1
	Structures within 0.5 mile of the transportation route	3	3
	Transportation restrictions	2	2
	Nature and volume of waste being transported	3	3
Proximity to Incompatible Structures	Proximity to airports	1	1
	Proximity to other incompatible structures	2	2
Utility Lines	Proximity to major utility lines	1	2
Municipal Effects	Consistency with the intent of master land-use plan	2	2
	Consistency with local laws, ordinances, rules, and regulations	1	1
	Public expense/revenue tradeoffs	1	1
Contamination of Ground and Surface Waters	Ground- and surface-water aspects	2	3
	Runoff	2	2
	Hydrogeological considerations	1	1

TABLE 10

COMPARISON OF PROPOSED RMU-2 SITING CRITERIA RATINGS
WITH RMU-1 SITING BOARD CRITERIA RATINGS
(Continued)

Siting Consideration	Criteria	CWM Proposed RMU-2 Rating	Siting Board RMU-1 Rating
Water Supply Sources	Relationship to water supply sources	2	2
Fire and Explosions	Minimum distance	1	1
	Fire department and emergency medical services	2	2
	Proximity to fire department and fire-fighting water supply. A suitable water supply shall be as recommended by the New York State Department of State Office of Fire Prevention and Control.	2	2
Air Quality	Atmospheric stability	2	2
	Prevailing wind direction	1	3
	Wind speed	2	2
Areas of Mineral Exploitation	Risk of subsidence	1	1
Preservation of Endangered, Threatened, and Indigenous Species	Development and operational impacts on endangered, threatened, and indigenous species or critical habitat	1	1
Conservation of Historic and Cultural Resources	Proximity to historic or cultural resources	1	1
Open Space, Recreational, and Visual Impacts	Proximity to open space and recreational resources	1	1
	Relationship to scenic views or vistas	1	1
	Degree to which proposed facility is readily noticeable to passersby	1	2

2.17.1 Criterion (1)(ii)(b) Projected Population and Rate of Growth for Areas within 0.5 Mile of the Site Boundary During the 20-Year Period Following Initial Site Operation

As presented in Section 2.1.2, the Town of Porter U.S. 2010 Census data for the 40-year period from 1970 to 2010 showed a consistent decrease in population for each 10-year period, despite the previously projected increase in population for the town. The zoning designation for the land adjacent to the site is primarily industrial, with the only residential property located to the southwest and east. The residential area is interspersed with agricultural districts. Although some of the industrial districts do not prohibit residential development, these areas typically do not foster residential growth. As a result, present land use and zoning will act to deter residential development within 0.5 mile of the site boundary.

According to the Southern Tier West Regional Planning and Development Board, a population decrease for Niagara County from 1990 to 2020 is projected at 1.15%. As demonstrated by the 2010 U.S. census data, the population within Niagara County has decreased 1.5% during the period from 2000 to 2010, which slightly exceeds the predicted decrease. It is anticipated that this decrease will continue during the previously predicted period and beyond 2030. The population of the Town of Lewiston, which borders the southern end of the Model City Facility, is expected to increase slightly over this period. However, the majority of growth predicted for Lewiston will take place in the area of the Village of Lewiston and not near the Model City Facility (i.e., approximately 7 miles from the facility).

The Town of Porter, which includes all waste management units at the Model City Facility, including proposed RMU-2, is expected to continue the historical general trend of declining population, or to remain stable with no appreciable increase. The population within 0.5 mile of the proposed RMU-2 is not expected to increase above current levels and, accordingly, this siting criterion was assigned a rating of 1 for RMU-2.

2.17.2 Criterion (2)(ii)(b) Project Population and Rate of Growth for Areas within 0.5 Mile of the Transportation Route During the 20-Year Period Following Initial Site Operation

At the time of preparation of the siting certificate application for RMU-1, the population was expected to increase above the then-current levels, at a rate greater than the rate forecasted for Niagara County at that time. Accordingly, the siting criterion rating for RMU-1 was designated as 3. This is no longer the projection for population growth in

Niagara County or in the areas within 0.5 mile of the transport route during the 20-year period following development of RMU-2.

The NYS Office of Planning Services recently projected a population decrease of 1.15% for Niagara County from 1990 to 2020. As demonstrated by the 2010 U.S. census data, the population within Niagara County has decreased 1.5% during the period from 2000 to 2010, which slightly exceeds the predicted decrease. It is anticipated that this decrease will continue during the previously predicted period and beyond 2030. Proposed development records of the Town of Lewiston's Building and Zoning office indicated that there are no proposed developments within 0.5 mile of NYS Route 18 and NYS Route 104 in the future. Proposed development records of the Town of Porter's Building and Sanitation office indicate that there are two proposed developments (i.e., single residence houses) within 0.5 mile of Balmer Road. The population within 0.5 mile of the transport route, based on current information available from NYS and the Towns of Lewiston and Porter, is not expected to increase above current levels. Accordingly, this siting criterion was assigned a rating of 1 for RMU-2.

2.17.3 Criterion (3)(ii)(a) Mode of Transportation

The RMU-1 Facility Siting Board's December 10, 1993 decision assigned a rating of 3 to this criterion. The Facility Siting Board stated that the documents referenced by CWM in the application were examined by the Facility Siting Board and, relying principally on the Congressional Office of Technology Assessments (OTA) report (Transportation of Hazardous Materials, 1986), concluded that truck transportation has a higher accident rate than either of the alternatives (e.g., rail, ship). CWM's review of government guidance documents, particularly the FEMA Handbook referenced in Section 2.3.1, directly contradicts the RMU-1 Facility Siting Board's statement concerning transportation mode-specific accident rates. Page-specific citations are included. The estimates of the probability of transportation accidents by mode of transportation presented in the FEMA Handbook were derived from several sources, including the OTA report.

CWM also considers that the accident rate of a defined body (i.e., non-CWM-owned waste haulers) within a given transportation mode is indicative of the manner in which the given transportation mode is utilized. Thus, a purportedly unsafe mode operated in a safe and careful manner may in fact be safer than a purportedly safe mode operated in an unsafe or careless manner. As presented in Section 2.3.1, the accident rate for haulers transporting waste to the Model City Facility is considered low when compared

to other modes of transportation. Table 1A shows that the accident rate for the top five waste haulers to CWM over the period from 2004 to 2008 is 1.4 reportable accidents per million miles driven.

Furthermore, the accident rate of the non-CWM-owned waste haulers is determined over a large geographic area. The accident rate along the transportation route to the Model City Facility is determined only in part by the trucks going to the facility. The driving habits of the local population and the inherent design of the route itself also determine the accident rare. The total number of accidents (by all vehicles) along the transportation route has remained consistent or decreased in the 9-year period from 2003 to 2011, when compared to the 9-year period from 1991 to1999.

The risk of environmental impairment or human exposure to hazardous wastes being transported to the Model City Facility is further minimized by the fact that the NYSDOT requires all transporters to maintain the appropriate shipping papers, which include emergency telephone numbers and emergency response information. Many transporters maintain their own formal Emergency Response Plan to facilitate quick and effective responses to a transportation incident involving the spill of hazardous waste. Transporters provide their drivers with a comprehensive driver-training program that includes training in emergency response measures; proper operation of equipment (such as the vehicle itself and emergency respirators, extinguishers and protective clothing); hazardous waste handling procedures; manifesting requirements; log and maintenance form preparation; defensive driving and placarding, marking, labeling, packaging and loading requirements. Drivers also complete safety training sessions that include Federal Safety Regulations, Federal Hazardous Materials Regulations, and use of the USDOT Emergency Response Guide. In addition, drivers are given yearly re-training required under the provisions of RCRA.

CWM's concern for safe and environmentally sound hazardous waste transportation extends to CWM's contract haulers. CWM's Model City Transportation Rules and Regulations (Appendix A) impose numerous training and safety requirements on the contract haulers. Contract hauler trucks are equipped with a safety kit and spill containment equipment. Spill containment equipment may include an over-pack drum, drum bungs, a bung wrench, mil plastic sheeting, absorbent, a shovel and a broom. A safety kit may include personal protection items, as well as a first-aid kit, eye wash kit, fire extinguisher and an emergency response guide book that contains instructions on proper responses to hazardous material spills. CWM requires all transporters hauling

hazardous waste to the Model City Facility to carry safety equipment for personal protection.

In the NYS HWFSP, the NYSDEC found that the amount of hazardous waste spilled each year while transported or at the terminal facility is small when compared to the total amount of hazardous waste transported. The NYSDEC further stated that the amount was "miniscule" when compared to the quantities of hazardous substances (e.g., gasoline, chemical feedstocks) shipped daily across the nation. Additionally, the USEPA estimates that hazardous waste transportation spills represent only approximately 1% of the hazardous materials spilled each year as a result of transportation.

The overall mode of transportation accident rate (as given in the FEMA Handbook), safety records of waste haulers to the Model City Facility, and the relative small percentage of hazardous waste spilled justify CWM's rating of 1 for this criterion.

2.17.4 Criterion (5)(ii)(a) Proximity to Major Utility Lines

In its RMU-1 decision, the Facility Siting Board assigned a rating of 2 to this criterion because it defined the "site" as the area within the boundary line of the Model City Facility. The Facility Siting Board stated that the landfill itself cannot function without other support facilities located at the Model City Facility. Therefore, if an approval were given based on the boundaries of RMU-1, the ancillary facilities where hazardous waste is handled or treated/processed would not have been approved under the siting law and could not legally operate in support of the landfill.

CWM suggests that this criterion rating should be 1 for RMU-2. The nearest major electrical utility line is located just to the west of the Model City Facility, approximately 0.8 miles from the proposed RMU-2 site. Using the RMU-1 Facility Siting Board's definition of "site" to include all supporting infrastructure, these ancillary facilities are all located within the permitted portion of the CWM property that is zoned M-3, Heavy Industrial (refer to the "limits of permit area" line on Figure 3). The electric utility lines are located 0.3 mile from the nearest point in the M-3 zone. No CWM support facilities are any closer to this utility. 6 NYCRR Part 361.7(b)(5) states that the intent of this criterion is... "to insure that the generation, transportation, treatment, storage or disposal of hazardous wastes at, near or about such a site will not interfere with, cause damage to, or otherwise disrupt the operation of major utility lines." The operations of previous landfills at the Model City Facility have not interfered with the utility line. Thus,

the operational history of landfilling activities at the Model City Facility demonstrates that such operations at RMU-2 will not interfere with this utility line and that a rating of 1 for this criterion is fully justified.

2.17.5 Criterion (7)(ii)(a) Contamination of Ground and Surface Waters

The Facility Siting Board for RMU-1 assigned a rating of 3 to this criterion, while CWM suggested a rating of 2. The Facility Siting Board's rationale for a rating of 3 for RMU-1 was that the RMU-1 site was partly located within 7 acres of federally protected wetlands and that CWM's wetland mitigation plan would require extensive effort to overcome this condition. Additionally, the Facility Siting Board considered the fact that RMU-1 would eliminate 16-acre-feet of floodwater storage area.

For RMU-2, CWM suggests a rating of 2 for this criterion. This rating is supported by the information provided in the Wetlands Delineation Reports (April 2003, June 2009, April 2011 and July 2012) prepared by EDR, which are included in the DEIS. These reports identify no impact to State Freshwater Wetlands, and less than 2 acres of federal wetlands within the RMU-2 footprint and areas occupied by relocated facilities. Approximately 2.5 acres of jurisdictional wetlands, as determined by the USACE, are located within the RMU-2 development area. The NYSDEC has determined that the development of the new Drum Management Building will impact a 100-foot adjacent area to a state freshwater wetlands. Additionally, the NYSDEC issued a determination that no other state freshwater wetlands or 100-adjacent areas are in the RMU-2 development area. The approximate 2.5 acres of wetlands are comprised of manmade roadside ditches and isolated pockets. Pending verification by the USACE, wetland mitigation work is anticipated to be restoration of wetlands onsite with restrictions on development of the mitigation area. The NYSDEC has indicated that a vegetative buffer will be constructed and maintained between the new Drum Management Building operational area and the state freshwater wetland. Additionally, the proposed location of RMU-2, and the proposed locations for relocated facilities are outside of any floodplain areas.

2.17.6 Criterion (9) Fire and Explosions

Consistent with the decision of the RMU-1 Facility Siting Board, CWM suggests that the siting consideration weight for this criterion be reduced from 11 to 9. The RMU-1 Facility Siting Board determined that the effect of fire or explosion, should one occur, would be limited to the site, which is far removed from the nearest population. Further,

explosives are neither used nor stored at the site, and the wastes disposed at the site are not explosive by nature. The Facility Siting Board concluded that this criterion has less importance and, therefore, assigned it a lower weight.

2.17.7 Criterion (10)(ii)(b) Prevailing Wind Direction

The Facility Siting Board for RMU-1 assigned a rating of 3 to this criterion, while CWM suggested a rating of 1 for RMU-1 and suggests a rating of 1 for RMU-2. The Facility Siting Board cited the fact that the hamlet of Ransomville is downwind of the site and constitutes a population concentration. CWM disagrees with the Facility Siting Board's use of the hamlet of Ransomville due to its distance from the site. CWM believes that primary consideration under this criterion should be given to the nearest populated area and sensitive receptors. In this case, the nearest sensitive receptors are a residence approximately 0.4 mile northeast of the site and the Lewiston-Porter Schools, which are 2 miles west-southwest of the site. Neither of these areas is located directly downwind of RMU-2 given the predominant wind direction. In contrast, Ransomville is at least 4 to 5 miles east of the proposed site of RMU-2. Given the safeguards employed at the Model City Facility to control off-site air emissions, the type of activities to be associated with RMU-2 (i.e., predominantly the landfilling of treated and stabilized bulk solids in accordance with LDR) and the utilization of dust control measures, CWM contends that it is inappropriate to consider populations at such distances. Real-time air monitoring for respirable particles (PM-10) and semivolatiles at the boundary of SLF-12 during its operation resulted in such low levels that the NYSDEC has dropped the requirement for such monitoring. For these reasons, CWM believes that populated areas as far away as Ransomville should not be considered under this criterion and that a rating of 1 is justified.

2.17.8 Criterion (14) Open Space, Recreational, and Visual Impacts

Consistent with the decision of the RMU-1 Facility Siting Board, CWM acknowledges that the siting consideration weight for this criterion should be increased from 3 to 5. The RMU-1 Facility Siting Board determined that this siting consideration should be given greater weight in recognition of the importance of this area to the community as an open space resource.

2.17.9 Criterion (14)(ii)(c) Visual Impacts

For RMU-1, the Facility Siting Board assigned a rating of 2 for this criterion while CWM proposed a rating of 1. The Siting Board's rationale behind a rating of 2 was that lighting used by the Model City Facility for night work could make the facility readily noticeable to passersby.

For RMU-2, CWM suggests a rating of 1. RMU-2 is located further inside the Model City Facility boundary than RMU-1. Based on the viewshed analysis performed by EDR in November 2007 (Figures provided in the RMU-2 DEIS), the completed RMU-2 will not be visible from locations east of the site on Porter Center Road, north of the site on Balmer Road, or from the intersection of Balmer Road and Porter Center Road. Additionally, the large majority of operational hours of RMU-2 will be during daylight and the need for additional lighting will be minimal.

ARCADIS

Figures

MODEL CITY FACILITY

TRUCK ROUTE

NIAGARA FALLS INTERNATIONAL AIRPORT

Wilson
Barker
Ransomville
Middleport
Gasport
Lockport
Lockport
Niagara Falls
North Tonawanda
North Tonawanda
Tonawanda

NOTES:

1. PROPERTY LINES ARE APPROXIMATE.
2. NO DRINKING WATER WELLS EXIST WITHIN 1/4 MILE OF THE FACILITY.
3. THE TREATED EFFLUENT DISCHARGE IS LOCATED AT THE NIAGARA RIVER.
4. 710 TOTAL ACRES.
5. 630 RCRA PERMITTED ACRES.

AREA LOCATION

0 2 4
MILES

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6NYCRR PART 361 PERMIT APPLICATION

REGIONAL LOCATION OF MODEL CITY FACILITY AND TRUCK ROUTE

ARCADIS

FIGURE
1

CITY: CLE DIV/GROUP: AIT 40 DB:L.GREENE LD: EAL PIC: WP PM: TM: GNG TR:
MODEL CITY 23725.003
Friday, June 19, 2009 1:37:16 PM
G:\enviro\Common\GIS\CWM\ModelCity\RevisionsToDEIS\mxd\FacilityLocationDetail_regional.mxd

SPDES OUTFALL 001 AT NIAGARA RIVER

SPDES OUTFALL 002

SPDES OUTFALL 003

SPDES OUTFALL 004

PROPERTY LIMIT

EFFLUENT DISCHARGE PIPE

LIMITS OF RCRA PERMITTED AREA

NOTES:

1. PROPERTY LINES ARE APPROXIMATE.
2. NO DRINKING WATER WELLS EXIST WITHIN 1/4 MILE OF THE FACILITY.
3. THE TREATED EFFLUENT DISCHARGE IS LOCATED AT THE NIAGARA RIVER.
4. 710 TOTAL ACRES.
5. 630 RCRA PERMITTED ACRES.

AREA LOCATION

0 1 2

MILES

GRAPHIC SCALE

DATA SOURCE: 24K USGS TOPO QUAD, NRCS Geospatial Data Gateway

DRAFT

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MODEL CITY, NEW YORK

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FACILITY LOCATION DETAIL

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FIGURE 2

CITY: CLE DIVGROUP: AIT 40 DB: L.GREENE EAL LD: EAL PIC: WP PM: TM: GNG TR: MODEL CITY 23725.003
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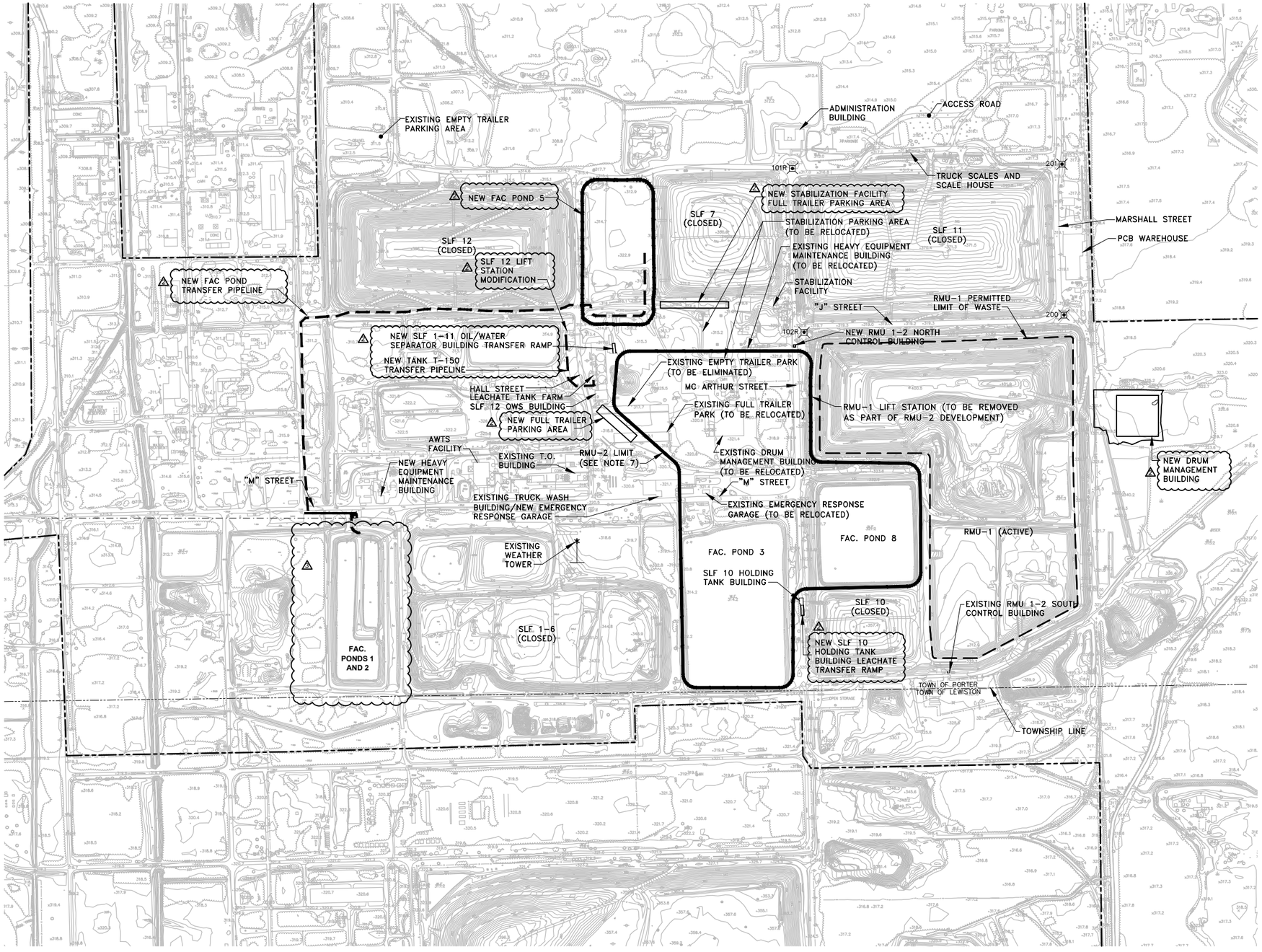

LEGEND:

- BRUSHLINE
- CABLE MARKER
- CATCH BASIN
- DROP INLET
- FENCE
- FIRE HYDRANT
- GUARD RAIL
- LIGHT POLE
- MISCELLANEOUS POLE
- MONUMENT
- POST
- RAILROAD TRACKS
- SIGN
- SWAMP
- TRAFFIC LIGHT
- TREE
- TREELINE
- UNIDENTIFIED OBJECT
- UTILITY POLE
- VALVE
- WATER LINE
- EXISTING CONTOUR
- EXISTING GRADEBREAK
- PROPERTY LINE

200 CONTROL MONUMENT (SEE TABLE BELOW)

E 13500 N 7000 COORDINATE GRID (SEE NOTE 3)

RMU-1/RMU-2 CONTROL MONUMENTS

MONUMENTS	ELEVATION	CWM PLANT GRID		RMU-1 GRID		NY STATE PLANE COORDINATES (NAD-27)		NGVD-29 ELEVATION
		NORTHING	EASTING	NORTHING	EASTING	NORTHING	EASTING	
102R	319.72	100+94.55	111+87.56	100+94.65	11+87.56	1,175,430.46	396,380.12	319.66
200	318.33	101+89.56	126+13.77	101+89.56	26+13.77	1,175,488.28	397,808.18	318.27
101R	316.01	109+94.28	111+23.09	---	---	1,176,331.436	396,339.034	315.92
201	316.62	110+17.82	126+3.49	---	---	---	---	---

CONTROL MONUMENTS NOTE:

1. RMU-1 EASTING GRID COORDINATES ARE SIMPLIFIED PLANT GRID COORDINATES. SUBTRACTING 10,000 FROM THE CWM PLANT GRID EASTING COORDINATE WILL CONVERT THE CWM PLANT GRID TO THE RMU-1 GRID. NOTE THAT NO CONVERSION IS REQUIRED FOR NORTHING COORDINATES.

NOTES:

1. TOPOGRAPHIC BASE MAP CONSISTS OF COMBINATION OF DATA COMPILED BY PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHY DATED 5/31/01 BY AIR SURVEY CORP. (PROJECT NO.71010503). AND AN AUGUST 2008 SURVEY BY ENSOL, INC.
2. VERTICAL DATUM BASED ON NGS MEAN SEA LEVEL.
3. GRID COORDINATES SHOWN ARE CWM PLANT GRID.
4. CONTOUR INTERVAL 2 FT.
5. DASHED CONTOURS INDICATE THAT GROUND IS PARTIALLY OBSCURED BY VEGETATION OR SHADOWS. THESE AREAS MAY NOT MEET STANDARD ACCURACY AND REQUIRE FIELD VERIFICATION.
6. PROPERTY LINE IS APPROXIMATE. EASEMENTS AND RIGHT-OF-WAYS NOT SHOWN.
7. RMU-2 LIMIT REPRESENTS TOE OF PERIMETER MSE WALL.

CITY: SYRACUSE, NY DIV/GROUP: ENVCAD DB: K. DAVIS LD: PIC: W. POPHAM PM: W. RANKIN TM: B. STONE LYR: ON="OFF=*REF*
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XREFS: 23725X02 23725X01 23725X00 IMAGES: PROJECTNAME: ---

300' 0 300' 600'
1"=300'

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING: USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Ckd
3	11/2013	REMOVED FAC POND 1/2 RECONSTRUCTION	GNG	BMS
2	1/2013	REVISED CALLOUTS	GNG	TJF
1	1/2012	REDESIGNED FAC POND TRANSFER PIPELINE	NWF	BMS

Professional Engineer's Name: **JOSEPH MOLINA**
Professional Engineer's No.: 072644
State: NY | Date Signed: | Project Mgr.: WAR
Designed by: BMS/PTO | Drawn by: LAF | Checked by: BMS

ARCADIS OF NEW YORK, INC.

CWM CHEMICAL SERVICES, LLC • MODEL CITY, NEW YORK
RESIDUALS MANAGEMENT UNIT 2 PART 361 PERMIT APPLICATION

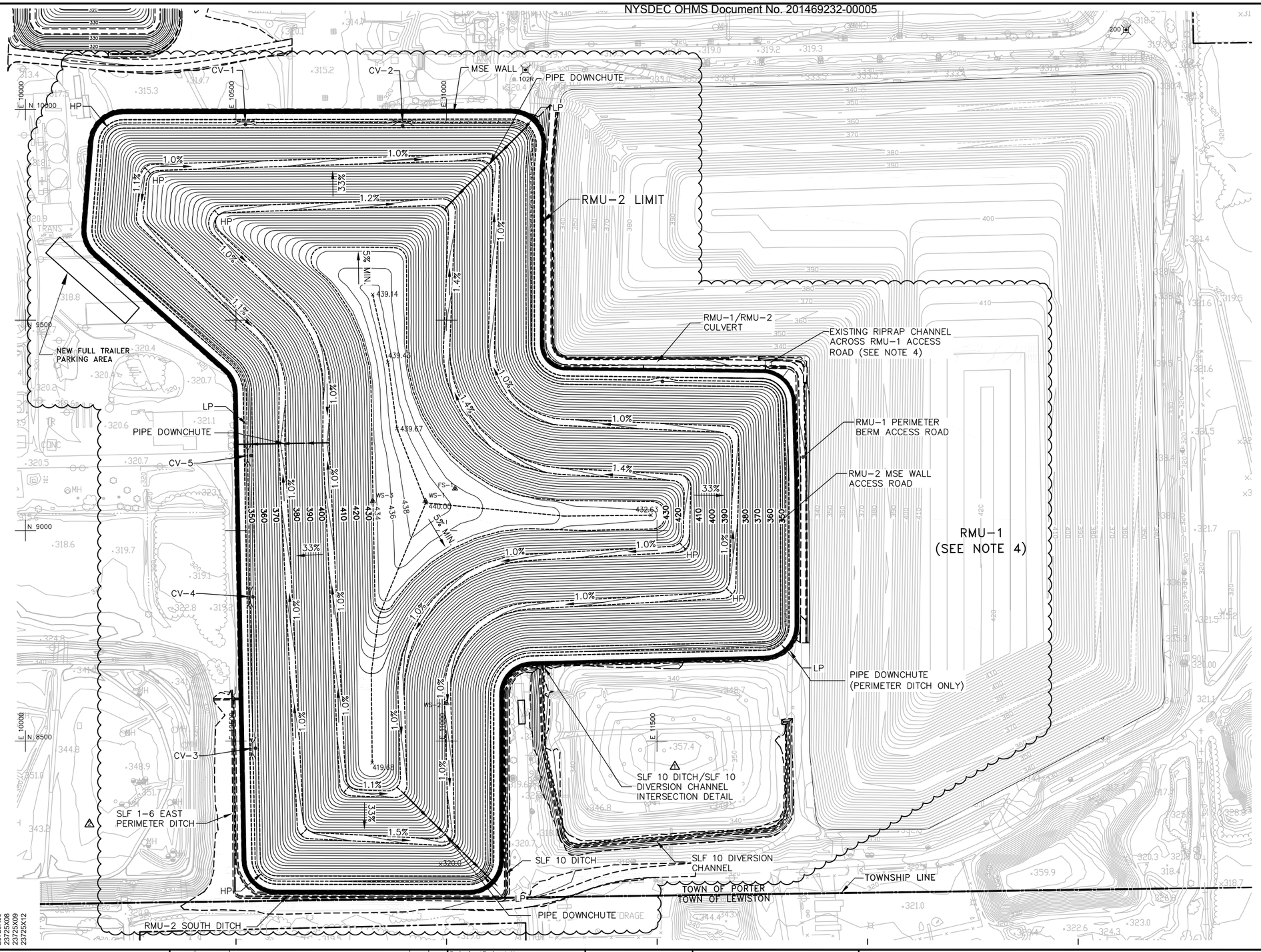
FACILITY LAYOUT

GENERAL

ARCADIS Project No. B0023725.2009.00006
Date AUGUST 2009

ARCADIS of New York, Inc.
6723 Towpath Road
P.O. Box 66
Syracuse, New York
TEL. 315.446.91220

3



LEGEND:

- APPROXIMATE PROPERTY LINE
- 310 PROPOSED INDEX ELEVATION CONTOUR
- 428 PROPOSED INTERMEDIATE ELEVATION CONTOUR
- PROPOSED GRADE BREAK
- PROPOSED RISER MANHOLE
- PROPOSED LEACHATE RISER VAULT
- CV-1 PROPOSED PERIMETER DITCH CULVERT AND ID
- ×320.0 PROPOSED SPOT ELEVATION
- LP PROPOSED PERIMETER DITCH LOW POINT
- HP PROPOSED PERIMETER DITCH HIGH POINT
- FS-1 SETTLEMENT CALCULATION POINT
- 200 PERMANENT CONTROL MONUMENT
- E 12500 N 10000 COORDINATE GRID

NOTES:

1. REFER TO DRAWING NO. 2 FOR ADDITIONAL BASE MAP INFORMATION.
2. PROPOSED GRADES SHOWN INSIDE OF PERIMETER DITCH ARE TOP OF WASTE GRADES. PROPOSED GRADES WITHIN AND OUTSIDE PERIMETER DICTH ARE FINAL GRADES.
3. MSE WALL ACCESS RAMP TO BE DESIGNED/CONSTRUCTED AS PART OF INITIAL CELL CONSTRUCTION (SEE DWG. 8). ADDITIONAL ACCESS RAMPS MAY BE CONSTRUCTED AS PART OF FUTURE CELL CONSTRUCTION.
4. EXISTING RIPRAP CHANNEL ACROSS RMU-1 PERIMETER BERM ACCESS ROAD CONVEYS RUNOFF FROM RMU-1 PERIMETER CHANNEL TO NEW RMU-1/RMU-2 PERIMETER CHANNEL.
5. PROPOSED TOP OF WASTE GRADES DO NOT REFLECT LOCAL GRADING PROXIMATE TO PIPE DOWNCHUTES. PROPOSED TOP OF WASTE GRADES DO NOT REFLECT EXISTENCE OF INFILTRATION CHANNEL AT LANDFILL PERIMETER.

CITY: SYRACUSE DIV/GROUP: ENV/CAD DB: K. DAVIS G. STOWELL L. FORAKER LD: PIC: W. POPHAM PM: W. RANKIN TM: B. STONE LYR: ON=*;OFF=*REF*
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1"=120'

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING. USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Ckd
1	1/30/13	REVISED CALLOUTS AND SECTION REFERENCES	GNG	TJF
2	1/2012	ADDITIONAL CALLOUT	NWF	BMS

Professional Engineer's Name: JOSEPH MOLINA
Professional Engineer's No.: 072644
State: NY | Date Signed: | Project Mgr.: WAR
Designed by: BMS/PTO | Drawn by: LAF | Checked by: BMS

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TOP OF VEGETATIVE COVER GRADES

GENERAL

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Date AUGUST 2009

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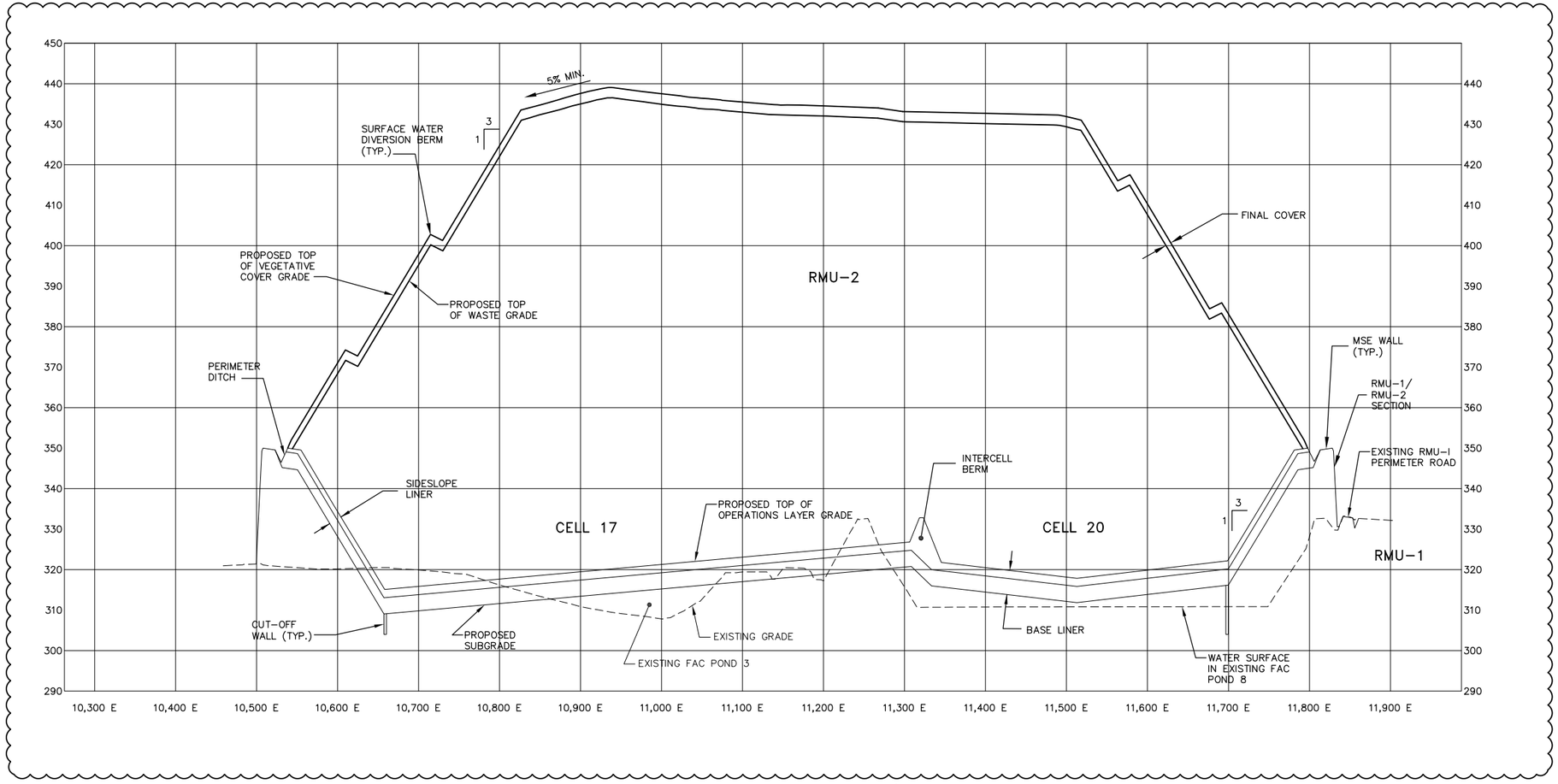
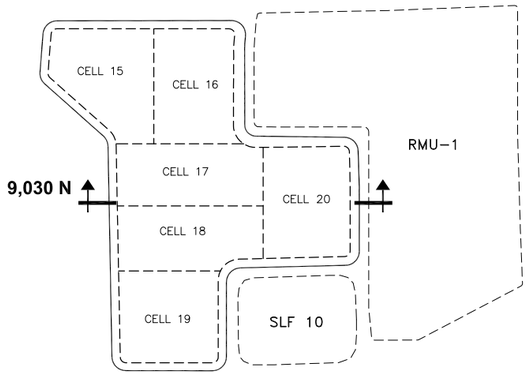
4





CROSS SECTION LOCATION PLAN

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80' 0 80' 160'
1"=80'
HORIZONTAL GRAPHIC SCALE

16' 0 16' 32'
1"=16'
VERTICAL GRAPHIC SCALE

SECTION 1

NOTE:

1. REFER TO DRAWING NO. 2 FOR BASE MAP INFORMATION.

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SCALE(S) AS INDICATED

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING: USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Ckd
1	1/30/13	REVISED CALLOUTS	GNG	TJF

Professional Engineer's Name: JOSEPH MOLINA
Professional Engineer's No.: 072644

State	Date Signed	Project Mgr.
NY		WAR
Designed by	Drawn by	Checked by
BMS/PTO	LAF	BMS

ARCADIS OF NEW YORK, INC.

CWM CHEMICAL SERVICES, LLC • MODEL CITY, NEW YORK
RESIDUALS MANAGEMENT UNIT 2 PART 361 PERMIT APPLICATION

CROSS SECTION 9,030 N

GENERAL

ARCADIS Project No. B0023725.2009.00006
Date AUGUST 2009

ARCADIS of New York, Inc.
6723 Towpath Road
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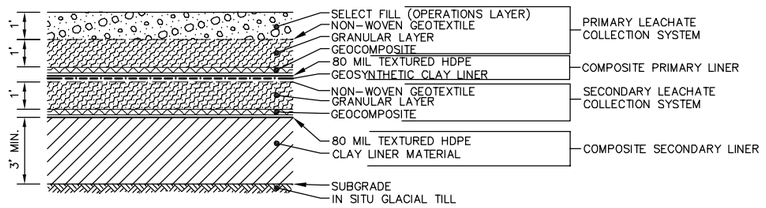
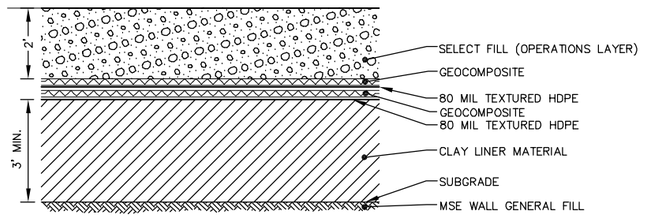
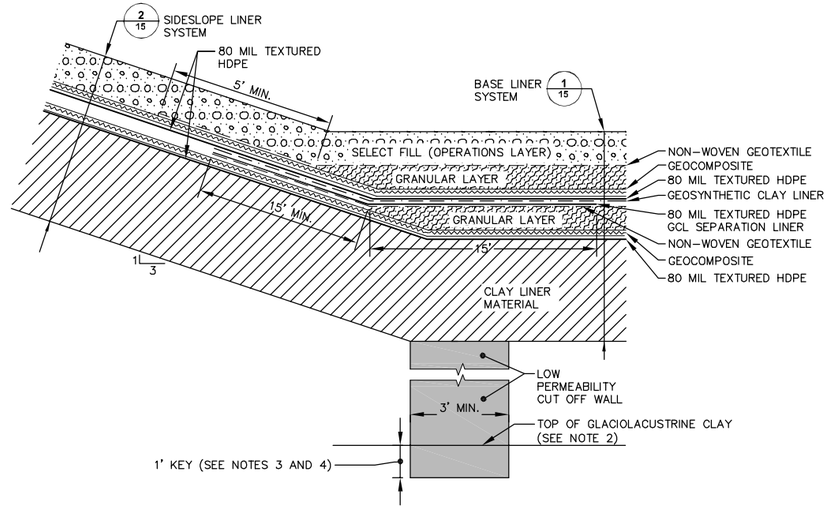
5



BASE LINER SYSTEM (1)



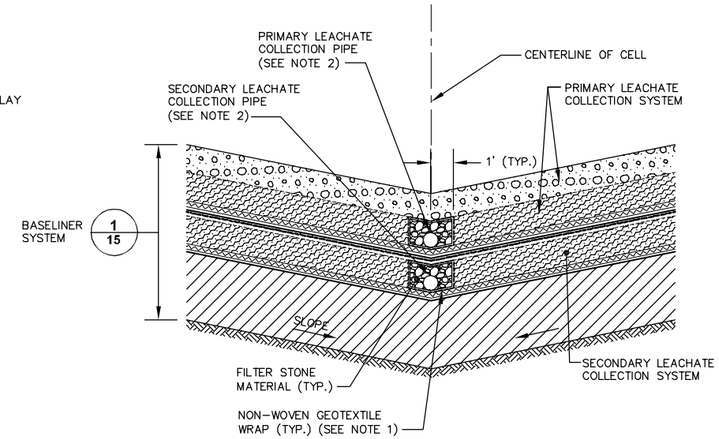
SIDESLOPE LINER SYSTEM (2)



NOTES:

1. LOW PERMEABILITY CUT OFF WALL SHALL BE CONSTRUCTED OF MATERIAL HAVING A MAXIMUM HYDRAULIC CONDUCTIVITY OF $1X10^{-7}$ CM/S.
2. TOP ELEVATION OF GLACIOLACUSTRINE CLAY SHALL BE VERIFIED AND DOCUMENTED DURING CONSTRUCTION.
3. BOTTOM ELEVATION OF LOW PERMEABILITY CUTOFF WALL SHALL EXTEND BELOW TOP ELEVATION OF GLACIOLACUSTRINE CLAY A MINIMUM OF 1 FOOT.
4. REQUIRED WIDTH OF LOW PERMEABILITY CUTOFF WALL AT TIE-IN WITH GLACIOLACUSTRINE CLAY IS 3 FEET.

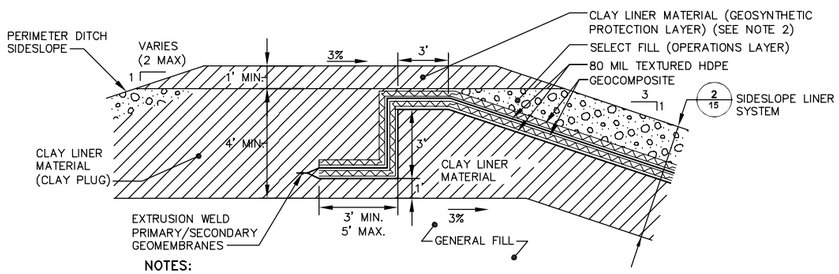
BASELINER/SIDESLOPE LINER TRANSITION (4)



NOTES:

1. SEAM ON GEOTEXTILE WRAP TO BE SEWN.
2. LEACHATE COLLECTION PIPES TO BE 8-INCH-DIA PERFORATED DR-11 HDPE WITH END CAP.

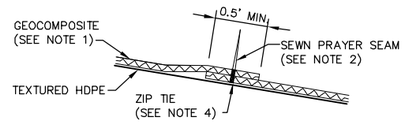
LEACHATE COLLECTION PIPE SECTION (6)



NOTES:

1. SYNTHETIC COMPONENTS OF SIDESLOPE LINER SYSTEM SHALL BE PROPERLY ANCHORED UNTIL FINAL BACKFILLING OF ANCHOR TRENCH.
2. GEOSYNTHETIC PROTECTION LAYER SHALL BE CONSTRUCTED AFTER COMPLETION OF LINER INSTALLATION AND BACKFILLING OF ANCHOR TRENCH. GEOSYNTHETIC PROTECTION LAYER WILL BE REMOVED (AS NECESSARY) DURING CONSTRUCTION OF FINAL COVER SYSTEM.

SIDESLOPE LINER SYSTEM ANCHOR TRENCH (3)



NOTES:

1. ALL GEOCOMPOSITE SHALL SHINGLE DOWNSLOPE AS SHOWN.
2. THE TOP GEOTEXTILE LAYER OF THE GEOCOMPOSITE IS TO BE PEELED BACK SO THAT A PRAYER SEAM MAY BE SEWN ABOVE THE GEOCOMPOSITE OVERLAP.
3. IF GEOTEXTILE IS UNABLE TO BE PEELED BACK WITHOUT CAUSING DAMAGE, A PATCH OF GEOTEXTILE SHALL BE HEAT BONDED TO THE TOP GEOTEXTILE LAYER OF THE GEOCOMPOSITES OVER THE SEAM.
4. ZIP TIES SHALL BE PLACED EVERY 5' ALONG ADJACENT PANELS AND EVERY 6" ALONG BUTT SEAMS AND IN ANCHOR TRENCHES.

TYPICAL GEOCOMPOSITE SEAM (5)

GENERAL NOTES:

1. GEOSYNTHETICS ARE SHOWN AT AN EXAGGERATED SCALE FOR CLARITY.

NOT TO SCALE

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING; USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Ckd

Professional Engineer's Name: JOSEPH MOLINA
Professional Engineer's No.: 072644

State	Date Signed	Project Mgr.
NY		WAR
Designed by: BMS/PTO	Drawn by: LAF	Checked by: BMS

ARCADIS OF NEW YORK, INC.

CWM CHEMICAL SERVICES, LLC • MODEL CITY, NEW YORK
RESIDUALS MANAGEMENT UNIT 2 PART 361 PERMIT APPLICATION

LINER SYSTEM SECTIONS AND DETAILS

GENERAL

ARCADIS Project No. B0023725.2009.00006
Date: OCTOBER 2009

ARCADIS of New York, Inc.
6723 Towpath Road
P.O. Box 66
Syracuse, New York
TEL. 315.446.91220

6

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: K. DAVIS G. STOWELL L. FORAKER LD: PIC: W. POPHAM PN: W. RANKIN TM: B. STONE LYR: ON=*;OFF=*REF*
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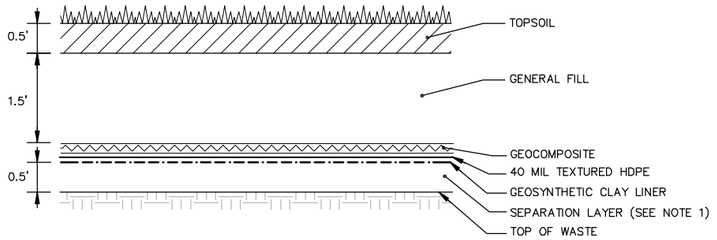
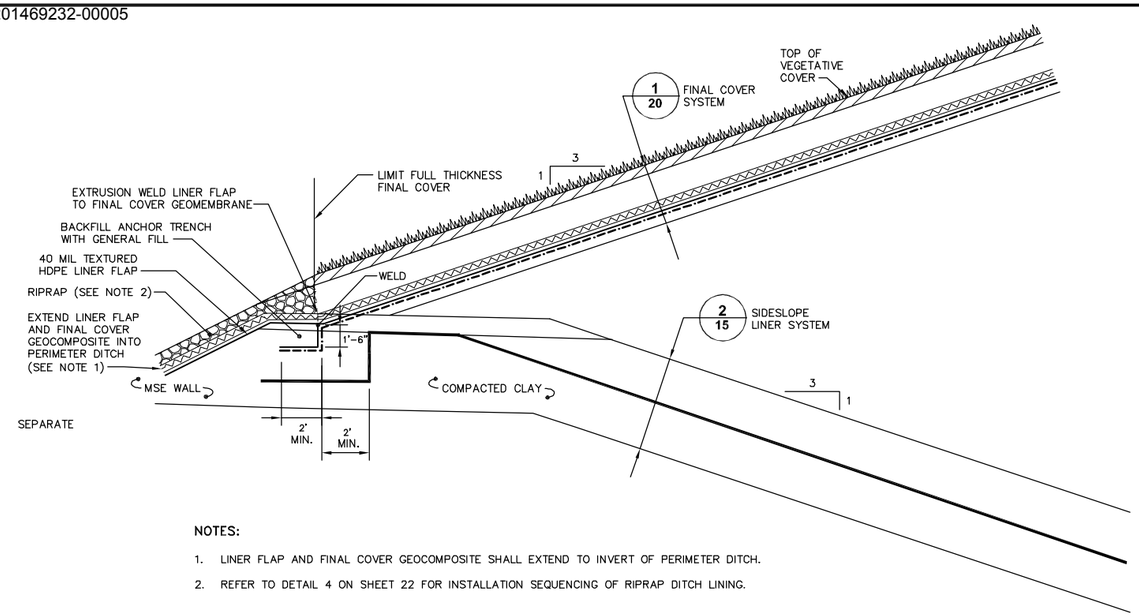


NOTE:

1. SEPARATION LAYER SHALL CONSIST OF GENERAL FILL MATERIAL HAVING A MAXIMUM PARTICLE SIZE OF 2–INCHES.

FINAL COVER SYSTEM 1

NOT TO SCALE

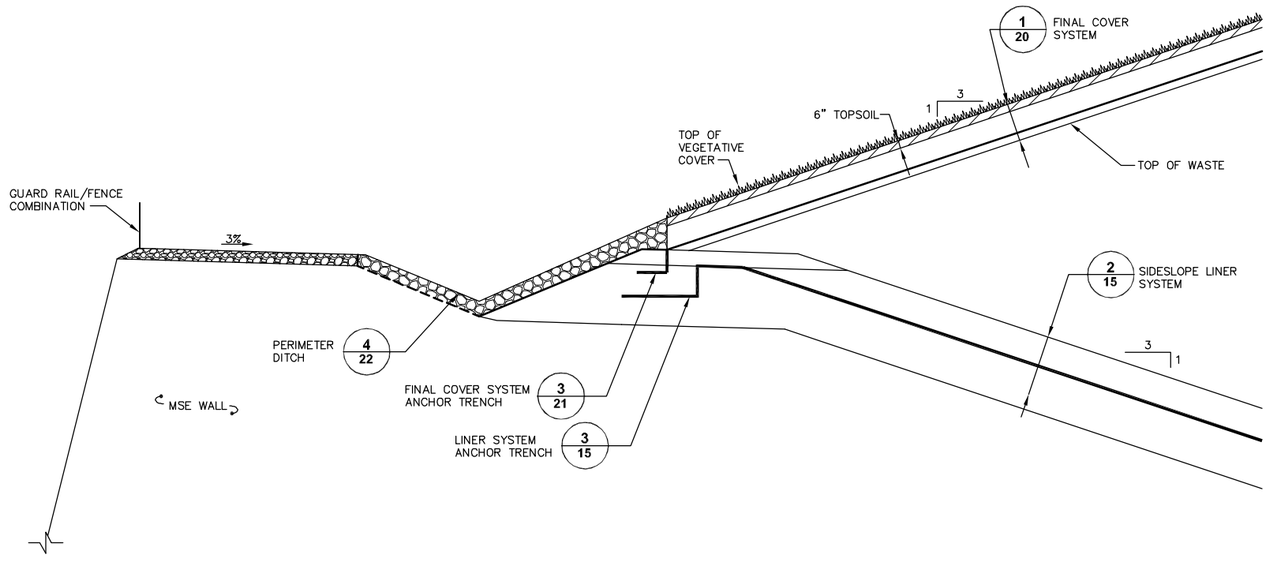


NOTES:

1. LINER FLAP AND FINAL COVER GEOCOMPOSITE SHALL EXTEND TO INVERT OF PERIMETER DITCH.
2. REFER TO DETAIL 4 ON SHEET 22 FOR INSTALLATION SEQUENCING OF RIPRAP DITCH LINING.

FINAL COVER SYSTEM ANCHOR TRENCH 3

NOT TO SCALE



TYPICAL FINAL COVER TERMINATION 2

0 5' 10'
GRAPHIC SCALE

GENERAL NOTE:

1. GEOSYNTHETICS ARE SHOWN AT AN EXAGGERATED SCALE IN CERTAIN DETAILS FOR CLARITY.

CITY:SYRACUSE DIV/GROUP:ENVCAD DB:K.DAVIS G.STOWELL L.FORAKER LD: PIC:W.POPHAM PM:W.RANKIN TM:B.STONE LYR:ON=*OFF=*REF*
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XREFS: PROJECTNAME: ---
IMAGES:
23726X00

SCALE(S) AS INDICATED

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING. USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Ckd

Professional Engineer's Name		
JOSEPH MOLINA		
Professional Engineer's No.		
072644		
State	Date Signed	Project Mgr.
NY		WAR
Designed by	Drawn by	Checked by
BMS/PTO	BKD	BMS

ARCADIS OF NEW YORK, INC.

CWM CHEMICAL SERVICES, LLC • MODEL CITY, NEW YORK
RESIDUALS MANAGEMENT UNIT 2 PART 361 PERMIT APPLICATION

FINAL COVER DETAILS

GENERAL

ARCADIS Project No.
B0023725.2009.00006

Date
AUGUST 2009

ARCADIS of New York, Inc.
6723 Towpath Road
P.O. Box 66
Syracuse, New York
TEL. 315.446.91220

6A

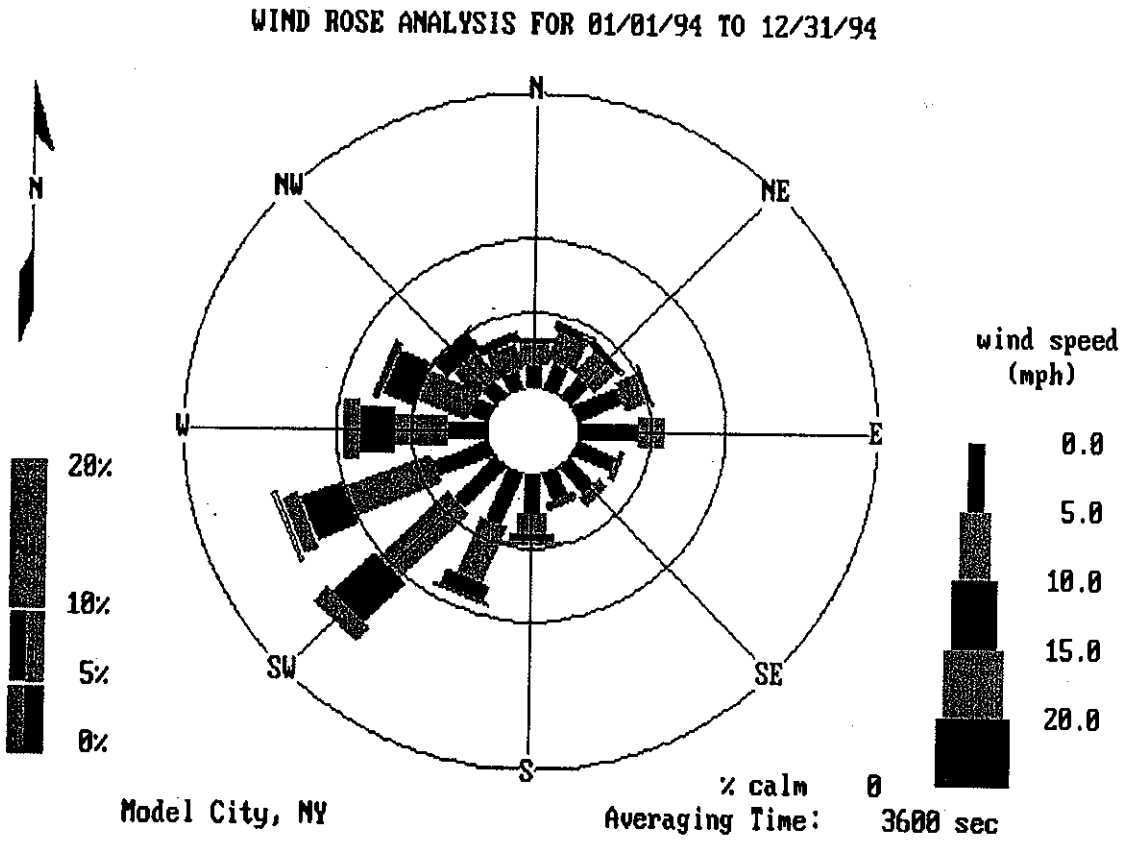
REV	DATE	DESCRIPTION	DR BY	APP BY
DES BY		PROJECT NO. 17365 DATE NOVEMBER 1992		
DRN BY		PROJECT CWM CHEMICAL SERVICES, INC. RESIDUALS MANAGEMENT UNIT - ONE		
CHK BY		DRAWING TITLE MAJOR LAND FEATURES AND POPULATION CENTERS WITHIN 5 MILES OF THE CWM MODEL CITY FACILITY		
ERV BY				
GRV BY				
APP BY				

SECDONOHUE
Environment & Infrastructure

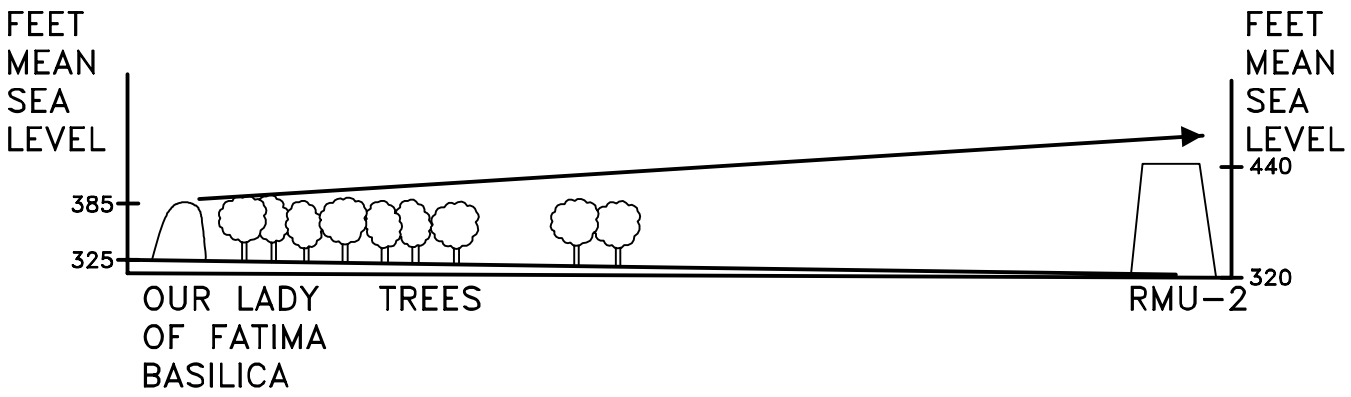
FILE NO.

DRAWING NO. 7

CWM CHEMICAL SERVICES, INC.
ANNUAL 1994



CWM CHEMICAL SERIVCES, LLC MODEL CITY, NEW YORK
6NYCRR PART 361 PERMIT APPLICATION
WIND ROSE ANALYSIS FOR MODEL CITY 01/01/94 TO 12/31/94
ARCADIS — FIGURE 8



VERTICAL EXAGGERATION = 1:200
HORIZONTAL EXAGGERATION = 1:2500

CWM CHEMICAL SERVICES, LLC
MODEL CITY, NEW YORK
6NYCRR PART 361 PERMIT APPLICATION

VIEW FROM OUR LADY OF FATIMA BASILICA TOWARD RMU-2 PROPOSED SITE

ARCADIS

FIGURE
9