WASTE MANAGEMENT
1550 Balmer Road
Model City, NY 14107
716 286 1550
716 286 0211 Fax

July 12, 2017

Mr. David Denk
New York State Department of
Environmental Conservation
Region 9
270 Michigan Avenue
Buffalo, New York 14203-2915

Re: Air State Facility Permit Modification Application – RMU-2
Response to Second Notice if Incomplete Application

Dear Mr. Denk:

Most recently, on May 23, 2017, CWM Chemical Services, LLC., (CWM) submitted a revised Air State Facility Permit Modification Application Updated Emissions Inventory for the addition of Residuals Management Unit No. 2 (RMU-2) to the Model City, New York facility, prepared by Conestoga-Rovers & Associates, Inc. (CRA, now known as GHD). The application was revised in response to a Notice of Incomplete Application (NOIA) issued by the New York State Department of Environmental Conservation (NYSDEC) on December 7, 2016.

On June 2, 2017, an Air Quality Modeling Report was submitted in support of the application and a NYSDEC required Air Permit Application Form, including CWM's certification and an engineering certification by GHD was submitted on June 7, 2017. The NYSDEC issued a Second Notice of Incomplete Application on June 22, 2017, which included a comment on the Air Permit Application Form and eleven comments on the RMU-2 Air Quality Modeling Report.

Please find attached in Enclosure No. 1 CWM's responses to the NYSDEC's comments and a revised Air Permit Application Form in Enclosure No. 2. The RMU-2 Air Quality Modeling Report has also been revised in response to the NYSDEC comments and is attached as Enclosure No. 3. A Compact Diskette (CD) with the all pertinent modeling input and output files is attached as Enclosure No. 4.

Please call Mr. Jonathan Rizzo at (716) 286-0354 or myself at (716) 286-0246 if you have any questions or comments.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Sincerely,
CWM CHEMICAL SERVICES, LLC

Jill A. Banaszak
Technical Manager
Model City Facility

JPR/JAB/jpr
Attachment

cc:
T. Mucha - NYSDEC/Region 9 (e-copy cover letter & Encl. Nos.1-3, only)
M. Passuite - NYSDEC/Region 9 (e-copy cover letter & Encl. Nos.1-3, only)
P. Grasso - NYSDEC/Region 9 (e-copy cover letter & Encl. Nos.1-3, only)
B. Rostami - NYSDEC/Region 9 (e-copy cover letter & Encl. Nos.1-3, only)
A. Carlacci - NYSDEC/Region 9 (e-copy cover letter & Encl. Nos.1-3, only)
J. Kent - NYSDEC/Albany, NY (e-copy cover letter & Encl. Nos.1-3, only)
M. Cruden - NYSDEC/Albany, NY (e-copy cover letter & Encl. Nos.1-3, only)
T. Killeen - NYSDEC/Albany, NY (e-copy cover letter & Encl. Nos.1-3, only)
On-site Monitors - NYSDEC/ Model City, NY (e-copy cover letter & Encl. Nos.1-3, only)
A. Park - USEPA/Region II (e-copy cover letter & Encl. Nos.1-3, only)
N. Azzam - USEPA/Region II (e-copy cover letter & Encl. Nos.1-3, only)
P. Dicky - NCHD/Lockport, NY (e-copy cover letter & Encl. Nos.1-3, only)
M. Mahar - CWM/Model City, NY (e-copy cover letter & Encl. Nos.1-3, only)
J. Rizzo - CWM/Model City, NY (e-copy cover letter & Encl. Nos.1-3, only)
D. Darragh - Cohen & Grigsby/Pittsburgh, PA (e-copy cover letter & Encl. Nos.1-3, only)
EMD Subject File
Q & A

ENCLOSURE NO. 1
CWM's RESPONSE TO NYSDEC JUNE 22, 2017 SECOND NOIA COMMENTS ON AIR STATE FACILITY PERMIT MODIFICATION REQUEST FOR PROPOSED RMU-2

July 12, 2017

CWM RESPONSE TO NYSDEC
JUNE 22, 2017 NOTICE OF INCOMPLETE APPLICATION
AIR STATE FACILITY PERMIT MODIFICATION
REQUEST
RESIDUALS MANAGEMENT UNIT 2
CWM CHEMICAL SERVICES, LLC
MODEL CITY, NEW YORK

The following are CWM Chemical Services, LLC., (CWM's) responses to New York State Department of Environment Conservation (NYSDEC) June 22, 2016 Notice of Incomplete Application (NOIA).

The NYSDEC NOIA comments were based on their review of CWM's Application submittals dated May 23, 2017, June 2, 2017, and June 7, 2017 associated with proposed Residuals Management Unit 2 (RMU-2) at the CWM facility in Model City, New York. The NYSDEC comments are repeated below in *italics* followed by CWM's response.

NYSDEC Comment Page 1, Paragraph 2 of June 22, 2017 NOIA

> *Specifically, the Application submitted on June 7, 2017 lists 40 CFR 63, Subpart DD (National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations) as an applicable federal requirement to the proposed RMU-2 landfill. That federal regulation, however, only pertains to Title V facilities and CWM is requesting an Air State Facility Permit. Please clarify this item and submit a revised application with original signature.*

CWM Response NYSDEC Comment Page 1, Paragraph 2

Section III, Page 2, of the June 7, 2017 Air State Facility Permit Application Form has been revised in response to the NYSDEC Comment and the reference to Subpart DD removed.

NYSDEC Comment No. 1

> *1. Modeling inputs in table 1A for non-high toxicity air contaminant (HTAC) compounds from the two baghouses that exhaust from the stabilization facility list emissions at nine pounds per hour for each of the two baghouses, for a total emission rate of 18 pounds per hour from the stabilization facility. The Application, as well as Section 3.1 of the Modeling Report, state that CWM would limit the short-term emission rate from stabilization to 10 pounds per hour and acknowledged that going above that emission rate would subject the process to air controls pursuant to Part 212-2.3 of Title 6 of the New York Codes, Rules and Regulations (6 NYCRR). Please clarify this item and either re-run the model with the correct emission rate or advise if CWM anticipates the need for the Air State Facility Permit to incorporate additional air controls.*

CWM Response to Comment No. 1

The modeling for non-HTACs was initially run with emission rates of 5 pounds per hour (lb/hr) for each baghouse for a total of 10 lb/hr for the stabilization facility (see modeling files that were previously

submitted). However NYSDEC Comment 3 is requesting that the emissions should be proportioned according to the respective exhaust flow rates for each baghouse. Therefore, Table 1A of the Air Quality Modeling Report has been revised to reflect emission rates of 6.43 lb/hr for baghouse #1 (reflecting an exhaust flow of 90,000 ACFM) and 3.57 lb hr for baghouse #2 (reflecting an exhaust flow of 50,000 ACFM). As the total emission rate from the stabilization facility does not exceed 10 lb/hr for any non-HTAC compound, no controls are required.

NYSDEC Comment No. 2

> *2. There are. discrepancies between certain emissions listed in the Modeling Report and those provided in the May 23, 2017 Emissions Inventory Report. For instance, the Emission Inventory Report contains PCB concentrations that should have been used for determining PCB_1 (Aroclor 1242 and less), and PCB_2 (Aroclor greater than 1242) emission rates for each of the closed landfills. The values in Table 1A do not reflect those concentrations. Please explain how PCB_1 and PCB_2 values were calculated for all sources.*

CWM Response to Comment No. 2

Table 1A and 1B of the Air Quality Modeling Report have been revised using individual Aroclors, rather than PCB_1 and PCB_2. For each of the closed landfills, the individual Aroclor concentrations was used. For sources with total PCBs, but without Aroclor data, the total PCB emissions are broken down into the three dominant Aroclors at the facility: Aroclor 1242, Aroclor 1254 and Aroclor 1260. Based on the average of the Aroclor types for the existing sources presented in the May 23, 2017 Emission Inventories (SLF 1-6, SLF-7, SLF-10, SLF-11, SLF-12 and RMU-1), total PCB emissions are appropriated as follows:

	TOTAL	Aroclor 1242	Aroclor 1254	Aroclor 1260
(% of TOTAL) *	100.00	35.85	33.64	30.51

This breakdown was applied for the stabilization facility and the proposed RMU-2 Landfill.

NYSDEC Comment No. 3

> *3. For the modeling files entitled "10LbPerHr," the emission rates of Xylene, Toluene, Methylene Chloride, Methyl Ethyl Ketone from "Stabilization Baghouse #1" and "Stabilization Baghouse #2" are 0.63 grams/second but the emission rates on Table 1A are 1.13 grams/second. In addition the air flow rates between the two baghouses are not identical. The emissions from the stabilization process should be allocated to each stabilization baghouse based on the proportion of air flow. Please update the modeling inputs and modeling, or explain why the method used is appropriate.*

CWM Response to Comment No. 3

See response to comment 1.

NYSDEC Comment No. 4

4. Please explain why the facility-wide 10 ton per year cap of hazardous air pollutants, including, Xylene, Toluene and Methylene Chloride, which is emitted from multiple sources, is modeled as only emitted from the stabilization baghouses. The gram per second emission rate for the 10 ton per year caps was not included in the modeling report. As these are inputs to the model, incorrect numbers will impact the results of the model.

CWM Response to Comment No. 4

The facility-wide modeling included emissions from the landfills, fac ponds and stabilization. The stabilization facility is the only emission source that contains a vent or appurtenant exhaust system capable of causing emissions of any air contaminant to the outdoor atmosphere from a process operation. The non-HTACs from the stabilization facility were modeled using emission rates of 10 lb/hr, as this is the maximum short-term emission rate that would not require consideration of air controls. The landfill areas and facultative ponds are storage systems that do not contain any vents or exhaust systems. In addition, the landfill areas and facultative ponds also have relatively insignificant emission rates that do not nearly approach the value of 10 lb/hr. Therefore, non-HTACs from the stabilization facility were modeled using emission rates of 10 lb/hr (as discussed in our response to comment #1) to compare with the short-term guidance concentration (SGC) published in DAR-1. For comparison to the annual guidance concentration (AGC), an emission rate of 43.6 tons per year was assumed for methyl ethyl ketone (since it is not a hazardous air pollutant (HAP), while a value of 10 TPY was assumed for toluene, xylene and methylene chloride, since these three pollutants are HAPs. Emissions from the landfill areas and facultative ponds were referenced from the previous emission inventories submitted on May 23, 2017.

NYSDEC Comment No. 5

5. Xylene emissions for cover diffusion and barometric pumping was included in the RMU-1 inventory but not as an input to the model. In addition, emissions from drums leaking/spilling inside a building were not included in the model. Please clarify this item and re-run the model accordingly.

CWM Response to Comment No. 5

The model has been re-run with xylene emissions included for the RMU-1 landfill area. The modeling of leak/spills from drums is difficult to model since they are not planned events, can occur at various locations across the facility, and generally would occur within a building. Tanks and containers are managed in accordance with 373-2.29, to minimize potential for air emissions. Work practices and best management procedures are employed to prevent spills. Therefore, a condition could be added to the permit that requires the facility to employ best practices for the containment/ prevention of leaking containers/ drums at the facility.

NYSDEC Comment No. 6

6. There is a mathematical error regarding the PCB, PCB_1 and PCB_2 totals in the RMU-2 Closed Emissions portion of Table 1B. It appears that Fac Ponds 3 and 5 were not included in the summation. Please clarify this item. As these are inputs to the model, incorrect numbers will impact the results of the model.

CWM Response to Comment No. 6

The facultative ponds and the RMU-2 Landfill are separate area sources. Therefore, emissions are calculated separately for these sources on different lines in Table 1B (and are not summed together).

NYSDEC Comment No. 7

> *7. There are inconsistencies in the surface area of some of the landfills entered in the model as compared to Figure 1 and Table 28. Please clarify this item.*

CWM Response to Comment No. 7

The surface areas shown in Figure 1 and Table 2B are based on an AutoCAD drawing created for the facility sources. These values are slightly different from the surface areas that were reported by the modeling output files, since this analysis was conducted by our modeling group. For consistency, Figure 1 and Table 2B of the Air Quality Modeling Report have been revised to reflect the surface areas used in the AERMOD modeling analysis.

NYSDEC Comment No. 8

> *8. Please provide the basis to support the position that all emissions from Fac Pond 3 will cease by the time RMU-2 begins operations.*

CWM Response to Comment No. 8

The May 23, 2017 emissions estimates for RMU-2 are based on the full build out of the landfill. That being six (6) cells, 19 acres of operational area (active area and interim cover area), and 19.5 acres of waste area that has received final cover. The June 2, 2017 Air Quality Modeling was performed utilizing the calculations for the full build out of RMU-2. Facultative (Fac) Pond 3 will only operate during the first phase of RMU-2 development/operation. The first phase of RMU-2 development will be the construction/operation of Cell 20, which will have an operational area of 6.32 acres. During the second phase of RMU-2 development (Cell 18), Fac Pond 3 will be closed and Fac Pond 5 will be constructed.

Fac Ponds 3 and 5 will not be used to store effluent from the aqueous waste treatment facility at the same time. The treated effluent in Fac Pond 3 will be discharged or transferred and the pond taken out of service for closure prior to starting the storage of treated effluent in Fac Pond 5. In addition, CWM is willing to accept a permit condition that prohibits the facility from discharging treated effluent to Fac Pond 3 and Fac Pond 5 simultaneously.

NYSDEC Comment No. 9

> *9. The Modeling Report does not fully address the potential emissions from the storm water basin used to collect RMU-2 contact stormwater runoff prior to treatment. The model needs to be revised accordingly.*

CWM Response to Comment No. 9

Emissions from the RMU-2 Landfill have already been calculated for diffusion through the cover, evaporation from the leachate standpipes and emissions from the active working face and are assumed to be occurring continuously throughout the year. Stormwater runoff passing over the surface of waste with cover applied, has minimal contact time allowing minimal transfer of constituents. The emissions from these constituents has already been accounted for in the cover diffusion calculation. In addition, collected stormwater above 1 foot depth must be pumped into the leachate collection system and processed at the Aqueous Water Treatment Facility (AWTF).

NYSDEC Comment No. 10

> *10. CWM modeled the short term guidance concentration on an emission rate of eight hours per day for open emissions plus 16 hours per day for closed emissions, rather than the maximum hourly emission rate 24/7. Please remodel the short term concentration.*

CWM Response to Comment No. 10

As the facility is accepting a permit condition that will limit the amount of hours that RMU-2 Landfill is active each day (8 hours per day active Monday through Saturday, 16 hours per day with daily cover Monday through Saturday, closed 24 hours on Sunday), the model was previously run according to these conditions. In order to run the model through all possible daily meteorological conditions for comparison with the short-term guidance concentration (SGC), the model has been re-run assuming that the landfill is active seven days per week rather than six days per week (for compounds that have a published SGC value).

NYSDEC Comment No. 11

> *11. The RMU-2PCB_1 modeling input file used a daily cover factor of 0.01368 at 10 a.m. from Monday through Friday. This factor needs to be corrected to an open face factor which is 1.*

CWM Response to Comment No. 11

The modeling file has been corrected.

ENCLOSURE NO. 2
REVISED AIR PERMIT APPLICATION FORM

July 12, 2017

New York State Department of Environmental Conservation
Air Permit Application

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

DEC ID	Application ID	Application Type
9-2934-00022	- - /	× State Facility ☐ Title V

Section I - Certification

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information required to complete this application, I believe the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Responsible Official Michael Mahar	Title Senior District Manager
Signature Michael D. Mahar	Date 7/12/17

Professional Engineer Certification

I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments as they pertain to the practice of engineering I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Professional Engineer Richard Snyder	NYS License No. 066242-1
Signature Richard V. Snyder	Date 7-12-17

Section II - Identification Information

Type of Permit Action Requested

New | Renewal | Significant Modification | Administrative Amendment | × Minor Modification

Application for the construction of a new facility | × Application involves the construction of new emission unit(s)

Facility Information

Name CWM Model City Facility

Location Address 1550 Balmer Road

× City / Town / Village Model City | Zip 14107

Owner/Firm Information

Name CWM Chemical Services, LLC | Business Taxpayer ID 364203347

Street Address 1550 Balmer Road

City Model City | State/Province NY | Country USA | Zip 14107

Owner Classification: ☐ Federal ☐ State ☐ Municipal × Corporation/Partnership ☐ Individual

Owner/Firm Contact Information

Name Banaszak, Jill | Phone (716) 286 - 0246

E-mail Address Jbanasz@wm.com | Fax (716) 286 - 0224

Affiliation CWM Chemical Services, LLC | Title Technical Manager

Street Address 1550 Balmer Road

City Model City | State/Province NY | Country USA | Zip 14107

Facility Contact Information

Name Banaszak, Jill | Phone (716) 286 - 0246

E-mail Address Jbanasz@wm.com | Fax (716) 286 - 0224

Affiliation CWM Chemical Services, LLC | Title Technical Manager

Street Address 1550 Balmer Road

City Model City | State/Province NY | Country USA | Zip 14107

New York State Department of Environmental Conservation
Air Permit Application

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

DEC ID
9 - 2 9 3 4 - 0 0 0 2 2

Project Description ☐ Continuation Sheet(s)

CWM Chemical Services, LLC is applying for an Air State Facility Permit Modification to incorporate the RMU-2 Area. The project is considered a minor modification.

Section III - Facility Information

Facility Classification

Hospital Residential Educational/Institutional Commercial * Industrial Utility

Affected States (Title V Applications Only)

Vermont Massachusetts Rhode Island Pennsylvania Tribal Land: _____
New Hampshire Connecticut New Jersey Ohio Tribal Land: _____

SIC Code(s)			NAICS Code(s)			
4953			562211			

Facility Description ☐ Continuation Sheet(s)

The CWM facility is an existing commercial hazardous waste treatment, storage, and disposal facility (TSDF) in Model City, Niagara County, New York. This TSDF began operation in 1972 as ChemTrol Pollution Services, Inc. Due to corporate acquisitions and name changes, CWM, a subsidiary of Waste Management, Inc., is the present owner and operator of the facility.

Compliance Statements (Title V Applications Only)

I certify that as of the date of this application the facility is in compliance with all applicable requirements. Yes | No

If one or more emission units at the facility are not in compliance with all applicable requirements at the time of signing this application (the 'NO' box must be checked), the noncomplying units must be identified in the "Compliance Plan" block on page 8 of this form along with the compliance plan information required. For all emission units at the facility that are operating in compliance with all applicable requirements, complete the following:

☐ This facility will continue to be operated and maintained in such a manner as to assure compliance for the duration of the permit, except those emission units referenced in the compliance plan portion of this application.

For all emission units subject to any applicable requirements that will become effective during the term of the permit, this facility will meet such requirements on a timely basis.

Compliance certification reports will be submitted at least once per year. Each report will certify compliance status with respect to each applicable requirement, and the method used to determine the status.

Facility Applicable Federal Requirements ☐ Continuation Sheet(s)

Title	Type	Part	Subpart	Section	Subdivision	Paragraph	Subparagraph	Clause	Subclause
40	CFR	63	ZZZZ						

Facility State Only Requirements ☐ Continuation Sheet(s)

Title	Type	Part	Subpart	Section	Subdivision	Paragraph	Subparagraph	Clause	Subclause
6	NYCRR	200							
6	NYCRR	201							
6	NYCRR	211							
6	NYCRR	212							

New York State Department of Environmental Conservation
Air Permit Application

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

DEC ID
9-2934-0002

Facility Compliance Certification

× Continuation Sheet(s)

Rule Citation

Title	Type	Part	Subpart	Section	Subdivision	Paragraph	Subparagraph	Clause	Subclause
6	NYCRR	201	7						

× Applicable Federal Requirement / State Only Requirement	Capping	CAS Number	Contaminant Name
		NY998-00-0	Volatile Organic Compounds

Monitoring Information

Work Practice Involving Specific Operations | Ambient Air Monitoring | × Record Keeping/Maintenance Procedures

Compliance Activity Description

Total potential VOC emissions from the facility are less than 50 tons per year. The facility will calculate total VOC emissions for VOCs reported to be present in waste management operations and other site operations on a 12-month rolling basis in order to demonstrate that emissions of VOCs are less than 50 tons per year. Records will be kept at the Site and provided upon request.

Work Practice Type Code	Process Material Code	Process Material Description	Reference Test Method

Monitored Parameter Code	Monitored Parameter Description	Manufacturer's Name/Model Number

Limit Upper	Limit Lower	Limit Units Code	Limit Units Description
50		38	Tons per year

Averaging Method Code	Averaging Method Description	Monitoring Frequency Code	Monitoring Frequency Description	Reporting Requirements Code	Reporting Requirements Description
17	12-Month Rolling Total	05	Monthly	10	Upon request

Facility Emissions Summary

Continuation Sheet(s)

CAS Number	Contaminant Name	Potential to Emit (tons/yr)	Actual Emissions (pounds/yr)
0NY075 - 00 - 5	PM-10	12.0	
0NY750 - 02 - 5	PM-2.5	6.8	
007446 - 09 - 5	Sulfur Dioxide	0.01	
0NY210 - 00 - 0	Oxides of Nitrogen	4.6	
000630 - 08 - 0	Carbon Monoxide	2.6	
007439 - 92 - 1	Lead (elemental)	0.002	
0NY998 - 00 - 0	Total Volatile Organic Compounds	< 50	
0NY100 - 00 - 0	Total Hazardous Air Pollutants	< 25	
0NY750 - 00 - 0	Carbon Dioxide Equivalents	4,472	
	All Individual Speciated HAPs	< 10	

New York State Department of Environmental Conservation
Air Permit Application Form

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

DEC ID
9 - 2 9 3 4 - 0 0 0 2 2

Section III - Facility Information

Facility Compliance Certification (continuation)

Rule Citation

Title	Type	Part	Subpart	Section	Subdivision	Paragraph	Subparagraph	Clause	Subclause
6	NYCRR	201	7						

☒ Applicable Federal Requirement ☐ State Only Requirement	☐ Capping	CAS No.	Contaminant Name
		NY100-00-0	Total HAPs

Monitoring Information

☐ Continuous Emission Monitoring	☐ Monitoring of Process or Control Device Parameters as a Surrogate
☐ Intermittent Emission Testing	☐ Work Practice Involving Specific Operations
☐ Ambient Air Monitoring	☒ Record Keeping/Maintenance Procedures

Description

Total potential HAP emissions from the facility are less than 25 tons per year. The facility will calculate total HAP emissions for HAPs reported to be present in waste management operations and other site operations on a 12-month rolling basis in order to demonstrate that emissions of HAPs are less than 25 tons per year. Records will be kept at the Site and provided upon request.

Work Practice Type	Process Material Code	Process Material Description	Reference Test Method

Parameter Code	Parameter Description	Manufacturer Name/Model No.

Limit Upper	Limit Lower	Limit Units Code	Limit Units Description
25		38	Tons per year

Averaging Method Code	Averaging Method Description	Monitoring Frequency Code	Monitoring Frequency Description	Reporting Requirements Code	Reporting Requirements Description
17	12-Month Rolling Total	05	Monthly	10	Upon Request

New York State Department of Environmental Conservation
Air Permit Application Form

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

DEC ID
9 - 2 9 3 4 - 0 0 0 2 2

Section III - Facility Information

Facility Compliance Certification (continuation)

Rule Citation

Title	Type	Part	Subpart	Section	Subdivision	Paragraph	Subparagraph	Clause	Subclause
6	NYCRR	201	7						

☒ Applicable Federal Requirement ☐ State Only Requirement	☐ Capping	CAS No.	Contaminant Name
		Various	Individual Speciated HAPs

Monitoring Information

☐ Continuous Emission Monitoring
☐ Intermittent Emission Testing
☐ Ambient Air Monitoring
☐ Monitoring of Process or Control Device Parameters as a Surrogate
☐ Work Practice Involving Specific Operations
☒ Record Keeping/Maintenance Procedures

Description

Total emissions of all individual speciated HAPs from the facility is less than 10 tons per year. The facility will calculate individual speciated HAP emissions for HAPS reported to be present in waste management and other site operations on a 12-month rolling basis in order to demonstrate that total emissions of all individual speciated HAPs is less than 10 tons per year, therefore, no individual HAP is greater than 10 tons per year. Records will be kept at the Site and provided upon request.

Work Practice Type	Process Material Code	Process Material Description	Reference Test Method

Parameter Code	Parameter Description	Manufacturer Name/Model No.

Limit Upper	Limit Lower	Limit Units Code	Limit Units Description
10		38	Tons per year

Averaging Method Code	Averaging Method Description	Monitoring Frequency Code	Monitoring Frequency Description	Reporting Requirements Code	Reporting Requirements Description
17	12-Month Rolling Total	05	Monthly	10	Upon Request

New York State Department of Environmental Conservation
Air Permit Application Form

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

DEC ID
9 - 2 9 3 4 - 0 0 0 2 2

Section III - Facility Information

Facility Compliance Certification (continuation)

Rule Citation

Title	Type	Part	Subpart	Section	Subdivision	Paragraph	Subparagraph	Clause	Subclause
6	NYCRR	212	2.2						

☐ Applicable Federal Requirement ☒ State Only Requirement	☐ Capping	CAS No.	Contaminant Name
		Various	HTAC Compounds (excluding PCB & POM)

Monitoring Information

☐ Continuous Emission Monitoring	☐ Monitoring of Process or Control Device Parameters as a Surrogate
☐ Intermittent Emission Testing	☐ Work Practice Involving Specific Operations
☐ Ambient Air Monitoring	☒ Record Keeping/Maintenance Procedures

Description

Emissions of HTACs reported to be present in waste management operations and other site operations (excluding PCB and POM) from the facility are less than the values specified in Table 2 of 6 NYCRR Part 212-2.2. The facility will calculate HTAC emissions for HTACs reported to be present in waste management operations and other site operations (excluding PCB and POM) on a 12-month rolling basis in order to demonstrate that emissions are under the values specified in Table 2 of 6 NYCRR Part 212-2.2. Records will be kept at the Site and provided upon request.

Work Practice Type	Process Material Code	Process Material Description	Reference Test Method

Parameter Code	Parameter Description	Manufacturer Name/Model No.

Limit Upper	Limit Lower	Limit Units Code	Limit Units Description
6 NYCRR 212-2.2, Table 2		1	lb per year

Averaging Method Code	Averaging Method Description	Monitoring Frequency Code	Monitoring Frequency Description	Reporting Requirements Code	Reporting Requirements Description
17	12-Month Rolling Total	05	Monthly	10	Upon Request

New York State Department of Environmental Conservation
Air Permit Application Form

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

DEC ID										
9	-	2	9	3	4	-	0	0	0	2	2

Section III - Facility Information

Facility Compliance Certification (continuation)

Rule Citation

Title	Type	Part	Subpart	Section	Subdivision	Paragraph	Subparagraph	Clause	Subclause
6	NYCRR	212	2.2						

☐ Applicable Federal Requirement	☐ Capping	CAS No.	Contaminant Name
☒ State Only Requirement		1336-36-3	PCB

Monitoring Information

☐ Continuous Emission Monitoring	☐ Monitoring of Process or Control Device Parameters as a Surrogate
☐ Intermittent Emission Testing	☒ Work Practice Involving Specific Operations
☐ Ambient Air Monitoring	☒ Record Keeping/Maintenance Procedures

Description

Emissions of PCBs from the facility are greater than the value specified in Table 2 of 6 NYCRR Part 212-2.2. CWM has identified the following measures as TBACT:
◦Operation of stabilization facility baghouses in accordance with Operations & Maintenance Manual.
◦Daily inspection (see Attachment F of Part 373 Sitewide RCRA permit) for visual verification that no dust is being emitted from the stabilization facility baghouse stacks or building doors.
◦Implementation of a 140,000 TPY permit cap limit for the maximum amount of waste material that can be stabilized at the facility in a given year. CWM will track total waste processed and estimated emissions from the stabilization facility .
◦Maintain the hours of operation at eight hours per day from Monday through Saturday (the landfill and stabilization facility will not operate on Sundays).
◦The facility will only stabilize waste materials that are less than 500 ppm VOCs according to 6 NYCRR Part 373-2.29.
◦Maintain the daily working face region to a maximum of 1.7 acres.
◦Application of Daily Cover of the landfill in accordance with the Part 373 Permit over the working face region daily and continuously maintained over the active/non-working face waste region (i.e. Interim Area).
◦Installation a synthetic liner as part of the final cover system in accordance with the Part 373 Permit after areas reach final waste grades.
◦Implementation of a facility perimeter monitoring program for PCBs (when RMU-2 is operational).
◦Stack testing demonstration requirement for the stabilization facility within the permit (when RMU-2 is operational).
A modeling analysis for PCB confirmed that the maximum ground-level concentration will not exceed the annual guidance concentration (AGC) published under DAR-1. The facility will calculate PCB emissions (for PCBs reported to be present in waste management and other site operations) on a 12-month rolling basis in order to demonstrate that emissions are less than 28.9 pounds per year. Records will be kept at the Site and provided upon request.

Work Practice	Process Material		Reference Test Method
Type	Code	Description	

Parameter		Manufacturer Name/Model No.
Code	Description	

Limit		Limit Units	
Upper	Lower	Code	Description
28.9		1	lb per year

Averaging Method		Monitoring Frequency		Reporting Requirements	
Code	Description	Code	Description	Code	Description
17	12-Month Rolling Total	05	Monthly	10	Upon Request

New York State Department of Environmental Conservation
Air Permit Application Form

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

DEC ID										
9	-	2	9	3	4	-	0	0	0	2	2

Section III - Facility Information

Facility Compliance Certification (continuation)

Rule Citation

Title	Type	Part	Subpart	Section	Subdivision	Paragraph	Subparagraph	Clause	Subclause
6	NYCRR	212	2.2						

☐ Applicable Federal Requirement	☐ Capping	CAS No.	Contaminant Name
☒ State Only Requirement		50-32-8	POM

Monitoring Information

☐ Continuous Emission Monitoring	☐ Monitoring of Process or Control Device Parameters as a Surrogate
☐ Intermittent Emission Testing	☒ Work Practice Involving Specific Operations
☐ Ambient Air Monitoring	☒ Record Keeping/Maintenance Procedures

Description

Emissions of POM from the facility are greater than the value specified in Table 2 of 6 NYCRR Part 212-2.2. CWM has identified the following measures as TBACT:
◦Operation of stabilization facility baghouses in accordance with Operations & Maintenance Manual
◦Daily inspection (see Attachment F of Part 373 Sitewide RCRA permit) for visual verification that no dust is being emitted from the stabilization facility baghouse stacks or building doors.
◦Implementation of a 140,000 TPY permit cap limit for the maximum amount of waste material that can be stabilized at the facility in a given year. CWM will track total waste processed and estimated emissions from the stabilization facility.
◦Maintain the hours of operation at eight hours per day from Monday through Saturday (the landfill and stabilization facility will not operate on Sundays).
◦The facility will only stabilize waste materials that are less than 500 ppm VOCs according to 6 NYCRR Part 373-2.29.
◦Maintain the daily working face region to a maximum of 1.7 acres.
◦Application of Daily Cover of the landfill in accordance with the Part 373 Permit over the working face region daily and continuously maintained over the active/non-working face waste region (i.e. Interim Area).
◦Installation a synthetic liner as part of the final cover system in accordance with the Part 373 Permit after areas reach final waste grades.
◦Implementation of a facility perimeter monitoring program for PCBs (when RMU-2 is operational).
◦Stack testing demonstration requirement for the stabilization facility within the permit (when RMU-2 is operational).
A modeling analysis for POM confirmed that the maximum ground-level concentration will not exceed the annual guidance concentration (AGC) published under DAR-1. The facility will calculate POM emissions (for POM reported to be present in waste management and other site operations) on a 12-month rolling basis in order to demonstrate that emissions are less than 146.4 pounds per year. Records will be kept at the Site and provided upon request.

Work Practice Type	Process Material Code	Process Material Description	Reference Test Method

Parameter Code	Parameter Description	Manufacturer Name/Model No.

Limit Upper	Limit Lower	Limit Units Code	Limit Units Description
146.4		1	lb per year

Averaging Method Code	Averaging Method Description	Monitoring Frequency Code	Monitoring Frequency Description	Reporting Requirements Code	Reporting Requirements Description
17	12-Month Rolling Total	05	Monthly	10	Upon Request

DEC ID
9 - 2 9 3 4 - 0 0 0 2 2

Section IV - Emission Unit Information

Emission Unit Description	☐ Continuation Sheet(s)
Emission Unit	2 - L A N D F

Emission Unit 2-LANDF consists of landfill area RMU-2. This modification includes construction and operation of the RMU-2 Landfill. Emissions occur from paved/ unpaved roads, waste unloading and compacting, landfill cell construction and capping, cover diffusion, barometric pumping, and emissions from the active working face.

Building Information ☐ Continuation Sheet(s)

Building ID	Building Name	Length (ft)	Width (ft)	Orientation

Emission Unit	Emission Unit Emissions Summary	☐ Continuation Sheet(s)
-		

CAS Number	Contaminant Name			
ERP (lbs/yr)	Potential to Emit		Actual Emissions	
	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)
CAS Number	Contaminant Name			
ERP (lbs/yr)	Potential to Emit		Actual Emissions	
	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)
CAS Number	Contaminant Name			
ERP (lbs/yr)	Potential to Emit		Actual Emissions	
	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)
CAS Number	Contaminant Name			
ERP (lbs/yr)	Potential to Emit		Actual Emissions	
	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)

New York State Department of Environmental Conservation
Air Permit Application

DEC ID
9-2934-00022

Emission Point Information						☐ Continuation Sheet(s)
Emission Point						
Ground Elevation (ft)	Height (ft)	Height Above Structure (ft)	Inside Diameter (in)	Exit Temp. (°F)	Cross Section Length (in)	Cross Section Width (in)
Exit Velocity (FPS)	Exit Flow (ACFM)	NYTM (E) (KM)	NYTM (N) (KM)	Building	Distance to Property Line (ft)	Date of Removal
Emission Point						
Ground Elevation (ft)	Height (ft)	Height Above Structure (ft)	Inside Diameter (in)	Exit Temp. (°F)	Cross Section Length (in)	Cross Section Width (in)
Exit Velocity (FPS)	Exit Flow (ACFM)	NYTM (E) (KM)	NYTM (N) (KM)	Building	Distance to Property Line (ft)	Date of Removal
Emission Point						
Ground Elevation (ft)	Height (ft)	Height Above Structure (ft)	Inside Diameter (in)	Exit Temp. (°F)	Cross Section Length (in)	Cross Section Width (in)
Exit Velocity (FPS)	Exit Flow (ACFM)	NYTM (E) (KM)	NYTM (N) (KM)	Building	Distance to Property Line (ft)	Date of Removal

Emission Source/Control Information							☐ Continuation Sheet(s)
Emission Source ID	Type	Date of Construction	Date of Operation	Date of Removal	Control Type Code	Control Type Description	Manufacturer's Name/Model Number
RMU02	I	TBD	TBD				RMU-2 Landfill
Design Capacity	Design Capacity Units Code	Design Capacity Units Description		Waste Feed Code	Waste Feed Description	Waste Type Code	Waste Type Description
4,030,700	93	Cubic Yards					
Emission Source ID	Type	Date of Construction	Date of Operation	Date of Removal	Control Type Code	Control Type Description	Manufacturer's Name/Model Number
FAC05	I	TBD	TBD				Facultative Pond 5
Design Capacity	Design Capacity Units Code	Design Capacity Units Description		Waste Feed Code	Waste Feed Description	Waste Type Code	Waste Type Description
20,703,000	18	Gallons per year					
Emission Source ID	Type	Date of Construction	Date of Operation	Date of Removal	Control Type Code	Control Type Description	Manufacturer's Name/Model Number
Design Capacity	Design Capacity Units Code	Design Capacity Units Description		Waste Feed Code	Waste Feed Description	Waste Type Code	Waste Type Description

New York State Department of Environmental Conservation
Air Permit Application

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

DEC ID
9-2934-00022

Process Information ☐ Continuation Sheet(s)

Emission Unit	2-LANDF	Process	FUG

Process Description

Emissions occur from paved/ unpaved roads, waste unloading and compacting, landfill cell construction and capping, cover diffusion, barometric pumping, and emissions from the active working face.

Source Classification Code (SCC)	Total Throughput		Throughput Quantity Units	
	Quantity/Hr	Quantity/Yr	Code	Description
		500,000	38	Tons per year

☐ Confidential Operating at Maximum Capacity	Operating Schedule		Building	Floor/Location
	Hours/Day	Days/Year		
	8	312		

Emission Point Identifier(s)

Emission Source/Control Identifier(s)

RMU02						

Emission Unit	2-LEACH	Process	LE2

Process Description

Process LE2 includes emissions from the collection, handling and storage of leachate from the newer landfills: SLF 12, RMU-1 and RMU-2. These units have lower levels of organics; no carbon canisters are present on storage tanks.

Source Classification Code (SCC)	Total Throughput		Throughput Quantity Units	
	Quantity/Hr	Quantity/Yr	Code	Description

☐ Confidential Operating at Maximum Capacity	Operating Schedule		Building	Floor/Location
	Hours/Day	Days/Year		

Emission Point Identifier(s)

Emission Source/Control Identifier(s)

SPIP2	LTNK2					

New York State Department of Environmental Conservation
Air Permit Application

DEC ID
9 - 2 9 3 4 - 0 0 0 2 2

Process Emissions Summary

☐ Continuation Sheet(s)

Emission Unit	-						Process	
CAS Number	Contaminant Name	% Thruput	% Capture	% Control	ERP (lbs/hr)	ERP How Determined		

Potential to Emit			Standard Units	Potential to Emit How Determined	Actual Emissions	
(lbs/hr)	(lbs/yr)	(standard units)			(lbs/hr)	(lbs/yr)

Emission Unit	-						Process	
CAS Number	Contaminant Name	% Thruput	% Capture	% Control	ERP (lbs/hr)	ERP How Determined		

Potential to Emit			Standard Units	Potential to Emit How Determined	Actual Emissions	
(lbs/hr)	(lbs/yr)	(standard units)			(lbs/hr)	(lbs/yr)

Emission Unit	-						Process	
CAS Number	Contaminant Name	% Thruput	% Capture	% Control	ERP (lbs/hr)	ERP How Determined		

Potential to Emit			Standard Units	Potential to Emit How Determined	Actual Emissions	
(lbs/hr)	(lbs/yr)	(standard units)			(lbs/hr)	(lbs/yr)

Emission Source Emissions Summary

☐ Continuation Sheet(s)

Emission Source						Process	
CAS Number	Contaminant Name	% Thruput	% Capture	% Control	ERP (lbs/hr)	ERP How Determined	

Potential to Emit			Standard Units	Potential to Emit How Determined	Actual Emissions	
(lbs/hr)	(lbs/yr)	(standard units)			(lbs/hr)	(lbs/yr)

Emission Source						Process	
CAS Number	Contaminant Name	% Thruput	% Capture	% Control	ERP (lbs/hr)	ERP How Determined	

Potential to Emit			Standard Units	Potential to Emit How Determined	Actual Emissions	
(lbs/hr)	(lbs/yr)	(standard units)			(lbs/hr)	(lbs/yr)

Emission Source						Process	
CAS Number	Contaminant Name	% Thruput	% Capture	% Control	ERP (lbs/hr)	ERP How Determined	

Potential to Emit			Standard Units	Potential to Emit How Determined	Actual Emissions	
(lbs/hr)	(lbs/yr)	(standard units)			(lbs/hr)	(lbs/yr)

New York State Department of Environmental Conservation
Air Permit Application

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

DEC ID
9 - 2 9 3 4 - 0 0 0 2 2

Emission Unit	Emission Point	Process	Emission Source	Emission Unit Applicable Federal Requirements							☐ Continuation Sheet(s)		
				Title	Type	Part	Subpart	Section	Subdiv.	Parag.	Subparag.	Cl.	Subcl.

Emission Unit	Emission Point	Process	Emission Source	Emission Unit State Only Requirements							☐ Continuation Sheet(s)		
				Title	Type	Part	Subpart	Section	Subdiv.	Parag.	Subparag.	Cl.	Subcl.

Emission Unit Compliance Certification ☐ Continuation Sheet(s)

Rule Citation

Title	Type	Part	Subpart	Section	Subdivision	Paragraph	Subparagraph	Clause	Subclause

Applicable Federal Requirement | State Only Requirement | Capping

Emission Unit	Emission Point	Process	Emission Source	CAS Number	Contaminant Name

Monitoring Information

- ☐ Continuous Emission Monitoring
- ☐ Intermittent Emission Testing
- ☐ Ambient Air Monitoring
- ☐ Monitoring of a Process or Control Device Parameters as a Surrogate
- ☐ Work Practice Involving Specific Operations
- ☐ Record Keeping/Maintenance Procedures

Compliance Activity Description

Work Practice Type Code	Process Material		Reference Test Method
	Code	Description	

Monitored Parameter		Manufacturer's Name/Model Number
Code	Description	

Limit		Limit Units	
Upper	Lower	Code	Description

Averaging Method		Monitoring Frequency		Reporting Requirements	
Code	Description	Code	Description	Code	Description

DEC ID
9 - 2 9 3 4 - 0 0 0 2 2

Determination of Non-Applicability (Title V Applications Only)

☐ Continuation Sheet(s)

Rule Citation

Title	Type	Part	Subpart	Section	Subdivision	Paragraph	Subparagraph	Clause	Subclause

Emission Unit	Emission Point	Process	Emission Source	
				☐ Applicable Federal Requirement ☐ State Only Requirement

Non-Applicability Description

Rule Citation

Title	Type	Part	Subpart	Section	Subdivision	Paragraph	Subparagraph	Clause	Subclause

Emission Unit	Emission Point	Process	Emission Source	
				☐ Applicable Federal Requirement ☐ State Only Requirement

Non- Applicability Description

Compliance Plan

☐ Continuation Sheet(s)

For any emission units which are not in compliance at the time of permit application, the applicant shall complete the following:

Consent Order		Certified progress reports are to be submitted every 6 months beginning / /

Emission Unit	Process	Emission Source	Applicable Federal Requirement									
			Title	Type	Part	Subpart	Section	Subdiv.	Parag.	Subparag.	Clause	Subcl.

Remedial Measures and Intermediate Milestones	R/I	Date Scheduled

New York State Department of Environmental Conservation
Air Permit Application

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

DEC ID
9 - 2 9 3 4 - 0 0 0 2 2

Request for Emission Reduction Credits

☐ Continuation Sheet(s)

Emission Source

Emission Reduction Description

Contaminant Emission Reduction Data

Baseline Period ____ /____ /_____ to ____ / ____ / _____

Reduction	
Date	Method

CAS Number	Contaminant Name	ERC (lbs/yr)	
		Netting	Offset

Facility to Use Future Reduction

Name

Application ID

Location Address

☐ City/ ☐ Town / ☐ Village | State | Zip

Use of Emission Reduction Credits

☐ Continuation Sheet(s)

Emission Source

Proposed Project Description

Contaminant Emissions Increase Data

CAS Number	Contaminant Name	Project Emission Potential (lbs/yr)

Statement of Compliance

☐ All facilities under the ownership of this "owner/firm" are operating in compliance with all applicable requirements and state regulations including any compliance certification requirements under Section 114(a)(3) of the Clean Air Act Amendments of 1990, or are meeting the schedule of a consent order.

Source of Emission Reduction Credit - Facility

Name

Permit ID

Location Address

☐ City/ ☐ Town / ☐ Village | State | Zip

Emission Source	CAS Number	Contaminant Name	ERC (lbs/yr)	
			Netting	Offset

DEC ID
9 - 2 9 3 4 - 0 0 0 2 2

Supporting Documentation and Attachments	
Required Supporting Documentation	Date of Document
List of Exempt Activities (attach form)	Not Applicable
× Plot Plan	May 23, 2017
× Process Flow Diagram	May 23, 2017
× Methods Used to Determine Compliance (attach form)	Attached
× Emissions Calculations	May 23, 2017
Optional Supporting Documentation	Date of Document
× Air Quality Model	June 2, 2017
Confidentiality Justification	
× Ambient Air Quality Monitoring Plan or Reports	May 23, 2017
Stack Test Protocol	
Stack Test Report	
Continuous Emissions Monitoring Plan	
Lowest Achievable Emission Rate (LAER) Demonstration	
Best Available Control Technology (BACT) Demonstration	
Reasonably Available Control Technology (RACT) Demonstration	
Toxic Impact Assessment (TIA)	
Environmental Rating Demonstration	
Operational Flexibility Protocol/Description of Alternate Operating Scenarios	
Title IV Permit Application	
Emission Reduction Credit (ERC) Quantification (attach form)	
Baseline Period Demonstration	
Use of Emission Reduction Credits (attach form)	
Analysis of Contemporaneous Emissions Increase/Decrease	
Other Supporting Documentation	Date of Document
TBACT Demonstration	May 23, 2017

New York State Department of Environmental Conservation
Air Permit Application

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

DEC ID
9-2934-00022

Methods Used to Determine Compliance

Emission Unit ID	Applicable Requirement	Method Used to Determine Compliance	Compliance Date
1-LANDF	6 NYCRR Part 373	Employ best management practices specified in the Facility's 'Fugitive Dust Control Plan.'	Upon issuance of permit
Facility	6 NYCRR 201-7	Calculation of 12-Month Rolling Emissions of VOC, Total HAPs, and individual speciated HAPs	Upon issuance of permit
Facility	6 NYCRR Part 212	Calculation of 12-Month Rolling Emissions of HTACs	Upon issuance of permit
Facility	6 NYCRR Part 212	Modeling analysis and TBACT Demonstration	6/2/2017

ENCLOSURE NO. 3
REVISED AIR QUALITY MODELING REPORT FOR RMU-2

July 12, 2017

Air Quality Modeling Report

CWM Chemical Services, LLC

Model City, New York

GHD | 2055 Niagara Falls Boulevard Niagara Falls New York 14304 USA

080335 | Report No 10 | July 2017

Table of Contents

Figure Index

Table Index

1. Introduction

This document details the air quality modeling procedures that were used in order to demonstrate that the CWM Chemical Services, LLC (CWM) Model City Facility (Facility or Site) is in compliance with the provisions of 6 NYCRR Part 212. A modeling protocol was submitted to the New York State Department of Environmental Conservation (NYSDEC) on February 3, 2017. An approval letter, with specified conditions, was subsequently provided by NYSDEC on March 3, 2017.

The CWM facility is an existing commercial hazardous waste treatment, storage, and disposal facility (TSDF) located in Model City, Niagara County, New York. CWM is proposing to expand the facility to include the new RMU-2 area. The area encompassed by the proposed RMU-2 area is approximately 43.5 acres and will contain a total of six cells. The proposed waste area of RMU-2 is approximately 38.5 acres. The RMU-2 project also includes the replacement of existing facultative (Fac) ponds, namely Fac Ponds 3 and 8. Fac Pond 8 has been closed in accordance with the Part 373 Permit. RMU 2 will include the areas currently occupied by Fac Ponds 3 and 8. Proposed Fac Pond 5 will be constructed to replace the storage capacity for treated wastewater lost by the closure of Fac Ponds 3 and 8.

The CWM facility and proposed RMU-2 area are located in an attainment zone for all pollutants with the exception of ozone (since it is located in the Ozone Transport Region), and is currently permitted under NYSDEC Air State Facility Permit No. 9-2934-00022/00233. The facility will continue to hold an Air State Facility Permit since CWM is proposing to cap potential emissions below the Title V thresholds for all pollutants.

The CWM Model City Facility will consist of the following upon expansion:

- CWM Model City Facility: Existing Landfill Areas (SLF1-6, SLF-7, SLF-10, SLF-11, SLF-12, RMU-1) including leachate standpipes, Stabilization Facility, Aqueous Water Treatment Facility (AWTF), Facultative Pond 1/2, and Facultative Pond 3 (to be closed).
- Proposed RMU-2 Area: RMU-2 Area including leachate standpipes and Facultative Pond 5.

NYSDEC has requested that CWM demonstrate compliance with 6 NYCRR Part 212 for the existing facility as well as the proposed RMU-2 area.

The modeling report has been developed based on the following documentation:

- DAR-10/NYSDEC Guidelines on Dispersion Modeling Procedures for Air Quality Impact Analysis (May 9, 2006)
- Appendix W of 40 CFR Part 51, USEPA (November, 2005)
- Ambient Monitoring Guidelines for PSD, USEPA (May, 1997)
- New Source Review Workshop Manual, USEPA (Draft, October, 1990)

2. Facility Overview

2.1 Facility Description

The CWM Model City Facility is located within the Erie-Niagara Region in the western section of New York State. The facility is situated on the boundary between the Towns of Lewiston and Porter in Niagara County. All hazardous waste management units are located within the Town of Porter. The facility's operations are authorized by a RCRA hazardous waste permit issued by NYSDEC and a TSCA (PCB) Approval issued by USEPA. The facility uses a number of processes for the proper storage, treatment and disposal of a variety of liquid and solid organic and inorganic hazardous waste and industrial non-hazardous waste. Storage, treatment and disposal capabilities include an aqueous waste treatment system, which includes phase separation, oxidation/reduction, neutralization, solids precipitation and filtration, biological treatment and carbon filtration. The treated effluent is stored in a facultative (fac) pond, qualified and discharged pursuant to the facility's State Pollutant Discharge Elimination System (SPDES) Permit. Other operations include waste stabilization; secure landfilling of approved solid waste, including PCBs; solvent and fuel blending processes; RCRA and TSCA container storage and transfer; landfill leachate collection, storage and treatment. As a RCRA permitted TSDF, CWM is subject to the hazardous waste regulations in 6 NYCRR Parts 370-376. This includes several regulations focused on minimizing the release of hazardous waste contaminants to the air: 373-2.28, Air Emission Standards for Equipment Leaks, and 373-2.29, Air Emission Standards for Tanks, Containers and Surface Impoundments.

The Model City Facility began operations in 1971 as ChemTrol Pollution Services, Inc. Activities included fuels blending of waste oils, distillation of spent solvents, aqueous waste treatment, and land disposal. In 1973, the stock of ChemTrol was purchased by SCA Services, Inc. The ChemTrol name was retained until late 1978 at which time the corporate name changed to SCA Chemical Waste Services, Inc., and in 1981, was renamed SCA Chemical Services, Inc.

In October 1984, WM Acquiring Corp., owned jointly by Waste Management, Inc. (WMI), and Genstar, Inc., acquired SCA Services, Inc., of which SCA Chemical Services, Inc. was a subsidiary. Through a corporate reorganization in October 1986, SCA Chemical Services, Inc. became a wholly owned subsidiary of Chemical Waste Management, Inc. (CWM), itself majority-owned by Waste Management, Inc. In July 1988, the corporate name SCA Chemical Services, Inc. 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. CWM Chemical Services, LLC, is the owner and operator of the Model City Facility.

The fuels blending tanks and solvent distillation operation were eliminated in the 1980s. The Aqueous Treatment facility continues to operate. The following summarizes the closed and active landfill units at the Facility:

Landfill Area	Years of Operation	Status
SLF 1-6	1971-1978	Closed
SLF 7	1978-1983	Closed
SLF 10	1982-1984	Closed

Landfill Area	Years of Operation	Status
SLF 11	1984-1990	Closed
SLF 12	1990-1994	Closed
RMU-1	1994-2015	Closed (Nov. 2016)

It should be noted that the Facility's most recently operated landfill (RMU-1) reached its capacity and received its final volume of hazardous wastes on November 12, 2015. From 1997 through 2013, final cover was constructed over the waste area of RMU-1 (approximately 31.8 acres) in accordance with the Part 373 Permit. A minimum of 12-inches of intermediate soil cover was installed over the remaining active area (approximately 7.7 acres) in 2015. In accordance with the Part 373 Permit, RMU-1 was completely closed by November 6, 2016 through the installation of final cover over the remaining 7.7 acres.

2.2 Land Use Classifications

The Model City Facility is located in a predominantly rural area on the border between the Towns of Lewiston and Porter. The surrounding area is undeveloped and sparsely populated, with an average of one person per 2 acres of land.

The nearest population concentrations are the Village of Lewiston (population 2,701; 2010 census), approximately 7 miles to the southwest; the Village of Youngstown (population 1,935; 2010 census), approximately 3 miles to the northwest and the Hamlet of Ransomville (population 1,419; 2010 census), approximately 2 miles to the east. Land use in the vicinity of the Model City Facility is primarily residential, agricultural, government services and military.

2.3 Topography

The topography around the Proposed Site is relatively flat. The base elevation of the Site is approximately 320 feet AMSL. However, the topography of the surrounding land ranges from approximately 308 feet AMSL to 338 feet AMSL.

3. Modeling Methodology

The modeling was conducted using the most recent executable versions of the USEPA AERMOD modeling system.

- AERMET, version 16216
- AERSURFACE, version 13016
- AERMAP, version 11103
- AERMOD, version 16216r
- BPIP-PRIME, version 04274

Modeling was facilitated using the Lakes Environmental graphical user interface AERMOD View (version 9.3.0).

3.1 Modeled Compounds

CWM is proposing a facility-wide annual 212 emission cap for each of the high toxicity air contaminant (HTAC) compounds listed in Table 2 of 6 NYCRR Part 212-2.2, with the exception of polycyclic organic matter (POM) and polychlorinated biphenyls (PCBs). Therefore, this modeling demonstration includes a comparison of the maximum modeled ground-level concentration (GLC) for POM and PCBs with each of their respective annual guideline concentrations (AGC) presented in the NYSDEC DAR-1 policy document[1]. For modeling purposes, PCB emission rates for sources with total PCB concentrations, but without specific Aroclor data were broken down into the following proportions based on the average of all closed landfills:

i. Aroclor 1242 - 35.85 percent

ii. Aroclor 1254 - 33.64 percent

iii. Aroclor 1260 - 30.51 percent

This modeling demonstration also includes the following non-HTAC compounds that potentially exceed an annual emission rate of 100 lb/year:

- Xylenes
- Toluene
- Methylene Chloride
- Methyl ethyl ketone

VOCs and HAPs that are not considered HTACs under 6 NYCRR Part 212 (not listed in Table 2 of 6 NYCRR Part 212) and that have the potential to emit greater than 100 lb/year from stabilization will be limited to a short-term emission rate of 10 pounds per hour (since they are considered category B compounds). The 10 pound per hour limit is the maximum short-term emission rate that would not require the consideration of air controls (for category B compounds according to Table 4 of 6 NYCRR Part 212). In addition, compounds that are hazardous air pollutants (HAPS) will be limited to an annual emission rate of 10 tons per year (TPY).

The maximum modeled ground-level concentration for the non-HTAC compounds listed above were compared with the short-term guidance concentrations (SGC) and AGC values presented in the NYSDEC DAR-1 policy document.

Emission rates for POM, PCBs, and the aforementioned non-HTAC compounds are presented in Tables 1A (Existing Facility) and Table 1B (RMU-2 Project). The emission rates presented in Tables 1A and 1B were derived from the Emission Inventories submitted for the Existing Facility and the RMU-2 Landfill, respectively, on May 23, 2017.

Since the proposed PM-10 emission increase is less than 15 TPY, in accordance with NYSDEC's CP-33, no further modeling for PM was required.

[1] The NYSDEC DAR-1 document does not list short-term guidance concentration (SGC) values for POM or PCBs.

3.2 Facility Source Inventory

This Section provides a summary of sources included in the modeling evaluation. A summary of the source inventory parameters is provided in Table 2. A plan site view of all emission sources is provided as Figures 1 through 4. It should be noted that the AWTF was not included in the modeling since tanks with the potential to contain > 500 ppm organics are already equipped with carbon canisters to control VOCs and/or PCBs from working and breathing losses. In addition, the modeling of leak/spills from drums is difficult to model since they are not planned events, can occur at various locations across the facility, and generally would occur within a building. Spills are not planned. Tanks and containers are managed in accordance with 373-2.29, to minimize potential for air emissions. Work practices and best management procedures are employed to prevent spills. Therefore, a permit condition that emphasizes the use of best practices for the containment/prevention of leaking containers/drums at the facility is a more suitable option.

3.2.1 Existing Landfill Areas

The following closed landfill areas were included in the modeling analysis:

- SLF 1-6
- SLF-7
- SLF-10
- SLF-11
- SLF-12
- RMU-1

Emissions for each of the landfill areas were calculated in the Air State Facility Permit Application and are based on the following:

- Landfill cover diffusion
- Barometric pumping
- Evaporation from leachate collection standpipes

Source inventory parameters for the existing landfill areas are provided in Table 2.

3.2.2 Future Landfill Areas

The following proposed landfill areas were included in the modeling analysis:

- RMU-2

Emissions for the RMU-2 area were calculated in the Air State Facility Permit Application and are based on the following:

- Landfill cover diffusion
- Barometric pumping
- Evaporation from leachate collection standpipes

- Active face emissions

It should be noted that emissions from the stormwater detention basin were not included in the modeling analysis. Emissions from the RMU-2 Landfill have already been calculated for diffusion through the cover, evaporation from the leachate standpipes and emissions from the active working face and are assumed to be occurring continuously throughout the year. Stormwater runoff passing over the surface of waste with cover applied, has minimal contact time allowing minimal transfer of constituents. The emissions from these constituents has already been accounted for in the cover diffusion calculation. In addition, collected stormwater above 1' depth will be pumped into the leachate collection system and processed at the Aqueous Water Treatment Facility (AWTF).

Source inventory parameters for the RMU-2 area are provided in Table 2.

3.2.3 Stabilization Facility

Emissions from the stabilization facility were calculated in the Air State Facility Permit Application and are based on a maximum value of 140,000 tons/year processed material. There are two baghouses that exhaust from the stabilization facility. Source inventory parameters for the stabilization facility are provided in Table 2.

3.2.4 Facultative Ponds

In order to obtain an estimate of emissions from the facultative ponds, one-half of the detection limit was assumed for each compound for a sample collected on December 2, 2015. Emissions from the facultative ponds were calculated using the mass balance approach presented as Equation 5-30 in the USEPA document *Air Emissions Models for Waste and Wastewater*, dated November 1994. PCB emissions from the ponds were conservatively estimated assuming a concentration of 200 nanograms per liter (Draft RMU-2 SPDES permit limit for internal outfall prior to discharge to the pond).

Fac Ponds 3 and 5 will not be used to store effluent from the aqueous waste treatment facility at the same time. The treated effluent in Fac Pond 3 will be discharged or transferred and the pond taken out of service for closure prior to starting the storage of treated effluent in Fac Pond 5. In addition, CWM is willing to accept a permit condition that prohibits the facility from discharging to Fac Pond 3 and Fac Pond 5 simultaneously. Therefore, the modeling analysis only includes Fac Pond 5 in addition to Fac Pond 1/2.

Source inventory parameters for the facultative ponds are provided in Table 2.

3.3 Modeling Input Parameters

The model was run using the "regulatory default" mode, which specified the use of the following options:

- Stack-tip downwash-reduces effective stack height when plume exit velocity is less than 1.5 times the wind speed
- Plume buoyancy induces dispersion-increases the dispersion coefficient to account for the vertical movement of the plume

- Calms processing
- Allow missing meteorological data
- Elevated terrain

Source specific input parameters were entered into the Source Pathway of the model.

3.4 Building Downwash Analysis

Any Site structures that may impact the emission sources, with respect to influencing building downwash, were also considered. Direction specific building dimensions were calculated utilizing BPIP-PRIME.

3.5 Meteorological Data

The Site does collect meteorological tower data. However, the 2012-2016 surface and profile meteorological data, as provided by the NYSDEC, was used in the analysis.

The surface and profile meteorological data was processed using the USEPA AERMET version 16216 according to standard USEPA methods for air dispersion modeling.

3.6 Modeled Receptors

For each pollutant, a multi-tier, uniform Cartesian grid centered on the CWM Model City Facility was established.

Distance from CWM Facility	***Receptor Node Spacing***
Up to 1 km	70 m
1 km to 2 km	200 m
2 km to 10 km	500 m

A property boundary receptor grid was established along the property boundary of the CWM Model City Facility with a spacing of 20 m to capture the maximum property boundary concentration.

All receptors located within the CWM Model City Facility property boundary were removed, as the site is fenced and public access is prohibited.

The need to evaluate elevated receptors within two (2) km of the CWM Model City Facility, such as rooftops, balconies and similar areas with public access, was not required.

3.7 Terrain Considerations

Although the topography of the region is relatively flat, the effects of terrain was considered as part of the modeling analyses. Elevations above mean sea level corresponding to the base elevation of the CWM Model City Facility was assigned to all structures and sources modeled.

At the request of DEC, a site-specific topographical elevation model was developed to include the existing and future onsite landfill features, and features of the Modern Landfill situated south of the Facility. The digital terrain data was constructed from USGS DEM data (10-meter resolution) with the following modifications.

- Elevations within the property of the CWM Model City Facility was replaced with air survey data based on photogrammetric methods
- RMU-1 elevation data was inserted into the CWM Model City Facility to represent its final design, replacing data in the air survey
- RMU-2 elevation data was inserted into the CWM Model City Facility to represent the berm design height of 30 feet, replacing data in the air survey
- Elevations for Modern Landfill to the south were extracted from 1-meter LIDAR data

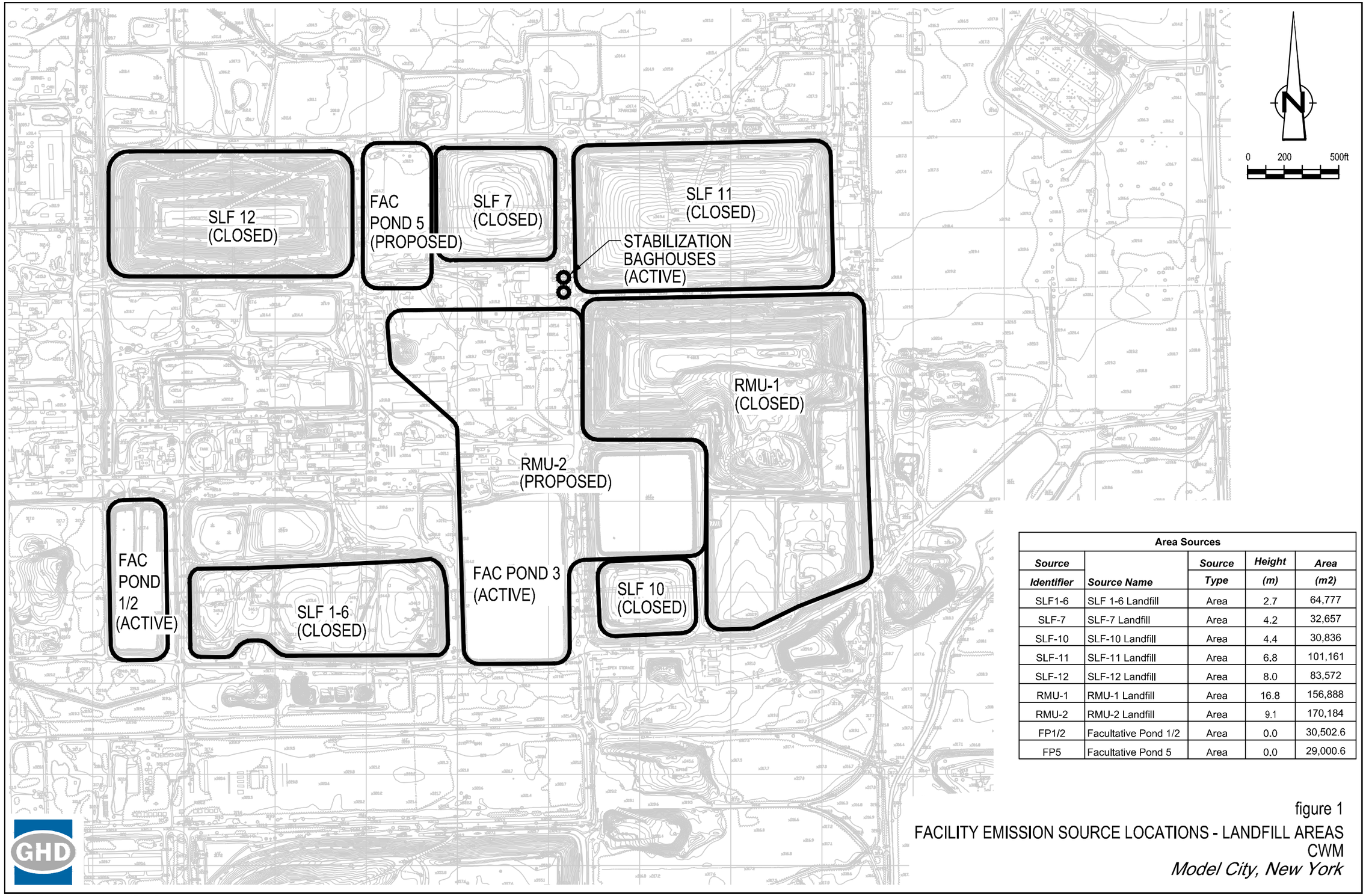
The above data sources were merged together into a single file using ArcGIS software. Alignment corrections, measurement units and projections systems were addressed during this stage. The resulting merged elevation file was then exported from ArcGIS into a neutral XYZ (x-coordinate, y-coordinate, elevation) file with 10-meter resolution. The XYZ file was further converted into USGS DEM format for use with AERMAP to develop the necessary terrain mesh for AERMOD's terrain following algorithms.

All sources were assigned base elevations calculated from data in the terrain mesh. An examination of the assigned elevations to the landfill area sources indicated that the elevations were too low for their designed final heights. These sources were manually adjusted to their final heights.

4. Conclusion

The results of the modeling analysis are provided in Table 3. All the modeled results are below their respective SGC and/or AGC values at the property boundary.

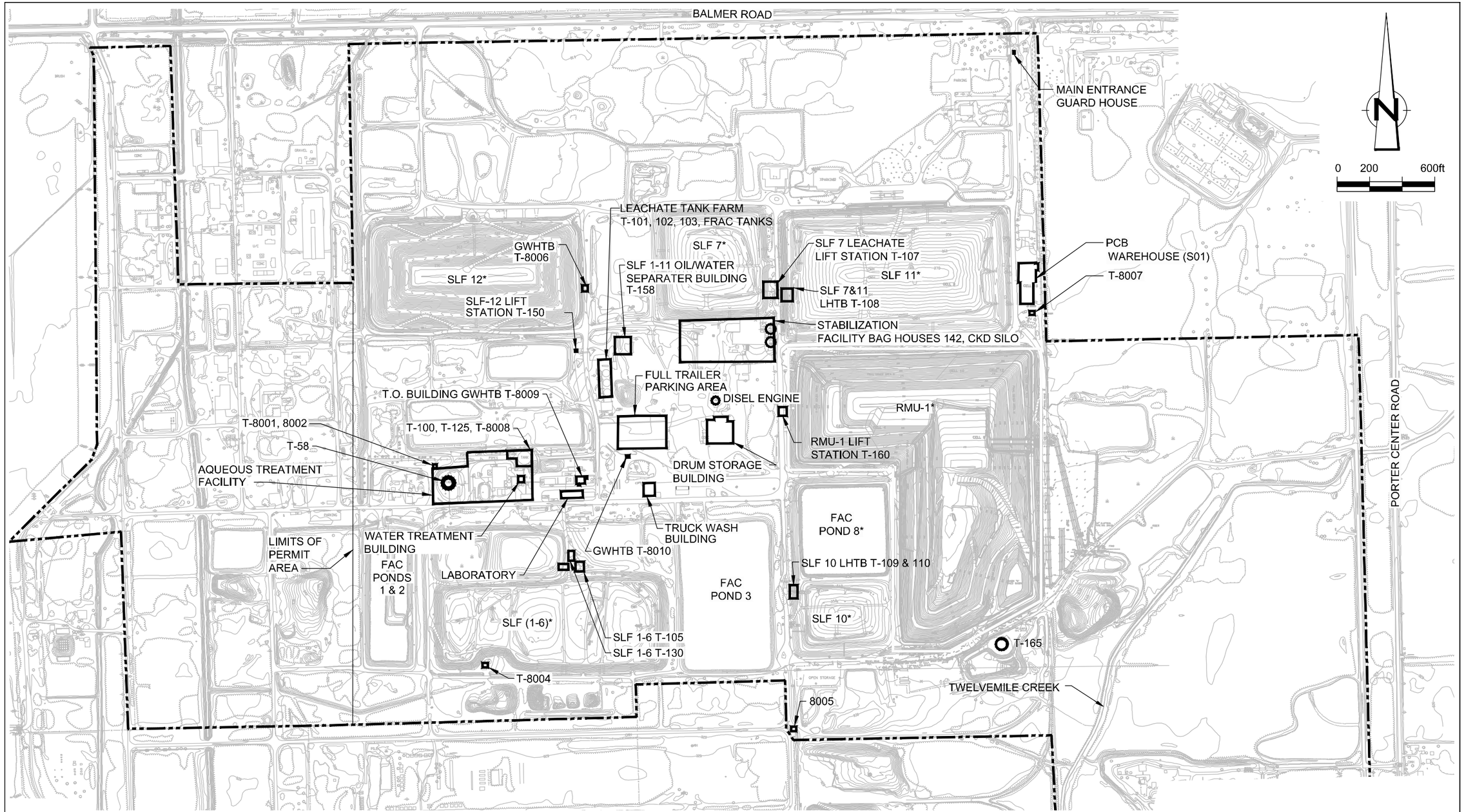
An electronic CD has been provided which contains all pertinent input and output files, as well as all supporting data files and executables necessary to reproduce the modeling results.



Area Sources				
Source Identifier	*Source Name*	*Source Type*	*Height (m)*	*Area (m2)*
SLF1-6	SLF 1-6 Landfill	Area	2.7	64,777
SLF-7	SLF-7 Landfill	Area	4.2	32,657
SLF-10	SLF-10 Landfill	Area	4.4	30,836
SLF-11	SLF-11 Landfill	Area	6.8	101,161
SLF-12	SLF-12 Landfill	Area	8.0	83,572
RMU-1	RMU-1 Landfill	Area	16.8	156,888
RMU-2	RMU-2 Landfill	Area	9.1	170,184
FP1/2	Facultative Pond 1/2	Area	0.0	30,502.6
FP5	Facultative Pond 5	Area	0.0	29,000.6

figure 1

FACILITY EMISSION SOURCE LOCATIONS - LANDFILL AREAS
CWM
Model City, New York



LEGEND

SLF = SECURE LANDFILL
FAC = FACULTATIVE
PROPERTY LINE
LIMITS OF ACTIVE LANDFILL
* = INACTIVE
LHTB = LEACHATE HOLDING TANK BUILDING
GWHTB = GROUNDWATER COLLECTION HOLDING TANK BUILDING

NOTES:

1. THIS MAP COMPILED BY PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHY DATED 5-31-01. (AIR SURVEY CORP. PROJECT NO.71010503)
2. VERTICAL DATUM BASED ON NGS MEAN SEA LEVEL.
3. GRID BASED ON LOCAL COORDINATE SYSTEM.
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 TESTING COMPLETION.
6. PROPERTY LINES ARE APPROXIMATE.
7. 630 PERMITTED ACRES.
8. 710 TOTAL ACRES.

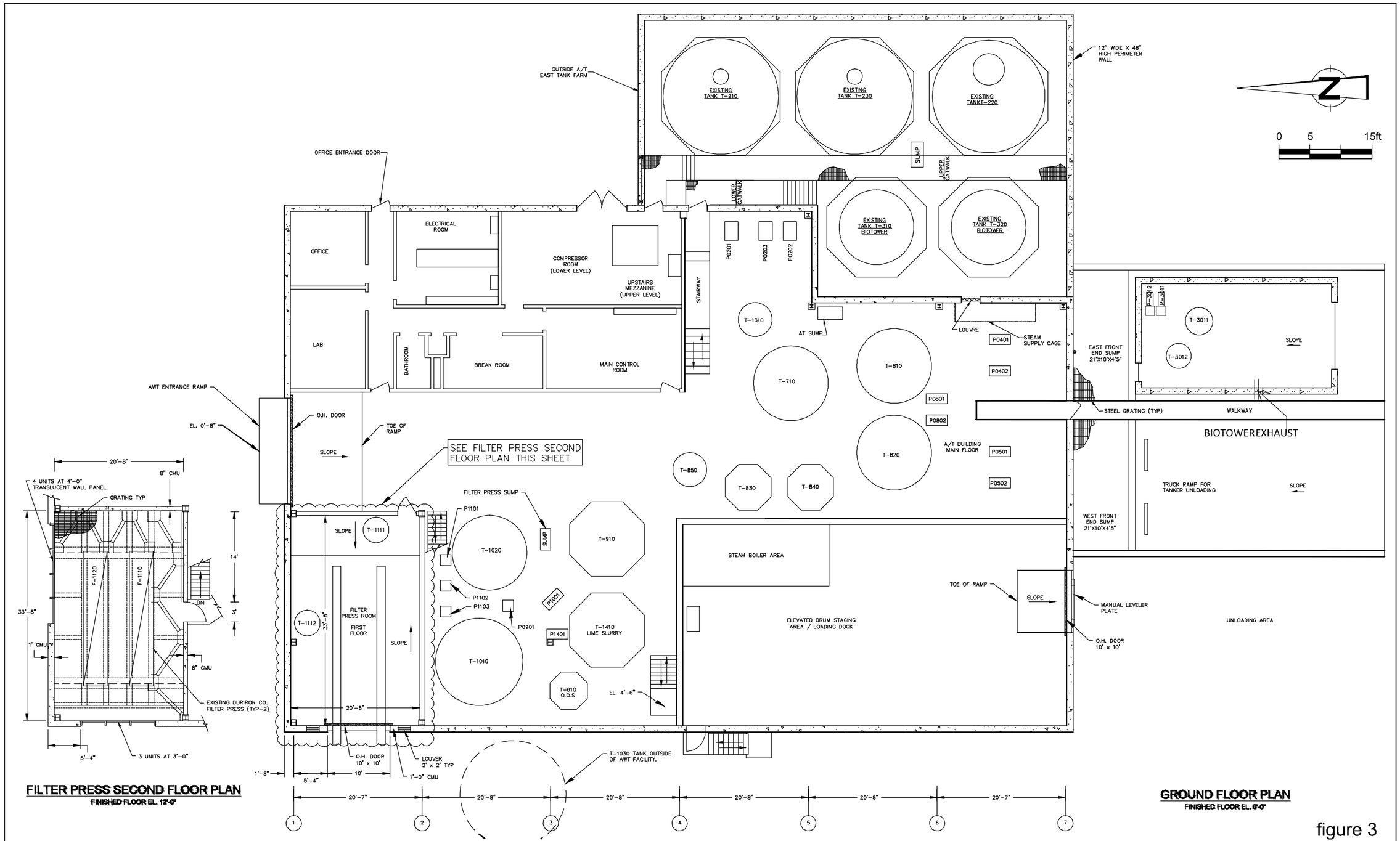
GHD

figure 2

FACILITY EMISSION SOURCE LOCATIONS - BUILDINGS AND TANKS

CWM

Model City, New York

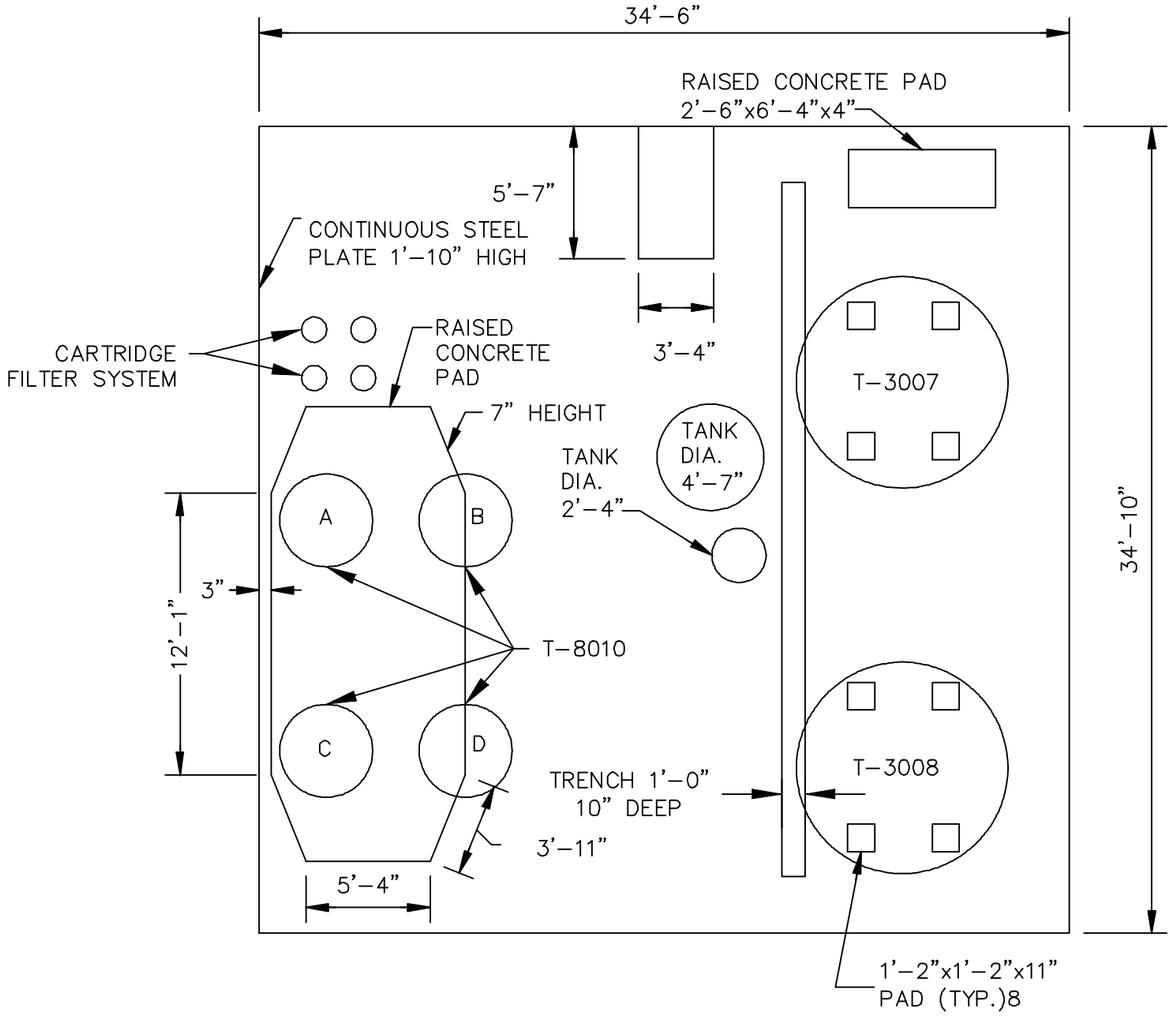


FILTER PRESS SECOND FLOOR PLAN
FINISHED FLOOR EL. 12'-0"

GROUND FLOOR PLAN
FINISHED FLOOR EL. 0'-0"

figure 3

FACILITY SOURCE LOCATIONS (AWT BUILDING)
CWM
Model City, New York



PLAN

N.T.S.

Modified: Nov. 2013

SOURCE REFERENCE:

WATER TREATMENT BUILDING 6NYCRR PART 373 PERMIT		
CWM CHEMICAL SERVICES LLC TOWN OF PORTER, STATE OF NEW YORK		
EnSol, Inc. Environmental Solutions	661 MAIN STREET NIAGARA FALLS, NY 14301 PHONE (716) 285-3920 FAX (716) 285-3926	FIGURE D-20
8/13/13	PN: 13-7028	

figure 4

FACILITY SOURCE LOCATIONS (WATER TREATMENT BUILDING)

CWM

Model City, New York

Table 1A

Summary of Modeled Emission Rates - Existing Facility
CWM Chemical Services, LLC
Model City, New York

	Aroclor 1242	Aroclor 1254	Aroclor 1260	POM	Xylene	Toluene	Methylene Chloride	Methyl ethyl ketone
Emission Source	***Emissions (grams per second)***							
SLF 1-6 Standpipes	4.34E-05	1.43E-05	5.19E-06	1.18E-05	6.12E-05	8.72E-05	2.59E-03	2.31E-03
SLF 1-6 Cover Diffusion	6.71E-06	7.28E-06	1.45E-05	0.00E+00	2.64E-05	1.46E-04	2.20E-03	3.20E-05
SLF 1-6 Barometric Pumping	1.01E-06	1.09E-06	2.18E-06	0.00E+00	3.96E-06	2.19E-05	3.31E-04	4.80E-06
SLF 1-6 TOTAL	**5.12E-05**	**2.27E-05**	**2.19E-05**	**1.18E-05**	**9.16E-05**	**2.55E-04**	**5.13E-03**	**2.34E-03**
SLF 7 Standpipes	8.74E-07	0.00E+00	0.00E+00	0.00E+00	4.37E-05	1.56E-05	5.09E-04	2.35E-04
SLF 7 Cover Diffusion	9.16E-07	0.00E+00	0.00E+00	0.00E+00	4.53E-04	1.45E-04	1.34E-03	8.68E-06
SLF 7 Barometric Pumping	1.37E-07	0.00E+00	0.00E+00	0.00E+00	6.79E-05	2.18E-05	2.01E-04	1.30E-06
SLF-7 TOTAL	**1.93E-06**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**5.64E-04**	**1.83E-04**	**2.05E-03**	**2.45E-04**
SLF 10 Standpipes	8.91E-08	1.90E-08	3.41E-08	0.00E+00	0.00E+00	0.00E+00	2.51E-04	4.43E-04
SLF 10 Cover Diffusion	1.80E-08	1.33E-08	5.44E-08	0.00E+00	0.00E+00	0.00E+00	1.23E-04	4.05E-06
SLF 10 Barometric Pumping	2.71E-09	1.99E-09	8.15E-09	0.00E+00	0.00E+00	0.00E+00	1.84E-05	6.08E-07
SLF-10 TOTAL	**1.10E-07**	**3.43E-08**	**9.66E-08**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**3.92E-04**	**4.48E-04**
SLF 11 Standpipes	5.50E-06	2.17E-05	1.23E-05	0.00E+00	0.00E+00	0.00E+00	1.06E-05	9.86E-05
SLF 11 Cover Diffusion	6.62E-07	8.81E-06	1.14E-05	0.00E+00	0.00E+00	0.00E+00	3.03E-06	5.53E-07
SLF 11 Barometric Pumping	9.93E-08	1.32E-06	1.70E-06	0.00E+00	0.00E+00	0.00E+00	4.55E-07	8.29E-08
SLF-11 TOTAL	**6.26E-06**	**3.18E-05**	**2.54E-05**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**1.41E-05**	**9.93E-05**
SLF 12 Standpipes	3.64E-07	4.99E-07	3.93E-07	0.00E+00	0.00E+00	0.00E+00	6.13E-06	1.18E-08
SLF 12 Cover Diffusion	2.82E-07	1.38E-06	2.48E-06	0.00E+00	0.00E+00	0.00E+00	1.19E-05	3.51E-10
SLF 12 Barometric Pumping	4.23E-08	2.07E-07	3.73E-07	0.00E+00	0.00E+00	0.00E+00	1.78E-06	5.27E-11
SLF-12 TOTAL	**6.88E-07**	**2.08E-06**	**3.25E-06**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**1.98E-05**	**1.22E-08**
RMU-1 Standpipes	1.71E-07	0.00E+00	7.22E-07	0.00E+00	0.00E+00	1.76E-05	1.78E-05	2.35E-05
RMU-1 Cover Diffusion	1.12E-08	0.00E+00	0.00E+00	5.51E-10	1.39E-07	6.49E-07	5.00E-07	3.18E-07
RMU-1 Barometric Pumping	1.68E-09	0.00E+00	0.00E+00	8.26E-11	2.09E-08	9.73E-08	7.50E-08	4.77E-08
RMU-1 TOTAL	**1.84E-07**	**0.00E+00**	**7.22E-07**	**6.33E-10**	**1.60E-07**	**1.84E-05**	**1.83E-05**	**2.39E-05**
Stabilization Baghouse #1	**3.09E-05**	**2.90E-05**	**2.63E-05**	**1.33E-03**	**8.10E-01**	**8.10E-01**	**8.10E-01**	**8.10E-01**
Stabilization Baghouse #2	**1.72E-05**	**1.61E-05**	**1.46E-05**	**7.41E-04**	**4.50E-01**	**4.50E-01**	**4.50E-01**	**4.50E-01**
Facultative Pond 1/2	**1.29E-07**	**1.21E-07**	**1.10E-07**	**0.00E+00**	**0.00E+00**	**3.15E-07**	**5.85E-07**	**1.98E-06**

Table 1B

Summary of Modeled Emission Rates - RMU-2 Project
CWM Chemical Services, LLC
Model City, New York

Emission Source	Aroclor 1242	Aroclor 1254	Aroclor 1260	POM	Xylene	Toluene	Methylene Chloride	Methyl ethyl ketone
	Emissions (grams per second) Open [1]							
Facultative Pond 5	**1.78E-07**	**1.67E-07**	**1.52E-07**	**0.00E+00**	**0.00E+00**	**4.35E-07**	**8.08E-07**	**2.73E-06**
RMU-2 Standpipes	1.17E-07	0.00E+00	4.87E-07	0.00E+00	0.00E+00	1.19E-05	1.20E-05	1.68E-05
RMU-2 Cover Diffusion	4.94E-07	4.63E-07	4.20E-07	1.93E-07	4.88E-05	2.27E-04	1.75E-04	1.11E-04
RMU-2 Barometric Pumping	7.40E-08	6.95E-08	6.30E-08	2.90E-08	7.32E-06	3.41E-05	2.63E-05	1.67E-05
RMU-2 Active Face	6.06E-05	5.69E-05	5.16E-05	6.63E-05	2.66E-04	7.28E-04	1.58E-04	1.88E-04
RMU-2 TOTAL	**6.13E-05**	**5.74E-05**	**5.25E-05**	**6.65E-05**	**3.22E-04**	**1.00E-03**	**3.72E-04**	**3.33E-04**

Emission Source								
	Emissions (grams per second) Closed [2]							
Facultative Pond 5	**1.78E-07**	**1.67E-07**	**1.52E-07**	**0.00E+00**	**0.00E+00**	**4.35E-07**	**8.08E-07**	**2.73E-06**
RMU-2 Standpipes	1.17E-07	0.00E+00	4.87E-07	0.00E+00	0.00E+00	1.19E-05	1.20E-05	1.68E-05
RMU-2 Cover Diffusion	4.94E-07	4.63E-07	4.20E-07	1.93E-07	4.88E-05	2.27E-04	1.75E-04	1.11E-04
RMU-2 Barometric Pumping	7.40E-08	6.95E-08	6.30E-08	2.90E-08	7.32E-06	3.41E-05	2.63E-05	1.67E-05
RMU-2 Active Face	4.84E-08	4.54E-08	4.12E-08	1.89E-08	4.79E-06	2.23E-05	1.72E-05	1.09E-05
RMU-2 TOTAL	**7.33E-07**	**5.78E-07**	**1.01E-06**	**2.41E-07**	**6.09E-05**	**2.96E-04**	**2.31E-04**	**1.56E-04**

Emission Source								
	Variable Emission Rate Ratio Closed							
Facultative Pond 5	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
RMU-2 Standpipes	1	1	1	1	1	1	1	1
RMU-2 Cover Diffusion	1	1	1	1	1	1	1	1
RMU-2 Barometric Pumping	1	1	1	1	1	1	1	1
RMU-2 Active Face	7.99E-04	7.99E-04	7.99E-04	2.86E-04	1.80E-02	3.07E-02	1.09E-01	5.81E-02
RMU-2 TOTAL	**1.196E-02**	**1.007E-02**	**1.924E-02**	**3.623E-03**	**1.892E-01**	**2.953E-01**	**6.207E-01**	**4.678E-01**

Notes:

[1] Emissions rate during the time frame there is active waste placement in the landfill (RMU-2). (8 hrs/day Monday to Saturday)
[2] Emissions rate during the time frame waste surfaces are covered with final, intermediate, or daily cover. (16 hrs/day Monday-Saturday: 24 hrs/day Sunday

Table 2

Summary of Modeling Input Parameters
CWM Chemical Services, LLC
Model City, New York

Table 2A: Point Sources

Source Identifier	Source Name	Source Type	Exit Height (m)	Exit Diameter Actual (m)	Exit Temperature Actual (K)	Exit Temperature Modeled (K)	Actual Flow Rate (ACFM)	Actual Flow Rate (Am^3/s)	Exit Velocity (m/s)
BH1	Stabilization Baghouse #1	Point	15.24	2.44	Ambient	0	9.00E+04	4.25E+01	9.08
BH2	Stabilization Baghouse #2	Point	9.14	1.32	Ambient	0	5.00E+04	2.36E+01	17.24

Table 2B: Area Sources

Source Identifier	Source Name	Source Type	Height (m)	Total Area Actual (m^2)
SLF1-6	SLF 1-6 Landfill	Area	2.7	64,777
SLF-7	SLF-7 Landfill	Area	4.2	32,657
SLF-10	SLF-10 Landfill	Area	4.4	30,836
SLF-11	SLF-11 Landfill	Area	6.8	101,161
SLF-12	SLF-12 Landfill	Area	8.0	83,572
RMU-1	RMU-1 Landfill	Area	16.8	156,888
RMU-2	RMU-2 Landfill	Area	9.1	170,184
FP1/2	Facultative Pond 1/2	Area	0.0	30,502.6
FP5	Facultative Pond 5	Area	0.0	29,000.6

Table 3

Summary of Modeling Results
CWM Chemical Services, LLC
Model City, New York

Air Contaminant	CAS No.	SGC/AGC Limit (ug/m3)	Averaging Period	Maximum Predicted GLC (ug/m3)	Percent of SGC/AGC Limit (%)
Methyl Ethyl Ketone	00078-93-3	13000	1-hour	629.46	4.84%
		5000	annual	4.03	0.08%
Methylene Chloride	00075-09-2	14000	1-hour	629.98	4.50%
		60	annual	0.95	1.58%
PCB 1242	various	0.01	annual	0.0025	25.41%
PCB 1254	various	0.002	annual	0.00126	62.95%
PCB 1260	various	0.002	annual	0.00121	60.50%
POM	various	0.02	annual	0.01	33.27%
Toluene	00108-88-3	37000	1-hour	629.55	1.70%
		5000	annual	0.92	0.02%
Xylenes, m, o & p mixture	01330-20-7	22000	1-hour	629.45	2.86%
		100	annual	0.92	0.92%

Note: The NYSDEC DAR-1 document does not list short-term guidance concentration (SGC) values for POM or PCBs.

www.ghd.com

ENCLOSURE NO. 4
COMPACT DISKETTE
REVISED AIR QUALITY MODELING FILES FOR RMU-2

July 12, 2017
Hand delivery to Mr. D. Denk