

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

August 13, 2013

PERMIT TO INSTALL
176-03A

ISSUED TO
City of Wyoming

LOCATED AT
2350 Ivanrest Avenue, SW
Wyoming, Michigan

IN THE COUNTY OF
Kent

STATE REGISTRATION NUMBER
B4113

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203:

July 30, 2013

DATE PERMIT TO INSTALL APPROVED:

August 13, 2013

SIGNATURE:

DATE PERMIT VOIDED:

SIGNATURE:

DATE PERMIT REVOKED:

SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	BTU	British Thermal Unit
BACT	Best Available Control Technology	°C	Degrees Celsius
CAA	Clean Air Act	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
CO ₂ e	Carbon Dioxide Equivalent	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H ₂ S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
GHGs	Greenhouse Gases	kW	Kilowatt
HAP	Hazardous Air Pollutant	m	Meter
HVLP	High Volume Low Pressure *	mg	Milligram
ID	Identification	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	ng	Nanogram
MAP	Malfuction Abatement Plan	NO _x	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality (Department)	PM	Particulate Matter
MSDS	Material Safety Data Sheet	PM10	PM with aerodynamic diameter ≤10 microns
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	PM with aerodynamic diameter ≤ 2.5 microns
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonably Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO ₂	Sulfur Dioxide
SCR	Selective Catalytic Reduction	THC	Total Hydrocarbons
SRN	State Registration Number	tpy	Tons per year
TAC	Toxic Air Contaminant	µg	Microgram
TEQ	Toxicity Equivalence Quotient	VOC	Volatile Organic Compound
VE	Visible Emissions	yr	Year

* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R 336.1219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R 336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R 336.1303. **(R 336.1301)**
 - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
 - b) A visible emission limit specified by an applicable federal new source performance standard.
 - c) A visible emission limit specified as a condition of this Permit to Install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R 336.1370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
EU-BIOSOLIDS	The Clean Water Plant (municipal wastewater treatment facility) Biosolids Storage Tanks 1, 2, and 3. The odor emissions (ammonia and hydrogen sulfide) from each tank are controlled by three sodium hydroxide/sodium hypochlorite odor control scrubbers through a common header.	FG-BIOLSOLIDS
EU-BIOSOLIDSEXFER	The Biosolids Transfer Pumping Station at the Clean Water Plant (municipal wastewater treatment facility), including three wet wells. The odor emissions (hydrogen sulfide) from the wet wells are controlled by a carbon adsorption odor control unit or can be routed to the sodium hydroxide/sodium hypochlorite odor control scrubbers.	FG-BIOLSOLIDS
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.		

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG-BIOSOLIDS	The Clean Water Plant (municipal wastewater treatment facility) Biosolids Storage Tanks 1, 2, and 3 and the Biosolids Transfer Pumping Station, including three wet wells. The odor emissions are controlled by three sodium hydroxide/sodium hypochlorite odor control scrubbers through a common header or, for the wet wells, by a carbon adsorption odor control unit.	EU-BIOSOLIDS, EU-BIOSOLIDSEXFER

The following conditions apply to: FG-BIOSOLIDS

DESCRIPTION: The Clean Water Plant (municipal wastewater treatment facility) Biosolids Storage Tanks 1, 2, and 3 and the Biosolids Transfer Pumping Station, including three wet wells.

Emission Units: EU-BIOSOLIDS, EU-BIOSOLIDSXFER

POLLUTION CONTROL EQUIPMENT: Carbon adsorption odor control unit or sodium hydroxide/sodium hypochlorite odor control scrubbers.

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Hydrogen Sulfide	0.00654 pph	Hourly	Each Biosolids Storage Tank	GC 13	R 336.1224, R 336.1225

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. Within 60 days of the date of this permit, the permittee shall submit to the AQD District Supervisor an approvable nuisance minimization plan (Plan) for FG-BIOSOLIDS. Upon approval of the Plan, or of a modified Plan, the permittee shall not operate FG-BIOSOLIDS unless the approved Plan is implemented and maintained. If at any time the Plan fails to address or inadequately addresses a malfunction, the permittee shall amend the Plan within 45 days after such an event occurs. The permittee shall also amend the Plan within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the Plan and any amendments to the Plan to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the Plan or amended Plan shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. The Plan shall address the areas listed below. **(R 336.1224, R 336.1901, R 336.1910)**
 - a. Effective capture that prevents odorous fugitive emissions.
 - b. Methods and frequency to be used to monitor the progress toward breakthrough of the carbon adsorption odor control unit for EU-BIOSOLIDSXFER, including a monitoring schedule to determine the breakthrough curve.
 - c. Criteria that identify when the carbon in the carbon adsorption odor control unit must be changed.
 - d. A description of the corrective procedures or operational changes to be taken in the event of a malfunction of FG-BIOSOLIDS.
 - e. Criteria that identify when EU-BIOSOLIDSXFER can be vented to the sodium hydroxide/sodium hypochlorite scrubbers and when EU-BIOSOLIDSXFER must vent to the carbon adsorption odor control unit in order to minimize nuisance odors.
2. The permittee shall operate each odor control scrubber when the corresponding EU-BIOSOLIDS Biosolids Storage Tank has the potential to generate odors, except in the event of a scrubber malfunction (which shall be expeditiously corrected) or scheduled maintenance. The nuisance minimization plan required in special condition No. III.1 shall include provisions to repair the odor control system, and bring it back into operation, as expeditiously as possible. **(R 336.1224, R 336.1225, R 336.1901, R 336.1910)**

3. The permittee shall maintain the pH, oxidation-reduction potential, make-up water flow rate, and differential pressure of each odor control scrubber as specified in the nuisance minimization plan. **(R 336.1224, R 336.1225, R 336.1901, R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate an EU-BIOSOLIDS odor control scrubber unless an alarm, which notifies the operator when any parameter monitored in SC VI.1 does not meet the required value(s) specified in SC III.3, is installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1901, R 336.1910)**
2. The permittee shall not transfer material to EU-BIOSOLIDSXFER unless the odor control unit (carbon adsorption control or sodium hydroxide/sodium hypochlorite scrubbers) is installed, maintained, and operated in a satisfactory manner. **(R 336.1224, R 336.1901, R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, devices to monitor, on a continuous basis, the following operating parameters for each odor control scrubber. **(R 336.1224, R 336.1225, R 336.1901, R 336.1910)**
 - a.) The scrubber liquid pH,
 - b.) The scrubber liquid oxidation-reduction potential,
 - c.) The scrubber make-up water flow rate, and
 - d.) The scrubber differential pressure.
2. The permittee shall keep, in a satisfactory manner, records of each alarm event including the cause of the alarm, the values of any parameters not meeting the required values specified in SC III.3, and actions taken to resolve the cause of the alarm condition. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1901, R 336.1910)**
3. The permittee shall monitor, in a satisfactory manner, the progress toward breakthrough for the carbon adsorption odor control unit with the frequency described in the approved plan required in SC III.1, when the carbon adsorption odor control unit is used as the control device for EU-BIOSOLIDSXFER. **(R 336.1910)**
4. The permittee shall keep, in a satisfactory manner, monthly records of the results of monitoring the progress toward breakthrough for the carbon adsorption odor control unit, as required by SC VI.3. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1910)**
5. The permittee shall keep, in a satisfactory manner, a record of the dates of adsorbent replacement for the carbon adsorption odor control unit. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1910)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-1	30 ¹	29.5 ¹	R 336.1225
2. SV-2	30 ¹	29.5 ¹	R 336.1225
3. SV-3	30 ¹	29.5 ¹	R 336.1225

IX. OTHER REQUIREMENTS

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).