



described alleged violations and the alleged violations referenced in the AQD letters of violation dated November 5, 2002, November 19, 2002 and March 3, 2003. The City and MDEQ stipulate to the termination of this proceeding by entry of a Stipulation for Entry of a Final Order by Consent ("Consent Order").

The City and MDEQ stipulate as follows:

1. The Natural Resources and Environmental Protection Act, 1994 PA 451, ("Act 451"), MCL 324.101 et seq is an act that controls pollution to protect the environment and natural resources in the State.
2. Article II, Pollution Control, Part 55 of Act 451 ("Part 55"), MCL 324.5501 et seq provides for air pollution control regulations in this State.
3. The Michigan Department of Natural Resources ("MDNR") is authorized pursuant to Section 5503 of Part 55 to administer and enforce all provisions of Part 55. Section 301 of Part 3 provides the authority to the Director of the MDNR to delegate powers and duties.
4. The MDEQ was created as a principal department within the Executive Branch of the State of Michigan pursuant to Executive Order 1995-18. All statutory authority, powers, duties, functions and responsibilities of the MDNR AQD were transferred to the Director of the MDEQ ("Director").
5. The Director has delegated authority to the Chief of the AQD ("AQD Chief") to enter into this Consent Order.
6. The termination of this matter by a Consent Order pursuant to Section 5528 of Part 55 is proper and acceptable.
7. The City and the MDEQ agree that the signing of this Consent Order is for settlement purposes only and does not constitute an admission by the City of any fact or law or that the law has been violated.
8. This Consent Order becomes effective on the date of execution ("effective date of this Consent Order") by the AQD Chief.
9. The City shall achieve compliance with the aforementioned regulations in accordance with the requirements contained in this Consent Order.

COMPLIANCE PROGRAM AND IMPLEMENTATION SCHEDULE10. A. Permit

1. Upon issuance of Permit to Install No. 228-73A, or any subsequent modifications thereof, the City shall comply with its terms and conditions, which is attached as Exhibit A, except as provided in 10.A.2 below. Exhibit A is incorporated by reference, and made an enforceable part of this Consent Order.

2. After the issuance of PTI No. 228-73A, or any subsequent modifications thereof, and after completion of the stack testing outlined in paragraph 13, the City shall fully comply with the particulate emission limits as specified in the permit.

B. Control Program and Installation Schedule

1. By June 30, 2005, the City shall install, calibrate, maintain and operate, in a satisfactory manner, a total hydrocarbons and oxygen CEMS for the exhaust gas from incinerators #1 and #2 in accordance with the procedures set forth in Exhibit E.

2. By June 30, 2006, the City shall install, calibrate, maintain and operate, in a satisfactory manner, a total hydrocarbons and oxygen CEMS for the exhaust gas from incinerators #3 and #4 in accordance with the procedures set forth in Exhibit E.

3. By June 30, 2006, the City shall have installed separate natural gas usage monitors, thermocouples, and pressure drop recording devices, on incinerators #3 and #4 pursuant to 40 CFR Part 60, Subpart O.

C. Preventative Maintenance and Malfunction Abatement Plan (PM/MAP)

1. Within 60 days after the approval of the PM/MAP, and after issuance of PTI No. 228-73A, the City shall fully implement and comply with the PM/MAP which was approved by AQD on December 22, 2004, or any alternate PM/MAP approved by the AQD. The PM/MAP shall be attached as Exhibit C, incorporated by reference, and made an enforceable part of this Consent Order.

RECORDKEEPING AND REPORTING

11. Upon issuance of PTI No. 228-73A, or any subsequent modifications thereof, the City shall keep records and submit reports as required in the permit. This information shall be kept on file at the plant for a period of at least five (5) years, and shall be made available to MDEQ upon written or verbal request.

12. On and after the effective date of this Consent Order, the City shall submit complete annual biosolids reports as required by 40 CFR Part 503, Subpart E, and in accordance with methods and procedures approved by the Water Division Lansing District Supervisor. The reporting period runs from October 1 to September 30 of the following year. The annual report shall be due on October 30 and shall be submitted to the Water Division Lansing District Supervisor, in an approved format, beginning October 30, 2007. A copy of the report shall also be sent to the AQD Lansing District Supervisor. Refer to Exhibit E for additional reporting requirements.

#### TESTING

13. The City shall conduct a Particulate Subpart O Performance test on Incinerators #3 and #4 during which monitoring and recording devices required under 40 CFR 60.153(a)(1), (b)(2), (b)(3) and (b)(4) are installed and operating, in accordance with methods and procedures approved by the AQD Lansing District Supervisor to demonstrate compliance with the particulate emission limitations specified in Permit No. 228-73A, or any subsequent modifications thereof. Testing shall be conducted in accordance with the following schedule:

A. By May 30, 2007, the City shall submit a test plan which meets the requirements of Format for Submittal of Source Emission Test Plans and Reports (4/04), which is attached to this Consent Order as Exhibit B to the AQD Lansing District Supervisor and the Compliance Support Unit Chief for approval prior to testing.

B. Not less than seven (7) days prior to testing, the City or its authorized agent, shall notify the AQD Lansing District Supervisor and the Compliance Support Unit Chief, in writing, of the time and place of the tests and who shall conduct them. A representative of the AQD shall have the opportunity to witness the tests.

C. Within ninety (90) days after the test plan has been approved, the City shall have completed the testing in accordance with the approved test plan.

D. Within sixty (60) days following the last date of the test, the City shall submit to the AQD Lansing District Supervisor, a test report, which includes the test data and results, in accordance with the requirements specified in Exhibit B.

SUPPLEMENTAL ENVIRONMENTAL PROJECT

14. The City agrees to undertake the Supplemental Environmental Project (SEP) described in Exhibit D which is attached, incorporated by reference and made enforceable under this Consent Order. Performance of the SEP will benefit the environment and is a project which the City is not otherwise legally required to perform. The City agrees to implement the SEP in accordance with the details specified in Exhibit D and the following terms and conditions:

A. The total expenditure for the SEP is estimated to be \$796,000.00 as provided below. All costs of the SEP shall be the responsibility of the City. For the SEP which is fully and completely implemented, to the extent that the actual expenditures for the SEP totals less than 60% of \$796,000.00, the City is subject to a stipulated penalty of up to \$10,000.00 depending on the size of the monetary shortfall realized by the City. Payment of any stipulated penalty shall be made as outlined in paragraph 18.

B. The plan included as Exhibit D contains a schedule, including specific dates for the implementation of the SEP. The City shall fully implement all aspects of the SEP within the specified schedule.

C. The City certifies that the City is not otherwise required by any local, state, or federal statute, regulation, rule, order, decree, permit, or other law or agreement, to develop or implement the SEP activities specified in Exhibit D. The City further certifies that the City has not received, and is not presently negotiating to receive, a credit for the SEP as part of any other enforcement action or any grant from the state, Environmental Protection Agency (EPA) or any other entity. The City also certifies that the City will not seek tax benefits following completion of the SEP.

D. In the event the City fails to fully and completely implement the SEP as provided here, the DEQ will provide written notice to the City describing the nature of the deficiency. The City shall have thirty (30) days from receipt of the notice to submit documentation to the AQD Lansing District Supervisor demonstrating that the deficiency has been corrected. In the event the deficiency is not corrected, the City will be notified and the City shall be in violation of this Consent Order and required to pay a stipulated penalty of \$50,240.00 to the DEQ, subject to the requirements of paragraph 21. The amount of the stipulated penalty may be reduced or waived by the DEQ if the City made good faith and timely efforts to complete the project. Payment of stipulated penalties under the terms of this paragraph shall satisfy the City's obligation to complete the SEP under this Consent Order. Payment of any stipulated penalty shall be made as outlined in paragraph 18.

E. The City agrees that any public statement, oral or written, making reference to the SEP shall include the following language: "This project was undertaken in connection with the settlement of an enforcement action taken by the Michigan Department of Environmental Quality for alleged violations of the federal Clean Air and Clean Water Acts."

F. After the effective date of this Consent Order, until completion of all activities specified in Exhibit D, the City shall provide the AQD Lansing District Supervisor with a progress report every Quarter. Each progress report shall include a description of the SEP activities the City completed in the prior Quarter.

G. No later than thirty (30) days after the completion of all activities specified in Exhibit D, the City shall submit written certification of completion of the SEP to the AQD Lansing District Supervisor demonstrating that all SEP activities specified in Exhibit D have been completed in accordance with the terms and conditions of this Consent Order and Exhibit D. The certification shall be accompanied by appropriate documentation (such as invoices, receipts,) to verify the total expenditure made by the City as a result of implementing the activities specified under Exhibit D.

#### GENERAL PROVISIONS

15. This Consent Order in no way affects the City's responsibility to comply with any other applicable state and federal, or local laws or regulations, including without limitation, any amendments to the federal Clean Air Act, 42 USC 7401 *et seq.*, Act 451, Part 55 or their rules and regulations, or to the State Implementation Plan.

16. This Consent Order constitutes a civil settlement and satisfaction as to the resolution of the violations specifically addressed herein; however, it does not resolve any criminal action that may result from these same violations.

17. Within thirty (30) days after the effective date of this Consent Order, the City shall pay to the General Fund of the State of Michigan, in the form of a check made payable to the "State of Michigan" and delivered to the Michigan Department of Environmental Quality, Financial and Business Services Division, Revenue Control, P.O. Box 30657, Lansing, Michigan 48909-8157, a settlement amount of \$16,750.00, which includes AQD costs for investigation and enforcement. This total settlement amount shall be paid within thirty (30) days of the effective date of this Consent Order. To ensure proper credit, all payments made pursuant to this Consent Order shall include the Agreement

Identification No. AQD 3221 on the face of the check. This settlement amount is in addition to any fees, taxes, or other fines that may be imposed on the City by law.

18. On and after the effective date of this Consent Order, if the City fails to comply with paragraphs 10.A.2, 10.B.1, 10.B.2, or 10.B.3 of this Consent Order, the City shall pay stipulated fines of \$2,500.00 per violation per day. On and after the effective date of this Consent Order, if the City fails to comply with paragraphs 11, 12, or 13 of this Consent Order, the City shall pay stipulated fines of \$2,000.00 per violation per day. On and after the effective date of this Consent Order, if the City fails to comply with any other provision of this Consent Order except paragraphs 14.A and 14.E, the City shall pay stipulated fines of \$500.00 per violation per day. Stipulated fines submitted under this Consent Order shall be by check, payable to the State of Michigan within thirty (30) days of demand and shall be delivered to the Michigan Department of Environmental Quality, Financial and Business Services Division, Revenue Control, P.O. Box 30657, Lansing, Michigan 48909-8157. To ensure proper credit, all payments shall include the Agreement Identification No. AQD 3221-S on the face of the check. Payment of stipulated fines shall not alter or modify in any way the City's obligation to comply with the terms and conditions of this Consent Order.

19. The AQD, at its discretion, may seek stipulated fines or statutory fines for any violation of this Consent Order which is also a violation of any provision of applicable federal and state law, rule, regulation, permit, or MDEQ administrative order. However, the AQD is precluded from seeking both a stipulated fine under this Consent Order and a statutory fine for the same violation.

20. To ensure timely payment of the settlement amount assessed in paragraph 17 and any stipulated fines assessed pursuant to paragraph 18 of this Consent Order, the City shall pay an interest penalty to the State of Michigan each time it fails to make a complete or timely payment under this Consent Order. The interest penalty shall be determined at a rate that is one percent (1%) plus the average interest rate paid at auctions of 5-year United States Treasury notes during the six (6) months immediately preceding July 1 and January 1, as certified by the State Treasurer, compounded annually, using the full amount due as principal, calculated from the due date specified in this Consent Order until the date that delinquent payment is finally paid in full. Payment of an interest penalty by the City shall be made to the State of Michigan in accordance with paragraph 17 of this Consent Order. Interest payments shall be applied first towards the most overdue amount or outstanding interest penalty owed by the City before any remaining balance is applied to subsequent payment amount or interest penalty.

21. The City agrees not to contest the legal basis for the settlement amount assessed pursuant to paragraph 17. The City also agrees not to contest the legal basis for any stipulated fines assessed pursuant to paragraph 18 of this Consent Order, but reserves the right to dispute in a court of competent jurisdiction the factual basis upon which a demand by MDEQ of stipulated fines is made. In addition, the City agrees that said fines have not been assessed by the MDEQ pursuant to Section 5529 of Part 55 and therefore are not reviewable under Section 5529 of Part 55.

22. This compliance program is not a variance subject to the 12 month limitation specified in Section 5538 of Part 55.

23. This Consent Order shall remain in full force and effect for a period of at least four (4) years. Thereafter, the Consent Order shall terminate only upon written notice of termination issued by the AQD Chief. Prior to issuance of a written notice of termination, the City shall submit a request consisting of a written certification that the City has fully complied with all the requirements of this Consent Order and has made all payments including all stipulated fines required by this Consent Order. Specifically, this certification shall include: (i) the date of compliance with each provision of the compliance program and the date any payments or stipulated fines were paid; (ii) a statement that all required information has been reported to the AQD Lansing District Supervisor; (iii) confirmation that all records required to be maintained pursuant to this Consent Order are being maintained at the facility; and, (iv) such information as may be requested by the AQD Chief.

24. In the event City of Flint, Water Pollution Control Facility sells or transfers the facility, with SRN B1598, it shall advise any purchaser or transferee of the existence of this Consent Order in connection with such sale or transfer. Within thirty (30) calendar days, the City shall also notify the AQD Lansing District Supervisor, in writing, of such sale or transfer, the identity and address of any purchaser or transferee, and confirm the fact that notice of this Consent Order has been given to the purchaser and/or transferee. The purchaser and/or transferee of this Consent Order must agree, in writing, to assume all of the obligations of this Consent Order. A copy of that agreement shall be forwarded to the AQD Lansing District Supervisor within thirty (30) days of assuming the obligations of this Consent Order.

25. Prior to the effective date of this Consent Order and pursuant to the requirements of Sections 5511 and 5528(3) of Part 55, the public was notified of a 30-day public comment period and was provided the opportunity for a public hearing.



26. Section 5530 of Part 55 may serve as a source of authority but not a limitation under which the Consent Order may be enforced. Further, Part 17 of Act 451 and all other applicable laws and any other legal basis or applicable statute may be used to enforce this Consent Order.

The undersigned certifies that he/she is fully authorized by the City to enter into this Consent Order and to execute and legally bind the City to it.

City of Flint, Water Pollution Control Facility

Robert J. Case, WPC Supervisor  
Print Name and Title

Robert J. Case Date: 6/14/05  
Signature

The above signatory subscribed and sworn to before me this 14<sup>th</sup> day of June, 2005.

[Signature]  
Notary Public  
My Comm. Expires: 7/17/07

Approved as to Content:

Approved as to Form:

[Signature]  
G. Vinson Hellwig, Chief  
AIR QUALITY DIVISION  
DEPARTMENT OF  
ENVIRONMENTAL QUALITY

[Signature]  
Alan F. Hoffman, Section Head  
ENVIRONMENTAL REGULATION SECTION  
ENVIRONMENT, NATURAL RESOURCES,  
AND AGRICULTURE DIVISION  
DEPARTMENT OF ATTORNEY GENERAL

Dated: 6/23/05

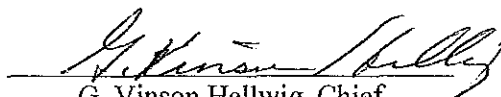
Dated: 6/20/05

FINAL ORDER

The Chief of the Air Quality Division having had opportunity to review the Consent Order and having been delegated authority to enter into Consent Orders by the Director of the Michigan Department of Environmental Quality pursuant to the provisions of Part 55 of Act 451 and otherwise being fully advised on the premises,

HAS HEREBY ORDERED that the Consent Order is approved and shall be entered in the record of the MDEQ as a Final Order.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY



G. Vinson Hellwig, Chief  
Air Quality Division

Dated: 6/23/05

EXHIBIT A

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION

December 17, 2004

NEW SOURCE REVIEW PERMIT TO INSTALL

228-73A

ISSUED TO  
City of Flint - Water Pollution Control Facility

LOCATED AT  
G-4652 Beecher Road  
Flint, Michigan

IN THE COUNTY OF  
Genesee

STATE REGISTRATION NUMBER

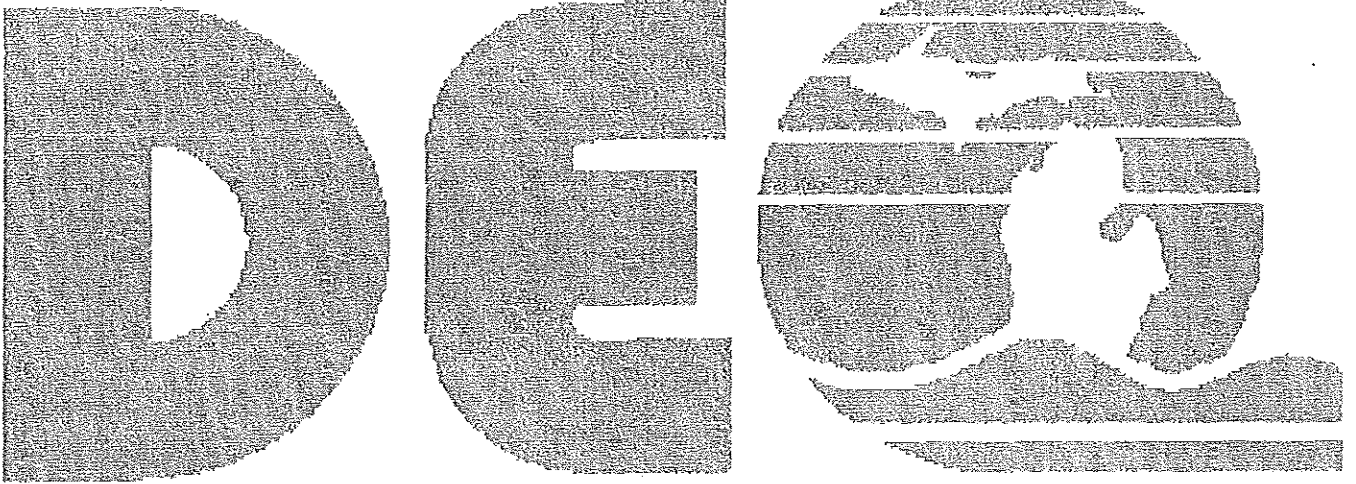
B1598

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 Part 5505(1) of Article II, Chapter I, Part 55 (Air Pollution Control) of P.A. 451 of 1994. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittees 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: <b>July 2, 2004</b>	
DATE PERMIT TO INSTALL APPROVED: <b>December 17, 2004</b>	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:

DATE PERMIT REVOKED:

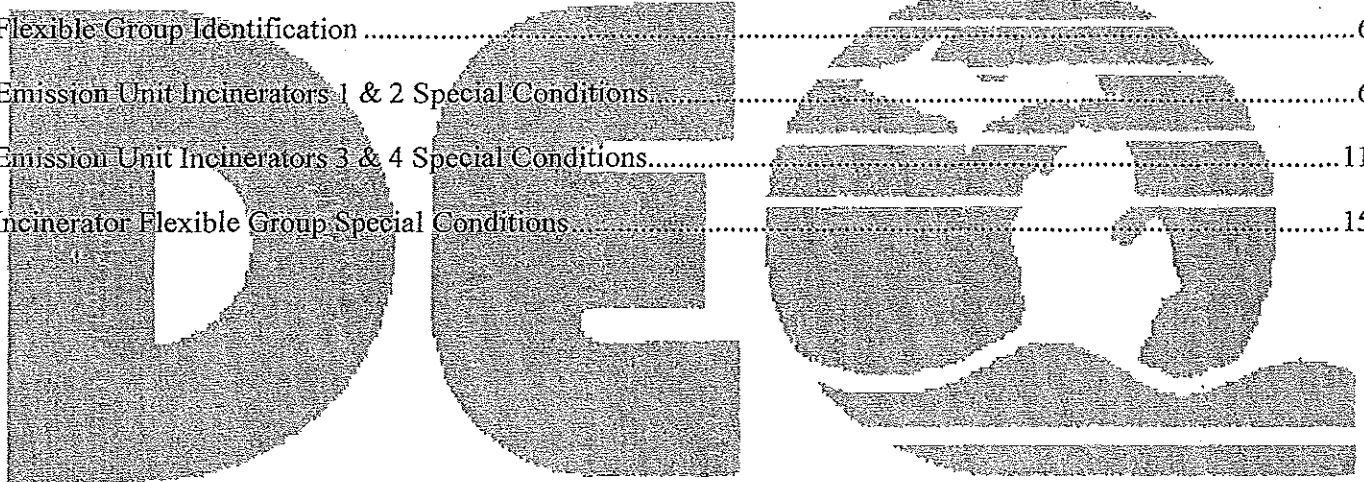
SIGNATURE:



PERMIT TO INSTALL

Table of Contents

Section	Page
Alphabetical Listing of Common Abbreviations / Acronyms.....	2
General Conditions.....	3
Emission Unit Identification.....	6
Flexible Group Identification.....	6
Emission Unit Incinerators 1 & 2 Special Conditions.....	6
Emission Unit Incinerators 3 & 4 Special Conditions.....	11
Incinerator Flexible Group Special Conditions.....	15



### Common Abbreviations / Acronyms

Common Acronyms		Pollutant/Measurement Abbreviations	
AQD	Air Quality Division	Btu	British Thermal Unit
ANSI	American National Standards Institute	°C	Degrees Celsius
BACT	Best Available Control Technology	CO	Carbon Monoxide
CAA	Clean Air Act	dscf	Dry standard cubic foot
CEM	Continuous Emission Monitoring	dscm	Dry standard cubic meter
CFR	Code of Federal Regulations	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H <sub>2</sub> S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
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	NOx	Oxides of Nitrogen
MAP	Malfunction Abatement Plan	PM	Particulate Matter
MDEQ	Michigan Department of Environmental Quality	PM-10	Particulate Matter less than 10 microns diameter
MIOSHA	Michigan Occupational Safety & Health Administration	pph	Pound per hour
MSDS	Material Safety Data Sheet	ppm	Parts per million
NESHAP	National Emission Standard for Hazardous Air Pollutants	ppmv	Parts per million by volume
NSPS	New Source Performance Standards	ppmw	Parts per million by weight
NSR	New Source Review	psia	Pounds per square inch absolute
PS	Performance Specification	psig	Pounds per square inch gauge
PSD	Prevention of Significant Deterioration	scf	Standard cubic feet
PTE	Permanent Total Enclosure	sec	Seconds
PTI	Permit to Install	SO <sub>2</sub>	Sulfur Dioxide
RACT	Reasonable Available Control Technology	THC	Total Hydrocarbons
ROP	Renewable Operating Permit	tpy	Tons per year
SC	Special Condition Number	µg	Microgram
SCR	Selective Catalytic Reduction	VOC	Volatile Organic Compounds
SRN	State Registration Number	yr	Year
TAC	Toxic Air Contaminant		
VE	Visible Emissions		

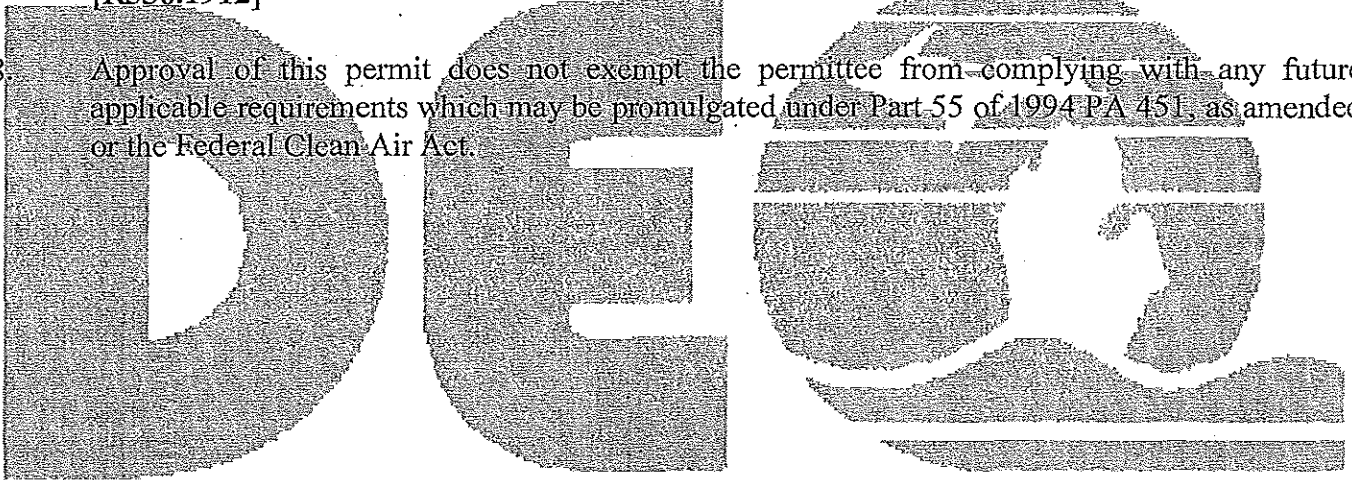
\* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

## 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. [R336.1201(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, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. [R336.1201(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 R336.1210, 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. [R336.1201(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. [R336.1201(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 R336.1219 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 R336.1219. The written request shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. [R336.1219]
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. [R336.1901]

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).  
[R336.1912]

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 R336.1301, 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 R336.1303. [R336.1301]
  - 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 R336.1370(2). [R336.1370]
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R336.2001 and R336.2003, under any of the conditions listed in R336.2001. [R336.2001]

**SPECIAL CONDITIONS**

**Emission Unit Identification**

<b>Emission Unit ID</b>	<b>Emission Unit Description</b>	<b>Stack Identification</b>
EU-INCINERATOR1	Six-Hearth sewage sludge incinerator controlled with a venturi and impingement tray scrubber and mist eliminators.	SV-INCINERATOR1
EU-INCINERATOR2	Six-Hearth sewage sludge incinerator controlled with a venturi and impingement tray scrubber and mist eliminators.	SV-INCINERATOR2
EU-INCINERATOR3	Six-Hearth sewage sludge incinerator controlled with a venturi and impingement tray scrubber and mist eliminators.	SV-INCINERATOR3
EU-INCINERATOR4	Six-Hearth sewage sludge incinerator controlled with a venturi and impingement tray scrubber and mist eliminators.	SV-INCINERATOR4
Changes to the equipment described in this table are subject to the requirements of R336.1201, except as allowed by R336.1278 to R336.1290.		

**Flexible Group Identification**

<b>Flexible Group ID</b>	<b>Emission Units Included in Flexible Group</b>	<b>Stack Identification</b>
FG-INCINERATORS	EU-INCINERATOR1, EU-INCINERATOR2, EU-INCINERATOR3, EU-INCINERATOR4	n/a

**The following conditions apply to: EU-INCINERATOR1 and EU-INCINERATOR2**

**Emission Limits**

<b>Pollutant</b>	<b>Equipment</b>	<b>Limit</b>	<b>Time Period</b>	<b>Testing/ Monitoring Method</b>	<b>Applicable Requirement</b>

	Pollutant	Equipment	Limit	Time Period	Testing/ Monitoring Method	Applicable Requirement
1.1a	PM	EU- INCINERATOR1	0.20 lb/1000 lbs exhaust gas corrected to 50% excess air	Test Protocol*	GC 13	R336.1331
1.1b	PM	EU- INCINERATOR2	0.20 lb/1000 lbs exhaust gas corrected to 50% excess air	Test Protocol*	GC 13	R336.1331

\* Test protocol will specify averaging time period

### Process/Operational Limits

1.2 The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 61, Subparts A and E, as they apply to EU-INCINERATOR1 and EU-INCINERATOR2. [40 CFR Part 61 Subparts A and E]

### Equipment

1.3 The permittee shall not operate EU-INCINERATOR1 and EU-INCINERATOR2 unless each venturi scrubber and impingement tray scrubber is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining each scrubber (venturi plus impingement tray) at an hourly average total differential pressure drop of at least 12 (inches of water). [R336.1301, R336.1331, R336.1702 (a), R336.1901, R336.1910]

### Monitoring

1.4 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the oxygen content of the exhaust gas from EU-INCINERATOR1 and from EU-INCINERATOR2 on a continuous basis during all periods when the incinerator is operating. The incinerator is considered operating when any sludge is charged. The

oxygen monitor shall be located upstream of any cooling air inlet into the incinerator exhaust gas stream or any other source of dilution air. [R336.1702(a), R336.1901]

1.5 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a measuring device to determine the amount of sewage sludge charged to EU-INCINERATOR1 and charged to EU-INCINERATOR2, in wet tons per hour, on a continuous basis during all periods when the incinerator is operating. The incinerator is considered operating when any sludge is charged. [R336.1205(1)(a) and (3), R336.1301, R336.1331, R336.1702(a), R336.1901]

1.6 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the temperature in every hearth of EU-INCINERATOR1 and in every hearth of EU-INCINERATOR2 on a continuous basis during all periods when the incinerator is operating. The incinerator is considered operating when any sludge is charged. A minimum of one temperature measuring device shall be installed in each hearth in the cooling and drying zones, and a minimum of two temperature measuring devices shall be installed in each hearth in the combustion zone. [R336.1301, R336.1331, R336.1702(a), R336.1901]

1.7 The permittee shall collect and analyze a well-mixed, representative grab sample of the sewage sludge fed to EU-INCINERATOR1 and fed to EU-INCINERATOR2, for dry solids content, once per calendar day of operation. The incinerator is considered operating when any sludge is charged. [R336.1205(1)(a) and (3), R336.1301, R336.1331, R336.1702(a), R336.1901]

1.8 No later than December 31, 2005, the permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the water flow through each scrubber (precooler, venturi and impingement tray) on a continuous basis during all periods when the incinerator is operating. The incinerator is considered operating when any sludge is charged. [R336.1301, R336.1331, R336.1702(a), R336.1901, R336.1910]

1.9 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the differential pressure across the inlet and outlet of the scrubber (venturi plus impingement tray) on a continuous basis during all periods when the incinerator is operating. The incinerator is considered operating when any sludge is charged. [R336.1301, R336.1331, R336.1702(a), R336.1901, R336.1910]

#### **Recordkeeping/Reporting/Notification**

1.10 The permittee shall keep records of mercury emission test results and other data needed to determine total mercury emissions to comply with the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 61 Subparts A and E. All data shall be retained at the source and kept on file for a period of at least five years and made

available to the Department upon request.  
 [40 CFR Part 61.53(d)(6)]

1.11 The permittee shall keep, in a satisfactory manner, the following records for EU-INCINERATOR1 and EU-INCINERATOR2 for each calendar day when the incinerator is operating:

- a) Hourly oxygen content of the incinerator exhaust gas
- b) Hourly sewage sludge feed-rate (in wet tons per hour)

c) Hourly temperature in each hearth

d) The total solids content of the sludge charged to each incinerator

e) Hourly incinerator exhaust gas temperature measured between the incinerator exit and scrubber inlet

All records shall be kept on file for a period of at least five years and made available to the Department upon request. [R336.1205(1)(a) and (3), R336.1301, R336.1331, R336.1702(a), R336.1901, 40 CFR Part 61 Subpart E]

1.12 Upon installation of the monitor required in SC 1.8, the permittee shall keep, in a satisfactory manner, records of the water flow through each scrubber (precooler, venturi and impingement tray), on a calendar day average when the incinerator is operating. All records shall be kept on file for a period of at least five years and made available to the Department upon request. [R336.1301, R336.1331, R336.1702(a), R336.1901, R336.1910]

1.13 The permittee shall keep, in a satisfactory manner, records of the pressure drop across each scrubber (venturi plus impingement tray), each hour when the incinerator is operating. All records shall be kept on file for a period of at least five years and made available to the Department upon request. [R336.1301, R336.1331, R336.1702(a), R336.1901, R336.1910]

**Stack/Vent Restrictions**

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
1.14a	SV-STACK01	38	100	R336.1201(3)
1.14b	SV-STACK02	38	100	R336.1201(3)
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

D

E



**The following conditions apply to: EU-INCINERATOR3 and EU-INCINERATOR4**

**Emission Limits**

	Pollutant	Equipment	Limit	Time Period	Testing/ Monitoring Method	Applicable Requirement
2.1a	PM	EU- INCINERATOR3	1.3 lb/ton dry sewage sludge	Test Protocol*	SC 2.6	60 CFR 60.152 (a)(1)
2.1b	PM	EU- INCINERATOR4	1.3 lb/ton dry sewage sludge	Test Protocol*	SC 2.6	60 CFR 60.152 (a)(1)
2.1c	PM	EU- INCINERATOR3	0.20 lb/1000 lbs exhaust gas corrected to 50% excess air	Test Protocol*	GC 13	R336.1331
2.1d	PM	EU- INCINERATOR4	0.20 lb/1000 lbs exhaust gas corrected to 50% excess air	Test Protocol*	GC 13	R336.1331
* Test protocol will specify averaging time						

**Visible Emission Limits**

2.2 Visible emissions from EU-INCINERATOR3 and EU-INCINERATOR4 shall not exceed a six-minute average of 20 percent opacity. [40 CFR 60.152 (a)(2)]

**Process/Operational Limits**

2.3 The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 61, Subparts A and E, as they apply to EU-INCINERATOR3 and EU-INCINERATOR4. [40 CFR Part 61 Subparts A and E]



## Equipment

- 2.4 The permittee shall not operate EU-INCINERATOR3 and EU-INCINERATOR4 unless each venturi scrubber and impingement tray scrubber is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining each scrubber (venturi plus impingement tray) at an hourly average total differential pressure drop of at least 12 (inches of water). [R336.1301, R336.1331, R336.1702(a), R336.1901, R336.1910]

## Testing

- 2.5 No later than September 30, 2007, federal Standards of Performance for New Stationary Sources require evaluation of visible emissions from EU-INCINERATOR3 and EU-INCINERATOR4, at owner's expense, in accordance with 40 CFR Part 60 Subparts A and O. No less than 60 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. Verification of visible emissions includes the submittal of a complete report of opacity observations to the AQD within 60 days following the last date of the evaluation. [R336.1301, 40 CFR 60.8, 40 CFR 60.154 (b)(6)]

- 2.6 No later than September 30, 2007, federal Standards of Performance for New Stationary Sources require verification of PM emission rates from EU-INCINERATOR3 and EU-INCINERATOR4, by testing at owner's expense, in accordance with 40 CFR Part 60 Subparts A and O. Proper verification includes a performance test during which the monitoring and recording devices required under 60.153(a)(1), (b)(1), (b)(2), (b)(3), and (b)(4) are installed and operating and for which the sampling and analysis procedures required under 60.153(b)(5) are performed. The permittee shall notify the AQD District Supervisor in writing within 15 days of the date of initial startup in accordance with 40 CFR 60.7(a)(3). Stack testing procedures and the location of stack testing ports shall be in accordance with the applicable federal Reference Methods, 40 CFR Part 60 Appendix A. No less than 60 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. [40 CFR 60.8, 40 CFR 60.154(a), (b) and (d)]

## Monitoring

- 2.7 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the oxygen content of the exhaust gas from EU-INCINERATOR3 and from EU-INCINERATOR4 on a continuous basis during all periods when the incinerator is operating. The incinerator is considered operating when any sludge is charged. The oxygen monitor shall be located upstream of any cooling air inlet into the incinerator exhaust gas stream or any other source of dilution air. [R336.1702(a), R336.1901, 40 CFR 60.153(b)(2)]



2.8 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a measuring device to determine the amount of sewage sludge charged to EU-INCINERATOR3 and charged to EU-INCINERATOR4, in wet tons per hour, on a continuous basis during all periods when the incinerator is operating. The incinerator is considered operating when any sludge is charged. [R336.1205(1)(a) and (3), R336.1301, R336.1331, R336.1702(a), R336.1901, 40 CFR 60.153(a)(1)]

2.9 No later than December 31, 2005, the permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the auxiliary fuel flow to EU-INCINERATOR3 and auxiliary fuel flow to EU-INCINERATOR4 on a continuous basis during all periods when the incinerator is operating. The incinerator is considered operating when any sludge is charged. [40 CFR 60.153(b)(4)]

2.10 No later than December 31, 2005, the permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the temperature in every hearth of EU-INCINERATOR3 and in every hearth of EU-INCINERATOR4 on a continuous basis during all periods when the incinerator is operating. The incinerator is considered operating when any sludge is charged. A minimum of one temperature measuring device shall be installed in each hearth in the cooling and drying zones, and a minimum of two temperature measuring devices shall be installed in each hearth in the combustion zone. [R336.1301, R336.1331, R336.1702(a), R336.1901, 40 CFR 60.153(b)(3)]

2.11 The permittee shall collect and analyze a well-mixed representative grab sample of the sewage sludge fed to EU-INCINERATOR3 and fed to EU-INCINERATOR4, for dry solids content, once per calendar day in accordance with 40 CFR 60.154 (b)(5), except that the determination of volatile solids, step (3)(b) of the method, may not be deleted. If the performance test for PM, pursuant to SC 2.6, shows PM emissions less than 0.75 lb per ton of dry sewage sludge input, then the determination of volatile solids is no longer applicable. [R336.1205(1)(a) and (3), R336.1301, R336.1331, R336.1702(a), R336.1901, 40 CFR 60.153(b)(5)]

2.12 No later than December 31, 2005, the permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the water flow through each scrubber (precooler, venturi, plus impingement tray) on a continuous basis during all periods when the incinerator is operating. The incinerator is considered operating when any sludge is charged. [R336.1301, R336.1331, R336.1702(a), R336.1901, R336.1910]

2.13 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the differential pressure across the inlet and outlet of the scrubber (venturi plus impingement tray) on a continuous basis during all periods when the incinerator is operating. The incinerator is considered operating when any sludge is charged. [R336.1301, R336.1331, R336.1702(a), R336.1901, R336.1910, 40 CFR 60.153(b)(1)]

### Recordkeeping/Reporting/Notification

2.14 The permittee shall keep records of mercury emission test results and other data needed to determine total mercury emissions to comply with the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 61 Subparts A and E. All data shall be retained at the source and kept on file for a period of at least five years and made available to the Department upon request.  
[40 CFR Part 61.53(d)(6)]

2.15 The permittee shall keep, in a satisfactory manner, the following records for EU-INCINERATOR3 and EU-INCINERATOR4 for each calendar day when the incinerator is operating:

- a) Hourly oxygen content of the incinerator exhaust gas
- b) Hourly sewage sludge feed-rate (in wet tons per hour)
- c) Auxiliary fuel flow (records are required after installation of the monitor required in SC 2.9)
- d) Hourly temperature in each hearth
- e) The total solids content of the sludge charged to each incinerator
- f) Hourly incinerator exhaust gas temperature measured between the incinerator exit and scrubber inlet

All records shall be kept on file for a period of at least five years and made available to the Department upon request. [R336.1205(1)(a) and (3), R336.1301, R336.1331, R336.1702(a), R336.1901, 40 CFR 60.153 (c), 40 CFR Part 61 Subpart E]

2.16 Upon installation of the monitor required in SC 2.12, the permittee shall keep, in a satisfactory manner, records of the water flow through each scrubber (precooler, venturi and impingement tray), on a calendar day average when the incinerator is operating. All records shall be kept on file for a period of at least five years and made available to the Department upon request. [R336.1301, R336.1331, R336.1702(a), R336.1901, R336.1910]

2.17 The permittee shall keep, in a satisfactory manner, records of the pressure drop across each scrubber (venturi plus impingement tray), each hour when the incinerator is operating. All records shall be kept on file for a period of at least five years and made available to the Department upon request. [R336.1301, R336.1331, R336.1702(a), R336.1901, R336.1910]

**Stack/Vent Restrictions**

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
2.18a	SV-STACK03	38	100	R336.1201(3)
2.18b	SV-STACK04	38	100	R336.1201(3)
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

**The following conditions apply to: FG-INCINERATORS**

**Emission Limits**

	Pollutant	Equipment	Limit	Time Period	Testing/Monitoring Method	Applicable Requirement
3.1a	CO	FG-INCINERATORS	89 tpy	12-month rolling time period as determined at the end of each calendar month	SC 3.6 and see "Compliance Method" below	R336.1205(1)(a) and (3)
<p>Compliance Method for CO</p> $\text{CO (Tons per Day)} = [\text{Wet Tons Sludge Per Day} * \text{Cake solids content} * \text{CO}_{\text{EF}}] / 2000$ $\text{CO}_{\text{EF}} = 649 e^{-0.0033 \times (\text{hourly exit temperature averaged each day } ^\circ\text{F})}$ <p>*NOTE: Daily averages are based on the actual hours that the incinerator operated in a calendar day.</p>						

**Process/Operational Limits**

3.2 The permittee shall submit to the AQD District Supervisor, for review and approval, a malfunction abatement plan for FG-INCINERATORS. The permittee shall not operate FG-INCINERATORS unless the approved malfunction abatement plan is implemented and maintained. The plan shall include procedures for maintaining and operating in a satisfactory manner, FG-INCINERATORS and associated monitoring equipment during any malfunction events, and a program for corrective action for any malfunction events. If

the malfunction abatement plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction at the time the plan is initially developed, the owner or operator shall revise the malfunction abatement plan within 45 days after such an event occurs. [R336.1911, R336.1912]

3.3 No changes shall be made in the operation of FG-INCINERATORS which would potentially increase mercury emissions above the level determined by the most recent stack test, until a new emission level has been estimated by calculation and the results reported to the Department. [40 CFR 61.53 (d)(4)]

3.4 The oxygen content of the exhaust gas in each incinerator included in FG-INCINERATORS shall not be less than 6 percent wet, based on an 8-hour average. An alternate oxygen content will apply if the permittee requests an alternate limit and can demonstrate, to the satisfaction and approval of the AQD District Supervisor, that there is not a meaningful increase in the total hydrocarbon emissions when the oxygen content decreases to the level proposed as a new limit. The permittee shall use actual data from the total hydrocarbon continuous emission monitor while it is operating in compliance with the Consent Order. The AQD District Supervisor will indicate acceptance of the applicable new limit by a letter to the permittee. [R336.1205 (1)(a) and (3), R336.1702(a), R336.1901]

3.5 The permittee shall not operate FG-INCINERATORS unless a minimum temperature of 1,000 °F, based on an 8-hour average, is maintained at each incinerator exit. [R336.1205 (1)(a) and (3), R336.1702(a), R336.1901]

#### **Recordkeeping/Reporting/Notification**

3.6 The permittee shall keep, in a satisfactory manner, daily and 12-month rolling time period CO calculation records for FG-INCINERATORS, as required by SC 3.1. All records shall be kept on file for a period of at least five years and made available to the Department upon request. [R336.1205(1)(a) and (3)]

3.7 The permittee shall keep, in a satisfactory manner, daily and monthly total hydrocarbon emission records for FG-INCINERATORS, from the continuous emission monitor while it is operating under the Consent Order. All records shall be kept on file and made available to the Department upon request. [R336.1205(1)(a) and (3), R336.1702(a), R336.1901]

EXHIBIT B  
MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY DIVISION

FORMAT FOR SUBMITTAL OF SOURCE EMISSION  
TEST PLANS AND REPORTS

April 2004

INTRODUCTION

The source emission test is often the ultimate determination of compliance. The results of a test are of great significance to both the regulatory agency and the source. Since the results often determine the course of future enforcement discussions between the agency and the source, it is important that the test be performed in a valid and representative manner. The complex nature of the various sampling methods places great responsibility on both agency and testing personnel to assure each test is an accurate representation of a source's actual emissions.

The objective of this document is to describe the Air Quality Division's (AQD's) technical submittal requirements for a source test. The format described applies to the requirements of Michigan Department of Environmental Quality Rule 1001 (4), and to any other emission test submitted for reasons such as a permit requirement, for a consent order or consent judgment, or at the request of the AQD.

TEST PLAN SUBMITTAL

In order to establish uniform requirements and help ensure proper test methods and procedures are employed, **the information specified below should be submitted to the appropriate district office and the Technical Programs Unit in Lansing**, at least 30 days prior to the scheduled test date. A complete submittal will minimize the possibility of a test rejection as a result of improper sampling or data collection methods.

Testing shall be performed in strict accordance with procedures specified in the Code of Federal Regulations, Title 40, Part 60 (Standards of Performance for New Stationary Sources, Appendix A, as amended), Part 61 (National Emission Standards for Hazardous Air Pollutants, Appendix B), and Part 51 (Requirements for Preparation, Adoption, and Submittal of Implementation Plans, Appendix M); and the Michigan Department of Environmental Quality Rules, Part 10, Intermittent Testing and Sampling. Any variations in the sampling or analytical procedures must be described in the test plan and receive approval from the division prior to testing. If state or federal test methods are not available for the pollutants of concern or the nature of the test site makes it impractical to use them, other methods may be proposed as necessary.

While the specific items in the test plan will vary depending on the source and pollutants of interest, the following format should be utilized:

1. Identification and a brief description of the source to be tested. The description should include:
  - a. names, addresses and telephone numbers of the contacts for information regarding the source and the test plan,
  - b. type of industrial process or combustion facility,
  - c. type and quantity of raw and finished materials used in the process,
  - d. description of any cyclical or batch operations which would tend to produce variable emissions with time,
  - e. basic operating parameters used to regulate the process, and
  - f. rated capacity of the process. Process capacity can be demonstrated by calculating an average and maximum production reate using facility records. Based on these figures the facility shall include a production rate to be maintained during emission testing.
2. A brief description of any air pollution control equipment associated with the process:
  - a. type of control device,
  - b. operating parameters, and
  - c. rated capacity and efficiency,
  - d. any maintenance activity on the air pollution control equipment within the last three months.
3. Applicable permit number and emission limits for the process to be tested.
4. Identify all pollutants to be measured.
5. A description of the sampling train(s) to be used, including schematic diagrams if appropriate.
6. Detailed sampling and analysis procedures, including the applicable standard methods reference. This should include concentration of calibration gases where appropriate and expected emission concentrations. Method of calibration (through the system or to back of the monitor) should be indicated. Justify any proposed sampling or analytical modifications.
7. The number and length of sampling runs which will constitute a complete test.
8. Dimensioned sketch showing all sampling ports in relation to breeching and to upstream and downstream disturbances or obstructions of gas flow.
9. Estimated flue gas conditions such as temperature, moisture and velocity.
10. Projected process operating conditions during which the tests will be run (e.g., production rate). *These conditions should match the operating conditions stated in*

*the facility's permit or facility operations shall be at the maximum routine operating conditions during the test.*

11. A description of any process or control equipment data to be collected during the test period. This should include any permit required information used to demonstrate the acceptable operations of emissions control processes and production rates.
12. A description of any monitoring data to be collected during the test period and subsequently reported (e.g., stationary continuous emission monitor data).
13. Chain of custody procedures.
14. Field quality assurance/quality control procedures (e.g., field blanks, sample storage and transport methods).
15. Laboratory quality assurance/quality control procedures utilized as part of the testing (e.g., manner and frequency of blanks, spikes and standards). This should include analysis of audit samples where required as a component of the approved test method.
16. Names and titles of personnel who will be performing the tests.

*The facility information in items 1, 2, 3, 8, 10, 11 and 12 above can be submitted by completing the attached Facility Test Information form or with a letter signed by the responsible official, as defined in Michigan Air Pollution Control Rule 336.1118(j). This letter shall certify that the testing will be conducted in accordance with the attached test plan and that the facility will be operated in compliance with permit conditions or at the maximum routine operating conditions for the facility. If the source operates under a Renewable Operating Permit, certification by a responsible official, using the Renewable Operating Permit Certification form (EQP 5736) must be included with the test plan and cover letter.*

## **EMISSION TEST REPORTING**

The emission test report should contain all pertinent data concerning the test program. In addition to reporting the results, it should include descriptions of the source, the sampling and analytical methodologies, the process operating conditions, and all raw field data, lab analytical data, and calculation methods. Since the report will serve as evidence to both the agency and the source as a demonstration of the compliance status of the facility, it is important it be complete in content and adequate in quality. Its contents should be presented in an understandable and organized manner. **The information listed below shall be submitted to the appropriate district office and the Technical Programs Unit** by the date specified in an applicable air use permit, consent order, consent judgment, or state or federal regulation. Otherwise, pursuant to Michigan Department of Environmental Quality Rule 1001(4), a complete test report shall be submitted to the AQD within 60 days following the last date of testing. In the event that the test report is not complete, additional information will be requested for submittal. If the information

is not received following two written requests to the facility, the test results may be rejected by the AQD.

While the exact format of the report and the applicable information necessary will vary depending on the source and the pollutants of interest, the following format should be utilized.

1. Introduction
  - a. identification, location and dates of tests,
  - b. purpose of testing,
  - c. brief description of source,
  - d. names, addresses and telephone numbers of the contacts for information regarding the test and the test report, and
  - e. names and affiliation of all personnel involved in conducting the testing.
2. Summary of Results
  - a. operating data (e.g., production rate, fuel type or composition),
  - b. applicable permit/license number or designation for the source,
  - c. results expressed in units consistent with the emission limitation applicable to the source, and
  - d. comparison with emission regulations.
3. Source Description
  - a. description of process, including operation of emission control equipment,
  - b. process flow sheet or diagram (if applicable),
  - c. type and quantity of raw and finished materials processed during the tests,
  - d. maximum and normal rated capacity of the process, and
  - e. description of process instrumentation monitored during the test.
4. Sampling and Analytical Procedures
  - a. description of sampling train(s) and field procedures,
  - b. description of recovery and analytical procedures,
  - c. dimensioned sketch showing all sampling ports in relation to breeching and to upstream and downstream disturbances or obstructions of gas flow,
  - d. sketch of cross-sectional view of stack indicating traverse point locations and exact stack dimensions.
5. Test Results and Discussion
  - a. detailed tabulation of results including process operating conditions and flue gas conditions,
  - b. discussion of significance of results relative to operating parameters and emission regulations,
  - c. discussion of any variations from normal sampling procedures or operating conditions which could have affected the results,
  - d. documentation of any process or control equipment upset condition which occurred during the testing,
  - e. description of any major maintenance performed on the air pollution control device(s) during the 3 month period prior to testing,



- f. in the event of a re-test, a description of any changes made to the process or air pollution control device(s) since the last test,
- g. results of any quality assurance audit sample analyses required by the reference method,
- h. calibration sheets for the dry gas meter, orifice meter, pitot tube, and any other equipment or analytical procedures which require calibration,
- i. sample calculations of all the formulas used to calculate the results,
- j. copies of all field data sheets, and
- k. copies of all laboratory data including quality assurance/quality control (e.g. blanks, spikes, standards).

*The facility information in items 1, 2 and 3 above can be submitted by completing the attached Facility Test Results form or in a letter signed by the responsible official, as defined in Michigan Air Pollution Control Rule 336.1118(j). This letter shall certify that the testing was conducted in accordance with the approved test plan and that the facility operating conditions were in compliance with permit requirements or were at the maximum routine operating conditions for the facility. If the source operates under a Renewable Operating Permit, certification by a responsible official using form, using the Renewable Operating Permit Certification form (EQP 5736), must be included with the emission test results and cover letter.*

#### REFERENCES

1. Michigan Department of Environmental Quality Rules, Part 10, Intermittent Testing and Sampling.
2. United States Environmental Protection Agency, Plant Inspection Workshop-Techniques for Evaluating Performance of Air Pollution Control Equipment: Observing Compliance Tests, February, 1981.

#### Mailing Address for the Technical Programs Unit

Michigan Department of Environmental Quality  
Air Quality Division  
Technical Programs Unit  
P.O. Box 30260  
Lansing, MI 48909

#### Street Address for Technical Programs Unit (needed for Federal Express, UPS, etc.)

Michigan Department of Environmental Quality  
Air Quality Division – Technical Programs Unit  
Constitution Hall, 3<sup>rd</sup> Floor North  
525 West Allegan Street  
Lansing, MI 48909

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION

Pre-Test Facility Information Form

**Facility Name:**

**Facility Address:**

**County:**

**Contact Person:**

**Telephone Number:**

**Fax Number:**

**Permit Number:**

**SRN:**

**Description of facility production (rates) or process (continuous or batch) operations:**

Historical average production rate:

Historical maximum production rate:

Production rate to be maintained during emissions monitoring:

**Air pollution control equipment and operation:**

**Maintenance activity on air pollution control equipment within last three months:**

**Production or process operations required during emissions testing:**

**Production or process control information to be recorded during emissions testing:**

**Air pollution equipment control equipment operating information to be recorded during emissions testing:**

**Representative from the facility must sign below certifying that the information provided on this form and any attached information is accurate and complete.**

**Signature:**

**Date:**

**Name:**

**Title:**

**Facility:**

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION

Post Test Facility Information Form

Facility Name:

Facility Address:

County:

Contact Person:

Telephone Number:

Fax Number:

Permit Number:

SRN:

Description of facility production rates or process operations during emissions sampling:

Are these items as described in test plan? If not provide an explanation for differences.

Air pollution control equipment and operations during emissions sampling:

Are these items as described in test plan? If not provide an explanation for differences.

Production or process control information recorded during emissions testing:

Air pollution equipment control equipment operating information recorded during emissions testing:

Based on the emission monitoring results is your facility in compliance with the applicable permit limitations?

Representative from the facility must sign below certifying that the information provided on this form and any attached information is accurate and complete.

Signature:

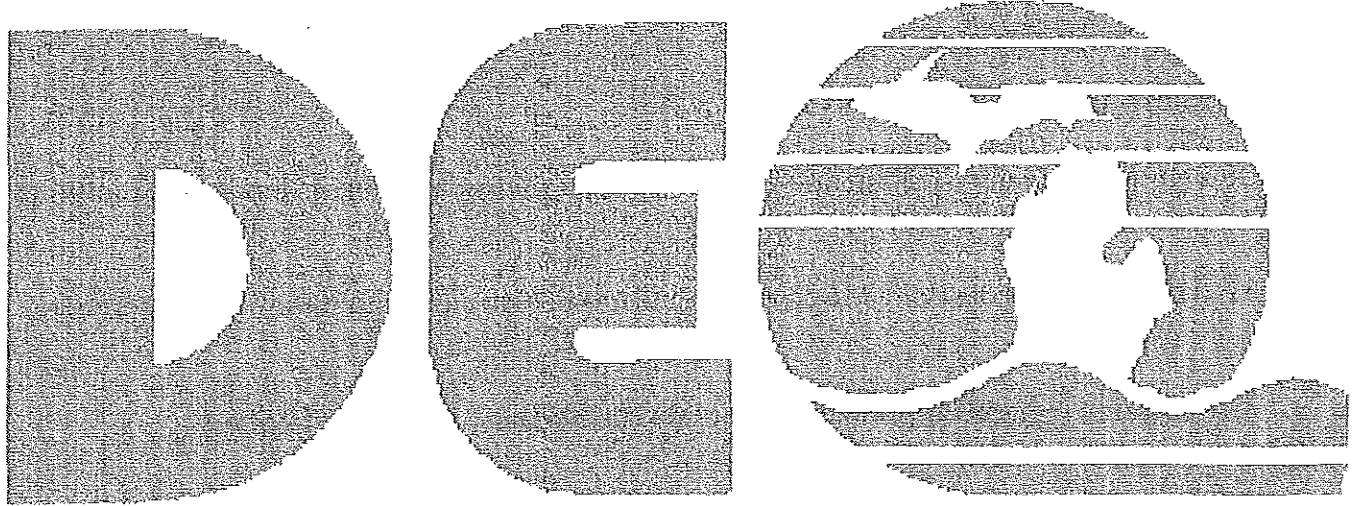
Date:

Name:

Title:

Facility:

EXHIBIT C  
(Preventative Maintenance and Malfunction Abatement Plan)



**EXHIBIT C**  
**Sludge Furnace Process Malfunction Abatement Plan**  
The City of Flint Water Pollution Control Plant

Process Parameter Reference Number	Process Parameter	Monitoring Device or Method	Location of Monitor	Normal Operating Range	Malfunction or Abnormal Process Range
1	Oxygen Level (%)	Oxygen Analyzer	Breech	>1 %	< 1%
2	Hearth 1 Temperature	Thermocouple	Hearth 1	> 750 °F.	< 750 °F
3	Afterburner Temperature	Thermocouple	Afterburner Chamber	> 1000 °F	< 1000 °F
4	Combustion Zone Temp	Thermocouple	Combustion Zone Hearths	>1250 °F	<1250 °F or > 2000 °F
5	Draft Pressure	Pressure gauge	Breech	0.0 to -1.5 in. H <sub>2</sub> O	> +0.0 in. H <sub>2</sub> O
6	Feed Rate	Weightometer	Conveyor Belt	0 to 6 Wet Tons Per Hour	> 6 Wet Tons Per Hour
7	Total Scrubber System Inlet-Outlet Diff. Pressure	Pressure gauges	Venturi Section Inlet and Tray Section Outlet	> 12 inches of H <sub>2</sub> O	< 12 in. of H <sub>2</sub> O
8	Scrubber Water Flow	Flow meters	Scrubber Water Supply Line	> 300 GPM	< 300 GPM
9	Sludge Combustion Air Supply	Shaft Return Air and Auxiliary Air Dampers	Control Room	0 to 100% Open	Unresponsive
10	Slag Buildup	Visual	Combustion Zone Hearths and Centershaft	All holes open and Centershaft clearance OK	≥ 25 % holes blocked. Centershaft not clear
11	Ash Buildup on Bottom Hearth	Visual	Basement	Empty (no buildup)	Plugged drop hole

Table 1

## Incineration Process Malfunction Abatement Plan

City of Flint Wastewater Treatment Plant

Process Parameter Reference Number	Condition	Possible Cause(s)	Corrective Procedures
1	Low oxygen	High Burner Use Profile	Reduce Burner Firing Rates or No. of Burners in Use
1	Low oxygen	Low draft pressure	Increase draft pressure setpoint
1	Low Oxygen	Process Changes or Control Problems	Increase oxygen setpoint, or Manually increase air damper openings
2	Low Hearth 1 Temperature	Feed Rate Increase or Low Cake Soilds	Increase Upper Hearth Burner Firing Rates and/or Reduce Feed Rate if necessary
3	Low Afterburner Temperature	Feed Rate Increase or Low Cake Soilds	Increase Afterburner Firing Rates and/or Reduce Feed Rate if necessary
4	Low Combustion Temps	Low burner use profiles	Increase number of burners in use and/or firing rates as needed.
4	Low Combustion Temps	Feed Rate Increase or Lower Cake Soilds	Increase number of burners in use and/or firing rates as needed. Or if necessary, reduce feed rate.
4	High Combustion Temps	Lost feed, burner use profile, or change in cake solids	Restore feed or reduce number of burners and/or firing rates
5	Low or High Draft	Various process changes	Increase or Decrease Draft Pressure Set point as Needed
6	No Feed	Conveyor(s) stopped or Dewatering Problems	Restart Conveyors and/or Correct Dewatering Problems
7	Low Scrubber System Differential Pressure	Various Process Changes	Increase venturi differential pressure set point
8	Low Scrubber Water Flow Rate	Incorrect Settings or Loss in Water Supply Pressure	Increase flow settings and/or Restore water supply pressure
9	Low or No Sludge Combustion Air Supply	Oxygen Control System or Air Damper Problems	Open Air Dampers in Manual Mode and Visually Check Damper Action. Open Lower Hearth Peep Holes If Necessary
Any	Preventative Maintenance	Other components shut off as a result of the P.M.	Control Burn Out and Place Incinerator in Standby Mode prior to P.M.
10	Slag Build-Up	High Combustion Zone Temps	De-Slag Affected Hearths and/or Centershaft sections if needed
11	Ash Buildup On Bottom Hearth	Ash system not removing ash	Check ash system. If not working, Stop Feed, Stop Shaft and Control Burn Out. Place on Standby Mode. Perform Corrective Maintenance.

## EXHIBIT D

### CITY OF FLINT UTILITIES DEPARTMENT-WATER POLLUTION CONTROL SUPPLEMENTAL ENVIRONMENTAL PROJECT PROPOSAL

**1. Enforcement Action** - Identify the name of the entity and the location of the site associated with the enforcement action. Include the city and county.

*City of Flint Water Pollution Control Facilities*

*G-4652 Beecher Road*

*Flint, MI 48532*

*Genesee County*

**2. Regulatory Information** - Provide a brief summary of all environmental enforcement actions, including compliance status, relating to the site identified above. For on-site projects, provide all MDEQ and Environmental Protection Agency (EPA) permit and account numbers related to this facility for all media.

*This SEP is in relation to Letters of Violation issued by AQD on November 5, 2002, November 19, 2002, and March 3, 2003. The City had previously entered into a Consent Order, ACO-SW99-013, dated December 16, 1999, with the MDEQ Water Division. Performance under that Consent Order is nearly complete.*

**3. Project Name - SEP Title.**

*The SEP title is Incineration Improvements.*

**4. Project Manager** - Provide the name, mailing address, telephone number, and fax number for the project manager, organization conducting the project (if different from the alleged violator), and the person who will be responsible for submitting status reports (if different from the project manager). If the project will be conducted by a third party to the MDEQ enforcement action, the proposal should be accompanied by a letter or resolution from the appropriate board, governing body, or executive staff

expressing the organization's commitment to the project if approved.

*The project manager and the person who will submit the status reports is Robert J. Case. His address is: G-4652 Beecher Road, Flint, MI 48532, Phone 810-766-7210 Fax: 810-230-3154*

**5. MDEQ Contact Person** - Provide the name, division, and telephone number of any MDEQ staff person who has assisted with the development of this project.

*The MDEQ contact person is Mike Kovalchick, Air Quality Division, telephone 517-335-6343.*

**6. Geographical Area to Benefit from the Project** - Identify cities, counties, and watersheds that would benefit from the project.

*Genesee County.*

**7. SEP Category** - Identify SEP categories the proposal meets:

*The SEP categories are pollution prevention, and pollution reduction.*

**8. Project Description** - Describe the project, including the following information: need for the project; availability of other similar services or projects in the area; and project implementation tasks such as technology, operation, or process changes.

ITEM DESCRIPTION	ESTIMATED COST	ENVIRONMENTAL BENEFIT	STATUS
1. Incineration Motor Control Center replacement and installation (West unit)	\$ 256,000.00	The new MCC will give additional control capabilities, such as adding variable speed drive to ID fans. Reduced emissions through improved overall combustion and airflow control, better monitoring and efficiency. Fuel savings. Less overall emissions due to decreased auxiliary fuel requirements.	Obtained quotes for West unit. Under consideration.



ITEM DESCRIPTION	ESTIMATED COST	ENVIRONMENTAL BENEFIT	STATUS
2. Feed System Improvements, including feed screws and hoppers for all 4 incinerators.	\$ 540,000.00	Reduced emissions through improved overall combustion control, decreased auxiliary fuel requirements, and reduced ambient air leakage. Fuel savings.	Received preliminary estimates. Under consideration.
<b>TOTAL</b>	<b>\$796,000.00</b>		

*Additional information:*

*a. Motor Control Center (MCC) replacement-the new MCC will provide power distribution to incineration equipment, and also devices to provide increased control and monitoring of incineration equipment.*

*b. Feed System Improvements-include screw feeders and hoppers to feed sludge cake from conveyor belts into the incinerators. The combination would allow sealing of feed ports to prevent air infiltration. It would also promote a more steady feed rate for the sludge cake material*

**9..Expected Environmental Benefits** - Explain the expected environmental benefits of this project and quantify the environmental benefits to the extent practical.

For example, in some pollution prevention or reduction projects, the amount of each pollutant that is expected to be reduced beyond the level required for environmental compliance may be quantified; and for other types of projects, the expected environmental benefit may include the quantity of participants, programs offered, sites cleaned, types of contamination contained/removed, acres restored or affected, etc.

*Emission reduction benefits regarding the feed system improvements have been estimated based on reductions in natural gas usage. For the Motor Control Center, specific emission benefits can't be estimated, because they would not be of a constant nature. Rather, the benefit of the MCC is to*

*improve overall control of the combustion process, and minimize process variations. There is a benefit, but it would not occur in a predictable manner.*

*Estimated Environmental Benefits*

*Project: Incineration Feed System Improvements*

*Description: The current system to feed sludge cake into the top (drying) hearth of the incinerator consists of conveyor belts equipped with plows and small hoppers mounted atop feed ports with spring loaded trap doors.*

*The proposed improvement is to replace part of the conveyor belt and plow system with cake pumps. The pumps are to feed variable speed screws between enlarged hoppers and the ports, and thus eliminate the trap doors.*

*Benefits: There are two major benefits of the project. First, it will better seal the feed ports from a significant source of air and heat leakage. Second, it will result in a more consistent feed rate for the cake, and a general reduction in process variations.*

*The emissions reductions due to improved control and more steady state combustion conditions are difficult to quantify because there is not a reliable baseline for comparison. Likewise, the emission reductions due to less gas flows through the scrubber are also difficult to quantify. There is little doubt, however, that by eliminating a significant amount of non-combustion air through the scrubber, enhanced particulate removal should result. The benefit of auxiliary fuel use reductions, however, has been estimated by engineers. Based on experience at the other facilities operating similar equipment, there should be a 10% reduction in gas usage and similar reduction in pollutants generated as a result of the gas combustion.*

**10. Project Budget** - Provide projected initial and annual project costs with specific line item expenditures. Costs must be clearly and solely attributable to the proposed SEP. Also include the following information:

Whether the company is a "C" corporation for tax purposes.

Capital costs of project.

Useful life of capital equipment in years.

The one-time, non-depreciable costs and whether they are tax deductible.

Annual operation costs of the project.

*The projects will be funded by the City's Sewer Fund, which has an adequate balance to pay for them. A statement from the latest audit of the fund can be submitted if needed to describe the Fund status. The fiscal year begins on July 1 each year. No difficulties are anticipated in providing funding for the two proposed projects.*

*No annual recurring or operation and maintenance costs are part of the SEP. The City of Flint is performing the SEP. The useful life is twenty-five years, and no tax deduction applies.*

**11. Project Schedule** - Provide a proposed schedule that addresses project implementation, the submittal of status reports to the MDEQ, and the anticipated completion date. Project implementation must not commence until after the MDEQ has approved the SEP in an executed enforcement action.

*The schedule is as follows:*

*a. New Incineration West Motor Control Center - complete by December 31, 2005*

*Incinerator West Motor Control Center Replacement Preliminary Schedule*

*Listing herewith are the milestone projections for the preparation, engineering, requisition development, bidding and award, order placement and procurement, construction and installation phase, testing and placement in service of the Incinerator West Motor Control Center Replacement, consisting of starters, VFDs, and PLCs for incinerator three and four.*

	<i>Major Milestones</i>	<i>Time required to complete task</i>	<i>Weeks following Project approval and funding</i>
1.	<i>Requests for bid quotations, construction preparation, bid review and recommendation, contract approval.</i>	<i>12 weeks</i>	<i>12</i>
2.	<i>Notice to proceed to successful bidder. Engineering, drawing modifications, prepare CAD drawings, and MCC build.</i>	<i>18 weeks</i>	<i>30</i>

<i>Major Milestones</i>		<i>Time required to complete task</i>	<i>Weeks following Project approval and funding</i>
3.	<i>Installation, inspection, startup of Incinerators No. 3 and 4, and testing.</i>	<i>5 weeks</i>	<i>35</i>
4.	<i>Contract punch-list and closeout. Final payment.</i>	<i>4 weeks</i>	<i>39</i>
<b>TOTAL WEEKS</b>		<b>39</b>	

*b. Feed system improvements - complete by June 1, 2007*

*Incinerator Feed System Improvements Preliminary Schedule*

*Listing herewith are the milestone projections for the preparation, engineering, requisition development, bidding and award, order placement and procurement, construction and installation phase, testing and placement in service of the Feed Screw & Hopper installation for the four (4) Multi-Hearth Incinerators.*

<i>Major Milestones</i>		<i>Time required to complete task</i>	<i>Weeks following Project approval and funding</i>
1.	<i>Engineering Prequalification</i>	<i>6 weeks</i>	<i>6</i>
2.	<i>Engineer Selection</i>	<i>16 weeks</i>	<i>22</i>
3.	<i>Design and Contractor Selection</i>	<i>39 weeks</i>	<i>61</i>
4.	<i>Construction, Incinerator No. 1 and No. 2</i>	<i>30 weeks</i>	<i>91</i>
5.	<i>Construction, Incinerator No. 3 and No. 4</i>	<i>21 weeks</i>	<i>112</i>
6.	<i>Commissioning and Testing</i>	<i>8 weeks</i>	<i>120</i>
<b>TOTAL WEEKS</b>		<b>120</b>	

**12. Accounting** - Describe how SEP contributions would be accounted for if a third party is the proposed project implementer.

*Not Applicable.*

**13. Reporting** - Describe the information and documentation that would be included in project status reports. Project reports must provide sufficient information for the MDEQ to monitor the project implementation status, to verify and document the proper expenditure of SEP funds, and to evaluate the effectiveness and benefits of the SEP.

*Quarterly status reports and a final report will be submitted upon completion of construction.*

**14. Prior Commitments and/or Regulatory Requirements:**

Identify any applicable local, state, or federal regulations that would require implementation of this project or any part of this project. *None*

Identify any binding private commitments to implement this project or any part of this project. *None*

Identify any other requirement to implement this project or any part of this project. *None*

Indicate the time frame for implementation of the project under any aforementioned commitments.

*Not applicable*

**15. Certification of Expenditures by the Respondent** - Provide a separate certification that the proposed SEP is solely attributable to the settlement of the current enforcement action and that no funding has been budgeted to the project prior to the approval of the project, nor is the proposed project funded by grants, donations, low interest loans, or other sources of funding not attributable to the Respondent's normal budgetary process. Also certify that the proposed project is not being done, nor will receive credit, as part of an environmental incentive or awards program offered by local, state, or federal government, industry, etc.

*The SEP is attributable to the settlement of the Letters of Violation issued by AQD on November 5, 2002, November 19, 2002, and March 3, 2003. No funding has been committed to it yet, nor is the project funded by grants, donations, low interest loans, or other sources of funding not attributable to the City's normal budgetary process. The project is not being done, nor will the City receive credit, as*

*part of an environmental incentive or awards program, offered by federal, state, local government, or industry. I certify that the information in this response to item 15 is true and accurate.*

*Robert J. Case, WPC Supervisor*

*City of Flint*

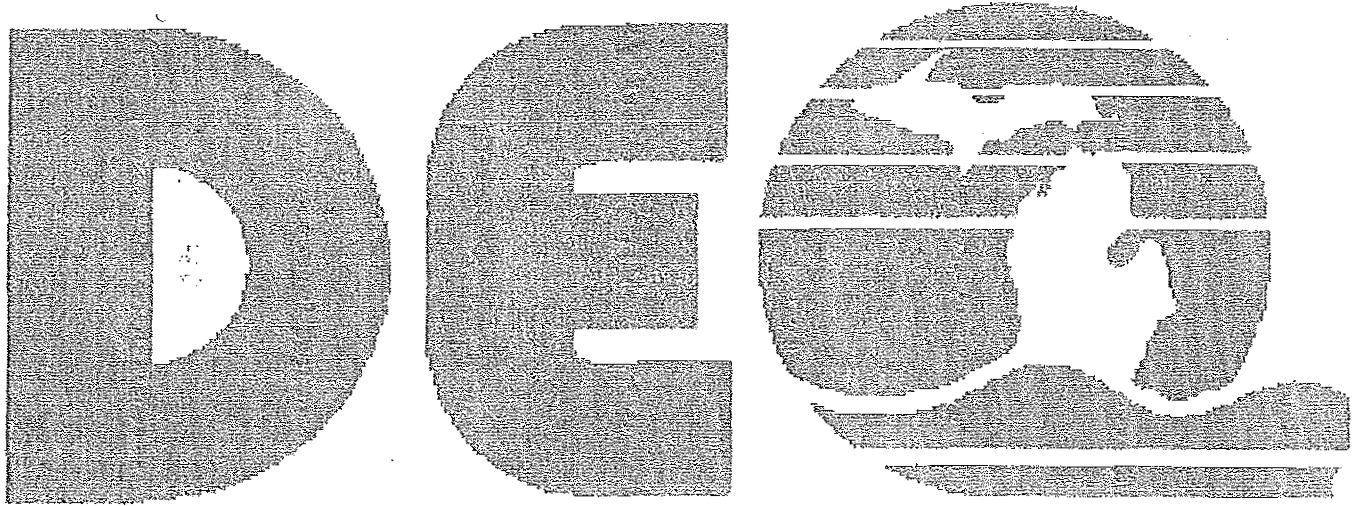


EXHIBIT E

Total Hydrocarbons (THC)  
Continuous Emission Monitoring System (CEMS) Requirements

1. By October 15, 2004, the City shall submit two copies of a Monitoring Plan to the AQD, for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required CEMS.
2. No later than 60 calendar days prior to testing, the City shall submit two copies of a complete test plan for the CEMS to the AQD for approval.
3. Within 60 days of completion of testing, the City shall submit to the AQD two copies of the final report demonstrating the CEMS complies with the requirements of Sections III-F, III-G and III-H of the USEPA document entitled "THC Continuous Emission Monitoring Guidance for Part 503 Sewage Sludge Incinerators (dated June 30, 1994)".
4. The span value shall be 2.0 times the lowest emission standard or as specified in the guidance document.
5. The CEMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in Sections III-F, III-G, III-H, III-I, III-J, AND III-K of the USEPA document entitled "THC Continuous Emission Monitoring Guidance for Part 503 Sewage Sludge Incinerators (dated June 30, 1994)", except as noted below.
6. Each calendar quarter, the City shall perform the Quality Assurance Procedures for the THC CEMS set forth in Section III-I of the USEPA document entitled "THC Continuous Emission Monitoring Guidance for Part 503 Sewage Sludge Incinerators (dated June 30, 1994)", with the following exception. If there is a failure to meet specified limits during a quarterly Cylinder Gas Audit (CGA) or Calibration Error Check, only the data generated by the THC-CEMS from that point forward until a successful CGA is completed shall be assumed to be invalid for demonstrating compliance (unless the City demonstrates otherwise).

Within 60 days following the end of each calendar quarter, the City shall submit two copies of the CGA results to the AQD.

The City shall perform the recordkeeping and reporting requirements of Sections III-J and III-K of the THC Continuous Emission Monitoring Guidance for Part 503 Sewage Sludge Incinerators by US EPA (dated June 30, 1994)", with the following exception. The annual report shall not have to use the code number and format specified. However, all operational data will be reported, in a suitable format. The reports will be submitted to the DEQ, as specified in Paragraph 12 of the main body of this document. All monitoring data shall be kept on file for a period of at least five years and made available to the AQD upon request.