

**STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER RESOURCES DIVISION**

ADMINISTRATIVE CONSENT ORDER

In the matter of:

ACO-000225

Date Entered: 5.9.2014

SECTION I

FACILITY OWNER/OPERATOR

NAME City of Flint		OWNER <input checked="" type="checkbox"/>	OPERATOR <input type="checkbox"/>
DEPARTMENT OF LABOR & ECONOMIC GROWTH BUSINESS IDENTIFICATION NUMBER			
ADDRESS 1101 South Saginaw Street			
CITY Flint	STATE Michigan	ZIP 48502	
CONTACT NAME/TITLE Darnell Earley, Emergency Manager		PHONE # 810-766-7254	

FACILITY NAME AND LOCATION

FACILITY NAME Flint MS4		
FACILITY OWNER IF NOT IDENTIFIED ABOVE		
ADDRESS 1101 South Saginaw Street		
CITY Flint	STATE Michigan	ZIP 48501
COUNTY Genesee		
CONTACT NAME Howard Croft	PHONE # 810-237-2043	

This document results from allegations by the Department of Environmental Quality (DEQ), Water Resources Division (WRD). The DEQ alleges that the above-referenced Facility Owner/Operator (Owner/Operator), is in violation of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), the administrative rules promulgated under this statute, and applicable permits issued to the Owner/Operator, as identified below.

STATUTE	PERMIT(S)
Part 31, Water Resources Protection, <input checked="" type="checkbox"/> MCL 324.3101 <i>et seq.</i>	National Pollutant Discharge Elimination System (NPDES) Permit No. <u>MI0053864</u>

Specific violations are referenced in DEQ letters attached to this Administrative Consent Order (Consent Order) as Exhibit A. The Owner/Operator and the DEQ agree to resolve the violations set forth herein through entry of this Consent Order. The Owner/Operator further agrees to resolve all compliance issues set forth in Exhibit A in accordance with the requirements contained in this Consent Order. This Consent Order, in its entirety, shall consist of Section I, the attached Sections II, III, and IV, Exhibit A, and any other referenced attachments, exhibits, or appendices. This Consent Order shall be considered null and void if it does not include, at a minimum, Sections I, II, III, and IV, and Exhibit A.

The Owner/Operator agrees to pay a civil fine of **\$2584.00 DOLLARS** for the violations specified in Exhibit A of this Consent Order. Payment shall be made within 30 days of the effective date of this Consent Order. Payment of past due or avoided permit fees shall be made in accordance with the compliance schedule in Section II of this Consent Order. A permit fee invoice will be sent to the Owner/Operator from the WRD after this ACO is fully executed by the WRD Chief. Failure to make timely payment constitutes a violation of this Consent Order. The Owner/Operator agrees to pay all funds due pursuant to this agreement by check made payable to the State of Michigan and delivered to the Accounting Services Division, Cashier's Office for DEQ, P.O. Box 30657, Lansing, Michigan 48909-8157; or hand delivered to the Accounting Services Division, Cashier's Office for DEQ, 425 W. Ottawa Street, Lansing, MI 48933. To ensure proper credit, all payments made pursuant to this Consent Order must include the **Payment Identification No. WRD40059**. The Owner/Operator agrees not to contest the legality of the civil fine and the avoided permit fees.

Signatories

DEPARTMENT OF ENVIRONMENTAL QUALITY

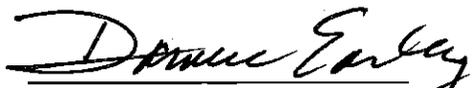


William Creal, Chief
Water Resources Division

5-9-2014
Date

I undersigned CERTIFY that I am fully authorized by the party identified above to enter into this Consent Order to comply by consent and to EXECUTE and LEGALLY BIND that party to it. I further attest that all information provided herein is accurate and true.

CITY OF FLINT



By: Darnell Earley, Emergency Manager
City of Flint

4-30-14
Date

SECTION II - COMPLIANCE SCHEDULE

IT IS THEREFORE AGREED AND ORDERED THAT Owner/Operator shall take the following actions to prevent further violations of Part 31 of the NREPA:

1. Perform the Work in Exhibits B and C or cause it to be performed in accordance to its terms. Exhibit B details the management of the compost. Exhibit C and its attachments detail the Operational Plan, Berm Construction, Storm Water Runoff Management Plan, and Sampling Plan for the site. These Exhibits and Attachments are incorporated into and enforceable by this Consent Order.
2. The Owner/Operator shall provide an implementation report on a quarterly basis to the DEQ District Supervisor. The report shall be submitted no later than March 31st, June 30th, September 30th, and December 31st of each year the consent order is in effect and include the following:
 - a. An update on the implementation status of the corrective action plan and a description of the effectiveness of the plan in eliminating wastewater discharges to waters of the state.
 - b. Operation and Maintenance inspection records related to the wastewater retention/collection system.
 - c. Wastewater disposal information including quantity collected and disposed.
 - d. Analytical results of any samples collected during the quarter in accordance with Section II.6 of this Consent Order.
3. The DEQ recognizes that during the design and construction of the corrective action plan, the Owner/Operator will begin processing of the composting material with implementation of readily available Best Management Practices (BMPs). Those BMPs at minimum shall include installation and maintenance of filter fabric in storm water catch basins and shall be implemented immediately upon the effective date of this Consent Order. The DEQ acknowledges that the site will remain in a similar condition as last inspected until the corrective action plan is fully implemented.
4. In the event that the Owner/Operator experiences a bypass of the collection/retention system and wastewater is discharged to surface waters of the state from the composting area, the Owner/Operator shall submit a written report to the DEQ Lansing District Supervisor within 5 days of the bypass. The written submission shall contain a description of the bypass and its cause; the time frame of the bypass, including exact dates and times, and if the bypass has not been corrected, the anticipated time it is expected to continue; steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass; and other information as required by the DEQ.

In addition, the Owner/Operator shall collect a representative sample of the discharge prior to mixing with receiving water in accordance with the sampling plan attached as Exhibit C. All samples will be grab samples and will be analyzed for the following parameters:

- Michigan 10 Metals (Arsenic, Barium, Cadmium, Chromium, Copper, Lead, Mercury, Selenium, Silver, Zinc)
- Carbonaceous Biochemical Oxygen Demand, 5-day (CBOD₅)
- Chemical Oxygen Demand (COD)
- Total Suspended Solids (TSS)
- Total Dissolved Solids (TDS)
- Fecal Coliform (Counts 10 – 1,000,000)
- Total Phosphorus
- Ammonia Nitrogen
- Nitrate/Nitrite
- pH
- Temperature

All samples will be preserved in accordance with Standard Methods for the Examination of Water and Wastewater, 20th Edition. The samples will be chemically analyzed using the approved methodologies found at 40 Code of Federal Regulations (CFR) Part 136.

5. A conceptual site plan is attached as Exhibit C which shows the maximum berm lengths and manhole locations. The Owner/Operator will reduce the berm lengths, as feasible, consistent with the 25-year storm event design criterion and composting operations and shall manage, as described in the attachments, manholes that are in the final bermed area. The Owner/Operator agrees that no additional material will be brought to the site for composting unless a long-term composting management and site plan has been reviewed and approved by the DEQ.
6. The Owner/Operator agrees to pay the applicable avoided annual permit fees of \$260 for the 2011, 2012, 2013, and 2014 fiscal years, totaling **\$1040.00**, to the State of Michigan in accordance with Section 3118 of Part 31 of the NREPA. Payment shall be made not later than 30 days after receiving a permit fee invoice from the WRD for each of the annual discharge permit fees.
7. The Owner/Operator shall submit all reports, work plans, specifications, schedules, monitoring results, or any other writing required by this section to the Lansing District Supervisor, WRD at Constitution Hall, 525 West Allegan, P.O. Box 30242, Lansing, Michigan 48909-7742. The cover letter with each submittal shall identify the specific paragraph and requirement of this Consent Order that the submittal is intended to satisfy.

Sections III and IV of this Consent Order shall not be altered in any way, including adding or eliminating any language, striking terms or parts of terms, retyping in whole or in part, or using a different format. Any changes to this document without written approval from the DEQ renders the Consent Order null and void.

SECTION III - STIPULATIONS

The Owner/Operator and the DEQ stipulate as follows:

1. The DEQ is authorized to enter this Consent Order requiring the Owner/Operator to comply with state law under one or more of the following provisions:
 - a. Section 3112(4) of Part 31 of the NREPA.
2. The Owner/Operator consents to the issuance and entry of this Consent Order and stipulates that the entry of this Consent Order constitutes a final order of the DEQ and is enforceable as such under the appropriate provisions of state law identified in this Consent Order. The Owner/Operator agrees not to contest the issuance of this Consent Order, and that the resolution of this matter by the entry of this Consent Order is appropriate and acceptable. It is also agreed that this Consent Order shall become effective on the date it is signed by the chief of the WRD, delegate of the director.
3. The Owner/Operator and the DEQ agree that the signing of this Consent Order is for settlement purposes only and does not constitute an admission by the Owner/Operator that the law has been violated.
4. The Signatory to this Consent Order on behalf of the Owner/Operator agrees and attests that it is fully authorized to assure that the Owner/Operator will comply with all requirements under this Consent Order.
5. The Owner/Operator shall achieve compliance with the aforementioned regulations in accordance with the requirements contained in Section II of this Consent Order.

SECTION IV - GENERAL PROVISIONS

1. With respect to any violations not specifically addressed and resolved by this Consent Order, the DEQ reserves the right to pursue any other remedies to which it is entitled for any failure on the part of the Owner/Operator to comply with the requirements of the NREPA and its rules. Entry of this Consent order does not relieve the Owner from future liability for the potential need to conduct remedial actions if contaminants originating from the discharge are discovered at limits that exceed the criteria under applicable law. The DEQ further expressly reserves the right to pursue the Owner for injunctive relief and costs associated with overseeing or conducting these remedial actions.
2. The DEQ and the Owner/Operator consent to enforcement of this Consent Order in the same manner and by the same procedures for all final orders entered pursuant to the provisions the NREPA, as applicable.
3. This Consent Order in no way affects the Owner/Operator's responsibility to comply with any other applicable state, federal, or local laws or regulations.
4. The WRD reserves its right to pursue appropriate action, including injunctive relief to enforce the provisions of this Consent Order, and applicable statutory fines for any violation of this Consent Order.

5. Nothing in this Consent Order is or shall be considered to affect any liability the Owner/Operator may have for natural resource damages caused by the Owner/Operator's acts or omissions at the facility. The State of Michigan does not waive any rights to bring an appropriate action to recover such damages to the natural resources.
6. In the event the Owner/Operator sells or transfers the facility, it shall advise any purchaser or transferee of the existence of this Consent Order in connection with such sale or transfer. Within 30 calendar days, the Owner/Operator shall also notify the WRD 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 WRD District Supervisor within 30 days of assuming the obligations of this Consent Order.
7. The provisions of this Consent Order shall apply to and be binding upon the parties to this action, and their successors and assigns.
8. 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.

9. REPORTING

The Owner/Operator shall verbally report any violation(s) of the terms and conditions of this Consent Order to the District Supervisor by no later than the close of the next business day following detection of such violation(s) and shall follow such notification with a written report within five business days following detection of such violation(s). The written report shall include a detailed description of the violation(s), as well as a description of any actions proposed or taken to correct the violation(s). The Owner/Operator shall report any anticipated violation(s) of this Consent Order to the above-referenced individual in advance of the relevant deadlines whenever possible.

10. RETENTION OF RECORDS

Upon request by an authorized representative of the DEQ, the Owner/Operator shall make available to the DEQ all records, plans, logs, and other documents required to be maintained under this Consent Order or pursuant to applicable laws or rules. All such documents shall be retained by the Owner/Operator for at least a period of three years from the date of generation of the record unless a longer period of record retention is required by the applicable law or its rules.

11. RIGHT OF ENTRY

The Owner/Operator shall allow any authorized representative or contractor of the DEQ, upon presentation of proper credentials, to enter upon the premises of the facility at all reasonable times for the purpose of monitoring compliance with the provisions of this Consent Order. This paragraph in no way limits the authority of the DEQ to conduct tests

and inspections pursuant to the NREPA and the rules promulgated thereunder, or any other applicable statutory provision.

12. DEQ APPROVAL OF SUBMITTALS

For any work plan, proposal, or other document, excluding applications for permits or licenses, that are required by this Consent Order to be submitted to the DEQ by the Owner/Operator, the following process and terms of approval shall apply:

- a. All work plans, proposals, and other documents required to be submitted by this Consent Order shall include all of the information required by the applicable statute and/or rule, and all of the information required by the applicable paragraph(s) of this Consent Order.
- b. In the event the DEQ disapproves a work plan, proposal, or other document, it will notify the Owner/Operator, in writing, specifying the reasons for such disapproval. The Owner/Operator shall submit, within 30 days of receipt of such disapproval, a revised work plan, proposal, or other document which adequately addresses the reasons for the DEQ's disapproval. If the revised work plan, proposal, or other document is still not acceptable to the DEQ, the DEQ will notify the Owner/Operator of this disapproval.
- c. In the event the DEQ approves with specific modifications, a work plan, proposal, or other document, it will notify the Owner/Operator, in writing, specifying the modifications required to be made to such work plan, proposal, or other document prior to its implementation and the specific reasons for such modifications. The DEQ may require the Owner/Operator to submit, prior to implementation and within 30 days of receipt of such approval with specific modifications, a revised work plan, proposal, or other document which adequately addresses such modifications. If the revised work plan, proposal, or other document is still not acceptable to the DEQ, the DEQ will notify the Owner/Operator of this disapproval.
- d. Upon DEQ approval, or approval with modifications, of a work plan, proposal, or other document, such work plan, proposal, or other document shall be incorporated by reference into this Consent Order and shall be enforceable in accordance with the provisions of this Consent Order.
- e. Failure by the Owner/Operator to submit an approvable work plan, proposal, or other document, within the applicable time periods specified above, constitutes a violation of this Consent Order and shall subject the Owner/Operator to the enforcement provisions of this Consent Order.
- f. Any delays caused by the Owner/Operator's failure to submit an approvable work plan, proposal, or other document when due shall in no way affect or alter the Owner/Operator's responsibility to comply with any other deadline(s) specified in this Consent Order.

- g. No informal advice, guidance, suggestions, or comments by the DEQ regarding reports, work plans, plans, specifications, schedules or any other writing submitted by the Owner/Operator will be construed as relieving the Owner/Operator of its obligation to obtain written approval, if and when required by this Consent Order.

13. EXTENSIONS

The Owner/Operator and the DEQ agree that the DEQ may grant the Owner/Operator a reasonable extension of the specified deadlines set forth in this Consent Order. Any extension shall be preceded by a written request to the District Supervisor no later than ten business days prior to the pertinent deadline, and shall include:

- a. Identification of the specific deadline(s) of this Consent Order that will not be met.
- b. A detailed description of the circumstances that will prevent the Owner/Operator from meeting the deadline(s).
- c. A description of the measures the Owner/Operator has taken and/or intends to take to meet the required deadline.
- d. The length of the extension requested and the specific date on which the obligation will be met.

No change or modification to this Consent Order shall be valid unless in writing from the DEQ, and if applicable, signed by both parties.

14. TERMINATION

This Consent Order shall remain in full force and effect until terminated by a written Termination Notice (TN) issued by the DEQ. Prior to issuance of a written TN, the Owner/Operator shall submit a request consisting of a written certification that the Owner/Operator has fully complied with the requirements of this Consent Order and has made payment of any fines, including stipulated penalties, required in this Consent Order. Specifically, this certification shall include:

- a. The date of compliance with each provision of the compliance program in Section II, and the date any fines or penalties were paid.
- b. A statement that all required information has been reported to the district supervisor.
- c. Confirmation that all records required to be maintained pursuant to this Consent Order are being maintained at the facility.

The DEQ may also request additional relevant information. The DEQ shall not unreasonably withhold issuance of a TN.

Exhibit A
Administrative Consent Order

<u>Enforcement Type</u>	<u>Enforcement Number</u>	<u>Issued Date</u>
Violation Notice	VN-005213	March 5, 2012
Enforcement Notice	EN-000225	February 24, 2014



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



DAN WYANT
DIRECTOR

March 5, 2012

CERTIFIED MAIL

Mr. Michael K. Brown, Emergency Manager
City of Flint
1101 S. Saginaw Street
Flint, Michigan 48502-1416

VN No. VN-005213

Dear Mr. Brown:

SUBJECT: Violation Notice
NPDES Permit No. MI0053864
Designated Name: Flint MS4

The Department of Environmental Quality (DEQ), Water Resources Division (WRD) staff attended an inspection of the City of Flint's (City) Municipal Separate Storm Sewer System (MS4) program conducted by the Environmental Protection Agency (EPA) on July 27, 28, and 29, 2011. In addition, on September 1 and 29, 2011, WRD staff conducted additional inspections of City operations for permit requirements not covered during the inspection conducted by EPA.

These efforts result in a complete audit of the City's MS4 program with the purpose of determining the City's compliance with Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), MCL 324.3101 *et seq.* and the Administrative Rules promulgated there under being 2006 AACRS R 323.2101 *et seq.*, as amended, and National Pollutant Discharge Elimination System (NPDES) Permit No. MI0053864.

Based on the audit, WRD has determined that the City is in noncompliance with Part 31 and the requirements of the MS4 permit.

During the audit, WRD staff examined the following areas of the City's MS4 program. Areas where EPA was the lead review agency are so designated:

- Education and Outreach on Storm Water Impacts – Public Education Program (EPA lead)
- Illicit Discharge Elimination Program (IDEP) (EPA lead)
- Post Construction Storm Water Management Program (EPA lead)
- Pollution Prevention/Good Housekeeping for Municipal Operations (WRD)
- Public Involvement/Participation (WRD)

For program areas where EPA was the lead review agency, WRD has provided observations made during the review and requested corrective actions to address compliance deficiencies. In a report dated January 10, 2012, EPA summarized their findings of their inspection of the City of Flint's MS4 program. WRD expects that the City will address any compliance issues identified in the EPA report in addition to those identified by the WRD.

March 5, 2012

Enclosed is a document entitled "Corrective Action Items". In this document, the items that are identified as "required items" indicate areas where the City's program is not meeting the minimum requirements and is in violation of the permit. The items that are identified as "recommended items" indicates areas of the City's program that may be meeting the permit requirements but have room for improvement or are suggested to assist the City in implementing the program.

Also, enclosed is a MS4 Audit Report. The audit report summarizes the findings from the inspection conducted in July and September of 2011.

The violations identified in this Violation Notice are ongoing.

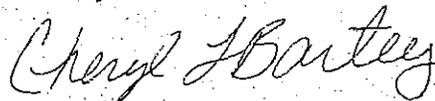
The City of Flint is requested to submit a written response to this office no later than **May 2, 2012**.

At a minimum, the response shall summarize the city's plan and implementation schedule for addressing the required items (Items 1 - 31) identified in the attached "Corrective Action Items" document and provide a response to the WRD's recommendations for program improvement.

If you have any factual information you would like us to consider regarding the violations identified in this Notice, please provide them with your written response. In addition, WRD staff appreciates the cooperation and assistance that the City of Flint provided as a part of this audit process.

If you have any questions or concerns regarding this Notice or if you would like to arrange a meeting to discuss it, please contact me at 517-335-6117 or kammers@michigan.gov.

Sincerely



for Stephanie Kammer
Environmental Quality Analyst
Lansing District Office
Water Resources Division
517-335-6117

Enclosures

cc/enc: Mr. Newton Ellens, EPA, Region 5
Mr. Dayne Walling, City of Flint, Mayor
Ms. Inez Brown, City of Flint, Clerk
Ms. Cheryl Bartley, DEQ-WRD
Mr. Jim Innes, DEQ-RD
Mr. Dwight Cummings, DEQ-RD
Mr. Susan Doty, DEQ-WRD



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE



DAN WYANT
DIRECTOR

NOTICE No. EN-000225

CERTIFIED MAIL 7009 2820 0001 9803 8977

Mr. Howard Croft, Director
Infrastructure and Development
City of Flint
1100 S. Saginaw Street
Flint, Michigan 48502

ENFORCEMENT NOTICE

Dear Mr. Croft:

**SUBJECT: Flint MS4
Composting Operations**

The Department of Environmental Quality (DEQ), Water Resources Division (WRD), Lansing District Office, is pursuing an escalated enforcement action for violations of law by the City of Flint (hereinafter "facility") as set forth herein.

Please be advised that the facility has failed to comply with Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Part 31 of the NREPA), MCL324.3101, *et seq.* and the Administrative Rules promulgated there under being 2006 AACS R 323.2101 *et seq.*, as amended.

Specifically, pursuant to Section 3112(1) of Part 31 of the NREPA:

"A person shall not discharge any waste or waste effluent into the waters of this state unless the person is in possession of a valid permit from the department".

Please be advised that the DEQ, WRD has identified the unpermitted discharge of leachate from facility composting operations at the former industrial site located at 300 North Chevrolet Avenue, commonly referred to as the "Chevy in the Hole" site.

The facility is hereby notified that the violations identified in this Enforcement Notice are violations of Part 31 of the NREPA.

The facility is requested to immediately undertake all actions necessary to resolve all violations identified in Violation Notice VN-005213, issued March 5, 2012.

The violations identified herein, as well as any additional violations discovered hereafter must be formally resolved through entry of an administrative consent order (ACO). The ACO will include an agreed-upon compliance program to resolve the WRD's allegations, any additional requirements, and a civil fine. Negotiations to resolve this matter through an ACO shall not exceed 90 days.

In light of the nature of the violations, the DEQ proposes entry of the enclosed ACO as an appropriate and expeditious means of resolving these issues. If this ACO is acceptable to the facility, please sign and return both (two) original documents to me, not later than (10) days after receipt of this letter. Upon receipt of the signed documents, I will secure the other signatures and return one fully executed original document to you for your records.

Enclosed, please find a copy of the Violation Notice (VN-005213) and a proposed ACO that specifies the requirements necessary to resolve violations of Part 31 of the NREPA.

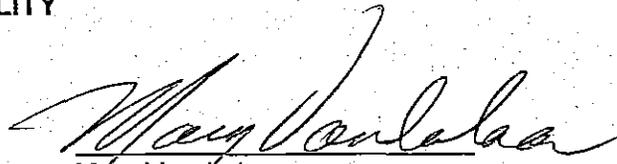
The DEQ reserves its right to take all necessary and appropriate enforcement actions for all violations of Part 31 of the NREPA that have occurred to date and any violations of Part 31 of NREPA that may occur in the future. These actions may include, but are not limited to, seeking civil fines, injunctive relief, natural resources damages, all costs associated with this enforcement action, including attorney costs and any other relief available to the DEQ.

The facility's continuing failure to comply with the terms of Part 31 of the NREPA, any other requirements set forth in this Notice, or failure to resolve these violations through entry of an ACO within the 90 day time frame may result in additional fines, penalties or other actions.

Pursuant to Section 1511 of the NREPA, the City of Flint may request a preliminary meeting with DEQ, WRD staff to discuss the issues detailed in this ENFORCEMENT NOTICE and their potential resolution. If you would like to participate in such a meeting, please contact Ms. Stephanie Kammer, WRD, at 517-897-1597, NOT LATER than 10 days from your receipt of this ENFORCEMENT NOTICE.

**STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER RESOURCES DIVISION**

Date Issued: 2/24/2014


Mary Vanderlaan
Lansing District Office
Water Resources Division

ADDRESS FOR FURTHER CORRESPONDENCE:

Stephanie Kammer
Water Resources Division
Lansing District Office
Constitution Hall, 1st Floor South
525 West Allegan Street
Lansing, Michigan 48909-7742

cc: Mr. Michael L. Robinson, Warner Norcross & Judd LLP
Mr. Peter Ostlund, DEQ
Ms. Stephanie Kammer, DEQ

Exhibit B

I. Work

- A. Screen (grind or haul away large pieces) the Inventory, including all leaf piles, regardless of their current condition. The material removed by the screening and all associated trash, overs, and debris (“Screened Material”) shall be promptly transported off-site for disposal.
- B. The Inventory remaining after screening and grinding shall be placed in rows onsite.
- C. The rows of Inventory shall be managed to optimize and hasten its conversion to compost that is suitable for onsite use for cover and for offsite commercial sale, other use, or disposal. The actions identified in the Management Plan shall be implemented for the management of water from precipitation that falls in the area where the compost process and operations are carried out. This plan includes using composting best management practices. The Management Plan is Exhibit C. The berms shall be installed and pumps and power connections for the pumps shall be provided, all as referenced in Exhibit C. The pumps shall be maintained.
- D. The City is a party to the Subgrant Agreement and other arrangements that require that finished compost be provided as a portion of the match and for likely future matches for anticipated grants. COF may keep at least 18,000 cubic yards of finished compost for use on the site as part of cover for the site.
- E. With respect to the finished compost intended as grant match or for use on the CITH site, such compost shall be placed outside of the bermed designated

composting area on the CITH site until it is used for cover on-site, in which case it may be incorporated into cover anywhere on the CITH site. Appropriate soil erosion/sediment/silt controls shall be placed at the compost storage area and areas where compost is used for cover on-site until such time that the cover is stabilized. In addition, the City will ensure compliance of all activities at the CITH site with any applicable Soil Erosion and Sedimentation Control requirements (Part 91, Soil Erosion and Sedimentation Control of the Natural Resources and Environmental Protection Act (NREPA)), and construction storm water requirements ("Permit-by-Rule," Rule 2190 promulgated under Part 31 of the NREPA) (including obtaining appropriate permits), as necessary in connection with storage, mixing, and placement of the compost as part of the cover at the CITH site.

F. Other than the finished compost to be used for cover on the CITH site, Inventory (some or all of which may be finished compost), including all Screened Material, shall be removed from the CITH site.

G. Schedule

- i. The Work shall commence no later than immediately after the DACO is effective, but Work may be commenced by the City prior to that date.
- ii. All Work shall be completed by August 31, 2015.

Exhibit C

Management Plan

(Operational Plan and Berm Construction And Storm Water Runoff Management Plan)

Flint- Chevy in the Hole-Operational Plan for Water Management

Site Description:

Chevy in the Hole (CITH) is a 66-acre vacant industrial brownfield that is owned by the City of Flint. As a former factory site, it has approximately 40+ acres of hard impervious surface (asphalt and concrete), and approximately 20+ acres of pervious surface (grass, gravel, sand). There are historic storm/sanitary sewer connections on the site which are evident throughout the site through exposed manhole covers. Through visual inspection, it is evident that surface water on the site is draining through either entry to the storm sewer system, City of Flint sanitary sewer system, or entering the groundwater through infiltration. Surface runoff to the Flint River or Swartz Creek through sheet-flow is minimal because the site is partially walled off from the river and/or graded to prevent that entry route.

Location: The composting site is located within the Chevy-in-the-Hole area. It is bounded by Swartz Creek on the east, a Norfolk Southern right-of-way to the north, Chevrolet Ave. to the west, and Kearsley Street to the south. The site is bisected by Stevenson Street.

Hydro-geologic Features: Swartz Creek provides the eastern border to the site and has a water surface elevation of 700.00 feet above sea level. The banks of the drain near the composting site are steep on both sides and channelized. The Flint River provides the northern border to the site and also has a surface elevation of 700.00 feet above sea level.

The site itself sits on a former facility that had paved parking and concrete slab floors. Therefore much of the site has an impermeable and engineered surface that is capable of bearing the weight of both the compost material and the processing equipment.

In addition, there has been substantial planting of trees on the permeable areas of the site that will allow for significant infiltration of surface water as well as a beneficial method of redirecting nutrient rich runoff.

Existing Structures: There are no existing structures on the Flint Compost Site. A small temporary structure has been erected that will provide small tool storage and a location for the site operator to keep site paperwork. It does not have electricity, running water, or phone service.

Natural Buffers:

As indicated above, the primary buffers to the site are surface water. The Flint River to the north and Swartz Creek to the east provide some barrier to the site. The balance of the Chevy-in-the-Hole stretches approximately 0.5 miles to the west. On the south, the GM machine and die plant provides a barrier between the composting site and the residential area to the south.

Best Management Practices:

The following table includes the industry standard best management practices that will be employed at the Chevy in the Hole site to mitigate and prevent any adverse effects of storm water runoff.

BMP - Grading Facility Area		
Description: Grading of select portions of the site to encourage proper drainage and to reduce the potential for pooling/ponding of water. Standing water on working surfaces is the leading cause of storm water contamination.	Design Purpose: Prevent accumulation of nutrient rich runoff accumulation.	CITH Operational Considerations: Maintain existing grade on majority of site. Plan to repair grading semi-annually (or as needed) to maintain grade and grade integrity. Focus active composting (windrowing) on appropriately graded areas to prevent pooling.
BMP - Graveling or Paving		
Description: Compact surfaces are best for active composting. Surfaces should maintain drainage, withstand repetitive vehicle loads, and maintain integrity in wet weather conditions.	Design Purpose: Prevent ponding and pooling of water, reduce erosion from runoff, reduce nutrient accumulation, withstand vehicle loads.	CITH Operational Considerations: All areas of the CITH site that are proposed for active composting currently have concrete or similar hard surfacing.
BMP- Sediment Fencing/Debris Filter		
Description: Sediment fencing may consist of the following methods and materials: geotextile fabric, straw bales, filter berms, solid berms or wattles.	Design Purpose: Heavy soil particles are retained on the up slope side of the fence and as a result of filtering and through the creation of a small settling basin up slope of the fence through restriction and	CITH Operational Consideration: Fencing, filters, and caps will be used to prevent storm water from entering any storm water receptors in areas adjacent to composting operations. The City (as

	retardation of the runoff flow.	part of their storm water management plan) will install controls to prevent runoff entering into the storm water sewers in the composting area. Covers will be inspected and maintained monthly.
BMP - Reuse of Storm water and Compost Runoff		
Description: Under moderate rainfall, the need for large amounts of water in the composting process presents a unique opportunity for storm water reuse as water is reincorporated back into the windrow piles.	Design Purpose: To reduce the cost and need for additional water, it is beneficial to reincorporate moderate storm water, where possible, back into the composting process.	CITH Operational Consideration: Using a wheeled front-end loader, the site operators will, whenever practical, reincorporate any small pools of standing water that may accumulate after a small to moderate rain event back into the composting piles or windrows.

Additional Measures:

Monitoring and Large Rain (greater than 1 inch in a calendar day) Event Management:

The City will install pumps and/or direct nutrient rich runoff during large rain events to the City Sanitary System for treatment at the City's wastewater treatment facility. The City will monitor storm water at the site and operate installed pumps as set forth in this management plan.

Chevy-in-the-Hole "Berm" Construction and Storm Water Runoff Management Plan - March 2014:

The City of Flint operates the existing compost site located and registered as Chevy-in-the-Hole. This site is bounded on the west by Chevrolet Ave, the south by Kearsley Street, bisected by Stevenson Street. The Flint River borders its north side and Swartz Creek borders its east side. (See attached area map).

There are two areas where compost is currently stored. Both of these areas are included in the plan for providing a containment "berm/barrier" to minimize storm water runoff from the compost flowing overland to the Flint River and/or entering the existing storm sewer system located on-site.

Construction of the "berm/barrier" in and around the compost will consist of a portable/above-ground system of water-filled bladders (see attached documentation). The decision to

recommend this type of solution was based on the specific site conditions and the time of year (cold/wet weather) that the system is more adaptable to.

Site conditions vary along the entire perimeter where the barrier needs to be placed. It consists of exposed concrete slabs, dirt/debris covered concrete slabs, brush, varying elevations, etc. In addition to the ground conditions, construction of this containment will be while there may be snow and wet ground conditions at the site. Sheet membrane and/or spray on membrane with rigid "traffic" barriers will not provide the necessary containment flexibility, so the change was made to the bladder-type containment system.

Construction:

- Attached concept layout of "barrier" provides for the compost operation to function within the boundary with minimal interference with equipment operation and material movement.
- Footprint of barrier will have to be cleared and swept so that the bladders can be placed without chance of puncture and so they provide a good contact with ground surface. All snow, debris, brush, etc. will need to be removed. If an area is encountered that will take extreme effort to prep, the bladders are flexible enough to be routed around without too much additional effort.
- Once footprint is prepared, bladders will be installed and filled.
- As the bladders are being prepared and installed, the storm sewer inlets that are located within the area will be sealed off. These inlets will be sealed off with grout and steel plates.
- The entire containment system should be able to be installed within a 2-3 week time period (allowing for delays due to clearing, material delivery, adjustments, etc.). This will be completed by June 30, 2014.

Storm Water Runoff Management:

- Storm water runoff calculations have been completed for the site. The 25-year storm event was used over the entire area to model the potential depth of ponding. The height (711.35 with 2.25' of free board) of the containment "berm" was determined based on these calculations.
- Once the entire containment system is in place, runoff from the compost area will be contained and minimized from flowing overland and/or through the storm sewer system into the surrounding tributaries and the Flint River.
- The City of Flint will monitor rain events (greater than 1 inch in a calendar day) on-site and will inspect the bermed area immediately after such a rain event. If ponding (greater than 1 inch deep) occurs, the City will exercise one of two methods of removal. First, a temporary pumping system can be installed to pump the ponded water to the sanitary sewer system manhole(s) identified on the attached plan. Or the City can deploy a vacor truck to the site and transport the collected ponded water to the sanitary sewer system or transport it directly to the WPC facility off of Beecher Road.

- If there is water ponded ($> 1'$), the sanitary sewer system will be monitored and when adequate capacity exists, the ponded water will be disposed of into the sanitary sewer collection system.

The containment system and storm water runoff plan will remain in place until all the compost is transported offsite or used on-site as part of cover.

[Note: The detention volume in the next page will be revised after the final installed berm acreage is determined. The final berm shall be capable of retaining the 25-year storm event.]

10388997-2

DamitDams™ Patented Cofferdams Basic Configurations

How it works:

1. DamitDams™ portable Cofferdams are made of a heavy-duty geotextile woven polypropylene outer casing that contains two side-by-side inner tubes. The inner dual tubes act as a stabilizer to keep the Dam from rolling due to outside water pressure and other forces.
2. Based on the depth of water you need to control, DamitDams™ come in eight different heights: 1-2-3-4-6-8-10 and 12 feet.
3. Important note: The Dam needs to be 25% higher (above board) than the depth of the water you are controlling. Example: 4 feet of water will require a 6 ft. high dam.
4. Onsite water is pumped - at the same rate - into the two fill tubes.
5. As the water enters both inner tube chambers, the outer master tube slowly and evenly inflates creating a strong, stable cylindrical tube.
6. As the inner tubes fill and the water pressure builds, the DamitDam™ un-rolls in a controlled manner creating a "barrier dam" so you are able to begin your water project.
7. The dam can be small or large and molds perfectly to the lake, river or waterbed.
8. A DamitDam™ can be extended to any length necessary. Using the extension coupling system, individual dams are easily linked together creating a watertight chained barrier. Extremely durable, once inflated you will be able to walk on the DamitDam™ easily when adding on extensions.
9. The dam is flexible and easy to install, steer or turn precisely where you need it.
10. Once the DamitDams™ is properly placed and filled to specifications - you can begin your project by pumping water from the side that needs to be dewatered. After you have completed your water project, simply deflate your DamitDams™ and it can be easily stored for future use.

DamitDams™ Deployed and Dewatered



Installation Overview:

DamitDams™: Inflating Directions ... "Easy Does it"

1. Place the DamitDam™ in the water at the edge at a right angle to the bank.
2. Place a pump discharge hose into each inner fill tube.
3. Using on-site water to fill the dam - begin pumping. It is imperative that the 2 - water pumps fill at the same rate.
4. As the water pressure builds - the Dam will start a controlled rollout.
5. Laborers can guide the DamitDam™ into any configuration your site requires; straight as an arrow, curved, U-shaped, L-shaped etc.

Placement: Lake/River

1. A DamitDam™ can be set up on most water edge surfaces - such as gravel, mud, grass, etc.
2. The starting point of the dam is placed on the bank - at least 5 ft. up on shore - with the Dam opening facing away from the water.
3. The positioning of the DamitDams™ opening needs to be raised to a higher point than the estimated height of a fully-filled DamitDam™. This will keep the water from back-flowing.
4. In some cases a berm may need to be built to meet this requirement.
5. To secure the Dam - simply tie ropes to the start of the Dam and then tie/secure the other end of the rope to heavy equipment, trees and or any other unmovable object in the nearby vicinity.

Lengthen and Linking DamitDams™

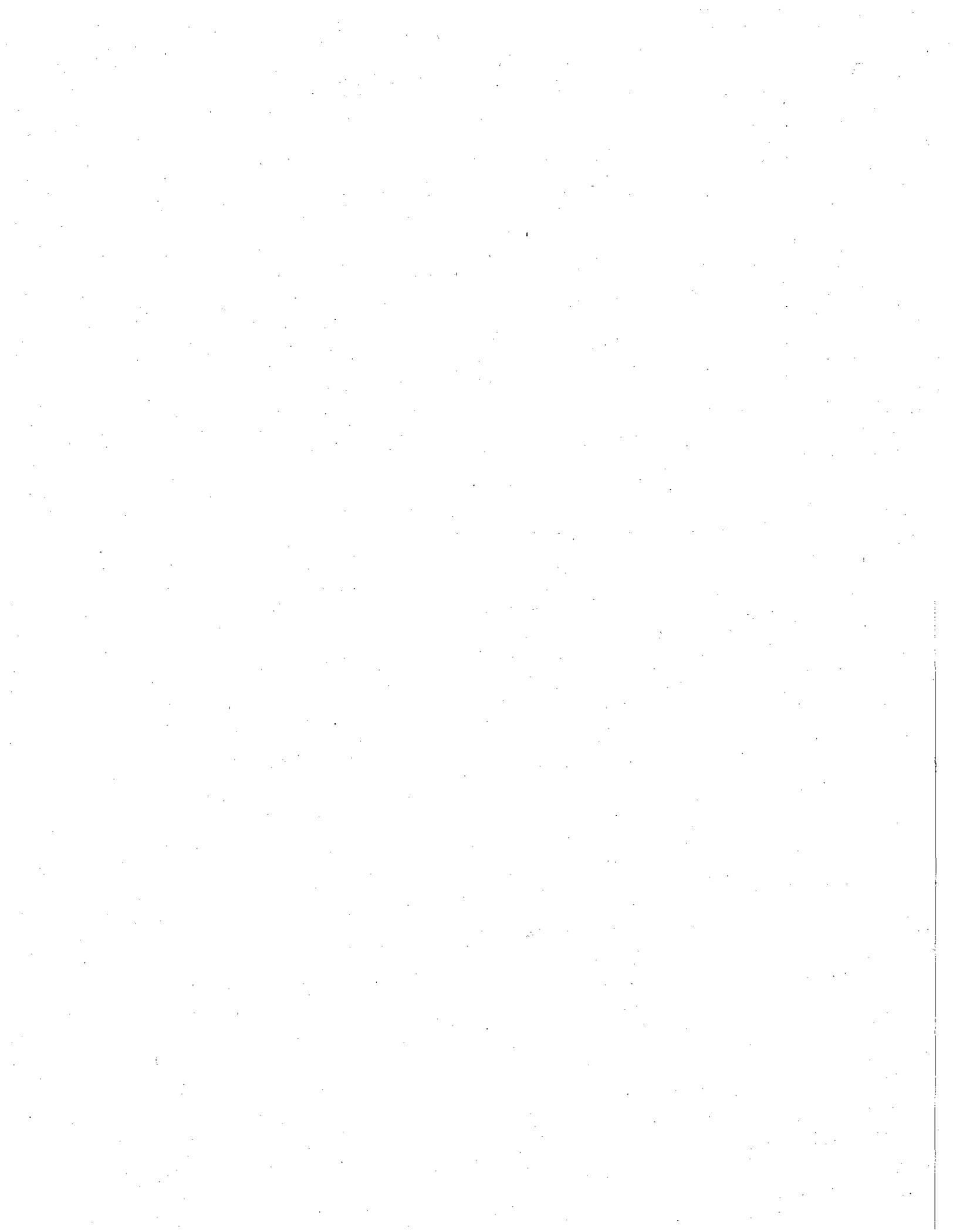
Using DamitDams™ patented extension-coupling system; Dams can easily be linked together to form a custom length, continuous water-filled barrier/dam.
"It could circle the globe if need be."

1. Each DamitDam™ is designed to seamlessly link together by drawing the patented extension-cuffing sleeve over the end of a previously filled cofferdam.
2. Fill tubes are drawn up from the previously filled Dam through openings in the extension cuffing systems.
3. Simply repeat the previous pumping procedure and your Dam can be extended to any length needed.

DamitDams™ Environment Statement

Following the environmental guidelines set forth by *The Clean Water Act*, DamitDams™ has developed an environmentally friendly method to manage water and protect the environment.

"We work with Mother Nature - not against her."



**DETERMINATION OF DETENTION VOLUME
FOR ONSITE CONTRIBUTORY DRAINAGE
Based on the Genesee County 25 Year Storm Event**

Project: **13C0157 - Flint Chevy in the Hole Compost
Runoff Detention/Diversion, NE area**
Date: **1/29/2014**
Designer: **DOS**



Rowe Professional Services Company
PO Box 3748
Flint, MI 48502

Area A (acres) =		5.21	Weighted C (C _w) =		0.95	Q _{allow} =	0	cfs/acre	
T _c (min)	I (25-yr Event) (in./hr.)	C _w *A (A in Acres)	Q _{in} (ft ³ /s)	Q _{out} (ft ³ /s)	Q _{in} - Q _{out} (ft ³ /s)	(Q _{in} - Q _{out}) X T _c X 60 (ft ³)			
10	5.34	4.95	26.42	0.00	26.42	15,850			
20	4.18	4.95	20.67	0.00	20.67	24,798			
30	3.43	4.95	16.97	0.00	16.97	30,546			
40	2.91	4.95	14.40	0.00	14.40	34,551			
50	2.53	4.95	12.50	0.00	12.50	37,500			
60	2.23	4.95	11.05	0.00	11.05	39,763			
70	2.00	4.95	9.89	0.00	9.89	41,554			
80	1.81	4.95	8.96	0.00	8.96	43,007			
90	1.65	4.95	8.19	0.00	8.19	44,210			
100	1.52	4.95	7.54	0.00	7.54	45,221			
110	1.41	4.95	6.98	0.00	6.98	46,084			
120	1.31	4.95	6.50	0.00	6.50	46,828			
130	1.23	4.95	6.09	0.00	6.09	47,477			
140	1.16	4.95	5.72	0.00	5.72	48,047			
150	1.09	4.95	5.39	0.00	5.39	48,553			
160	1.03	4.95	5.10	0.00	5.10	49,005			
170	0.98	4.95	4.84	0.00	4.84	49,410			
180	0.93	4.95	4.61	0.00	4.61	49,776			
190	0.89	4.95	4.40	0.00	4.40	50,108			
200	0.85	4.95	4.20	0.00	4.20	50,411			
210	0.81	4.85	4.02	0.00	4.02	50,688			
220	0.78	4.95	3.86	0.00	3.86	50,942			
230	0.75	4.85	3.71	0.00	3.71	51,177			
240	0.72	4.95	3.57	0.00	3.57	51,394			
270	0.65	4.95	3.21	0.00	3.21	51,956			
1440	0.13	4.95	0.65	0.00	0.65	55,939			

Required 25 Year Design Detention Volume = **55,939** ft³

Proposed Detention Basin Volume Calculations:

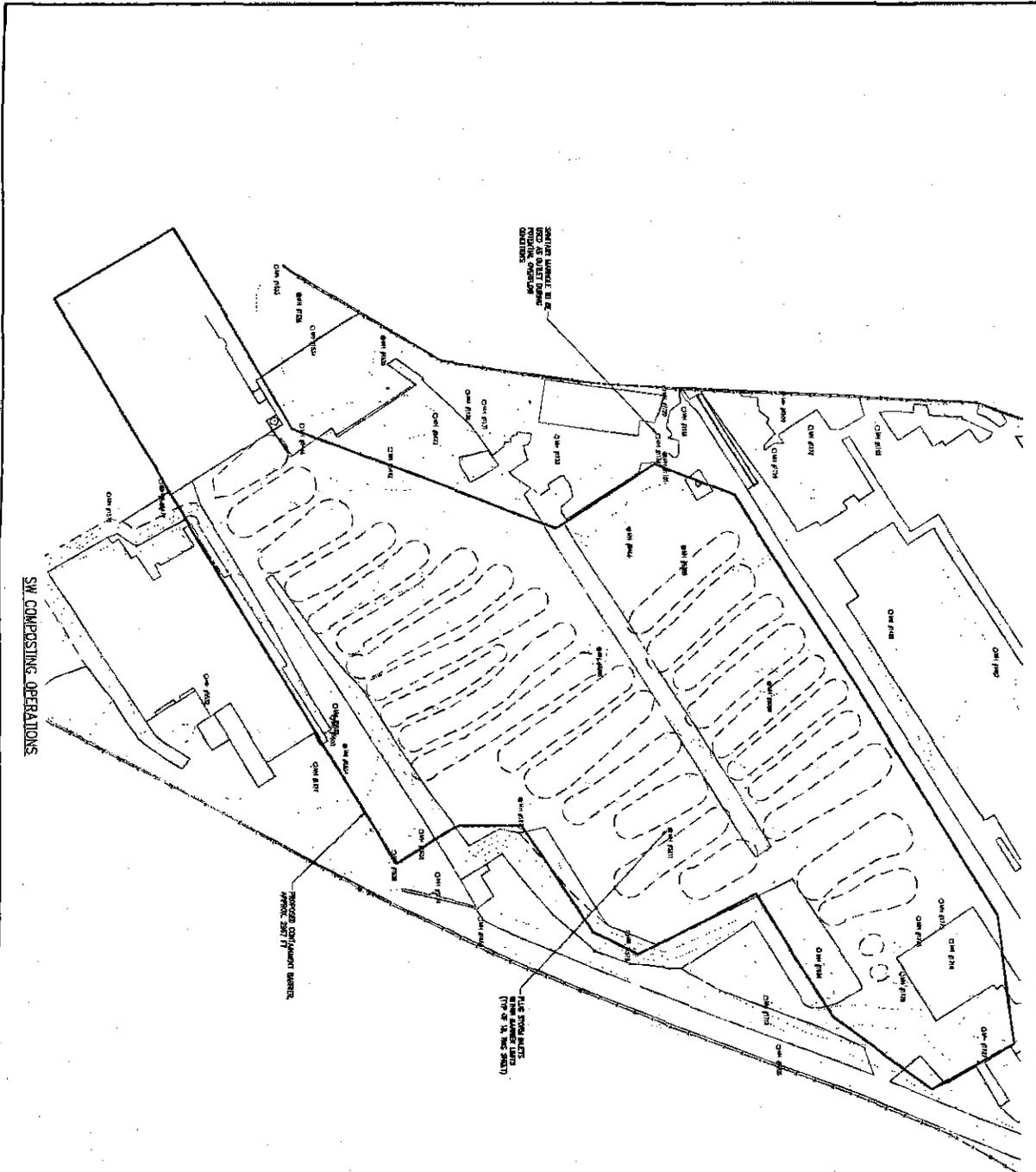
Storage in Detention Basin:

Elevation (ft)	Area (ft ²)	Volume (ft ³)	Cum. Vol. (ft ³)
709.00	0		
710.00	20,015	10,007	10,007
711.00	40,030	30,022	40,030
712.00	60,045	50,037	90,067
713.00	60,045	60,045	150,112
714.00	60,045	60,045	210,157

<-- Use WSEL = **711.32** *

Volume Provided at Detention Basin WSEL = **55,939** ft³

* Low Point of Wall 709.1 - Freeboard (2.25') = 711.35



NO.	DATE	DESCRIPTION	BY	CHK

REVISIONS
 Have your field notes
 Call before you dig


REV: A
 SHEET 2 OF 2
 JOB NO. 120127

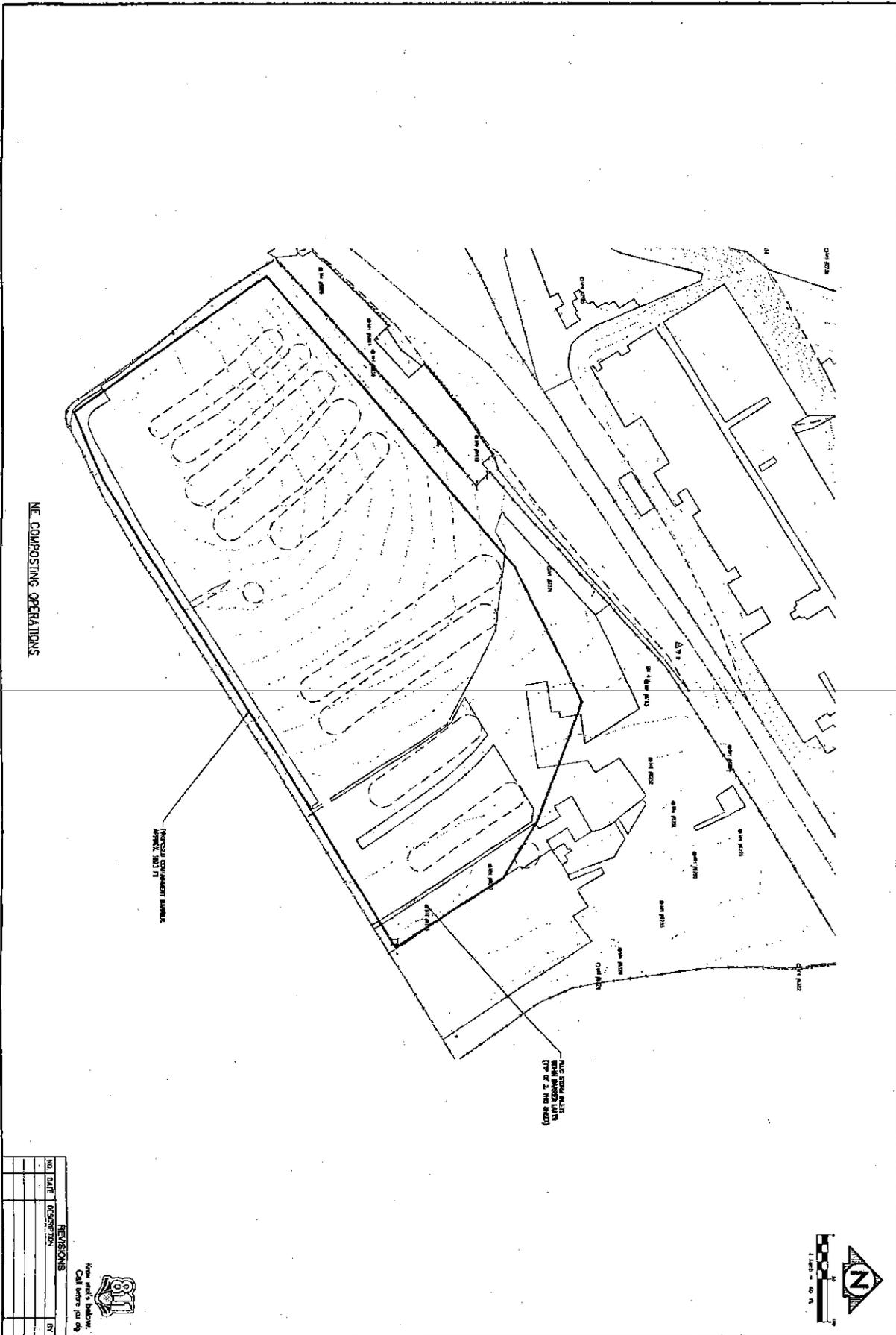
PREPARED FOR
CITY OF FLINT
CHEVY IN THE HOLE
 COMPOST SITE RUNOFF CONTAINMENT
 BARRIER CONCEPT - SW AREA



ROWE PROFESSIONAL SERVICES COMPANY
 The ROWE Building
 540 S. Saginaw St., 3rd. 200 P. O. Box 3748
 Flint, MI 48502
 D: (810) 341-7500
 F: (810) 341-7573
 www.roweps.com

PLAN DATE: 02/13/13
 PROJECT MGR: RAF
 REVIEWER: DDS
 SCALE: 1"=50'





NO.	DATE	DESCRIPTION	BY	REV.



How much better. Call before you dig.

PREPARED FOR
CITY OF FLINT
CHEVY IN THE HOLE
 COMPOST SITE RUNOFF CONTAINMENT
 BARRIER CONCEPT - NE AREA

ROWE PROFESSIONAL SERVICES COMPANY

The ROWE Building
 540 S. Saginaw St., Ste. 200; P.O. Box 3748
 Flint, MI 48502

O: (810) 341-7500
 F: (810) 341-7573
 www.rowepsc.com

PLAN DATE:	02/13/14
PROJECT W/O:	RAF
REVIEWER:	DOS
SCALE:	1" = 30'

REGIONS

SHIT 1 OF 2

JOB No. 132013

**CHEVY IN THE HOLE (CITH) LEAF COMPOST RUNOFF SAMPLING PLAN
FOR THE CITY OF FLINT'S COMPOSTING OPERATIONS**

This sampling plan for collecting storm water contaminated with the leaf compost leachate has been developed for the MDEQ Administrative Consent Order (ACO-000225). From past field observations of the surrounding leaf composting areas in CITH parcel B & E, the following sample points have been determined.

Sampling Site Plan

The sample points are old GM/Delphi storm catch basins or manholes that runoff from the surrounding composting operations has been observed discharging into (See attached table and parcel maps).

Compost Leachate Runoff Collection Points

Sample Date: 3/28/2014

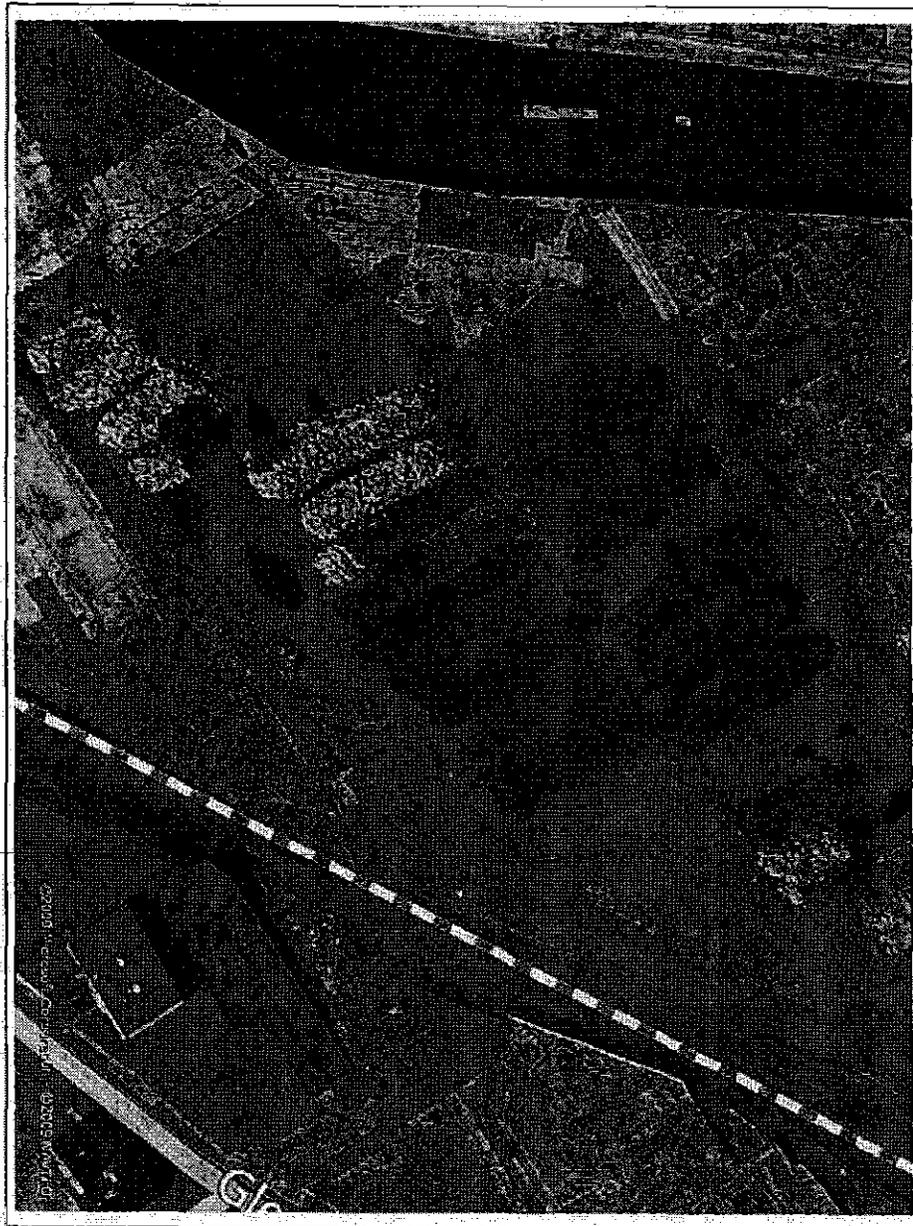
Parcel	Item ID	Deg	Min.	Sec.		Time	
B	129	43	0	42563	N	11:34	
		83	42	21.467	W		
	137	43	0	39.161	N	10:10	
		83	42	21.071	W		
	138	43	0	39.817	N	11:06	
		83	42	21.565	W		
	142	43	0	37.902	N	10:23	
		83	42	20.971	W		
	143	43	0	38.96	N	10:37	
		83	42	21.915	W		
	625	43	0	44.844	N	10:01	
		83	42	14.424	W		
	633	43	0	42.202	N	10:09	
		83	42	15.037	W		
	634	43	0	15.020	N	10:16	
		83	42	16.360	W		
	E	184	43	0	47.98	N	11:48
			83	42	7.566	W	
679		43	0	51.319	N	11:56	
		83	42	0.429	W		
672		43	0	49.858	N	N/A	
		83	42	0.131	W		

Sample Collection

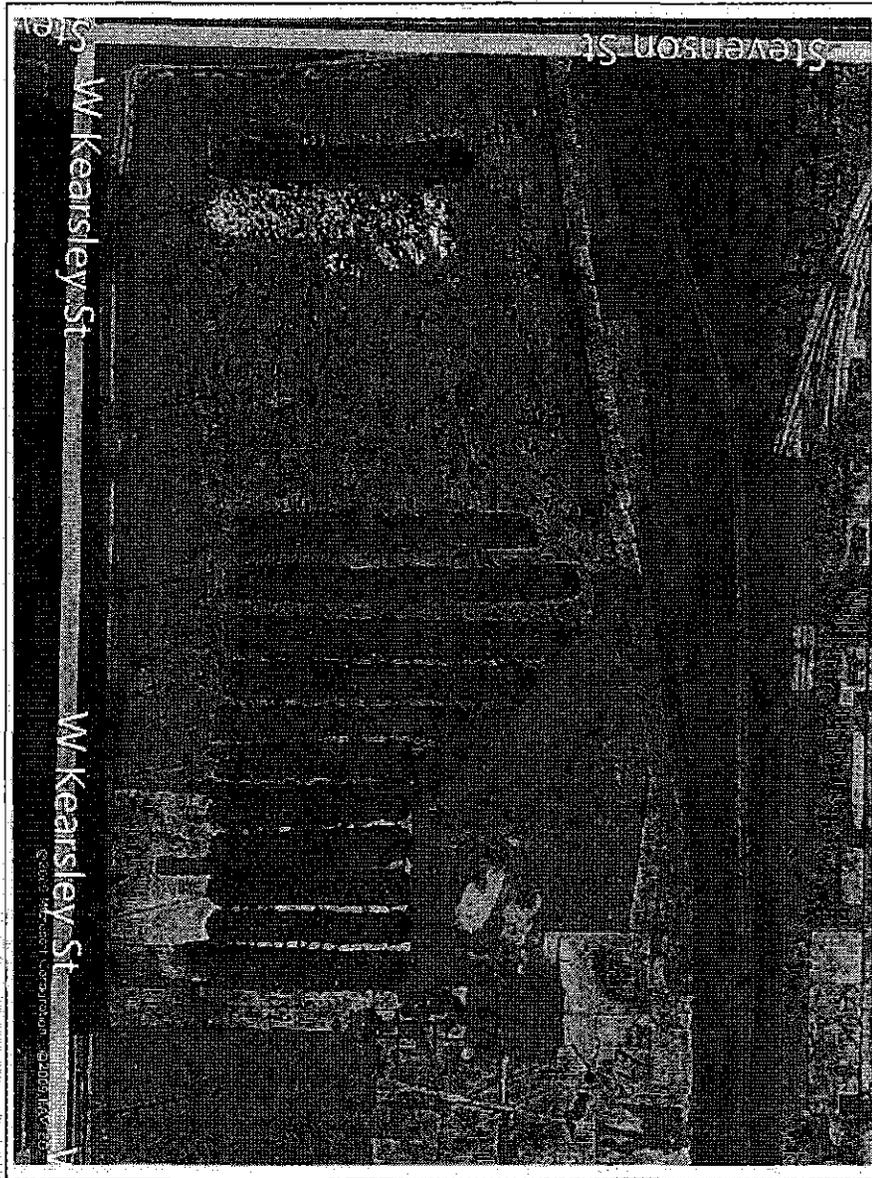
If a rain event (greater than 1 inch in a calendar day) causes observable runoff from the composting operation to discharge to the sample points, a representative sample of the discharge will be collected. Sample collection will be completed upon such observation. A grab sample from each sample point, that has composting leachate discharging into it, will be taken and placed into one composite sample. The following parameters from the MDEQ Administrative Consent Order (ACO-000225) will be collected along with turbidity (see attached field sheet).

1. Michigan 10 Metals: Arsenic, Barium, Cadmium, Chromium, Copper, Lead, Mercury, Selenium, Silver, and Zinc.
2. Carbonaceous Biochemical Oxygen Demand, 5-day (CBODs).
3. Chemical Oxygen Demand (COD).
4. Total Suspended Solids (TSS).
5. Total Dissolved Solids (TDS).
6. Fecal Coliform (Counts 10-1,000,000).
7. Total Phosphorus.
8. Ammonia Nitrogen.
9. PH.
10. Temperature.

All samples will be collected and preserved in accordance with Standard Methods for Examination of Water and Wastewater, 20th Edition. The samples will be chemically analyzed using the approved methodologies found at 40 Code of Federal Regulations (CFR) Part 136.



C1H PARCEL B



CH PARECE

City of Flint
 G-4852 Beecher Road
 Flint, MI 48532
 810.766.7210

CIH COMPOST RUNOFF - Field Sheet
CHAIN-OF-CUSTODY RECORD

Facility:
 Chevy in the Hole
 300 N CHEVROLET AVE.
 Parcel B & E

Sampling Location:
 Compost runoff by catch basins 129, 137, 138,
 142, 143, 625, 633, & 634 for parcel B and
 184, & 679 for parcel E.
 672 had no flow.

Date Collected: 3/28/2014
Sampler(s): COF
 TH/TD

<u>Sample Date/Time</u>	<u>Parameter</u>	<u>Preservative</u>	<u>Bottle</u>
Grab Composite	Metals	PH <2 HNO ₃	Plastic 250 ml
3/28/2014 10:01 am - 12:01 pm	As, Ba,Cd,Cr,Cu,Pb,Hg, Se, Ag, Zn		
	Chemical Oxygen Demand - COD	PH <2 H ₂ SO ₄	Glass 1L
	Total Phosphorus / Ammonia Nitrogen	PH <2 H ₂ SO ₄	Glass 1L
	CBOD5 / TSS	None	Glass 1L
	Fecal Coliform	None	Glass 1L
	Nitrate / Nitrite	None	Glass 500 ml
<u>Sample Date/Time</u>	<u>Parameter - Field</u>	<u>Results</u>	<u>Units</u>
3/28/14 12:01pm	Total Dissolved Solids - TDS	479	mg/L
	PH - Calibrated Buffers 4, 7, & 10 on: 3/28/14 At: 9:15 am	7.1	SU
	Temperature	45.5	° F
	Turbidity	163	NTU
	Conductivity	681	uS

