

**Michigan's
Resource Conservation
and Recovery Act**

Work Plan for Fiscal Years 2018 and 2019

State of Michigan



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1.0 INTRODUCTION

This Resource Conservation and Recovery Act of 1976, as amended (RCRA), Grant Work Plan for fiscal years (FYs) 2018 through 2019 (Work Plan) describes work the Michigan Department of Environmental Quality (MDEQ), Waste Management and Radiological Protection Division (WMRPD), is committing to accomplish during October 1, 2017, to September 30, 2019 (FYs 2018 - 2019). This work fulfills the WMRPD's obligations in its role of administering the national Solid Waste Disposal Act in Michigan, as amended by the RCRA, as amended by the Hazardous and Solid Waste Amendments of 1984.

The Director of the MDEQ functions as the designated representative of the Administrator of the United States Environmental Protection Agency (U.S. EPA).

This Work Plan is organized in five sections, as follows:

Introduction

This section consists of an overview of the Work Plan detailing its organization and the guidance used in its development.

Program Elements

This section identifies the U.S. EPA's FY 2014 - 2018 national program goal associated with each of the RCRA Work Plan program elements and discusses the MDEQ goal, strategy, objectives and considerations, and work commitments established to meet the U.S. EPA goal. The narrative for each element includes a description of how the element coincides or varies from the U.S. EPA guidance, a description of state-specific initiatives, and any scheduled FY activities.

Waste Minimization

This section consists of a narrative describing how the MDEQ intends to encourage companies, communities, governmental organizations, and individuals to prevent pollution and waste before generation by implementing conservation techniques, promoting efficient reuse of materials, making production processes more sustainable, and promoting the use of safe substances.

Miscellaneous Activities

This section consists of a narrative describing other activities that the MDEQ intends to perform in support of the overall program goals.

1.1 Guidance Documents Used to Develop the Work Plan

The U.S. EPA guidance documents used to develop this Work Plan are:

- *FY 2014 - 2018 EPA Strategic Plan, April 10, 2014, U.S. EPA*
- *FYs 2018 - 2019 National Program Manager's Guidance, Draft – June 28, 2017, Office of Land and Emergency Management, U.S. EPA*
- *FYs 2018 - 2019 National Program Manager's Guidance, Draft – June 29, 2017, Office of Enforcement and Compliance Assurance, U.S. EPA*

1.2 FYs 2018-2019 RCRA Grant Work Year Distribution

The following table shows the distribution of full-time equivalent (FTE) in **work years** among the various core elements of the Michigan Hazardous Waste Program (Program) and Work Plan objectives for FYs 2018 – 2019. It is important to note that the table below has been reformatted from what was reflected in previous FY Work Plans; the table now quantifies our work effort on each core element, as FTE in work years, rather than in staff FTEs. This provides consistency and alignment with the budget narrative in our FYs 2018 - 2019 Grant Application. The RCRA Total FTE work years of "25" does not include the work completed by the MDEQ's Senior Environmental Employee (SEE) Program positions that provide critical support for Site Identification, Manifest Processing, and Biennial Reporting, or work

associated with the vacant positions that the Program may not fill in FYs 2018 – 2019, given the federal budget constraints discussed in Section 1.3, below. It is important to note that the total number of FTE positions that the MDEQ will have, in FYs 2018 – 2019, to run the core program will likely be reduced from the FTE positions that the program had in FY 2017 and this will impact upon the MDEQ's ability to meet the commitments identified in this Work Plan that include achievement of the U.S. EPA's corrective action (CA) goals for the Government Performance and Results Act of 1993 (GPRA) 2020 priority sites.

RCRA Work Plan Program Element	Whole Work Years*
State Authorization	1
Compliance Monitoring and Enforcement Inspections and/or Record Reviews Manifest Processing Waste Classification Biennial Report Reviews Laboratory Support Monitoring Performance Reviews and Inspections	8
Environmental Justice These work efforts are incorporated as part of the Administrative Controls and CA Program Elements	
Administrative Controls Operating Licenses/Post-Closure Operating Licenses Closures/Post-Closure Plans Orders/Legally Enforceable Agreements Public Participation	1
CA Planning and Priority Setting (GPRA and Non-GPRA) Public Participation Technical Reviews Oversight Enforcement Support CA Tracking	6
Financial Assurance	1
Management and Reporting Administrative Activities – including legislative workgroup for funding Information Management – WDS/RCRA Info Tracking and Database Administration Training (Health and Safety and Technical) Freedom of Information Act Requests Laboratory Coordination Quality Management Plan (QMP) Health and Safety and Emergency Management Coordination Pollution Emergency Alerting System Support	8
RCRA Total FTE Work Years	25

*The column "Work Years" was rounded to the closest whole number to eliminate fractional time.

1.3 Challenges to Meeting FYs 2018 - 2019 Commitments

Two new and significant challenges have arisen that will affect the MDEQ's ability to accomplish Work Plan goals on a go-forward basis from FY 2018 through FY 2020. These are:

- The four-year phased reduction for Michigan's allocation of the RCRA Subtitle C State/Tribal Assistance Grant (STAG) funding recently announced by the U.S. EPA; and
- Changes in the understanding of the significance of the volatilization to indoor air pathway.

Significant Reduction in the U.S. EPA STAG Funding Allocation to Michigan

On July 18, 2016, the U.S. EPA notified the MDEQ that Michigan's STAG funding will be reduced in a phased manner by approximately \$290,000 per year over the next four years until FY 2020, resulting in approximately a one-third reduction in funding, if FY 2016 is used as a baseline. This level of funding reduction will impact upon Michigan's ability to hire new staff to fill existing vacancies and to retain and replace existing experienced CA staff who retire or move on to other employment. Without sufficient staff resources, this funding reduction will directly impact upon Michigan's ability to meet FY 2018 – 2019 commitments and, specifically, the U.S. EPA's goal of Environmental Indicators (EI) completions at 95 percent of the State's GPRA 2020 baseline list of facilities by FY 2020. The issue is further compounded by the vapor intrusion issue that is discussed below. If the STAG funding reduction continues to go forward as planned, and/or additional U.S. EPA funding reductions are imposed, it may become necessary for the MDEQ to reopen discussions with the U.S. EPA to identify the commitments that will not be met as proposed in the FYs 2018 – 2019 Work Plan.

Volatilization to Indoor Air Pathway

Vapor intrusion into buildings and residential structures is an important human health exposure pathway that is addressed in CA. Recent advances in vapor intrusion science and toxicology show that soil, groundwater, and indoor air levels for some common hazardous substances that were previously thought to be protective of human health are **not** protective. For example, trichloroethylene (TCE) and tetrachloroethylene (PCE) are commonly detected industrial pollutants in Michigan. The currently promulgated Part 201, Environmental Remediation (Part 201), of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), criteria for TCE and PCE soil volatilization to indoor air inhalation and groundwater volatilization to indoor air criteria are both orders of magnitude higher than the proposed vapor intrusion groundwater and soil screening values. Draft indoor air screening values for TCE and PCE are also more conservative and considered more health-protective than previous indoor air screening values. It is also important to note that the volatilization to indoor air pathway was not well understood when the U.S. EPA initially ranked sites for CA using the National Corrective Action Prioritization System and identified the higher priority facilities that are now on the 2020 baseline list. As a result, many low priority non-GPRA facilities where vapor intrusion may drive risk have received little or no attention. This was recently demonstrated at a closed treatment, storage, and disposal facility (TSDF) in the Grand Rapids Area (Trex Properties, LLC - MID020906764 {Trex}). In this case, the non-GPRA facility (Trex) had been redeveloped for commercial use and was conducting CA under a voluntary agreement. Information submitted by the facility, as part of their RCRA Facility Investigation, showed that sub-slab vapors were present in certain areas of the site at sufficiently high concentrations to be a potential human health concern. Follow-up indoor air samples collected in coordination with the Michigan Department of Health and Human Services, the local health department and the U.S. EPA resulted in the mandatory evacuation of the commercially used building and the investigation of surrounding buildings. Similar investigations are now ongoing at two of our GPRA 2020 facilities, Trex-Detroit and L3 Communications, and at other TSDFs that are subject to CA.

Given the new and more advanced criteria now recognized as protective for indoor air, regulatory agencies are now faced with going back and evaluating historic cleanup decisions, where volatilization to indoor air was an applicable pathway, to ensure that the CA taken was adequately protective. In addition, the low priority non-GPRA facilities must be screened to determine if volatilization to indoor air

may be a significant pathway requiring immediate attention. During FYs 2018 - 2019, the MDEQ intends to continue reviewing all of Michigan's 237 TSDFs, that are subject to CA, to determine if work activities need to be re-prioritized to immediately address potential human health exposures to vapors. Dependent upon the results from these evaluations, some of the GPRA 2020 CA commitments currently identified in this Work Plan may need to be re-prioritized and work may need to be conducted at non-GPRA facilities where human health could potentially be at risk. In addition, the results from these evaluations may impact GPRA determinations that have already been made, i.e. human exposures controlled determinations that may no longer be accurate. The MDEQ will keep the U.S. EPA advised if any changes in work priority and Work Plan goals become necessary. The MDEQ intends to have further discussions with the U.S. EPA regarding how necessary CA conducted at non-GPRA facilities could be used to meet Michigan's grant commitments.

2.0 PROGRAM ELEMENTS

In FYs 2018 - 2019, the MDEQ will use seven elements in an effective Program to manage hazardous waste through a delegation of RCRA authorities.

The RCRA Work Plan Program elements are as follows:

- State Authorization
- Compliance Monitoring and Enforcement
- Environmental Justice
- Administrative Controls
- CA
- Financial Assurance
- Management and Reporting

This section is organized into the following components:

- The U.S. EPA FY 2014 - 2018 Strategic Plan Goal and Objective associated with the Program element.
- The MDEQ goal for the Program element.
- The Program strategy, objectives and considerations, and any work commitments for the Program element.

2.1 State Authorization

U.S. EPA FY 2014–2018 Strategic Plan, Goal 3: Cleaning Up Communities and Advancing Sustainable Development

Objective 3.2: *Preserve Land.* Conserve resources and prevent land contamination by reducing waste generation and toxicity, promoting proper management of waste and petroleum products, and increasing sustainable materials management.

Objective 3.3: *Restore Land.* Prepare for and respond to accidental or intentional releases of contaminants and clean up and restore polluted sites for reuse.

MDEQ Goal

The MDEQ is committed to obtaining and maintaining the legal authorities needed to administer a quality state Program. The MDEQ has a work effort of one FTE in work years devoted to state authorization.

Strategy

Under federal environmental laws, the U.S. EPA and state share responsibility for protecting human health and the environment. The MDEQ intends to work with the U.S. EPA to ensure that Michigan retains authorization to administer the state Program and that the development and implementation of rules are consistent with the RCRA requirements.

Objective

The MDEQ submitted a draft express authorization revision application, EARA, for the April 5, 2017, state rules on April 12, 2017, and will continue to pursue the authorization thereof.

The MDEQ will be initiating work on a new rules package which will address, in part, RCRA Cluster 25. The package represents the 12th amendment to the state rules.

Work Commitments

Authorization Schedule, Adjustments, Review Responsibilities

Event	Party	Time Frame
Send U.S. EPA subsequent drafts of package	MDEQ	Within 60 days of comments receipt
Send U.S. EPA notice of public hearing	MDEQ	Before notice is given to public
Send U.S. EPA copy of effective rules and draft express authorization revision application (EARA)	MDEQ	Within 30 days of rules effective date
Send state written comments on draft EARA	U.S. EPA	Within 60 days of draft EARA receipt
Send U.S. EPA written response to comments on draft EARA and submit final EARA	MDEQ	Within 60 days of comments receipt
Send state written comments on final EARA	U.S. EPA	Within 60 days of final EARA receipt
Send U.S. EPA written response to comments on final EARA	MDEQ	Within 60 days of comments receipt

If a work commitment will not be met, the following actions will be taken prior to that commitment date:

- For delays of less than 30 days, verbal notification will be provided by the MDEQ/U.S EPA to the U.S. EPA/MDEQ regulatory specialist.
- If the MDEQ's actions result in delays of 30 or more days, the MDEQ will provide a written submittal to the U.S. EPA regulatory specialist outlining the reasons for the delay and a revised work commitment schedule.
- If the U.S. EPA's actions result in delays of more than 30 days, the U.S. EPA will provide a written submittal to MDEQ outlining the reasons for the delay and a revised work commitment schedule. In such cases, the MDEQ will not be required to submit formal schedule extension requests.

Report on Authorized State Program Revisions

The MDEQ will submit a Report on Authorized State Program Revisions (RASPR) each FY by March 1st. It will include: the Federal Register (FR) title, date, and citation; federal statutory basis for revision; RCRA cluster and revision checklist numbers; date by which revisions are required; date appearing on package; effective date of rules; amendment number associated with package in relation to base program; authorization FR citation and date; effective date of authorization; comments; codification FR citation and date; and effective date of codification.

2.2 Environmental Justice

U.S. EPA FY 2014–2018 Strategic Plan, Goal 3: Cleaning Up Communities and Advancing Sustainable Development

Objective 3.1: *Promote Sustainable and Livable Communities.* Support sustainable, resilient, and livable communities by working with local, state, tribal, and federal partners to promote smart growth, emergency preparedness and recovery planning, redevelopment and reuse of contaminated and formerly contaminated sites, and the equitable distribution of environmental benefits.

Expanding the conversation on environmentalism and working for environmental justice (EJ) is one of the U.S. EPA's top priorities. Plan EJ 2020, named in recognition of the 20th anniversary of the issuance of Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, is the U.S. EPA overarching strategy for carrying out this priority. Under Plan EJ 2020, the U.S. EPA is developing an implementation plan relating to considering EJ and permitting. The U.S. EPA, Office of Resource Conservation and Recovery, intends to use these recommendations to establish a mechanism for permitting authorities to meaningfully address EJ in their decisions. As emphasized in the *U.S. EPA FY 2014 - 2018 Strategic Plan* and the Draft FYs 2018-2019 National Program Managers Guidance Documents, all U.S. EPA programs are to continue to integrate EJ principles into each stage of the agency's programmatic and regional decision making. In addition, under the federal Title VI of the federal Civil Rights Act of 1964, recipients of federal funds are prohibited from discriminating on the basis of race, color, or national origin. Since the MDEQ is a recipient of federal funds for administration of its Program, the MDEQ needs to incorporate EJ into their RCRA Program.

MDEQ Goal

The MDEQ is committed to incorporating EJ into each stage of the RCRA Program.

Strategy

The MDEQ intends to continue to incorporate EJ into each stage of the RCRA Program by achieving the objectives and work items discussed below.

Objective and Considerations

The MDEQ recognizes that incorporating EJ into all aspects of the RCRA decision-making process is a top priority to the U.S. EPA. As such, Michigan will continue to work with the U.S. EPA as they roll out tools, to the states, to incorporate EJ into the RCRA Program.

Work Commitments

In general, the RCRA Program has expanded its public participation process to integrate EJ principles into RCRA decision-making. For most projects, public meetings are video recorded and posted on the internet, via YouTube, so they can be accessed by anyone at any time. Licensing and CA information are also routinely posted on city/township Web sites and the MDEQ website in addition to public notification via standard, legally-required procedures. A translation partnership with the University of Michigan has been established to provide translated materials to the public when the need arises. Staff will continue to participate in webinars and conference calls discussing new EJ tools and guidance.

The WMRPD, Hazardous Waste Section (HWS), has incorporated an updated EJ evaluation step into the master checklist that project managers use to facilitate the operating license review process. This update utilizes EJSCREEN and recommendations from Plan EJ 2020, in addition to recommending blanket mailings to residents and businesses within an appropriate radius around a facility to increase public awareness of RCRA activities. This process is also used for CAs. Beginning in FY 2018, the HWS is expanding our EJ efforts to engage EJ comments earlier in the hazardous waste relicensing process to better understand community concerns and address them to the extent possible in the licensing decision.

In addition to the EJ focus in the RCRA Program, there are some agency-wide initiatives in progress. An EJ Coordinator and EJ Steering Committee have been formed to look at EJ issues that affect the entire MDEQ and a grievance procedure that complies with the Federal Civil Rights Act has been developed. The RCRA Program will continue to participate in agency-wide EJ initiatives.

2.3 Compliance and Enforcement

U.S. EPA FY 2014–2018 Strategic Plan, Goal 3: Cleaning Up Communities and Advancing Sustainable Development

Objective 3.2: *Preserve Land.* Conserve resources and prevent land contamination by reducing waste generation and toxicity, promoting proper management of waste and petroleum products, and increasing sustainable materials management.

U.S. EPA FY 2014–2018 Strategic Plan, Goal 5: Protecting Human Health and the Environment by Enforcing Laws and Assuring Compliance

Objective 5.1: *Enforce Environmental Laws to Achieve Compliance.* Pursue vigorous civil and criminal enforcement that targets the most serious water, air, and chemical hazards in communities to achieve compliance. Assure strong, consistent, and effective enforcement of federal environmental laws nationwide. Use Next Generation Compliance strategies and tools to improve compliance and reduce pollution.

MDEQ Goal

The MDEQ's Mission is to promote wise use of Michigan's air, land, and water resources to support a sustainable environment, healthy communities, and a vibrant economy. In support of that mission, the WMRPD's goals are to protect human health and the environment, by ensuring the safe management of hazardous and nonhazardous wastes, to advance sustainable environmental outcomes and to optimize economic and social outcomes through agency decisions and actions.

Strategy

Consistent with the Mission and goals noted above, the MDEQ's FYs 2018 – 2019 compliance activities will include the following:

- Conducting the inspections required by the U.S. EPA, Office of Enforcement and Compliance Assurance (OECA), and MDEQ guidelines for TSDFs, generators, and transporters at the frequency outlined below.
- Increasing presence at small quantity generators (SQGs) and conditionally exempt small quantity generators (CESQGs) to increase compliance.
- Performing a significant number of SQG and CESQG inspections to further compliance with statutes and rules.
- Improving our compliance and enforcement program through continued attention to inspection quality, identification of violations, and tracking responses to violations. That, coupled with a broader inspection emphasis, will allow staff to provide education, outreach, and compliance assistance, including pollution prevention, waste characterization, and waste minimization information, directly to the regulated community.
- Continuing efforts to identify hazardous waste transporters operating without a registration and permit and/or financial responsibility (i.e., fleet liability coverage for accidental occurrences arising from hazardous materials transportation activities) and follow up as appropriate.
- Increasing efforts to expand public participation and involvement.
- Developing metrics to measure the effectiveness of the WMRPD's compliance efforts.

Consistent with Part 111, Hazardous Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Part 111), the OECA, and MDEQ guidelines, the targeted inspection frequencies will be as follows:

Type of Facility/Level of Inspection	Targeted Frequency*
Federal facilities	Annually
Active operating TSDFs	Annually at a minimum
Closed TSDFs	Every three years
Large Quantity Generators (LQGs)	20 percent annually based upon Biennial Reporting System (BRS) Numbers
Hazardous Waste Transporters	Every three years
Other – SQGs, CESQGs, Used Oil Processors, etc.	As resources allow

*Targeted frequency may be adjusted to account for prioritization and initiatives implemented to achieve the overall MDEQ goals and strategies.

It is important to note that in FY 2018, the MDEQ intends to evaluate whether Michigan should pursue an alternative approach to conducting inspections at 20 percent of our universe of LQG facilities, as calculated using BRS numbers, on an annual basis. The U.S. EPA Compliance Monitoring Strategy for the RCRA Subtitle C Program offers flexibilities for conducting RCRA core program inspections. Michigan will work the U.S. EPA Region 5 to exercise flexibility.

Objective and Considerations

Objectives of the MDEQ’s Program include:

- Increasing compliance by providing compliance assistance to the regulated community through regular inspections and numerous outreach efforts.
- Encouraging the regulated community to voluntarily discover, disclose, and correct violations before they are identified by regulatory agencies.
- Identifying and ensuring correction of violations in a timely manner to protect human health and the environment, foster program integrity, and deter future violations.

The following factors will be considered as the MDEQ strives to meet our objectives:

- Inspection planning and priority setting.
- The MDEQ’s inspection/records review process; the tools (e.g., inspection checklists) and techniques (e.g., sampling) used as part of the inspection; the accuracy and completeness of inspections and follow up; U.S. EPA communications; and compliance assistance.
- The MDEQ’s enforcement activities as indicated by the nature, timeliness, and appropriateness of enforcement actions; the degree of support afforded other enforcement officials; the nature of follow up to enforcement actions; and the effectiveness of enforcement communications with the U.S. EPA.

Staffing levels and funding will impact the MDEQ’s ability to maximize inspections. Decisions about which facilities to inspect will be based on target frequencies, complaints, risk criteria, and management factors as outlined in each respective district’s neutral inspection criteria plan. The proposed inspection activity is predicated on an effort of approximately four FTE in work years.

Inspections

The MDEQ will continue to focus inspections on:

- **TSDFs:** The MDEQ continues to implement strategies that maximize resources and focus work effort in areas that maximize protection of the environment and public health. It is the MDEQ's goal to inspect most active TSDFs four times per year. The HWS and the District offices will be coordinating to complete these inspections at some TSDFs. These inspections will include at least one District Compliance and Enforcement Inspection (CEI), and the other inspections will either be a District Focused Compliance Inspection (FCI) or an HWS inspection, such as a Groundwater Monitoring Evaluation (GME), Operation and Maintenance (O&M), Post-Closure Cap (PC Cap), Corrective Action Cover/Cap (CA Cover/Cap), Corrective Action Maintenance and Monitoring (Camm), or HWS FCI or Corrective Action Compliance Inspection. This coordinated approach is intended to provide District staff with more time to complete a greater number of generator inspections, while still maintaining a regular presence at active TSDFs.
- **Generators:** The MDEQ will strive to inspect 20 percent of Michigan's LQGs annually, using the LQG numbers from Michigan's most recent Biennial Report (i.e. the 2015 Biennial Report), to ensure that these generators are inspected at least once every five years. A September 2017 pull from RCRAInfo shows that the universe of LQGs, identified through Michigan's 2015 Biennial Report, is 339. It is important to note that MDEQ's experience with historic LQG inspections has shown that LQGs generally have a good understanding of the regulations and have few compliance problems. Accordingly, in 2014, the MDEQ initiated an effort to visit a greater number of SQGs and CESQGs to provide compliance assistance and conduct inspections, as necessary. As a result, MDEQ Field staff interacted with many generators that had never been visited and helped the regulated community to better understand hazardous waste management requirements. In FYs 2018 - 2019, the MDEQ will continue to focus compliance assistance and inspection efforts on SQGs and CESQGs. Experience has shown that these two categories of generators can be combined, for purposes of compliance assistance visits and inspection planning, since it has been found that these sites commonly notify incorrectly. For purposes of FYs 2018 - 2019 planning, the MDEQ has combined used oil processors, complaint investigations, and facilities regulated under Michigan's Liquid Industrial By-Products law with SQGs and CESQGs and that category is referred to as "Other", as noted in the above-listed table. In FYs 2018 - 2019, the MDEQ intends to inspect at least 350 to 400 facilities in the "Other" category each FY. MDEQ inspections afford effective opportunities to educate and assist facilities to gain and maintain compliance, to identify improved disposal options, and to consider waste minimization.
- **Transporters:** The MDEQ goal continues to be to inspect transporters at least once every three years.

The following factors will be a consideration when selecting facilities for inspections:

- Time elapsed since last inspection
- Compliance history
- Site status in comparison to manifested waste data
- Necessity to collect manifest data from non-reporting sites
- Necessity to investigate manifest discrepancies
- Transporters not properly registered and/or permitted; and
- Complaints.

Compliance Assistance

The MDEQ will continue to provide compliance assistance to the regulated community through several means, including:

- Educating the regulated community during inspections and through inquiries to help them achieve compliance (i.e., providing written material on common compliance requirements, such as secondary containment, manifest tracking, and universal waste).
- Educating the regulated community on various hazardous waste topics through workshops and Webinars.
- Placing guidance documents and compliance information on the MDEQ Web site for ready availability.
- Educating members of the regulated community in the use of the MDEQ Web site and informational systems.

Program Improvements

The MDEQ is working to accomplish the following program improvements:

- Developing innovative approaches to enhance our ability to conduct field assessments, inspections, and CA oversight at RCRA facilities.
- Developing compliance rate metrics.
- Developing more understandable compliance communications.
- Acknowledgement of in-compliance status.
- Performing SQG introductory inspections.
- Definition of Solid Waste rule implementation.
- Expanded public participation.
- Using existing tools, such as the Biennial Report, and new tools, such as e-manifest implementation, to identify and improve compliance in problem areas.

The MDEQ will continue to review and, where identified, improve the overall management and operation of the compliance and enforcement portion of the Program to assist with meeting overall Program goals. Staff continues to ensure data quality captured in the Waste Data System (WDS) database. Consistency, timeliness of inspections, education/outreach, and inspection follow up continue to be emphasized. The MDEQ is continuing to implement the initiative to maximize resources and efficiencies so that sufficient TSDF and LQG inspections are conducted, while allowing staff to inspect more SQGs, CESQGs, and other facilities handling hazardous and liquid industrial by-product.

The MDEQ continues to use template letters to help achieve Program consistency, and the letters continue to be refined for improved effectiveness and efficiencies. MDEQ District and Field staff currently use prepopulated Hazardous Waste Inspection Cover Sheets that were implemented to address concerns raised by the U.S. EPA regarding inspection completeness. The cover sheets include fields for facility size, number of employees, facility operation hours, a site diagram, and previously-identified violations. These cover sheets have benefitted staff prior to and during inspections and increased the MDEQ's ability to accurately identify potential significant non-compliers and changes in processes and waste generation.

The MDEQ is still in the process of implementing a new software program (nSpect) to improve the accuracy and efficiency of staff field inspections. Once implemented, the MDEQ anticipates that all inspection forms will be updated and will be loaded onto tablets that will be issued to all field staff. All WDS database information will be loaded into the tablets. The nSpect program allows for handwriting recognition and GPS coordinates; mapping and photographs can be integrated into the inspection

report that the program generates. The inspection report, when completed, is saved as a PDF file for electronic storage or it can be downloaded and printed. Upon return to the office, staff will sync the tablet with WDS and transfer all inspection data into the WDS database. This will allow for timely input of all inspection data into WDS for migration into RCRAInfo. The nSpect software program has the capability of storing and retrieving hazardous waste rules, regulations, and guidelines and, it is anticipated that at a future date, when funding allows, the program will interface with the MDEQ's template letters so that accurate demographic and enforcement information are transferred into the letter.

In FY 2017, the MDEQ HWS began using drones in an effort to enhance our ability to conduct field assessments, inspections, and CA oversight at our RCRA sites. The HWS now has staff that are trained Federal Aviation Administration Certified drone pilots and these staff have developed several innovative products to augment our inspection capabilities and increase our ability to make sound compliance decisions. Using drone technology, MDEQ staff can now update outdated satellite imagery, take photos and videos that help to determine the perspective size and scope of items such as fill areas, view facility operations or conditions not accessible from the ground, calculate cut and fill volumes, and build three dimensional (3D) and Digital Elevation Models that represent facility grounds (e.g. size and dimension of piles, building locations, etc.). During FY 2018 – 2019, the MDEQ intends to continue to use drones as a tool to conduct inspections and to advance our work in Pre-Mission Planning, Mission Safety Checklists, and efficiencies in Post Processing workflow. In addition, the MDEQ is considering expanding our drones and sensors to include thermal imagery, lidar, and sampling capabilities.

Coordinated District, Field Office, and HWS Work Commitments

District and Field Office Work Effort

For FYs 2018 - 2019, it is anticipated four FTE per year, in work years, will be devoted to MDEQ District and Field Offices compliance and enforcement activities. This total may be reduced dependent upon vacancies that could result from staff retirements/transfers and the inability to fill positions due to budget constraints. The work performed by these staff includes:

- Inspections at TSDFs, LQGs, SQGs, CESQGs, transporters, and other notifiers
- Marketer/oil burner inspections
- Inspections of used oil transporters, used oil transfer facilities, and used oil processor/re-refiners
- Accompany U.S. EPA on U.S. EPA led inspections
- Complaint investigations
- Compliance assistance visits (inquiries, presentations, etc.)
- Waste characterization reviews
- Record reviews
- Administrative and civil enforcement activities and support
- Criminal case development work/assistance Program improvement activities
- Community-based initiative participation

Coordinated District, Field Office, and HWS Inspection Schedule

During FYs 2018 – 2019, District, Field Office, and HWS staff will perform the activities identified below.

District and Field Office Staff		HWS Staff
CEI Category	Number of Inspections*	Number of Inspections*
TSDF	105	31
LQGs	136	0
Transporter	Approximately 38	0
Other	700-800	0

**Total number of inspections to be conducted during the 2-year FYs 2018 - 2019 period (i.e. 50% of the number for each respective inspection in the table will be conducted each FY)*

The TSDF inspections will be conducted within the full enforcement universe of 47 TSDFs (14 of which are actively accepting waste). A list of specific facilities and the planned inspections for FY 2018 is provided below. An amendment to this plan will be provided at a future date to identify the list of specific facilities and the inspection schedule for FY 2019. The HWS inspections to be conducted are discussed in greater detail at the end of this Section.

Active TSDFs Inspection Schedule for FY 2018 (Number of Inspections)

	Site ID	Current Name	No. of District CEIs	No. of District FCIs	HWS O&M	HWS CAMM	HWS CA Cover/Cap Inspection	HWS PC Cap Inspection	District
1	MID092947928	Drug and Laboratory Disposal Inc	1	3					Kalamazoo
2	MID000820381	Pharmacia & Upjohn Company LLC	1			1			Kalamazoo
3	MIR000001834	U of M Beck Road Facility	1						Jackson
4	MID053343976	MSU Waste Storage Facility	1						Lansing
5	MID000724724	Dow Chemical Main Plant & Incinerator Complex	1	2				1	Saginaw Bay
6	MID000809632	Dow Corning Midland Plant	1	3					Saginaw Bay
7	MID980617435	Dow Chemical Company-Salzburg Landfill	1	2	1				Saginaw Bay
8	MID000724831	Michigan Disposal Waste Treatment Plant	1	3					Southeast Michigan
9	MID005338801	Gage Products Co	1	3					Southeast Michigan
10	MID048090633	Wayne Disposal Inc	2	2	1			1	Southeast Michigan

	Site ID	Current Name	No. of District CEIs	No. of District FCIs	HWS O&M	HWS CAMM	HWS CA Cover/Cap Inspection	HWS PC Cap Inspection	District
11	MID074259565	US Ecology Michigan	1	3					Southeast Michigan
12	MID980615298	PSC Environmental Services	1	3					Southeast Michigan
13	MID980991566	EQ Detroit Inc	1	3					Southeast Michigan
14	MIR000016055	Environmental Geo-Technologies LLC	2	2					Southeast Michigan

Closed/Inactive TSDFs Inspection Schedule for FY 2018 (Number of Inspections)

	Site ID	Current Name	No. of District CEIs	No. of District FCIs	HW Section O&M	HW Section CAMM	HW Section CA Cap Inspection	HW Section PC Cap Inspection	District
15	MID980825632	MI Dept/Nat Res Storage Facility Roscommon							Cadillac
16	MID006013643	Warner Lambert Co LLC Former Manufacturing Site		1					Grand Rapids
17	MID006014666	Lacks Industries Inc							Grand Rapids
18	MID006014906	Occidental Chemical Corp							Grand Rapids
19	MID006025217	Barber Steel Foundry Corp							Grand Rapids
20	MID006407597	Former TDY Vehicle Systems		1					Grand Rapids
21	MID017079625	GM Components Holdings LLC							Grand Rapids
22	MID020906764	Trex Properties LLC							Grand Rapids
23	MID080359433	Lacks Industries Inc Saranac			1			1	Grand Rapids
24	MID980499735	Mahle Engine Components USA Inc		1					Grand Rapids
25	MID005057005	Ford River Raisin Warehouse						1	Jackson

	Site ID	Current Name	No. of District CEIs	No. of District FCIs	HW Section O&M	HW Section CMM	HW Section CA Cap Inspection	HW Section PC Cap Inspection	District
26	MID009305665	Ford Motor Company - Saline Plant							Jackson
27	MID990760100	Chrysler Introl Division			1				Jackson
28	MID005356647	DPH ERT Flint Site Plant 400							Lansing
29	MID005356712	Racer Buick City Plant							Lansing
30	MID005356860	Racer Coldwater Road Landfill			1				Lansing
31	MID005358130	MRP Alma Facility			1				Lansing
32	MID082771700	Granger Grand River Landfill			1				Lansing
33	MID980506265	Grand Blanc Landfill							Lansing
34	MID980568620	DPH ERT Flint Site Plant 500							Lansing
35	MID005513262	Metavation LLC		1					Saginaw Bay
36	MID041793340	Saginaw Nodular Industrial Land		1					Saginaw Bay
37	MID060975844	EQ Resource Recovery Inc							Southeast Michigan
38	MID985568021	Chemical Analytics Inc							Southeast Michigan
39	MID004508628	Former Wyckoff Steel Inc			1				Southeast Michigan
40	MID005356886	Racer Pontiac North Campus		1					Southeast Michigan
41	MID005356910	Racer Fiero Assembly Plant		1					Southeast Michigan
42	MID005378161	Green Clover Property LLC							Southeast Michigan
43	MID009708678	Solutia Inc East Property							Southeast Michigan
44	MID061862926	Intertape Polymer Grp							Southeast Michigan
45	MID000810408	Woodland Meadows Landfill North							Southeast Michigan

	Site ID	Current Name	No. of District CEIs	No. of District FCIs	HW Section O&M	HW Section CAMM	HW Section CA Cap Inspection	HW Section PC Cap Inspection	District
46	MID980568711	Ford Motor Co Allen Park Clay Mine LF				1			Southeast Michigan
47	MI0571924760	Former US Air Force KI Sawyer AFB					1		Upper Peninsula

*The table reflects a complete list of the facilities in the TSDf full enforcement universe, and it identifies the inspections to be completed in FY 2018.

HWS Technical Reviews and Inspections

GME/O&M Inspection Work: To ensure that land disposal facility owners/operators comply with applicable groundwater monitoring requirements, HWS staff will conduct GME/O&M inspections as shown in the Compliance and Enforcement FYs 2018 – 2019 HWS Work Schedule, which follows this section.

PC Cap Inspection Work: To ensure that TSDf owners/operators comply with post-closure requirements to maintain the final cover on closed/capped units pursuant to the approved design specifications, HWS staff will conduct PC Cap Inspections as shown in the Compliance and Enforcement FYs 2018 - 2019 Hazardous Waste Section Work Schedule, which follows this section.

CA Cover/Cap Inspection Work: To ensure that TSDf owners/operators comply with CA requirements to maintain the final cover on closed/capped CA units, pursuant to the approved design specifications, HWS staff will conduct CA Cap Inspections as shown in the Compliance and Enforcement FYs 2018 – 2019 Hazardous Waste Section Work Schedule, which follows this section.

CAMM Inspection Work: To ensure that approved institutional and engineering controls are being properly operated, maintained, and transferred (if property transactions occur) at facilities that have a CA550 with controls EI, the HWS conducts CAMM inspections. With the continued GPRa progress on CAs “completed with controls,” the MDEQ has identified the critical need to conduct these inspections to ensure the long-term effectiveness of the CA. Given that the universe of CAs “completed with controls” is continually expanding, it must be emphasized that the number of CAMM inspections to be conducted each year is increasing, with this work now becoming a significant part of the HWS’s work load.

The MDEQ has established a goal to inspect each facility that is part of the CAMM universe on a once every three-year frequency. It has been determined that this frequency is necessary if we intend to identify issues of concern and correct problems before the remedy is compromised and/or human health and/or the environment suffers an impact. To ensure that the MDEQ maintains a complete list of facilities that are subject to these inspections, a definitive method has been devised to do an annual screening, so that the CAMM universe list is periodically updated and new facilities that need CAMMs are identified. For FYs 2018 - 2019, HWS staff will conduct CAMM Inspections as shown in the Compliance and Enforcement FYs 2018 - 2019 Hazardous Waste Section Work Schedule, which follows this section. In the future, it is expected that there will be a larger number of facilities that become part of the CAMM universe, thereby necessitating higher numbers of inspections to be completed, each FY to meet the MDEQ’s inspection frequency goal. Additionally, the MDEQ anticipates that staff will be required to complete an increasing number of remediation progress reviews, monitoring data reviews, and financial assurance reviews, each FY, with this expanding universe.

Annual Groundwater Report and Non-Financial Record Reviews: During FYs 2018 - 2019, the HWS will continue to review annual groundwater reports from the facilities where submittals are required and non-financial records, including data packages and letters responding to MDEQ required submittals, to the maximum amount possible.

Waste Delisting Reviews: During FYs 2018 - 2019, upon receipt of a request to redesignate a waste otherwise identified as a hazardous waste according to the provisions of Part 111, the HWS intends to process the request and issue an approvability determination. In addition, the HWS will review the records and conduct an inspection at two facilities, with active re-designation approvals, to audit compliance with the redesignation conditions and verification sampling for ongoing waste characterization.

Waste Characterization Reviews and Variance Requests: During early FY 2016, the WMRPD filled the HWS's vacant Waste Characterization Specialist position, which allowed the HWS to begin completing dedicated waste characterization reviews on a more comprehensive basis. During FYs 2018 - 2019, the HWS will continue to complete waste characterization reviews and expeditiously process variance requests as they arrive for MDEQ review.

MDEQ Radiological Protection Section (RPS), Hazardous Waste Program Support

The MDEQ RPS oversees the disposal and processing of naturally occurring radioactive material (NORM) and other radioactive material exempt from U.S. Nuclear Regulatory Commission (U.S. NRC) regulation. The MDEQ receives requests from Wayne Disposal, Inc. for authorization to dispose of this material in their hazardous waste landfill and from U.S. Ecology Detroit North and the Michigan Disposal Waste Treatment Plant to process these wastes. In FYs 2018 - 2019, the MDEQ RPS intends to provide support to the Program by reviewing requests to process and/or dispose of specific NORM and other U.S. NRC-exempted waste streams at these licensed hazardous waste TSDFs and issuing approvals/denials for the requested activities.

MDEQ Law Enforcement Division, Environmental Investigation Section, Hazardous Waste Program Support

The Law Enforcement Division, Environmental Investigation Section will continue to provide law enforcement support for MDEQ hazardous waste regulatory programs through activities such as transport vehicle patrols and investigative services to detect criminal violations of hazardous waste law and prepare cases for prosecution by local, state, or federal officials.

**COMPLIANCE AND ENFORCEMENT
FY 2018 - 2019 HAZARDOUS WASTE SECTION WORK SCHEDULE**

#	CURRENT NAME	LEGAL NAME	CITY	SITE ID	STAFF
FY 2018					
Groundwater O&M Inspections (OAM)					
1	Dow Chemical Company - Salzburg Landfill	The Dow Chemical Company	Midland	MID 980 617 435	Joe Rogers
2	RACER Coldwater Road Landfill	Revitalizing Auto Communities Environmental Response Trust	Flint	MID 005 356 860	Joe Rogers
3	Wolf Five LLC (Former Wyckoff Steel Property)	Wolf Five LLC	Plymouth	MID 004 508 628	Joe Victory
4	Chrysler Introl Division	Old Carco LLC	Dexter	MID 990 760 100	Joe Rogers
5	Granger Grand River Landfill	Granger Land Development Co	Grand Ledge	MID 082 771 700	Dale Bridgford
6	Wayne Disposal Inc.	Wayne Disposal Inc.	Belleville	MID 048 090 633	Joe Rogers
7	MRP Alma Facility (Landfarm)	MRP Properties Co LLC	Alma	MID 005 358 130	Dale Bridgford
8	Lacks Industries Inc. Saranac	Lacks Industries Inc	Saranac	MID 080 359 433	Dale Bridgford
Postclosure Cap Inspections (FCI)					
9	Wayne Disposal Inc. MC VII and IX	Wayne Disposal Inc	Belleville	MID 048 090 633	Joe Rogers
10	Ford River Raisin Warehouse (CAMUs)	Ford River Raisin Warehouse	Monroe	MID 005 057 005	Joe Rogers
11	Dow Chemical Main Plant and Incinerator Complex (Poseyville Rd Landfill)	The Dow Chemical Co	Midland	MID 000 724 724	Joe Victory
12	Former US Air Force KI Sawyer AFB	US Dept/Defense	Gwinn	MIO 571 924 760	Dale Bridgford
13	Michigan Seamless Tube	Michigan Seamless Tube LLC	South Lyon	MID 082 767 591	Joe Rogers
14	Lacks Industries Inc. Saranac (Cllosed Surface Impoundment)	Lacks Industries Inc	Saranac	MID 080 359 433	Dale Bridgford
Corrective Action Maintenance and Monitoring Inspections (CAC)					
15	American Axle and MFG	American Axle and MFG Inc	Three Rivers	MID 000 718 551	Kimberly Tyson
16	RACER Romulus Industrial Land	Revitalizing Auto Communities Environmental Response Trust	Romulus	MID 000 809 905	Ronda Blayer
17	Ford Motor Co Allen PK Clay Mine LF	Ford Motor Co	Allen Park	MID 980 568 711	Pete Quackenbush
18	KHI Inc	KHI Inx	Holland	MID 006 020 895	Pete Quackenbush
19	Reichhold Inc Ferndale MI	Reichhold Inc	Ferndale	MID 020 087 128	Andrew Bertepelle
20	Pharmacia and Upjohn Co LLC	Pharmacia and Upjohn Co LLC	Portage	MID 000 820 381	Pete Quackenbush

**COMPLIANCE AND ENFORCEMENT
FY 2018 - 2019 HAZARDOUS WASTE SECTION WORK SCHEDULE**

#	CURRENT NAME	LEGAL NAME	CITY	SITE ID	STAFF
FY 2019					
Groundwater O&M Inspections (OAM)					
1	Dow Chemical Company - Salzburg Landfill	The Dow Chemical Company	Midland	MID 980 617 435	Joe Rogers
2	MI Dept/Nat Res Storage Facility Roscommon	MI Dept/Natural Resources	Roscommon	MID 980 825 632	John McCabe
3	Lacks Industries Inc (Cascade)	Lacks Industries Inc	Grand Rapids	MID 006 014 666	Dale Bridgford
4	Dow Chemical Main Plant and Incinerator Complex (GTRAI)	The Dow Chemical Co	Midland	MID 000 724 724	Joe Victory
5	Grand Blanc Landfill	Grand Blanc Landfill	Grand Blanc	MID 980 506 265	Joe Rogers
6	Wayne Disposal Inc.	Wayne Disposal Inc.	Belleville	MID 048 090 633	Joe Rogers
7	Metavation Vassar LLC (TPOP)	Metavation Vassar LLC	Vassar	MID 005 513 262	Joe Victory
Postclosure Cap Inspections (FCI)					
8	Dow Chemical Company - Salzburg Landfill	The Dow Chemical Company	Midland	MID 980 617 435	Joe Rogers
9	Dow Chemical Main Plant and Incinerator Complex (Sites Southeast)	The Dow Chemical Company	Midland	MID 000 724 724	Joe Victory
10	Dow Chemical Main Plant and Incinerator Complex (Diversion Basin)	The Dow Chemical Company	Midland	MID 000 724 724	Joe Victory
11	Woodland Meadows Landfill North	Waste Management of Michigan Inc	Canton	MID 000 810 408	Dale Bridgford
12	Grand Blanc Landfill	Grand Blanc Landfill	Grand Blanc	MID 980 506 265	Joe Rogers
13	Occidental Chemical Corp (Vault)	Occidental Chemical Corp	Montague	MID 006 014 906	Dale Bridgford
14	MRP Alma Facility (Landfarm)	MRP Properties Co LLC	Alma	MID 005 358 130	Dale Bridgford
Corrective Action Maintenance and Monitoring Inspections (CAC)					
15	U of M Beck Road Facility	University of Michigan	Belleville	MIR 000 001 834	Dale Bridgford
16	Whirlpool Corp St Joseph Div PLTS 3-6	Whirlpool Corp	Saint Joseph	MID 005 477 773	John McCabe
17	MI Dept/Nat Res Storage Facility Roscommon	MI Dept/Natural Resources	Roscommon	MID 980 825 632	John McCabe
18	Lafayette Building	Lafayette Building	Mount Clemens	MID 076 342 708	Rich Conforti
19	Advanced Resource Recovery LLC	Advanced Resource Recovery LLC	Inkster	MID 057 002 602	Joe Rogers
20	General Motors LLC - Technical Center	General Motors LLC	Warren	MID 050 615 996	Joe Rogers

2.4 Administrative Controls

U.S. EPA FY 2014–2018 Strategic Plan, Goal 3: Cleaning Up Communities and Advancing Sustainable Development

Objective 3.2: *Preserve Land.* Conserve resources and prevent land contamination by reducing waste generation and toxicity, promoting proper management of waste and petroleum products, and increasing sustainable materials management.

GPRA 2020 CA Universe

In March 2013, the U.S. EPA formally revised the GPRA 2020 CA Universe baseline list of facilities. Historically, Michigan had 119 facilities in their GPRA 2020 CA Universe. The new baseline added four Michigan facilities and removed four historical facilities, which resulted in no net change to the number of facilities in Michigan's GPRA CA Universe. Of that 119, the MDEQ is the lead regulatory agency for CA at 85 of the facilities. The MDEQ continues to coordinate with the U.S. EPA on an ongoing basis to determine the most appropriate lead agency for the facilities on the GPRA 2020 CA Universe baseline list of facilities. If agreement is reached with the U.S. EPA to change the lead for a facility, the baseline list will be revised accordingly.

GPRA 2020 Permit Baseline

The cleanup of some of the facilities in the GPRA 2020 CA Universe is governed through enforceable administrative controls (i.e., issuance/renewal of an operating license/post-closure operating license, certification of clean closure, approval of a post-closure plan equivalent to a post-closure operating license, or entry into a consent order/legally enforceable agreement). Of the 119 Michigan facilities in the GPRA 2020 CA Universe, the U.S. EPA has identified 60 facilities that are subject to enforceable administrative controls. This subset of the GPRA 2020 CA Universe is referred to as the GPRA 2020 Permit Baseline.

U.S. EPA Guidance

Page 85 of the *U.S. EPA FY 2014 - 2018 Strategic Plan* establishes the following strategic measure:

By 2018, prevent releases at 500 additional hazardous waste management facilities by issuing initial approved controls or updated controls resulting in the protection of an estimated 20 million people living within a mile of all facilities with controls. (Baseline: At the end of FY 2013, 1,220 facilities require these controls out of the universe of 6,600 facilities, with over 20,000 process units.)

The U.S. EPA Draft FYs 2018 - 2019 Office of Land and Emergency Management NPM Guidance and Annual Commitment System (ACS) Code HW0, Attachment A, provides the following strategic measure for FY 2018:

The U.S. EPA and the States shall achieve new or updated controls at 70 hazardous waste facilities in FY 2018.

MDEQ Goal

In FYs 2018 - 2019, the MDEQ intends to apply available resources at a pace that will ensure that administrative controls are issued, or updated and maintained, for 100 percent of the 60 facilities in the GPRA 2020 Permit Baseline.

Strategy

The MDEQ intends to process new or expansion applications, to issue/renew operating/post-closure licenses, to clean close regulated units, to approve post-closure plans, to process license modifications, or to enter into CA consent orders/legally enforceable agreements at a pace that will ensure that these

administrative controls are maintained for 100 percent of the 60 facilities in the GPRA 2020 Permit Baseline.

GPRA 2020 Permit Baseline by Facility Table

The GPRA 2020 Permit Baseline by Facility Table shows the actual and projected accomplishment dates for each MDEQ-lead facility, alphabetically. An explanation of the abbreviated column headings is shown at the top of each page of the table. The table follows this page.

GPRA 2020 PERMIT BASELINE BY FACILITY

The GPRA 2020 Permit Baseline shows the actual/projected accomplishment dates for each facility alphabetically.

Exp=Expansion PM=Project Manager *=License Expiration Date PCP=Postclosure Plan LEA=Legally Enforceable Agreement CC=Clean Closure

	Current Name	Legal Name	City	Site ID	Exp	TSD Op License Issued	TSD Op License Major Mod.	TSD Op License Renewal Submitted	TSD Op License Projected	TSD Exp App Submitted	PC Op License Issued	PC Op License Renewal Submitted	PC Op License Projected	PCP Approved	Order/ LEA Issued	Voluntary Corr. Action Agreement	CC Accepted
1	Access Business Group LLC	Access Business Group LLC	Ada	MID006026793													07/23/2010
2	Alma Facility	MRP Properties Co LLC	Alma	MID005358130											01/30/2003		
3	Anchor Danly Components	Anchor Lamina America Inc	Bellaire	MID006017966										11/27/1994			07/21/1998
4	Automotive Components Holdings LLC - Saline	Automotive Components Holdings LLC	Saline	MID009305665										05/18/2007			
5	Bayer CropScience LP	Bayer CropScience LP	Muskegon	MID080358351											11/20/2003		12/30/2003
6	U of M Beck Road Facility	University of Michigan	Belleville	MIR000001834		03/02/2010			03/02/2020*								
7	Chemical Analytics Inc Romulus	Stericycle Specialty Waste Solutions	Romulus	MID985568021		09/30/2002		04/03/2012	Closed (HSWA License Continuing for CA only)								03/21/2016
8	Chrysler Introl Division	Old Carco LLC	Dexter	MID990760100										09/30/2003			
9	Cyanokem - Detroit	Le Petomane VII Custodial Trust	Detroit	MID098011992													12/19/2002
10	Cytec Industries - Past TSD	Cytec Industries	Kalamazoo	MID005360680											03/06/2013		05/11/1999
11	Trex Properties LLC	Trex Properties LLC	Detroit	MID091605972		01/31/2001		08/09/2010	Opted to close rather than renew						02/18/2014		06/13/2014
12	Detroit Steel Co Trenton	Detroit Steel Co	Trenton	MID017422304											Referred to and accepted by CERCLA		
13	Dow Chemical Co - Salzburg LF	Dow Chemical Co	Midland	MID980617435		09/25/2015			9/25/2025*					12/23/1986			

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14	Dow Chemical Co Main PI & Incinerator Complex	Dow Chemical Co	Midland	MID000724724		09/25/2015			9/25/2025*								
15	Dow Corning - Midland PI	Dow Corning Corp	Midland	MID000809632		09/21/2012			9/21/2022*								
16	DPH DAS LLC	DPH DAS LLC	Flint	MID005356647										04/26/2005			
17	Drug & Laboratory Disposal Inc	Drug & Laboratory Disposal Inc	Plainwell	MID092947928		09/25/2012			9/25/2022*								
	Drug & Laboratory Disposal Inc	Drug & Laboratory Disposal Inc	Plainwell	MID092947928	Y	09/25/2012			9/25/2022*	09/30/2010							
18	U.S Ecology Detroit North	U.S. Ecology Michigan Inc	Detroit	MID074259565		03/16/1998		09/14/2007	03/31/2018								
	U.S Ecology Detroit North	U.S. Ecology Michigan Inc	Detroit	MID074259565	Y				03/31/2018	03/05/2013							
19	Edwards Oil Service Inc	Edwards Oil Service Inc	Detroit	MID088754668													08/15/2003
20	EQ Detroit Inc South	US Ecology	Detroit	MID980991566		03/18/2004		09/11/2008	09/30/2018								
21	EQ Resource Recovery Inc	EQ Resource Recovery Inc	Romulus	MID060975844		09/30/2015			9/30/2025*								
22	Enthone OMI Inc	Ethone OMI Inc	Warren	MID056717747													11/14/2001
23	Ford River Raisin Warehouse	River Raisin Warehouse	Monroe	MID005057005							11/28/2007	06/16/2017	09/30/2018				
24	Ford Motor Co Allen Park Clay Mine LF	Ford Motor Co	Allen Park	MID980568711										09/30/2004			
25	RACER Coldwater Road LF	RACER Trust	Flint	MID005356860										06/26/2006			
26	Wolf Five LLC (Former Wycoff Steel Property)	Wolf Five LLC	Plymouth	MID004508628										08/26/1996			
27	Gage Products	Gage Products	Ferndale	MID005338801		03/31/2015			3/31/2025*								
28	General Motors LLC	General Motors LLC	Flint	MID005356951													03/31/1992
29	General Motors LLC	General Motors LLC	Warren	MID050615996		12/05/2001									11/29/2011		01/20/2012

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30	GM Components Holdings LLC	GM Components Holdings LLC	Wyoming	MID017079625										09/30/2005			
31	Grand Blanc LF	Grand Blanc LF	Grand Blanc	MID980506265										07/08/2010			
32	Granger Grand River LF	Granger Land Development Co	Grand Ledge	MID082771700							01/25/2012		1/25/2022*				
33	Hadley Industries Div of ASI	Hadley Industries	Cadillac	MID982222242													04/30/1999
34	Holcim US Inc - Dundee	Holcim US Inc	Dundee	MID005038500													02/10/1998
35	KHI Inc	KHI Inc	Holland	MID006020895													01/16/2001
36	Lacks Industries Inc	Lacks Industries Inc	Grand Rapids	MID006014666											01/26/1990		06/04/1987
37	Lacks Industries Inc - Saranac	Lacks Industries Inc	Saranac	MID080359433											09/05/1995		05/31/2005
38	Lafarge Midwest Inc	Lafarge Midwest Inc	Alpena	MID005379607													06/04/2001
39	Lake States Wood Preserving	Lake States Wood Preserving	Munising	MID990687964											Referred to and accepted by CERCLA		
40	Macdermid Inc	Macdermid Inc	Ferndale	MID005338371													08/03/1999
41	Mahle Engine Components USA Inc	Mahle Engine Components USA Inc	Muskegon Heights	MID980499735										05/30/2002			
42	Metavation LLC	Metavation LLC	Vassar	MID005513262											11/09/2004		
43	Mi Dept/Nat Res Storage Facility Roscommon	MI Dept/Natural Resources	Roscommon	MID980825632										08/09/2000			
44	Michigan Disposal Waste Treatment Plant	Michigan Disposal Inc	Belleville	MID000724831		10/31/2007		10/31/2016	09/30/2018								
45	Michigan Seamless Tube LLC	Michigan Seamless Tube LLC	South Lyon	MID082767591											04/07/2004		09/24/1998

GPRA 2020 PERMIT BASELINE BY FACILITY

The GPRA 2020 Permit Baseline shows the actual/projected accomplishment dates for each facility alphabetically.

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	Current Name	Legal Name	City	Site ID	Exp	TSD Op License Issued	TSD Op License Major Mod.	TSD Op License Renewal Submitted	TSD Op License Projected	TSD Exp App Submitted	PC Op License Issued	PC Op License Renewal Submitted	PC Op License Projected	PCP Approved	Order/ LEA Issued	Voluntary Corr. Action Agreement	CC Accepted
46	National Standard Company LLC	National Standard Company LLC	Niles	MIT270010549											11/17/1995		03/04/1998
47	Occidental Chemical Corp	Occidental Chemical Corp	Montague	MID006014906											04/29/1993		04/24/1993
48	Dyno Nobel Inc Ishpeming Plant	Dyno Nobel	Ishpeming	MID041413154												04/14/1999	10/17/2000
49	Perma Fix of Michigan Inc	Perma Fix of Michigan Inc	Brownstown	MID096963194											09/20/2006		01/13/2006
50	Pharmacia and Upjohn Co LLC	Pharmacia and Upjohn Co LLC	Portage	MID000820381		12/14/2012			12/14/2022*								06/23/2005
51	PSC Environmental Services	Petro-Chem Processing Group of Nortru LLC	Detroit	MID980615298		12/18/2012			12/18/2022*								11/13/2003
52	Barber Steel Foundry Corp	Barber Steel Foundry Corp	Rothbury	MID006025217										07/27/2011			
53	Rugged Liner Inc	Rugged Liner Inc	Owosso	MID058816927													11/13/2003
54	Safety Kleen Systems Inc	Safety Kleen Systems Inc	Pontiac	MID000722686													11/03/1999
55	Solutia Inc East Property	Solutia Inc	Trenton	MID009708678										03/27/2002			
56	Systech Environmental Corp	Systech Environmental Corp	Alpena	MID981200835													09/21/2001
57	Warner Lambert Co LLC - Former Manufacturing Site	Warner Lambert Co LLC	Holland	MID006013643										05/08/2015			
58	MSU Waste Storage Facility	Michigan State University	Lansing	MID053343976		01/31/2014			01/31/2024*								
58	MSU Waste Storage Facility	Michigan State University	Lansing	MID053343976	Y	01/31/2014			01/31/2024*	04/19/2013							
59	Wayne Disposal Inc	Wayne Disposal Inc	Belleville	MID048090633		05/04/2012			05/04/2022*								
	Wayne Disposal Inc	Wayne Disposal Inc	Belleville	MID048090633	Y	05/04/2012			05/04/2022*	03/04/2011							

GPRA 2020 PERMIT BASELINE BY FACILITY

The GPRA 2020 Permit Baseline shows the actual/projected accomplishment dates for each facility alphabetically.

Exp=Expansion PM=Project Manager *=License Expiration Date PCP=Postclosure Plan LEA=Legally Enforceable Agreement CC=Clean Closure

	Current Name	Legal Name	City	Site ID	Exp	TSD Op License Issued	TSD Op License Major Mod.	TSD Op License Renewal Submitted	TSD Op License Projected	TSD Exp App Submitted	PC Op License Issued	PC Op License Renewal Submitted	PC Op License Projected	PCP Approved	Order/ LEA Issued	Voluntary Corr. Action Agreement	CC Accepted
60	Woodland Meadows LF North	Woodland Meadows LF North	Canton	MID000810408							09/12/2005	05/15/2015	03/31/2018				

Objective and Considerations

In FYs 2018 - 2019, the MDEQ intends to issue/renew operating/post-closure licenses, to process license modifications, to clean close regulated units, to approve post-closure plans, or to enter into CA consent orders/legally enforceable agreements such that the GPRA “approved controls in place” goals are achieved for 100 percent of the GPRA 2020 Permit Baseline.

The MDEQ will apply resources and allocate work between the U.S. EPA and other MDEQ divisions, as necessary, to achieve the “controls in place” schedules. This effort will involve approximately one FTE in work years. Successfully implementing the schedule will allow the MDEQ to meet the FY 2018 national goal for “approved controls in place” at Michigan’s GPRA 2020 Permit Baseline facilities. It must be recognized that the ability to evaluate and process timely “controls in place” requires financial assurance reviews, as well as public participation. In addition, the work that resulted from the General Motors’ bankruptcies that took place in FY 2010, the work that needs to be done to redevelop the General Motors sites, now owned by Revitalizing Automotive Communities Environment Response Trust (RACER Trust), the staff time necessary to provide support on U.S. EPA lead projects, the staff time that may be necessary to coordinate recommendations for future Program funding, the staff time to be devoted to the WDS/RCRAInfo databases, the staff time to participate in stakeholder work groups to assist the U.S. EPA in developing the e-Manifest IT system and trouble shoot any interoperability between Michigan’s existing system (WDS) and the new national system, efforts to incorporate EJ into each stage of the RCRA Program, and any FTE positions that are vacated and not filled could impact upon the MDEQ’s ability to meet the “controls in place” projected work schedule.

Work Commitments

Waste Analysis Plan Initiative

To improve the quality and consistency of the Waste Analysis Plans (WAPs) in our Permits and to streamline the permitting process, the HWS is initiating a focused WAP review process for three facilities that are in the process of relicensing. As part of this process, MDEQ will engage with the facilities and the U.S. EPA to update our WAP template and resolve key issues that have hindered relicensing. This process is anticipated to take three months and will require commitment of significant resources from the MDEQ, U.S. EPA and the regulated community. The outcome of this process should greatly facilitate license reissuance and result in high quality and consistent WAPs across facilities in Michigan.

Administrative Controls Work Schedule

The Administrative Controls FYs 2018 - 2019 Hazardous Waste Section Work Schedule follows this page.

**ADMINISTRATIVE CONTROLS
FY 2018 - 2019 HAZARDOUS WASTE SECTION WORK SCHEDULE**

#	CURRENT NAME	LEGAL NAME	CITY	SITE ID	STAFF
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Operating License Renewal Application - Technical Adequacy Determination (OP150)

1	EQ Detroit Inc South	US Ecology	Detroit	MID 980 991 566	Andrew Bertapelle
2	Michigan Disposal Waste Treatment Plant	Michigan Disposal Waste Treatment Plant	Belleville	MID 000 724 831	Kimberly Tyson

Operating License Renewal Application - Public Notice Draft Operating License (OP160DP)

3	EQ Detroit Inc South	US Ecology	Detroit	MID 980 991 566	Andrew Bertapelle
4	Michigan Disposal Waste Treatment Plant	Michigan Disposal Waste Treatment Plant	Belleville	MID 000 724 831	Kimberly Tyson

Operating License Renewal Application - Reissuance Determination (OP205)

5	EQ Detroit Inc South	US Ecology	Detroit	MID 980 991 566	Andrew Bertapelle
6	US Ecology Detroit North	US Ecology Michigan Inc	Detroit	MID 074 259 565	Rich Conforti
7	Michigan Disposal Waste Treatment Plant	Michigan Disposal Waste Treatment Plant	Belleville	MID 000 724 831	Kimberly Tyson

Postclosure Operating License Renewal Application - Permit Reviewed for Completeness (PC403CO)

8	Ford River Raisin Warehouse	Ford River Raisin Warehouse	Monroe	MID 005 057 005	Pete Quackenbush/Andrew Bertapelle
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Postclosure Operating License Renewal Application - Technical Adequacy Determination (PC150)

9	Ford River Raisin Warehouse	Ford River Raisin Warehouse	Monroe	MID 005 057 005	Pete Quackenbush/Andrew Bertapelle
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Postclosure Operating License Renewal Application - Permit Public Notice - Other (PC160OT)

10	Woodland Meadows	Woodland Meadows North Landfill	Canton	MID 000 810 408	Pete Quackenbush
11	Ford River Raisin Warehouse	Ford River Raisin Warehouse	Monroe	MID 005 057 005	Pete Quackenbush/Andrew Bertapelle

Postclosure Operating License Renewal Application - Final Permit Effective (PC205)

12	Woodland Meadows	Woodland Meadows North Landfill	Canton	MID 000 810 408	Pete Quackenbush
13	Ford River Raisin Warehouse	Ford River Raisin Warehouse	Monroe	MID 005 057 005	Pete Quackenbush/Andrew Bertapelle

2.5 Corrective Action

U.S. EPA FY 2014–2018 Strategic Plan, Goal 3: Cleaning Up Communities and Advancing Sustainable Development

Objective 3.3: *Restore Land.* Prepare for and respond to accidental or intentional releases of contaminants and clean up and restore polluted sites for reuse.

U.S. EPA Guidance

Page 16 of the Draft FYs 2018 – 2019 U.S. EPA National Program Manager’s Guidance states:

For RCRA Corrective Action, EPA will collaborate with states to develop and implement a strategic corrective action path forward, with the goals of achieving progress toward the 2020 strategic goals for 2020 Baseline facilities, completing final cleanups for the highest priority facilities. The corrective action path forward will address the highest priority work such as barriers to progress, identify and implement innovative solutions, incentivize achievement, measure and track progress, and communicate best practices and successes.

Environmental Indicators (EIs)

The RCRA CA Program tracks EIs as the means by which environmental results are measured.

Appendix A, of the U.S. EPA Draft FYs 2018 - 2019 National Program Manager’s Guidance identifies FY 2018 national guidance measures for the following RCRA CA EIs:

CA EI	National Target
Human Exposures Under Control (CA725)	94 percent
Groundwater Migration Under Control (CA750)	88 percent
Remedy Construction (CA550) *	70 percent
Corrective Action Performance Standards Attained (CA900 or CA999)	33 percent

**Note that for FY 2017, the U.S. EPA National Program Manager’s Guidance for completing CA550s was revised to incentivize remedial efforts at large and complex operating CA facilities where not all contamination can be reached, due to safety or physical limitations. In FY 2017, the U.S. EPA will begin counting facilities that construct remedies in all reachable areas and defer a small portion of their final remedies for a specified time-period with required review criteria and schedule.*

The first two RCRA CA EIs are a means of evaluating and reporting on the acceptability of current site conditions (i.e., they are interim milestones and not final remedy or site closure milestones) and they are defined as follows:

- The Current Human Exposures Under Control (CA725) EI is an assessment of actual current human risks and would typically take the form of a qualitative assessment of the completeness of exposure pathways but, as necessary, may include a traditional quantitative risk assessment.
- The Groundwater Migration Under Control (CA750) EI is strictly a resource protection measure and not a direct measure of human risk. It may include the assessment of impacts of groundwater discharges to surface waters and surface water ecosystems.

These EIs provide an opportunity for facilities and regulators to show meaningful progress that is achievable in the near future. The EIs focus on results (i.e., changes in the quality of the environment) and de-emphasize the CA process. The EIs reflect “current” conditions (i.e., known or expected at the time of the determination), are site-wide determinations, and should reflect all contaminants of concern present above risk-based levels of concern. The EIs cannot be achieved until all aspects of the facility subject to RCRA CA are considered.

The third RCRA CA EI, Remedy Construction, is a significant milestone to the U.S. EPA because it measures the progress of remedy implementation at GPRA 2020 CA facilities. This EI is reported in the national RCRAInfo as follows:

CA550NR – This event code applies when the RCRA facility receives state/U.S. EPA acknowledgement that no construction is necessary beyond what has been implemented prior to the remedy decision (e.g., as in the case of stabilization measures).

CA550RC – This event code applies when the RCRA facility receives state/U.S. EPA written acknowledgement that the approved final remedy that was designed to achieve long-term protection of human health and the environment has been constructed and is fully functional as designed, whether or not final cleanup levels or other requirements have been achieved.

CA550OF – This code applies when the agency has approved written documentation submitted by the facility demonstrating that remedy deferral for a specific operating (manufacturing process) area(s) is appropriate based on defined criteria. For this code to apply, the facility must demonstrate the following:

- There are safety and/or physical limitations that cannot be overcome by engineering and/or scheduling considerations and that preclude reasonable efforts to construct/implement remedies during a specified time period of operation.
- The deferred operating area is not an operating hazardous waste unit/area; the environmental indicators CA725 and CA750 are and will continue to be met relative to the entire facility.
- There are no ongoing releases contributing to contamination and there are no offsite releases; contaminant extent has been delineated, the final remedy has been identified, and financial assurance for the final remedy is in place for all areas at the facility.
- Any necessary institutional controls are in place to prevent unacceptable exposures to contamination and ensure protection of human health and the environment, and
- The deferral is only for a specified period of time and shall not extend beyond the active life of the critical process, or integral component, that is the basis for the deferral.

The fourth RCRA CA EI, Corrective Action Performance Standards Attained, has become a significant milestone to the U.S. EPA because it measures achievement of performance standards. This EI is reported in the national RCRAInfo as follows:

CA900CR – This event code applies when the selected remedy for the protection of human health and the environment standard is fully implemented and associated performance standards have been attained with required controls.

CA900NC – This event code applies when the selected remedy for the protection of human health and the environment standard is fully implemented and associated performance standards have been attained with no controls.

CA999NF – This event code applies when the site characterization has demonstrated the attainment of the final RCRA CA goals without any active remediation.

CA999RM – This event code applies when all active remedial measures as specified in the RCRA permit or enforcement order are completed, final RCRA CA goals have been attained, the permit or order has been terminated, and CA at the facility is no longer needed.

GPRA 2020 CA Universe

Refer to the GPRA 2020 CA Universe discussion, in the Administrative Controls Section of this Work Plan, for details regarding the sites that are in this universe.

The GPRA 2020 CA Baseline by Facility table alphabetically lists each of the 119 facilities that are in the universe, the lead agency for the facility, and the actual EI accomplishment dates for each of the CA goals (CA725, CA750, CA550, CA900/CA999). An explanation of the abbreviated column headings is shown at the top of each page of the table.

The GPRA 2020 CA Baseline by Facility table follows this page.

GPRA 2020 Corrective Action Baseline By Facility

The GPRA 2020 Corrective Action Baseline by Facility shows the actual/projected accomplishment dates for each facility alphabetically.														
Definitions: N-Caps=National CA Prioritization System; HE Control=Human Exposures Controlled; GW Control=Groundwater Controlled; Construct Comp=Construction Complete; Lead-C=CERCLA														
	CURRENT NAME	Legal IName	Lead	City	Site ID	Permit Engineer	N-CAPS	HE Control CA725	GW Control CA750	Remedy Decision CA400	Construction Comp CA550	RAU CA800	Perf Std Attained CA900	Perform Std Attained CA999
1	ANCHOR DANLY COMPONENTS	ANCHOR LAMINA AMERICA INC	EPA	BELLAIRE	MID006017966	Kimberly Tyson	H	06/10/1999	06/10/1999	09/30/1999	09/30/1999			
2	ARKEMA INC	ARKEMA INC	EPA	RIVERVIEW	MID005363114	Peter (Pete) Quackenbush	M	09/30/2004	06/22/2005					
3	ASHLAND INC	ASHLAND INC	EPA	LANSING	MID047173653	Cheryl Howe	M	04/28/2005	05/26/2005					
4	BASF CORP	BASF CORP	EPA	HOLLAND	MID048223986	Daniel (Dan) Dailey	H	03/10/2004	06/14/2007	08/20/2009	12/01/2011	10/07/2014		
5	BASF CORP	BASF CORP	EPA	WYANDOTTE	MID064197742	Richard Conforti	H	06/30/2005	09/30/2005					
6	CITY OF FLINT	CITY OF FLINT	EPA	FLINT	MID005356654	Daniel (Dan) Dailey	M	10/07/2015						
7	CITY OF ADRIAN	COUNTY OF LENAWEE	EPA	ADRIAN	MID005044813	Richard Conforti	H	03/30/2005	05/30/2007					
8	DEMMER PROPERTIES LLC	DEMMER PROPERTIES LLC	EPA	LANSING	MID005380134	Daniel (Dan) Dailey	H		10/23/2006					
9	DETROIT DIESEL CORPORATION REDFORD	DETROIT DIESEL CORPORATION	EPA	DETROIT	MID005356803	Ronda Blayer	M	12/04/1999	09/02/2003	02/09/2011	12/19/2014	01/06/2015		
10	DPH ERT FLINT SITE PLANT 400	DPH ENVIRONMENTAL RESPONSE TRUST	EPA	FLINT	MID005356647	Richard Conforti	H	09/29/2004	12/28/2006					
11	DPH ERT FLINT SITE PLANT 500	DPH ENVIRONMENTAL RESPONSE TRUST	EPA	FLINT	MID980568620	Daniel (Dan) Dailey	L	06/19/2015	06/24/2016					
12	EDWARD C LEVY CO PLANT 3	EDWARD C LEVY CO	EPA	ECORSE	MID000809665	Cheryl Howe	L	11/04/1999	11/04/1999					
13	GENERAL MOTORS FLINT ASM	GENERAL MOTORS LLC	EPA	FLINT	MID005356951	Stephen (Steve) Buda	M	11/04/2005	11/04/2005	11/04/2005				
14	GM COMPONENTS HOLDINGS LLC	GM COMPONENTS HOLDINGS LLC	EPA	WYOMING	MID017079625	Richard Conforti	H	09/29/2004	12/28/2006					
15	HENKEL SURFACE TECHNOLOGIES	HENKEL SURFACE TECHNOLOGIES	EPA	MORENCI	MID058723867	Peter (Pete) Quackenbush	H	08/24/2004	08/26/2003	06/15/2006	06/27/2006	10/02/2007		
16	HONEYWELL INTERNATIONAL INC BURDICK AND JACKSON	HONEYWELL INTERNATIONAL INC	EPA	MUSKEGON	MID072575731	Stephen (Steve) Buda	H	09/27/2007						

GPRA 2020 Corrective Action Baseline By Facility

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	CURRENT NAME	Legal IName	Lead	City	Site ID	Permit Engineer	N-CAPS	HE Control CA725	GW Control CA750	Remedy Decision CA400	Constructio n Comp CA550	RAU CA800	Perf Std Attained CA900	Perform Std Attained CA999
17	JOHNSON CONTROLS INC	JOHNSON CONTROLS INC	EPA	FOWLerville	MID099124299	Stephen (Steve) Buda	H	03/31/2004	09/30/2004	12/01/2006				
18	LACKS INDUSTRIES INC SARANAC	LACKS INDUSTRIES INC	EPA	SARANAC	MID080359433	Kimberly Tyson	H	09/30/2004	09/17/2003					
19	MODINEER COMPANY	MODINEER CO	EPA	NILES	MIK367427523	Daniel (Dan) Dailey	M							
20	OCCIDENTAL CHEMICAL CORP	OCCIDENTAL CHEMICAL CORP	EPA	MONTAGUE	MID006014906	Daniel (Dan) Dailey	H	09/30/2003	02/24/2000		07/19/2012	12/17/2012		
21	PPG INDUSTRIES INC	PPG INDUSTRIES INC	EPA	ADRIAN	MID048788749	Richard Conforti	H	09/27/2007	03/10/2008					
22	FORMER NATIONAL COPPER PRODUCTS INC	PRAIRIE RONDE REALTY COMPANY	EPA	DOWAGIAC	MID005068507	Daniel (Dan) Dailey	M	06/28/2007	04/07/2008		06/24/2016			
23	RACER SAGINAW NODULAR INDUSTRIAL LAND	RACER PROPERTIES LLC	EPA	SAGINAW	MID041793340	Cheryl Howe	H	08/25/2004	09/29/2004					
24	FORMER WORLDWIDE FACILITIES GROUP	REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE TRUST	EPA	LIVONIA	MID005356621	Richard Conforti	H	03/05/2008	11/16/2004	03/10/2006				
25	RACER BUICK CITY PLANT	REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE TRUST	EPA	FLINT	MID005356712	Peter (Pete) Quackenbush	H	08/17/2004	09/29/2005					
26	RACER PONTIAC NORTH CAMPUS	REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE TRUST	EPA	PONTIAC	MID005356886	Daniel (Dan) Dailey	H	03/02/2004	09/29/2004					
27	RACER PONTIAC CENTERPOINT CAMPUS CENTRAL & WEST	REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE TRUST	EPA	PONTIAC	MID005356902	Kimberly Tyson	H	12/06/2000	12/06/2000	08/03/2006	09/04/2014	05/04/2015	05/04/2015	

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	CURRENT NAME	Legal IName	Lead	City	Site ID	Permit Engineer	N-CAPS	HE Control CA725	GW Control CA750	Remedy Decision CA400	Construction Comp CA550	RAU CA800	Perf Std Attained CA900	Perform Std Attained CA999
28	RACER FIERO ASSEMBLY PLANT	REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE TRUST	EPA	PONTIAC	MID005356910	Daniel (Dan) Dailey								
29	RACER PROPERTIES LLC	REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE TRUST	EPA	PONTIAC	MID980568836	Stephen (Steve) Buda								
30	ST MARYS CEMENT	ST MARYS CEMENT	EPA	DETROIT	MID094553419	Peter (Pete) Quackenbush	L	06/30/2003	06/30/2003					
31	TECUMSEH COMPRESSOR COMPANY	TECUMSEH COMPRESSOR COMPANY	EPA	TECUMSEH	MID005049440	Peter (Pete) Quackenbush	L							
32	CWC CASTINGS DIVISION PLANT 3	TEXTRON INC	EPA	MUSKEGON	MID006030357	Stephen (Steve) Buda	H	12/31/2007	12/31/2007					
33	DOW BAY CITY PLANT	THE DOW CHEMICAL COMPANY	EPA	BAY CITY	MID005380258	Cheryl Howe	H	03/13/2007	03/13/2007					
34	UNIVERSAL DIE CAST INC	WASHTENAW INDUSTRIAL FACILITY LLC	EPA	SALINE	MID980795512	Peter (Pete) Quackenbush	H	09/25/2008						
35	MIDLINK BUSINESS PARK	5200 EAST CORK ST INVESTORS LLC	State - Hazardous Waste	KALAMAZOO	MID001876663	Richard Conforti	M	09/18/2017						
36	ACCESS BUSINESS GROUP LLC	ACCESS BUSINESS GROUP LLC	State - Hazardous Waste	ADA	MID006026793	Peter (Pete) Quackenbush	H	09/30/2002	08/20/2004	07/10/2006	01/30/2008		09/29/2015	
37	AK STEEL DEARBORN WORKS	AK STEEL CORPORATION	State - Hazardous Waste	DEARBORN	MID087738431	Kimberly Tyson	H	02/08/2005	02/08/2005					
38	AMERICAN AXLE AND MFG INC	AMERICAN AXLE AND MFG	State - Hazardous Waste	THREE RIVERS	MID000718551	Kimberly Tyson	H	12/31/2007	12/31/2007		08/25/2014	08/25/2014	10/01/2014	10/01/2014
39	BARBER STEEL FOUNDRY CORP	BARBER STEEL FOUNDRY CORP	State - Hazardous Waste	ROTHBURY	MID006025217	Peter (Pete) Quackenbush	H	07/14/2004	07/11/2011		12/21/2011	08/28/2014	09/30/2015	09/30/2015

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Definitions: N-Caps=National CA Prioritization System; HE Control=Human Exposures Controlled; GW Control=Groundwater Controlled; Construct Comp=Construction Complete; Lead-C=CERCLA														
	CURRENT NAME	Legal IName	Lead	City	Site ID	Permit Engineer	N-CAPS	HE Control CA725	GW Control CA750	Remedy Decision CA400	Construction Comp CA550	RAU CA800	Perf Std Attained CA900	Perform Std Attained CA999
40	BAYER CROPS SCIENCE LP	BAYER CROPS SCIENCE LP	State - Hazardous Waste	MUSKEGON	MID080358351	Richard Conforti		09/14/2005	09/23/2004	05/07/2014	07/23/2015			
41	BLACK RIVER PUBLIC SCHOOL	BLACK RIVER SCHOOLS	State - Hazardous Waste	HOLLAND	MID006411953	Ronda Blayer	L	09/21/2003	09/16/2003	09/21/2006	03/06/2009	09/16/2003	09/16/2003	09/16/2013
42	BLUE COW INC	BLUE COW INC	State - Hazardous Waste	MIDDLEVILLE	MID060197662	Peter (Pete) Quackenbush	H	01/16/1998	01/16/1998	06/13/1996	01/16/1998	04/16/1998		01/16/1998
43	BOSTIK INC	BOSTIK INC	State - Hazardous Waste	MARSHALL	MID060198249	Stephen (Steve) Buda	M							
44	MONTAGUE WORKS	CHEMOURS COMPANY FC LLC	State - Hazardous Waste	MONTAGUE	MID000809640	Ronda Blayer	M	09/24/2013	09/10/2015					
45	CYTEC INDUSTRIES INC (PAST TSD)	CYTEC INDUSTRIES INC	State - Hazardous Waste	KALAMAZOO	MID005360680	Daniel (Dan) Dailey	L	06/28/2012	09/19/2011	12/03/2008				
46	DELPHI ENERGY & CHASSIS SAGINAW OPERATIONS	DELPHI AUTOMOTIVE SYSTEMS LLC	State - Hazardous Waste	SAGINAW	MID005356845	Stephen (Steve) Buda	L							
47	DORE INDUSTRIAL INC	DORE INDUSTRIAL INC	State - Hazardous Waste	BAY CITY	MID005359286	Kimberly Tyson	H	09/21/2006	08/03/2006	09/21/2006	09/30/1999			
48	DOW CORNING MIDLAND PLT	DOW CORNING CORPORATION	State - Hazardous Waste	MIDLAND	MID000809632	Kimberly Tyson	M	09/24/1999	09/24/1999		05/25/2012			
49	DRUG AND LABORATORY DISPOSAL INC	DRUG AND LABORATORY DISPOSAL INC	State - Hazardous Waste	PLAINWELL	MID092947928	Kimberly Tyson	M	03/27/1996	03/27/1996		06/13/2011	09/27/2011		
50	DYNO NOBEL INC - ISHPERING PLANT	DYNO NOBEL INC	State - Hazardous Waste	ISHPEMING	MID041413154	Richard Conforti	M	09/08/2008						
51	EDWARD C LEVY CO PLT 6	EDWARD C LEVY CO	State - Hazardous Waste	DETROIT	MID094549425	Kimberly Tyson	L	11/04/1999	11/04/1999					
52	EDWARDS OIL SERVICE INC	EDWARDS OIL SERVICE INC	State - Hazardous Waste	DETROIT	MID088754668	Daniel (Dan) Dailey	M	07/02/1992	11/22/1993					

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	CURRENT NAME	Legal IName	Lead	City	Site ID	Permit Engineer	N-CAPS	HE Control CA725	GW Control CA750	Remedy Decision CA400	Construction Comp CA550	RAU CA800	Perf Std Attained CA900	Perform Std Attained CA999
53	EI DUPONT DE NEMOURS	EI DUPONT FLINT SITE	State - Hazardous Waste	FLINT	MID005512066	Daniel (Dan) Dailey	L	09/21/2006	01/30/2006	08/14/2006	05/29/2009	04/11/2013		
54	ENTHONE OMI INC	ENTHONE OMI INC	State - Hazardous Waste	WARREN	MID056717747	Kimberly Tyson	L	04/15/2014	04/15/2014		09/21/2015			
55	EQ DETROIT INC SOUTH	US ECOLOGY	State - Hazardous Waste	DETROIT	MID980991566	Richard Conforti	L	08/29/2011	08/23/1996	09/01/2010	06/21/2011	09/27/2011	06/23/2016	
56	EQ RESOURCE RECOVERY INC	EQ RESOURCE RECOVERY INC	State - Hazardous Waste	ROMULUS	MID060975844	Peter (Pete) Quackenbush	M	09/24/1999	09/24/1999		07/09/2015			
57	FORD MOTOR COMPANY - SALINE PLANT	FORD MOTOR COMPANY	State - Hazardous Waste	SALINE	MID009305665	Peter (Pete) Quackenbush	M	09/23/2014	09/05/2013		06/29/2017			
58	FORD MOTOR CO ALLEN PK CLAY MINE LF	FORD MOTOR COMPANY	State - Hazardous Waste	ALLEN PARK	MID980568711	Peter (Pete) Quackenbush	M	09/06/2007	01/04/2007	09/30/2004	09/30/2004	11/30/2007	02/15/2017	
59	FORD RIVER RAISIN WAREHOUSE	FORD RIVER RAISIN WAREHOUSE	State - Hazardous Waste	MONROE	MID005057005	Peter (Pete) Quackenbush	H	10/01/2001	03/25/2005					
60	GAGE PRODUCTS CO	GAGE PRODUCTS CO	State - Hazardous Waste	FERNDALE	MID005338801	Daniel (Dan) Dailey	L	01/09/2014						
61	GM LANSING GRAND RIVER	GENERAL MOTORS LLC	State - Hazardous Waste	LANSING	MID005356894	Peter (Pete) Quackenbush	M	09/28/2015						
62	GENERAL MOTORS LLC	GENERAL MOTORS LLC	State - Hazardous Waste	WARREN	MID050615996	Kimberly Tyson	L	03/14/2011	03/17/2011		08/19/2014	09/22/2014	02/29/2016	
63	GRAND BLANC LANDFILL	GRAND BLANC LANDFILL	State - Hazardous Waste	GRAND BLANC	MID980506265	Kimberly Tyson	M	08/06/2010	08/06/2010		03/25/2014			
64	GRANGER GRAND RIVER LANDFILL	GRANGER LAND DEVELOPMENT COMPANY	State - Hazardous Waste	GRAND LEDGE	MID082771700	Peter (Pete) Quackenbush	H	09/05/2001	09/05/2001	08/17/2006	09/17/2008			
65	HADLEY INDUSTRIES DIV OF ASI	HADLEY INDUSTRIES	State - Hazardous Waste	LUDINGTON	MID982222242	Richard Conforti	L							
66	HOLCIM US INC DUNDEE PLANT	HOLCIM US INC	State - Hazardous Waste	DUNDEE	MID005038500	Kimberly Tyson	M							

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	CURRENT NAME	Legal IName	Lead	City	Site ID	Permit Engineer	N-CAPS	HE Control CA725	GW Control CA750	Remedy Decision CA400	Construction Comp CA550	RAU CA800	Perf Std Attained CA900	Perform Std Attained CA999
67	FORMER DETROIT COKE CORPORATION SITE	HONEYWELL INTERNATIONAL INC	State - Hazardous Waste	DETROIT	MID099114704	Peter (Pete) Quackenbush	H	09/25/2003						
68	INTERTAPE POLYMER GRP	INTERTAPE POLYMER CORPORATION	State - Hazardous Waste	MARYSVILLE	MID061862926	Daniel (Dan) Dailey	L	01/13/2012	01/24/2012		05/09/2013	09/30/2013	10/05/2015	
69	KHI INC	KHI INC	State - Hazardous Waste	HOLLAND	MID006020895	Peter (Pete) Quackenbush	H	09/06/2001	02/22/2011	10/30/1997	01/16/2001	12/07/2007	05/19/2011	
70	LACKS INDUSTRIES INC	LACKS INDUSTRIES INC	State - Hazardous Waste	GRAND RAPIDS	MID006014666	Cheryl Howe	H	09/29/2003	08/22/2013					
71	LAFARGE MIDWEST INC	LAFARGE MIDWEST INC	State - Hazardous Waste	ALPENA	MID005379607	Daniel (Dan) Dailey	H	05/17/2001	05/17/2001	05/17/2001	05/17/2001	05/17/2001		05/17/2001
72	LAFAYETTE BUILDING	LAFAYETTE BUILDING	State - Hazardous Waste	MOUNT CLEMENS	MID076342708	Richard Conforti	M	08/22/2012	06/06/2012		06/16/2015	07/24/2015		11/06/2009
73	MACDERMID INC	MACDERMID INC	State - Hazardous Waste	FERNDALE	MID005338371	Kimberly Tyson	M							
74	MAHLE ENGINE COMPONENTS USA INC	MAHLE ENGINE COMPONENTS USA INC	State - Hazardous Waste	MUSKEGON HEIGHTS	MID980499735	Daniel (Dan) Dailey	L	10/03/2002	08/28/2002	12/03/2012	05/09/2013	09/23/2013		
75	METAVATION VASSAR LLC	METAVATION VASSAR LLC	State - Hazardous Waste	VASSAR	MID005513262	Richard Conforti	M	07/13/2011	08/30/2013					
76	MI DEPT/NAT RES STORAGE FACILITY ROSCOMMON	MI DEPT/NATURAL RESOURCES	State - Hazardous Waste	ROSCOMMON	MID980825632	Stephen (Steve) Buda	H	09/29/2000	09/29/2000	08/09/2000	02/01/2002	09/13/2012	02/01/2002	
77	MICHIGAN DISPOSAL WASTE TREATMENT PLANT	MICHIGAN DISPOSAL INC	State - Hazardous Waste	BELLEVILLE	MID000724831	Kimberly Tyson	L	05/12/2009	05/12/2009		06/10/2011	09/27/2011		
78	MICHIGAN SEAMLESS TUBE	MICHIGAN SEAMLESS TUBE LLC	State - Hazardous Waste	SOUTH LYON	MID082767591	Ronda Blayer	H	09/09/2004	09/30/2005					
79	MSU WASTE STORAGE FACILITY	MICHIGAN STATE UNIVERSITY	State - Hazardous Waste	LANSING	MID053343976	Kimberly Tyson	H	05/29/1998	05/29/1998		09/19/2012	09/19/2012		03/17/1993

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	CURRENT NAME	Legal IName	Lead	City	Site ID	Permit Engineer	N-CAPS	HE Control CA725	GW Control CA750	Remedy Decision CA400	Constructio n Comp CA550	RAU CA800	Perf Std Attained CA900	Perform Std Attained CA999
80	MRP ALMA FACILITY	MRP PROPERTIES CO LLC	State - Hazardous Waste	ALMA	MID005358130	Peter (Pete) Quackenbush	H	09/27/2004	09/16/2004					
81	NATIONAL STANDARD COMPANY LLC	NATIONAL STANDARD COMPANY LLC	State - Hazardous Waste	NILES	MIT270010549	Kimberly Tyson	M							
82	NATIONAL STANDARD NILES CITY COMPLEX	NATIONAL STANDARD NILES CITY COMPLEX	State - Hazardous Waste	NILES	MID005069257	Kimberly Tyson	M	09/29/2003	09/22/2004					
83	CHRYSLER INTROL DIVISION	OLD CARCO LLC	State - Hazardous Waste	DEXTER	MID990760100	Cheryl Howe	M	09/28/2006	08/14/2007	08/28/2014				
84	PERMA FIX OF MICHIGAN INC	PERMA FIX OF MICHIGAN INC	State - Hazardous Waste	BROWNSTOWN TOWNSHIP	MID096963194	Kimberly Tyson	H	03/24/2004	09/24/2003	05/18/2012	09/24/2012	09/04/2014	11/26/2014	
85	PSC ENVIRONMENTAL SERVICES	PETRO-CHEM PROCESSING GROUP OF NORTRU LLC	State - Hazardous Waste	DETROIT	MID980615298	Daniel (Dan) Dailey	M	06/16/1999	06/16/1999	06/16/1999				
86	PHARMACIA & UPJOHN COMPANY LLC	PHARMACIA & UPJOHN COMPANY LLC	State - Hazardous Waste	PORTAGE	MID000820381	Peter (Pete) Quackenbush	H	03/29/2001	03/29/2001	03/30/2001	03/30/2001	09/28/2012	09/01/2015	
87	REICHHOLD INC FERNDALE MICHIGAN	REICHHOLD INC	State - Hazardous Waste	FERNDALE	MID020087128	Daniel (Dan) Dailey	H	05/28/1998	04/24/1998	04/18/2005	05/13/2003	09/15/2006		
88	RACER ROMULUS INDUSTRIAL LAND	REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE TRUST	State - Hazardous Waste	ROMULUS	MID000809905	Ronda Blayer		08/06/2013	09/18/2014	09/03/2015	10/30/2015	12/18/2015	12/22/2015	
89	RACER COLDWATER ROAD LANDFILL	REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE TRUST	State - Hazardous Waste	FLINT	MID005356860	Richard Conforti	H	05/29/1998	05/29/1998	10/29/1992	07/31/2014	03/25/2015		01/29/2015

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	CURRENT NAME	Legal IName	Lead	City	Site ID	Permit Engineer	N-CAPS	HE Control CA725	GW Control CA750	Remedy Decision CA400	Construction Comp CA550	RAU CA800	Perf Std Attained CA900	Perform Std Attained CA999
90	RACER TRUST LANSING PLANT 6 INDUSTRIAL LAND	REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE TRUST	State - Hazardous Waste	LANSING	MID005356928	Peter (Pete) Quackenbush	M	09/25/2013	09/18/2014					
91	RACER PLANTS 2 & 3	REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE TRUST	State - Hazardous Waste	LANSING	MID980700827	Peter (Pete) Quackenbush	M	09/06/2013	09/18/2014					
92	FORMER PEREGRINE COLDWATER ROAD SITE	REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE TRUST	State - Hazardous Waste	FLINT	MIR000020743	Richard Conforti		03/21/2014	04/23/2015					
93	RUGGED LINER INC	RUGGED LINER INC	State - Hazardous Waste	OWOSSO	MID058816927	Richard Conforti	M	08/25/2006	08/04/2006	09/28/2007	07/23/2009	05/09/2013	03/30/2017	
94	SAFETY KLEEN SYSTEMS INC	SAFETY KLEEN SYSTEMS INC	State - Hazardous Waste	PONTIAC	MID000722686	Daniel (Dan) Dailey	M	04/07/2014	07/18/1998	02/11/2004	10/13/2014	09/15/2014	10/13/2014	01/06/2005
95	SAFETY KLEEN SYSTEMS INC	SAFETY KLEEN SYSTEMS INC	State - Hazardous Waste	MASON	MID981000359	Daniel (Dan) Dailey	H	05/28/1998	05/28/1998	05/28/1996	04/25/1996			
96	SOLUTIA INC EAST PROPERTY	SOLUTIA INC	State - Hazardous Waste	TRENTON	MID009708678	Cheryl Howe	M	09/22/2015	08/27/2014					
97	CHEMICAL ANALYTICS INC ROMULUS	STERICYCLE SPECIALTY WASTE SOLUTIONS INC	State - Hazardous Waste	ROMULUS	MID985568021	Richard Conforti	L	08/04/1998	08/04/1998	09/01/2010	06/05/2012	09/17/2013		08/04/1998
98	SYSTECH ENVIRONMENTAL CORP	SYSTECH ENVIRONMENTAL CORP	State - Hazardous Waste	ALPENA	MID981200835	Daniel (Dan) Dailey	L	08/06/2012	08/06/2012		08/06/2012	10/14/2013		07/20/2015
99	FORMER TDY VEHICLE SYSTEMS	TELEDYNE VEHICLE SYSTEMS	State - Hazardous Waste	MUSKEGON	MID006407597	Daniel (Dan) Dailey	H	07/07/2005	07/07/2005					

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	CURRENT NAME	Legal IName	Lead	City	Site ID	Permit Engineer	N-CAPS	HE Control CA725	GW Control CA750	Remedy Decision CA400	Construction Comp CA550	RAU CA800	Perf Std Attained CA900	Perform Std Attained CA999
100	DOW CHEMICAL MAIN PLANT & INCINERATOR COMPLEX	THE DOW CHEMICAL COMPANY	State - Hazardous Waste	MIDLAND	MID000724724	Daniel (Dan) Dailey	H		09/30/2003					
101	DOW CHEMICAL COMPANY-SALZBURG LANDFILL	THE DOW CHEMICAL COMPANY	State - Hazardous Waste	MIDLAND	MID980617435	Daniel (Dan) Dailey	L	09/09/2009	09/09/2009		07/10/2012	06/12/2013		
102	TRANSIGN LLC	TRANSIGN LLC	State - Hazardous Waste	WATERFORD	MID006007967	Daniel (Dan) Dailey	L	08/25/2008	08/25/2008	08/25/2008	09/29/2010	09/18/2012		09/29/2010
103	TREX PROPERTIES LLC	TREX PROPERTIES LLC	State - Hazardous Waste	DETROIT	MID091605972	Daniel (Dan) Dailey	L		02/10/2006					
104	U OF M BECK ROAD FACILITY	UNIVERSITY OF MICHIGAN	State - Hazardous Waste	BELLEVILLE	MIR000001834	Ronda Blayer	M	07/11/2005	07/11/2005	09/21/2006	05/16/2005	05/16/2005	05/16/2005	
105	SELFRIDGE AIR NATIONAL GUARD	US DEPT/DEFENSE	State - Hazardous Waste	SELFRIDGE ANGB	MID099113128	Peter (Pete) Quackenbush	H	09/29/2004						
106	US ECOLOGY DETROIT NORTH	US ECOLOGY MICHIGAN INC	State - Hazardous Waste	DETROIT	MID074259565	Richard Conforti	L	03/16/1998	03/16/1998	09/01/2010	07/08/2011	09/27/2011		03/16/1998
107	WACKER CHEMICAL CORP	WACKER CHEMICAL CORP	State - Hazardous Waste	ADRIAN	MID075400671	Daniel (Dan) Dailey	H	09/27/2007	09/14/2007	11/02/2007	09/28/2012	10/03/2013		
108	WARNER LAMBERT CO LLC FORMER MANUFACTURING SITE	WARNER LAMBERT COMPANY LLC	State - Hazardous Waste	HOLLAND	MID006013643	Cheryl Howe	M	11/13/2003	09/21/2004	06/20/2014	01/30/2015			
109	WOODLAND MEADOWS LDFL NORTH	WASTE MANAGEMENT OF MICHIGAN, INC.	State - Hazardous Waste	CANTON	MID000810408	Peter (Pete) Quackenbush	L	09/30/2010	09/30/2010	09/30/2010	09/30/2010	08/26/2014		
110	WAYNE DISPOSAL INC	WAYNE DISPOSAL INC	State - Hazardous Waste	BELLEVILLE	MID048090633	Peter (Pete) Quackenbush	M	09/09/2009	09/09/2009					
111	WHIRLPOOL CORP ST JOSEPH DIV PLTS 3-6	WHIRLPOOL CORP	State - Hazardous Waste	SAINT JOSEPH	MID005477773	Kimberly Tyson	H	02/27/2001	02/27/2001	11/28/2000	12/27/2002	06/23/2003		06/23/2003

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	CURRENT NAME	Legal IName	Lead	City	Site ID	Permit Engineer	N-CAPS	HE Control CA725	GW Control CA750	Remedy Decision CA400	Construction Comp CA550	RAU CA800	Perf Std Attained CA900	Perform Std Attained CA999
112	WOLF FIVE LLC (FORMER WYCKOFF STEEL PROPERTY)	WOLF FIVE LLC	State - Hazardous Waste	PLYMOUTH	MID004508628	Kimberly Tyson	H	02/18/1996	02/18/1996	03/26/2002	08/29/2003	06/12/2013	08/06/2015	
113	FEDERAL-MOGUL CORP	FEDERAL-MOGUL CORP	State - Superfund	GREENVILLE	MID006021414	Kimberly Tyson	H	03/10/2008	09/22/2015					
114	CYANOKEM - DETROIT	LE PETOMANE VII CUSTODIAL TRUST	State - Superfund	DETROIT	MID098011992	Daniel (Dan) Dailey	L							
115	REMEDICATION & REDEVELOPMENT- PROD PLATED PLASTICS	MI DEPT/ENVIRONM ENTAL QUALITY	State - Superfund	RICHLAND	MID047153077	Richard Conforti	H	07/14/2000	06/12/2001					
116	REMEDICATION & REDEVELOPMENT DIV FENSKE LANDFILL	MI DEPT/NATURAL RESOURCES AND ENVIRONMENT	State - Superfund	GRAND RAPIDS	MID072589328	Kimberly Tyson	H	04/25/2005	09/18/2014					
117	BAY CITY INDUSTRIAL LAND	REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE TRUST	State - Superfund	BAY CITY	MID005356688	Cheryl Howe	H	09/27/2007	03/10/2008		09/14/2015		09/28/2016	
118	FORMER GM PLANT SAGINAW MALLEABLE IRON	REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE TRUST	State - Superfund	SAGINAW	MID005356696	Cheryl Howe	H	11/16/2007	09/15/2006					
119	REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE TRUST	REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE TRUST	State - Superfund	YPSILANTI	MID980587893	Stephen (Steve) Buda	L	03/25/2015	07/16/2015					

MDEQ Goal

In FY 2018, the MDEQ intends to apply available resources at a pace that will enable the meeting of the following milestones for the MDEQ-lead GPRA 2020 CA Universe:

- Human exposures controlled at 92 percent of the MDEQ-lead sites (EI achieved at two additional facilities in FY 2018). Of the 85 Michigan-lead GPRA 2020 facilities, nine sites remain where this EI has not been met. The agency is committing to complete CA Oversight at several facilities that have not had active staff involvement, for the past several years, to re-initiate communication with the facility and to move them forward towards CA completions. The MDEQ is also committing to continuing with CA oversight at several sites, where work is ongoing, with the goal of achieving this EI at a substantial number of them moving forward toward FY 2020.
- Contaminated groundwater controlled at 89 percent of the MDEQ-lead sites (EI achieved at four additional facilities in FY 2018). Of the 85 Michigan-lead GPRA 2020 facilities, 13 sites remain where this EI has not been met. The agency is committing to complete CA Oversight at facilities that have not had active staff involvement, for the past several years, to re-initiate communication with the facility and to move them forward towards CA completions. The MDEQ is also committing to continuing with CA oversight at several remaining sites, where work is ongoing, with the goal of achieving this EI at a substantial number of them moving forward towards FY 2020.
- Complete construction of final remedies at 60 percent of the MDEQ-lead sites (EI achieved at five additional facilities in FY 2018).
- Achieve performance standards attained (CA900/CA999) at 38 percent of the MDEQ-lead sites (EI achieved at 6 additional facilities in FY 2018).

A similar volume of CA work activities will be conducted in FY 2019; an amendment to this plan will be provided at a future date to identify the specific FY 2019 work schedule.

While the MDEQ continues to work towards accomplishing EI milestones at our GPRA facilities where these goals have not yet been met, it is important for the U.S. EPA to recognize that there is an ever-increasing amount of work to be done at facilities that have achieved CA550s with controls to assure the adequacy of the implemented control(s) and require essential and timely adjustments if/when they become necessary. As the MDEQ achieves larger CA550 percentages for our GPRA 2020 facilities, the amount of time that must be devoted to oversight will increase and this area of CA will become a significant work element.

Strategy

The MDEQ will apply resources as well as allocate the work to be done between the U.S. EPA and other MDEQ divisions in an endeavor to meet the MDEQ goal for FYs 2018 - 2019 CA accomplishments. It is important to note that resource reduction and additional workloads (RACER Trust site remediation, operating license expansion applications, operating license renewals, operating license modifications, negotiation of new CA consent orders, staff time to evaluate mechanisms for future program funding, staff time to provide support on U.S. EPA lead projects, staff time to be devoted to the WDS/RCRAInfo databases, staff time to participate in stakeholder work groups and assist the U.S. EPA in developing the e-Manifest IT system and trouble shoot any interoperability between Michigan's existing system (WDS) and the new national system, etc.), impact upon the MDEQ's ability to meet our FYs 2018 - 2019 CA goals. In addition, financial assurance review continues to be an important component to the RCRA Program objectives (for operating licenses, post-closure, and CA) and instances involving regulated facilities on the brink of bankruptcy is altering the progress planned for the MDEQ-lead GPRA 2020 CA schedule. The MDEQ also plans to continue to follow through with compliance oversight efforts of implemented CA to ensure adequate operation and maintenance, which

is even more critical during difficult economic times. Some bankrupt TSDFs will likely require Comprehensive Environmental Response, Compensation and Liability Act referrals.

Objective and Considerations

The MDEQ will implement the above described strategy to conduct CA at the GPRA 2020 CA Universe facilities for which the MDEQ is the lead regulatory agency and to assist the U.S. EPA, as resources allow, to help the U.S. EPA achieve their FYs 2018 - 2019 national CA milestones. It is anticipated that approximately six FTE in work years will be devoted to this effort. Any FTE positions that are vacated and not filled in FYs 2018 - 2019 will affect the MDEQ's ability to meet our GPRA goal.

The Remediation and Redevelopment Division (RRD) Part 201 Amendments and their Potential Impact on RCRA/Part 111 Corrective Action in Michigan

In Michigan, Part 111 uses environmental protections standards pursuant to Part 201 for CA. In 2000, the U.S. EPA and the MDEQ entered into a memorandum of understanding (MOU) to aid in the implementation of RCRA CA requirements, at Michigan facilities, recognizing the use of the Part 201 cleanup criteria and associated processes for Part 111 CA to fulfill the RCRA CA obligations in Michigan. In 2002, the U.S. EPA and the MDEQ entered into a technical addendum that provided some additional technical detail related to substantive technical requirements. Because Part 201 has undergone several statutory changes since the U.S. EPA and the MDEQ entered into the MOU and the technical addendum, the agencies have agreed that an update to the MOU is needed.

During FY 2018, the HWS Toxicologists expect to continue to spend significant time working with RRD to support update of the Part 201 generic cleanup criteria that have historically been used for Part 111/RCRA CA in Michigan; updated criteria are critical to the updated MOU that is under development. The cleanup criteria rules package will require response to comments and any necessary revisions prior to promulgation.

The MDEQ has also made a commitment to the U.S. EPA to develop a compliance assistance document that will lay out what provisions of Part 201 apply to Part 111/RCRA CA. The MDEQ has been developing this compliance assistance tool and expects to share a draft document during FY 2018. The U.S. EPA has already provided direction on the Michigan Occupational Safety and Health Administration (MIOSHA) provisions found in § 324.20120a(18). After the MDEQ completes the cleanup criteria update and compliance assistance document, the agency will proceed to draft the MOU for U.S. EPA review and comment.

Work Commitments

RCRA Ready for Anticipated Use (RAU) Determinations

Sites are RAU if they have a CA550 (Remedy Constructed) and a CA725 (Human Exposures Controlled Determination). They must also have all necessary land use controls in place and a CA772 (Institutional Controls Established) entered into RCRAInfo for each institutional control implemented, unless it has been determined that no land use controls are needed. As part of their land cleanup efforts, the U.S. EPA tracks the number of sites and number of acres that have been cleaned up and are RAU, so that they can measure how much land has been successfully revitalized. The MDEQ is committed in helping the U.S. EPA track progress on land revitalization and, as such, staff will determine if a GPRA facility that meets the U.S. EPA's definition of RAU indeed meets that definition and, if it does, they will complete a U.S. EPA RAU form for the facility and enter the appropriate code for the determination (CA800 Yes) into WDS and RCRAInfo. For FYs 2018 - 2019, the MDEQ will continue to focus upon getting CA800 RAUs caught up-to-date in WDS and RCRAInfo and to identify the acreage for these accomplishments.

Mixing Zone Authorizations/Reauthorizations

As a tool to help achieve EI goals at Michigan's GPRA facilities, the MDEQ is committed to completing mixing zone authorization/reauthorization determinations as needed for facilities where contaminated

groundwater is venting to surface water at concentrations exceeding applicable Part 201 groundwater/surface water interface criteria.

Coordinated Polychlorinated Biphenyl Cleanups (PCBs)

As identified in the *FYs 2018-2019 National Program Manager's Guidance, Draft – June 28, 2017, Office of Land and Emergency Management, U.S. EPA*, cleaning up contaminated sites and promoting reuse is identified as a key element to be accomplished during these FYs. As part of this work effort, the U.S. EPA has identified the following PCB cleanup goals:

- U.S. EPA Headquarters and Regions will implement high priority aspects of the PCBs cleanup program, which is not delegated to states. The U.S. EPA will continue coordination of Toxic Substances Control Act (TSCA) PCB cleanups with RCRA, Superfund and state cleanups.
- U.S. EPA Regions will review and issue PCB cleanup/disposal approvals as required under Title 40 of the Code of Federal Regulations (CFR) Part 761, Subpart D (TSCA Storage and Disposal), addressing technical issues with applicants and coordinating with states.
- Appendix A – FY 2018 NPM Guidance Measures, ACS Codes PC1 and PC3, in the FYs 2018-2019 NPM Guidance identifies the U.S. EPA FY 2018 National Targets for number of sites receiving TSCA coordinated approvals.

To facilitate PCB clean-ups and eliminate duplication of efforts when PCB remediation is needed at RCRA CA sites, the MDEQ and the U.S. EPA have been working cooperatively for coordinating approvals, pursuant to 40 CFR Part 261.77 (TSCA coordinated approval), although a formal memorandum of agreement or understanding is not yet in place. Additional projects with coordination of TSCA PCB remediation work are expected during FYs 2018 - 2019. The MDEQ has been working with the U.S. EPA on many of the conditions for coordinated approvals under Part 111 and Part 201 authorities. Once the MDEQ has promulgated updated cleanup criteria for PCBs during FY 2018, the agency intends to provide a draft memorandum to the U.S. EPA for TSCA coordinated approvals so that a formal memorandum of agreement or understanding can be established.

CA Work Schedule

The CA FY 2018 HWS Work Schedule follows this page.

**CORRECTIVE ACTION
FY 2018 HAZARDOUS WASTE SECTION WORK SCHEDULE**

#	CURRENT NAME	LEGAL NAME	CITY	SITE ID	STAFF
Corrective Action Oversight (CA001)					
1	Dow Midland On-site	The Dow Chemical Co	Midland	MID 000 724 724	Dan Dailey
2	Dow Midland Off-site - Midland Area Soils	The Dow Chemical Co	Midland	MID 000 724 724	Dan Dailey
3	Dow Midland Off-site - Tittabawassee River & Floodplain	The Dow Chemical Co	Midland	MID 000 724 724	Dan Dailey
4	Pfizer/Warner-Lambert Co LLC Former Manufacturing Site	Warner Lambert Co LLC	Holland	MID 006 013 643	Dave Slayton/Andrew Bertapelle
5	Cytec Industries Inc	Cytec Industries Inc	Kalamazoo	MID 005 360 680	Dave Slayton/Andrew Bertapelle
6	Edwards C Levy Co - Pl 6	Edwards C Levy Co	Detroit	MID 094 549 425	Andrew Bertapelle/Kimberly Tyson
7	Gage Products Co	Gage Products Co	Ferndale	MID 005 338 801	Dale Bridgford
8	Bostik Inc	Bostik Inc	Marshall	MID 060 198 249	Andrew Bertapelle/Dale Bridgford
9	Delphi Energy & Chassis Saginaw Operations	Delphi Automotive Systems LLC	Saginaw	MID 005 356 845	Dale Bridgford
10	Former TDY Vehicle Systems (L3 Communications)	Teledyne Vehicle Systems	Muskegon	MID 006 407 597	John McCabe
11	Wacker Chemical Corp	Wacker Chemical Corp	Adrian	MID 075 400 671	Dan Dailey
12	Edwards Oil Service Inc. (RTT of Detroit)	Edwards Oil Service Inc	Detroit	MID 088 754 668	Andrew Bertapelle
13	Silbond Corp	Silbond Corp	Weston	MID 005 039 458	Dave Slayton/Andrew Bertapelle
14	Chrysler Introl Division (CorePointe)	Old Carco LLC	Dexter	MID 990 760 100	Joe Rogers
15	Safety-Kleen Mason	Safety-Kleen Systems, Inc.	Mason	MID 981 000 359	Joe Rogers
16	RACER Trust (Former GM Willow Run Powertrain)	Revitalizing Auto Communities Environmental Response Trust	Ypsilanti	MID 980 587 893	John McCabe
17	Former GM Company Vehicle Operations (Willow Run CVO)	Revitalizing Auto Communities Environmental Response Trust	Ypsilanti	MID 005 356 795	John McCabe
18	Enthone OMI Inc	Enthone OMI Inc	Warren	MID 056 717 747	Kimberly Tyson
19	National Standard Niles City Complex	National Standard Niles City Complex	Niles	MID 005 069 257	Kimberly Tyson
20	Ford Rouge - Severstal	Severstal Dearborn LLC	Dearborn	MID 087 738 431	Kimberly Tyson
21	Macdermid Inc	Macdermid Inc	Ferndale	MID 005 338 371	Andrew Bertapelle/Kimberly Tyson
22	National Standard Company LLC	National Standard Company LLC	Niles	MIT 270 010 549	Andrew Bertapelle/Kimberly Tyson
23	Selfridge Air National Guard	US Dept/Defense	Selfridge ANGB	MID 099 113 128	Pete Quackenbush
24	Ford Motor Company - Saline Plant	Ford Motor Company	Saline	MID 009 305 665	Pete Quackenbush
25	Alma Facility	MRP Properties Co LLC	Alma	MID 005 358 130	Pete Quackenbush
26	Ford River Raisin Warehouse	Ford River Raisin Warehouse	Monroe	MID 005 057 005	Pete Quackenbush
27	Former GM Lansing Car Assembly - Plant 6	Revitalizing Auto Communities Environmental Response Trust	Lansing	MID 005 356 928	Pete Quackenbush
28	Former GMC & LMC - Lansing Plant 2 & 3	Revitalizing Auto Communities Environmental Response Trust	Lansing	MID 980 700 827	Pete Quackenbush
29	General Motors LLC - Lansing Plant 1	General Motors LLC	Lansing	MID 005 356 894	Pete Quackenbush
30	Wayne Disposal Inc Site 1	Wayne Disposal Inc	Belleville	MID 048 090 633	Pete Quackenbush
31	Former Detroit Coke Corporation Site	Honeywell International Inc	Detroit	MID 099 114 704	Pete Quackenbush
32	BASF Corp	BASF Corp	Wyandotte	MID 064 197 742	Rich Conforti
33	Former Peregrine Coldwater Road Site	Revitalizing Auto Communities Environmental Response Trust	Flint	MIR 000 020 743	Rich Conforti
34	RACER Coldwater Road Landfill	Revitalizing Auto Communities Environmental Response Trust	Flint	MID 005 356 860	Rich Conforti
35	Dyno Nobel Inc - Ishpeming Plant	Dyno Nobel Inc	Ishpeming	MID 041 413 154	Rich Conforti
36	DPH DAS LLC	DPH DAS LLC	Flint	MID 005 356 647	Rich Conforti
37	Hadley Industries Div of ASI	Hadley Industries	Cadillac	MID 982 222 242	Rich Conforti
38	Montague Works	Chemours Company FC LLC	Montague	MID 000 809 640	Ronda Blayer
39	Michigan Seamless Tube LLC	Michigan Seamless Tube LLC	South Lyon	MID 082 767 591	Ronda Blayer
40	Steelcase Inc Grand Rapids Site	Steelcase Inc	Grand Rapids	MID 006 016 547	John McCabe/Joe Victory
41	Ford Motor Company - Milan Plant	Ford Motor Company	Milan	MID 091 955 476	Pete Quackenbush
42	Trex Properties LLC	Trex Properties LLC	Grand Rapids	MID 020 906 764	John McCabe
43	Trex Properties LLC	Trex Properties LLC	Detroit	MID 091 605 972	John McCabe

**CORRECTIVE ACTION
FY 2018 HAZARDOUS WASTE SECTION WORK SCHEDULE**

#	CURRENT NAME	LEGAL NAME	CITY	SITE ID	STAFF
Enforcement Technical Support (CA085)					
44	Montague Works	Chemours Company FC LLC	Montague	MID 000 809 640	Ronda Blayer
45	Midlink Business Park	Midlink Business Park	Kalamazoo	MID 001 876 663	Rich Conforti
46	Michigan Seamless Tube LLC	Michigan Seamless Tube LLC	South Lyon	MID 082 767 591	Ronda Blayer
47	Lacks Industries Inc	Lacks Industries Inc	Grand Rapids	MID 006 014 666	Andrew Bertapelle/Dale Bridgford
48	Former TDY Vehicle Systems (L3 Communications)	Teledyne Vehicle Systems	Muskegon	MID 006 407 597	Dan Dailey
49	Trex Properties LLC	Trex Properties LLC	Grand Rapids	MID 020 906 764	John McCabe
50	Trex Properties LLC	Trex Properties LLC	Detroit	MID 091 605 972	John McCabe
GPRA CA400 Remedy Selection Determination (CA400)					
51	Petro-Chem Processing Group of Nortru, LLC	Stericycle Environmental Solutions/PSC	Detroit	MID 980 615 298	Dave Slayton/John McCabe
52	Michigan Seamless Tube LLC	Michigan Seamless Tube LLC	South Lyon	MID 082 767 591	Ronda Blayer
GPRA CA725 Human Exposures Controlled Determination (CA725YE)					
53	Bostik Inc	Bostik Inc	Marshall	MID 060 198 249	Andrew Bertapelle/Dale Bridgford
54	Hadley Industries Div of ASI	Hadley Industries	Ludington	MID 982 222 242	Rich Conforti
GPRA CA750 Groundwater Controlled Determination (CA750YE)					
55	Midlink Business Park	Midlink Business Park	Kalamazoo	MID 001 876 663	Rich Conforti
56	Bostik Inc	Bostik Inc	Marshall	MID 060 198 249	Andrew Bertapelle/Dale Bridgford
57	Gage Products Co	Gage Products Co	Ferndale	MID 005 338 801	Dan Dailey/Dale Bridgford
58	Dyno Nobel Inc - Ishpeming Plant	Dyno Nobel Inc	Ishpeming	MID 041 413 154	Rich Conforti
GPRA CA550 Construction Complete Determination (CA550*)					
59	Michigan Seamless Tube LLC	Michigan Seamless Tube LLC	South Lyon	MID 082 767 591	Ronda Blayer
60	RACER Trust Lansing Plant 6 Industrial Land	Revitalizing Auto Communities Environmental Response Trust	Lansing	MID 005 356 928	Pete Quackenbush
61	Cytec Industries Inc (Past TSD)	Cytec Industries Inc	Kalamazoo	MID 005 360 680	Dave Slayton/Andrew Bertapelle
62	Remediation & Redevelopment Div Fenske Landfill	MI Dept/Natural Resources and Environment	Grand Rapids	MID 072 589 328	Kimberly Tyson
63	Former GM Plant Saginaw Malleable Iron	Revitalizing Auto Communities Environmental Response Trust	Saginaw	MID 005 356 696	John McCabe
GPRA CA900/CA999 Corrective Action Performance Standards Attained (CA900*/CA999*)					
64	Safety Kleen Systems Inc	Safety Kleen Systems Inc.	Mason	MID 981 000 359	Joe Rogers
65	Former GM Plant Saginaw Malleable Iron	Revitalizing Auto Communities Environmental Response Trust	Saginaw	MID 005 356 696	John McCabe
66	Enthone OMI Inc	Enthone OMI Inc	Warren	MID 056 717 747	Kimberly Tyson
67	Woodland Meadows	Woodland Meadows North Landfill	Canton Twnshp	MID 000 810 408	Pete Quackenbush
68	Cytec Industries Inc (Past TSD)	Cytec Industries Inc	Kalamazoo	MID 005 360 680	Dave Slayton/Andrew Bertapelle
69	Former Peregrine Coldwater Road Site	Revitalizing Auto Communities Environmental Response Trust	Flint	MIR 000 020 743	Rich Conforti

2.6 Financial Assurance

U.S. EPA FY 2014–2018 Strategic Plan, Goal 3: Cleaning Up Communities and Advancing Sustainable Development

Objective 3.3: *Restore Land.* Prepare for and respond to accidental or intentional releases of contaminants and clean up and restore polluted sites for reuse.

MDEQ Goal

The MDEQ is committed to ensuring that all owners and operators of TSDFs obtain and maintain sufficient financial assurance to pay for cleanup of accidental releases of hazardous waste constituents during the life of facility operation and to pay for cleanup, closure, and post-closure care in case the responsible party defaults on these regulatory obligations. The MDEQ has one FTE in work years devoted to financial assurance.

Strategy

The MDEQ intends to complete financial record reviews in accordance with the objectives and considerations identified below.

Objective and Considerations

In FYs 2018 - 2019, the MDEQ intends to review budgets and expenditures under the settlement and trust agreements for the RACER Trust and for the CorePointe Group (formerly Chrysler Insurance Company), in follow up to the bankruptcies filed in FY 2011. Significant work will be required to review budget proposals and track expenditures, in addition to Work Plan review and implementation oversight.

In FYs 2018 - 2019, the MDEQ expects to complete financial record reviews at all facilities that maintain financial assurance in Michigan, which currently includes 55 facilities. The MDEQ will use the state's WDS database to track, update, and verify whether facilities are maintaining financial mechanisms as required by the rules. Compliance and financial capability data from WDS will be translated into RCRAInfo pursuant to Michigan's agreement with the U.S. EPA. The MDEQ will send letters to owners/operators reminding them to update cost estimates, make payments into trust funds, and/or renew/replace mechanisms prior to their anniversary date. Deadlines will be tracked, and responses will be logged into the WDS database. Owner/operators will be contacted again if no response is received or if the response is inadequate. As some post-closure periods are approaching 30 years, extension of this time-period may need to be pursued in conjunction with perpetual care funds for financial assurance.

This verification and notification process is possible because all TSDFs and financial mechanisms are listed in WDS. The financial mechanisms are reviewed when received and rejected if inadequate. If a mechanism is listed in WDS, it has the proper wording. The major concern is that the mechanism provides sufficient coverage and that it is updated and renewed/replaced on schedule. The database can be used to determine what types of coverage are required, to determine what the owner/operator has submitted to meet those requirements, and to identify the submittal deadlines.

The MDEQ has found this process is more effective than conducting facility-specific financial record reviews at only a limited number of facilities each year. This process highlights the inadequate financial demonstrations before they occur, putting the MDEQ in a proactive mode.

Work Commitments

In FYs 2018 - 2019, the MDEQ will complete a financial record review for all 55 facilities that maintain financial assurance in Michigan, each FY, and enter data into WDS to demonstrate that the review has been completed. To reflect this in WDS, the MDEQ will record an "in-compliance" financial record review (except when it does not apply) for the active TSDFs in the Compliance and Enforcement Module in WDS. Because of this proactive approach, essentially all Michigan TSDFs will be in compliance with the financial capability requirements at any given time.

2.7 Management and Reporting

U.S. EPA FY 2014–2018 Strategic Plan, Goal 3: Cleaning Up Communities and Advancing Sustainable Development

Objective 3.2: *Preserve Land.* Conserve resources and prevent land contamination by reducing waste generation and toxicity, promoting proper management of waste and petroleum products, and increasing sustainable materials management.

MDEQ Goal

The MDEQ's goal is to support waste minimization and resource conservation activities and to ensure that hazardous wastes are managed in a manner that protects human health and the environment and accomplishments are entered into state and federal databases in a timely manner to track the U.S. EPA milestone progress. The MDEQ anticipates that approximately eight FTE in work years will be devoted to this effort.

Strategy

The MDEQ intends to manage the RCRA Program in a manner that encourages resource conservation and recycling while ensuring human health and environmental protection. The MDEQ also intends to enter the information, that is needed to reflect Michigan's performance measures towards meeting the applicable U.S. EPA GPRA goals into the appropriate state and federal databases and to do so in a timely manner.

Objective and Considerations

The MDEQ will manage the RCRA Program to meet its overall purposes efficiently and effectively despite diminishing resources and funding constraints. However, any vacancies that may exist or occur during FYs 2018 - 2019 may affect the performance of this objective.

The following factors will be a consideration as the MDEQ strives to meet their objective:

- Accuracy and adequacy of the RCRA Program description contained in the Work Plan
- Timeliness and accuracy of reports and other information submitted to the U.S. EPA
- Effect of internal procedures to identify, track, and complete tasks necessary to fulfill the Work Plan
- Effect of the MDEQ administrative records to support compliance and enforcement monitoring, permitting and closure, CA activities, and state authorization
- Effectiveness of communications with the U.S. EPA relating to management and reporting issues
- Quality of the staff training program
- Quality of laboratory support
- Quality of the MDEQ's responses to requests for information by the public

Work Commitments

Baseline Oversight Reporting

The MDEQ will follow the baseline oversight reporting frequencies identified in the following table:

Reports/Reporting	Frequency
WDS/RCRAInfo (Handler/CME/Permitting/CA)	Monthly
Financial Reporting	Annually at year end
Equipment Inventory	Annually at year end
Report of Staff Vacancies	Annually at year end
RASPR	Semiannually
Training	Semiannually
Waste Minimization	Semiannually
Joint Inspections	Up to ten per year
Conference Calls	
Compliance/Enforcement	Quarterly or as negotiated
Permitting	Quarterly or as negotiated
CA	Quarterly or as negotiated
Authorization	Quarterly or as negotiated
Financial Assurance	Quarterly or as negotiated
WDS	Quarterly or as negotiated
File Audits	
Compliance/Enforcement	Annually
Permitting	Annually
CA	Annually
Meetings (on-site, video conference, and/or conference call)	Annually or as negotiated
Written Evaluation Reports	Mid-year and year end
Capability Assessment	Informal, in conjunction with authorization packages
Picture Reports	Based on WDS data, can be pulled at anytime

Database Management and Reporting

WDS/RCRAInfo Reporting: Michigan data for the RCRA Program is entered into WDS and translated to the RCRAInfo for Handler, Permitting, CA, Compliance and Enforcement, and Hazardous Waste (biennial) Reporting. Work on translating financial assurance data into RCRAInfo began in FY 2015. There was delay in the completion due to resource restraints. The work on completing the translation feature is now scheduled for FY 2018. Direct entry of financial assurance data into RCRAInfo to address the U.S. EPA data quality of financial assurance data in RCRAInfo was implemented in July 2016 and continues to be updated. Resources will be focused on the translation of financial assurance into RCRAInfo. Any disruptions in translation or data comparison reports will be communicated to the U.S. EPA, Region 5.

- Compliance Monitoring and Enforcement Module: The MDEQ commits to maintaining WDS to reflect current compliance, monitoring, and enforcement activities in Michigan. This data will continue to be translated into RCRAInfo on a monthly schedule through the Exchange Network by submitting XML files.
- Handler Module: The U.S. EPA Site ID numbers will continue to be issued through WDS, and the numbers will conform to the required check-digit algorithm. This data will continue to be translated into RCRAInfo on a monthly schedule through the Exchange Network by submitting XML files.
- Permit Module: The MDEQ commits to maintaining WDS to reflect current permitting, closure, and post-closure activities in Michigan, including facilities listed by the U.S. EPA as high priority under the federal GPRA. This data will continue to be translated into RCRAInfo on a monthly schedule through the Exchange Network by submitting XML files.
- CA Module: The MDEQ commits to maintaining WDS to reflect CA activities in Michigan, including facilities listed by the U.S. EPA as high priority under the federal GPRA. This data will continue to

be translated into RCRAInfo on a monthly schedule through the Exchange Network by submitting XML files.

E-Manifest Support: The Hazardous Waste Electronic Manifest Establishment Act, established as an amendment to the federal Solid Waste Disposal Act, required the U.S. EPA to issue and implement regulation authorizing the use of electronic manifests. In FY 2014, the U.S. EPA finalized this regulation (i.e., the “one year rule”), which codified several of the essential provisions of the Act and provided the legal and policy framework to authorize use of electronic manifests, once the e-Manifest IT system is ready. As a result, RCRA authorized states are now required to adopt the “one year rule” in accordance with requirements and timeframes in Title 40 of the CFR, Part 271. It is Michigan’s intent to adopt the “one year rule” with our next rules package submittal.

User Fee Regulatory Development: The U.S. EPA will continue developing the initial fee structure of the e-Manifest IT system, including implementation and compliance dates, through rulemaking. The U.S. EPA will conduct outreach to relevant stakeholders while developing the proposed rule. States’ experience using and processing manifest data, as well as operating manifest data systems, will be very valuable to this regulatory development effort. Stakeholders and interested parties will also have the opportunity to comment on the proposed rule once it is published. Michigan intends to continue to participate in stakeholder work groups to assist the U.S. EPA in developing the proposed rule, to the extent that resources are available to do so.

E-Manifest IT System Development: In FY 2018, the U.S. EPA will have continued e-Manifest system planning through formulation of a system implementation strategy and technical architecture and a fee rule. Building on system requirements and with additional stakeholder discussions, this technical architecture will provide the foundation for full system development/build. The U.S. EPA will continue to work closely with states (and industry users) in building the e-Manifest IT system and will carefully address interoperability between their existing systems and the new national system. Michigan will continue to participate in stakeholder work groups to assist the U.S. EPA in developing the e-Manifest IT system and trouble shoot any interoperability between Michigan’s existing system (WDS) and the new national system, to the extent that resources are available to do so.

E-Manifest Implementation: The e-Manifest team met with the U.S. EPA Regions on Wednesday, June 21, 2017, to discuss its e-Manifest Implementation plan for the e-Manifest system. Each U.S. EPA Region has assigned a point-of-contact to work, with both the e-Manifest team and states, on a number of technical, policy, and outreach efforts and activities to be completed prior to system deployment in June 2018.

Laboratory Support

Estimates for laboratory support needs for FYs 2018 - 2019 are based on data generated by the MDEQ Environmental Laboratory and Private Sector Contract Laboratories for past analytical services. Costs are divided into two categories to differentiate between samples collected during; (1) RCRA groundwater inspections (i.e., GMEs, O&Ms, and groundwater assessments); and (2) samples resulting from RCRA compliance and/or CA investigations. Although projected laboratory costs are chiefly for mandatory RCRA inspections, allowance has been included for additional sampling visits in oversight support of RCRA closures, waste classification audits, and RCRA facility assessments. Estimates for laboratory support needs also include the time involved for special support of laboratory expertise regarding specific laboratory technology, methodology, and review of specified portions of Quality Assurance Project Plans.

All samples collected during sampling and compliance inspections will be analyzed in the MDEQ Environmental Laboratory, unless specialized analytical capability not available through the MDEQ Environmental Laboratory is required (i.e., high resolution mass spectrography). Samples will be sent to laboratories that participate in the MDEQ, RRD, Contract Laboratory Program, for any needed analyses not routinely conducted by the MDEQ Environmental Laboratory. All analyses conducted by the MDEQ will be performed in accordance with standard procedures contained in the 2016

(Revision 6) quality assurance manual entitled *Office of Waste Management and Radiological Protection Quality Assurance and Quality Control Manual for the Sampling and Analysis of Environmental Media*. A copy of this manual was originally provided to the U.S. EPA following its completion (with the assistance of the U.S. EPA contractor) in February 1998, and it was officially approved by the U.S. EPA, Region 5, on December 16, 1998. Major updating was completed during FY 2001 (Revision 2). A second major update was completed in FY 2006 (Revision 3). Revision 4 was completed in FY 2009. Revision 5 was completed in FY 2013. Revision 6 was completed on August 31, 2016. Since this manual is lengthy and the procedures it contains do not frequently change, the MDEQ will review this document on a biennial basis and perform minor revisions, as needed. The MDEQ will submit a fully updated copy of the manual to the U.S. EPA every five years (from the date of official U.S. EPA approval), unless substantial changes necessitate a release sooner. In addition to this MDEQ reference manual, the *U.S. EPA SW-846 Third Edition, Update IVB*, with revisions, will be used.

Safety Training

The WMRPD has developed a Health and Safety Program to ensure any staff that performs duties at facilities where they may be exposed to hazardous chemicals conducts tasks in the safest manner possible. The WMRPD Health and Safety Program is designed to comply with MIOSHA standards that includes the Michigan Hazardous Waste Operations and Emergency Response (HAZWOPER) regulations and all applicable MDEQ health and safety policies.

- All WMRPD staff that sample and/or inspect facilities where hazardous chemicals may be present must complete at least 24 hours of safety training designed to teach chemical awareness and toxicology and to familiarize them with personal protective equipment that may be required to perform tasks. All staff who have taken this training are required to complete an additional eight hours of safety training, annually, to update their safety skills and to maintain their HAZWOPER certifications. Staff whose work duties require them to wear a respirator must complete an annual 4-hour respiratory protection refresher training, which includes a fit test, and they must be able to demonstrate that they understand and can apply the information learned. All WMRPD staff that perform field work in a location remote from a medical facility must take Cardiopulmonary Resuscitation (CPR), First Aid, and Automated External Defibrillator (AED) training and maintain their certifications so that they can provide lifesaving skills if an emergency arises.
- All District and Program staff persons that may be called upon to participate in an emergency incident involving hazardous chemicals are required to be trained in the National Incident Management System (NIMS) structure for incident response. To meet this requirement, staff must satisfactorily complete the following NIMS online training courses, available through the Federal Emergency Management Agency Emergency Management Institute, and refresh these trainings on a three-year cycle: Introduction to Incident Command System (ICS-100), ICS for Single Resources and Initial Action Incidents (ICS-200), and NIMS – An Introduction (IS-700).
- The following training needs and costs are projected for FYs 2018 - 2019 based on the current FTE level of staffing, number of staff budgeting a percentage of their time to RCRA activities (i.e., partial RCRA FTEs), and expected training costs:

<u>Training Needs</u>	<u>No. of Staff</u>	<u>Training Cost</u>
8-hour Annual Safety Training	46 staff	\$120.00/person
24-hour Initial Safety Training	4 staff	\$350.00/person
40-hour Initial Safety Training	4 staff	\$425.00/person
Respirator Fit Testing, Respirator Training and Medical Monitoring	22 staff	\$500.00/person
CPR/First Aid Refresher/AED Training	59 staff	\$ 52.00/person
Total FY Safety Training Cost		\$22,688.00

3.0 WASTE MINIMIZATION

U.S. EPA FY 2014–2018 Strategic Plan, Goal 4: Ensuring the Safety of Chemicals and Preventing Pollution

Objective 4.2: *Promote Pollution Prevention.* Conserve and protect natural resources by promoting pollution prevention and the adoption of other sustainability practices by companies, communities, governmental organizations, and individuals.

MDEQ Goal

Promote pollution prevention (P2) and the adoption of other sustainable practices throughout all aspects of the RCRA Program.

Strategy

P2 is central to all U.S. EPA sustainability strategies, and the U.S. EPA will continue to incorporate these principles into its policies, regulations, and actions. P2, a long-standing priority for the U.S. EPA, encourages companies, communities, governmental organizations, and individuals to prevent pollution and waste by implementing conservation techniques, promoting efficient reuse of materials, making production processes more sustainable, and promoting the use of safety substances. The MDEQ is committed to collaborating with the U.S. EPA to review P2 results and identify enhanced P2 strategies.

Objective and Considerations

The MDEQ intends to meet our goal to promote P2 to the maximum extent possible.

The following considerations will impact upon our ability to provide this assistance:

- Limited funding and staff resources
- The availability of MDEQ, WMRPD Pollution Prevention and Stewardship and Solid Waste, Sustainable Materials Management Unit (SMMU) staff, and
- Communication with the U.S. EPA on P2 results and enhanced P2 strategies.

Work Commitments

Pollution Prevention

P2 is a key element for protecting the Michigan environment. The WMRPD Pollution Prevention and Stewardship program administers Section 11108 of Part 111, which established the state Waste Reduction Fee. Fees are assessed on businesses according to quantities of hazardous waste solidified or landfilled. Fees collected must be used for activities specified in Part 143, Waste Minimization, and Part 145, Waste Reduction Assistance, of the NREPA.

Parts 143 and 145 contain the following major components:

- Provide P2 assistance including information, technical, and financial assistance to help businesses, institutions, and communities.
- Application of P2 multimedia compliance assistance to encourage businesses, municipalities, and the public to meet environmental responsibilities in a cost-effective manner.
- Identification of opportunities to encourage P2 through traditional regulatory activities, including permit programs, environmental impact statements, inspections, and enforcement.

The WMRPD Pollution Prevention and Stewardship program continues to focus on voluntary P2 programs as specified in their Mission and Goals. Current P2 priorities include source reduction, climate change issues, water conservation, and green chemistry.

Further information about the WMRPD Pollution Prevention and Stewardship P2 program, the P2 Annual Report, as well as other P2 resources, is located on the general P2 Web site located at <http://www.michigan.gov/deqp2>¹.

Sustainable Materials Management

The MDEQ's Sustainable Materials Management (SMM) Unit, housed within the WMRPD, focuses on SMM as it relates to waste issues, particularly waste utilization. This aligns with the efforts of the U.S. EPA and fits with Michigan's 2007 Solid Waste Policy (http://www.michigan.gov/deq/0,4561,7-135-3312_4123-172638--,00.html).

On April 14, 2014, Michigan's Governor Rick Snyder presented his statewide "Proposed Plan of Action on Recycling" (http://www.michigan.gov/deq/0,4561,7-135-70153_69695-313206--,00.html). Guided by MDEQ discussions with businesses and the public, the proposed plan identified two key goals to be met: convenient access to residential recycling and market development for recycled products. In addition, the Governor appointed a nine-member Governor's Recycling Council to advise the MDEQ in implementing the Plan to achieve a 30 percent recycling rate within two years.

In FYs 2018 - 2019, it is the SMMU and the WMRPD's continuing goal to focus on increasing opportunities and innovation for materials management related activities (i.e. reduce/reuse/recycle) by:

- Continuing to implement a web-based measurement and benchmarking system. Measurement legislation was passed March 29, 2016, as Public Act (PA) 55 of 2016. The MDEQ is utilizing the Re-TRAC system to meet the data collection needs outlined in PA 55; the electronic registration and reporting system was functioning by the close of the FY 2016 so that recycling establishments could become familiar with the system and submit data by the first quarterly report date of February 15, 2017.
- Conducting a significant amount of outreach and education for recycling establishments covered by PA 55. Outreach and education started in FY 2016, when MDEQ introduced the initial PA 55 registration system, and these efforts are planned to continue.
- Continuing with efforts to establish a robust statewide education and outreach campaign. A statewide recycling outreach campaign at state parks by the Department of Natural Resources and the Michigan Recycling Coalition (MRC) was announced at the MRC conference on May 4, 2016. This was just the beginning of state outreach and education efforts to promote increased recycling in Michigan.
- Developing markets. \$2.9 million in market development grants were awarded under the FY 2017 Scrap Tire Market Development Program and the projects that began will continue into FY 2018. A similar level of funding for market development grants should become available in FYs 2018 - 2019.
- Working to increase the number of counties with convenient access to residential recycling to all 83 counties. The current number of counties with convenient access is 35.
- Leading by example. The MDEQ is continuing to work to increase recycling in State owned buildings and freeway rest areas.
- Discussing whether holding a fourth Governor's Summit on Recycling and sponsorship of partner events will help to further promote aspects of recycling and sustainability.
- Investing in recycling infrastructure through continuation of a \$1 million appropriation while continuing to grow the recycling grant program.

¹ If clicking the hyperlink does not open the webpage/document, try pasting the link directly into your web browser or contact the MDEQ for assistance.

In FYs 2018 - 2019, the SMMU intends to continue the implementation of Michigan's electronic waste take-back law, administered under Part 173, Electronics, of the NREPA, which became effective in 2008, with a focus on three areas: (1) educating consumers and retailers about the program provisions; (2) compliance assistance for registered recyclers and manufacturers; and (3) define necessary program revisions using internal and external stakeholder workgroups. In addition, the SMMU intends to focus on increasing markets for scrap tires, other than tire-derived fuels; continue to promote additional food waste and organics composting; implement the diverted waste and beneficial reuse legislation; continue to participate with the U.S. EPA's SMM efforts; and look for opportunities to partner with other U.S. EPA Region 5 states.

Per capita collection of covered electronic devices (televisions, computers, printers) for recycling is currently below two pounds. The MDEQ continues to work on educating consumers and retailers about the program requirements, and on compliance assistance for registered recyclers and manufacturers. Senate Bill 922 was introduced on April 28, 2016, providing for proposed electronics program amendments identified through stakeholder efforts. The proposed bill includes provisions for a formal stakeholder workgroup to delve further into some issues in the program before proposing solutions.

The Solid Waste and Sustainability Advisory Panel (SWSAP) along with the Governors Recycling Council (GRC) have issued reports (see below). The groups have now been combined and the MDEQ is coordinating the new group, referred to as the Solid Waste and Recycling Advisors (SWRA), as the process of comprehensive review of Michigan's solid waste statute moves forward. The SWRA intends to shift the historic vision of solid waste management away from waste disposal systems and view the management of materials more holistically, e.g. through options for waste reduction, material utilization, etc. These concepts will be incorporated into county planning to help drive more sustainable choices for managing materials throughout their lifecycle. The SWRA continues to work towards its goals along with the MDEQ and are prioritizing recommendations and developing plans for implementation. Along these lines, Michigan's solid waste statute (Part 115 of the NREPA) is currently being evaluated for potential revisions.

SWSAP Report

http://www.michigan.gov/documents/deg/deg-wmripd-SWSAP_Report_FINAL_555407_7.pdf

GRC Report

http://www.michigan.gov/documents/deg/deg-wmripd-GRC_Report_FINAL_555408_7.pdf

4.0 MISCELLANEOUS ACTIVITIES

Senior Environmental Employees (SEEs) Program

The MDEQ is seeking U.S. EPA In-Kind Funding for the critical seven SEE FTEs to support Michigan's Hazardous Waste Program. The employees will continue to work in the following areas: (1) handler information and user charges; (2) Site ID and manifest processing and data collection; (3) RCRAInfo data collection, verification, entry, reporting, and research; 4) biennial reporting; and (5) district inspections. One SEE employee will continue to be used by the MDEQ, Southeast Michigan District Office, to conduct certain oversight inspections.

Remediation Advisory (RAT) and Technical and Program Support (TAPS) Teams

During FYs 2018 - 2019, HWS staff will continue to coordinate and participate on the RAT to review remediation proposals, develop guidance to aid staff in reviewing remedial investigations and remediation reports, and provide opinions on technical issues related to remediation activities. The RAT is also available to U.S. EPA project managers; the RAT chairperson sends monthly reminders to U.S. EPA staff to announce upcoming meetings and ask for agenda items. In addition, assigned HWS staff will continue to participate on the MDEQ's RRD TAPS teams to keep apprised of Part 201 guidance and to maintain as much consistency between Parts 111 and 201 as possible and allowed by RCRA.

MDEQ Quality Management Plan (QMP)

The QMP is a document mandated by the U.S. EPA for all entities that receive federal funds and collect and/or review environmental data. The QMP outlines all the significant processes in an organization and documents the steps taken to ensure quality in those processes (including organizational policies, standard operating procedures, the process to ensure that competent staff are hired and remain qualified, etc.). As a recipient of federal funds, the MDEQ has an approved QMP for the agency. The most recent update of the QMP was approved by the U.S. EPA on February 28, 2013.

The QMP outlines specific steps the MDEQ takes to ensure quality in the collection, analysis, and review of environmental data. Specific portions of the QMP relating to WMRPD programs include the *WMRPD Quality Assurance/Quality Control Manual for the Sampling and Analysis of Environmental Media*, and DEQ Policy 09-020, *Policy on Quality Assurance Project Plans*. WMRPD staff use these and other components of the QMP to ensure that environmental data collected by staff, or by the regulated community, are suitable for their intended uses.

The WMRPD adheres to the MDEQ's QMP portions that describe the process of hiring staff. The Michigan Department of Civil Service (MDCS) establishes job classifications and eligibility requirements for all positions in state government. Prior to hiring, individual position descriptions are reviewed and approved by the MDEQ, Office of Human Resources, and the MDCS, to ensure that the education and experience requirements meet the job classifications. Once hired, the manager or supervisor ensures that staff follows the training plan for their position. To ensure that MDEQ employees maintain adequate qualifications to perform their job duties, tenured staff undergoes performance evaluations annually and new staff undergoes probationary performance evaluations at the 3-month, 6-month, and 1-year bench marks. Through this process, the supervisor evaluates how the staff person is performing relative to their job "objectives" (essential duties of the job) and "competencies" (behaviors and attributes of the position). An unsatisfactory performance, if noted, is immediately addressed to maintain a quality work force. The MDEQ also retains a training database to document continued staff training. In addition, the Program is subject to external audits and evaluations by entities, such as, the Michigan Auditor General and Office of Internal Audit Services and the U.S. EPA to ensure that their program remains of high quality. The Program is required to participate in the development and revision of the MDEQ QMP. The MDEQ has committed to a complete review and revision of the QMP, with submittal of the final revised version to the U.S. EPA, in FY 2017.