

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

**Fiscal Year 2020 Year End
Accomplishments Report**

for the

**United States
Environmental Protection Agency**

April 1, 2020 – September 30, 2020



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

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Table of Contents

INTRODUCTION	4
CHALLENGES TO MEETING FY 2020 COMMITMENTS	4
Coronavirus Pandemic of 2020	4
Reduced Program Funding	4
Vapor Intrusion Pathway	5
PFAS Initiative	5
Health and Safety Coordination	7
PROGRAM ELEMENTS	8
State Authorization	8
Environmental Justice	9
Compliance and Enforcement	11
Compliance	11
<i>Compliance Assistance and Outreach</i>	11
<i>Program Improvements</i>	18
Coordinated District Office, and Hazardous Waste Section Inspections Report	19
Hazardous Waste Section Inspection Report	22
Enforcement	23
<i>EGLE, Radiological Protection Section (RPS), Hazardous Waste Program Support</i>	25
<i>Michigan Department of Natural Resources (MDNR), Law Enforcement Division, Environmental Investigation Section, Hazardous Waste Program Support</i>	25
Administrative Controls	26
<i>HWS Administrative Controls Work Schedule Commitments</i>	26
<i>Waste Analysis Plan Initiative</i>	26
<i>Progress Toward Meeting Administrative Controls Work Plan Commitments</i>	26
<i>Non-Commitment Administrative Controls Completions</i>	28
<i>Operating License Modifications</i>	28
<i>The Dow Chemical Company Main Plant and Incineration Complex (MID 000 724 724) and Salzburg Landfill (MID980617435) Combined Operating License –Work Activities</i>	28
Corrective Action	28
<i>Goal for FY 2020 CA Accomplishments</i>	28
<i>GPRA CA725, CA750, CA400, and CA900/999 EI Completions</i>	29
<i>HWS Corrective Action Work Schedule Commitments Met</i>	29
<i>CA Oversight (CA001)</i>	29
<i>Enforcement Technical Support (CA085)</i>	29
<i>Progress Toward Meeting Enforcement Technical Support Work Plan Commitments</i>	30
<i>Corrective Action Consent Orders (CACO) or Corrective Action Long-Term Agreements (CALTA)</i>	31
<i>Non-Commitment CA Completions</i>	32
<i>Enforcement Technical Support</i>	32
<i>CA Oversight</i>	33

<i>EGLE/U.S. EPA Coordinated Approvals for Polychlorinated Biphenyl (PCB)</i>	
<i>Clean-ups</i>	34
<i>The Part 201 Amendments, Criteria Updates, and Criteria Rule Revisions with Potential Impacts on Part 111/RCRA Corrective Action in Michigan</i>	34
Financial Capability	35
<i>FY 2020 Year-End Accomplishments</i>	35
<i>Financial Record Reviews</i>	35
Data Entry	35
Management and Reporting	35
<i>Database Management and Reporting</i>	35
<i>Laboratory Support</i>	36
<i>Safety Training</i>	37
WASTE MINIMIZATION	38
Materials Management Division’s Support of Pollution Prevention	38
Sustainable Materials Management	39
<i>Recycling</i>	39
<i>Electronics Recycling Program</i>	40
<i>Other SMM Work</i>	41
MISCELLANEOUS ACTIVITIES	42
Hazardous Waste Section Technical Reviews and Inspections	42
<i>Annual Groundwater Report Reviews</i>	42
<i>Non-Financial Record Reviews</i>	42
Waste Determinations	42
<i>Waste Delisting</i>	42
<i>Land Disposal Restriction Treatability Variances</i>	42
<i>Waste Characterization Reviews</i>	42
<i>Hazardous Secondary Materials (HSM) Reviews and Determinations</i>	42
Remediation Advisory Team	43
Senior Environmental Employee (SEE) Program	43
EGLE Technical and Program Support (TAPS) Teams	43

APPENDIX 1A - FY 2020 Corrective Action Oversight Work Schedule Commitments Accomplishments

APPENDIX 1B - FY 2020 Corrective Action Oversight Work Schedule Commitments Accomplishments for the Dow Chemical Company

APPENDIX 2 - FY 2020 Non-Commitment Corrective Action Accomplishments

APPENDIX 3 - FY 2020 Financial Record Review Accomplishments

APPENDIX 4 - FY 2020 Non-Financial Record Reviews Accomplishments

APPENDIX 5 - FY 2020 Vapor Intrusion Work Accomplishments

APPENDIX 6 - FY 2020 Hazardous Secondary Materials Reviews and Determinations

Notes:

- *The tables included throughout this report have been pulled directly from EGLE's Waste Data System (WDS) database and the information contained therein may include shortened descriptions and/or acronyms. If questions regarding the table contents arise, the reader is encouraged to contact EGLE for clarification.*

INTRODUCTION

This report has been prepared by the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Materials Management Division (MMD), to fulfill its obligation under the assistance agreement to submit a semi-annual technical performance report to the United States Environmental Protection Agency, Region 5 (U.S. EPA).

The assistance agreement is for development and implementation of an authorized Hazardous Waste Management Program in the State of Michigan to control the generation, transportation, treatment, storage, and disposal of hazardous waste; to minimize hazardous waste production; and to protect human health and the environment from both active and inactive hazardous waste facilities. EGLE conducts such activities as permitting, corrective action (CA), inspections, enforcement, computerized tracking, ensuring data quality, and pollution prevention outreach, to implement its Hazardous Waste Management Program.

This report provides a year end summary of the fiscal year (FY) 2020 work accomplishments of the Resource Conservation and Recovery Act of 1976, as amended (RCRA), Work Plan (Work Plan) by EGLE, MMD. These accomplishments fulfill EGLE's obligation in its role of administering the national Solid Waste Disposal Act in Michigan, as amended by the RCRA, and as amended by the Hazardous and Solid Waste Amendments of 1984.

CHALLENGES TO MEETING FY 2020 COMMITMENTS

Coronavirus Pandemic of 2020

On March 24, 2020, Michigan's Governor, Gretchen Whitmer, issued the "Stay Home, Stay Safe" Executive Order 2020-21, in response to the Coronavirus Disease of 2019 (COVID-19). Most EGLE employees were mandated to work from home. Inspections, incident investigations, sampling, and the like, that were deemed non-essential to sustain and protect life and public health, were mandated to be postponed. Although some in-person field work was postponed, we still conducted electronic record reviews where possible. We still reviewed investigation workplans, corrective measures reports, groundwater monitoring reports, etc. We provided comments, and engaged with regulated entities through Skype, Microsoft Teams, and emails. EGLE began phasing back into field work in June 2020 following the Centers for Disease Control and Prevention (CDC) guidelines.

Due to the budget implications of COVID-19, EGLE employees faced temporary layoffs June through August 2020. This impacted completion of some inspections and required staff training.

Reduced Program Funding

On July 18, 2016, the U.S. EPA notified the MDEQ that Michigan's State and Tribal Assistance Grants funding would be reduced in a phased manner, by approximately \$290,000 per year, from FY 2017 through FY 2020. It is important to note that a \$290,000 reduction in funds equates to a reduction in approximately two full-time equivalent positions (eight positions overall). This funding reduction impacts 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. With fewer staff resources, this funding reduction has directly impacted Michigan's ability to meet grant commitments, and achieve the U.S. EPA's goal of Environmental Indicator (EI) completions at 95 percent of the state's Government Performance and Results Act of 1993 (GPRA), baseline list of facilities by year 2020. The issue has been further compounded by emerging contaminants, such as perfluoroalkyl and polyfluoroalkyl substances (PFAS) and vapor intrusion (VI), as discussed below. Given this budgetary climate

and the human health significance of emerging contaminant issues, further discussions with the U.S. EPA will be needed to identify GPRA commitments that will not be met, given the high priority for Hazardous Waste Program (HWP) staff to manage PFAS, VI, and any other emerging issues that may pose significant human health risk in the near term.

Vapor Intrusion Pathway

VI into buildings and residential structures is an important human health exposure pathway that is addressed in CA. Recent advances in VI 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, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), criteria for TCE and PCE soil volatilization indoor air inhalation criteria (SVIIC) and groundwater volatilization indoor air inhalation criteria (GVIIC) do not meet RCRA stringency criteria. Indoor air screening values have been developed for TCE and PCE that reflect existing science, are more conservative, and considered more health-protective than previous indoor air screening values.

Given the new and more advanced criteria now recognized as protective for indoor air, it has become critical for EGLE to screen all hazardous waste treatment, storage, and disposal facilities (TSDF) with CA responsibilities in the state, both GPRA 2020 priority sites and non-GPRA sites, for potential VI pathway risks using the more protective criteria. For Michigan, the total number of sites requiring this screening is 237; this work includes going back and evaluating historic cleanup decisions where VI was an applicable pathway, to ensure that CA taken was adequately protective. With the results from the assessments that have been conducted to date, it has become clear that work beyond EGLE's GPRA 2020 CA commitments will be necessary to address sites where human health risks may be unacceptably high. As such, EGLE will need to have further discussions with the U.S. EPA regarding how this VI pathway work, particularly the work that has become a priority at non-GPRA sites, can be used to meet our FY 2020 and post 2020 grant commitments.

During the second half of FY 2020, it is estimated that staff and management spent approximately 662 hours on VI work. Since the HWP established their VI Screening Committee in early January 2017, HWP staff have continued to screen HWP facilities for potential VI pathway issues to determine if additional CA activities under Part 111, Hazardous Waste Management, of the NREPA (Part 111)/RCRA are necessary, and recommend escalated actions if the screening results suggest that VI may be posing a substantial human health threat. Refer to Appendix 5 at the end of this report for details regarding FY 2020 VI work completed and/or in progress. It is important to note that the Hazardous Waste Section (HWS) has not only screened a significant number of TSDFs as of the date of this report; they have also initiated action at some of the facilities on an accelerated timeline, to ensure protection of human health.

PFAS Initiative

PFAS have been classified by the U.S. EPA as an emerging contaminant on the national level. PFAS are a suite of chemicals historically used in thousands of applications throughout industrial, food, and textile industries. They are extremely stable, and do not break down in the environment, and are highly soluble, easily transferring through soil to groundwater. PFAS are used in firefighting foams, food packaging, cleaning products, and various other products. These products and the associated PFAS are present in existing landfills, and continue to be

discarded in landfills throughout Michigan, and across the United States. PFAS are also used by industries such as plating, tanneries, and clothing manufacturers, where waterproofing may be required, or a protective film is needed in a manufacturing process. Results from recent environmental studies have confirmed that PFAS are present in soils, groundwater, surface water and/or other media, at a large number of sites around the State of Michigan.

On November 13, 2017, given the serious human health and environmental risks posed by PFAS contamination throughout the state, Michigan's Governor, Rick Snyder, issued an executive directive requiring Michigan Department of Environmental Quality (MDEQ), now EGLE, and several other state agencies to establish a Michigan PFAS Action Response Team (MPART). As per the directive, the MPART shall take expedited actions to identify locations impacted by PFAS, and initiate environmental response protocols to address that contamination. Given this priority, the MMD spent considerable time developing an initiative to survey concentrations of PFAS in landfill leachate, and landfill groundwater monitoring wells in Michigan. On February 4, 2019, Michigan's newly elected governor, Gretchen Whitmer, signed [Executive Order 2019-3](#), naming MPART as an established, enduring body to address the threat of PFAS contamination in Michigan, protect public health, and ensure the safety of Michigan's land, air, and water. Executive Order 2019-3 created MPART as an advisory body within the MDEQ, with the director, or director's designee, from seven other state departments, and established the MDEQ director, or director's designee, as the chairperson.

As a result of the continued directive for EGLE to identify locations impacted by PFAS and initiate response actions to address the contamination, HWS staff have continued to spend significant time performing PFAS related work activities. During the second half of FY 2020, HWP staff spent approximately 754 hours participating in workgroups to address a variety of challenges associated with PFAS contamination. Staff also organized the October 2020 Virtual Great Lakes PFAS Summit, hosted by EGLE, in coordination with the Treatment Technology Roundtable, a group consisting of over 150 participants, including state and federal government employees, environmental consultants, treatment technology vendors, and researchers. This group shares information regarding treatment technologies being implemented at sites across the state, and assists EGLE in evaluating new technologies and research needs. In February 2020, EGLE released the call for abstracts for the Great Lakes PFAS Summit and received 160. Staff worked with a subset of the Treatment Technology Workgroup, the Conference Planning Committee, to review these abstracts and plan an agenda for the October conference.

Staff has also spent significant time designing a state-wide soil sampling initiative to determine what concentrations of PFAS are present in a variety of soil and location types throughout the State of Michigan. Activities include, constructing GIS maps to plot potential sampling points; consulting with the project team and statistician; and coordinating with a contracted consulting firm to determine best methods for completing the state-wide survey.

In addition, HWP staff spent significant time integrating PFAS issues into CA activities at several state-lead and U.S. EPA-lead GPR 2020 sites, including Revitalizing Auto Communities Environmental Response (RACER) Lansing Plants 2, 3, and 6; RACER Coldwater Road and Peregrine; RACER Peregrine; RACER Buick City; RACER Willow Run Powertrain; RACER Eckles Road, Livonia; RACER Flint West; Chrysler Introl; US Ecology Romulus; Lacks Industries (Saranac and Cascade); Selfridge Air National Guard; Adient (Former Universal Die Cast); Ford Motor Company - Monroe; Ford Motor Company – Saline Plant; MRP Properties – Alma; Rouge Manufacturing Complex and the Schaefer Road Area Facility; Petro-Chem Processing Group of Nortu, LLC; Reichhold East Area; Michigan Seamless Tube; Former TDY (L3); Wayne Disposal Inc (WDI); BASF Northworks Wyandotte; Former Daimler Chrysler,

Scio Township; PetroChem, Detroit; and MacDermid, Inc., Ferndale. These activities involved sample collection and analysis, reporting, and in most cases, additional delineation activities, residential well sampling, and coordination with the Michigan Department of Health and Human Services (MDHHS) and local health departments. HWP staff also spent time preparing material for and presenting information on these sites in a series of Regional Webinars presented throughout the State to inform citizens and Local Units of Government about PFAS contamination at these sites.

Additional EGLE staff time was spent on an Aqueous Film Forming Foam (AFFF) collection and disposal program. In late 2018, MDEQ received an appropriation to support the collection program. Over 700 municipal fire departments and airports were surveyed in 2018, and 340 were determined to have some volume of the Class B AFFF on-site, for use on petroleum-based fires. Class B AFFF contains from 1 to 6 percent PFAS containing chemicals. EGLE and the Michigan Fire Marshal Office decided it would be an environmentally prudent plan to remove this material from stockpiles at municipal fire departments and municipal airports. With an appropriation from the 2018 Michigan legislature, a program was developed to collect, treat, and dispose of this material in a hazardous waste landfill, even though the material is unregulated. The department was unable to secure reliable incineration services at the time of issuing the contract, and thus the landfilling disposal method was chosen. Collection activities closed on September 19, 2020, with 51,400 gallons of Class B AFFF collected from 338 fire departments and commercial airports. Additionally, 17 locations reported previously disposing of their AFFF material. Those disposal methods ranged from using local household waste events, disposal through local wastewater treatment plants, hiring a waste contractor to dispose of the material and in one case, sending the material to the local landfill. A total of 12 semi-trail loads of material were sent to the US Ecology facility in Grandview, Idaho for treatment and disposal. All containers were reviewed as they were collected under a forensic chemical fingerprinting effort. 3,375 gallons (675 containers) of material remain in secure storage under litigation hold.

The contractor will provide an end-of-contract report summarizing activities and accomplishments. That report will be posted on the MPART AFFF web page.

It is important to note that staff time spent on PFAS activities will likely increase in future years, given the high priority to quickly identify PFAS contamination throughout the state, and initiate immediate actions as necessary to protect public health. As with VI, PFAS contamination is requiring the HWP to evaluate human exposures under control determinations at GPRA sites where this EI has been met, and at sites moving forward through the CA process to ensure the validity of “yes” determinations. Without additional resources to complete HWP work, time spent on the PFAS initiative will likely jeopardize EGLE’s ability to complete grant commitments where non-commitment PFAS work must be prioritized to protect human health.

Health and Safety Coordination

A successful health and safety program that ensures employees are provided the tools necessary to safely perform their job functions, coupled with effective program management control, are critically important elements that must be a part of EGLE’s work environment. The HWP houses one staff person to coordinate the many health and safety tasks involved with health and safety oversight for both the MMD and the Oil, Gas, and Minerals Division (OGMD). This work involves coordinating health and safety issues that include purchasing and distribution of personal protection equipment and supplies, employee notification and tracking for health monitoring and respirator fit testing, scheduling and tracking initial and refresher hazardous waste operations and emergency response (HAZWOPER) and CPR and First Aid training and

overseeing accident reporting for 170 employees. It is important to note that the HWP position that historically handled these duties was vacated due to a promotion several years ago and, due to both state and federal funding reductions, it has only recently been filled. In addition, health and safety duties have become more time intensive over the years, given newly assigned responsibility for OGMD health and safety, new and more complicated enrollment procedures to enroll staff into initial and refresher HAZWOPER trainings, and the need to ensure that staff complete a suite of National Incident Management trainings, requisite training for EGLE staff who may be called upon to respond if an emergency incident should occur. It is estimated that the HWP staff person currently responsible for the above described duties spends at least 25 percent of their time performing this work. In addition, the COVID-19 pandemic had significant impacts on the duties of this position in FY 2020. These included rescheduling of previously established HAZWOPER refresher trainings to a virtual format, adjustments to required physical examinations due to health clinic changes in response to the pandemic and additional time spent in tracking and record keeping to document staff compliance with Health and Safety requirements and the development of pandemic-safe field protocols consistent with CDC and MDHHS guidance.

PROGRAM ELEMENTS

In FY 2020, EGLE is using seven elements in an effective state program to manage hazardous waste through a delegation of RCRA authorities.

The Work Plan elements are as follows:

- State Authorization
- Compliance and Enforcement
- Environmental Justice
- Administrative Controls (operating licenses, post closure (PC) operating licenses, clean-closure, PC plans, and orders/legally enforceable agreements)
- Corrective Action
- Financial Capability
- Management and Reporting

The year end accomplishments are discussed in the applicable sections below.

State Authorization

U.S. EPA FY 2018–2022 Strategic Plan, Goal 1 – Core Mission: Deliver real results to provide Americans with clean air, land, and water, and ensure chemical safety.

Objective 1.3: *Revitalize Land and Prevent Contamination.* Provide better leadership and management to properly clean up contaminated sites and to revitalize and return the land back to communities.

U.S. EPA FY 2018–2022 Strategic Plan, Goal 2 – Cooperative Federalism: Rebalance the power between Washington and the states to create tangible environmental results for the American people.

Objective 2.1: *Enhance Shared Accountability.* Improve environmental protection through shared governance and enhanced collaboration with state, tribal, local, and federal partners using the full range of compliance assurance tools.

Amendment 12 of the HWP rules were promulgated on August 3, 2020. A draft express authorization revision application (EARA) for the new rules was submitted to the U.S. EPA on August 13, 2020. EGLE has yet to receive comments on the draft EARA.

Michigan's annual Report on Authorized State Program Revisions (RASPR) was submitted to the U.S. EPA on August 4, 2020.

Environmental Justice

U.S. EPA FY 2018–2022 Strategic Plan, Goal 1 – Core Mission: Deliver real results to provide Americans with clean air, land, and water, and ensure chemical safety.

Objective 1.3: *Revitalize Land and Prevent Contamination.* Provide better leadership and management to properly clean up contaminated sites and to revitalize and return the land back to communities.

U.S. EPA FY 2018–2022 Strategic Plan, Goal 2 – Cooperative Federalism: Rebalance the power between Washington and the states to create tangible environmental results for the American people.

Objective 2.2: *Increase Transparency and Public Participation.* Listen to and collaborate with impacted stakeholders and provide effective platforms for public participation and meaningful engagement.

Participation in Work Groups and Outreach to other Environmental Justice Entities: On February 20, 2019, Governor Whitmer established the Office of Environmental Justice Public Advocate within EGLE. This office will, along with other activities, recommend changes in state and federal law, rules, regulations, policies, guidelines, practices, and procedures relating to environmental justice (EJ). The Office will also undertake studies through various workgroups to that may lead to improvements in EJ in Michigan.

HWS staff participate in the Training Workgroup and the Planning and Policy Workgroup, which are multi-agency wide work groups formed to address EJ education, and development of EJ strategies. A particular focus in FY 2020 was on plain language communication with the public and stakeholders. Additionally, EGLE employs a full-time EJ and Tribal Liaison to implement EJ into all facets of EGLE's work.

Training: EGLE continues to encourage staff to receive EJ training. As new state and federal guidance is developed, staff can incorporate EJ principles into all aspects of the RCRA decision-making processes. During the second half of FY 2020, the HWS participated in various webinars related to EJ tools, processes, and implementation. Additionally, the HWS continues to review external EJ policies and procedures for applicability to Michigan. In November EGLE held mandatory, department wide EJ training for all employees. Implicit Bias training was also completed, in early FY 2021.

Licensing and Corrective Action: To ensure that the HWS follows consistent procedures to process operating license (OL) renewal applications, new license/expansion applications, and CAs, each project manager uses a master checklist for guidance and tracking. A checklist item exists so that EJ is considered and incorporated into OL and CA decisions. This checklist item provides a protocol for evaluating whether an area should be considered an EJ area, using environmental justice mapping and screening tool (EJSCREEN). The project manager uses the protocol to analyze a site in EJSCREEN, evaluate the EJSCREEN outputs, make some common-sense decisions about appropriate EJ actions for the facility (i.e., type of enhanced outreach and implementation of enhanced outreach, as appropriate) and create a memo for the

file to document EJ analysis and activities. This checklist item was updated and reviewed by EGLE's EJ and Tribal Liaison in 2018.

On July 27, 2020, EGLE received a Discrimination Complaint regarding its licensing of US Ecology Detroit North. EGLE issued a license to US Ecology Detroit North on January 29, 2020. The Complaint alleges that EGLE failed to comply with Title VI of the Civil Rights Act of 1964. Updates on the Complaint may be found on the [Nondiscrimination in EGLE Programs page](https://www.michigan.gov/egle/0,9429,7-135--515060--,00.html), under the "Filed Discrimination Complaints" header <https://www.michigan.gov/egle/0,9429,7-135--515060--,00.html>.

EGLE and Complainant are engaging in informal discussions to resolve the Complaint. EGLE anticipates changes to its hazardous waste licensing processing procedures and public outreach efforts in FY 2021.

Examples of Implementation: In general, the RCRA HWS has expanded its public participation process due to EJ principles. For most projects, public meetings are posted on the Internet, via YouTube, to be accessed by anyone, at any time. Licensing, CA, and contact information is also routinely posted on city websites, which is in addition to the requirements of our administrative rules. We have also implemented mass-mailings to alert the public of licensing and CA activities at facilities in EJ areas.

US Ecology Detroit South (EQ Detroit) - HWS reran EJSCREEN with a 3-mile radius, based on ongoing discussions around the Title VI complaint. This screen showed a mildly more linguistically isolated population. This determination combined with significant public interest from linguistically isolated populations identified at the proximate US Ecology Detroit North site have resulted in the decision to provide translation services for the EQ Detroit public engagement process. A public informational webinar on OL renewal (currently in 2nd technical review process) is scheduled to be held in December 2020.

During the second half of FY 2020, EGLE performed a significant amount of work to improve communication, and information posted on our website. Refer to the below listed information for details. It is important to note that several of the public information documents developed for the US Ecology Detroit North OL renewal required translation services for Arabic and Bengali.

Public Engagement

A webinar was held on October 8, 2020, for the residents of Wayne County to discuss PFAS impacts at the Marathon Refinery and Rouge Manufacturing Complex.

In September 2020, the Environmental Scorecard for US Ecology Detroit North was updated (updated biannually).

Translation Projects: Since many Michigan communities have locations that are primarily non-English speaking, it is necessary to go beyond the traditional public outreach process in these areas.

The US Ecology Detroit North facility OL renewal and expansion was approved on January 29, 2020. The Notice of Final Decision, updated facility Fact Sheet, and Response to Comments for the license renewal were posted on the EGLE facility website in English, Arabic, and Bengali. Paper copies of each document, in each language, totaling approximately 100 pages, were mailed to the 650 addresses on the facility mailing list. In response to comments received,

we created an environmental scorecard for the facility on the EGLE facility webpage. Compliance information for wastewater discharge and air monitoring are put into digestible tables and terms, and updated semiannually.

Compliance and Enforcement

<p>U.S. EPA FY 2018–2022 Strategic Plan, Goal 3 – Rule of Law and Process: Administer the law, as Congress intended, to refocus the Agency on its statutory obligations under the law.</p> <p>Objective 3.1: <i>Compliance with the Law.</i> Timely enforce environmental laws to increase compliance rates and promote cleanup of contaminated sites through the use of all of the U.S. EPA’s compliance assurance tools, especially enforcement actions to address environmental violations.</p> <p>Objective 3.2: <i>Create Consistency and Certainty.</i> Outline exactly what is expected of the regulatory community to ensure good stewardship and positive environmental outcomes.</p>

Compliance

Compliance Assistance and Outreach

Training: During FY 2020, EGLE provided training on RCRA and Michigan’s materials management programs through workshops to 294 people, and through webinars to 9,582 people. The total number of EGLE attendees for MMD programs was nearly 10,000 people. This increase appears to be in part due to EGLE’s roll-out of the generator improvement rules, initiative to refocus toward managing materials for their highest and best use instead of landfilling, and because of the pandemic.

EGLE began refreshing core hazardous waste generator training webinars in a new [Waste Webinar Series](#) in March 2020, just as the pandemic came to light. EGLE also hosted a new version of the traditional, biennial Michigan Environmental Compliance Conference virtually. The conference was rebranded and delivered as the Michigan Environmental Compliance Week which significantly increased engagement during these COVID-19 times. Details on the various in-person and virtual sessions and attendance are provided for FY 2020.

Date	Event	Topic	Attended	Recording FY 2020 Views
11/19/19	Waste Gone Wild Dealing with Nuisance Waste Sites and Illegal Dumping in your Community	Michigan’s solid waste, scrap tire, and electronic waste regulations, issues and local strategies to enhance compliance.	246	65
11/20/19 and 11/21/19	Michigan Sustainability Conference	Advancing sustainable businesses, sustainable communities, and green transportation infrastructure.	294	
1/16/20	Recycling Quality Improvement Grant Opportunity – Informational Webinar	EGLE grants available to improve the quality of recyclables.	217	64

2/13/20	Petro-Chem Hazardous Waste Facility Clean-up Activities Webinar	Current corrective action clean-up activities occurring at the Petro-Chem facility.	20	
3/25/20	Waste 101	Various types of waste (hazardous waste, liquid industrial by-products, solid waste, PCB waste, medical waste, radiological waste), who is subject to the waste regulations and what they generally require of waste handlers.	564	284
4/2/20	Waste Characterization and Generator Status	How to characterize waste and make a hazardous waste generator category determination.	449	244
4/16/20	Accumulation, Labeling, and Shipping	How to accumulate, label and ship hazardous waste and liquid industrial by-products in Michigan.	565	213
5/5/20	Inspection and Recordkeeping	What happens during a hazardous waste inspection and the records that are required to be produced for review.	537	99
5/11/20	Environmental Emergencies and Natural Disasters	EGLE and EPA's roles, process and partners available to assist communities in responding to environmental emergencies and natural disasters.	635	78
5/27/20	Part 111 New Rules	EGLE's adoption of the generator improvement rules and aerosol cans as a universal waste type.	429	101
6/2/20	PFAS Fire Fighting Foam Treatment and Disposal	EGLE overview of contamination resulting from use of PFAS firefighting foam and efforts to collect and properly dispose of it from local firefighters.	648	141
6/3/20	Universal Waste	Universal waste types and benefits, including how to properly accumulate, ship and dispose of the various universal waste types.	670	127
6/17/20	What Small Businesses(VSQGs) Need to Know about Hazardous Waste	What very small quantity generator must do to maintain their VSQG category and properly handle and dispose of exempted hazardous waste.	342	71

6/30/20	Household Hazardous Waste and Universal Waste Collection Requirements	Requirements for collecting and properly handling, disposing or recycling household hazardous waste and universal waste.	211	32
6/30/20	PFAS Reverse Osmosis Leachate Treatment and Granulated Activated Carbon Technology	Treatment technologies used to remediate PFAS contaminated sites and treat landfill leachate.	649	74
9/21/20	Integrated Assessments	EGLE overview of the integrated multimedia pollution prevention and compliance assistance assessments offered to small businesses.	99	
9/21/20	Marijuana Regulatory Panel	EGLE multimedia overview of the regulations that apply to marijuana growers and processors.	314	
9/23/20	Part 115 Statutory Changes – Refocusing Michigan’s Solid Waste Program	EGLE overview of solid waste statutory amendments under consideration and how they will advance a culture that promotes the environmental, social, and economic benefits through managing unwanted materials more sustainably.	282	
9/23/20	EGLE Energy and Recycling Programs for Communities	EGLE overview of technical assistance, funding opportunities and stakeholder engagement offered to communities to assist with energy reduction, waste reduction, recycling, and pollution prevention.	184	
9/23/20	All Things Landfill	EGLE overview of recent multimedia changes in the environmental compliance requirements for landfills.	205	
9/23/20	Michigan’s Materials Management Approach	Overview of EGLE’s initiative to shift the focus from throwing trash in a landfill to managing materials to their highest and best use, including baselining through the Mega Data initiative.	117	
9/23/20	EGLE Energy and Recycling Programs for Businesses	EGLE overview of technical assistance, funding opportunities and stakeholder engagement offered to businesses to assist with energy reduction, waste reduction, recycling, and pollution prevention.	93	

9/23/20	EGLE Division Updates	EGLE updates from division directors on program of technical assistance, funding opportunities and stakeholder engagement offered to businesses to assist with energy reduction, waste reduction, recycling, and pollution prevention.	273	
9/23/20	EGLE's Transportation Sustainability Programs	EGLE overview of programs for reducing emissions from transportation and acceleration of electric vehicle adoption, as well as alternate fuel use in Michigan.	86	
9/23/20	EGLE Solid Waste Office Hours	EGLE panel of experts help answer questions related to composting, recycling, landfill and transfer station design and operating requirements, materials recycling facility operating requirements, scrap tire handling, financial assurance requirements, and more.	48	
9/23/20	EGLE Hazardous Waste Office Hours	EGLE panel of experts help answer questions related to waste characterization, record keeping, exemptions, land disposal restrictions, WAPs, universal waste, used oil, liquid industrial by-products, reporting and more.	94	
9/23/20	Did You Just Say... Radioactive?	EGLE staff provide a step-by-step guide to identifying whether a material is Naturally Occurring Radioactive Material (NORM), Technically Enhanced Naturally Occurring Radioactive Material (TENORM), or something greater, and whether the handling of the material is subject to state or federal regulations.	141	
FY 2020 TOTAL			8412	1464

Publications: In light of Michigan’s pending adoption of the [Generator Improvement Rules](#), revising publications to align with the new rules was a priority. In FY 2020, the following publications were newly developed or substantially revised to help foster compliance and the use of best management practices in managing materials, both from households and non-households, hazardous and non-hazardous:

1. New – [Home Composting: Reap a Heap of Benefits](#)
2. New – [Residential Composting: Frequently Asked Questions](#)
3. New – [Very Small Quantity Hazardous Waste Generators: Guidance](#)
4. Revised – [Handling Unwanted Pharmaceuticals and their Containers in Healthcare](#)
5. Revised – [Scrap Tires: Frequently Asked Questions](#)
6. Revised – [Waste Characterization and Hazardous Waste Generator Status: Guidance](#)
7. Revised – [Contingency Plan and Emergency Procedures for Large Quantity Generators](#)
8. Revised – [Summary of Hazardous Waste Generator Accumulation Requirements](#)
9. Revised – [Environmental Crimes Handbook](#)
10. New – [Managing Storm Debris](#)
11. New – [Coronavirus Disease 2019 PPE Waste Disposal](#)
12. New – [Compost Rack Card](#)
13. New – [Scrap Tire Rack Card](#)
14. New – [e-Waste Rack Card](#)
15. New – [Michigan Recycling Directory Rack Card](#)
16. New – [Recycled Materials Market Directory Rack Card](#)
17. Revised/New – [Small Quantity Hazardous Waste Generator Guidance](#)
18. New – [Mega Data Phase 1 County or Organization 1-pager](#)
19. New – [Mega Data Phase 1 Municipality 2-pager](#)
20. Revised – [Michigan Guide to Environmental Health and Safety Regulations](#)
21. Translated - [Radon YouTube Video – Radon – Test. Fix. Save a Life](#) which has subtitles in English, Spanish and Arabic
22. Translated - [Recycling Racoons](#) 1 pager – [Spanish](#) or [English and Spanish](#)

GovDelivery Activity: The State of Michigan makes [GovDelivery](#) available to all state agencies for communicating directly with target audiences interested in specific topics. In FY 2020 EGLE continued to expand use of [GovDelivery](#), which now offers the following subscription topics to share EGLE details related to materials management activities:

1. EGLE MI Environment – 8,359 subscribers
2. Waste Management News and Info – 2,988 subscribers
3. Michigan PFAS Action Response Team (MPART) News and Updates – 2,110 subscribers
4. Retail Environmental Initiative – 1,857 subscribers
5. Biennial Reports – 1,248 Subscribers
6. Hazardous Waste Management Program Long List for people interested in Michigan’s RCRA rulemaking – 1,850 subscribers
7. Former McLouth Property/Riverview-Trenton Railroad North Parcel – 773 subscribers
8. Former Lacks Cascade Township – 896 subscribers
9. US Ecology Detroit North Hazardous Waste Facility – 1,254 subscribers
10. Arbor Hills – 1,254 subscribers
11. Central Sanitary Landfill – 988 subscribers
12. Environmental Network – 4728 subscribers
13. Petro-Chem – 445 subscribers
14. Materials Management Planning – 670 subscribers

15. Scrap Tire Program – 1,722 subscribers
16. Pleasant Peninsulas – Environmental Assistance – 2,332 subscribers
17. Pleasant Peninsulas – Recycling and Sustainability– 1,647 subscribers
18. Recycling Directories – 1,950 subscribers
19. Recycling Reporting – 2,020 subscribers
20. Recycling Updates – 2,210 subscribers
21. Recycling Racoons – 3,084 subscribers
22. Solid Waste Law Amendments – 1,420 subscribers
23. The DIRT On Michigan Composting – 1,113 subscribers
24. Diamond Chrome – 354 subscribers

Some EGLE communications encompass multiple programs. In those cases, EGLE shares notices with additional GovDelivery subscribers interested in topics like Air Quality News and Info, Great Lakes and Water News, and Remediation and Redevelopment News and Info. Using GovDelivery allows EGLE to proactively work with stakeholders to keep them informed on important areas of interest. Here are some examples of communications shared in FY 2020 for the topics listed above, many of which are issued to coincide with an event, or other new EGLE resource highlighted in the communication:

1. [When it comes to falling leaves, consider composting](#) – 10/19
2. [EPA Hosting Community Advisory Group Workshop](#) for the Former McLouth Site – 10/19 and 11/19
3. [EGLE's drone program takes off](#) – 10/19
4. [Think outside the trash: Composting jack-o'-lantern pumpkins](#) – 10/19
5. [EGLE enlists raccoons to help spread recycling message](#) – 11/19
6. ['Know It Before You Throw It' campaign](#) helps EGLE's local partners promote new initiatives – 11/19
7. [EGLE Issues Violation Notice to Owners and Operator of the Former McLouth Steel Property for Asbestos Abatement Activities](#) – 11/19
8. [Summary Updates for July 2019 through January 2020](#) – 11/19
9. [Michigan lawmakers share bipartisan embrace of Recycling Racoons](#) – 11/19
10. [New MI EnviroMinute video focuses on composting yard waste](#) – 12/19
11. [EGLE expands the nexus between business and community in sustainability at the sold-out Michigan Sustainability Conference](#) – 12/19
12. [Winners of Green Communities challenge announced at EGLE-hosted sustainability conference](#) – 12/19
13. [EGLE's Recycling Racoons named campaign of the year by Waste Dive](#) – 12/19
14. [Issuance of Hazardous Waste Management Facility Renewal/Expansion Operating License \(License\); US Ecology Michigan, Inc. \(USE\), Detroit, Michigan, translated into Arabic and Bengali](#)– 1/20
15. [EPA Hosting Community Advisory Group Workshop](#) - 1/20
16. [First Former McLouth Steel Superfund Site Community Advisory Group Meeting – Online only](#) – 3/20
17. [Arbor Hills Landfill PFAS sampling results available](#) – 3/20
18. [Yard Waste Handling During the Stay Home, Stay Safe Executive Order](#) – 4/20
19. [State Guidelines Issued to Assist Midland-area Residents with Clean Up](#) – 5/20
20. [EGLE Launches New Initiative to Drive Michigan Materials Management Forward](#) – 6/20
21. [Michigan program to collect, dispose of PFAS-containing firefighting foam surpasses 30,000 gallons](#) – 6/20
22. [New hazardous waste management rules biggest changes in 40 years](#) -8/20

23. [MI Environment features effort to gather data from municipalities, counties on trash, recycling and more – 7/20](#)
24. [EGLE launches new sustainability series webinars aimed to help Michigan small businesses – 8/20](#)
25. [Many Household Hazardous Waste recycling locations in Michigan open through fall – 8/20](#)
26. [Electronic waste recycling takes off in rural Michigan – 8/20](#)
27. [EGLE signs Corrective Action Consent Order with RACER Trust at Buick City in Flint – 8/20](#)
28. [Attention all MI Materials Management Partners - EGLE NEEDS YOUR HELP! – 8/20](#)
29. [Re-notification requirements for small quantity generators of hazardous waste starting in 2021 – 9/20](#)
30. [May 14th Virtual Community Advisory Group Meeting regarding the McLouth Steel Superfund Site – 4/20](#)

Initiatives: In FY 2020, EGLE implemented three new initiatives related to materials management.

Video Activity:

1. **Integrated Assessments:** EGLE published a new [video](#) highlighting that small businesses can enjoy a free, confidential integrated assessments that helps them identify pollution prevention and compliance opportunities, encouraging them to sign up for a visit at Michigan.gov/EGLEIntegratedAssessment.
2. **Mega Data:** As part of EGLE’s initiative to shift from a landfill focus to managing unwanted materials at their highest and best use, EGLE published a new [video](#) to help counties and municipalities report their materials management activities. This will help EGLE baseline existing materials management infrastructure and help communities grow their programs in the future. See the video on How to Join EGLEs Michigan Materials Management Programs at Michigan.gov/EGLEMegaData.
3. **Mega-Data Collection Project** –EGLE embarked on a new data collection initiative to collect baseline data necessary for counties to develop materials management plans and provide the state with a roadmap for putting unwanted materials to their highest and best use instead of being landfilled. The shift EGLE is seeking is to minimize the impacts of the material choices made every day and establish more convenient access to recycling, composting, and waste reduction opportunities for businesses and communities.

The first phase of the data collection initiative began in June 2020. EGLE launched online surveys for municipalities and counties to complete and share their landfill diversion data, letting EGLE know about their existing materials management programs for communities. The second phase of data collection will concentrate on collecting data from material recovery facilities and other willing to share their data.

Learn more about the project and outreach by subscribing to the Materials Management Planning GovDelivery subscriber list, reviewing the outreach shared in this report, and by visiting Michigan.gov/EGLEMegaData.

Compost Outreach: In the fall of 2020, EGLE launched an initiative to help the general public better understand the benefits of home composting, and how easy it is to get started composting household materials. EGLE produced a new, short [video](#) that was frequently tweeted, produced a new [Mi EnviroMinute video](#), and published a Mi Environment GovDelivery

[article](#) encouraging residents to compost yard and food waste from their home. All of these resources drove residents to the newly published [home composting flyer](#) and [residential composting frequently asked questions](#).

Michigan Migrant Council Outreach: In the winter of 2020, EGLE launched an initiative to reach Hispanic migrant workers with information to properly manage unwanted materials. As part of that effort, EGLE translated the following key resources into Spanish and distributed them to Michigan residents through local migrant councils:

- Open Burning Regulations in Michigan ([English](#) and [Spanish](#))
- Recycling Racoons Reference Sheet ([English](#) and duplexed in both [Spanish](#) and [English](#))
- Energy Waste Reduction

These materials are vital in providing information to the Hispanic community which is organized regionally across Michigan. Through Mid-Year 2020, EGLE worked with the four regional councils (southeast, southwest, northwest and Allegan, Barry and Ottawa migrant resource councils) providing outreach to 26 counties, and well over a thousand residents. These migrant resource councils continue to meet throughout the harvest to share these resources, and EGLE anticipates reaching all migrant councils with these resources before the end of FY 2020.

Program Improvements

nSpect Software Program: In late FY 2015, EGLE began a pilot program to implement a new software program (nSpect) with a goal to improve the accuracy and efficiency of staff field inspections. In FY 2016, implementation was setback due to staff retirements. During FY 2017, additional setbacks were encountered, due to interfacing issues and new funding requirements from the Michigan Department of Technology, Management, and Budget (MDTMB). In FY 2018, the MDTMB required new security protocols to be met prior to implementation. At the same time, the software contractor continued to develop the application, and reached out to EGLE staff to resume discussions around EGLE's need for an electronic inspection component of the enforcement section. The pilot program continued into FY 2019, with the goal of implementation once development issues were resolved. In early FY 2020, nSpect was deployed to a test environment. By the end of FY 2020, nSpect will be fully deployed to the production environment. Once in use, this software program will allow inspection forms, and Waste Data System (WDS) information to be loaded into Microsoft tablets for use during inspections. The nSpect program integrates handwriting recognition, GPS coordinates and mapping, and photographs into the inspection report that is generated, and then can be saved as a PDF file for electronic storage, or downloaded and printed. The tablet can be synced with WDS, efficiently facilitating the transfer of all inspection data into the WDS database, eliminating manual entry, and resulting in quicker data translations into RCRAInfo.

Inspection Checklist Forms: HWP district staff updated and improved the inspection checklist forms to include the changes from hazardous waste generator rules, which were adopted August 3, 2020.

Unmanned Aerial Systems - Drone Technology: During the second half of FY 2020, MMD flew 11 Missions between April 1 and Sept 30. These included post flood inspection response on the Tittabawassee River, and surveys of McLouth Steel, Dow Salzburg Landfill, Dow SDF Landfill, and Safe Spot Business Park. Other mission were related to training and research.

Seven new staff entered EGLE UAS drone program, including 3 in MMD. The Aerial Reconnaissance Technology (ART) TAPS Team revised and updated our 2018 EGLE UAS Drone Policy to reflect new monthly pilot flying proficiency requirements, new Fit4Service Aircraft inspection protocol, and new sections dealing specifically with privacy and security concerns.

EGLE acquired two replacement drones due to incidences (one being EAGLE generated), and put forth two grant proposals to purchase new dedicated aircraft for Water Resources Division (WRD) and the Radiological Protection Program. The ART TAPS Team started monthly division pilot calls in September using Microsoft Teams, and is working to develop a Teams Site and Channels.

Coordinated District Office, and Hazardous Waste Section Inspections Report

During the second half of FY 2020, EGLE continued to implement strategies that maximize resources and focus work effort in areas that maximize protection of the environment and public health. EGLE focused inspections on:

- **TSDFs:** It is EGLE’s goal to inspect active TSDFs one time per year. Inspections will include at least one district Compliance and Enforcement Inspection (CEI). EGLE will also conduct other inspections, 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 Corrective Action Compliance Inspection. The FY 2020 inspection schedule is:

Inspection Schedule FY 2020

Inspection Type	Number of Inspections
Active operating TSDF CEI	15
O&M	8
PC Cap	4
CA Cover/Cap	1
CAMM	4

- **Generators:** EGLE, MMD staff will conduct annual inspections at 51 of Michigan’s Large Quantity Generators (LQG). This is a deviation from the requirement to inspect at least 20 percent of our LQG universe as required under the U.S. EPA Office of Enforcement and Compliance Assurance, RCRA Compliance Monitoring Strategy. Michigan proposed to follow an alternative approach to the standard requirement by following Alternative 3 – The Straight Trade-off Approach. Our proposed plan is discussed below.
 - Description of the state’s known universe – Based on Michigan’s 2017 Biennial Report (BR), Michigan has 510 LQGs. Based on Michigan’s Waste Data System (WDS), Michigan currently has 1978 Small Quantity Generators (SQG), and 21,307 Very Small Quantity Generators (VSQG).
 - Baseline – Based on Michigan’s 2017 BR, Michigan would have to conduct 102 inspections to meet the standard approach of inspecting 20 percent of the LQG universe in FY 2020.

- Problem statement – Michigan is confident that waste streams at its LQGs have been identified and are properly managed. These facilities have more mature waste management programs, and as such, we see less violations and better compliance rates than we do at SQGs and VSQGs. Michigan sought flexibility to focus its resources at facilities that pose greater risks.
- Planned mix of inspections – Michigan proposed to inspect 10% of its LQG universe, 51 inspections, based on the BR or report. Michigan commits to inspect an additional 102 SQG, VSQG, and/or other inspections in FY 2020.
- Expected outcomes – Under this alternative approach, Michigan expects to identify facilities where waste mismanagement occurs, and expects that the quantity identified as being handled improperly far exceed the amount of waste improperly handled by any LQGs identified with violations. Michigan will gain a more complete generator universe.
- Mix of tools – Michigan’s alternative approach for inspections used in conjunction with educating the regulated community during inspections, various workshops and webinars, guidance documents and compliance information on EGLE’s websites will help maximize compliance rates and minimize environmental risks.
- Measurement plan – Michigan will document the amount of waste the SQGs, VSQGs, and other facilities generate, the amount of waste identified as not being handled properly at the time of an inspection but corrected at the time of inspection, the amount corrected as a result of follow up enforcement actions, the amount that will now be managed properly because of the implementation of environmental management practices that ensure compliance, the amount not properly identified as hazardous waste that will now be handled properly, etc. Michigan will report outcomes to the region through WDS, which is translated to RCRAInfo.

During the second half of FY 2020, district offices, in combination with HWS staff, completed work as summarized in the following tables.

Inspection Category	District Staff		Hazardous Waste Section Staff	
	FY 2020 Commitment	Inspections Completed	FY 2020 Commitment	Inspections Completed
TSDFs	15	18	17	19
LQGs	51	117	0	0
Other*	102	291	0	0

*Other includes SQG, VSQG, Liquid Industrial By-Products (LIB), used oil processor, transporter and complaint inspections performed under the Part 111/Part 121 of the NREPA regulatory program.

Inspections that are combined into the Other category include:

- SQG – 113
- VSQG – 48
- Used Oil Processor – 1
- LIB – 78
- Transporter - 13
- Complaints – 94

District Staff TSDF Inspection Report

Active TSDF Inspection Schedule with Commitment Number and Completion Dates

	Site ID	Current Name	District CEIs	District
1	MID 092 947 928	Drug and Laboratory Disposal Inc	9/15/2020	Kalamazoo
2	MID 000 820 381	Pharmacia & Upjohn Company LLC	6/26/2020	Kalamazoo
3	MIR 000 001 834	U of M Beck Road Facility	5/13/2020	Jackson
4	MID 053 343 976	MSU Waste Storage Facility	7/01/2020	Lansing
5	MID 000 724 724	Dow Chemical Main Plant & Incinerator	8/25/2020	Bay City
6	MID 000 809 632	Dow Silicones Corporation	9/01/2020	Bay City
7	MID 980 617 435	Dow Chemical Company-Salzburg Landfill	8/25/2020	Bay City
8	MID 000724 831	Michigan Disposal Waste Treatment Plant	12/13/2019 7/09/2020	Warren
9	MID 060 975 844	US Ecology Romulus	8/18/2020	Warren
10	MID 005 338 801	Gage Products Co	7/31/2020	Warren
11	MID 048 090 633	Wayne Disposal Inc	12/13/2019 7/20/2020	Warren
12	MID 074 259 565	US Ecology Detroit North	9/20/2020	Warren
13	MID 980 615 298	PSC Environmental Services	6/30/2020 9/25/2020	Warren
14	MID 980 991 566	EQ Detroit South	9/25/2020	Warren
15	MIR 000 016 055	Environmental Geo-Technologies LLC	2/03/2020	Warren
16	MID 005 378 161	Michigan Chrome (closed)	12/05/2019	Warren

Hazardous Waste Section Inspection Report

This table identifies the completion dates and status of the GME/O&M, PC Cap, CA Cap, Focused Compliance Inspection (FCI), and CAMM Work Plan commitments.

	Site ID	Current Name	HWS O&M	HWS CAMM	HWS CA Cover/Cap Inspection	HWS PC Cap Inspection	HWS CAC/FCI – Other
1	MID 000 724 724	Dow Chemical Main Plant & Incinerator Complex	9/30/2020		9/30/2020	9/30/2020	
2	MID 000 809 632	Dow Silicones Corporation	9/30/2020				
3	MID 980 617 435	Dow Chemical Company - Salzburg Landfill	3/31/2020				
4	MID 048 090 633	Wayne Disposal Inc	9/11/2020				
5	MID 006 014 666	Lacks Industries Inc				Deferred to 2021	
6	MID 006 411 953	Black River Public School		9/28/2020			
7	MID 006 026 793	Access Business		9/21/2020			
8	MID 096 963 194	Perma-Fix of Michigan		08/31/2020			
9	MID 009 708 678	Solutia Inc. East Property	9/28/2020				
10	MID 000 810 408	Woodland Meadows Landfill North	9/28/2020				
11	MID 006 014 906	Occidental Chemical Corp	9/24/2020				
12	MID 006 025 217	Barber Steel Foundry Corp		9/16/2020			
13	MID 005 057 005	Ford River Raisin Warehouse	12/18/2019				
14	MID 005 356 860	Racer Coldwater Road Landfill				4/17/2020	
15	MID 082 771 700	Granger Grand River Landfill				9/22/2020	
	MID 005 356 886	RACER Pontiac North Campus					7/27/2020
	MID 005 356 910	RACER Fiero Assembly Plant					7/27/2020
16	MID 005 513 262	Vassar Acquisitions	9/30/2020				

Enforcement

Enforcement Section Report

Significant Non-Compliers (SNCs) Reported in Current Fiscal Year			
Name: Legal name of entity. Additional information may be given under the name heading (e.g., previous owner(s) / operator(s), common name of facility, city located in, etc.) to assist in identifying the facility.	Site ID	Date of SNC Determination	SNC Status
Petro-Chem Processing Group of Nortru, LLC (Stericycle): Violation Notice (VN) issued October 4, 2019.	MID 980 615 298	3/10/2020	SNY*
Target Corporation: VN issued March 5, 2020	MIK 338 447 436	8/19/2020	SNY

*SNY is the RCRAInfo code signifying that a facility owner and/or operator/generator/transporter is a SNC

SNCs Reported in a Prior Fiscal Year(s)			
Name	Site ID	SNC Date	SNC Status
Orchard Lake Machining: VN issued September 6, 2018	MIK 878 278 044	2/12/2019	SNY
Harbor Packaging: VN issued September 21, 2018.	MI0 000 373 027	1/3/2019	SNY
Dow Chemical Main Plant and Incinerator Complex: VN issued April 24, 2019.	MID 000 724 724	4/24/2019	SNY
Metro Delivery: VN issued April 22, 2019.	MIK 837 520 182	6/19/2019	SNY
Kassouni Manufacturing, Inc.: VN issued July 29, 2019 and September 12, 2019.	MIK 196 055 853	8/27/2019	SNY
Diamond Chrome Plating, Inc., Howell: VN issued March 21, 2016, June 24, 2016, October 17, 2018, May 10, 2019 and April 14, 2020. This is a multi-media case among the EGLE Air Quality Division, WMRPD (lead division/office), and Water Resources Division. A Demand for Stipulated Penalties was issued to Diamond Chrome on August 2, 2016 and June 25, 2020, for violations of the July 28, 2015, First Amended Consent Decree. EGLE is currently negotiating a Second Amended Consent Decree	MID 005 344 973	1/28/2016	SNY
Electro-Plating Service, Inc., Madison Heights: VNs issued June 6, 2016, and December 2, 2016. Order to Cease and Desist Operation issued on December 21, 2016. The facility was referred to U.S. EPA Superfund, Emergency Response Branch to perform a Time-Critical Removal Action (TCRA). The TCRA was completed on January 3, 2018. The facility was also referred jointly to U.S. EPA CID and MDNR, LED, EIS for criminal investigation. As a result, the owner/operator of the facility pled guilty to one count of felony hazardous waste storage without a license. In December 2019, a release of contaminated groundwater occurred from the site onto Interstate-696. Since then, U.S. EPA Emergency Response Branch has mitigated the groundwater migration and is installing groundwater treatment measures. EGLE's Remediation and Redevelopment Division will take over operation and maintenance of the groundwater treatment.	MID 042 444 687	11/22/2016	SNY
Middletons, LLC: VN(s) issued June 9, 2017 and July 31, 2017.	MID 112 838 966 and MID 074 296 070	7/10/2017	SNY

U.S. Steel Great Lakes (Site B): VN issued September 8, 2017.	MIK 438 244 824	9/8/2017	SNY
Michigan Disposal Waste Treatment Plant: VN issued February 2018.	MID 000 724 831	9/22/2017	SNY
Schawk (LSI/KALA, LLC): VN issued March 29, 2018. FTO was offered on March 6, 2019.	MID 004 912 861	8/28/2018	SNY

Fast Track Administrative Consent Order (FTO)

Name	EPA Site ID	SNC Date	SNC Status	Enforcement Notice Issued and Proposed FTO Offered	Entered
JVIS: VN issued June 3, 2018. FTO was offered on September 25, 2019 and entered on December 12, 2019.	MIR 000 013 623	11/08/2018	SNN**	9/25/2019	12/12/2019

**SNN is the RCRAInfo code signifying that a facility owner and/or operator, generator, or transporter is no longer a SNC.

Administrative Consent Order (CO) or Unilateral Administrative Order (UAO)

Name	Site ID	SNC Date	SNC Status	Enforcement Notice Issued and Proposed CO Offered	Entered
Liquid Industrial Waste Services, Inc: VN issued on July 11, 2018, November 20, 2018 and April 23, 2019. ACO offered on October 25, 2019 and entered on November 25, 2019.	MID 006 546 121	1/29/2019	SNN	10/25/2019	11/25/2019

Bankruptcy Proceedings

Name	Site ID	SNC Date	SNC Status	Referral to MDAG	EGLE Claim Filed	Court Order Issued
Metavation Vasser, LLC (Tuscola Co.): Voluntary Chapter 11 bankruptcy petition filed July 22, 2013. Referral to the MDAG for representation. A CACO was entered with Metavation, LLC, on July 15, 2011. EGLE and Metavation Vassar, LLC reached an Agreement to settle EGLE's proof of claim in December 2018 that was approved and entered by the Bankruptcy Court on January 2, 2020. EGLE provided for release of the financial assurance mechanism during the 1 st Quarter of 2020.	MID 005 513 262	N/A***	SNN	12/13/2013	1/20/2014	

***Not Applicable

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

In the second half of FY 2020, the EGLE, RPS, supported the HWS through the activities noted below.

RPS staff:

- Reviewed the plan for disposal of formerly utilized sites remedial action program material at WDI originating from the Middlesex, New Jersey site. The cleanup of the site is overseen by the U.S. Army Corps of Engineers. An approval letter was drafted for WDI. A briefing paper was drafted for the EGLE Executive Office.
- Attended the quarterly U.S. Ecology quarterly meeting on July 22, 2020.

Michigan Department of Natural Resources (MDNR), Law Enforcement Division, Environmental Investigation Section, Hazardous Waste Program Support

During the first half of FY 2020, the MDNR, Law Enforcement Division, Environmental Investigation Section, provided non-grant funded support to the HWP through their work to conduct waste hauler vehicle and border patrols along with investigations/prosecutions of hazardous waste/RCRA related cases, as noted below.

Waste Hauler Vehicle Patrols: 0

Border Patrols: 0

Hazardous Waste/RCRA-Related Cases Opened: 0

Hazardous Waste/RCRA-Related Cases Closed with Conviction: 0

Hazardous Waste/RCRA-Related Cases Closed Compliance Gained Without Conviction: 0

Hazardous Waste/RCRA Related Cases remaining open 1, working with the U.S. EPA

FY 2020 Hazardous Waste/RCRA-Related Cases Open		
Case #	Case Name	Initiation Date
16-010	Midland Chemical Lab Warrant still valid - suspect currently out of the country.	2016
17-025	Electro-Plating Service Suspect pled guilty in federal court. Sentencing was on 11/5/2019 in Federal Court. Suspect sentenced to one year and a day in prison, 5 years' probation. Special fines assessed - \$500.00, U.S. EPA restitution - \$1,449,963.94. In December 2019, EIS spent multiple hours on related "Green Ooze" on Interstate 696, related to this case. Suspect pled guilty in federal court, sentencing set for May 18, 2020.	03/27/2017
18-035	Stoddard Oil Waste Under Investigation.	06/26/2018
18-040	Pinch Hwy abandoned barrels Closed could not establish suspect – February 15, 2019.	08/23/2018
19-031	Lead Waste at Muskegon Gun Range 6/24/19 Insufficient evidence - closed.	06/24/2019

Administrative Controls

U.S. EPA FY 2018–2022 Strategic Plan, Goal 1 – Core Mission: Deliver real results to provide Americans with clean air, land, and water, and ensure chemical safety.

Objective 1.2: *Provide for Clean and Safe Water.* Ensure waters are clean through improved water infrastructure and, in partnership with states and tribes, sustainably manage programs to support drinking water, aquatic ecosystems, and recreational, economic, and subsistence activities.

Objective 1.3: *Revitalize Land and Prevent Contamination.* Provide better leadership and management to properly clean up contaminated sites to revitalize and return the land back to communities.

U.S. EPA FY 2018–2022 Strategic Plan, Goal 3 – Rule of Law and Process: Administer the law, as Congress intended, to refocus the Agency on its statutory obligations under the law.

Objective 3.4: *Streamline and Modernize.* Issue permits more quickly and modernize our permitting and reporting systems.

In FY 2020, EGLE established a goal to issue or renew OLs and PC OLs, to process major or minor license modifications, to clean close regulated units, to approve PC plans, and to enter into CACO, and other legally enforceable agreements, such that the GPRA “approved controls in place” goals are achieved for 100 percent of the GPRA 2020 Permit Baseline.

HWS Administrative Controls Work Schedule Commitments

Waste Analysis Plan Initiative

To improve the quality and consistency of the Waste Analysis Plans (WAP) in our OLs, and to streamline the licensing process, the HWS has initiated a focused WAP review process for three facilities that are in the process of relicensing. As part of this process, EGLE has engaged with the facilities and the U.S. EPA to update our WAP template, and resolve key issues that have hindered relicensing. This process began in October 2017 and has involved frequent conference calls, and consultation, between EGLE and the U.S. EPA since its inception. In December 2017, a collaborative face-to-face meeting was held with facilities representatives, EGLE staff, and the U.S. EPA, Region 5, permitting staff, to establish an understanding of the agencies’ key WAP concerns. Although the WAP initiative continues to require commitment of significant resources from EGLE, the U.S. EPA, and the regulated community, its outcome should help ensure that OLs will contain high quality and consistent WAPs moving forward, and will serve as a template for future licensing activities. During the second half of FY 2020, HWS and U.S. EPA restarted evaluating WAPs for Michigan Disposal Waste Treatment Plant and US Ecology Detroit South.

Progress Toward Meeting Administrative Controls Work Plan Commitments

The summaries below identify the progress made during the second half of FY 2020 toward accomplishing the Administrative Controls commitments identified in the EGLE FY 2020 – 2021 RCRA Grant Work Plan.

University of Michigan – Beck Road (MIR 000 001 834) Operating License Application Completeness and Technical Review: Application determined to be complete on June 22, 2020, and staff proceeded with technical review. On September 7, 2020, staff determined the application needed minor revisions to reflect department name change, deletion of nonapplicable template text which impacted the application formatting, and other minor changes.

US Ecology Detroit North (MID 074 259 565) Operating License Issuance: EGLE issued this OL on January 29, 2020.

Michigan Disposal Waste Treatment Plant (MID 000 724 831) Operating License Renewal Application Completeness and Technical Adequacy Determinations: During the second half of FY 2020, EGLE focused on facility compliance issues and review of the WAP. On September 30, 2020, EGLE sent Michigan Disposal Waste Treatment Plant an Enforcement Notice of its commencement of an enforcement action based its on February 22, 2018, VN for the August 7, 2017, fire at the facility.

EQ Detroit, Inc dba US Ecology Detroit South (MID980991566) Operating License Renewal Technical Adequacy Determination: During the second half of FY 2020, HWS staff continued with technical review of the US Ecology Detroit South (USE-Detroit South) OL renewal application. At the end of FY 2017, EGLE sent the facility a *Technical Notice of Deficiency* (TNOD). EGLE received USE-Detroit South's response to the TNOD, along with the associated application revisions, in December 2017, and a preliminary review of the revisions was completed during the third quarter of FY 2018. On March 27, 2018 EGLE also provided the facility with a copy of U.S. EPA's November 29, 2017 comments on the application's WAP, regarding technical inadequacies and concerns. On September 25, 2020, the facility submitted a re-written WAP as a revision to the application. The EGLE project team continues to meet weekly and participate in calls with U.S. EPA Region 5 staff to resolve deficiencies in the facility's WAP, and to discuss necessary actions to move forward toward the license issuance. EGLE is currently planning public outreach in the form of a public informational webinar, to ensure that the host community and other stakeholders are adequately informed regarding the pending application review. EGLE has set a tentative goal to finish a second technical review of the application in Q2 of FY 2021, with a technical adequacy determination by the end of FY 2021. Although this is the goal for the license issuance progression, the timing to resolve the WAP issues at the facility, and anticipated significant public interest in this licensing action will be a significant factor that will dictate the ultimate schedule for work to be accomplished throughout FY 2021.

Ford River Raisin Warehouse (MID 005 057 005) Post Closure Operating License Renewal Technical Adequacy Determinations: At the end of FY 2018, EGLE sent the facility a *Completeness Notice of Deficiency* (CNOD). EGLE received revisions from Ford through January 2019. At the end of FY 2019, EGLE issued a completeness determination for the Ford River Raisin post-closure permit renewal application. During FY 2020, EGLE HWS staff continued to work with Ford River Raisin Warehouse (Ford) toward a technical adequacy determination. EGLE anticipates issuing a TNOD during the 1st quarter of FY 2021, and reviewing subsequent revisions in the 2nd quarter of FY 2021, with a goal of technical adequacy before the end of the 2nd quarter of FY 2021, and public noticing and ultimate issuance by the end of FY 2021.

Non-Commitment Administrative Controls Completions

Operating License Modifications

Current Site Name	Site Legal Name	EPA Site Id	Event Code	Event Description	Comment	Date
US Ecology Detroit North	US Ecology Michigan Inc	MID 074 259 565	OP240OH	Modification Approved – Other Modification	Administrative Change – Conversion of Tank 27 to hazardous waste service	7/31/2020
Republic Industrial & Energy Solutions LLC	Republic Industrial and Energy Solutions	MIR 000 016 055	OP230OH	Modification Requested	Modifications for treatment products tanks, RWWV, and well maintenance feed lines	8/28/2020

The Dow Chemical Company Main Plant and Incineration Complex (MID 000 724 724) and Salzburg Landfill (MID980617435) Combined Operating License –Work Activities

During the second half of FY 2020, the HWS spent significant time providing oversight on The Dow Chemical Company (Dow) combined Part 111 /RCRA hazardous waste TSDF OL, and providing support for the federal Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Administrative Order on Consent (AOC), for the Tittabawassee and Saginaw Rivers and Saginaw Bay Site. Refer to RCRAInfo for data entry on inspection and record review evaluations associated with the Dow OL. Also, HWS staff meet internally on a weekly basis to discuss oversight of Dow’s combined OL and the CERCLA AOC. Since the weekly meetings combine discussions for both Dow OL and CA work, details are included in Appendix 1B, The Dow Chemical Company CA oversight commitment work accomplishments table, to avoid duplication.

Corrective Action

U.S. EPA FY 2018–2022 Strategic Plan, Goal 1 – Core Mission: Deliver real results to provide Americans with clean air, land, and water, and ensure chemical safety.

Objective 1.3: Revitalize Land and Prevent Contamination. Provide better leadership and management to properly clean up contaminated sites and to revitalize and return the land back to communities.

Goal for FY 2020 CA Accomplishments

For FY 2020, EGLE intends to apply available resources at a pace to enable the meeting of the below listed milestones for the EGLE lead GPRA 2020 CA Universe of facilities. Note that EGLE’s ability to achieve this goal has become significantly impeded by the U.S. EPA’s budget reductions to our program, the need to conduct VI evaluations at non-GPRA sites to protect human health, and the State of Michigan’s new PFAS Initiative to identify locations impacted by PFAS and initiate appropriate remedial response. In addition, factors beyond EGLE’s control, such as newly identified releases, and/or areas of contamination requiring additional investigative study and/or newly proposed remedies, have the potential to impact upon EGLE’s ability to meet the Work Plan goals identified below.

- Human exposures controlled (CA725) at 94 percent of the EGLE-lead sites (EI achieved at two additional facilities in FY 2020).

- Contaminated groundwater controlled (CA750) at 92 percent of the EGLE-lead sites (EI achieved at two additional facilities in FY 2020).
- Complete construction of final remedies (CA550) at 62 percent of the EGLE-lead sites (EI achieved at three additional facilities in FY 2020).
- Achieve performance standards attained (CA900/CA999) at 46 percent of the EGLE-lead sites (EI achieved at four additional facilities in FY 2020).

GPRA CA725, CA750, CA400, and CA900/999 EI Completions

During the second half of FY 2020, EGLE completed the following

Environmental Indicator	Facility	EPA Site ID	Date
CA 725	Bostik	MID 060 198 249	September 30, 2020
CA 750	Gage Products	MID 005 338 801	September 30, 2020
CA 550	MacDermid Inc	MID 005 338 371	September 29, 2020

No CA400, or CA900/999 EI commitments were completed; however, progress was made toward completions. Determinations not completed in FY 2020 will carry forward to FY 2021 and these have been communicated to U.S. EPA. As noted previously, U.S. EPA budget reductions and emerging contaminant issues with near term human health risks are having an impact upon the EGLE's ability to meet these EIs.

HWS Corrective Action Work Schedule Commitments Met

The summaries below identify the work completed to accomplish each respective commitment.

CA Oversight (CA001)

During FY 2020, EGLE completed CA oversight activities at all facilities listed on the CA FY 2020 Hazardous Waste Section Work Schedule of the Work Plan. The work activities included meetings, technical reviews, and communications, along with field work. A list of the CA oversight activities completed during the second half of FY 2020 is included in Appendix 1A, and Appendix 1B of this report.

Enforcement Technical Support (CA085)

Name	EPA Site ID	Event Code	Event Description	Comment	Date
Gage Products Company	MID 005 338 801	CA085	Enforcement Technical Support	Support Hazardous Secondary Material Notification Violation	10/14/2019
Gage Products Company	MID 005 338 801	CA085	Enforcement Technical Support	Support Hazardous Secondary Material Notification Violation	10/14/2019
Trex Properties Llc	MID 091 605 972	CA085	Enforcement Technical Support	Enforcement Technical Support	11/19/2019
Lacks Industries Inc	MID 006 014 666	CA085	Enforcement Technical Support	Meeting with Enforcement Staff to develop WMUs	3/12/2020

Progress Toward Meeting Enforcement Technical Support Work Plan Commitments

Safety Kleen Systems Inc. (MID 981 000 359): The facility needs to reach an agreement with the city of Mason to restrict groundwater use at an adjacent property, due to the migration of groundwater contaminants offsite. The city has not been as receptive to the facility's proposal for accomplishing this as had been hoped. Given this, along with the need to evaluate the groundwater for PFAS, Safety Kleen Systems, Inc., planned corrective measures have yet to be implemented. If sampling results for PFAS are negative and an agreement is reached that allows the necessary groundwater restriction to be put into place, EGLE intends to refer the site to the MMD Enforcement Section for development of a Corrective Action Long-Term Agreement (CALTA) to ensure that the controls that are a part of the facility's final CA remain functional, until such time as they are no longer needed.

Lacks Industries, Inc. (Lacks), (MID 006 014 666): The facility needs to reach agreement with EGLE regarding Phase 2 investigation, and on-going monitoring requirements for PFAS, in light of new, more restrictive maximum contaminant levels and generic cleanup drinking water criteria established in Michigan. These criteria changes will likely require some degree of sampling outside of the previous Phase 1 investigation area, which needs to be defined. Lacks is also updating the facility's overall long-term groundwater monitoring program, as well as conducting a study to re-establish a previous purge well, which was previously taken offline due to PFAS being discovered in purge well effluent in 2018. Additionally, the VI pathway came into play over the summer of 2019. A baseline environmental assessment was conducted at one of the facility's former manufacturing buildings, and it identified indoor air and sub-slab concentrations above criteria, as the building was being reoccupied for office use. EGLE has had difficulty in getting Lacks to engage with the current property owners to conduct any onsite environmental investigations for onsite CA, for which Lacks is liable via the 1990 Consent Judgement (CJ). EGLE is working to develop an up to date CACO to address these issues.

Lacks Industries – Saranac (MID 080 359 433): EGLE is working with U.S. EPA to assume corrective action oversight responsibilities, from U.S. EPA. Work has begun to identify CA milestones completed, and work that remains to be done. HWS staff are working with Enforcement Section staff in creating the first draft.

Michigan Seamless Tube (MID 082 767 591): The facility has an existing CACO. It is out-of-date relative to various requirements and staff have been working to determine necessary revisions. The facility has discovered three *new* areas of concern: an oily soils area that appears to be associated with a former oil spill that was carved out of the CACO; an area between the process area and the on-site Wastewater Treatment Unit where two separate pipeline breaks occurred, and a release of oily wastewater from a tote and interim response activities are ongoing. The facility has shared a draft groundwater restrictive covenant that they are proposing to use as an institutional control with HWS staff, and input has been sought from our Enforcement Section. HWS staff provided feedback to the facility on the restrictive covenant and they are working with the local municipality to secure consensus. Continued coordination with the Enforcement Section will likely be needed throughout the remainder of FY 2020 to resolve these issues.

Chemours – Montague Works (MID 000 809 640): Work on this facility has slowed due to other work priorities, however, an active citizens' group has taken an interest in, and has become involved in CA at the facility. They maintain a direct line of communication with facility staff, and EGLE conducts a monthly call with the group, answering questions they pose. HWS

staff have provided basic information to Enforcement Section staff regarding the need for an enforceable document for the facility. Chemours – Montague Works has conducted CA activities on a voluntary basis, without any cost-recovery, and has provided the HWS staff with a copy of the enforceable document that is being used for CA at some of their other facilities. HWS and Enforcement Section staff agree the example enforceable document would be a good starting point to develop something similar for this facility, since facility staff and EGLE seem to be in agreement on the document. Since facility representatives and the citizens’ group are eager to get an enforceable document in place, continued coordination on this matter will occur between HWS and the Enforcement Section throughout the remainder of FY 2020.

Trex Properties (MID 091 605 972): During FY 2020 EGLE met with Trex representatives on November 19, 2019, and on August 28, 2020, for the semi-annual progress meetings under the CACO. Two sub-slab depressurization systems continue operation at adjacent properties to mitigate VI, and Trex completed additional remedial facility investigation (RFI) work at multiple other surrounding properties during FY 2019-2020. A report summarizing Supplemental RFI data is in development.

Hayes Lemmerz (MID 041 803 123): Work on this facility continues; on January 29, 2020, EGLE sent a letter approving an Interim Measures Work Plan for the Eastern Border of the site, to investigate potential off impacts. Implementation of the work has been delayed due to the COVID-19 shutdown. In addition, EGLE approved the Current Conditions Report on February 13, 2020. In the approval letter, EGLE also requested the submittal of a RCRA Facility Investigation Work Plan within 60 days of receipt of the letter. Work has also been initiated on drafting a Corrective Action Consent Order; however, progress has been slowed due to the potential purchase of the property by another party. Work will continue on this project in 2020.

Chrysler Introl (MID 990 760 100): Work on this facility continues. On February 27, 2020, EGLE approved a proposal and work plan for additional PFAS investigation. In addition, on April 16, 2020, EGLE approved a proposal/work plan for a feasibility study for eliminating/reducing PFAS venting to the Huron River. Some limited residential well sampling surrounding the facility is also planned; however, that has been delayed due to the COVID-19 shutdown. During the second half of FY 2020, HWS and Enforcement Section staff continued work on the development of a new Corrective Action Order with the current owner of the property in preparation for the time when the funds appropriated from Chrysler’s Insurance Company are exhausted; however, a draft version has not yet been shared with the facility.

Corrective Action Consent Orders (CACO) or Corrective Action Long-Term Agreements (CALTA)

Corrective Action Consent Order (CACO) or Corrective Action Long-Term Agreement (CALTA)			
Name	Site ID	Proposed CACO or CALTA Offered	CACO or CALTA Entered
Five Star Store It Ferndale, LLC, Ferndale: CALTA for the East Area of the former Reichhold, Inc. Ferndale site. EGLE re-evaluating long-term corrective measures based on recent sampling data.	MID 020 087 128	11/24/2015	

<p>J&A Holdings, LLC and Stericycle Specialty Waste Solutions, Inc. (formerly Chemical Analytics Inc.): EGLE provided draft CALTA to the respondent on March 8, 2017, that includes measures for restrictive covenant, barrier maintenance, and FA. Owner was not receptive to draft CALTA and has requested that only a restrictive covenant be needed for the facility. Technical meeting between the parties was held on September 28, 2017 that resulted in the respondent performing additional evaluation of contaminants and exposure pathways. Owner provided proposal for corrective measures and financial assurance in April 2018. Since then, Owner has refused to provide financial assurance to maintain/replace the barrier at the facility and refused to agree to EGLE's restrictive covenant language. Owner then filed a lawsuit in the Michigan Court of Claims seeking declaratory ruling that he is not subject to corrective action.</p>	MID 985 568 021	03/08/2017	
<p>Perma-Fix of Michigan: CALTA finalized and entered on March 27, 2020. CACO amendment to reflect change in property ownership was entered on July 23, 2020.</p>	MID 096 963 194	03/14/2019	03/27/2020
<p>Vassar Acquisitions, LLC: EGLE is drafting a CALTA to replace the CACO.</p>	MID 005 513 262		
<p>Lacks Industries, Inc. – Saranac: Engaging with current facility owner regarding corrective action obligations including PFAS contamination. Intend to draft CACO to replace current U.S. EPA /DOJ Consent Decree</p>	MID 080 359 344		
<p>Triair Company (former Sweepster/Chrysler/Corepoint): Engaging with current facility owner regarding corrective action obligations including addressing PFAS contamination, and entry of a CACO.</p>	MID 000 724 724		
<p>Lacks Industries, Inc – Cascade: Working with historical owner/operator on additional PFAS and VI investigation/remediation. Current enforcement mechanism is a Consent Judgement from the later 1990's. Working towards and updated administrative mechanism to replace the Consent Judgement.</p>	MID 006 014 666		
<p>Former Hayes Lemmerz: Engaging with current facility owner regarding corrective action obligations including sources of contamination that may result in VI, and entry of a CACO.</p>	MID 041 803 123		
<p>RACER Trust Buick City: Transitioning from EPA to EGLE as lead for this RACER Trust facility. EGLE CACO replaced EPA 3008(h) Order.</p>	MID 005 356 712	04/03/2020	08/05/2020

Non-Commitment CA Completions

Enforcement Technical Support

Reichhold, Inc. (MID 020 087 128): Reichhold is a GPRA 2020 baseline facility located in Ferndale, Michigan. Manufacturing operations at the site took place from 1927 to 1989. After operations ceased in 1989, the facility began implementing CA activities that included some soil removal, groundwater extraction, in-situ chemical oxidation, and dual phase (groundwater and soil gas) extraction. All buildings at the site were demolished to ground level in 1995. On

July 15, 2014, the MDEQ and Reichhold entered into an *Agreement for a Corrective Action* as a formal means to address the facility's CA obligations. On September 30, 2014, Reichhold filed for bankruptcy and the MDEQ drew on, and obtained, the facility's CA financial assurance Letter of Credit for \$719,113.

In February 2016, the West Area and the V-Shaped Building were purchased by WHP Investments, Inc. (WHP), who subsequently entered two CALTAs with the MDEQ to memorialize necessary steps for CA completion and implementation of long-term controls. Following entry of the agreements, restrictive covenants detailing controls and requirements for each area were filed on the properties, and the MDEQ approved WHP's Corrective Measures Implementation Plans. Financial assurance was agreed upon in May 2016, and a small change in the environmental monitoring schedule was approved in August 2016. On April 25, 2018, the MDEQ approved the first cost reimbursements to WHP for corrective action work performed at the West Area and V-Shaped Building, drawing upon the previously seized financial assurance, in the amount of \$80,346.16. EGLE approved a second cost reimbursement to WHP on February 13, 2020, drawing upon the previously seized financial assurance again, in the amount of \$26,060.59.

The Reichhold East Area, covering approximately the north 75 percent of the property east of the railroad, has been redeveloped into a self-storage business. Initially, the self-storage business, Five Star Store It (Five Star), was renting the East Area; however, the business has now purchased the property. Contaminants above relevant Part 201 of the NREPA (Part 201) criteria (soil, groundwater, soil gas) remain to be addressed in this area. A *Corrective Measures Implementation Work Plan* for the East Area was submitted to the MDEQ on February 3, 2017, and it was subsequently approved on December 4, 2017. The HWS is providing technical support and coordinating with the MMD, Enforcement Section, and Michigan Department of Attorney General (MDAG) staff to finalize a CALTA for this area. This CALTA is being negotiated concurrently with a review of Five Star's June 7, 2019, Corrective Action Complete With Controls Request report.

During the calendar year of 2019, EGLE directed both WHP and Five Star to sample for PFAS at their respective portions of the former Reichhold facility. After negotiating the details of the sampling, both owners have complied, and PFAS results in groundwater samples ranged from non-detect to low levels, below applicable cleanup criteria.

CA Oversight

100 E Patterson LLC (MID 005 049 440): 100 E Patterson LLC, formerly known as The Tecumseh Products Company, is a U.S. EPA-lead GPRA 2020 facility that is undergoing CA. Since the beginning of FY 2016, at the request of the U.S. EPA, the HWS has been providing substantial project support on this U.S. EPA-lead project, primarily in the areas relating to the volatilization to indoor air (VIA) and groundwater/surface water interface (GSI) pathways. This work has continued throughout FY 2020. HWS support has included historic document reviews, Corrective Measures Study Report review, Work Plan reviews, Monitoring Plan reviews, progress report reviews, deed restriction reviews, risk-based CA model review relating to media specific screening levels for the VIA pathway, field oversight and sampling, a mixing zone determination, and recommendations for further corrective measures, coordination between U.S. EPA, RRD, and other stakeholders, and the development of performance monitoring specifications for the VIAP. The HWS has also participated in numerous technical meetings and conference calls to address overall CA, the VIA and GSI pathways. To date, it is

estimated that the HWS has provided 120 hours of support to the U.S. EPA on this project during FY 2020.

Trex Properties, LLC (MID 020 906 764): Trex Properties, LLC, located at 312 Ellsworth Ave SW, Grand Rapids, MI is a U.S. EPA-lead facility that is undergoing CA. Since the beginning of FY 2020, at the request of the U.S. EPA, HWS has been providing substantial project support on this U.S. EPA-lead project, for overall CA work. HWS support to U.S. EPA has included historic document reviews, Work Plan reviews, Monitoring Plan reviews, progress report reviews, and recommendations for further corrective actions, coordination between U.S. EPA, and other stakeholders. The HWS has also participated in numerous technical meetings and conference calls to address overall CA for the site. To date, it is estimated that the HWS has provided 60 hours of support to the U.S. EPA on this project during FY 2020.

Other Work Activities: Refer to Appendix 2, , at the end of this report for a summary of the specific non-commitment CA oversight work activities completed by HWS staff during the second half of FY 2020. As can be seen in the Appendix 2 summary, EGLE continues to provide substantial support to the U.S. EPA on their lead projects, and a high percentage of the non-commitment work is for VI.

EGLE/U.S. EPA Coordinated Approvals for Polychlorinated Biphenyl (PCB) Clean-ups

To facilitate PCB clean-ups and eliminate duplication of efforts when PCB remediation is needed at RCRA CA sites, EGLE and the U.S. EPA have been working cooperatively to coordinate approvals pursuant to Title 40 of the Code of Federal Regulations §761.77 (Toxic Substances Control Act [TSCA]) coordinated approvals. During the second half of FY 2020, EGLE coordinated with U.S. EPA on TSCA PCB cleanups for:

1. The RACER Buick City facility, in Flint, Michigan.
2. The RACER Pontiac North facility, in Pontiac, Michigan.
3. The Omnisource facility, in Jackson, Michigan.

EGLE also received inquiries and answered questions regarding TSCA applicability and sampling requirements throughout the FY. EGLE is continuing to resolve updated Part 201 cleanup criteria for PCBs, and a resolution needs to be reached prior to entering into a EGLE/U.S. EPA TSCA Memorandum of Agreement for formal Coordinated Approvals.

The Part 201 Amendments, Criteria Updates, and Criteria Rule Revisions with Potential Impacts on Part 111/RCRA 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 in to a Memorandum of Understanding (MOU) to aid in the implementation of RCRA CA requirements at Michigan facilities, recognizing the use of the Part 201 criteria for Part 111 CA, to fulfill the RCRA CA obligations in Michigan as long as these criteria are not less stringent than would be required by RCRA. In 2002, the U.S. EPA and the MDEQ entered into a technical addendum to the MOU that provided some additional 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. EGLE and U.S. EPA will start updating the MOU in FY 2021.

The HWS continues to work with the RRD to resolve concerns with Part 201 generic cleanup criteria, and proposed updated criteria rules that have historically been used for Part 111/RCRA CA in Michigan. Because updated cleanup criteria administrative rules have not yet been promulgated and the schedule for completing this task remains uncertain, EGLE is working with U.S. EPA to update the MOU and to do so in a manner that allows annual reviews to keep the MOU current. The agencies initiated that task during the second half of FY 2020 and this is a focus work effort for EGLE in 2021.

Financial Capability

U.S. EPA FY 2018–2022 Strategic Plan, Goal 1 – Core Mission: Deliver real results to provide Americans with clean air, land, and water, and ensure chemical safety.

Objective 1.3: *Revitalize Land and Prevent Contamination.* Provide better leadership and management to properly clean up contaminated sites and to revitalize and return the land back to communities.

In FY 2020, EGLE committed to completing a financial record review for all 54 facilities that maintain financial assurance in Michigan, and entered data into WDS to demonstrate that the review has been completed. To reflect this in WDS, EGLE recorded 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 are in compliance with the financial capability requirements at any given time.

FY 2020 Year-End Accomplishments

Financial Record Reviews

During the second half of FY 2020, EGLE performed 58 financial record reviews at 48 of the 54 facilities with financial mechanisms. With these completions, EGLE has accomplished reviews at 100 percent of the facilities providing financial mechanisms to date. Several facilities provide multiple financial mechanisms based on facility operations. These facilities require multiple reviews during the FY 2020. The completed financial reviews are summarized in Appendix 3.

Data Entry

All written decisions and financial record reviews completed as of year end have been entered in the Compliance, Monitoring, and Enforcement (CME) modules of WDS and RCRAInfo as required.

Management and Reporting

U.S. EPA FY 2018–2022 Strategic Plan, Goal 1 – Core Mission: Deliver real results to provide Americans with clean air, land, and water, and ensure chemical safety.

Objective 1.3: *Revitalize Land and Prevent Contamination.* Provide better leadership and management to properly clean up contaminated sites and to revitalize and return the land back to communities.

Database Management and Reporting

WDS/RCRAInfo Reporting: Michigan data for the HWP is entered into WDS and translated to the U.S. EPA national hazardous waste database, RCRAInfo, for handler, permitting, CA, compliance and enforcement, and hazardous waste (biennial) reporting data. Work on translating financial assurance data into RCRAInfo began in FY 2015. There was a delay in the

completion due to resource constraints. The work on completing the translation feature is still scheduled for late FY 2020. Direct entry of financial assurance data into RCRAInfo, in order to address the U.S. EPA data quality of financial assurance data in RCRAInfo, was implemented in July 2016, and that work is continuing. Resources will focus on the translation of financial assurance data into RCRAInfo. Any disruptions in translation or data comparison reports will be communicated to the U.S. EPA, Region 5.

CME Module: During FY 2020, EGLE committed to maintain WDS to reflect current CME activities in Michigan. This data continued to be translated into RCRAInfo on a monthly schedule, through the Exchange Network, by submitting XML files.

Handler Module: During FY 2020, the U.S. EPA identification numbers continued to be issued through WDS, and the identification numbers conform to the required check-digit algorithm. This data continued to be translated into RCRAInfo on a monthly schedule, through the Exchange Network, by submitting XML files.

Permit Module: During FY 2020, EGLE committed to maintain WDS to reflect current permitting, closure, and PC activities in Michigan, including facilities listed by the U.S. EPA as high priority, under the federal GPRA. This data continued to be translated into RCRAInfo on a monthly schedule, through the Exchange Network, by submitting XML files. The Permit module translation schema is currently in the process of being updated. The schema update will be completed the first quarter of FY 2021.

CA Module: During FY 2020, EGLE committed to maintain WDS to reflect CA activities in Michigan, including facilities listed by the U.S. EPA as high priority, under the federal GPRA. This data continued to be translated into RCRAInfo on a monthly schedule, through the Exchange Network, by submitting XML files.

Laboratory Support

The EGLE samples collected during sampling and compliance inspections are analyzed in the EGLE Environmental Laboratory, unless specialized analytical capability is required which is not available through the EGLE Environmental Laboratory. All analyses conducted by EGLE are performed in accordance with standard procedures contained in the quality assurance manual entitled *OWMRP, Quality Assurance Quality Control Manual for the Sampling and Analysis of Environmental Media, Revision 6*, dated August 31, 2016, (2016 QA/QC Manual) .

As part of an assessment of emerging contaminants, the MMD is analyzing groundwater and leachate samples from select regulated facilities for certain PFAS. Sample collection for PFAS follows an MMD Standard Operating Procedure for PFAS Sample Collection, that is being incorporated into the revision of the 2016 QA/QC Manual. The updated QA/QC Manual is awaiting management review.

Safety Training

Notices for the required HAZWOPER training and annual health monitoring continue to be sent to individual MMD staff as reminders that they are due for their required training and physicals. At midyear, seven MMD staff had completed their annual physical exam for health monitoring. The COVID-19 pandemic and associated response activities have had a significant impact on Health and Safety activities and metrics. MMD staff were directed to delay their Annual Health Monitoring examinations until COVID protocols allowed resumption of examinations. The Michigan State Police Training Academy needed to shut down all non-essential activities and all HAZWOPER 8-hour refresher courses have been postponed indefinitely. This required training has been replaced with on-line training provided by EGLE health and safety staff. All staff staff required to have training have now completed their 8-hour HAZWOPER annual refresher training. In addition, two MMD staff have completed their initial 40-hour HAZWOPER training. Annual respirator fit testing for FY 2020 was postponed due to COVID-19 response activities.

WASTE MINIMIZATION

U.S. EPA FY 2018–2022 Strategic Plan, Goal 1 – Core Mission: Deliver real results to provide Americans with clean air, land, and water, and ensure chemical safety.

Objective 1.3: *Revitalize Land and Prevent Contamination.* Provide better leadership and management to properly clean up contaminated sites and to revitalize and return the land back to communities.

Materials Management Division's Support of Pollution Prevention

In protecting Michigan's environment, Pollution Prevention (P2) is a key element. It is an analysis approach that companies and communities can use to reduce the use of natural resources, minimize the generation of toxic and hazardous wastes through process changes, purchases of non/less toxic raw materials, and other methods. EGLE, MMD, administers § 11108 of the NREPA, which established the state Waste Reduction Fee. Fees are assessed on businesses according to quantities of hazardous waste solidification and/or disposal at TSDFs within Michigan. 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 of the NREPA contain the following major components:

- Provision of P2 assistance including information, technical, and financial assistance to help businesses, institutions, and communities.
- Application of P2 in multi-media 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.

Section 3.0, Waste Minimization, of the Work Plan summarizes the EGLE's FY 2020 commitment to protect the Michigan environment through P2. During the FY, the EGLE Sustainable Development Unit continued to support the HWP through non-grant funded work in the following areas:

- Continued to implement the Fuel Transformation Program and award grants through the Michigan Clean Diesel Grant Program and Volkswagen Settlement Mitigation Trust Agreement.
- Continued voluntary P2 integrated assessments.
- Maintained partnerships with business sustainability forums.

In addition, P2 staff continued to maintain the following core programs, and partnerships, to encourage waste minimization:

- Clean Corporate Citizen
- Integrated P2 Assessment
- Clean Marinas
- Michigan Green Communities
- Small Business P2 Loan Program
- Sustainability Conference

Further information about the MMD and its P2 efforts are available at https://www.Michigan.gov/EGLE/0,9429,7-135-70153_70155---,00.html.

Sustainable Materials Management

EGLE has multiple sustainable materials management (SMM) initiatives spread throughout the agency which aligns with the efforts of the U.S. EPA, and fits into Michigan's 2017 Solid Waste Policy (https://www.Michigan.gov/Documents/DEQ/DEQ-WMRPD-SolidWastePolicy_FINAL_SWSAP_GRC_608848_7.pdf).

Recycling

The Michigan Legislature approved \$15 million in FY 2020 for recycling through the Renew Michigan fund. The funding supports local recycling collection, processing, and end-use activities. A special focus on strong planning and recycling market development activities is noted, and will go toward the following three main areas:

- Materials management planning, including grants to counties, regional planning agencies, municipalities, and other entities responsible for preparing, implementing, and maintaining materials management plans.
- Local recycling programs, including grants to local units of government, nonprofit, and for-profit entities, for recycling infrastructure, local recycling outreach campaigns, and other costs necessary to support increased recycling.
- Market development, including grants to local units of government and nonprofit and for-profit entities for purchasing equipment, research and development, or associated activities to provide new or increased use of recycled materials to support the development of recycling markets.

In addition to working to amend our solid waste laws, EGLE is focusing this year's recycling efforts on the following activities:

Market Development – The Renew Michigan funding has allowed us to offer \$2 million in funding to support the growth of recycling markets in Michigan through the 2019 Recycling Market Development Grant. It will provide support to for-profit, and non-profit businesses and organizations located in Michigan, to encourage recycling market development projects. The grant will support research of new uses for recycled materials, commercialization of technologies to replace materials with recycled content, and increase the demand for recycled materials needed for manufacturing or other uses. Requests for funding will be accepted through June 6, 2019. To view the Recycling Market Development Grant details, and for more information about the grants program, visit https://www.Michigan.gov/EGLE/0,9429,7-135-70153_69695---,00.html.

In addition to the Recycling Market Development Grant, EGLE is establishing a Michigan Materials Marketplace <https://Michigan.MaterialsMarketplace.org/>, in collaboration with the Michigan Economic Development Corporation, to connect generators and users of recycled materials. We are also working to update a recycled materials market analysis that will identify market capacity for recycled materials as well as update economic impact data that describes the economic activity that the recycling industry creates. Lastly, EGLE is working to establish a network of partners to manage agricultural and marine film plastic, to better manage that resource.

Education and Engagement – EGLE has established a statewide education campaign to improve the quality of recycled materials and increase the quantity of recyclables collected. EGLE is also working with local partners to develop and provide locally specific information on how to correctly recycle.

State Government Recycling – EGLE is working with the Michigan Department of Transportation (MDOT), and the MDNR to improve state government recycling opportunities at state offices, rest areas, and parks.

Recycling Infrastructure – In FY 2020, EGLE released a Recycling Infrastructure Grant Request For Proposals for \$3 million in support of the statewide recycling goals of increasing recycling rates, and ensuring convenient access to recycling. Eligible applicants are non-profit organizations, tribal governments, public school districts, public universities/colleges, local health departments, regional planning agencies, cities, villages, townships, charter townships, counties, municipal solid waste authorities, and resource recovery authorities located in Michigan. The maximum request amount per grant is \$1 million. The grant application period will close on April 28, 2020.

Technical Assistance – During FY 2020, EGLE has continued to provide technical assistance to local recycling programs. We are striving to build partnerships with non-profit, municipal, and for-profit entities to leverage funding and increase investment in Michigan’s recycling infrastructure.

Electronics Recycling Program

During the second half of FY 2020, the Sustainable Materials Management Unit (SMMU) continued its implementation of Michigan’s electronic waste take-back law, administered under Part 173, Electronics, of the NREPA. The SMMU’s focus was on three areas:

- Compliance assistance for affected entities.
- Establishing/supporting electronics recycling services in rural areas of the state.
- Monitoring and managing uncontrolled waste stockpiles.

Per capita, collection of covered electronic devices (TVs, computers, printers, monitors) for recycling was negatively impacted by the COVID 19 pandemic. Most collection activities were curtailed from March thru July of 2020, some collection close downs extending through August. Recycling operations were identified by EGLE as essential services early in the pandemic thus allowing them to operate under pandemic guidelines. Since many local units of government were unsure how to properly address worker PPE during the shutdown, recycling sites remained shut down longer than anticipated.

The program is seeing some increased support from large electronics manufacturers. Focus of SMMU efforts continues to be on assuring opportunities to recycle unwanted electronics in the rural areas of the state. Recycling infrastructure in urban areas continues to be strong.

On an annual basis we anticipate a significant drop in the per capita recycling attributed to the pandemic. Include the fact that , Michigan’s law has a non-binding recycling goal for the manufacturers, and we expect a 25% decrease in electronics recycling volume. Discussions have begun with a consortium of electronics manufacturers around changing the electronics EPR law from a weight based program to a convenience program. The proposed program is modeled after the Illinois program.

The high cost of properly recycling both cathode ray tubes (CRT) and flat panel LCD displays continue to be the main challenge for both manufacturers and recyclers participating in the program. It is anticipated that beginning in 2021 there will be significant difficulties encountered by electronics recyclers when it comes to the actual recycling of plastics generated by the industry. The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal is expected to essentially halt the export of e-plastics beginning in early 2021. EGLE's electronics mini-grant program continues to encourage electronics recycling in the rural areas of our state. This has allowed several communities to offer electronics recycling to residents who previously did not have access.

Compliance assistance activities continue to be a primary focus of the SMMU efforts. The main focus of the assistance efforts is towards recyclers that are new to the business or new to the state. These startups are a smart investment of staff time to assure they understand Michigan law and how the laws apply to their business. Again, this year, EGLE initiated compliance assistance efforts directed at electronics retailers.

Other SMM Work

During the second half of FY 2020, the SMMU focused on increasing markets for scrap tires, other than tire-derived fuels (i.e. rubber modified asphalt, crumb rubber, rubber modified aggregate); continued to promote food waste and organics composting, including food security and rescue initiatives; implementing the diverted waste and beneficial reuse legislation; building a more robust composting program; and participating in the U.S. EPA's SMM efforts.

Increasing markets for scrap tires: For FY 2020, 77 grants worth more than \$1,277,351 for scrap tire cleanups were awarded. To date, cleanup grantees have utilized \$629,000 and cleaned up nearly 360,000 scrap tires. Also, in FY 2020, three grants to further develop markets under the Scrap Tire Market Development Program, with one law enforcement grant with the city of Detroit, were funded. Scrap Tire Market Development Grants will identify and promote new or expanded uses for Michigan scrap tires.

Industrial By-Product reuse and food waste and organics composting: The data from 2019 shows a total of 23,824 wet tons of food waste being diverted and 1,139,070 tons of industrial by-products as being reused. 2020 data is currently being collected and will be available in January 2021.

Building consistency into compost operations: During the second half of FY 2020, the SMMU's ability to complete inspections of various registered composting facilities throughout Michigan's upper and lower peninsulas was hindered by the Covid-19 pandemic and associative travel restrictions. However, these facilities continue to be evaluated for their compliance with statutorily required record keeping, stormwater and groundwater management, accumulated storage of over 5,000 cubic yards of compostable materials on any acre, possible animal vectors, and fire potential. During FYs 2018 and 2019, the SMMU determined that increased education of composters/compost facilities is needed to improve compliance and to build consistency into compost operations. This educational component is being enacted during these ongoing inspections. Going forward, education not only for the composters, but for the public as well, is essential to bring consistency to the program and to grow organics management throughout Michigan. Facilities that fail inspections are asked to provide SMMU with a plan outlining the steps they will take to improve compliance. As a result, several facilities have improved operations, and others are in the planning stages for improvements.

MISCELLANEOUS ACTIVITIES

Hazardous Waste Section Technical Reviews and Inspections

Annual Groundwater Report Reviews

EGLE received annual groundwater monitoring reports from all 28 of the facilities where submittals were required. In general, annual groundwater monitoring reports, where required, must be submitted by no later than March 1, for the monitoring events completed during the previous calendar year. During FY 2020, EGLE completed 11 reviews and found no violations.

Non-Financial Record Reviews

During the second half of FY 2020, the HWS completed 23 non-financial record reviews. Refer to Appendix 4 for additional information. The documents reviewed included environmental monitoring reports, data packages, and letters from facilities responding to EGLE required submittals.

Waste Determinations

Waste Delisting

During FY 2020, EGLE did not receive any new waste delisting petitions. Refer to Appendix 6, at the end of this report, for details regarding the waste characterization inquiries and work completed during this time period.

Land Disposal Restriction Treatability Variances

During FY 2020, EGLE did not receive any new requests for a Land Disposal Restriction Treatability Variance.

Waste Characterization Reviews

During the second half of FY 2020, EGLE completed 103 requests for waste characterization assistance. For the entire fiscal year, 80% of these requests were received regarding a variety of waste characterization issues. In addition to general requests, assistance regarding hazardous secondary materials (HSM) consisted of about 21% of the total, while the remaining requests related to waste delisting or permitting. Refer to Appendix 6, at the end of this report, for details regarding waste characterization inquiries and staff responses during this time period. It should be noted that this total number of waste characterization requests is a 35% increase over those received in FY 2019, and consistent with the increasing trend of waste characterization requests received by EGLE since the agency began tracking this information. EGLE anticipates that this trend will continue into FY 2021 and beyond.

Hazardous Secondary Materials (HSM) Reviews and Determinations

During the second half of FY 2020, EGLE spent significant time reviewing notifications of HSM activity and legitimacy determinations, and issuing determinations as to whether management of the HSM complies with Part 111, Hazardous Waste Management, of the NREPA, 1994 PA 451, as amended, administrative rules that took effect in 2017. During this time, EGLE received administratively complete HSM/legitimacy

notifications for 5 generators and concurred with each of these notifications. Refer to Appendix 6, at the end of this report, for details regarding the HSM work completed during this time period.

Remediation Advisory Team

During second half of FY 2020, the MMD, Remediation Advisory Team (RAT), completed the work discussed below:

- Ann Arbor Landfill, Ann Arbor, Michigan. Assisted with the addition of a monitoring well location. (May 27, 2020)
- Walnut Creek Country Club, South Lyon, Michigan. Assisted Water Resources Division (WRD) with closure of Walnut Creek Country Club wastewater treatment lagoons. WRD requested review assistance from MMD per Op-Memo 115-25. (July 29, 2020)
- MacDermid, Inc., Ferndale, Michigan. Assisted in review of facility proposed final corrective measures. Facility investigations complete and execution of property wide restrictive covenant proposed as the final corrective measure. (July 29, 2020)
- General Motors LLC (GM) Pontiac North Campus, Pontiac, Michigan. Assisted EPA with review of the proposed final corrective measures for the facility. Presentation of facility investigations and proposed measures by GM and its consultant, GHD. (September 30, 2020)
- National Gypsum Company, National City, Michigan. Assisted with review of proposed modification to the approved Remedial Action Plan. (September 30, 2020)

In addition, RAT members participated in the following trainings:

- Michigan Environmental Compliance Week, Virtual. Members received training on various environmental regulations. (September 21-25, 2020)
- Hazardous Waste Section Part 111 Rules School, Virtual. Members received training on various aspects of federal and state hazardous waste regulations (RCRA and Part 111). (April – May 2020)

Senior Environmental Employee (SEE) Program

The work performed by the SEEs is a critical component towards accomplishing the FY 2020 Work Plan commitments. During second half of FY 2020, the SEEs issued 862 Hazardous Waste Site Identification Numbers. E-Manifest went live on June 30, 2018, and manifests are no longer collected by Michigan. The SEEs are now working on obtaining the electronic data from U.S. EPA's e-Manifest system by using the RCRAInfo Metabase query application. With this information EGLE can track waste from generation to disposal. EGLE can also use this data to confirm the status of a generator based upon the quantity of waste manifested. In addition, SEEs addressed all manifest Freedom of Information Act requests, assisted with Hazardous Waste User Charge invoices, and monthly operator reports. Without the SEE Program funding, it would be necessary to redirect the HWS staff from permitting, inspections, CA, enforcement, reporting, and possibly other Work Plan commitments, to perform these key program items.

EGLE Technical and Program Support (TAPS) Teams

EGLE, RRD, formed TAPS teams to provide support and guidance in certain technical areas of the Part 201 Program. In order to keep apprised of Part 201 guidance, and to maintain as

much consistency between Part 111 and Part 201 as possible, the HWS assigned representatives to participate on the following TAPS Teams: Non-Aqueous Phase Liquids (NAPL), VI, Institutional Controls (IC), Groundwater to Surface Water Interface (GSI), Soil Background (SB), Incremental Sampling (IS), Groundwater Modeling (GWM), In-Situ Remediation (In-Situ), Aerial Reconnaissance Technology (ART), and the Toxics Steering Group (TSG). The following summarizes the TAPS team activities for FY 2020.

- **GSI:** The GSI TAPS Team holds bimonthly meetings on an as-needed basis to conduct site-specific reviews. During FY 2020, HWS staff attended GSI TAPS team meetings and spent significant time reviewing project materials prior to the meetings.
- **GWM:** The GWM TAPS Team holds meetings on an as-needed basis to review potential updates to the guidance document and to conduct site-specific reviews. Several meetings were held for review of one site model during FY 2020.
- **SB:** During FY 2020, bi-monthly SB TAPS Team meetings were held to provide technical support to the RRD on the new Part 201 natural background definition.
- **IS:** The IS TAPS Team holds monthly meetings on an as-needed basis. During FY 2020, representatives from the HWS attended 3 meetings to keep current on IS sampling developments, review specific applications, and to remain current with EGLE project examples and EGLE policy and procedure documents. In addition, the HWS team representatives provided IS guidance to MMD staff and projects upon request and used IS protocols in on post-flood soil sampling on the Tittabawassee River flood plain for assessment of dioxin and other contaminants.
- **NAPL:** The NAPL TAPS Team holds quarterly meetings along with Part 201 and Part 111 project-specific meetings, as necessary. Prior to meetings, team members are provided agenda materials, often requiring substantial review and subsequent group discussion. Meetings have primarily focused upon preparation of a dense non-aqueous phase liquid Technical Resource Document. During FY 2020, team members continued to review relevant technical literature and attend trainings to increase expertise in this subject area.
- **IC:** The IC TAPS Team holds monthly meetings and team members perform information reviews to approve or deny the use of proposed ordinances. During FY 2020, the team worked on guidance documents to identify the activities and necessary documentation to rely on state laws or local health codes as alternate ICs. The team also continued work on the development of a website for land and resource use restrictions guidance.
- **VI:** During FY 2020, the VI TAPS Team held monthly meetings. Representatives from the HWS attended meetings to provide input on site-specific project reviews, to keep current on VI sampling developments, and to review RRD policy and procedure documents. In addition, the team representatives provided VI guidance to HWS staff on several Part 111 VI reports and/or work plans. VI TAPS staff is also coordinating updates to the 2013 EGLE Vapor Intrusion Guidance Document, and HWS is assisting in that effort.
- **In-Situ:** The In-Situ TAPS Team holds monthly meetings on an as-needed basis. During FY 2020, the HWS TAPS team representative attended meetings and trainings, provided input on site-specific project reviews, and reviewed relevant technical literature to remain current on In-Situ sampling and treatment technologies.

- **ART:** The ART TAPS Team holds monthly TEAM calls to discuss the safe, legal, and ethical deployment of Unmanned Aerial Systems (drones) in EGLE. The ART TAPS Team reviews the status of FAA-certified pilots, equipment, mission planning, and post-processing technologies. During FY 2020, the MMD ART TAPS team representative is the Coordinator of the EGLE UAS Program, and spends significant time on UAS activities, including Missions for MMD/EPA/RCRA sites, Training, Purchasing and disseminating FAA and State Regulations to EGLE Pilots. EGLE UAS Drones were used extensively in assessing the 2020 Dam failures on the Tittabawassee River as well as PFAS and groundwater seep investigations and RCRA landfill cap inspections.
- **TSG:** The TSG holds meetings on a quarterly basis. The Toxics Steering Group (TSG) is EGLE's forum for discussion of human health risk assessment issues related to the exposure to chemical contaminants in environmental media. Members of the TSG are risk assessors, toxicologists within EGLE, and toxicologists from other state agencies—the MDHHS, and Department of Agriculture and Rural Development (MDARD) specifically—and other related state experts. Since February 2018, the HWS no longer has a toxicologist on staff; therefore, no HWS toxicologist has participated in the TSG workgroup since that date. However, due to the importance of the work TSG, the HWS Manager has been representing the MMD during the quarterly meetings until a new toxicologist(s) can be hired, and is working with TSG staff to propose creating a multi-agency agreement between EGLE, MDARD, MDHHS, and MDNR to continue to incorporate the best-available science in the development, review, and application of chemical contaminant criteria developed for the protection of human health, safety, welfare, and the environment. Human health, safety, welfare, and environmental risk assessment issues encountered in these efforts may have department and state-wide implications, and any decisions made concerning these issues may have impacts in several programmatic areas. Human health-related issues of concern include, but are not limited to, protection of children's health, assessment of the risks associated with exposures to chemical mixtures, development of indoor air screening levels for the VI pathway and responding to emerging classes of contamination such as PFAS.

EGLE Quality Management Plan

In August 2017, a required five-year update of the Quality Management Plan (QMP) was submitted to the U.S. EPA. The U.S. EPA provided comments in November 2017 and EGLE submitted a final draft to them in December 2017. The U.S. EPA granted final approval of the QMP in February 2018. Pursuant to discussions with the U.S. EPA about QMP reporting requirements, the HWP understands that they will not be required to submit any Quality Assurance Project Plans (QAPP) to the U.S. EPA, other than those already provided as part of any new/renewal OL submittal. All other QAPPs (WAPs, sampling and analysis plans, etc.) that have been submitted for various Part 111/RCRA program elements will be available to the U.S. EPA through audits or upon request.

During the second half of FY 2020, the MMD adhered to EGLE's QMP, portions of which describe the process of hiring staff. Managers and supervisors ensured that staff adhered to training plans for respective positions. EGLE continued to retain a training database to document staff training. The EGLE Quality Management Team met once during the second half of FY 2020 to review and update the EGLE Quality Policy, and develop systems to ensure and document that the various EGLE divisions were complying with the Quality Policy and, by extension, the QMP. The MMD had representation at these meetings.

A scheduled update and revision of the WMRPD *Quality Assurance/Quality Control (QA/QC) Manual for the Sampling and Analysis of Environmental Media* (the primary component of the MMD portion of the QMP) was completed in FY 2016, and a copy was distributed to all MMD field staff on September 9, 2016. Updated standard operating procedures for sampling for PFAS compounds in groundwater and landfill leachate were finalized and distributed to staff during the second half of FY 2018, appended to the QA/QC Manual, and have been incorporated into a major scheduled revision of the QA/QC Manual which was completed in July 2020, and is currently undergoing management review and approval.

After a request from and consultation with U.S. EPA, Region 5 Quality Staff, MMD staff have drafted a RCRA Part C QAPP for the Hazardous Waste Program. The revision to the QA/QC Manual currently being drafted will serve as the most significant attachment to this QAPP. The draft of this QAPP was completed in July 2020 and will be submitted to the U.S. EPA once it has undergone management review and approval.