



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
25063 CENTER RIDGE ROAD
WESTLAKE, OHIO 44145**

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Michigan Operations Site, Midland, Michigan

FROM: Danny Nguyen, Risk Management Program (RMP) Inspector
WECAB, Multimedia Section

THRU: Mr. Brooke Furio, Section Supervisor
WECAB, Multimedia Section

TO: File

BASIC INFORMATION

Facility Name: Michigan Operations Site (The Dow Chemical Company)

Facility Location: 1790 Building Washington Street, Midland, Michigan, 48674

Date of Inspection: May 22-24, 2023

EPA Inspector(s):

1. Danny Nguyen, RMP Inspector, USEPA Region 5
2. Jason Schenandoah, RMP Inspector, USEPA Region 5
3. Erin DuMontelle, RMP Inspector, USEPA Region 5

Other Attendees:

See Participant List in Attachment A

Contact Email Address: mlafond@dow.com

Purpose of Inspection: Compliance with the prevention of accidental release provisions found in Section 112(r) of the Clean Air Act (CAA), 42 U.S.C. §§7414(r)

Facility Type: Chemical manufacturing including specialty chemicals, silicones, and plastics

Regulations Central to Inspection: The Chemical Accident Prevention Provisions at 40 C.F.R. Part 68

Arrival Time: 1:00 PM (May 22, 2023)

Facility Name: Michigan Operations Site (The Dow Chemical Company)
Facility Location 1790 Building Washington Street, Midland, Michigan, 48674
Date of Inspection: May 22-24, 2023

Departure Time: 2:37 PM (May 24, 2023)

Inspection Type:

- ☐ Unannounced Inspection
☒ Announced Inspection

OPENING CONFERENCE

- ☒ Presented Credentials
☒ Stated authority and purpose of inspection
☐ Provided Small Business Resource Information Sheet
☒ Small Business Resource Information Sheet not provided. Reason: Not a small business
☒ Provided CBI warning to facility

The following information was obtained verbally from the Michigan Operations Site representatives unless otherwise noted.

Company Ownership: The Dow Chemical Company is the parent company

Process Description:

The Michigan Operations Site is one of seven companies located in the Michigan Operations Industrial Park (I-Park). The Dow Chemical Company retains ownership of the Michigan Operations and is the landlord for the I-Park. As the landlord, Dow retains ownership for the environmental liabilities at the site. Dow provides security, site access control, and emergency response to all I-Park tenants.

The I-Park includes 2,600 acres of land, 800 buildings, 46 miles of railway, 50 miles of roads, and 100 miles of distribution pipeline for industrial gases and liquids.

The Michigan Operations Site's primary activity is chemical manufacturing, including specialty chemicals, silicones, and plastics. There are twenty-five (25) covered processes, forty (40) programs and thirty (30) regulated substances present at the stationary source.

The inspection focused on the following two covered processes:

- The Chlorosilane (ClSi) production process, specifically the Silazane production portion of the 322 Building Program within the Chlorosilane production process.
- The Environmental Operations (EVO) Incinerator process which thermally destructs both solid and liquid wastes.

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Data Collected and Observations:

The following observations were made during the records review process:

Process Safety Information (PSI)

- For the Incinerator-EVO process, the safe upper and lower limits were referenced in other documents and not comprehensively listed under PSI.

Compliance Audit

- For the ClSi 322 Building production process, the 2019 and 2022 compliance audits had not been conducted by at least one person knowledgeable in the process. Per the facility representative statement, operators are interviewed as part of the audit, but not included in the audit itself.
- For the ClSi 322 Building production process, a 2022 audit discovered that previous PHA recommendations by Dow Corning were unresolved. The discrepancy corrections from the recommendations have been delayed until 2024.
- For the Incinerator-EVO process, operators knowledgeable with the covered process were interviewed as part of the audit, but not included in the audit itself.

Process Hazard Analysis (PHA)

- For the ClSi 322 Building production process, there were action items still open from the 2019 PHA and there was no documentation of schedule for resolution of the open action items. Additionally, there was no record of assignment of prioritization for each action item.
- Per Ms. LaFond, the open action items are waiting for review at the corporate level to determine if the action items affect other global Dow sites. After corporate review, actions items are funded for affected sites for resolution.

Management of Change (MOC)

- For the Incinerator-EVO process, a transformer was permanently disconnected, but no MOC was completed and approved for the change.

Operating Procedures (OPs)

- For the ClSi 322 Building production process, the emergency shutdown in the OPs did not include conditions under which emergency shutdown is required.
- For the Incinerator-EVO process, the OPs did not include temporary and emergency operations.

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TOUR INFORMATION

EPA Tour of the Facility: Yes

Photos and/or Videos: were not taken during the inspection.

Field Measurements: were not taken during this inspection.

Tour observations:

For the ClSi 322 Building production process:

- Piping going into the building did not have labels of the chemical and direction of flow. The facility uses a cross section canister located outside the building for pipeline identification. This observation is not consistent with other pipes that were labeled inside the building. The facility provided no record of an industry standard for using cross section canister for pipeline identification.
- Only one E-stop for emergency shutdown was located in the control room and not in the machinery room.
- There were ammonia sensors just outside the building set at 25ppm to alarm inside the building. There were only audible alarms and no visual alarms per facility representatives.
- There were several bends of piping inside the building that did not have label of chemical and direction of flow.

RECORDS REVIEW

The following records were provided by the Facility representatives electronically to USEPA prior to the inspection and are filed on a secure One Drive folder provided by EPA Inspector Danny Nguyen under the folder "DOW Chemical RMP Document Folder."

322 Building Compliance Audit Documents (5 Total)
322 Emergency Plan.pdf
322 Building 2022 PHA Documents (4 Total)
322 Building 2019 PHA (1 Total)
322 Building Process Safety Information Piping and Instrumentation Diagrams (8 Total)
322 Building Pre Startup Safety Review (4 Total)
322 Building 2023 RMP Audit Slides.pdf
322 Building Drawings (3 Total)
Incinerator – EVO Process Emergency Response Documents (8 Total)
Incinerator – EVO 2022 PHA Documents (9 Total)
Incinerator – EVO 2018 PHA Documents (3 Total)
Incinerator – EVO Process Safety Information (10 Total)
Incinerator – EVO Pre Startup Safety Review (2 Total)
Incinerator – EVO Plant Info.pptx

Facility Name: Michigan Operations Site (The Dow Chemical Company)
Facility Location 1790 Building Washington Street, Midland, Michigan, 48674
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Other Process Documents (43 Total)

B322-0020 Anhydrous Ammonia SDS.pdf
B322-0021 Trimethylchlorosilane SDS.pdf
Incin-0021 115-11-7.pdf
Incin-0022 75-78-5.pdf
Incin-0023 75-79-6.pdf
Incin-0024 75-77-4.pdf
Agenda-0001 DOW EPA RMP Visit May 22 2023.pdf
CorpSite-0007 Dow Annual CMT 2023.pdf
CorpSite-0008 Dow Annual Delivery Driver 2023.pdf
CorpSite-0009 Dow Annual OSL 2023.pdf
CorpSite-0012 05 20 2021 LEPC Minutes.pdf
CorpSite-0026 ODMS 06.05 L1 Employee Health and Safety Policy & Requirements.pdf
CorpSite-0027 ODMS 06.05 L3 MiOps Employee Participation Plan.pdf
CorpSite-0029 ODMS 05.04.05 L1 Investigations Policy, Requirements & Performance Principles.pdf
CorpSite-0030 ODMS 05.04.05 L2 Investigations Work Process.pdf
CorpSite-0032 Management of Change Detailed Work Process Step1-Initiate.pdf
CorpSite-0033 Management of Change Detailed Work Process Step2-Review & Approve.pdf
CorpSite-0034 Management of Change Detailed Work Process Step 3-Prepare.pdf
CorpSite-0035 Management of Change Detailed Work Process Step4-Implement.pdf
CorpSite-0036 Management of Change Detailed Work Process Step 5-Close.pdf
CorpSite-0037 Management of Change L1 Policy.pdf
CorpSite-0038 Management of Change L2 Process.pdf
CorpSite-0039 ODMS 05.03.04 L1 Procedures Policy, Requirements & Performance Principles.pdf
CorpSite-0041 ODMS 05.04.02 L1 Corrective - Preventive Actions Policy, Requirements & Performance Principles.pdf
CorpSite-0042 ODMS 05.04.02 L2 Corrective - Preventive Actions Work Process.pdf
CorpSite-0043 ODMS 06.08 L2 Process Safety Work Process.pdf
CorpSite-0045 ODMS 06.08 L1 Process Safety Policy & Requirements.pdf
CorpSite-0053 ODMS 05.03.01 Training L1 Policy.pdf
CorpSite-0054 ODMS 05.03.01 Training L2 Process.pdf
CorpSite-0070 Global Emergency Preparedness Standard.pdf
CorpSite-0072 Global Hot Work Standard.pdf
CorpSite-0074 Isolation of Energy Sources.pdf
CorpSite-0075 Contractor Safety and Visitor Standards EHS.pdf

CLOSING CONFERENCE

☒ Provided U.S. EPA point of contact to the facility

Facility Name: Michigan Operations Site (The Dow Chemical Company)
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Areas of Concern:

- For the ClSi 322 Building production process, the 2019 and 2022 compliance audits had not been conducted by at least one person knowledgeable in the process. Per the facility representative statement, operators are interviewed as part of the audit, but not included in the audit itself.
- For the ClSi 322 Building production process, a 2022 audit discovered that previous PHA recommendations by Dow Corning were unresolved. The discrepancy corrections from the recommendations have been delayed until 2024 and observed to not be resolved in a timely manner.
- For the Incinerator-EVO process, operators knowledgeable with the covered process were interviewed as part of the audit, but not included in the audit itself.
- For the ClSi 322 Building production process, there were action items still open from the 2019 PHA and there was no documentation of schedule for resolution of the open action items. Additionally, there was no record of assignment of prioritization for each action item.
- For the Incinerator-EVO process, a transformer was permanently disconnected, but no MOC was completed and approved for the change.
- For the ClSi 322 Building production process, the emergency shutdown in the OPs did not include conditions under which emergency shutdown is required.
- For the Incinerator-EVO process, the OPs did not include temporary and emergency operations.
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- There were ammonia sensors just outside the building set at 25ppm to alarm inside the building. There were only audible alarms and no visual alarms per facility representatives.
- There were several bends of piping inside the building that did not have label of chemical and direction of flow.

DIGITAL SIGNATURES

Report Author: **DANNY NGUYEN**
 Digitally signed by DANNY NGUYEN
Date: 2023.07.21 07:16:11 -04'00'

Section Supervisor: **Furio, Brooke**
 Digitally signed by Furio, Brooke
Date: 2023.07.21 07:36:35 -04'00'

Facility Name: Michigan Operations Site (The Dow Chemical Company)
Facility Location 1790 Building Washington Street, Midland, Michigan, 48674
Date of Inspection: May 22-24, 2023

APPENDICES AND ATTACHMENTS

- I.* Appendix A: Participant List

Facility Name: Michigan Operations Site (The DOW Chemical Company)
Facility Location 1790 Building Washington Street, Midland, Michigan, 48674
Date of Inspection: May 22-24, 2023

APPENDIX A: PARTICIPANT LIST

NAME	PHONE	EMAIL	TITLE
Scott Kent	989-492-8996	scott.kent@dow.com	Process Safety Tech Ldr
Mitchell Lafond	989-686-5142	mlafond@dow.com	Process Safety Tech Ldr
Harry Smith	989-636-1251	hsmith@dow.com	Notetaker
Jim Alger	989-615-1901	james.alger@dow.com	Expert Air Subject Matter
Brad Kischnick	989-638-8602	Kischnick@dow.com	Environmental Specialist
Matt Weber	989-948-7248	matt.weber@dow.com	Tech Leader
Steven Rausch	989-359-4555	steven.rausch@dow.com	Production Coordinator
Logan Miller	409-512-1770	lmiller7@dow.com	Production Engineer
Mallory Bunker	231-470-4234	MBunker@dow.com	Improvement Engineer
Carlie Shelton	810-972-3215	CSelton3@dow.com	Improvement Engineer
Nick Lueder	989-750-6829	nlueder@dow.com	Production Engineer
Ben Wieser	989-380-9940	ben.wieser@dow.com	improvement engineer
Katie Weigold	248-860-1314	weigold@dow.com	Process safety manager
Danny Nguyen	440-250-1709	nguyen.danny@epa.gov	RMP INSPECTOR
Travis Fahy	989-636-3079	TMFahy@dow.com	Maintenance Prodr
Steve Zielinski	989-638-1636	SFzielinski@dow.com	Mech Integrity Leader
Ashley Horns	989-636-3278	AHorns@dow.com	Operations Excellence Specialist (OES)
Bernie Dean	989-529-2946	Bdeane@dow.com	Operations Excellence Specialist (OES)
Tim Topolinski	989-638-5477	timothy.topolinski@dow.com	OES Specialist
Alex Wrigley			HVS Production Engineer
Joe Hesot			Rozal Rail Tech Advisor
Shawonda Brockington	504-427-7724	sbrockington@dow.com	OES Leader
Ryan Gwizdale	989-280-0313	rgwizdale@dow.com	OES Operation Lead
Kristan Soto	989-633-1809	ksoto@dow.com	Responsible Care
Craig Jensen	989-330-2383	craig.jensen@dow.com	Production Director
Brandon Bosacker	989-220-9759	john.bosacker@dow.com	OES Env Delivery Leader

Facility Name: Michigan Operations Site (The DOW Chemical Company)

Facility Location 1790 Building Washington Street, Midland, Michigan, 48674

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Bryan Klett	989-638-5660	bmklett@dow.com	EVO Production director
Jamie Dole	989-636-5895	JSdole@dow.com	Regulatory Affairs Leader

RMP Program Level 3 Process Checklist

General Facility Information

Facility Name:	Michigan Operations Site (Dow Chemical Company)		
Mailing Address (Street, City, State, Zip):	1790 Building Washington St Midland, Michigan 48674		
Physical Address (Street, City, State, Zip):	1790 Building Washington St Midland, Michigan 48674		
Latitude/Longitude: (Source)	43.606083, -084.219528		
County:	Midland		
RMP Number/ FRS Number:	1000 0002 8524		
Facility Contact (Name, Title):	Ms. Michell Lafond, Process Safety Technology Leader Risk Management Program SME		
Facility Contact Phone No:	(989) 636-5142	Facility Contact Email:	mlafond@dow.com
Reported NAICS Code(s):			

Inspection Information

Inspection Begin Date:	May 22, 2023	Inspection End Date:	May 24, 2023
Arrival Time:	1:00 PM (5/22/23)	Departure Time:	2:37 PM (5/24/23)
Lead Inspector	Name:	Organization:	Phone No./Email:
	Danny Nguyen	USEPA R5	440-250-1709 nguyen.danny@epa.gov
Participating Inspectors	Jason Schenandoah	USEPA R5	312-886-9506 schenandoah.jason@epa.gov
	Erin DuMontelle	USEPA R5	312-353-0826 dumontelle.erin@epa.gov

Subpart A – General [68.10-15]

General requirements followed and implemented as in 40 CFR 68.10-15?

Comments:

General: Applicability [68.10]

- | | |
|---|---|
| 1. Has the owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process, as determined under §68.115, complied with the requirements of this part no later than the latest of the following dates [68.10(a)]:

☐ June 21, 1999? [68.10(a)(1)];
☐ Three years after the date on which a regulated substance is first listed under §68.130? [68.10(a)(2)];
☐ The date on which a regulated substance is first present above a threshold quantity in a process? [68.10(a)(3)]; or
☐ For any revisions to this part, the effective date of the final rule that revises this part? [68.10(a)(4)] | ☒ Y ☐ N ☐ N/A |
| 2. Has the owner or operator complied with the emergency coordination activities in accordance with §68.93 by September 21, 2018? [68.10(b)] (See Items 2 through 5 of Subpart E) | ☒ Y ☐ N ☐ N/A |
| 3. Has the owner or operator developed and implemented an emergency response program in accordance with §68.95 within three years of when the owner or operator determined that the stationary source is subject to the emergency response program requirements of §68.95? [68.10(c)] (See Items 1.b.(2) – 1.b.(7) of Subpart E) | ☒ Y ☐ N ☐ N/A |
| 4. Has the owner or operator developed plans for conducting emergency response exercises in accordance with §68.96 by December 19, 2023? [68.10(d)] (See Items 1.b.(8) – 1.b.(17) , 6 , and 7 of Subpart E) | ☒ Y ☐ N ☐ N/A |
| 5. Has the owner or operator complied with the public meeting requirement in §68.210(b) within 90 days of any RMP reportable accident at the stationary source with known offsite impacts specified in §68.42(a), that occurs after March 15, 2021? [68.10(e)] (See Item 2 of Subpart H) | ☐ Y ☐ N ☒ N/A |
| 6. <u>After December 19, 2024</u> , has the owner or operator reported in the RMP submission: [68.10(f)]
☐ A public meeting after an RMP reportable accident under §68.160(b)(21)? [68.10(f)(1)];
☐ Emergency response program information under §68.180(a)(1)? [68.10(f)(2)];
☐ Emergency response program information under §68.180(a)(2) and (3)? [68.10(f)(3)]; and,
☐ Emergency response program and exercises information under §68.180(b), as applicable? Including submittal of the following: [68.10(f)(4)]
☐ Dates of the most recent notification,
☐ Dates of field and tabletop exercises in the risk management plan,
☐ Dates for exercises completed as required under §68.96 at the time the risk management plan is either submitted under §68.150(b)(2) or (3), or is updated under §68.190. | ☐ Y ☐ N ☒ N/A |

RMP Program Level 3 Process Checklist

Facility Name: **Michigan Operations Site (D)**

General: Program Eligibility [68.10(g)-(i)]

7. Does the covered process meet the eligibility requirements of Program 1? Specifically: [68.10(g)]	☐ Y ☒ N ☐ N/A
Does the covered process meet all of the following requirements:	
☐ For the five years prior to the submission of an RMP, the process has not had an accidental release of a regulated substance where exposure to the substance, its reaction products, overpressure generated by an explosion involving the substance, or radiant heat generated by a fire involving the substance led to any of the following offsite? [68.10(g)(1)]; ☐ Death; [68.10(g)(1)(i)] ☐ Injury; [68.10(g)(1)(ii)] or, ☐ Response or restoration activities for an exposure of an environmental receptor; [68.10(g)(1)(iii)] and ☐ The distance to a toxic or flammable endpoint for a worst-case release assessment conducted under subpart B and §68.25 is less than the distance to any public receptor, as defined in §68.3 [68.10(g)(2)]; and ☐ Emergency response procedures have been coordinated between the stationary source and local emergency planning and response organizations [68.10(g)(3)]	
8. Does the covered process meet the eligibility requirements of Program 3? Specifically: [68.10(i)]	☒ Y ☐ N ☐ N/A
☒ The process does not meet the eligibility requirements of Program 1. [68.10(i)]; and Is the covered process any of the following NAICS codes: [68.10(i)(1)] ☐ 32211, 32411, 32511, 325181, 325188, 325192, 325199, 325211, 325311, or 32532; or ☒ Is the process subject to the OSHA process safety management standard, 29 CFR 1910.119? [68.10(i)(2)]	
9. Does the covered process fail to meet the eligibility requirements of Program 1 and Program 3 (i.e., is the covered process a Program 2)? [68.10(h)]	☐ Y ☒ N ☐ N/A

General: Management [68.15]

Has the owner or operator:

10. Developed a management system to oversee the implementation of the risk management program elements? [68.15(a)]	☒ Y ☐ N ☐ N/A
11. Assigned a qualified person or position that has the overall responsibility for the development, implementation, and integration of the risk management program elements? [68.15(b)]	☒ Y ☐ N ☐ N/A
12. Documented other persons responsible for implementing individual requirements of the risk management program and defined the lines of authority through an organization chart or similar document? [68.15(c)]	☒ Y ☐ N ☐ N/A

Subpart B - Hazard Assessment [68.20-68.42]

Hazard assessment conducted and documented as provided in 40 CFR 68.20-68.42?

Comments:

Hazard Assessment: Offsite consequence analysis parameters [68.22]

1. Used the following endpoints for offsite consequence analysis for a worst-case scenario: [68.22(a)] ☒ For toxics: the endpoints provided in Appendix A of 40 CFR Part 68? [68.22(a)(1)] ☒ For flammables: an explosion resulting in an overpressure of 1 psi? [68.22(a)(2)(i)]; or ☒ For flammables: a fire resulting in a radiant heat/exposure of 5 kw/m ² for 40 seconds? [68.22(a)(2)(ii)] ☒ For flammables: a concentration resulting in a lower flammability limit, as provided in NFPA documents or other generally recognized sources? [68.22(a)(2)(iii)]	☒ Y ☐ N ☐ N/A
2. Used the following endpoints for offsite consequence analysis for an alternative release scenario: [68.22(a)] ☒ For toxics: the endpoints provided in Appendix A of 40 CFR Part 68? [68.22(a)(1)] ☒ For flammables: an explosion resulting in an overpressure of 1 psi? [68.22(a)(2)(i)] ☒ For flammables: a fire resulting in a radiant heat/exposure of 5 kw/m ² for 40 seconds? [68.22(a)(2)(ii)] ☒ For flammables: a concentration resulting in a lower flammability limit, as provided in NFPA documents or other generally recognized sources? [68.22(a)(2)(iii)]	☒ Y ☐ N ☐ N/A
3. Used appropriate wind speeds and stability classes for the release analysis? [68.22(b)]	☒ Y ☐ N ☐ N/A
4. Used appropriate ambient temperature and humidity values for the release analysis? [68.22(c)]	☒ Y ☐ N ☐ N/A
5. Used appropriate values for the height of the release for the release analysis? [68.22(d)]	☒ Y ☐ N ☐ N/A
6. Used appropriate surface roughness values for the release analysis? [68.22(e)]	☒ Y ☐ N ☐ N/A
7. Do tables and models, used for dispersion analysis of toxic substances, appropriately account for dense or neutrally buoyant gases? [68.22(f)]	☒ Y ☐ N ☐ N/A
8. Were liquids, other than gases liquefied by refrigeration only, considered to be released at the highest daily maximum temperature, based on data for the previous three years appropriate for a stationary source, or at process temperature, whichever is higher? [68.22(g)]	☐ Y ☐ N ☒ N/A

Hazard Assessment: Worst-case release scenario analysis [68.25]

9. Analyzed and reported in the RMP one worst-case release scenario estimated to create the greatest distance to an endpoint resulting from an accidental release of a regulated toxic substance from covered processes under worst-case conditions? [68.25(a)(2)(i)]	☒ Y ☐ N ☐ N/A
10. Analyzed and reported in the RMP one worst-case release scenario estimated to create the greatest distance to an endpoint resulting from an accidental release of a regulated flammable substance from covered processes under worst-case conditions? [68.25(a)(2)(ii)]	☒ Y ☐ N ☐ N/A
11. Analyzed and reported in the RMP additional worst-case release scenarios for a hazard class if the worst-case release from another covered process at the stationary source potentially affects public receptors different from those potentially affected by the worst-case release scenario developed under 68.25(a)(2)(i) or 68.25(a)(2)(ii)? [68.25(a)(2)(iii)]	☒ Y ☐ N ☐ N/A
12. Has the owner or operator determined the worst-case release quantity to be the greater of the following: [68.25(b)] ☒ If released from a vessel, the greatest amount held in a single vessel, taking into account administrative controls that limit the maximum quantity? [68.25(b)(1)] ☐ If released from a pipe, the greatest amount held in the pipe, taking into account administrative controls that limit the maximum quantity? [68.25(b)(2)]	☒ Y ☐ N ☐ N/A

RMP Program Level 3 Process Checklist
Facility Name: Michigan Operations Site (D)

13.a. Has the owner or operator for toxic substances that are normally gases at ambient temperature and handled as a gas or liquid under pressure:

13.a.(1) Assumed the whole quantity in the vessel or pipe would be released as a gas over 10 minutes? [68.25(c)(1)] ☐ Y ☐ N ☒ N/A

13.a.(2) Assumed the release rate to be the total quantity divided by 10, if there are no passive mitigation systems in place? [68.25(c)(1)] ☐ Y ☐ N ☒ N/A

13.b. Has the owner or operator for toxic gases handled as refrigerated liquids at ambient pressure:

13.b.(1) Assumed the substance would be released as a gas in 10 minutes, if not contained by passive mitigation systems or if the contained pool would have a depth of 1 cm or less? [68.25(c)(2)(i)] ☐ Y ☐ N ☒ N/A

13.b.(2) If released substance would be contained by passive mitigation systems in a pool with a depth > 1 cm;
☐ Assumed the quantity in the vessel or pipe (as determined per 68.25(b)) would be spilled instantaneously to form a liquid pool? [68.25(c)(2)(ii)] ☐ Y ☐ N ☒ N/A
☐ Calculated the volatility rate at the boiling point of the substance and at the conditions specified in 68.25(d)? [68.25(c)(2)(ii)]

13.c. Has the owner or operator for toxic substances that are normally liquids at ambient temperature:

13.c.(1) Assumed the quantity in the vessel or pipe would be spilled instantaneously to form a liquid pool? [68.25(d)(1)] ☒ Y ☐ N ☐ N/A

13.c.(2) Determined the surface area of the pool by assuming that the liquid spreads to 1 cm deep, if there is no passive mitigation system in place that would serve to contain the spill and limit the surface area, or if passive mitigation is in place, was the surface area of the contained liquid used to calculate the volatilization rate? [68.25(d)(1)(i)] ☒ Y ☐ N ☐ N/A

13.c.(3) Taken into account the actual surface characteristics, if the release would occur onto a surface that is not paved or smooth? [68.25(d)(1)(ii)] ☒ Y ☐ N ☐ N/A

13.c.(4) Determined the volatilization rate by accounting for the highest daily maximum temperature in the past three years, the temperature of the substance in the vessel, and the concentration of the substance if the liquid spilled is a mixture or solution? [68.25(d)(2)] ☒ Y ☐ N ☐ N/A

13.c.(5) Determined the rate of release to air from the volatilization rate of the liquid pool? [68.25(d)(3)] ☒ Y ☐ N ☐ N/A

13.c.(6) Determined the rate of release to air by using the methodology in the RMP Offsite Consequence Analysis Guidance, any other publicly available techniques that account for the modeling conditions and are recognized by industry as applicable as part of current practices, or proprietary models that account for the modeling conditions may be used provided the owner or operator allows the implementing agency access to the model and describes model features and differences from publicly available models to local emergency planners upon request? [68.25(d)(3)] ☒ Y ☐ N ☐ N/A

What modeling technique did the owner or operator use? [68.25(g)] RMP COMP

13.d. Has the owner or operator for flammable gases:

13.d.(1) Assumed the quantity in a vessel(s) of flammable gas held as a gas or liquid under pressure is released as a gas over 10 minutes resulting in a vapor cloud explosion? [68.25(e)(1)] ☒ Y ☐ N ☐ N/A

13.d.(2) For gas handled as refrigerated liquid that is not contained by passive mitigation systems, assumed the total quantity in a vessel(s) of refrigerated liquid is released as a gas over 10 minutes resulting in a vapor cloud explosion? [68.25(e)(2)(i)] ☒ Y ☐ N ☐ N/A

13.d.(3) For gas handled as refrigerated liquid released to a contained area, assumed the quantity volatilized in 10 minutes results in a vapor cloud? [68.25(e)(2)(ii)] ☒ Y ☐ N ☐ N/A

RMP Program Level 3 Process Checklist
Facility Name: Michigan Operations Site (D)

13.d.(4) Assumed a yield factor of 10% of the available energy is released in the explosion for determining the distance to the explosion endpoint, if the model used is based on TNT-equivalent methods? [68.25(e)]	☒ Y ☐ N ☐ N/A
13.e. Has the owner or operator for <u>flammable liquids</u> :	
13.e.(1) Assumed the entire quantity in the vessel or pipe, taking into account administrative controls that limit the maximum quantity, would be spilled instantaneously to form a liquid pool? [68.25(f)(1)]	☒ Y ☐ N ☐ N/A
13.e.(2) For liquids at temperatures below their atmospheric boiling point, calculated the volatility rate at the boiling point of the substance and at the conditions specified in 68.25(d) and assumed that the quantity which becomes vapor in the first 10 minutes is involved in the vapor cloud explosion? [68.25(f)(1)-(2)]	☒ Y ☐ N ☐ N/A
13.e.(3) Assumed a yield factor of 10% of the available energy is released in the explosion for determining the distance to the explosion endpoint, if the model used is based on TNT-equivalent methods? [68.25(f)]	☒ Y ☐ N ☐ N/A
14. Used the parameters defined in 68.22 to determine distance to the endpoints? [68.25(g)]	☒ Y ☐ N ☐ N/A
15. Determined the rate of release to air by using the methodology in the RMP Offsite Consequence Analysis Guidance, any other publicly available techniques that account for the modeling conditions and are recognized by industry as applicable as part of current practices, or proprietary models that account for the modeling conditions may be used provided the owner or operator allows the implementing agency access to the model and describes model features and differences from publicly available models to local emergency planners upon request? [68.25(g)] What modeling technique did the owner or operator use? [68.25(g)] <u>RMP COMP</u>	☒ Y ☐ N ☐ N/A
16. Ensured that the passive mitigation system, if considered, is capable of withstanding the release event triggering the scenario and will still function as intended? [68.25(h)]	☒ Y ☐ N ☐ N/A
17. Considered also the following factors in selecting the worst-case release scenarios: [68.25(i)] ☒ Smaller quantities handled at higher process temperature or pressure? [68.25(i)(1)] ☒ Proximity to the boundary of the stationary source? [68.25(i)(2)]	☒ Y ☐ N ☐ N/A
Hazard Assessment: Alternative release scenario analysis [68.28]	
18. Identified and analyzed at least one alternative release scenario for each regulated toxic substance held in a covered process(es) and at least one alternative release scenario to represent all flammable substances held in covered processes? [68.28(a)]	☒ Y ☐ N ☐ N/A
19. Selected a scenario: [68.28(b)] ☒ That is more likely to occur than the worst-case release scenario under 68.25? [68.28(b)(1)(i)] ☒ That will reach an endpoint off-site, unless no such scenario exists? [68.28(b)(1)(ii)]	☒ Y ☐ N ☐ N/A
20. Considered release scenarios which included, but are not limited to, the following: [68.28(b)(2)] ☒ Transfer hose releases due to splits or sudden hose uncoupling? [68.28(b)(2)(i)] ☒ Process piping releases from failures at flanges, joints, welds, valves and valve seals, and drains or bleeds? [68.28(b)(2)(ii)] ☒ Process vessel or pump releases due to cracks, seal failure, or drain, bleed, or plug failure? [68.28(b)(2)(iii)] ☒ Vessel overfilling and spill, or overpressurization and venting through relief valves or rupture disks? [68.28(b)(2)(iv)] ☒ Shipping container mishandling and breakage or puncturing leading to a spill? [68.28(b)(2)(v)]	☒ Y ☐ N ☐ N/A
21. Used the parameters defined in 68.22 to determine distance to the endpoints? [68.28(c)]	☒ Y ☐ N ☐ N/A

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22. Determined the rate of release to air by using the methodology in the RMP Offsite Consequence Analysis Guidance, any other publicly available techniques that account for the modeling conditions and are recognized by industry as applicable as part of current practices, or proprietary models that account for the modeling conditions may be used provided the owner or operator allows the implementing agency access to the model and describes model features and differences from publicly available models to local emergency planners upon request? [68.28(c)] What modeling technique did the owner or operator use? [68.25(g)] <u>RMP COMP</u>	☒ Y ☐ N ☐ N/A
23. Ensured that the passive and active mitigation systems, if considered, are capable of withstanding the release event triggering the scenario and will be functional? [68.28(d)]	☒ Y ☐ N ☐ N/A
24. Considered the following factors in selecting the alternative release scenarios: [68.28(e)] ☐ The five-year accident history provided in 68.42? [68.28(e)(1)] ☒ Failure scenarios identified under 68.50? [68.28(e)(2)]	☒ Y ☐ N ☐ N/A

Hazard Assessment: Defining off-site impacts–Population [68.30]

25. Estimated population that would be included within a circle where its center is the point of the release and a radius determined by the distance to the endpoint? [68.30(a)]	☒ Y ☐ N ☐ N/A
26. Identified the presence of institutions, parks and recreational areas, major commercial, office, and industrial buildings in the RMP? [68.30(b)]	☒ Y ☐ N ☐ N/A
27. Used most recent Census data, or other updated information to estimate the population? [68.30(c)]	☒ Y ☐ N ☐ N/A
28. Estimated the population to two significant digits? [68.30(d)]	☒ Y ☐ N ☐ N/A

Hazard Assessment: Defining off-site impacts–Environment [68.33]

29. Identified environmental receptors within a circle where its center is the point of the release and a radius determined by the distance to the endpoint? [68.33(a)]	☒ Y ☐ N ☐ N/A
30. Relied on information provided on local U.S.G.S. maps, or on any data source containing U.S.G.S. data to identify environmental receptors? [Source may have used LandView to obtain information] [68.33(b)]	☒ Y ☐ N ☐ N/A

Hazard Assessment: Review and update [68.36]

31. Reviewed and updated the off-site consequence analyses at least once every five years? [68.36(a)]	☒ Y ☐ N ☐ N/A
32. Completed a revised analysis and submit a revised RMP within six months of a change in processes, quantities stored or handled, or any other aspect that might reasonably be expected to increase or decrease the distance to the endpoint by a factor of two or more? [68.36(b)]	☒ Y ☐ N ☐ N/A

Hazard Assessment: Documentation [68.39]

33. Has the owner or operator maintained the following records on the offsite consequence analyses:	
33.a For worst-case scenarios: a description of the vessel or pipeline and substance selected, assumptions and parameters used, the rationale for selection, and anticipated effect of the administrative controls and passive mitigation on the release quantity and rate? [68.39(a)]	☒ Y ☐ N ☐ N/A
33.b For alternative release scenarios: a description of the scenarios identified, assumptions and parameters used, the rationale for the selection of specific scenarios, and anticipated effect of the administrative controls and mitigation on the release quantity and rate? [68.39(b)]	☒ Y ☐ N ☐ N/A
33.c Documentation of estimated quantity released, release rate, and duration of release? [68.39(c)]	☒ Y ☐ N ☐ N/A
33.d Methodology used to determine distance to endpoints? [68.39(d)]	☒ Y ☐ N ☐ N/A

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33.e Data used to estimate population and environmental receptors potentially affected? [68.39(e)]

☒ Y ☐ N ☐ N/A**Hazard Assessment: Five-year accident history [68.42]**

34. Has the owner or operator included all accidental releases from covered processes that resulted in deaths, injuries, or significant property damage on site, or known offsite deaths, injuries, evacuations, sheltering in place, property damage, or environmental damage? [68.42(a)]

☐ Y ☐ N ☒ N/A

35. Has the owner or operator reported the following information for each accidental release: [68.42(b)]

☐ Y ☐ N ☒ N/A☐ Date, time, and approximate duration of the release? [68.42(b)(1)]☐ Chemical(s) released? [68.42(b)(2)]☐ Estimated quantity released in pounds and percentage weight in a mixture (toxics)? [68.42(b)(3)]☐ NAICS code for the process? [68.42(b)(4)]☐ The type of release event and its source? [68.42(b)(5)]☐ Weather conditions (if known)? [68.42(b)(6)]☐ On-site impacts? [68.42(b)(7)]☐ Known offsite impacts? [68.42(b)(8)]☐ Initiating event and contributing factors (if known)? [68.42(b)(9)]☐ Whether offsite responders were notified (if known)? [68.42(b)(10)]☐ Operational or process changes that resulted from investigation of the release? [68.42(b)(11)]**Subpart D - Program 3 Prevention Program [68.65-68.87]**

Implemented the Program 3 prevention requirements as provided in 40 CFR 68.48 - 68.60?

Comments:

Prevention Program: Process safety information [68.65]

1. Has the owner or operator compiled written process safety information, which includes information pertaining to the hazards of the regulated substances used or produced by the process, information pertaining to the technology of the process, and information pertaining to the equipment in the process, before conducting any process hazard analysis required by the rule? [68.65(a)]

☒ Y ☐ N ☐ N/A

Does the process safety information contain the following for hazards of the substances: [68.65(b)]

☒ Toxicity information? [68.65(b)(1)]☒ Permissible exposure limits? [68.65(b)(2)]☒ Physical data? [68.65(b)(3)]☒ Reactivity data? [68.65(b)(4)]☒ Corrosivity data? [68.65(b)(5)]☒ Thermal and chemical stability data? [68.65(b)(6)]☒ Hazardous effects of inadvertent mixing of materials that could foreseeably occur? [68.65(b)(7)]

Note: Safety Data Sheets (SDS) meeting the requirements of the OSHA Hazard Communication Standard [29 CFR 1910.1200(g)] may be used to comply with this requirement to the extent they contain the information required by 68.65(b).

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2. Does the process safety information contain information pertaining to technology of the process [68.65(c)]? Does the information concerning the technology of the process include the following: [68.65(c)(1)] ☒ A block flow diagram or simplified process flow diagram? [68.65(c)(1)(i)] ☒ Process chemistry? [68.65(c)(1)(ii)] ☒ Maximum intended inventory? [68.65(c)(1)(iii)] ☒ Safe upper and lower limits for such items as temperatures, pressures, flows, or compositions? [68.65(c)(1)(iv)] ☒ An evaluation of the consequences of deviation? [68.65(c)(1)(iv)]	☒ Y ☐ N ☐ N/A
3. Does the process safety information contain information pertaining to the equipment in the process? [68.65(d)] Does the information pertaining to the equipment in the process include the following: [68.65(d)(1)] ☒ Materials of construction? 68.65(d)(1)(i)] ☒ Piping and instrumentation diagrams [68.65(d)(1)(ii)] ☒ Electrical classification? [68.65(d)(1)(iii)] ☒ Relief system design and design basis? [68.65(d)(1)(iv)] ☒ Ventilation system design? [68.65(d)(1)(v)] ☒ Design codes and standards employed? [68.65(d)(1)(vi)] ☐ Material and energy balances for processes built after June 21, 1999? [68.65(d)(1)(vii)] ☒ Safety systems? [68.65(d)(1)(viii)]	☒ Y ☐ N ☐ N/A
4. Has the owner or operator documented that equipment complies with recognized and generally accepted good engineering practices? [68.65(d)(2)]	☒ Y ☐ N ☐ N/A
5. Has the owner or operator determined and documented that existing equipment, designed and constructed in accordance with codes, standards, or practices that are no longer in general use, is designed, maintained, inspected, tested, and operating in a safe manner? [68.65(d)(3)]	☒ Y ☐ N ☐ N/A

Prevention Program: Process hazard analysis [68.67]

6. Has the owner or operator performed an initial process hazard analysis (PHA), and has this analysis identified, evaluated, and controlled the hazards involved in the process? [68.67(a)]	☒ Y ☐ N ☐ N/A
7. Has the owner or operator determined and documented the priority order for conducting PHAs, and was it based on an appropriate rationale? [68.67(a)]	☒ Y ☐ N ☐ N/A
8. Has the owner used one or more of the following technologies to conduct process PHA: [68.67(b)] ☐ What-if? [68.67(b)(1)] ☐ Checklist? [68.67(b)(2)] ☒ What-if/Checklist? [68.67(b)(3)] ☐ Hazard and Operability Study (HAZOP) [68.67(b)(4)] ☐ Failure Mode and Effects Analysis (FMEA) [68.67(b)(5)] ☐ Fault Tree Analysis? [68.67(b)(6)] ☐ An appropriate equivalent methodology? [68.67(b)(7)]	☒ Y ☐ N ☐ N/A

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9. Did the PHA address: ☒ The hazards of the process? [68.67(c)(1)] ☒ Identification of any incident that had a likely potential for catastrophic consequences? [68.67(c)(2)] ☒ Engineering and administrative controls applicable to hazards and interrelationships?[68.67(c)(3)] ☒ Consequences of failure of engineering and administrative controls? [68.67(c)(4)] ☒ Stationary source siting? [68.67(c)(5)] ☒ Human factors? [68.67(c)(6)] ☒ A qualitative evaluation of a range of the possible safety and health effects of failure of controls? [68.67(c)(7)]	☒ Y ☐ N ☐ N/A
10. Was the PHA performed by a team with expertise in engineering and process operations and did the team include at least one employee who has experience and knowledge specific to the process being evaluated and at least one member of the team who is knowledgeable in the specific process hazard analysis methodology being used?? [68.67(d)]	☒ Y ☐ N ☐ N/A
11. Has the owner or operator completed the following: [68.67(e)] ☐ Established a system to promptly address the team's findings and recommendations? ☐ Assured that the recommendations are resolved in a timely manner and documented? ☐ Documented what actions are to be taken? ☐ Completed actions as soon as possible? ☐ Developed a written schedule of when these actions are to be completed? and ☐ Communicated the actions to operating, maintenance, and other employees whose work assignments are in the process and who may be affected by the recommendations?	☐ Y ☒ N ☐ N/A
12. Has the PHA been updated and revalidated by a team every five years after the completion of the initial PHA to assure that the PHA is consistent with the current process? [68.67(f)]	☒ Y ☐ N ☐ N/A
13. Has the owner or operator retained PHAs and updates or revalidations for each process covered, as well as the resolution of recommendations for the life of the process? [68.67(g)]	☒ Y ☐ N ☐ N/A

Prevention Program: Operating procedures [68.69]

14. Has the owner or operator developed and implemented written operating procedures that provide instructions or steps for conducting activities associated with each covered process consistent with the safety information? [68.69(a)]	☒ Y ☐ N ☐ N/A
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15. Do the procedures address the following: [68.69(a)] <u>Steps for each operating phase: [68.69(a)(1)]</u> ☒ Initial Startup? [68.69(a)(1)(i)] ☒ Normal operations? [68.69(a)(1)(ii)] ☐ Temporary operations? [68.69(a)(1)(iii)] ☐ Emergency shutdown including the conditions under which emergency shutdown is required, and the assignment of shutdown responsibility to qualified operators to ensure that emergency shutdown is executed in a safe and timely manner? [68.69(a)(1)(iv)] ☐ Emergency operations? [68.69(a)(1)(v)] ☒ Normal shutdown? [68.69(a)(1)(vi)] ☒ Startup following a turnaround, or after emergency shutdown? [68.69(a)(1)(vii)] <u>Operating limits: [68.69(a)(2)]</u> ☒ Consequences of deviations [68.69(a)(2)(i)] ☒ Steps required to correct or avoid deviation? [68.69(a)(2)(ii)] <u>Safety and health considerations: [68.69(a)(3)]</u> ☒ Properties of, and physical hazards presented by, the chemicals used in the process [68.69(a)(3)(i)] ☒ Precautions necessary to prevent exposure, including engineering controls, administrative controls, and personal protective equipment? [68.69(a)(3)(ii)] ☒ Control measures to be taken if physical contact or airborne exposure occurs? [68.69(a)(3)(iii)] ☒ Quality control for raw materials and control of hazardous chemical inventory levels? [68.69(a)(3)(iv)] ☒ Any special or unique hazards? [68.69(a)(3)(v)] ☒ <u>Safety systems and their functions? [68.69(a)(4)]</u>	☐ Y ☒ N ☐ N/A
16. Are operating procedures readily accessible to employees who are involved in a process? [68.69(b)]	☒ Y ☐ N ☐ N/A
17. Has the owner or operator certified annually that the operating procedures are current and accurate and that procedures have been reviewed as often as necessary to assure that they reflect current operating practice, including changes that result from changes in process chemicals, technology, and equipment, and changes to stationary sources? [68.69(c)]	☒ Y ☐ N ☐ N/A
18. Has the owner or operator developed and implemented safe work practices to provide for the control of hazards during specific operations, such as lockout/tagout; confined space entry; opening process equipment or piping; and control over entrance into a stationary source by maintenance, contractor, laboratory, or other support personnel? [68.69(d)]	☒ Y ☐ N ☐ N/A
Prevention Program: Training [68.71]	
19. Has each employee involved in operating a process, and each employee before being involved in operating a newly assigned process, been initially trained in an overview of the process and in the operating procedures? [68.71(a)(1)]	☒ Y ☐ N ☐ N/A
20. Did initial training include emphasis on safety and health hazards, emergency operations including shutdown, and safe work practices applicable to the employee's job tasks? [68.71(a)(1)]	☒ Y ☐ N ☐ N/A
21. In lieu of initial training for those employees already involved in operating a process on June 21, 1999, an owner or operator may certify in writing that the employee has the required knowledge, skills, and abilities to safely carry out the duties and responsibilities as specified in the operating procedures [68.71(a)(2)]	☐ Y ☐ N ☒ N/A

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22. Has refresher training been provided at least every three years, or more often if necessary, to each employee involved in operating a process to assure that the employee understands and adheres to the current operating procedures of the process? [68.71(b)]	☒ Y ☐ N ☐ N/A
23. Has owner or operator ascertained and documented in record that each employee involved in operating a process has received and understood the training required? [68.71(c)]	☒ Y ☐ N ☐ N/A
24. Does the prepared record contain the identity of the employee, the date of the training, and the means used to verify that the employee understood the training? [68.71(c)]	☒ Y ☐ N ☐ N/A

Prevention Program: Mechanical integrity [68.73]

25. Has the owner or operator established and implemented written procedures to maintain the on-going integrity of the process equipment listed in 68.73(a)? [68.73(b)]	☒ Y ☐ N ☐ N/A
26. Has the owner or operator trained each employee involved in maintaining the on-going integrity of process equipment? [68.73(c)]	☒ Y ☐ N ☐ N/A
27. Has the owner or operator performed inspections and tests on process equipment? [68.73(d)(1)]	☒ Y ☐ N ☐ N/A
28. Has the owner or operator followed recognized and generally accepted good engineering practices for inspections and testing procedures? [68.73(d)(2)]	☒ Y ☐ N ☐ N/A
29. Has the owner or operator ensured the frequency of inspections and tests of process equipment is consistent with applicable manufacturers' recommendations, good engineering practices, and prior operating experience? [68.73(d)(3)]	☒ Y ☐ N ☐ N/A
30. Has the owner or operator documented each inspection and test that had been performed on process equipment, and identified the following: [68.73(d)(4)] ☐ The date of the inspection or test? ☐ The name of the person who performed the inspection or test? ☐ The serial number or other identifier of the equipment on which the inspection or test was performed? ☐ A description of the inspection or test performed? and ☐ The results of the inspection or test?	☒ Y ☐ N ☐ N/A
31. Has the owner or operator corrected deficiencies in equipment that were outside acceptable limits defined by the process safety information before further use or in a safe and timely manner when necessary means were taken to assure safe operation? [68.73(e)]	☒ Y ☐ N ☐ N/A
32. Has the owner or operator assured that equipment as it was fabricated is suitable for the process application for which it will be used in the construction of new plants and equipment? [68.73(f)(1)]	☒ Y ☐ N ☐ N/A
33. Has the owner or operator performed appropriate checks and inspections to assure that equipment was installed properly and consistent with design specifications and the manufacturer's instructions? [68.73(f)(2)]	☒ Y ☐ N ☐ N/A
34. Has the owner or operator assured that maintenance materials, spare parts and equipment were suitable for the process application for which they would be used? [68.73(f)(3)]	☒ Y ☐ N ☐ N/A

Prevention Program: Management of change [68.75]

35. Has the owner or operator established and implemented written procedures to manage changes to process chemicals, technology, equipment, and procedures, and changes to stationary sources that affect a covered process? [68.75(a)]	☒ Y ☐ N ☐ N/A
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36. Do procedures assure that the following considerations are addressed prior to any change: [68.75(b)] ☐ The technical basis for the proposed change? [68.75(b)(1)] ☐ Impact of change on safety and health? [68.75(b)(2)] ☐ Modifications to operating procedures? [68.75(b)(3)] ☐ Necessary time period for the change? [68.75(b)(4)] ☐ Authorization requirements for the proposed change? [68.75(b)(5)]	☒ Y ☐ N ☐ N/A
37. Were employees, involved in operating a process and maintenance, and contract employees, whose job tasks would be affected by a change in the process, informed of, and trained in, the change prior to start-up of the process or affected parts of the process? [68.75(c)]	☒ Y ☐ N ☐ N/A
38. If a change resulted in a change in the process safety information, was such information updated accordingly? [68.75(d)]	☒ Y ☐ N ☐ N/A
39. If a change resulted in a change in the operating procedures or practices, had such procedures or practices been updated accordingly? [68.75(e)]	☒ Y ☐ N ☐ N/A

Prevention Program: Pre-startup safety review [68.77]

40. Has the owner or operator performed a pre-startup safety review for new stationary sources and for modified stationary sources when the modification is significant enough to require a change in the process safety information? [68.77(a)]	☒ Y ☐ N ☐ N/A
41. Does the pre-startup safety review confirm the following prior to the introduction of a regulated substance to a process: [68.77(b)] ☐ Construction and equipment was in accordance with design specifications? [68.77(b)(1)] ☐ Safety, operating, maintenance, and emergency procedures were in place and were adequate? [68.77(b)(2)] ☐ For new stationary sources, a process hazard analysis had been performed and recommendations had been resolved or implemented before startup? [68.77(b)(3)] ☐ Modified stationary sources meet the requirements contained in management of change? [68.77(b)(3)] ☐ Training of each employee involved in operating a process had been completed? [68.77(b)(4)]	☒ Y ☐ N ☐ N/A

Prevention Program: Compliance audits [68.79]

42. Has the owner or operator certified that the stationary source has evaluated compliance with the provisions of the prevention program at least every three years to verify that the developed procedures and practices are adequate and being followed? [68.79(a)]	☒ Y ☐ N ☐ N/A
43. Has the audit been conducted by at least one person knowledgeable in the process? [68.79(b)]	☐ Y ☒ N ☐ N/A
44. Are the audit findings documented in a report? [68.79(c)]	☒ Y ☐ N ☐ N/A
45. Has the owner or operator promptly determined and documented an appropriate response to each of the findings of the audit and documented that deficiencies had been corrected? [68.79(d)]	☒ Y ☐ N ☐ N/A
46. Has the owner or operator retained the two most recent compliance reports? [68.79(e)]	☒ Y ☐ N ☐ N/A

Prevention Program: Incident investigation [68.81]

47. Has the owner or operator investigated each incident that resulted in, or could reasonably have resulted in a catastrophic release of a regulated substance? [68.81(a)]	☒ Y ☐ N ☐ N/A
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48. Were all incident investigations initiated not later than 48 hours following the incident? [68.81(b)]	☒ Y ☐ N ☐ N/A
49. Was an accident investigation team established and did it consist of at least one person knowledgeable in the process involved, including a contract employee if the incident involved work of a contractor, and other persons with appropriate knowledge and experience to thoroughly investigate and analyze the incident? [68.81(c)]	☒ Y ☐ N ☐ N/A
50. Was a report prepared at the conclusion of every investigation? [68.81(d)]	☒ Y ☐ N ☐ N/A
51. Does every report include: [68.81(d)] ☒ Date of incident? [68.81(d)(1)] ☒ Date investigation began? [68.81(d)(2)] ☒ A description of the incident? [68.81(d)(3)] ☒ The factors that contributed to the incident? [68.81(d)(4)] ☒ Any recommendations resulting from the investigation? [68.81(d)(5)]	☒ Y ☐ N ☐ N/A
52. Has the owner or operator established a system to promptly address and resolve the incident report findings and recommendations, and are the resolutions and corrective actions documented? [68.81(e)]	☒ Y ☐ N ☐ N/A
53. Was the report reviewed with all affected personnel whose job tasks are relevant to the incident findings including contract employees where applicable? [68.81(f)]	☒ Y ☐ N ☐ N/A
54. Has the owner or operator retained incident investigation reports for at least five years? [68.81(g)]	☒ Y ☐ N ☐ N/A
Prevention Program: Employee participation [68.83]	
55. Has the owner or operator developed a written plan of action regarding the implementation of the employee participation required by this section? [68.83(a)]	☒ Y ☐ N ☐ N/A
56. Has the owner or operator consulted with employees and their representatives on the conduct and development of process hazards analyses and on the development of the other elements of process safety management in chemical accident prevention provisions? [68.83(b)]	☒ Y ☐ N ☐ N/A
57. Has the owner or operator provided to employees and their representatives access to process hazards analyses and to all other information required to be developed under the chemical accident prevention rule? [68.83(c)]	☒ Y ☐ N ☐ N/A
Prevention Program: Hot work permit [68.85]	
58. Has the owner or operator issued a hot work permit for each hot work operation conducted on or near a covered process? [68.85(a)]	☒ Y ☐ N ☐ N/A
59. Does the permit document that the fire prevention and protection requirements in 29CFR 1910.252(a) have been implemented prior to beginning the hot work operations? [68.85(b)]	☒ Y ☐ N ☐ N/A
60. Does the permit indicate the date(s) authorized for hot work and the object(s) upon which hot work is to be performed? [68.85(b)]	☒ Y ☐ N ☐ N/A
61. Are the permits being kept on file until completion of the hot work operations? [68.85(b)]	☒ Y ☐ N ☐ N/A
Prevention Program: Contractors [68.87]	
62. Has the owner or operator obtained and evaluated information regarding the contract owner or operator's safety performance and programs when selecting a contractor? [68.87(b)(1)]	☒ Y ☐ N ☐ N/A
63. Has the owner or operator informed contract owner or operator of the known potential fire, explosion, or toxic release hazards related to the contractor's work and the process? [68.87(b)(2)]	☒ Y ☐ N ☐ N/A

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64. Has the owner or operator explained to the contract owner or operator the applicable provisions of the emergency response or the emergency action program? [68.87(b)(3)]	☒ Y ☐ N ☐ N/A
65. Has the owner or operator developed and implemented safe work practices consistent with §68.69(d), to control the entrance, presence, and exit of the contract owner or operator and contract employees in the covered process areas? [68.87(b)(4)]	☒ Y ☐ N ☐ N/A
66. Periodically evaluated the performance of the contract owner or operator in fulfilling their obligations (as described at 68.87(c)(1) – (c)(5))? [68.87(b)(5)]	☒ Y ☐ N ☐ N/A

Subpart E - Emergency Response [68.90 - 68.96]

Developed and implemented an emergency response program as provided in 40 CFR 68.90-68.96?

Comments:

1. Is the facility designated as a “responding stationary source”?	☒ Y ☐ N ☐ N/A
1.a. If the facility is not a responding stationary source, it need not comply with §68.95 if the following conditions are met:	
1.a.(1) For stationary sources with any regulated substances held in a process above threshold quantities, is the source included in the community emergency response plan developed under 42 U.S.C. 11003? [68.90(b)(1)]	☐ Y ☐ N ☒ N/A
1.a.(2) For stationary sources with only regulated flammable substances held in a process above threshold quantities, has the owner or operator coordinated response actions with the local fire department? [68.90(b)(2)]	☐ Y ☐ N ☒ N/A
1.a.(3) Are appropriate mechanisms in place to notify emergency responders when there is need for a response? [68.90(b)(3)]	☐ Y ☐ N ☒ N/A
1.a.(4) As of September 21, 2018, has the owner or operator performed the annual emergency response coordination activities required under § 68.93? [68.90(b)(4)] (See Items 2 through 5)	☐ Y ☐ N ☒ N/A
1.a.(5) Has the owner or operator performed the annual notification exercises required under § 68.96(a) before December 19, 2024? [68.90(b)(5)] (See Items 6 and 7)	☐ Y ☐ N ☒ N/A

For non-responding stationary sources where 1.a.(1)-(5) are all marked as ‘Y’, proceed to Subpart E Item [2](#)

1.b. If the facility is a responding stationary source:	
1.b.(1) Has the owner or operator developed and implemented an emergency response program that includes the elements required in § 68.95(a)(1-4)? [68.95(a)] (See Items 1.b.(2) – 1.b.(5))	☒ Y ☐ N ☐ N/A
1.b.(2). An emergency response plan is maintained at the stationary source and contains the following? [68.95(a)(1)]	☒ Y ☐ N ☐ N/A
☒ Procedures for informing the public and the appropriate Federal, state, and local emergency response agencies about accidental releases? [68.95(a)(1)(i)]	
☒ Documentation of proper first-aid and emergency medical treatment necessary to treat accidental human exposures? [68.95(a)(1)(ii)]	
☒ Procedures and measures for emergency response after an accidental release of a regulated substance? [68.95(a)(1)(iii)]	
1.b.(3) Does the emergency response program contains procedures for the use of emergency response equipment and for its inspection, testing, and maintenance? [68.95(a)(2)]	☒ Y ☐ N ☐ N/A
1.b.(4) Does the emergency response program include training for all employees in relevant procedures? [68.95(a)(3)]	☒ Y ☐ N ☐ N/A
1.b.(5) Does the emergency response program include procedures to review and update, as appropriate, the emergency response plan to reflect changes at the stationary source and ensure that employees are informed of changes? [68.95(a)(4)]	☒ Y ☐ N ☐ N/A

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1.b.(6) Does the emergency response program include a written plan that complies with other Federal contingency plan regulations or is consistent with the approach in the National Response Team's Integrated Contingency Plan Guidance ("One Plan")? If so, does the plan include the elements provided in paragraph (a) of 68.95, and also complies with paragraph (c) of 68.95? [68.95(b)]	☒ Y ☐ N ☐ N/A
1.b.(7) Has the emergency response plan been coordinated with the community emergency response plan developed under EPCRA? [68.95(c)]	☒ Y ☐ N ☐ N/A
1.b.(8) Has the owner or operator developed and implemented an exercise program for its emergency response program, including the emergency plan required under § 68.95(a)(1)? [68.96(b)]	☒ Y ☐ N ☐ N/A
1.b.(9) Do the exercises involve facility emergency response personnel and, as appropriate, emergency response contractors? [68.96(b)]	☒ Y ☐ N ☐ N/A
1.b.(10) When planning emergency response field and tabletop exercises, has the owner or operator coordinated with local public emergency response officials and invite them to participate in the exercise? [68.96(b)]	☒ Y ☐ N ☐ N/A
1.b.(11) Does the emergency response exercise program include: [68.96(b)] ☒ Emergency response field exercises? [68.96(b)(1)] ☒ Tabletop exercises? [68.96(b)(2)] ☒ Documentation? [68.96(b)(3)]	☒ Y ☐ N ☐ N/A
1.b.(12) As part of coordination with local emergency response officials, has the owner or operator consulted with these officials to establish an appropriate frequency for field exercises? [68.96(b)(1)(i)]	☒ Y ☐ N ☐ N/A
1.b.(13) Field exercises shall involve tests of the source's emergency response plan, including deployment of emergency response personnel and equipment. Do field exercises include: [68.96(b)(1)(ii)] ☒ Tests of procedures to notify the public and the appropriate Federal, state, and local emergency response agencies about an accidental release? ☒ Tests of procedures and measures for emergency response actions including evacuations and medical treatment? ☒ Tests of communications systems? ☐ Mobilization of facility emergency response personnel, including contractors, as appropriate? ☒ Coordination with local emergency responders? ☐ Emergency response equipment deployment? ☒ Any other action identified in the emergency response program, as appropriate?	☒ Y ☐ N ☐ N/A
1.b.(14) As part of coordination with local emergency response officials, has the owner or operator consulted with these officials to establish an appropriate frequency for tabletop exercises and conducted a tabletop exercise before December 21, 2026 and at a minimum of at least once every three years thereafter? [68.96(b)(2)(i)]	☐ Y ☐ N ☒ N/A
1.b.(15) Tabletop exercises shall involve discussions of the source's emergency response plan. Do the exercises include discussions of: [68.96(b)(2)(ii)] ☐ Procedures to notify the public and the appropriate Federal, state, and local emergency response agencies? ☐ Procedures and measures for emergency response including evacuations and medical treatment? ☐ Identification of facility emergency response personnel and/or contractors and their responsibilities? ☐ Coordination with local emergency responders? ☐ Procedures for emergency response equipment deployment? ☐ Any other action identified in the emergency response plan, as appropriate?	☒ Y ☐ N ☐ N/A

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1.b.(16) Has the owner or operator prepared an evaluation report within 90 days of each field and tabletop exercise, which included: [68.96(b)(3)] ☐ A description of the exercise scenario? ☐ Names and organizations of each participant? ☐ An evaluation of the exercise results including lessons learned? ☐ Recommendations for improvement or revisions to the emergency response exercise program and emergency response program, and a schedule to promptly address and resolve recommendations?	☒ Y ☐ N ☐ N/A
1.b.(17) Has the owner or operator satisfied the requirement to conduct notification, field and/or tabletop exercises through alternative means such as: [68.96(c)] ☐ Exercises conducted to meet other Federal, state, or local exercise requirements, provided the exercise meets the requirements of paragraphs (a) and/or (b) of this section, as appropriate. [68.96(c)(1)] ☐ Response to an accidental release, provided the response includes the actions indicated in paragraphs (a) and/or (b) of this section, as appropriate. When used to meet field and/or tabletop exercise requirements, the owner or operator shall prepare an after-action report comparable to the exercise evaluation report required in paragraph (b)(3) of this section, within 90 days of the incident. [68.96(c)(2)]	☒ Y ☐ N ☐ N/A

For all responding and non-responding stationary sources:

2. Has the owner or operator of a stationary source coordinated response needs with local emergency planning and response organizations to determine how the stationary source is addressed in the community emergency response plan and to ensure that local response organizations are aware of the regulated substances at the stationary source, their quantities, the risks presented by covered processes, and the resources and capabilities at the stationary source to respond to an accidental release of a regulated substance? [68.93(a)]	☒ Y ☐ N ☐ N/A
3. Has coordination occurred at least annually, and more frequently if necessary, to address changes: At the stationary source; in the stationary source's emergency response and/or emergency action plan; and/or in the community emergency response plan? [68.93(a)]	☒ Y ☐ N ☐ N/A
4. Has coordination included providing to the local emergency planning and response organizations? [68.93(b)] ☐ The stationary source's emergency response plan if one exists? ☐ Emergency action plan? ☐ Updated emergency contact information? ☐ Other information necessary for developing and implementing the local emergency response plan? ☐ For responding stationary sources, has facility consulted with local emergency response officials to establish appropriate schedules and plans for field and tabletop exercises required under §68.96(b)? (See Items 1.b.(8), 1.b.(10), 1.b.(12), and 1.b.(14))	☒ Y ☐ N ☐ N/A
5. As of September 21, 2018, has the owner or operator documented coordination with local authorities, including: [68.93(c)] ☐ The names of individuals involved and their contact information (phone number, email address, and organizational affiliations)? ☐ Dates of coordination activities? ☐ Nature of coordination activities?	☒ Y ☐ N ☐ N/A
6. Has the owner or operator of a stationary source with any Program 2 or Program 3 process conducted an exercise of the stationary source's emergency response notification mechanisms before December 19, 2024 and annually thereafter? [68.96(a)] (Owners or operators of responding stationary sources may perform the notification exercise as part of the tabletop and field exercises)	☐ Y ☐ N ☒ N/A

RMP Program Level 3 Process ChecklistFacility Name: **Michigan Operations Site (D)**

- | | |
|--|---|
| 7. Has the owner/operator maintained a written record of each notification exercise conducted over the last five years? [68.96(a)] | ☒ Y ☐ N ☐ N/A |
|--|---|

Subpart G – Risk Management Plan [40 CFR 68.150 – 68.195]

Documented a Risk Management Plan as provided in 40 CFR 68.150-68.195?

Comments:

- | | |
|--|---|
| 1. Does the single registration form include, for each covered process: [68.160(b)(7)]
<div style="margin-left: 20px;">☒ The name and CAS number of each regulated substance held above the threshold quantity in the process?
☒ The maximum quantity of each regulated substance or mixture in the process (in pounds) to two significant digits?
☒ The five- or six-digit NAICS code that most closely corresponds to the process?
☒ The correct program level of the process?</div> | ☒ Y ☐ N ☐ N/A |
| 2. Does the registration form include whether a public meeting has been held following an RMP reportable accident, pursuant to §68.210(b)? [68.160(b)(21)] | ☐ Y ☐ N ☒ N/A |
| 3. Does the owner or operator provide in the RMP: [68.180(a)]
<div style="margin-left: 20px;">☐ Name, phone number and email address of local emergency planning and response organizations with which the stationary source last coordinated emergency response efforts, pursuant to §68.10(g)(3) or §68.93? [68.180(a)(1)]
☐ The date of the most recent coordination with the local emergency response organizations, pursuant to §68.93? [68.180(a)(2)]
☐ A list of Federal or state emergency plan requirements to which the stationary source is subject? [68.180(a)(3)]</div> | ☒ Y ☐ N ☐ N/A |
| 4. For non-responding stationary sources, does the owner or operator identify: [68.180(b)(1)]
<div style="margin-left: 20px;">☐ For stationary sources with any regulated toxic substance held in a process above the threshold quantity, whether the stationary source is included in the community emergency response plan developed under 42 U.S.C. 11003, pursuant to §68.90(b)(1)? [68.180(b)(1)(i)]
☐ For stationary sources with only regulated flammable substances held in a process above the threshold quantity, the date of the most recent coordination with the local fire department, pursuant to §68.90(b)(2)? [68.180(b)(1)(ii)]
☐ What mechanisms are in place to notify the public and emergency responders when there is a need for emergency response? [68.180(b)(1)(iii)]
☐ The date of the most recent notification exercise, as required in §68.96(a)? [68.180(b)(1)(iv)]</div> | ☐ Y ☐ N ☒ N/A |
| 5. For responding stationary sources, does the owner or operator identify the date of the most recent: [68.180(b)(2)]
<div style="margin-left: 20px;">☐ Review and update of the emergency response plan, pursuant to §68.95(a)(4)? [68.180(b)(2)(i)]
☐ Notification exercise, as required in §68.96(a)? [68.180(b)(2)(ii)]
☐ Field exercise, as required in §68.96(b)(1)? [68.180(b)(2)(iii)]
☐ Tabletop exercise, as required in §68.96(b)(2)? [68.180(b)(2)(iv)]</div> | ☒ Y ☐ N ☐ N/A |

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6. Has the owner or operator reviewed and updated the RMP and submitted it to EPA for the following: [68.190(a)]? ☐ Five-year update. [68.190(b)(1)] ☐ Within three years of a newly regulated substance listing. [68.190(b)(2)] ☐ At the time a new regulated substance is first present in an already regulated process above threshold quantities. [68.190(b)(3)] ☐ At the time a regulated substance is first present in a new process above threshold quantities. [68.190(b)(4)] ☐ Within six months of a change requiring revised PHA or hazard review. [68.190(b)(5)] ☐ Within six months of a change requiring a revised OCA as provided in 68.36. [68.190(b)(6)] ☐ Within six months of a change that alters the Program level that applies to any covered process. [68.190(b)(7)]	☒ Y ☐ N ☐ N/A
7. If the owner or operator experienced an accidental release that met the five-year accident history reporting criteria (as described at 68.42) subsequent to April 9, 2004, did the owner or operator submit the information required at 68.168, 68.170(j) and 68.175(l) within six months of the release or by the time the RMP was updated as required at 68.190, whichever was earlier. [68.195(a)]	☐ Y ☐ N ☒ N/A
8. If the emergency contact information required at 68.160(b)(6) has changed since June 21, 2004, did the owner or operator submit corrected information within thirty days of the change? [68.195(b)]	☒ Y ☐ N ☐ N/A

Subpart H – Other Requirements [40 CFR 68.200 – 68.210]

Implemented Other Requirements as provided in 40 CFR 68.200-68.210?

Comments:

1. Has the owner or operator maintained records supporting the implementation of this part at the stationary source for five years, unless otherwise provided in Subpart D: Program 3 Prevention Program? [68.200]	☒ Y ☐ N ☐ N/A
2. Did the owner or operator hold a public meeting to provide information required under §68.42(b), no later than 90 days after any RMP reportable accident at the stationary source with any known offsite impact specified in §68.42(a)? [68.210(b)]	☐ Y ☐ N ☒ N/A