

STATUS OF CORRECTIVE ACTION AT CHEMOURS-MONTAGUE FACILITY

December 4, 2018

*A Presentation to the Local Community
by the Waste Management and Radiological Protection Division*



PUBLIC MEETING AGENDA

- Waste Management and Radiological Protection Division (WMRPD) briefing on corrective action program and status at facility
- Chemours to discuss facility footprint and potential future land use considerations
- Opportunity for questions

CORRECTIVE ACTION PROGRAM

- ✓ Assessment of history and conditions - RFA
- ✓ Investigation of WMUs and AOCs - RFI
- Evaluation of corrective measures options - CMS
- Implementation of measures - CMI

WMUs/AOCs REFRESHER

Former hazardous waste storage area

Former flammable hazardous waste storage area

Air stripper condensate area

Hydrogen chloride storage tanks

West railcar un/loading area

East railcar un/loading area

NPDES impoundments and corrosive treatment tanks

Northeast landfill

Calcium fluoride basin

Former PCB spill area

Former injection well

Bury pit landfill

Waste neoprene landfill

Basin sludge storage area

Mirror Lake

North landfill



Lime pile

Pierson Creek landfill

Site Map with Areas of Concern and Waste Management Units



Legend

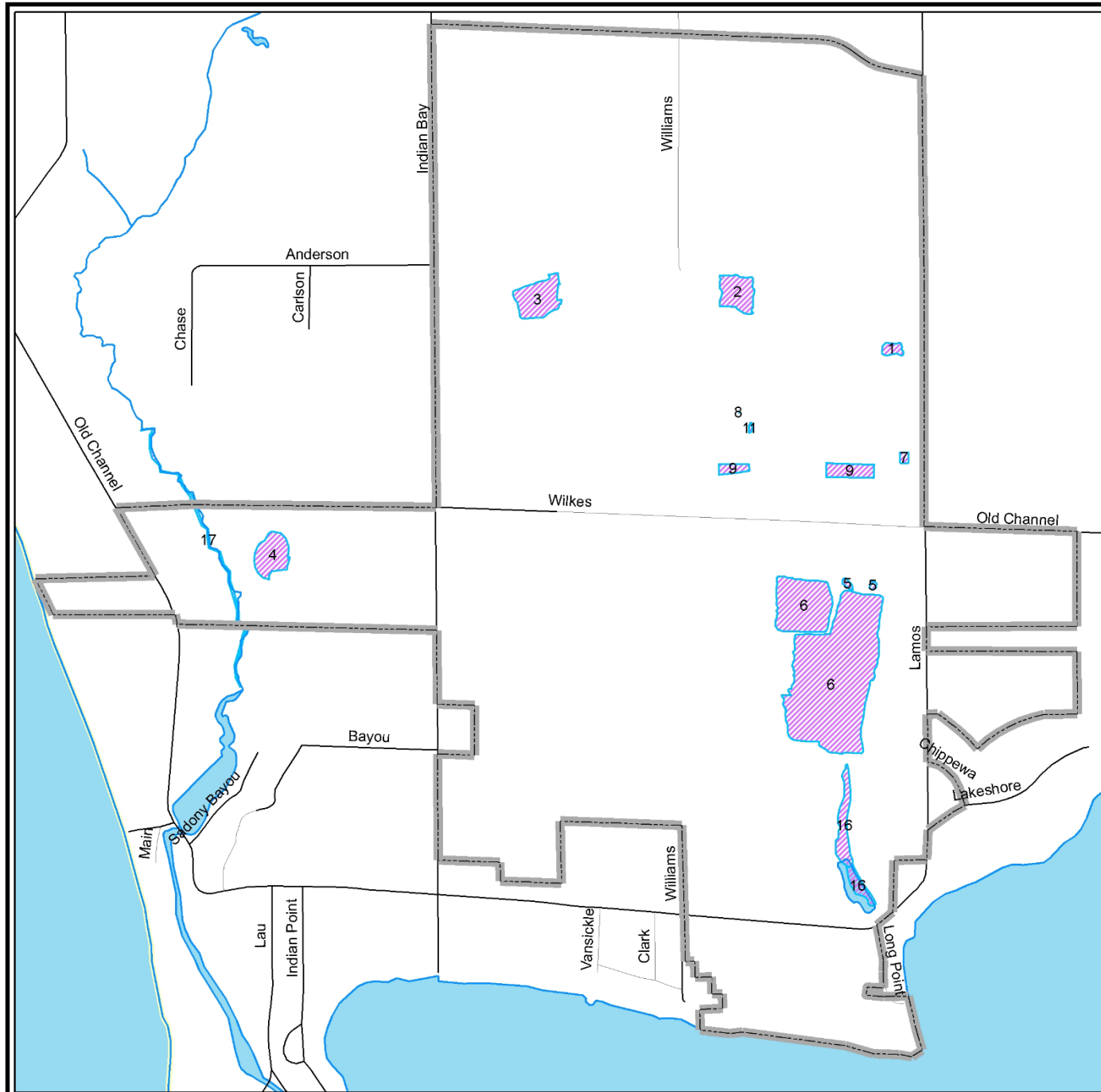
-  Dupont Property Line
-  WMUs and AOCs

Id	FeatureNam	Acreage
1	Northeast Landfill	0.6144
2	North Landfill	2.9301
3	Bury Pit Landfill	3.8155
4	Pierson Creek Landfi	3.1831
5	Basin Sludge	0.1091
5	Waste Neoprene Landf	0.1713
6	Lime Pile	29.1322
6	CaF2 Pile	7.4815
7	Waste Water Treatmen	0.2415
8	Injection Well	0.0005
9	Unloading Area East	1.7697
9	Unloading Area	0.7431
11	Hydrogen Chloride St	0.0677
16	Lime near Mirror Lk	2.3873
16	Mirror Lk Water	1.1028
17	Pieson Creek General	1.5145

0 500 1,000 2,000 3,000
Feet

**Waste &
Hazardous
Materials
Division**

 Michigan Department of
Natural Resources and
Environment
Hazardous Waste Section
Technical Support Unit
Map Drawn 7/8/2010 by DRB

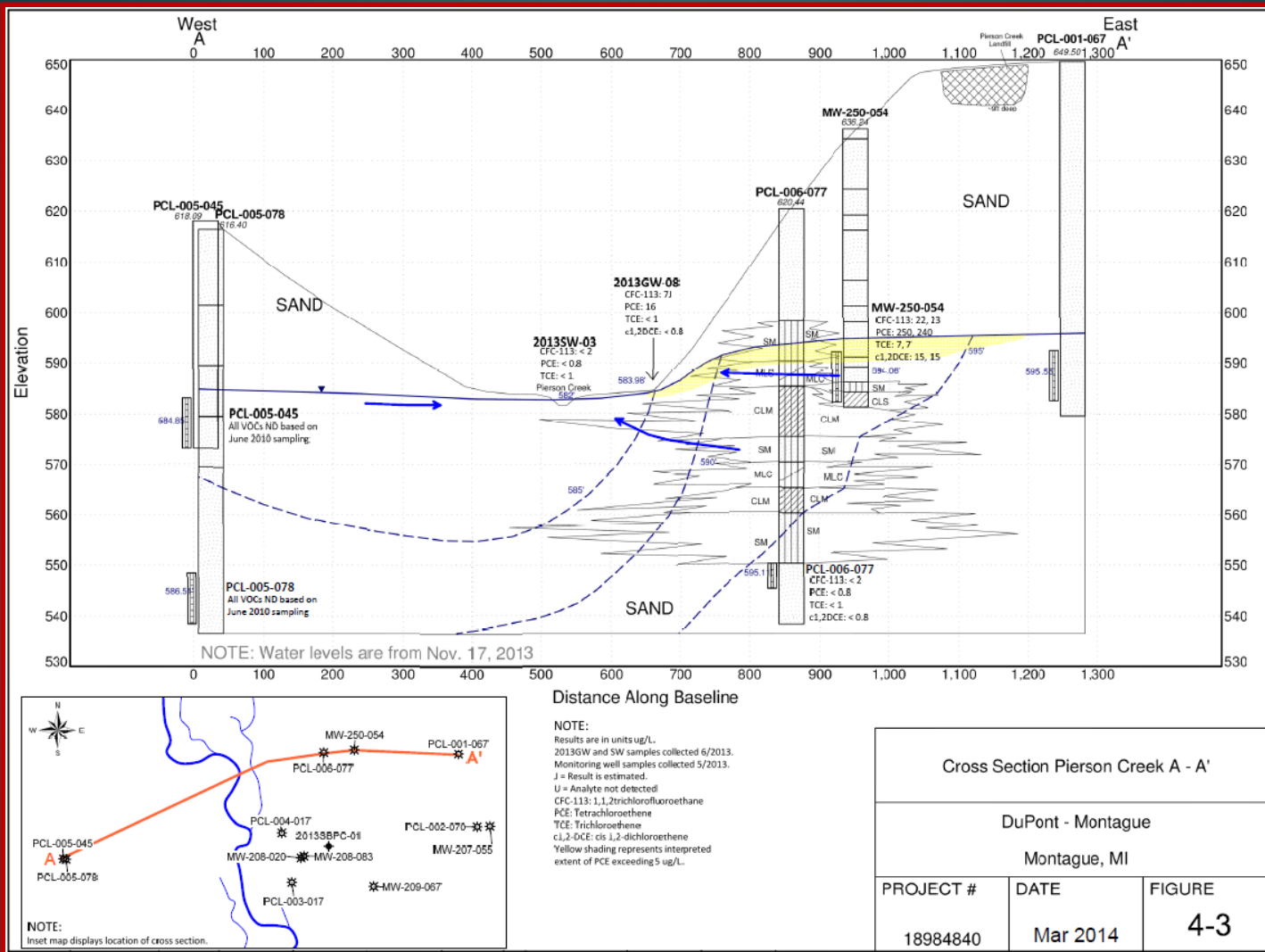


RECENT FOCUS

- Pierson Creek (PC) Landfill (PCL)
- PFAS

PCL AREA

- Waste in PCL: wastewater treatment sludge (north, fenced part) and spent catalyst (south part)
- Hydrogeology & Nature and Extent
 - ▶ Groundwater flows west-southwest
 - ▶ Lithology is stratified and there's an upward hydraulic gradient under PC
 - ▶ Shallow groundwater contains VOC constituents from north part of landfill. Extent is limited to the area between the landfill and creek (where it discharges).
 - ▶ There is no evidence of constituents in the deeper aquifer or west of PC



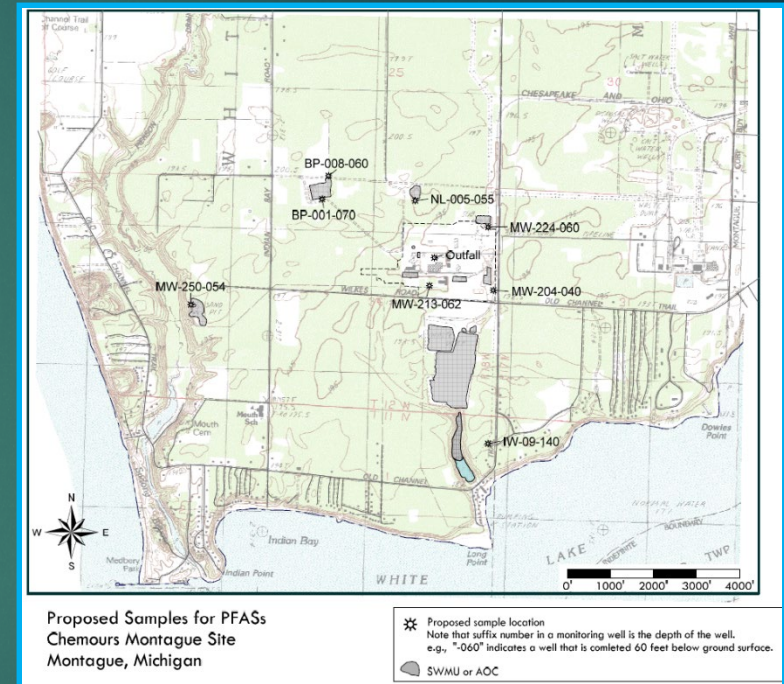
PFAS SAMPLING

■ DEQ's Request

- ▶ Perform sampling and analysis for PFOA and PFOS to determine if there are any issues regarding those compounds that would need to be addressed pursuant to Part 201. Develop focused sampling strategy to provide coverage to areas that have the highest potential to have these compounds.
- ▶ Requested a monitor well downgradient of each of the site landfills, downgradient of the former wastewater surface impoundment, the NPDES Outfall prior to discharge to the conveyance pipe, and a background well

■ Chemours Conducted

- ▶ One monitor well downgradient of each of the landfills (four total). One well downgradient of former impoundment.
- ▶ Added MW-213-062 (downgradient and slightly downwind of Freon Manufacturing Area) and IW-09-140 (downgradient of Lime Pile).
- ▶ Background well (BP-008-060)
- ▶ Outfall sample



PFAS SAMPLING AND RESULTS

- Each of the wells near landfills were selected as the closest and (typically) shallowest
- IW-09-140 selected because it draws in water from a very wide area
- Chemours added MW-213-062 because it is downgradient and east of the former Freon Manufacturing Area

Sample ID	Location ID	Analyte		PFOA	PFOS	PFOA+ PFOS	Total PFAS
		Screening Criteria (GSI / Drinking Water)		12,000 / 70	12 / 70	NA / 70	
		Date	Purpose	ng/L	ng/L	ng/L	ng/L
August 2018 PFAS Sampling							
PFAS0818-Outfall	"001"	8/22/18	Regular Sample	ND 1.7	ND 3.3	ND	16.2
PFAS0818-IW-09-140	IW-09-140	8/23/18	Regular Sample	1.6	ND 1.8	3.4	9.2
PFAS0818-MW-204-040	MW-204-040	8/22/18	Regular Sample	3.6	ND 1.8	5.4	3.6
PFAS0818-MW-213-062	MW-213-062	8/22/18	Regular Sample	4.9	ND 1.8	6.7	4.9
PFAS0818-MW-213-062-D	MW-213-062	8/22/18	Field Duplicate	5.4	ND 1.9	7.3	5.4
PFAS0818-MW-224-060	MW-224-060	8/23/18	Regular Sample	1.7J	ND 2.5	4.2	14.7J
PFAS0818-MW-250-054	MW-250-054	8/22/18	Regular Sample	1.2	ND 2.0	3.2	7.2
PFAS0818-BP-001-070	MW-BP-001-070	8/23/18	Regular Sample	1.1	ND 1.9	3	1
PFAS0818-BP-008-060	MW-BP-008-060	8/23/18	Regular Sample	ND 0.88	ND 1.8	ND	ND
PFAS0818-NL-005-055	NL-005-055	8/23/18	Regular Sample	ND 0.89	ND 1.8	ND	ND
PFAS0818-SiteW	Site Wide	8/23/18	Regular Sample	ND 0.93	ND 1.9	ND	ND

FUTURE WORK

- Complete CMS and CMI
- Establish and enter into an enforceable document, i.e., consent order or long term agreement
- Continue to make pertinent documents available to public via the Chemours – Montague Corrective web page on the DEQ's website at:
http://www.Michigan.Gov/deq/0,4561,7-135-3312_4118_4240-241452--,00.Html
- Conduct public participation on site-wide CMI approach prior to making final decision

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CHEMOURS DISCUSSION



QUESTIONS

