

2022 Communication Meeting

Michigan Public Service Commission
Energy Operations Division

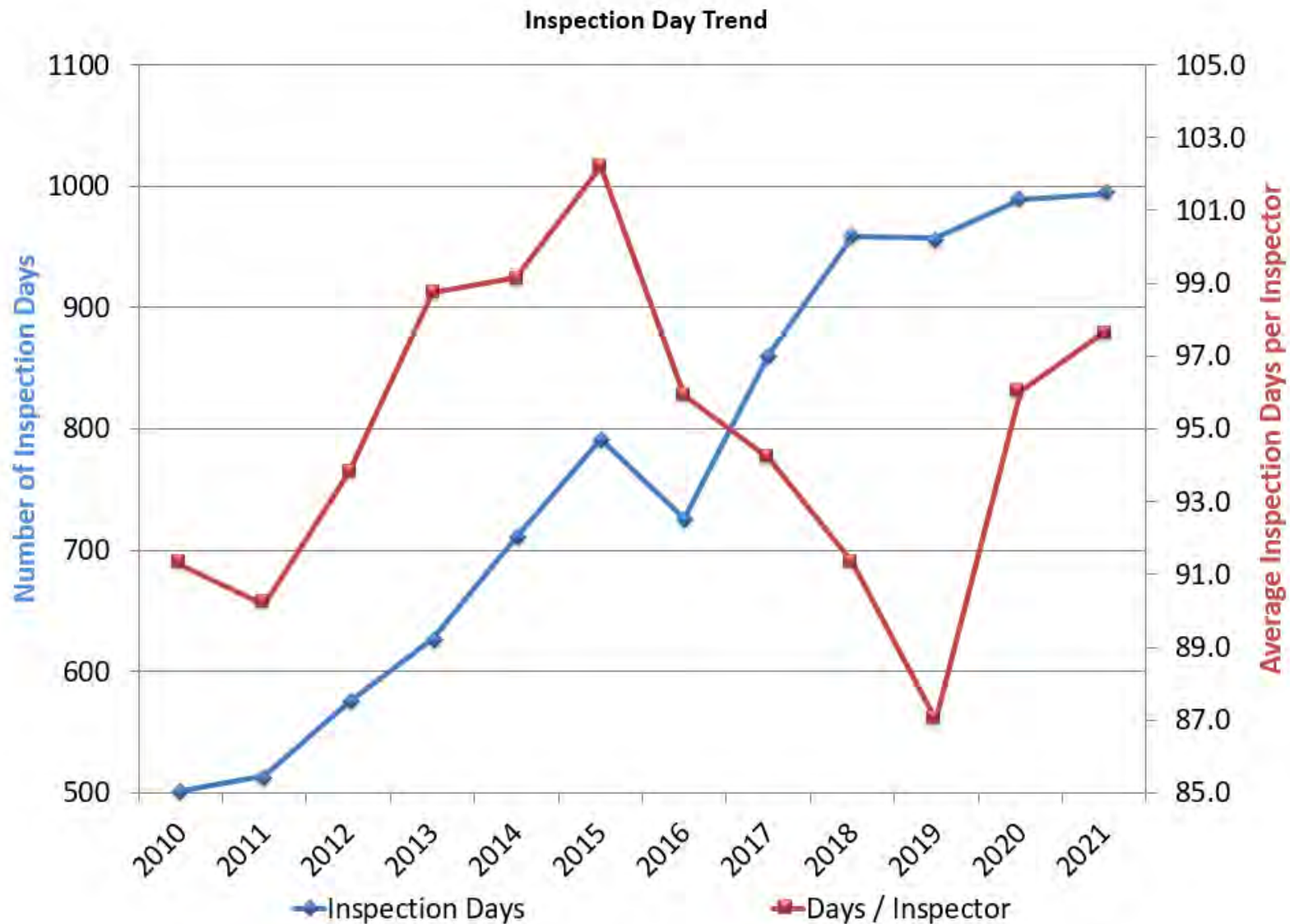


Gas Safety Program Updates

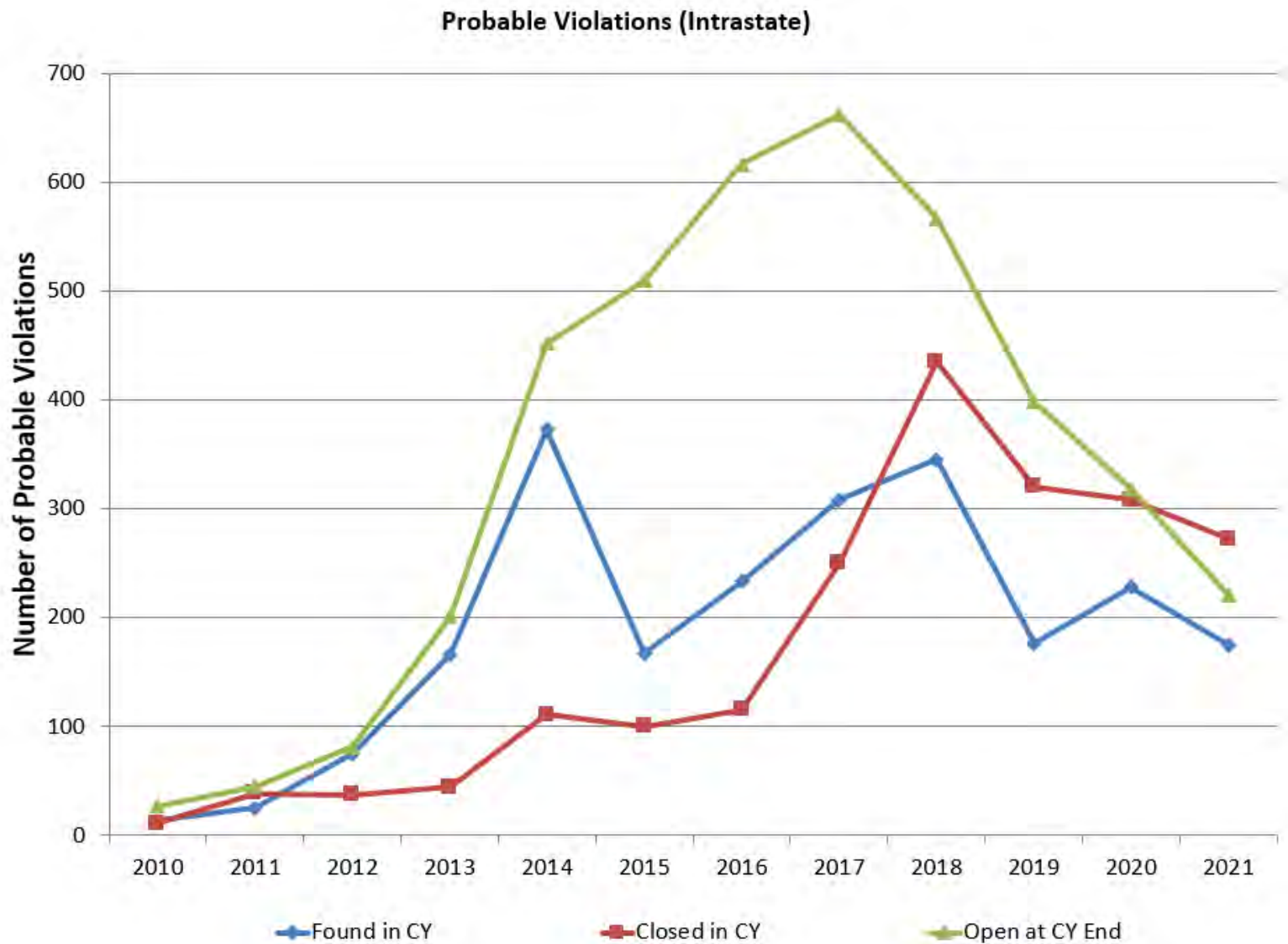
Michigan Public Service Commission
Energy Operations Division



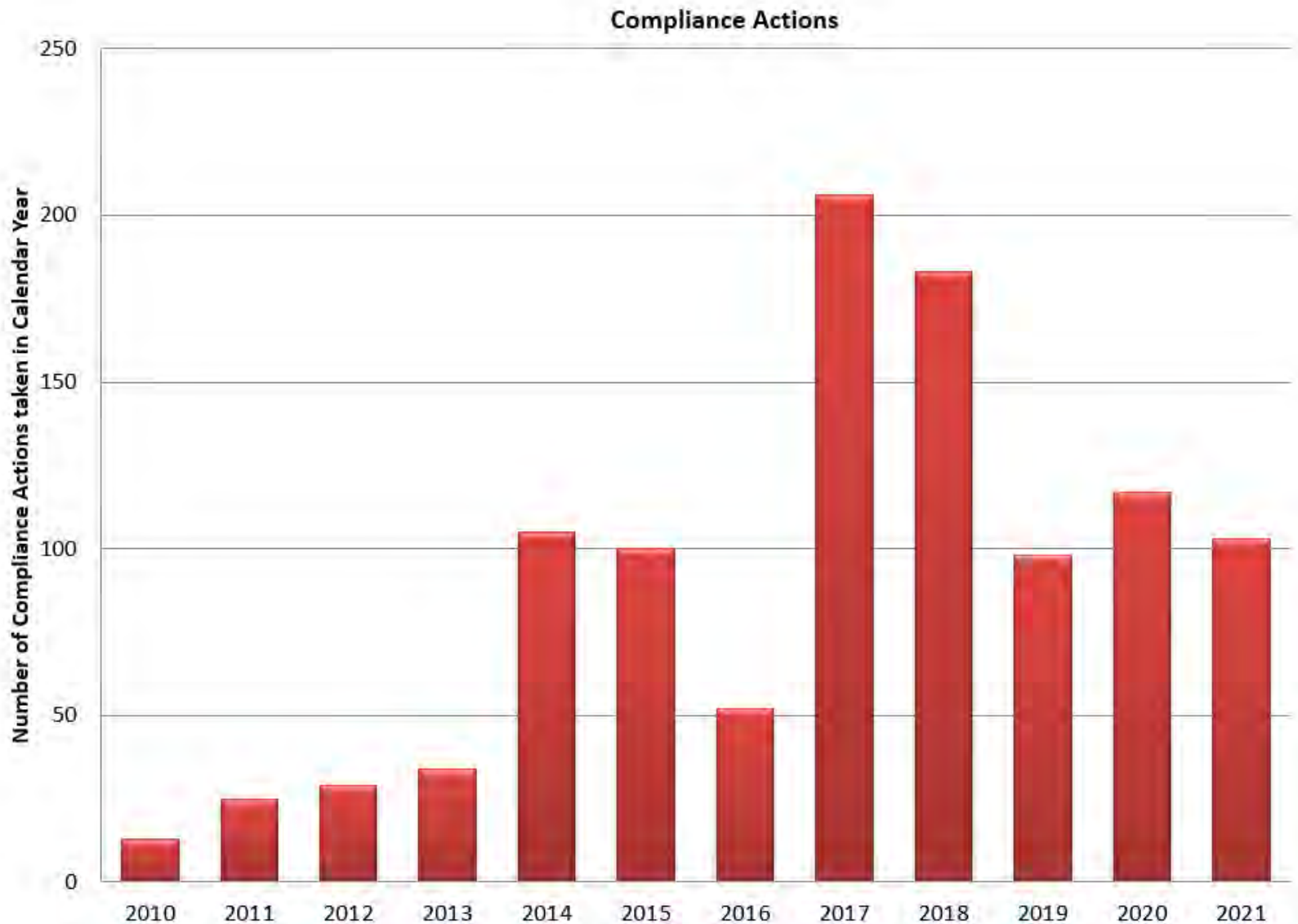
Gas Safety Program Statistics



Gas Safety Program Statistics



Gas Safety Program Statistics



Miscellaneous Items

- New Employee Training
- Incident Notifications – Call the Incident Line: 517-284-8230. If no answer after 2 attempts call Dave Chislea.
- Pipeline Seminar – Planning for 2023.
- R502 Notifications – Email to: lara-mpsc-operations@michigan.gov & CC the Gas Safety Engineer assigned to the unit.
- Section 114 – Methane Emissions Form – Update.
- Farm Taps

Underground Natural Gas Storage Program - Updates

Michigan Public Service Commission
Energy Operations Division

Underground Natural Gas Storage Inspection Program

- In 2021, MPSC and EGLE kicked off the first year the intrastate UNGS inspection program
- Conducted 4 Inspections covering 3 operators covering:
 - Program inspections for 2 operators
 - Records and observations for 11 storage fields

Underground Natural Gas Storage Inspection Program

- Non-Compliances and Recommendations
 - 5 Probable Violations of 49 CFR 192.12 related to:
 - Signage at well site
 - Ability to access Emergency Response Plans and O&M manuals in the field, including procedures requiring them to be readily available
 - Inadequate written Emergency Response Plans
 - Recommendations related to:
 - Personnel training
 - Well site conditions (vegetation, signage, barriers)
 - Incorporation of current programs and draft procedures into current and published documents

Underground Natural Gas Storage Inspection Program

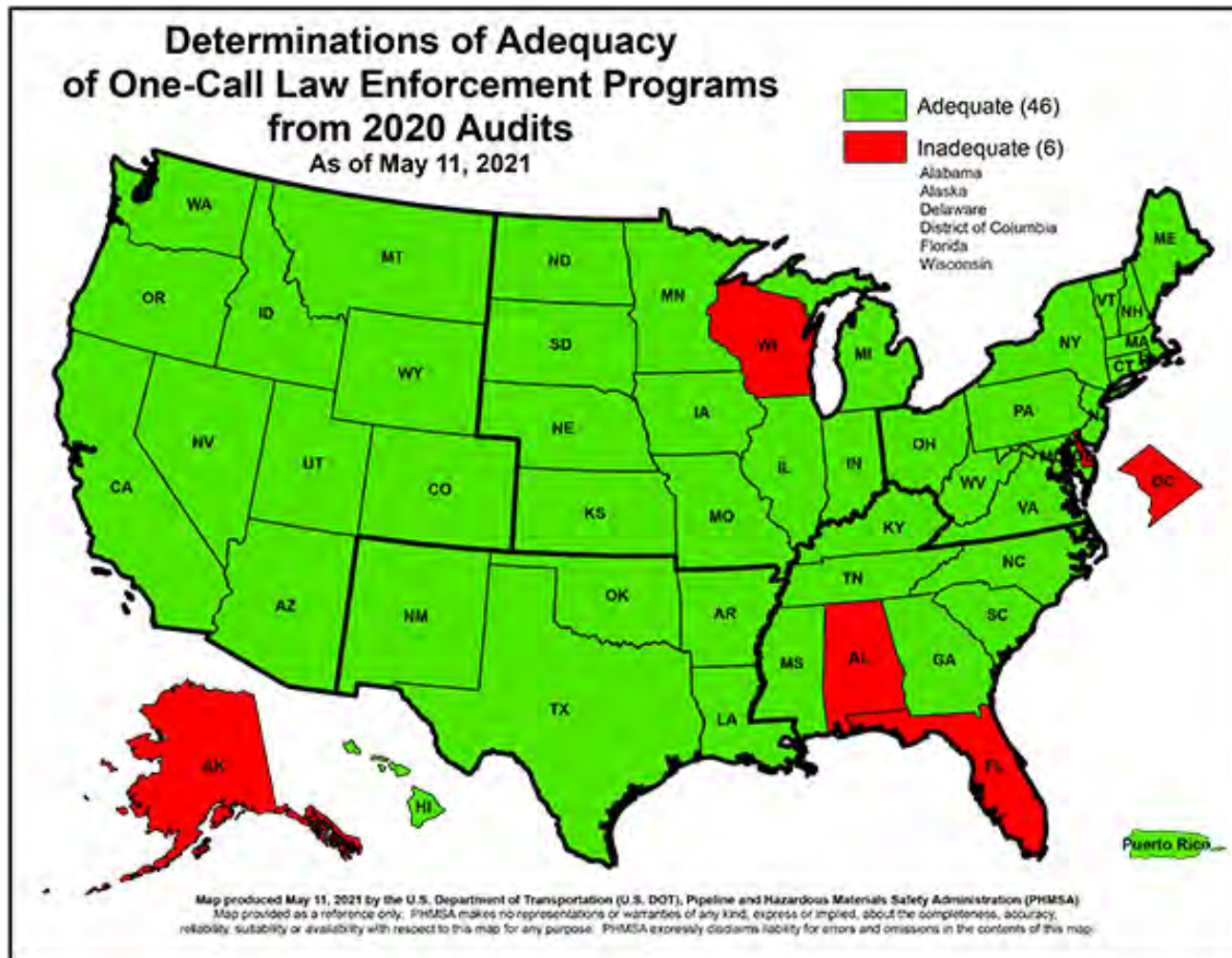
- 2022 Planned Program Activity
 - Program level inspections for 4 operators, including records and observations for 5 storage fields
 - Construction inspections for new well drilling, maintenance, and abandonment activities
 - Integrity testing and monitoring inspections
 - Participation in pipeline safety Drug & Alcohol inspections for operators with UNGS

Damage Prevention Program - Updates

Michigan Public Service Commission
Energy Operations Division



PHMSA Audit



PHMSA Audit

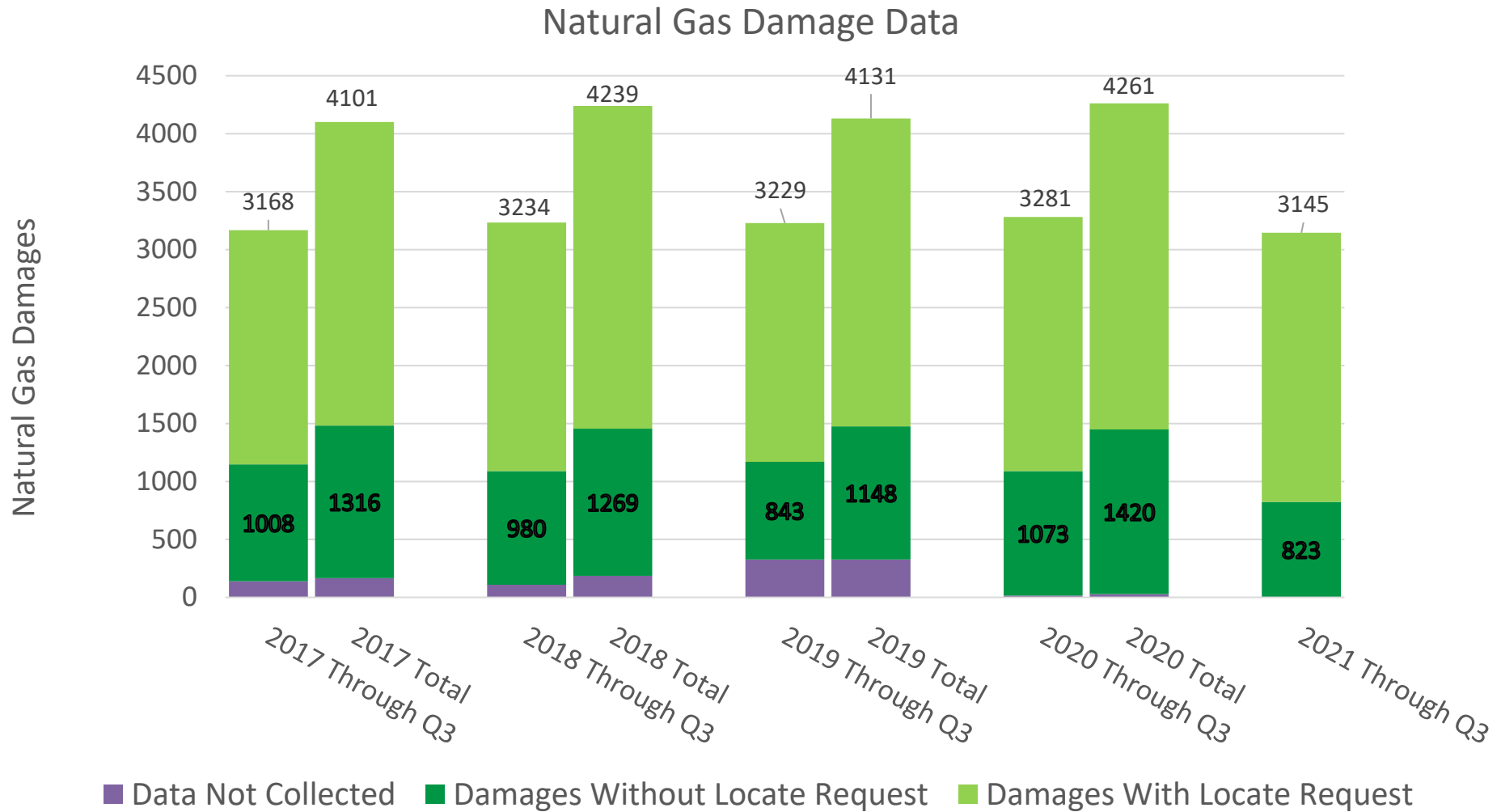
- Areas to focus on:
 - Hand digging and soft excavation damages.
 - Making enforcement actions publicly available.
 - Locator performance.
 - Mismarking
 - Late marking
 - 1st and 2nd party damages
 - Data quality
 - Unknown/Other

Damage Reporting

- The Damage Reporting Manual and CSV File are available on MPSC website or upon request.
- Common Ground Alliance - Damage Information Reporting Tool (DIRT) field form.
- Utilizes the Operations email account (LARA-MPSC-Operations@michigan.gov).
- Damage Data submission deadlines are as follows:

Reporting Period	Due Date
First Quarter	May 15 th
Second Quarter	August 15 th
Third Quarter	November 15 th
Fourth Quarter	February 15 th

Damage Prevention Statistics



Damage Prevention Statistics

(Gas Distribution) 2020 Excavation Damages

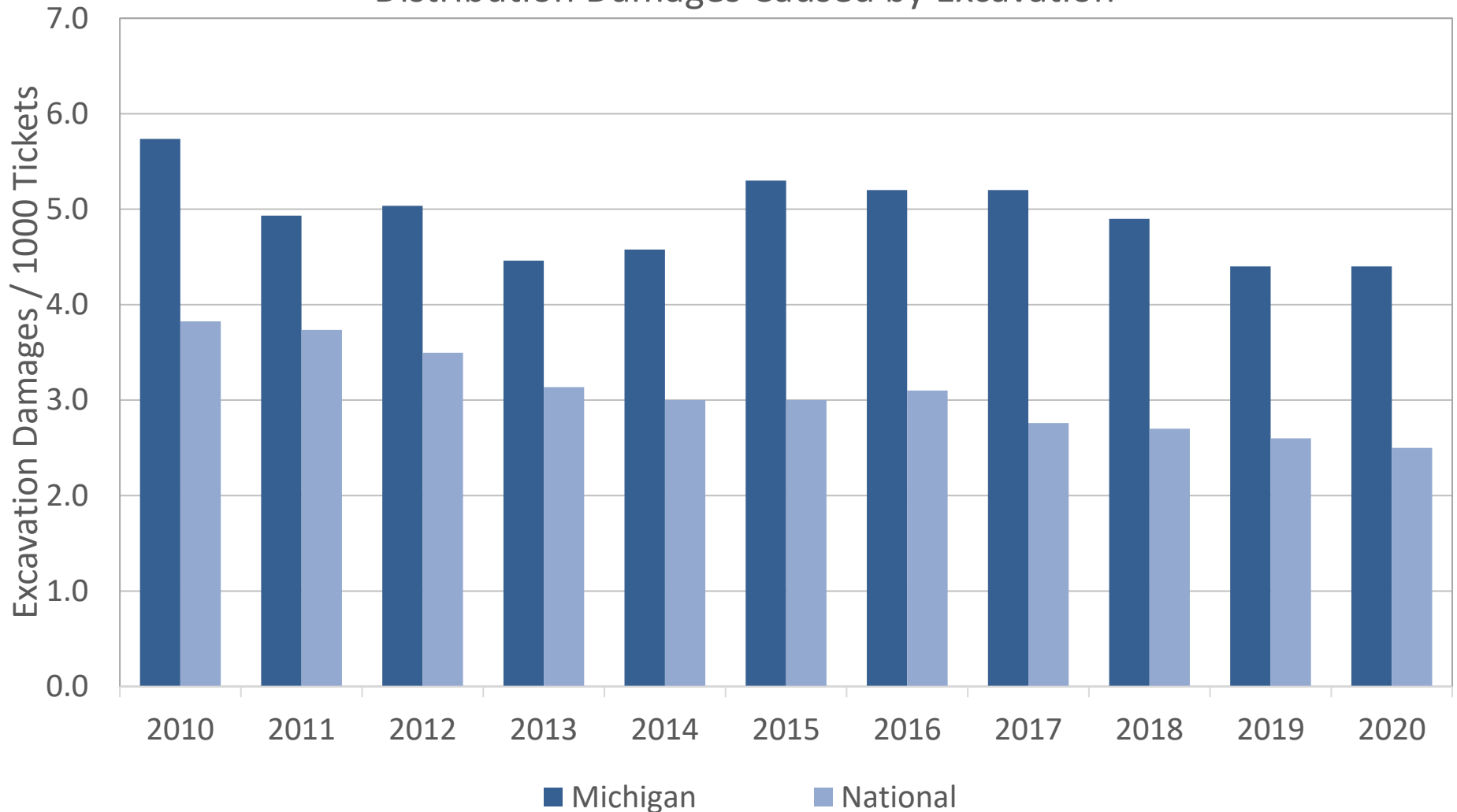
Michigan	
Total Excavation Damages	4,359
Total Excavation Tickets	1,000,022
Excavation Damages / 1000 Tickets	4.4

National	
Excavation Damages / 1000 Tickets	2.5

Damage Prevention Statistics

Gas Facility Damages Per 1000 Tickets

Distribution Damages Caused by Excavation



Damage Prevention Statistics

Gas Leaks Per Unit of Infrastructure

2020 Michigan Leak Summary

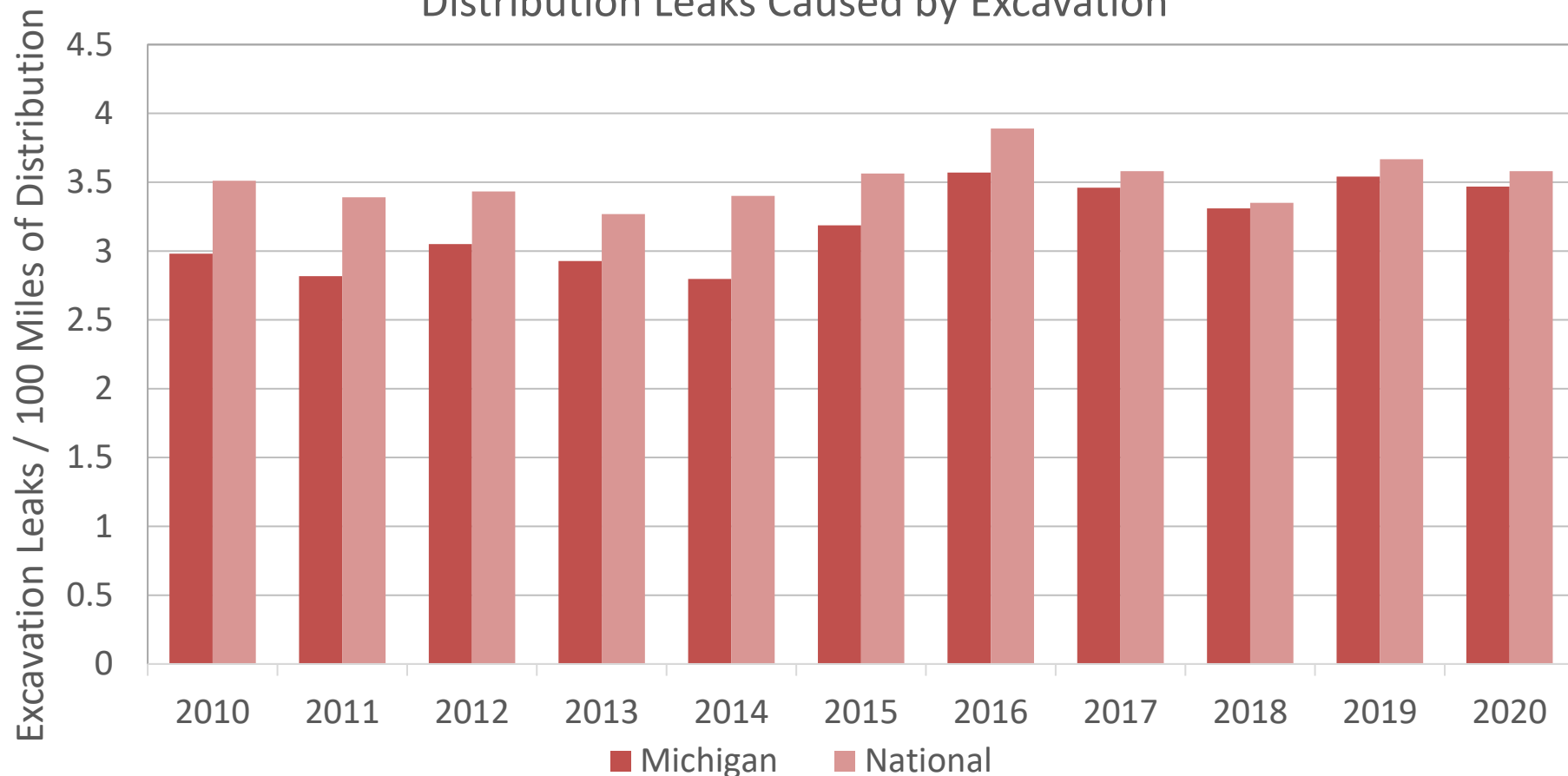
Mains	
Excavation Leaks	483
Leaks / 100 Miles of Main	0.80

Services	
Excavation Leaks	3678
Leaks / 1000 Services	1.10

Damage Prevention Statistics

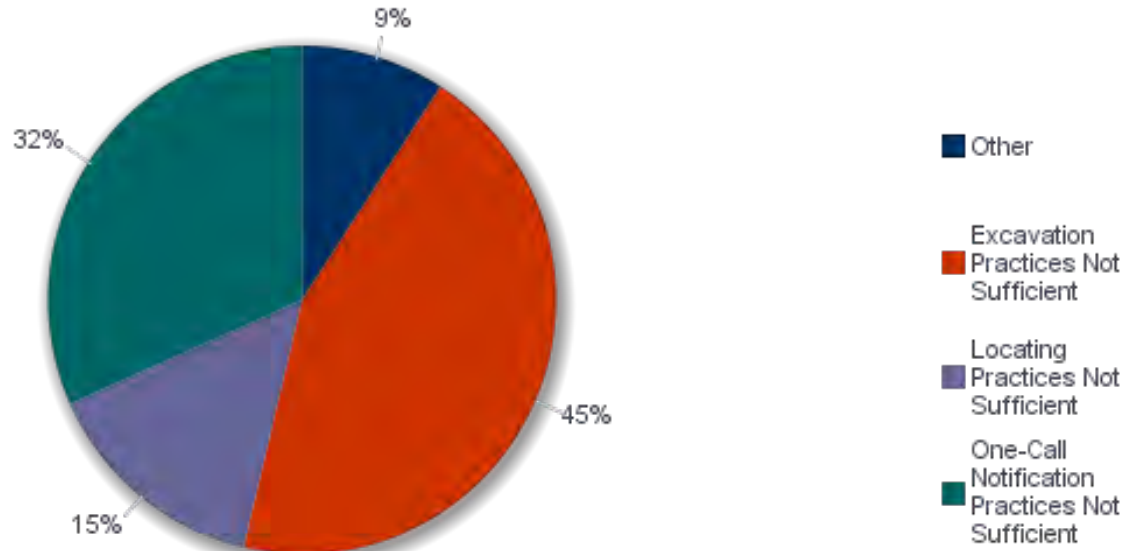
(Gas Distribution)

Distribution Leaks Caused by Excavation



Damage Prevention Statistics

Michigan Gas Distribution Pipeline Excavation Damages by Root Cause



25,343

Calendar Year	Number of Excavation Tickets	Number of Excavation Damages	Damages per Thousand Tickets	One-Call Notification Practices Not Sufficient	Locating Practices Not Sufficient	Excavation Practices Not Sufficient	Other	One-Call Notification Practices Not Sufficient	Locating Practices Not Sufficient	Excavation Practices Not Sufficient	Other
2020	1,000,022	4,362	4.4	1,446	762	1,941	213	33%	17%	44%	5%
2019	928,529	4,117	4.4	1,362	716	1,556	483	33%	17%	38%	12%
2018	819,538	4,054	4.9	1,177	633	1,954	290	29%	16%	48%	7%
2017	822,578	4,271	5.2	1,238	636	2,108	289	29%	15%	49%	7%
2016	827,516	4,272	5.2	1,361	466	1,999	446	32%	11%	47%	10%
2015	796,641	4,267	5.4	1,451	481	1,727	608	34%	11%	40%	14%

Source: US DOT Pipeline and Hazardous Materials Safety Administration

Complaints

- PA 174 complaints filed

Year	Complaints Received	Issued NOPV with Penalty	Issued NOPV	Warning
2019	47	4	1	2
2020	90	14	8	2
2021	34	17	2	4

Enforcement Activity

- In 2021, 14 reportable pipeline safety incident cases involving damage prevention were opened.
 - A total of \$32,500 in penalties were assessed in 2021.

Type of Letter	Excavator	Facility Operator
NOPV with Penalty	7	4
NOPV	-	3
Warning	1	-

Enforcement Activity

- In 2021, proactive damage prevention inspections leading to enforcement actions.
 - A total of \$54,000 in penalties were assessed.

Type of Letter	Excavator	Facility Operator
NOPV with Penalty	17	10
NOPV	5	6

Gas Safety Program Significant NC / Incidents

Michigan Public Service Commission
Energy Operations Division

Jotham Povich

- Area of Responsibility:
 - Northwest Lower Michigan
 - Propane Distribution
 - Gathering
- Cell: 231-357-8816
- Email: povichj1@michigan.gov

Significant Incident – 6352/6670

- 2nd Party Damage
- Characteristics
 - 6" Plastic Main
 - \$26,300 damages
- Description
 - New pipeline was being installed parallel to existing distribution main.
 - Excavator operator attempted to clean up bench of excavation to stabilize slope.
 - Bucket struck and hooked onto main, causing tear.
 - Had spotter during initial excavation, but did not have one at moment of damage.
 - Utilities were marked and physically located every ~50'.
 - MCL 460.725(5) – Failure to expose all marked facilities in the caution zone by soft excavation.



Significant Incident – 6352/6670 (Cont.)



Karen Krueger

- Area of Responsibility:
 - South/Central Michigan
 - Operator Qualifications
- Cell: 517-582-8619
- Email: kruegerk1@michigan.gov

Significant Incident – 5908

- Gas Release at Relief Valve
- Characteristics
 - Transmission Valve Site
 - MAOPs of 858 psig, 844 psig & 811 psig
 - 16 MMcf gas loss
- Description
 - Relief valve vented before the high-high alarm set point of 811 psig
 - Recommendations: Include high and low alarms/alerts to notify Gas Control of pending emergencies
 - Recommendations: Establish procedures to alert Gas Control when speed conditions at compressors that may be critical to operations have been met

Significant Non-Compliances

- 192.273(b)– Failure to make each joint in accordance with written procedures that have been proven by test or experience to produce strong gastight joints.



Significant Non-Compliances

- 192.629(a) – Failure to purge a pipeline of air by use of gas, where the gas must be released into one end of the line in a moderately rapid and continuous flow.
 - Record showed no procedures were developed for large scale projects with multiple purge points

Significant Non-Compliances

- 192.723(b)(1) – Failure to leak survey with leak detector equipment in business districts at intervals not exceeding 15 months, but at least once each calendar year.

Significant Non-Compliances

- 192.805(b) – Failure to ensure through evaluation that individuals performing covered tasks are qualified
 - Evaluators
 - Evaluation methods

Kristen Kenyon

- Area of Responsibility:
 - Central Michigan
 - Damage Prevention
- Cell: 517-331-6554
- Email: kenyonk3@michigan.gov

Significant Incident – 5669

- Distribution Leak
- Characteristics
 - 2" steel distribution main.
 - \$126,698.
- Description
 - Initial leak repaired with clamp.
 - Several other leaks found, main partially replaced.
 - Recommendations.



Significant Incident – 5819

- Third Party Damage
- Characteristics
 - 4" steel distribution main
 - Low pressure
- Description
 - Staking error, main not marked.
 - Violations:
192.614(c)(5) – Failure to provide temporary marking of buried pipelines.



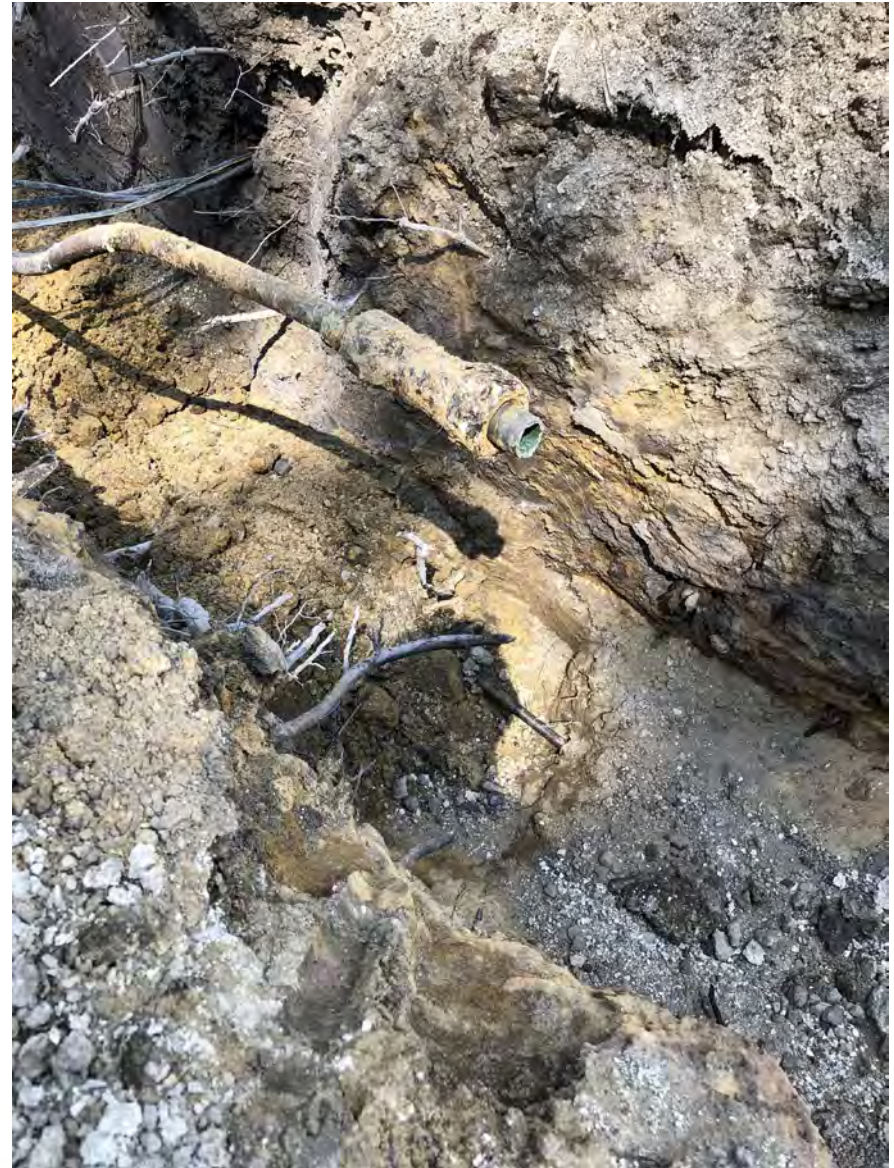
Brian Gauthier

- Area of Responsibility:
 - Southeast Michigan
 - Drug & Alcohol Program Inspections
- Cell: 517-930-4968
- E-mail: GauthierB2@Michigan.gov

Significant Incident – 6211

- First Party Damage: release, ignition & injury
- Characteristics
 - Suburban steel distribution, 10 psig main/service
 - MMO & service renewal for a single-family house
 - Gas worker is burned & hospitalized overnight
- Description
 - Service severed near main by back-hoe bucket
 - E-power lines too; co-worker 700' away
 - Ongoing Investigation

Significant Incident – 6211 (Cont.)



Significant Incident – 6211 (Cont.)



Significant Incident – 6377

- Outside Force Damage, near-by gravitational surface loads cause ground upheaval
- Characteristics
 - Urban steel, cast iron & plastic distribution lines
 - MAOP's of 2, 10, 99 & 145 psig in the area
 - Leaks occur & damages cost \$2,000,000
- Description
 - Metal scrap yard particle piles overloaded subgrade soft clays; adjacent building & road ROW upheaved; several utilities impacted
 - Ongoing Investigation

Significant Incident – 6377 (Cont.)



Significant Incident – 6377 (Cont.)



Significant Incident – 6377 (Cont.)



Significant Non-Compliances

- 192.481(a) - Failure to conduct (inside MA) atmospheric corrosion inspections.
- 192.614(a) – Failure to satisfy excavation / DP requirements.
- 192.723(b) - Failure to satisfy leakage survey / monitoring requirements.
- 199.101(a) - Failure to maintain an anti-drug plan that conforms with US-DOT requirements.

Kyle Friske

- Area of Responsibility:
 - SE Michigan (Training)
 - TIMP / DIMP
 - MEGA Rule
 - Risk Based Inspection Program
- Cell: 517.290.9605
- Email: friskek@michigan.gov

Risk Based Inspections

- Forms:

- Plastic Distribution Construction
- Plastic Transmission Construction
- Steel Distribution Construction
- Steel Transmission Construction
- Service Lines
- Transmission O&M
- Distribution O&M
- Iron O&M
- Compressor Stations
- Atmospheric Corrosion
- External Corrosion
- Internal Corrosion
- Transmission MAOP
- Distribution MAOP
- Pressure Control
- DP – One Call
- DP – Locating
- DP – Excavation
- DP – General

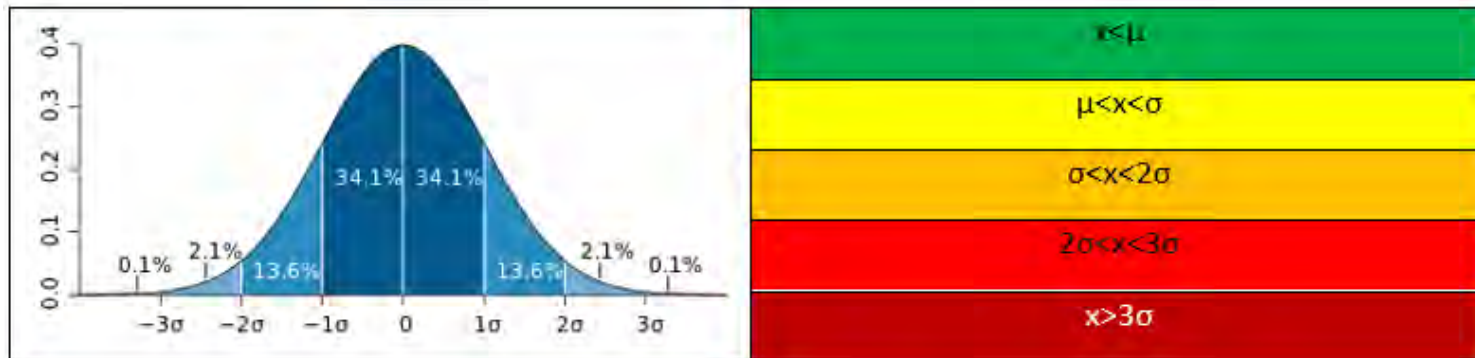
- One additional inspection day per unit and per form that the model produced. (over and above existing standard and construction inspection expectations)

Risk Based Inspections

- Risk = Likelihood x Consequence

DOM:

Total Risk $x > 3\sigma$



Higher than Average Likelihood, Higher than Average Consequence

- % Risky Infrastructure (unprotected steel, cast iron, copper): Higher than Average (11.38%)
- # of Fixed Leaks (Repaired in CY): Higher than Average (1262)
- # of Balance leaks (Scheduled/Monitored remaining at end of CY): Higher than Average (1071)
- # of NOPV (in last 5 years): Higher than Average (2)

Risk Based Inspections

- Construction Related
 - PDC, PTC, SDC, STC, SL
 - Inspect Risk Score $> \mu$.
- O&M Related
 - TOM, DOM, IOM, CS, AC, EC, IC, TMAOP, DMAOP, PRC, DP's
 - Inspect Risk Score $> 2\sigma$ (2021 was $> 3\sigma$)

2021:

53 Risk Inspections

- 34 Construction
- 19 O&M

2022:

93 Risk Inspections

- 35 Construction
- 44 O&M
- 14 DP

Heather David

- Area of Responsibility:
 - Central Michigan
 - Steel Construction
 - Incident Investigations
- Cell: 517-256-0342
- Email: davidh@michigan.gov

Significant Incident – 5848

- Apartment Fire due to vehicle damage
- Characteristics
 - 3” plastic service & meter bank installed in 1977
 - 10 psig MAOP
- Description
 - Vehicle left parking lot and drove ~50’ down embankment prior to hitting meter bank.
 - 1 fatality.
 - Gas ignited causing fire damage to 5 units.
 - 22 evacuations.
 - Gas blew for 5 hours and 27 min.
 - R 460.20501(2)(a) – Inaccurate maps. Distribution map did not show 2-way feed.

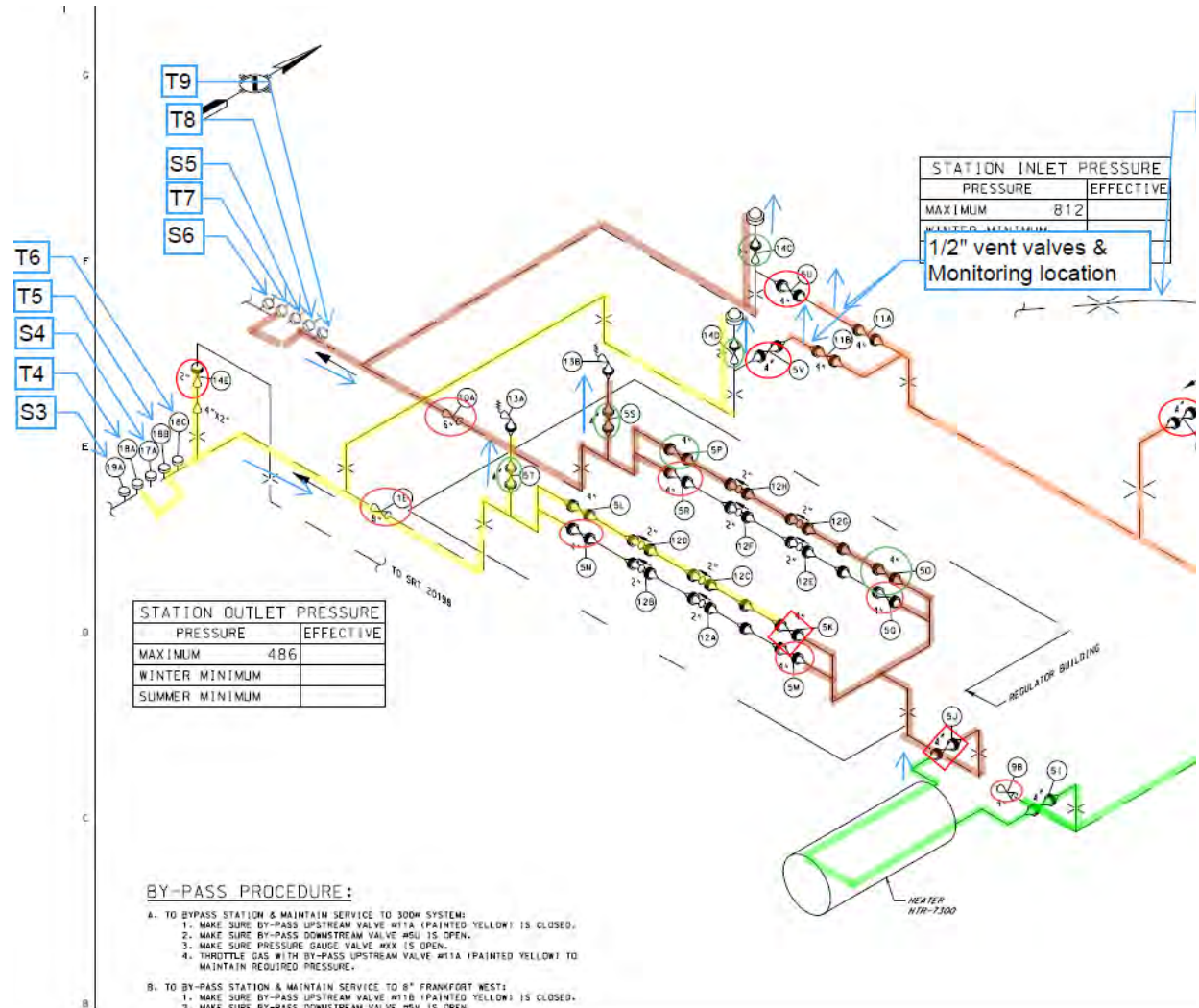
Significant Incident – 5848 (Cont.)



Significant Incident – 6487

- Venting Relief Valve
- Characteristics
 - Existing 8" transmission line (812 psig MAOP) to be derated to a distribution main (486 psig MAOP).
 - 2021 newly constructed Regulating Station with RV set at 507 psig to protect the derated 8" distribution main.
- Description
 - Line returned to service prior to deration occurring.
 - RV was not isolated. 8.83 Mmcf gas loss
 - Ongoing investigation

Significant Incident – 6487 (Cont.)



Significant Incident – 6541

- House explosion with secondary ignition
- Characteristics
 - 1979 1” plastic service
 - \$256,184 damages
 - 2 fatalities & 1 injury
 - 36 houses damaged, including 2 nearby fires
 - 25 outages
- Description
 - Unthreaded fuel line discovered near furnace.
 - Ongoing investigation

Significant Incident – 6541 (Cont.)



Significant Non-Compliances

- 192.227(a) – Failure to qualify welders in accordance with API 1104. Welder's amps below range specified and root opening too large.
- 192.241(a)(1) – CWI did not enforce the WPS.
- 192.225(b) – Failure to follow WPS. Welder used wrong size electrode.



Significant Non-Compliances

Leak Survey Observations:

- R 460.20308(c) – Failure to identify lack of meter support.
- R 460.20308(d) – Failure to identify lack of meter protection.
- 192.723(b)(2) – Missing leak survey frequency due to inaccurate mapping.



Significant Non-Compliances

- 192.475(b)(1) – Failure to perform internal corrosion inspections.
- 192.747(a) – Failure to lubricate valve and check for leaks during valve inspection.
- 192.754(b) – Failure to maintain a record of sealing cast iron upon exposure.