

FY 2018
Follow-up Federal Annual Monitoring Evaluation (FAME) Report

Maryland Occupational Safety and Health (MOSH)



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I. Executive Summary

The purpose of this Federal Annual Monitoring Evaluation (FAME) report is to assess the Maryland Occupational Safety and Health (MOSH) program's progress in Fiscal Year (FY) 2018, and its progress in resolving six outstanding findings identified during previous FAMEs. MOSH has been inconsistent in its response to OSHA's previous FAME recommendations – in some cases addressing findings and implementing corrective actions, and in other cases not addressing findings or implementing corrective actions at all. This FAME report contains six findings – five were continued, and one that was converted from an observation to a finding – and five observations. Four observations were continued and one finding was converted to an observation. Two observations were closed.

During the FY 2018 performance period, MOSH program administration worked to improve some of the findings that OSHA identified by addressing two complaint-related findings, documenting more complaints in the OSHA Information System (OIS), and adopting some of the overdue federal program changes (FPCs) identified in the FY 2017 FAME report. OSHA will evaluate MOSH's actions taken on three findings identified in FY 2017 during next year's comprehensive on-site case file review. However, MOSH's number of cases with open abatement for 60 or more days increased; therefore, OSHA converted this previous FY 2017 observation to a finding.

Two FY 2017 observations regarding follow-up inspections and contacting complainants were closed. MOSH improved its unprogrammed activity (UPA) documentation accuracy and the number of state and local government (SLG) inspections, but OSHA will need to continue monitoring these observations to determine additional progress during the next performance period. OSHA will also need to determine the status of the two remaining FY 2017 observations during the next comprehensive on-site case file evaluation.

OSHA continues to be concerned with MOSH's complaint processing. During the FY 2018 evaluation performance period, OSHA determined that MOSH did not take action on many of the electronic complaints that OSHA considered serious and valid. The FY 2018 End-of-Year (EOY) SAMM Report also showed that MOSH inspected or investigated only a portion of the complaints documented in the OIS.

In addition, MOSH needs to ensure that abatement is appropriately tracked and evaluated to ensure that workers are no longer exposed to serious hazards at their worksites. Properly addressing complaints is also a critical component that MOSH needs to improve upon. Workers generally do not make the decision to file a complaint lightly. In many cases, filing a complaint is the only mechanism by which workers can make MOSH aware of hazardous conditions at worksites in the state of Maryland. MOSH needs to continue improving its program performance in FY 2019.

In FY 2018, MOSH initiated an inspection in response to a trench collapse. The inspection resulted in multiple citations, four of which were issued as willful. The MOSH egregious policy was applied to two of the willful citations. MOSH issued \$277,050 in penalties.

II. State Plan Background

The Maryland State Plan was initially approved on July 5, 1973, pursuant to Section 18 of the Occupational Safety and Health (OSH) Act. The State Plan was certified on February 15, 1980 and granted final approval on July 18, 1985. MOSH operates under the authority of the MOSH Act, Labor and Employment Article, Section 5-101 through 5-901. The Maryland Department of Labor, Licensing and Regulation (DLLR), Division of Labor and Industry (DLI), is the state agency designated by the governor to administer the MOSH program. DLLR is headquartered in Baltimore and consists of MOSH representatives stationed in different regional and field offices located in Hunt Valley, Easton, Hagerstown, and Upper Marlboro.

MOSH is the agency responsible for protecting Maryland workers from workplace safety and health hazards. MOSH covers over 2.5 million workers and 170,000 employers in the state of Maryland. MOSH's Compliance Services Unit conducts occupational safety and health inspections for all state and local government workplaces and private sector places of employment in the state of Maryland. However, MOSH does not inspect places of employment which fall under OSHA's jurisdiction. OSHA's jurisdiction includes federal workers, the United States Postal Service, private sector maritime activities (shipyard employment, marine terminals, and longshoring), and United States (U.S.) military bases. Additionally, MOSH's Outreach Unit provides free consultation services through the consultation program, training and education, and manages its cooperative programs.

MOSH operates a private sector on-site consultation project under Section 21(d) and a state and local government consultation project under Section 23(g) of the OSH Act of 1970. MOSH's Discrimination Unit investigates whistleblower complaints made by workers who feel that they have been retaliated against by their employer for making a safety and health complaint.

The Research and Statistic Unit provides MOSH with statistical data on occupational fatal and nonfatal workplace injuries and illnesses. Industries covered by MOSH include a combination of agricultural, manufacturing, construction, transportation, and trade, and service industries. Similar to OSHA, MOSH has selected certain high hazard industries on which to focus its safety and health activities through the implementation of emphasis programs.

The table below presents MOSH's funding levels for FY 2018:

MOSH Program FY 2018 Funding Levels					
Fiscal Year	Federal Award (\$)	State Plan Match (\$)	100% State Plan Funds (\$)	Total Funding (\$)	% of State Plan Contribution
2018	\$3,999,100	\$3,999,100	\$2,150,182	\$10,148,382	61%

As a State Plan, MOSH has the authority to promulgate standards and regulations which may be more stringent than OSHA's standards. MOSH has multiple standards and regulations which differ from the federal program including, but not limited to: High Voltage Lines (Title 6), Fall Protection in Steel Erection (Code of MD Regulations (COMAR) 09.12.25), and Tree Care and Removal (COMAR 09.12.28). MOSH also made amendments to OSHA standards that are more stringent

than OSHA's such as: Occupational Exposure to Formaldehyde (29 CFR 1910.1048), Lead in Construction Work (29 CFR 1926.62), Excavations (Requirements for Protective Systems (29 CFR 1926.652), and Steel Erection (29 CFR 1926, Subpart R).

MOSH promotes and recognizes exceptional safety and health efforts through its voluntary programs. The Maryland Safety and Health Achievement Recognition Program (SHARP) recognizes smaller, high-hazard employers who develop and implement exemplary safety and health management systems. MOSH's Voluntary Protection Programs (VPP) is a cooperative effort between MOSH and participating employers to extend worker protection beyond the minimum required by MOSH standards. MOSH has also established a Cooperative Compliance Partnership (CCP) for employers in Maryland.

New Issues

None.

Maximum Penalty Increase

In accordance with the Bipartisan Budget Bill passed on November 2, 2015, OSHA published a rule on July 1, 2016 raising its maximum penalties. As required by law, OSHA then increased maximum penalties annually, on January 1, 2017, January 1, 2018, and January 23, 2019, according to the Consumer Price Index (CPI). State Plans are required to adopt both the initial increase and subsequent annual increases within the corresponding six-month timeframe set by regulation. December 2018 marked two full years since the first deadline passed for adoption and MOSH has not yet completed the legislative changes to increase maximum penalties. Therefore, if the State Plan has does not take significant steps to adopt during FY 2019, this issue may be a finding in the FY 2019 Comprehensive FAME Report.

Beryllium Standard

On January 9, 2017, OSHA issued a final rule to prevent chronic beryllium disease and lung cancer in workers by limiting their exposure to beryllium. The rule contains standards for general industry, construction and shipyards. State Plans were required to adopt an "at least as effective as" rule within six months of promulgation or by July 9, 2017. On June 27, 2017, OSHA published a notice of proposed rulemaking (NPRM) proposing to revoke the ancillary provisions of the standards applicable to the construction and shipyard sectors, but to retain the new permissible exposure limit of $0.2 \mu\text{g}/\text{m}^3$ (PEL) and the short-term exposure limit (STEL) of $2.0 \mu\text{g}/\text{m}^3$. The NPRM for the construction and shipyard beryllium standards is still pending.

In May 2018, OSHA issued a Direct Final Rule adopting a number of clarifying amendments to address the application of the beryllium general industry standard to materials containing trace amounts ($< 0.1\%$) of beryllium. Subsequently, in December 2018, OSHA published an NPRM modifying the beryllium general industry standard to clarify certain provisions and to help improve compliance. This NPRM is still pending. Given the unusual circumstances of this rulemaking, in which substantive changes have been proposed to a rule within six months following its initial promulgation, MOSH has delayed promulgation pending completion of all rulemaking on this rule.

Electronic Reporting Rule

On May 12, 2016, OSHA published the Final Rule to Improve Tracking of Workplace Injuries and Illnesses. The rule amended the regulations on recording and reporting occupational injuries and illnesses to require employers with 250 or more employees to submit injury and illness Forms 300, 300A, and 301 to OSHA electronically through the Injury Tracking Application (ITA) on an annual basis. State Plans were required to adopt an “at least as effective” rule by November 14, 2016 or within six months of OSHA’s promulgation.

Subsequently, OSHA rescinded the requirement to submit electronically Forms 300 and 301 (NPRM on July 30, 2018, final rule on January 25, 2019). Initially, a number of State Plans, including MOSH, delayed adoption of the rule during the rulemaking. Now that this rulemaking has concluded, OSHA expects MOSH to complete adoption of this rule.

III. Assessment of State Plan Progress and Performance

A. Data and Methodology

OSHA established a two-year cycle for the FAME process. This is the follow-up year and as such, OSHA did not perform an on-site evaluation and case file review. This strategy allows the State Plan to focus on correcting deficiencies identified in the most recent comprehensive FAME. The analyses and conclusions described in this report are based on information obtained from a variety of monitoring sources, including:

- State Activity Mandated Measures Report (Appendix D)
- State Information Report
- Mandated Activities Report for Consultation
- State OSHA Annual Report (Appendix E)
- State Plan Annual Performance Plan
- State Plan Grant Application
- Quarterly monitoring meetings between OSHA and the State Plan

B. Findings and Observations

This follow-up FAME report contains six findings – five of which were continued and one that was converted from an observation to a finding. One FY 2017 finding was converted to a new observation and two observations were closed. Four observations were continued. Appendix A describes the new and continued findings and recommendations. Appendix B describes the five continued and one new observation as well as the related federal monitoring plans. Appendix C describes the status of each FY 2017 recommendation in detail.

Completed Findings

No findings were completed in FY 2018.

Continued Findings

Finding FY 2018-01 (Finding FY 2017-01): Federal Program Changes

MOSH did not take action on federal program changes (FPCs) within the required timeframes.

Status: MOSH made some progress to adopt overdue FPCs in FY 2018. MOSH adopted the Respirable Crystalline Silica regulation, the Electric Power Generation, Transmission and Distribution regulation, and the Walking-Working Surfaces regulation. MOSH also adopted the Consultation Policies and Procedures Manual. MOSH continues to be delinquent in its adoption of multiple FPCs; therefore, this finding remains open. The status of FPCs described in the FY 2017 FAME report are presented in the tables below:

Status of Federal Program Change Standards Identified in FY 2017 FAME	
Standard	MOSH Status
Final Rule on Walking-Working Surfaces and Personal Protective Equipment (Fall Protection Systems)	Adopted
Final Rule on Occupational Exposure to Beryllium	Not Yet Adopted/Will Adopt Identical
Interim Final Rule on Maximum Penalty Increases	Not Yet Adopted/No Response
Final Rule to Improve Tracking of Workplace Injuries and Illnesses	Not Yet Adopted/Will Adopt Alternative
Final Rule for Occupational Exposure to Silica	Adopted
Direct Final Rule for Electric Power Generation, Transmission and Distribution; Electrical Protective Equipment	Adopted

Status of Federal Program Change Directives Identified in FY 2017 FAME	
Directive	MOSH Status
Field Operations Manual (FOM) (CPL 02-00-160)	Not Yet Adopted/Will Adopt Alternative
Whistleblower Investigations Manual (CPL 02-03-007)	Not Yet Adopted/Will Adopt Identical
Consultation Policies and Procedures Manual (CSP 02-00-003)	Adopted
Mandatory Training Program for OSHA Whistleblower Investigators (TED 01-00-020)	Not Yet Adopted/No Response
OSHA Strategic Partnership for Worker Safety and Health (CPL 03-002-003)	Not Yet Adopted/No Response

Finding FY 2018-02 (Finding FY 2017-02): Informal Conferences

In 80% of the case files reviewed in FY 2017, MOSH held informal conferences beyond the 15 working day contest period, and has not developed or implemented a policy ensuring that employers abate serious hazards when informal conferences were scheduled and held beyond the 15 working day contest period.

Status: In FY 2018, MOSH did not adopt a policy to ensure that informal conferences are held within the 15 working day contest period. However, an on-site case file review is necessary to gather the facts needed to comprehensively evaluate the corrective action taken on this finding. This finding is open and will be a focus during the next on-site case file review.

Finding FY 2018-03 (Finding FY 2017-03): *Next-of-Kin (NOK) Notification Documentation*

In FY 2017 in eight of 19 (42%) fatality case files, there was no documentation showing that the final NOK letter with the inspection results was sent or that contact was made with family members.

Status: An on-site case file review is necessary to gather the facts to comprehensively evaluate the corrective action taken on this finding. This finding is open and will be a focus during the next on-site case file review.

Finding FY 2018-04 (Finding FY 2017-04): *Serious Hazard Complaint Validation and Processing Procedures*

In FY 2017, MOSH did not validate and process at least 82 of 146 (56%) electronic complaints from former employees and other complainants alleging serious hazards.

Status: MOSH's processing of complaints continues to be a significant concern. During FY 2018, OSHA forwarded at least 491 electronic complaints to MOSH. Upon review, OSHA deemed at least 146 of the 491 electronic complaints to allege serious, valid hazards. It was determined that MOSH did not enter 48 of the 146 (33%) complaints and marked 34 of the 146 (23%) as not valid in OIS. Therefore, OSHA determined that MOSH did not take action on at least 82 of the 146 (56%) of the electronic complaints that OSHA considered serious and valid.

Out of 547 UPAs coded as a complaint and entered into OIS, the FY 2018 EOY SAMM Report indicated that MOSH only inspected 48 and investigated 115 complaints – resulting in 70% (384 of 547) complaints that were not inspected or investigated. It was determined that improper data entry into OIS led to this result. For example, a report capturing all UPAs received in FY 2018 was run independently of the SAMM and indicated that MOSH initiated inspections in response to 64 complaints – 16 more than is reported on the FY 2018 EOY SAMM Report. However, in 17 out of 64 (27%) of complaint cases with an associated inspection listed on the UPA report, the complaints were still coded as “draft” which made them undetected by the SAMM algorithm. Because data entry continues to be an issue, OSHA is taking into consideration this as one possibility for the lack of response to a significant majority of complaints received by MOSH. This finding is open.

Finding FY 2018-05 (Finding FY 2017-06): *OSHA Information System (OIS)*

In FY 2017, in 36 of 71 (51%) reviewed complaints, the hazardous condition described by the complainant was not documented in OIS.

Status: An on-site case file review is necessary to gather the facts needed to comprehensively evaluate corrective action taken on this finding. This finding is open and will be a focus during the next on-site case file review.

New FY 2018 Finding

Finding FY 2018-06 (FY 2017-OB-04 and Finding FY 2016-10): *Abatement Verification and Documentation*

MOSH has not verified and documented abatement for 112 inspection cases which have been open for more than 60 days beyond the first abatement due date.

Discussion: Finding FY 2016-10 indicated that MOSH had not verified and documented abatement for 265 inspection cases which have been open for more than 60 days beyond the first abatement due date. FY 2017-OB-04 indicated that MOSH had not verified and documented abatement for 59 inspection cases which have been open for more than 60 days beyond the abatement due date. Because the number of cases with past due abatement increased significantly, Observation FY 2017-OB-04 was converted back to a finding as FY 2018-07.

Recommendation: MOSH should adhere to its procedures outlined in the Field Operations Manual (FOM) to verify and document that abatement has been completed for all cases where abatement is past due.

Closed FY 2018 Observations

Observation FY 2017-OB-06: *Follow-Up Inspections*

MOSH did not conduct any follow-up inspections in FY 2017.

Status: An OIS inspection report revealed that MOSH conducted three follow-up inspections in FY 2018. This observation is closed.

FY 2017-OB-07: *Complaint Procedures/ Documenting Contact with Complainant*

MOSH does not appropriately document if it attempted to communicate with complainants by email and telephone (when this information is available) regarding potentially serious hazards.

Status: During FY 2018 OSHA was not made aware of any cases where MOSH did not document if it attempted to communicate with the complainant. This observation is closed.

Continued FY 2018 Observations

Observation FY 2018-OB-01 (FY 2017-OB-01): *Unprogrammed Activity (UPA) Documentation Accuracy*

MOSH documented that inspections were initiated prior to the receipt of the associated UPA in 21 of 255 (8.2%) inspections with a linked UPA, skewing data reports and distorting complaint documentation accuracy.

Status: In FY 2017, MOSH documented that inspections were initiated prior to the receipt of the associated UPA in 66 of 261 (25%) inspections with a linked UPA. MOSH has made improvement but OSHA will continue to monitor UPA documentation accuracy. This observation is continued and OSHA will run quarterly reports to assess the status of data entry.

Observation FY 2018-OB-02 (FY 2017-OB-02): *Complaint Response Time by Receipt Date*
In FY 2017, in 20 of 71 (28%) reviewed complaint files, MOSH incorrectly documented that the complaints were received after the actual receipt date, initiating complaint investigations and inspections after the negotiated three- and five-day timeframes.

Status: An on-site case file review is necessary to gather the facts needed to evaluate performance in relation to this observation. This observation is continued and will be a focus during the next on-site case file review.

Observation FY 2018-OB-03 (FY 2017-OB-03): *Complaint Response Procedures*
In six of 17 (35%) valid complaints reviewed in FY 2017, MOSH did not validate the complaint appropriately, responding to the complaints after the negotiated three-day timeframe.

Status: An on-site case file review is necessary to gather the facts needed to evaluate performance in relation to this observation. This observation is continued and will be a focus during the next on-site case file review.

Observation FY 2018-OB-04 (FY 2017-OB-05): *State and Local Government Inspection Goals*

MOSH conducted 114 of 1922 (5.93%) inspections in state and local government – 48 less than its anticipated goal of 162 (8.3%) inspections.

Status: In FY 2017, MOSH conducted 37 of 1,722 (2.15%) inspections in state and local government – 117 less than its anticipated goal of 154 (7.76%) inspections. Although the 114 state and local government inspections in FY 2018 was an improvement from FY 2017, OSHA will continue to monitor MOSH's activities in state and local government, emphasizing the percent of inspections conducted in state and local government each quarter. This observation is continued.

New FY 2018 Observation

Observation FY 2018-OB-05 (Finding FY 2017-05): *Serious Hazard Complaint Documentation/OSHA Information System (OIS)*

MOSH did not document 48 of 146 (33%) of electronic complaints alleging serious hazards in OIS.

Discussion: OSHA deemed 146 of the 491 electronic complaints forwarded to MOSH to contain serious, valid hazards. Of the 146 serious, valid complaints reviewed it was determined that MOSH did not enter 48 (33%) of them into OIS. Overall, of the 491 electronic complaints forwarded to MOSH, 172 (35%) were not entered into OIS. In FY 2017, MOSH failed to enter 40% (65 of 161) of serious, valid complaints into OIS. During FY 2018, MOSH improved by documenting more complaints in OIS; therefore, Finding FY 2017-05 was converted to an observation. OSHA will continue to monitor the status of complaint documentation.

C. State Activity Mandated Measures (SAMM) Highlights

OSHA's previous on-site case file reviews of UPA files determined that multiple discrepancies in

MOSH complaint data entry procedures caused question regarding the data accuracy. It was determined that MOSH's actual performance may not match the reported data.

Each SAMM has an agreed upon FRL which can be either a single number, or a range of numbers above and below the national average. State Plan SAMM data that falls outside the FRL triggers a closer look at the underlying performance of the mandatory activity. Appendix D presents the MOSH's FY 2018 State Activity Mandated Measures (SAMM) Report and includes the FRLs for each measure. MOSHH was outside the FRL on the following SAMMs:

SAMM #2a - Average number of workdays to initiate complaint investigations (state formula):

Discussion of State Plan data and FRL: The FRL for the average number of workdays to initiate complaint investigations is a negotiated fixed total of three days. The FY 2018 SAMM data indicates that MOSH did not initiate complaint investigations within the three-day negotiated timeframe. On average, MOSH initiated complaint investigations within 6.35 days.

Explanation: The federal formula (SAMM#2b) indicates that MOSH conducted complaint investigations in 0.49 days. Based on the federal formula algorithms, the SAMM report indicates that MOSH may be more accurately reporting receipt and valid dates in OIS. An on-site review of complaint files during the next comprehensive FAME will provide more insight.

SAMM#5 - Average number of violations per inspection by violation type:

Discussion of State Plan data and FRL: The FRL for the average number of violations per inspection with violations by violation type is +/- 20% of the three-year national average of 1.82 for serious/willful/repeat (S/W/R) violations which equals a range of 1.46 to 2.18. MOSH's S/W/R average is 2.39 violations per inspection.

Explanation: MOSH is performing above the FRL. Hazard recognition may be attributed to the comprehensive and thorough training provided to compliance staff.

SAMM #6 - Percent of total inspections in state and local government workplaces:

Discussion of State Plan data and FRL: The FRL for inspection in state and local government workplaces is +/- 5% of 8.26% of total inspections that was negotiated in the grant, which equals a range of 7.65% to 8.67% of total inspections. The FY 2018 EOY SAMM indicates that MOSH conducted 114 of 1922 (5.93%) inspections in state and local government – 48 less than its anticipated goal of 162 (8.3%) inspections.

Explanation: MOSH has developed and implemented a Local Emphasis Program (LEP) for state and local government inspections. MOSH also responds to unprogrammed activity at state and local government worksites. Although this statistic is an improvement from FY 2017, OSHA continued this observation.

SAMM #9 – Percent in-compliance:

Discussion of State Plan data and FRL: The FRL for percent in-compliance is +/-20% of the three-year national average of 29.90% for safety, which equals a range of 23.92% to 35.88%, and +/-20% of the three-year national average of 36.10% for health, which equals a range of 28.88% to 43.32%. MOSH's in-compliance rate for safety cases was 16.26% and 28.57% for health cases in FY 2018.

Explanation: MOSH had a positive performance on this SAMM; both in-compliance rates were below the FRL. MOSH's in-compliance rate often surpasses the national average. Hazard recognition may be attributed to the comprehensive and thorough training provided to compliance staff.

SAMM#10 - Percent of work-related fatalities responded to in one workday:

Discussion of State Plan data and FRL: The FRL for percent of work-related fatalities responded to in one workday is a fixed total of 100%. MOSH was unable to respond to two fatalities within 24 hours.

Explanation: A fatality inspection involving a City of York, Pennsylvania police officer who was training at a Baltimore County Police Department facility was delayed as it was necessary for MOSH management to consult with the Office of the Assistant Attorney General to determine the appropriate jurisdiction. The second fatality where MOSH's response was greater than 24 hours involved an employee of an assisted living facility who died on April 21, 2018 in a fire at the facility. Neither the employer nor Anne Arundel County Police or Fire notified MOSH of the incident. Approximately 2.5 weeks after the incident, MOSH was made aware that one of the three victims was an employee.

SAMM #11 - Average lapse time:

Discussion of State Plan data and FRL: The FRL for average lapse time is +/- 20% of the three-year national average of 44.09 days for safety which equals a range of 36.96 to 55.44 days and a three-year national average of 46.20 days for health cases which equals a range of 45.25 to 67.87 days. MOSH's average safety lapse time fell within the FRL at 48.54 days while the health lapse time fell above the FRL at 81.44 days.

Explanation: The increased lapse time in health cases may be attributed to the recent turnover and short tenure of the health compliance staff.

SAMM#12 – Percent penalty retained:

Discussion of State Plan data and FRL: The FRL for percent penalty retained is +/-15% of the three-year national average of 66.81% which equals a range of 56.79% to 76.83%. In FY 2018 MOSH maintained 78.20% of penalties, surpassing the FRL.

Explanation: MOSH continues to maintain penalties above the FRL.

SAMM #13 - Percent of initial inspections with worker walk around representation or worker interview:

Discussion of State Plan data and FRL: The FRL for percent of initial inspections with worker walk around representation or worker interview is a fixed total of 100%. The EOY SAMM indicates that MOSH included workers on 99.58% of inspections in FY 2018.

Explanation: MOSH evaluated the outlying inspections and determined that a data entry error was responsible for the outliers. MOSH corrected the data errors.

Appendix A – New and Continued Findings and Recommendations
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FY 2018-#	Finding	Recommendation	FY 2018-# or FY 2018-OB-#
FY 2018-01	<i>Federal Program Changes</i> MOSH did not take action on Federal Program Changes (FPCs) within the required timeframes.	MOSH should develop a strategy that ensures action is taken on FPCs within the required timeframes.	FY 2017-01
FY 2018-02	<i>Informal Conferences</i> In 80% of the case files reviewed, MOSH held informal conferences beyond the 15 working day contest period, and has not developed or implemented a policy ensuring that employers abate serious hazards when informal conferences were scheduled and held beyond the 15 working day contest period.	MOSH should develop a policy in its FOM ensuring that informal conferences are held within the 15 working day contest period and develop, formalize, and implement a policy requiring serious hazard abatement when informal conferences are held beyond the 15 working day contest period.	FY 2017-02
FY 2018-03	<i>Next-of Kin (NOK) Notification Documentation</i> In eight of 19 (42%) fatality case files, there was no documentation showing that the final NOK letter with the inspection results was sent or that contact was made with family members.	MOSH should develop a strategy to ensure that final NOK letters with inspection results are provided to NOK in all fatality cases.	FY 2017-03
FY 2018-04	<i>Serious Hazard Complaint Validation and Processing Procedures</i> MOSH did not validate and process at least 82 of 146 (56%) electronic complaints from former employees and other complainants alleging serious hazards.	MOSH should adhere to the non-formal complaint processing procedures and requirements set forth in its Field Operations Manual (FOM), and develop a strategy to ensure that all complaints alleging serious hazards are addressed.	FY 2017-04
FY 2018-05	<i>OSHA Information System (OIS)</i> In 36 of 71 (51%) reviewed complaints, the hazardous condition described by the complainant was not documented in OIS.	MOSH should adhere to the procedures outlined in its Field Operations Manual (FOM) and ensure that the hazardous conditions are documented on a MOSH form.	FY 2017-06

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FY 2018-#	Finding	Recommendation	FY 2017-#
FY 2018-06	MOSH has not verified and documented abatement for 112 inspection cases which have been open for more than 60 days.	MOSH should adhere to its procedures outlined in the Field Operations Manual (FOM) to verify and document that abatement has been completed for all cases where abatement is past due.	FY 2017-OB-04

Appendix B – Observations and Federal Monitoring Plans
FY 2018 Maryland Occupational Safety and Health Comprehensive FAME Report

Observation # FY 2018-OB-#	FY 2017-#	Observation	Federal Monitoring Plan	Current Status
FY 2018-OB-01	FY 2017-OB-01	<i>Unprogrammed Activity (UPA) Documentation Accuracy</i> MOSH documented that inspections were initiated prior to the receipt of the associated UPA in 21 of 255 (8%) inspections with a linked UPA, skewing data reports and distorting complaint documentation accuracy.	In FY 2019, OSHA will run quarterly reports to determine how MOSH is documenting the receipt date for UPAs associated with inspections. The outliers will be provided to MOSH for prompt correction.	Continued
FY 2018-OB-02	FY 2017-OB-02	<i>Complaint Response Time by Receipt Date</i> In 20 of 71 (28%) reviewed complaint files, MOSH incorrectly documented that the complaints were received after the actual receipt date, initiating complaint investigations and inspections after the negotiated three- and five-day timeframes.	In FY 2019, OSHA will conduct a review of complaint files to document MOSH's progress documenting complaint receipt dates.	Continued
FY 2018-OB-03	FY 2017-OB-03	<i>Complaint Response Procedures</i> In six of 17 (35%) valid complaints reviewed, MOSH did not validate the complaint appropriately, responding to the complaints after the negotiated three-day timeframe.	In FY 2019, OSHA will conduct a review of complaint files to document MOSH's progress documenting valid dates.	Continued
FY 2018-OB-04	FY 2017-OB-05	<i>State and Local Government Workplace Inspection Goals</i> MOSH conducted 114 of 1,922 (5.93%) inspections in state and local government – 48 less than its anticipated goal of 162 (8.3%) inspections.	OSHA will continue to monitor MOSH's activities in state and local government workplaces, emphasizing the percent of inspections conducted in state and local government workplaces each quarter.	Continued

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FY 2018 Maryland Occupational Safety and Health Comprehensive FAME Report

Observation # FY 2018-OB-#	FY 2017-#	Observation	Federal Monitoring Plan	Current Status
FY 2018-OB-05	FY 2017-05	<i>Serious Hazard Complaint Documentation/OSHA Information System (OIS)</i> MOSH did not document 48 of 146 (33%) of electronic complaints alleging serious hazards.	OSHA will continue to monitor the number of complaints received by MOSH that are entered into OIS quarterly.	New
	FY 2017-OB-04	<i>Abatement Verification and Documentation</i> MOSH has not verified and documented abatement for 59 inspection cases which have been open for more than 60 days.	In FY 2018, OSHA will run a quarterly abatement documentation report and provide MOSH with a list of outliers for prompt action.	Converted to Finding
	FY 2017-OB-06	<i>Follow-Up Inspections</i> MOSH did not conduct any follow-up inspections in FY 2017.	OSHA will continue to monitor the number of follow-up inspections conducted in FY 2018. OSHA will run reports for cases that the MOSH FOM indicates follow-up inspections are appropriate and provide the list to MOSH every quarter.	Closed
	FY 2017-OB-07	<i>Complaint Procedures/ Documenting Contact with Complainant</i> MOSH does not appropriately document if it attempted to communicate with complainants by email or telephone (when this information is available) regarding potentially serious hazards.	OSHA will review case files in FY 2018 to identify how MOSH communicated with complainants to determine if potentially serious hazards were not investigated due to lack of contact with the complainant.	Closed

Appendix C – Status of FY 2017 Findings and Recommendations
FY 2018 Maryland Occupational Safety and Health Comprehensive FAME Report

FY 2017-#	Finding	Recommendation	State Plan Corrective Action	Completion Date	Current Status (and Date if Item is Not Completed)
FY 2017-01	<i>Federal Program Changes</i> MOSH did not take action on Federal Program Changes (FPCs) within the required timeframes.	MOSH should develop a strategy that ensures action is taken on FPCs within the required timeframes.	MOSH is working with DLLR to take action on all overdue FPCs. In FY 2018, MOSH adopted three regulations and one directive.	Not Applicable	Open (March 15, 2018)
FY 2017-02	<i>Informal Conferences</i> In 81% of the case files reviewed, MOSH held informal conferences beyond the 15 working day period.	MOSH should reevaluate and update its Field Operations Manual (FOM) policy to ensure that informal conferences are held within 15 working days.	MOSH will require employers to submit abatement documentation and certification (where applicable) when requesting the informal conference within 15 working days of receiving a citation. MOSH will incorporate this change in its next FOM update during FY 2018.	Not Applicable	Open (March 15, 2018)
FY 2017-03	<i>Next-of Kin (NOK) Notification Documentation</i> In nine of 12 (75%) fatality case files from FY 2015, there was no documentation showing that the final NOK letter with the inspection results was sent or that contact was made with family members.	MOSH should develop a strategy to ensure that final NOK letters with inspection results are provided to NOK in all fatality cases.	MOSH Instruction 16-10 will be updated in FY 2018 to reflect the alternate means of communication and documentation of NOK notification.	Not Applicable	Open (March 15, 2018)

Appendix C – Status of FY 2017 Findings and Recommendations
FY 2018 Maryland Occupational Safety and Health Comprehensive FAME Report

FY 2017-#	Finding	Recommendation	State Plan Corrective Action	Completion Date	Current Status (and Date if Not Completed)
FY 2017-04	<i>Serious Hazard Complaint Validation and Processing Procedures</i> MOSH did not validate and process at least 17 electronic complaints from former employees and other complainants alleging serious hazards.	MOSH should adhere to the non-formal complaint processing procedures and requirements set forth in their Field Operations Manual (FOM), and develop a strategy to ensure that all complaints alleging serious hazards are addressed.	MOSH will adhere to the non-formal complaint processing procedures and requirements set forth in its FOM, and develop a strategy to ensure that all complaints alleging serious hazards are addressed.	Not Applicable	Open (March 15, 2018)
FY 2017-05	<i>Serious Hazard Complaint Documentation/OSHA Information System (OIS)</i> MOSH did not document 65 of 161 (40%) of electronic complaints alleging serious hazards, and did not document all serious complaint allegations received telephonically in OIS.	MOSH should adhere to the complaint processing procedures in its Field Operations Manual (FOM) and document receipt of complaints.	MOSH will adhere to the complaint processing procedures in its FOM and document receipt of all serious complaints. MOSH also established a telephone log on the MOSH shared drive to document all serious complaint allegations received by phone.	Not Applicable	Converted to an Observation (March 15, 2018)

Appendix C – Status of FY 2017 Findings and Recommendations
FY 2018 Maryland Occupational Safety and Health Comprehensive FAME Report

FY 2017-#	Finding	Recommendation	State Plan Corrective Action	Completion Date	Current Status (and Date if Not Completed)
FY 2017-06	<i>OSHA Information System (OIS)</i> In 36 of 71 (51%) reviewed complaints, the hazardous condition described by the complainant was not documented in OIS.	MOSH should adhere to its procedures outlined in its Field Operations Manual (FOM) and ensure that the hazardous conditions are documented on a MOSH form.	MOSH has provided training to staff about entering the hazardous conditions described by the complainant into OIS.	Not Applicable	Open (March 15, 2018)

Appendix D – FY 2018 State Activity Mandated Measures (SAMM) Report

FY 2018 Maryland Occupational Safety and Health Follow-up FAME Report

U.S. Department of Labor				
Occupational Safety and Health Administration State Plan Activity Mandated Measures (SAMMs)				
State Plan: Maryland – MOSH			FY 2018	
SAMM Number	SAMM Name	State Plan Data	Further Review Level	Notes
1a	Average number of work days to initiate complaint inspections (state formula)	4.98	5	The further review level is negotiated by OSHA and the State Plan.
1b	Average number of work days to initiate complaint inspections (federal formula)	2.90	N/A	This measure is for informational purposes only and is not a mandated measure.
2a	Average number of work days to initiate complaint investigations (state formula)	6.35	3	The further review level is negotiated by OSHA and the State Plan.
2b	Average number of work days to initiate complaint investigations (federal formula)	0.49	N/A	This measure is for informational purposes only and is not a mandated measure.
3	Percent of complaints and referrals responded to within one workday (imminent danger)	N/A	100%	N/A – The State Plan did not receive any imminent danger complaints or referrals in FY 2018. The further review level is fixed for all State Plans.
4	Number of denials where entry not obtained	0	0	The further review level is fixed for all State Plans.

Appendix D – FY 2018 State Activity Mandated Measures (SAMM) Report

FY 2018 Maryland Occupational Safety and Health Follow-up FAME Report

SAMM Number	SAMM Name	State Plan Data	Further Review Level	Notes
5	Average number of violations per inspection	SWRU: 2.39	+/- 20% of SWRU: 1.82	The further review level is based on a three-year national average. The range of acceptable data not requiring further review is from 1.46 to 2.18 for SWRU and from 0.78 to 1.18 for OTS.
		Other: 1.38	+/- 20% of Other: 0.98	
6	Percent of total inspections in state and local government workplaces	5.93%	+/- 5% of 8.26%	The further review level is based on a number negotiated by OSHA and the State Plan through the grant application. The range of acceptable data not requiring further review is from 7.85% to 8.67%.
7	Planned v. actual inspections – safety/health	S: 1,832	+/- 5% of S: 1,878	The further review level is based on a number negotiated by OSHA and the State Plan through the grant application. The range of acceptable data not requiring further review is from 1,784.10 to 1,971.90 for safety and from 78.85 to 87.15 for health.
		H: 90	+/- 5% of H: 83	

Appendix D – FY 2018 State Activity Mandated Measures (SAMM) Report

FY 2018 Maryland Occupational Safety and Health Follow-up FAME Report

SAMM Number	SAMM Name	State Plan Data	Further Review Level	Notes
8	Average current serious penalty in private sector – total (1 to greater than 250 workers)	\$682.2 6	+/- 25% of \$2,603.32	The further review level is based on a three-year national average. The range of acceptable data not requiring further review is from \$1,952.49 to \$3,254.15.
	a. Average current serious penalty in private sector (1-25 workers)	\$591.2 7	+/- 25% of \$1,765.19	The further review level is based on a three-year national average. The range of acceptable data not requiring further review is from \$1,323.89 to \$2,206.49.
	b. Average current serious penalty in private sector (26-100 workers)	\$938.5 9	+/- 25% of \$3,005.17	The further review level is based on a three-year national average. The range of acceptable data not requiring further review is from \$2,253.88 to \$3,756.46.
	c. Average current serious penalty in private sector (101-250 workers)	\$1,042. 79	+/- 25% of \$4,203.40	The further review level is based on a three-year national average. The range of acceptable data not requiring further review is from \$3,152.55 to \$5,254.25.
	d. Average current serious penalty in private sector (greater than 250 workers)	\$1,490. 89	+/- 25% of \$5,272.40	The further review level is based on a three-year national average. The range of acceptable data not requiring further review is from \$3,954.30 to \$6,590.50.

Appendix D – FY 2018 State Activity Mandated Measures (SAMM) Report

FY 2018 Maryland Occupational Safety and Health Follow-up FAME Report

SAMM Number	SAMM Name	State Plan Data	Further Review Level	Notes
9	Percent in-compliance	S: 16.26%	+/- 20% of S: 29.90%	The further review level is based on a three-year national average. The range of acceptable data not requiring further review is from 23.92% to 35.88% for safety and from 28.88% to 43.32% for health.
		H: 28.57%	H: 36.10%	
10	Percent of work-related fatalities responded to in one workday	84.62%	100%	The further review level is fixed for all State Plans.
11	Average lapse time	S: 48.54	+/- 20% of S: 46.20	The further review level is based on a three-year national average. The range of acceptable data not requiring further review is from 36.96 to 55.44 for safety and from 45.25 to 67.87 for health.
		H: 81.44	+/- 20% of H: 56.56	
12	Percent penalty retained	78.20%	+/- 15% of 66.81%	The further review level is based on a three-year national average. The range of acceptable data not requiring further review is from 56.79% to 76.83%.
13	Percent of initial inspections with worker walk around representation or worker interview	99.58%	100%	The further review level is fixed for all State Plans.
14	Percent of 11(c) investigations completed within 90 days	42%	100%	The further review level is fixed for all State Plans.

Appendix D – FY 2018 State Activity Mandated Measures (SAMM) Report

FY 2018 Maryland Occupational Safety and Health Follow-up FAME Report

SAMM Number	SAMM Name	State Plan Data	Further Review Level	Notes
15	Percent of 11(c) complaints that are meritorious	21%	+/- 20% of 24%	The further review level is based on a three-year national average. The range of acceptable data not requiring further review is from 19.20% to 28.80%.
16	Average number of calendar days to complete an 11(c) investigation	171	90	The further review level is fixed for all State Plans.
17	Percent of enforcement presence	1.84%	+/- 25% of 1.24%	The further review level is based on a three-year national average. The range of acceptable data not requiring further review is from 0.93% to 1.55%.

Note: Fiscal Year 2018 is the third year since the transition from the NCR (OSHA's legacy data system) began that all State Plan enforcement data has been captured in OSHA's Information System (OIS). Therefore, the national averages on this report are three-year rolling averages. Unless otherwise noted, the data contained in this Appendix D is pulled from the State Activity Mandated Measures (SAMM) Report in OIS and the State Plan WebIMIS Report run on November 13, 2018 as part of OSHA's official end-of-year data run.

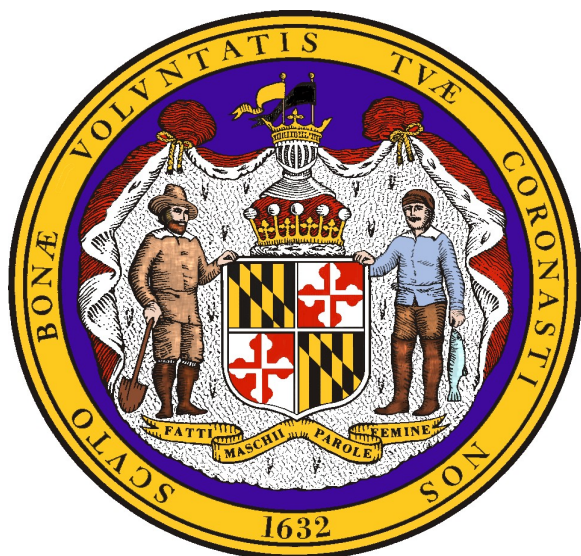
SOAR - State OSHA Annual Report: Maryland Occupational Safety and Health Compliance Annual Report for Fiscal Year 2018

December 2018



Maryland Division of Labor and Industry

*Maryland Occupational Safety
and Health (MOSH)*



Larry Hogan, Governor
Kelly M. Schulz, Secretary
Matthew S. Helminiak, Commissioner
William E. Dallas, Assistant Commissioner

Appendix E – FY 2018 State OSHA Annual Report (SOAR)
FY 2018 MOSH Follow-up FAME Report

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FY 2018 MOSH Follow-up FAME Report

Section 1: Year in Review

Fiscal year 2018 (FY18) was the first year of the Maryland Occupational Safety and Health (MOSH) new five-year Strategic Plan. MOSH has accomplished several goals this year and is on track to complete all of the annual and five-year goals. During FY18, MOSH welcomed eight new safety compliance officers and four new industrial hygienists. Additionally, a Safety Compliance Officer III moved to Consultation to fill a vacancy.

In FY18, the Voluntary Protection Program (VPP) unit awarded Star Recognition VPP status to three new sites and received an application for another company. VPP also performed four pre-application visits.

During FY18, the Strategic Partnership for Excellence in Construction Safety (SPECS) agreement was signed with Associated Builders and Contractors, Inc., (ABC). Three construction companies were recognized as Partner Contractors and an application was received from another contractor.

On August 14, 2018, MOSH signed their 90th Cooperative Compliance Partnership (CCP) since the inception of the program in 1997. During FY18, MOSH signed seven new CCP partnerships with general contractors. The total project value of these partnerships is estimated at \$523M.

The Training and Education Unit offered 79 educational seminars covering 30 topics at no cost to the employees and employers in Maryland. Federal employees and contractors also attended some of these training events.

In July 2018, the MOSH Research and Statistics unit completed the reference year 2017 data collection for the Bureau of Labor Statistics Survey of Occupational Injuries and Illnesses (SOII) program. The statistics generated from this employer-based survey are the U.S. government's official accounting of the safety and health issues facing America's workplaces. The SOII charts the nature and magnitude of occupational injuries and illnesses across the United States. The dedication and perseverance of the Research and Statistics staff helps ensure that MOSH has reliable and timely occupational injury and illness data at its disposal for industry outreach initiatives and other surveillance purposes.

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Instructions and Standards Notices

One MOSH Instruction and four Standard Notices were issued in FY18.

MOSH Instructions and Standards Notices Issues in FY18			
<i>OSHA Directive/Standards</i>	<i>Topic</i>	<i>MOSH Instructions/Standards Notices</i>	<i>Effective Date</i>
CSP 02-00-003	Consultation Policies and Procedures Manual	MI 18-1	June 12, 2018
MOSH Standards Notice	Walking-Working Surfaces	MS 18-1	April 23, 2018
MOSH Standards Notice	Electric Power Generation, Transmission & Distribution Standard	MS 18-2	April 23, 2018
MOSH Standards Notice	Respirable Crystalline Silica Construction	MS 18-3	July 18, 2018
MOSH Standards Notice	Respirable Crystalline Silica General Industry	MS 18-4	July 18, 2018

MOSH Instructions and Standard Notices are available online at:

<http://www.dllr.state.md.us/labor/instructions/>

<http://www.dllr.state.md.us/labor/standards/>

Staff Training

During FY18, MOSH sent 17 compliance officers to 9 different technical training courses offered by the Occupational Safety and Health Administration (OSHA) Training Institute (OTI) in Chicago, Illinois. Additionally, in April and May 2018, MOSH brought two OTI courses to the Hunt Valley (HV), Maryland office; these were attended by 41 MOSH compliance officers.

Topics of Study	
Applied Welding Principles	Fall Protection
Cranes and Materials Handling for General Industry	Introduction to Health Standards for Industrial Hygienists
Excavation, Trenching and Soil Mechanics	Machine Guarding and Hazardous Energy Control
Expanded Health Standards	Principles of Ventilation
Introduction to On-Site Consultation	Principles of Scaffolding*
Inspection Techniques and Legal Aspects*	

*HV: MOSH Hunt Valley, Maryland Office

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In May 2018, MOSH partnered with Department of Natural Resources in Work2LiveWELL, Governor Hogan's new job training initiative program. This was a new initiative program to provide opportunities in tree care work for Baltimore City young adults. MOSH gave a presentation on tree care safety to the potential entry-level employees.

Three MOSH compliance officers obtained the Construction Health Safety Technician (CHST) certification, one compliance officer obtained the Associated Safety Professional (ASP) certification.

Consultation received hands-on fall protection training from the Maryland Fire and Rescue Institute (MFRI). Included in the training was the opportunity to work from a 4 in 12 slope roof while installing roofing materials. This training provided consultants with first-hand experience of the difficulties faced by construction industry workers.

Organizational Changes

In the spring and summer of 2018, MOSH welcomed its newest class of inspectors. The new trainees consisted of eight safety compliance officers and four industrial hygienists. Each trainee participated in a training curriculum that consisted of classroom-style training and field training with senior compliance officers.

The Industrial Hygiene unit gained four new industrial hygienists, increasing the total number of industrial hygienists (IH) in the unit to eleven. One inspector was assigned to the MOSH Hagerstown office and another is slated to transition to the MOSH Easton office. MOSH has been focusing on providing classroom and on-the-job training to the four new inspectors, and direct support and assistance to the rest of the IH team.

Section 2: Unit Review

Enforcement

According to the OSHA derived State Activity Mandated Measures (SAMM) report, MOSH compliance officers opened 1,922 enforcement inspections in FY18, including 1,832 safety inspections and 90 health inspections. MOSH projected 1,961 inspections would be conducted; the agency was able to accomplish 98% of that goal.

Compliance officers continued to focus their efforts on the industries in Maryland that had high injury and illness rates. Of the 1,922 enforcement inspections, 1,639 (85%) were conducted under one or more of the state's Local Emphasis Programs (LEP) and 168 (9%) of the inspections were conducted under one or more of the adopted National Emphasis Programs (NEP). MOSH compliance officers investigated approximately 132 accidents, an increase of 30 from FY17. According to the SAMM issued by federal OSHA, MOSH investigated 13 workplace fatalities, with 11 being opened within one day of notification.

According to the end-of-year SAMM, MOSH was able to initiate complaint inspections within an average of 4.98 days, which is below the five-day average. Complaint investigations were initiated

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within an average of 6.35 days. There were no instances where a compliance officer did not gain entry into a facility after an employer originally denied the inspection.

According to SAMM Measure 5, MOSH compliance officers and industrial hygienists averaged 2.39 serious, willful, or repeat violations and 1.38 other-than-serious violations per case, totaling an average of 3.77 violations per case file.

MOSH's average penalty per serious violation was \$682.26. MOSH issued an average penalty of \$591.27 per serious citation for employers with 25 employees or fewer, \$938.59 for employers between 26 and 100 employees, \$1,042.79 for employers between 101 and 250, and \$1,490.89 for employers with over 250 employees. MOSH will continue to follow its Field Operations Manual (FOM) and applicable policies regarding penalty levels. Based on the most recent U.S. Bureau of Labor Statistics' data, of the 41 states and the District of Columbia, where occupational injury and illness data are available, Maryland's private sector total recordable case incidence rate was 2.6 injuries and illnesses per 100 full-time equivalent workers for 2017. By contrast, the U.S. private sector rate was 2.8. Significance testing shows that the difference in these two rates is statistically significant. Maryland's rate was 7% below the U.S. private sector average. Maryland was one of 15 states and the District of Columbia whose total recordable case incidence rate was statistically lower than the national average.

According to SAMM Measure 9, there were 1,740 safety inspections completed with 16.26% in compliance. There were also 70 qualifying health inspections completed with 28.57% of them being in compliance. According to MOSH documentation, over 83% of health inspections in FY18 were un-programmed, of which 52% were complaints.

Just under 6% of all MOSH inspections were completed in the public sector. MOSH continued to use an LEP to help focus on public sector establishments. While MOSH recognizes that this number is still below our projected goal for public sector inspections, it is an area where recent focus has created a significant increase over past fiscal years. This focus will continue to increase the public sector inspection numbers going forward, allowing MOSH to better reach the goal.

Lapse time (number of days from inspection open date to citation issuance date) increased from FY17, for both safety and health. As the new class of trainees began to write their own cases, the number of reviews and time spent on each case increased as they learned the process. During FY18, safety inspections averaged just over 48 days and health inspections averaged just over 81 days.

Case Highlights

Entrapment in Excavation Results in the Death of a 19-Year-Old Worker

On May 30, 2018, a subcontractor for Baltimore City was sent to a city pool to clear a sanitary sewer line. The sanitary sewer line had a break in the pipe that required a section of the pipe to be excavated and replaced. On June 4, 2018, excavation of the pipe began late in the afternoon. On June 5, 2018, the crew returned to the site to continue the excavation of the pipe. The crew dug down approximately 15 to 18 feet to find the pipe. The pipe was partway exposed allowing water to accumulate in the bottom of the excavation. Two employees were working in the bottom of the excavation to expose the broken area of the pipe. One employee had to stand on the edges of a traffic cone due to the accumulation of water and mud in the bottom of the excavation. At approximately 3:15 p.m., the east wall collapsed trapping

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one employee under the soil of the east wall. Citations issued to the employer included: not providing cave-in protection; not having a competent person on site; allowing the accumulation of water in the bottom of the trench; not providing hard hats for employees working in excavation; and not training employees in the hazards associated with excavation work. Four of the citations were characterized as willful and the MOSH egregious policy was applied to two of the willful citations. MOSH issued Total Proposed Penalties of \$277,050.00.

Transferring Liquid Nitrogen

In April 2018, MOSH responded to a referral of the potential hazardous use of liquid nitrogen transfer process and usage at a restaurant in North Bethesda, Maryland. MOSH industrial hygienists observed employees transferring liquid nitrogen from a pressurized cylinder into coffee airpots for storage and use in crafting cocktails. Liquid nitrogen, a cryogenic liquid that can freeze human tissue on contact, was used to create a “caldron effect” in cocktails, to cool beverage glasses prior to filling, and to pour into a cold-brew glass coffee tower during a liquor infusion process. The transfer of bulk liquid nitrogen into coffee airpots was not conducted through a closed system, which exposed employees to potential hypoxia and asphyxiation due to nitrogen displacement. The transfer occurred in a storage room without continuous or adequate ventilation, without an emergency shut-off device, and without an oxygen monitoring system to warn of an oxygen deficient atmosphere. In the event of an accidental release of a full cylinder of liquid nitrogen, the liquid nitrogen would expand to nitrogen gas, exceeding the volume of the room and displacing all oxygen. Personal protective equipment, including water-resistant cryogenic gloves and a face shield, were provided only during the transfer of liquid nitrogen from the cylinder to the airpots but were not provided or required for use in the bar area. Eye protection was not provided to any employees.

Citations were recommended for, among other things, potential hypoxia and asphyxiation due to nitrogen displacement; the use of inappropriate containers for liquid nitrogen storage and handling; failure to provide and require adequate personal protective equipment during transfer, dispensing, and handling; and failure to provide effective training to employees working with liquid nitrogen.

Consultation

MOSH has one public sector safety consultant in 23(g). When there are specific health concerns on a public sector site, one of the industrial hygiene consultants from 21(d) will temporarily transfer and perform the health visit. The MOSH public sector consultant attended the Principles of Scaffolding and Hands-on Fall Protection training in FY18. There were 66 public sector site visits completed; 55 were initial safety visits, three were safety follow-up visits, and eight were initial health visits. The goal of 61 visits was exceeded. All public sector requests for service were filled and promotional activities were conducted throughout the year.

Assistance was provided to the Outreach unit through speaker requests, and seminar presentations by the public sector safety consultant. All of the employer surveys received by the Consultation Unit rated the service provided by MOSH public sector consultant(s) as “excellent.”

Outreach

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Cooperative Compliance Partnerships (CCP)

Seven new partnerships were signed in FY18 with various general contractors throughout the state of Maryland. The estimated value of these projects totaled over \$523M. On August 14, 2018, MOSH signed their 90th partnership since the inception of the program in 1997. Several new applications are currently going through the review process and are likely to become new partnerships in FY19.

The CCP Unit performed 25 site visits and conducted 100 inspections on some of the largest construction projects in the state of Maryland. The CCP team removed 3,476 employees from the 162 hazards found on these sites. At the end of FY18, there were eight active CCP sites.

Companies Awarded a Partnership in FY18

Company Name	Project Name	Signing Date	Project Value
The Whiting-Turner Contracting Company	Kennedy Krieger Inst. New Ashland. OP Center	12/18/2017	\$39 M
The Whiting-Turner Contracting Company	North Dorchester High School Replacement	1/18/2018	\$43 M
The Whiting-Turner Contracting Company	Ronald McDonald House	2/14/2018	\$25 M
Donohoe Construction Company	One Light Street	2/22/2018	\$122 M
The Whiting-Turner Contracting Company	UMBC Interdisciplinary Life Science Building	3/19/2018	\$95 M
Gilbane Building Company	Cole Field House Phase II	6/27/2018	\$115 M
Wagman Heavy Civil, Inc.	I-270 at Watkins Mill Road Interchange	8/14/2018	\$84M

Active CCP Sites as of End FY18

Company Name	Project Name	Expected Completion Date
The Whiting-Turner Contracting Company	Kennedy Krieger Inst. New Ashland. OP Center	11/2/2018
The Whiting-Turner Contracting Company	Ronald McDonald House	11/30/2018
Lendlease Construction	414 Light Street	12/31/2018
Donohoe Construction Company	One Light Street	3/30/2019

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The Whiting-Turner Contracting Company	UMBC Interdisciplinary Life Science Building	4/30/2019
Gilbane Building Company	Cole Field House Phase II	12/1/2019
The Whiting-Turner Contracting Company	North Dorchester High School Replacement	5/31/2020
Wagman Heavy Civil, Inc.	I-270 at Watkins Mill Road Interchange	6/30/2020

Voluntary Protection Program (VPP) - Star Only

The VPP unit awarded three new Star-designated sites with VPP status, and received two applications and approved three in FY18. The onsite evaluation is scheduled for the first quarter of FY19. The unit also performed four pre-application visits and continues to work with each company. The VPP program manager attended the Region III and National VPP Participants' Association, Inc. (VPPPA) conferences in FY18. A Special Government Employee (SGE) training course will be conducted in Galena, Maryland, in FY19. The Maryland VPP continues to support the OSHA and VPPPA SGE program by using SGEs as mentors.

Active VPP Sites FY18		
<i>Approval Date</i>	<i>STAR Designated Site</i>	<i>Location</i>
3/7/2003	Frito-Lay	Aberdeen
11/5/2005	Performance Pipe	Hagerstown
3/3/2006	Covanta Energy	Dickerson
11/27/2006	Monsanto Galena Research Station	Galena
3/12/2007	Wheelabrator	Baltimore
6/17/2008	Sherwin Williams	Crisfield
5/25/2009	Clean Harbors Environmental Services	Baltimore

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6/18/2009	Thermo Fisher Scientific	Frederick
8/15/2011	Covanta Montgomery Transfer Station	Derwood
3/7/2012	Sherwin Williams	Beltsville
3/13/2012	(Raytheon) Solipsys Corp.	Fulton
6/6/2012	GE Healthcare	Laurel
10/31/2015	Cintas Corporation 42	Baltimore
12/29/2015	Sherwin Williams	Baltimore
3/4/2016	Cintas Corporation 387	Frederick
3/4/2016	Cintas Corporation 41	Landover
5/5/2016	Cintas Corporation 393	Hughesville
5/9/2016	Raytheon IIS Riverdale	Riverdale
2/21/2017	Stinger Ghaffarian Technologies	Lanham
2/2/2018	Cintas Corporation D52 Fire Protection Division	Jessup
4/2/2018	Cintas Corporation 386	Cumberland
4/2/2018	Cintas Corporation B22 (CRT)	Cumberland

Strategic Partnership for Excellence in Construction Safety (SPECS)

The Strategic Partnership for Excellence in Construction Safety (SPECS) agreement was signed with Associated Builders and Contractors, Inc., (ABC). Three construction companies were recognized as

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Partner Contractors: Coakley-Williams Construction Inc., Forrester Construction Company, and Scaffold Resources, LLC. An application was also received from another in FY18.

Active SPECS Partner Contractors FY18	
<i>Company</i>	<i>Location</i>
Coakley-Williams Construction Inc.	Bethesda
Forrester Construction Company	Rockville
Scaffold Resources, LLC	Lanham

Safety and Health Achievement Recognition Program (SHARP)

Please refer to the FY18 Consultation Annual Program Report (CAPR) for these results.

Education Unit

In FY18, the Training and Education Unit was able to offer 79 educational seminars covering 30 topics at no cost to the employees and employers in Maryland, including many federal employees and contractors. Most of the seminars were taught by MOSH compliance officers and consultants and were offered at locations throughout the state. Just over 1,600 employees and employers participated in the half-day and full-day seminars. MOSH also offered employers the opportunity to request speaking engagements where compliance officers gave presentations on relevant, technical safety and health topics. In FY18, 110 different employers, institutions, and government agencies requested a MOSH compliance officer to speak at their job site. MOSH speakers spent over 170 hours presenting various safety and health topics to over 4,200 employees at these speaking engagements. MOSH continues to consider teen safety to be an important topic to cover with high school students who are preparing to enter the workforce. Each year MOSH completes numerous speaker requests at various high schools throughout the state. In FY18, MOSH spent over 50 hours speaking to 728 students at 21 different events about workplace hazards.

Educational Seminars Offered in FY18

Course Name	Course Name
Accident Investigation	Introduction to OSHA Recordkeeping
Blood Borne Pathogens	Job Safety Analysis
Characteristics of an Effective Safety & Health Program	Lead in Construction

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Confined Spaces	Machine Guarding
Construction Site Safety I	MD Tree Care & Removal
Construction Site Safety II	Occupational Exposure to Noise
Electrical Safety & Lockout Tagout	Personal Protective Equipment
Emergency Response and Disaster Preparedness	Powered Industrial Truck Safety
Excavation Safety	Respiratory Protection
Fall Protection – Construction	Scaffolding Safety in Construction
General Industry – I	Seguridad en la Construction
General Industry – II	This is MOSH
Hand and Power Tool Safety	Walking-Working Surfaces
Hazard Communication	Workplace Hazard Assessment
Heat Stress	Workplace Violence

Conclusion

In FY18, MOSH increased staffing levels and further developed inspectors from the FY17 and FY16 new hire classes. Moreover, the number of enforcement inspections increased significantly compared to previous years. MOSH remains committed to its mission of ensuring the safety and health of Maryland workers.

APPENDIX A

Summary of Annual Performance Plan Goals for MOSH FY18

- Performance Goal 1.1 – Total Reduction in the Fatality Rate by 1% in FY18 (5% by end of FY22)
- Performance Goal 1.2 – Reduce the rate of occupational injuries and illnesses in Maryland’s private sector by 1% (5% by end of FY22)
- Performance Goal 2.1 – Increase Recognition Programs from 19 to 20 in FY18 (5 New Recognition programs by the end of FY22)
- Performance Goal 2.2 – Increase Cooperative Partnerships from 84 to 87 in FY18 (add 15 new Cooperative Partnerships by the end of FY22)
- Performance Goal 2.3 – Maintain attendance in MOSH outreach and training programs annually at 6,000 participants
- Performance Goal 3.1 – Percent of fatality and catastrophe inspections initiated within one working day of notification maintained at least 100% in FY18
- Performance Goal 3.2 – Serious complaint inspections are initiated within an average of five working days of notification
- Performance Goal 3.3 – Percent of discrimination complaint investigations completed within 90 days is at least 90%
- Performance Goal 3.4 – Percent of polled responses from MOSH website users indicating a positive overall experience established at 90% by end of 2018
- Performance Goal 3.5 – 90% of responding employers are satisfied with the consultation visit received
- Performance Goal 3.6 – Provide prompt consultation service

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APPENDIX B

Program Activity Projections:

Total Inspections- Enforcement				
	Safety		Health	
	Projected	Actual	Projected	Actual
Private Sector Inspections (FY17 Safety 1607; Health 79)	1728	1739	71	69
Public Sector Inspections (FY17: Safety 23; Health 14)	150	93	12	21
Total	1878	1832	83	90

Projected Inspection - Consultation		
	Safety	Health
21(d)	237*	72*
23(g)	53**	8**

Total Inspections – Consultation

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* For results of the 21(d) consultation unit please see the FY18 CAPR

** In all, sixty-six 23g consultation visits were conducted. Fifty-five were initial visits, three were follow-up visits and eight were initial health visit.

Performance Standards

Strategic Goal 1: Improve workplace safety and health through compliance assistance and enforcement of occupational safety and health regulations.

Performance Goal 1.1: Total Reduction in the Fatality Rate by 1% in FY 18 (5% by end of FFY 2022)

Performance Goal 1.2: Reduce the rate of occupational injuries and illnesses in Maryland's private sector by 1% (5% by end of FFY 2022)

Unit Responsible (date source)	Performance Indicator	Result	Comments
Enforcement/ Compliance Assistance	Perform inspection and intervention activity in the following areas: <u>Industry</u> 2018 Projected	<u>Industry</u> 2018 Actual	NOTE: The Maryland private sector DART rate for reference year (RY) 2017 decreased to 1.5 injuries and illnesses per 100 equivalent full-time workers. MOSH had one 23(g) public sector consultant. All parameters for consultation can be found in the FY18 CAPR.
Consultation	a. Construction (NAICS 230).....1327	a. Construction (NAICS 230)1574	
Integrated Management Information System [IMIS] (numerator) and the Maryland Quarterly Census of Employment and Wages [QCEW] Program (denominator)	b. Other high-hazard industries442	Other high-hazard industries106 (NAICS 110,510-560,610-620,710-720,810)	
	CS 110,510-560,610-620,710-720,810	Public Sector 116	
	Public Sector..... 177	Manufacturing (NAICS 310-330)...86	
	Manufacturing (NAICS 310-330).155	Trade, Transportation, Utilities..... 98	
	Trade, Transportation, Utilities110	(NAICS 220,420-450,480-490)	
	AICS 220,420-450,480-490)		
	Conduct the following number of Consultation visits:	ustry 2018	
	<u>Industry</u>	Construction (NAICS 230).....See CAPR	
	a. Construction (NAICS 230)158	Other high-hazard industries.....See CAPR	

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(BLS survey of occupational injuries and illnesses)	b. Other high-hazard industries.....24 CS 110,510-560,610-620,710-720,810 Public Sector..... 61 Manufacturing (NAICS 310-330) 91 Trade, Transportation, Utilities36 AICS 220,420-450,480-490)	AICS 110,510-560,610-620,710-720,810 Public Sector 66 Manufacturing (NAICS 310-330)...See CAPR Trade, Transportation, Utilities.....See CAPR AICS 220,420-450,480-490) See CAPR for consultation results on Goal 1.2	
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Strategic Goal 2: Promote a safety and health culture through Cooperative Programs, Compliance Assistance, On-site Consultation Programs, Outreach, Training and Education, and Informative Services.

Performance Goal 2.1: Increase Recognition Programs from 19 to 20 in FY 18 (5 new Recognition programs by end of FY2022)

Unit Responsible (data source)	Performance Indicator	Result	Comments
Compliance Assistance (report from consultation unit and VPP unit)	Increase Recognition Programs by one new company for FY18.	There were three VPP Star Designated sites added for FY 18.	The VPP unit awarded three new Star Designated sites with VPP status, and received two applications and approved three in FY18.

Performance Goal 2.2: Increase Cooperative Partnerships from 84 to 87 (add 15 new cooperative partnerships by the end of FY 2022)

Unit Responsible (data source)	Performance Indicator	Result	Comments
Compliance Assistance	Increase MOSH Cooperative Partnerships by 3 new partnerships in 2018.	MOSH signed seven new cooperative partnerships in FY18.	MOSH signed their 90th partnership since the inception of the program twenty years ago.

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(report from partnership and alliance unit)			
Performance Goal 2.3: Maintain attendance in MOSH outreach and training programs annually at 6,000 participants			
Unit Responsible (data source)	Performance Indicator	Result	Comments
Compliance Assistance (report from training and education unit)	Maintain the total number of trainees/participants anticipated to be affected by outreach activities in the areas covered by MOSH LEP's, current SST, and Federal NEP's including formal training, workshops, seminars, speeches, conferences, and informal worksite training at 6,000.	The total number of employees/employers participating in MOSH outreach and training programs in FY18 was approximately 5,857. The total number of participants in the full day and half-day educational seminars was approximately 1,610. There were approximately 4,247 participants in total speaking engagements done by MOSH personnel. MOSH spent over fifty hours speaking to 728 high school students at twenty-one different events about workplace hazards.	The annual goal of 6,000 participants achieved at 98%. The MOSH Training and Education Unit continues to develop, train, and support senior compliance officers to complete speaker requests and teach seminars.

Performance Goal 3.1: Percent of fatality and catastrophe inspections initiated within one working day of notification maintained at least 100%			
Unit Responsible (data source)	Performance Indicator	Result	Comments
Enforcement/ Compliance Assistance (OIS/IMIS)	Percentage of fatal case investigations initiated within one working day of notification.	According to SAMM Measure 10, MOSH investigated thirteen workplace fatalities, with eleven opened within one day of notification.	One fatality where MOSH's response was greater than 24 hours involved a City of York, PA police officer undergoing training conducted by the Baltimore County Police Department at one of their facilities. Discussions ensued with MOSH

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			<p>management and the Office of the Assistant Attorney General regarding jurisdiction.</p> <p>The other incident of MOSH not responding within 24 hours involved an employee of an assisted living facility who died on April 21, 2018 in a fire in the facility where she worked. Neither the employer nor Anne Arundel County Police or Fire notified MOSH of the incident. Not until approximately 2.5 weeks later did MOSH learn that one of the three victims was an employee.</p>
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Performance Goal 3.2 – Serious complaint inspections are initiated within an average of five working days of notification			
Unit Responsible (data source)	Performance Indicator	Result	Comments
Enforcement/ Compliance Assistance (OIS/IMIS) SAMM Report	Serious complaint inspections are initiated within an average of five days of notification.	In FY18 MOSH initiated complaint inspections within an average of 4.98 days.	This goal was exceeded. MOSH focuses many resources on ensuring serious complaints are investigated as quickly as possible.

Performance Goal 3.3: Percent of discrimination complaint investigations completed within 90 days maintained at least at 90%			
Unit Responsible (data source)	Performance Indicator	Result	Comments
Enforcement/ Compliance Assistance	Percent of discrimination complaint	According to the IMIS report, there were eighteen new discrimination complaints	The unit continues to work towards getting complaints completed within the negotiated timeframe.

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(whistleblower web-based application)	investigations completed within 90 days.	received, and twenty-four completed, in FY18. Of those, ten (42%) were completed within the 90-day timeframe.	
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Performance Goal 3.4: Percent of polled responses from MOSH website users indicating a positive overall experience established at 90% by 2018

Unit Responsible (date source)	Performance Indicator	Result	Comments
Enforcement/ Compliance Assistance	This is a continuing Performance Goal carried over from the previous 5-year Strategic Plan, whereas, 90% of website users indicate a positive overall experience when polled at the end of the five-year Strategic Plan.	In 2017, the DLLR launched an expanded outreach program to support interdepartmental training, information dissemination, and communication. MOSH continues to work towards better content management and can update the website on a more timely basis. MOSH is still working toward the goal of having a poll online for users to fill out. MOSH has also continued to utilize social media links such as our website, DLLR Facebook page, and the State of Maryland YouTube page. We use the DLLR Facebook page to keep Maryland employers and employees up to date on the latest safety & health information, educational seminars, and local agency news. We use the two YouTube videos to inform employees and employers about MOSH's mission. The videos are shown at all our educational seminars	The agency continues to support a user-friendly website. As we move forward we continue to make all of our processes and information easier to find for the final user. We continue with our efforts to make a “two click” process to locate information such as ordering publications, filing a complaint, and registering for our seminars.
Consultation (online review of website)	Consultation will share in the technical development of the website and continue to maintain their Federal OSHA requirements, current information, and forms.		

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		and at safety conference informational booths.	
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Performance Goal 3.5: 90% of responding employers are satisfied with the consultation visit received			
Unit Responsible (data source)	Performance Indicator	Result	Comments
Consultation (returned and completed DLLR external customer survey from)	Percent of responding employers that rate “overall satisfaction” as satisfactory or better.	All employer surveys received from our public sector consultant(s) were rated as “excellent.” Please see the FY18 CAPR for information on our private sector consultants.	This measure was exceeded for our public sector consultant(s).

Performance Goal 3.6: Provide prompt consultation service			
Unit Responsible (data source)	Performance Indicator	Result	Comments
Consultation (OIS reports)	On average, small high-hazard employers are visited within thirty days of their request for an initial visit; on average, initial visit reports are mailed within twenty	On average, the initial high-hazard public sector visits were conducted thirteen days after their request, and the initial visit reports were mailed seven days after the closing conference.	MOSH met both time requirements.

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	days of the closing conference. Public sector only – see CAPR for private sector.		