Navy Industry Leadership Meeting

07 August 2019

Presented to:

Navy & Industry Ship Repair and Modernization Leadership

Presented by:

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NAVSEA
NAVAL SEA SYSTEMS COMMAND

USS GUNSTON HALL(LSD 44)

Incident Background:

- **Year 2015 hot work initiated fire involving combustibles not removed from beneath work area**
- **Occurred while in private shipyard, Portsmouth VA area**
- **Cutting hole through deck via plasma arc**
- **Did not properly follow hot work requirements**

- **Only combustibles immediately below cut were covered, rack full of combustibles immediately adjacent remained uncovered**
- **Slag from arc bounced off pipe below cut and into bottom of combustibles**
- **<u>Repairs exceeded $44 Million</u>**

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USS OSCAR AUSTIN (DDG 79)

Incident Background:

- Year 2018. Occurred while in private shipyard, Norfolk VA area
- hot work initiated fire involving combustibles, Cutting operation extended beyond the hot work boundaries into a space that was not intended to be affected and did not have a fire watch

Repairs estimated at $ XX Million

Summary

- In both USS Gunston Hall and USS Oscar Austin hot work procedures were not properly followed
- Workers have to be properly trained on hot work and must follow the hot work procedures
- Management needs to emphasize the need to follow hot work procedures and take disciplinary action when procedures are not followed

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USS FITZGERALD (DDG 79)

- Fitzgerald Commanding Officer(CO) reported in his availability update that he was concerned that the destroyer repairs were at risk from poor shipyard fire safety.
- The CO documented at least 15 fire safety incidents on FITZGERALD from Feb 18 – May 19.
- During the most recent incident aboard Fitzgerald, which the CO said was similar to what happened on Oscar Austin, workers expanded their hot work into a space with no fire watch, according to his report. According to the CO expanding the hot work area “caused damage to bulkhead lagging and electrical panel which will likely require replacement.”

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Safety Programs in Shipyards

- RDML Anderson and RDML Williamson sent letters to the Regional Maintenance Centers (RMCs) and Naval Shipyards directing them to conduct self-assessments of their safety programs.
- Concurrently, VADM Moore sent letters to our prime contracting partners stating that over 250 reported shipboard fire safety incidents have occurred during maintenance availabilities within the last two years.
- To combat this unacceptable number of fire incidents, VADM Moore directed a self-assessment of safety programs.

RMC Actions

MARMC

- Briefed the VA Ship Repair Association (VSRA) Safety Management Board

SERMC

- Held a meeting with approximately 50 representatives from industry partners.

SWRMC

- Met with each prime contractor's Safety Manager between June 27 and July 8 2019.

FDRMC

- Met with the Navantia on 9 July 2019. and met with ASRY 14 July and BASREC 30 June.

HRMC

- Safety staff met with their representatives from four industry partners.

NWRMC

- Senior members met with the Puget Sound Ship Repair Association (PSSRA) Quality, Environmental, Safety and Health Committee (QESH).

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Continuing and Future Actions

- SWRMC actions:
  - Ships in availabilities with a negative safety trend are receiving heightened back shift attention to ensure contractor management and personnel working these periods received the message about expectations for maintaining safe operations.
  - A face-to-face meeting with prime contractor leadership and safety staff is conducted prior to the start of all CNO availabilities and CMAVs greater than 9 weeks..
- SERMC actions:
  - Ship Repair ESH Manager has standing weekly meetings with ship repair contractor safety managers.
  - Enforcement of NSI 009-120 with active involvement to drive industry to most correct and realistic preventive actions.
- MARMC actions:
  - Utilizing the VSRA SMB meetings to encourage Production and QA managers attendance so they can see first hand the significant safety concerns across the deck plates.
  - Conducting deck plate training for KTR junior safety specialists.
  - Weekly environmental & safety quick-hits and the KTR safety specialists participate.
  - KTR annual face to face all-hands meeting.

Building professional working relationships with our counterparts that support timely and productive problem solving

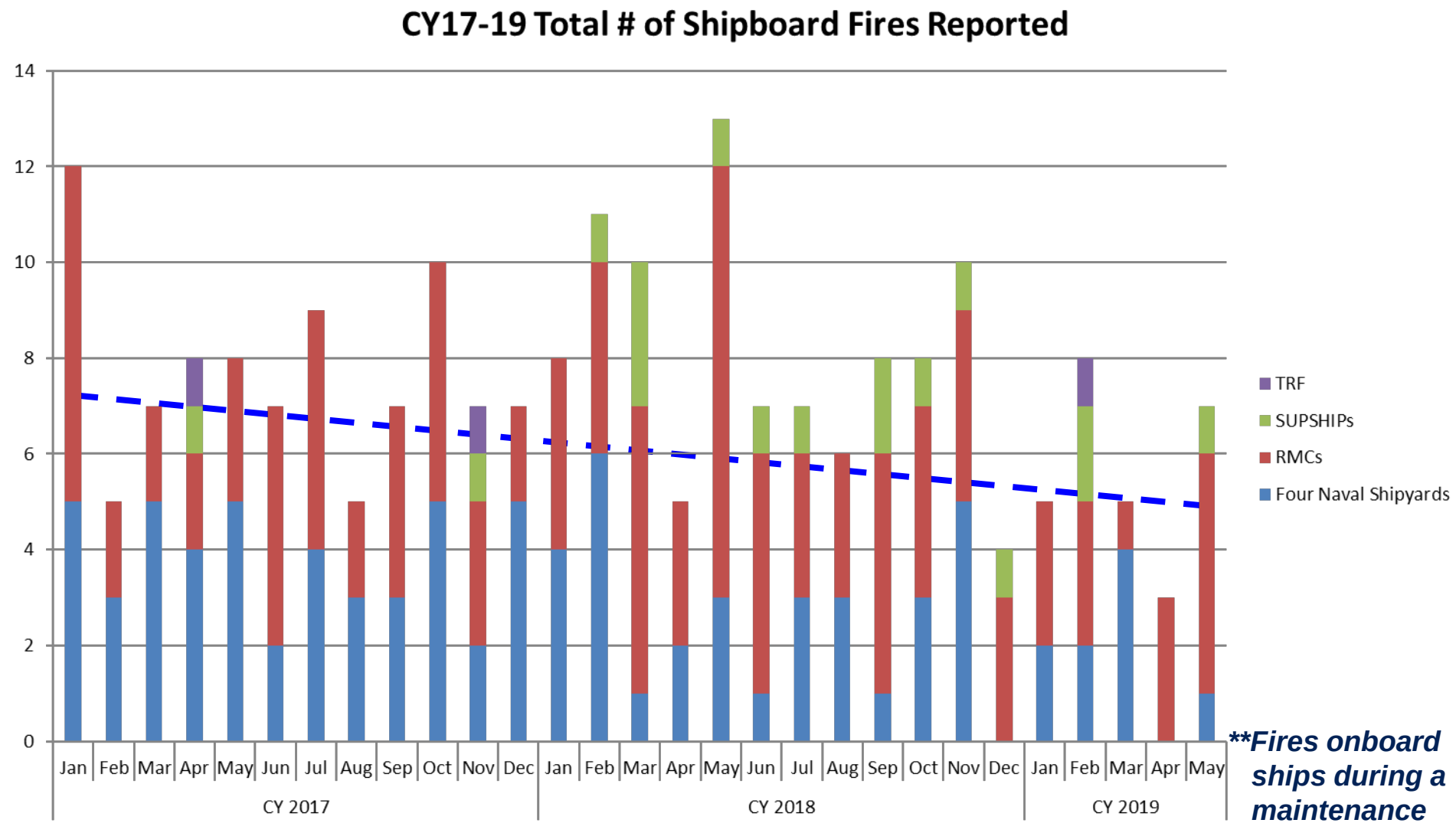
Continuing and Future Actions

- FDRMC actions:
  - To encourage better communication, Rota Detachment Officer in Charge (OIC) and Deputy OIC have a monthly breakfast with the Navantia Project Manager to provide an opportunity to address any concerns.
  - FDRMC Det Bahrain will continue to invoke T/P 8010 in all contracts and Project Team members will enforce the requirements. Safety Specialists lead daily safety walk through and document deficiencies for trend analysis and correction while ensuring contractors review and update Fire Safety and Response Plans.
- HRMC
  - HRMC safety staff met with their representatives from four industry partners as well as AIT Contractors. During these meetings the following safety areas were discussed and assessed: fire prevention, electrical safety, fall protection, confined space, and hazardous energy control.
- NWRMC
  - Creating a single hot work notification form for use by both PSNS & IMF, AITs and contractor hot work organizations.
  - Created an updated hot work surveillance plan to include executable inspection requirements for contractor oversight

Backup Slides

10

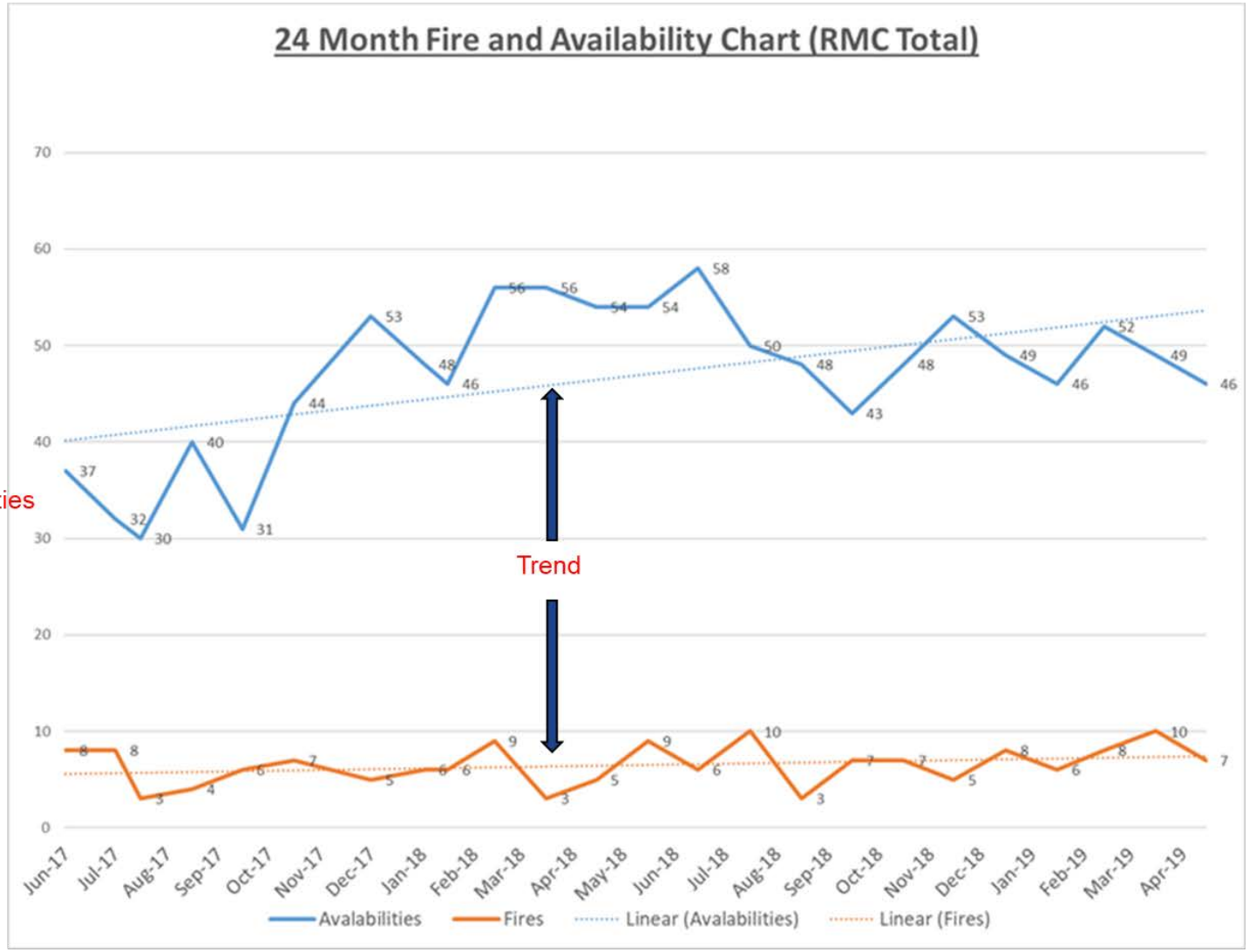
Shipboard Fires at Industrial Activities



***Fires onboard ships during a maintenance availability.**

Data Source: Trouble Reports, OSHE Comm's, OPREP 3 Messages, ect.

Fire Metrics



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Shipboard Fires at Industrial Activities

INCIDENCE RATE

- CY17 – 92(5.9/month), CY18 – 97(8.1/month), CY19 (to date) – 28(5.6/month)
- Activity Fires for CY18 were up by 5% from CY17. So far in 2019, the reported industrial fires is showing a 31% decrease in fires per month.

HOT WORK

- 94 (43%) of the total fires have something to do with hot work and are a violation in some aspect of NAVSEA standard item 009-07, or local hot work procedure.
- 56 (60%) of the total hot work fires involve contractor work.

CLASS "C" FIRES

- 100 (46%) of the total fires were class "C" fires.
- 72 (72%) of the total class "C" fires involve failure of electrical equipment.

ROOT CAUSE

- Work Practice is the most frequent root cause followed by Material Failure and Supervision.

Data Source: Trouble Reports, OSHE Comm's, OPREP 3 Messages, ect.

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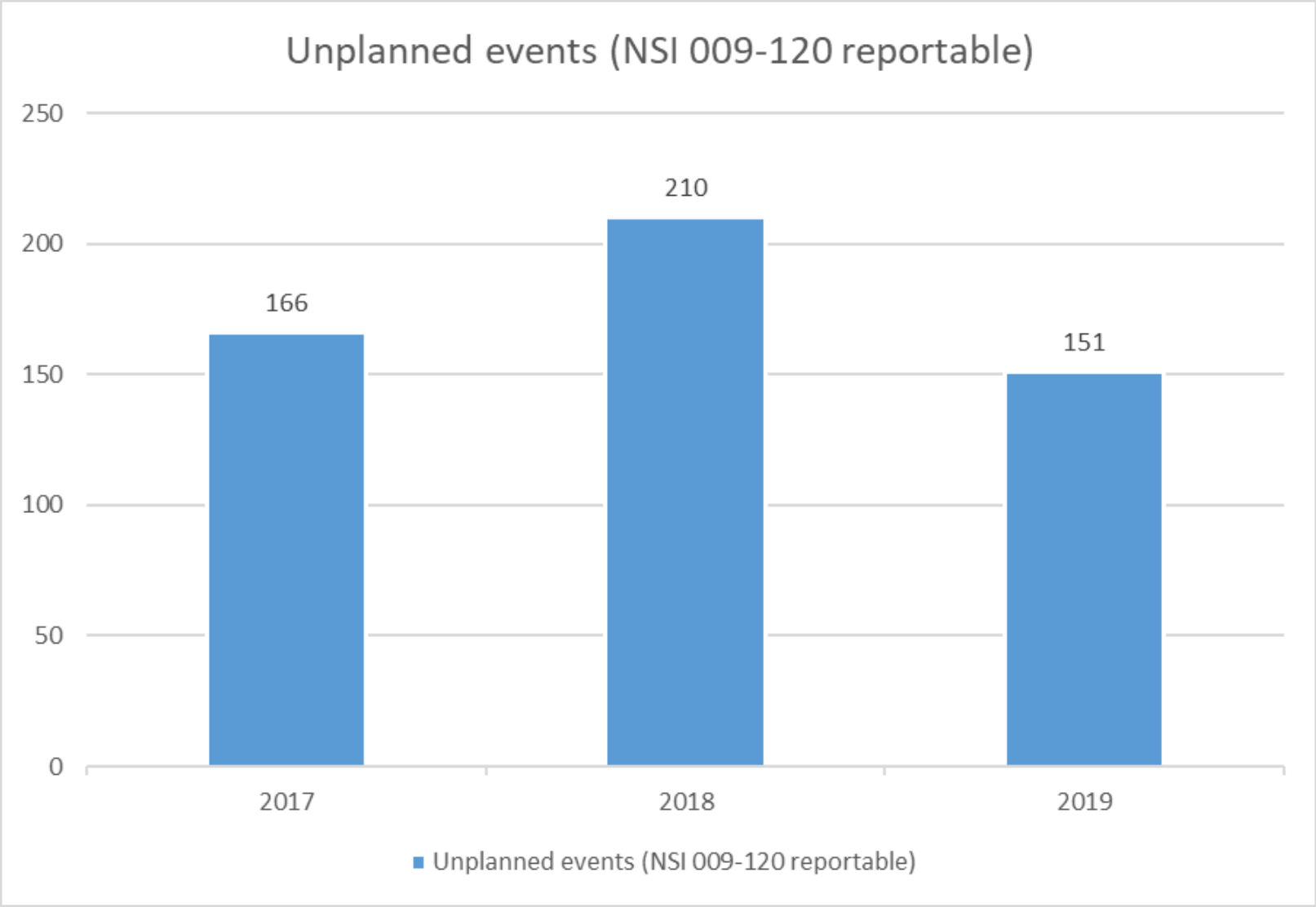
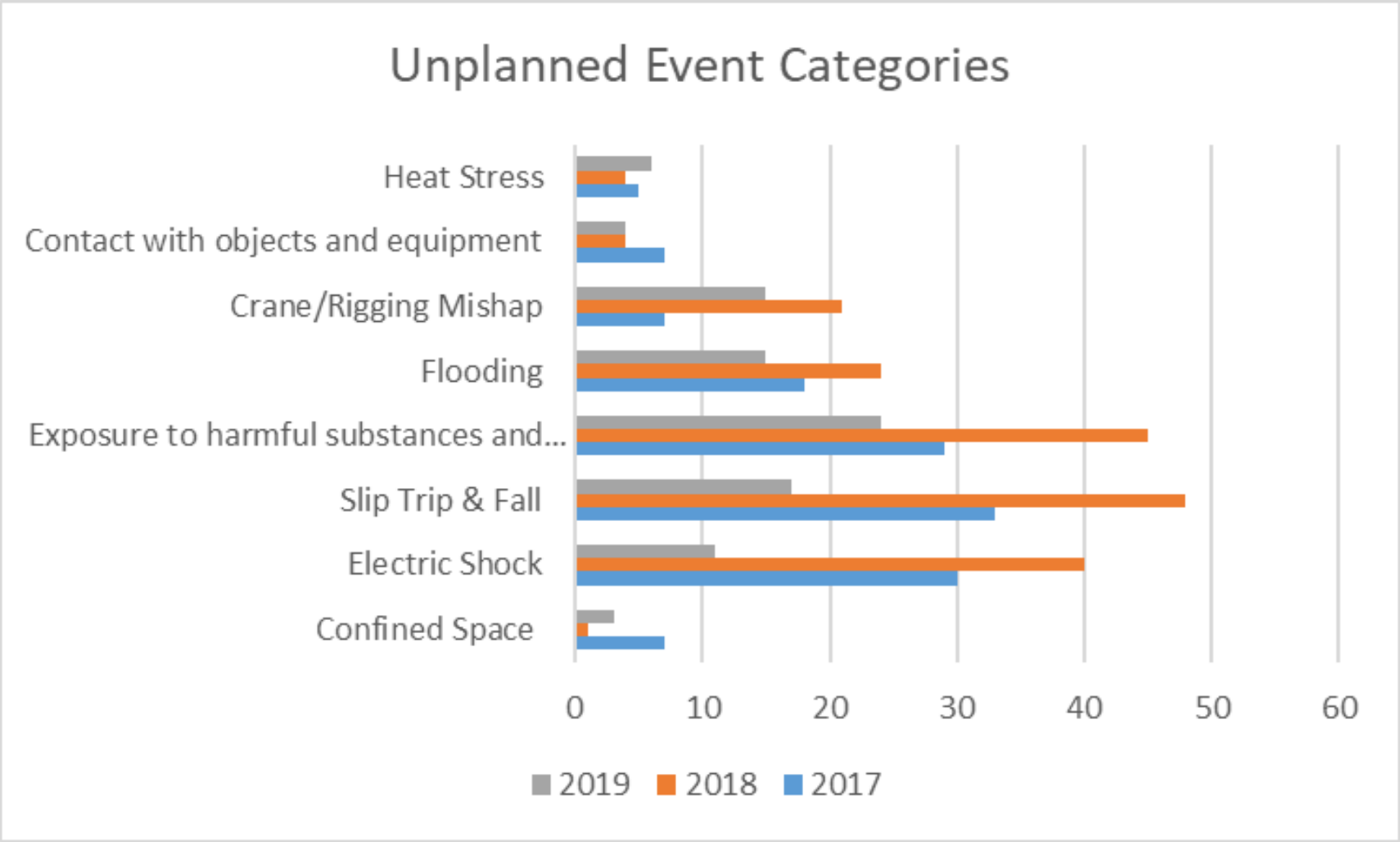
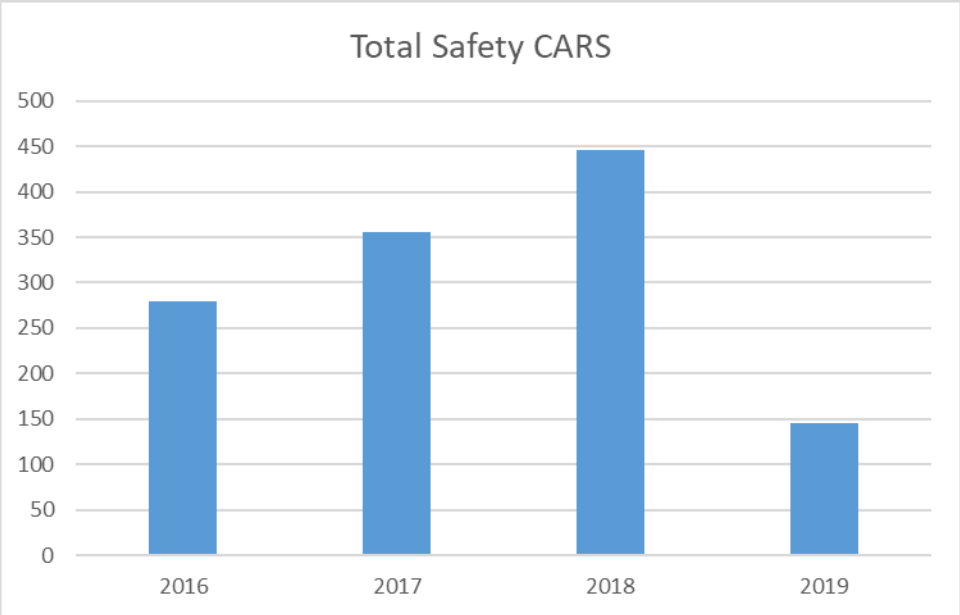
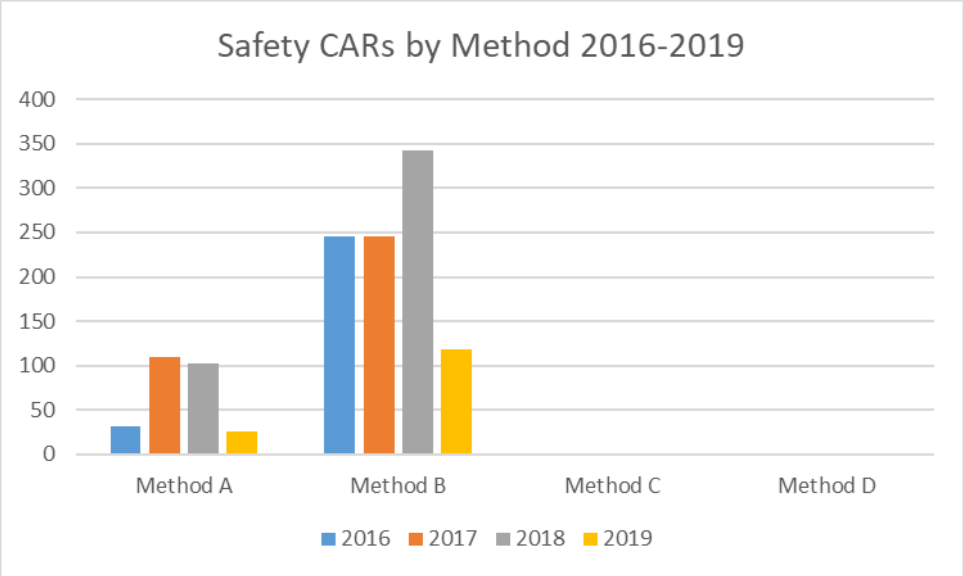

Unplanned events (NSI 009-120 reportable)
250
200
150
100
50
0
166
210
151
2017
2018
2019
Unplanned events (NSI 009-120 reportable)

Safety Metrics



Safety CARS


Total Safety CARS
500
450
400
350
300
250
200
150
100
50
0
2016
2017
2018
2019


Safety CARs by Method 2016-2019
400
350
300
250
200
150
100
50
0
Method A
Method B
Method C
Method D
2016
2017
2018
2019

SWRMC Contractor Incidents

NAVSEA REGIONAL MAINTENANCE CENTER Southwest

Contractor Incidents June 2017 - June 2019

Total level 1 and Level 2 Incidents Reported: 12

Toxic Releases	Weight Handling Equipment	Fires
6	2 *Crane, Rigging, Fork Lift*	2

Trips, Slips, Falls	Electrical Shock	Tag-Out Violation
0	1	1

2

Enclosure (5) 2

RMC Observations/Trends

SWRMC

- A review of level 1, 2, 3 events and trends have identified gaps in compliance with program requirements for fire protection, control of gas hazards, and weight handling equipment across contracted ship repair work in San Diego.
- Use of subcontractor and temporary labor provider fire watches.
- Decrease hot worker diligence in preparing hot work site controls due to shared responsibility with management's Permit Authorizing Individual who bears ultimate responsibility and assumed to provide proper oversight.
- Fire watches on mobile personal electronic devices during work.
- Hot worker culture of not reporting problems

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RMC Observations/Trends

SERMC

- **Negative:**

- Varying workload results in the KTR laying off or hiring people and/or use of temp labor in rapid responses to port workload. Not all experienced workers return to the workforce, resulting in personnel inexperienced with the shipyard environment. This situation invariably increases workplace injuries until personnel gain more experience in the environment. Temp workers are a significant portion of the pinches, cuts, scrapes, etc.

- Success at preventing injuries for a significant period can lull personnel into believing that they can forgo safety requirements. Continual training and management attention are needed to maintain the tempo of command safety. Setting the example, inspecting to the requirement, ensuring the workforce knows that safety is Number 1 often and repeatedly are a must.

- Ignorance - either poor training or lack of personal concern can result in personnel not meeting safety requirements - training and enforcing expectations are a must.

- Some personnel will incorrectly interpret the mission to get repairs completed on time as a license to willfully not comply with other requirements (safety/quality/etc) even though they are never told this and there are active programs to the contrary (VPP, safety council, etc).

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19

RMC Observations/Trends

SERMC cont.

Positive:

- Initiated process to become a VPP star site - thus increasing command emphasis on safety
- Regular internal safety surveillances to identify non-compliance/weaknesses and make improvements
- Command leadership emphasizing safety at indoc (including ORM) for all personnel and at arrival conferences for all project teams.
- Command engagement in promulgating safety incidents/lessons learned.
- Full command enforcement of PPE requirements from leadership down to the deck plate seaman/GS/WG.
- Daily oversight and walkthroughs with the KTR on ship projects.
- Execution of the fact finding/critique process, both internally and on KTR projects

2019 SERMC's assessment from 2018 is still relevant with this additional comment:

- Availability sizing (number and complexity of work items relative to availability duration) has been growing over the last several years. This coupled with the large amount of growth work identified during the execution of an availability is creating a strained atmosphere/culture where production, specifically production end dates have become the primary driving factor, overshadowing safety and quality

Fire Safety Trends

- Hot workers (Supervisors, Welders/Cutters/Brazers, and Fire Watches) do not consistently execute OSHA, NFPA, and NAVSEA Standard Item requirements. Primary root causes in order of magnitude:
  - Work Practices
  - Supervision
  - Training

- A review of level 1, 2, 3 events and trends have identified gaps in compliance with program requirements for fire protection, control of gas hazards, and weight handling equipment across contracted ship repair work in San Diego.
- Use of subcontractor and temporary labor provider fire watches.
- Decreased hot worker diligence in preparing hot work site controls due to shared responsibility with management's Permit Authorizing Individual who bears ultimate responsibility and assumed to provide proper oversight.
- Fire watches on mobile personal electronic devices during work.
- Hot worker culture of not reporting problems

RMC Efforts to Reduce Fires

- Working towards assigning Fire Safety Officers to all availabilities
- Partnering at the deck plate
  - Briefing private shipyards on 8010 or contractual requirements
  - A-30 Event Safety Brief
  - Review hot work requirements at IPTD events
  - Fire Safety Council Meetings
  - “What Right Looks Like” training to industry safety and production teams, S/F, and RMC MT
  - Increased hot work tracking and inspections
- Safety Specialist remains at work site until fire safety discrepancies are resolved
- Ship Repair Association Briefings

RMC Actions

MARMC

- MARMC's Safety Director is utilizing the Virginia Ship Repair Association (VSRA) Safety Management Board (SMB) as a platform to highlight trends as we employ intrusive leadership to drive the prime contractor to increase their daily deck plate oversight of the subcontractors across the port.
- MARMC is restricting dust collectors from being placed onboard the ship in the port of Norfolk as well as requesting the contractor update their Fire Safety Plan to include this change in policy.
- MARMC's CO and Executive Director make weekly visits to the local private shipyards' top management, with Fire Prevention and High-Risk Programs and practices being a recurring topic.
- MARMC's Safety Director is utilizing the Virginia Ship Repair Association (VSRA) Safety Management Board (SMB) as a platform to highlight trends.
- MARMC Safety's recommendation in the port of Norfolk is to implement the use of only LED lamps in temporary service light stringers due to recent multiple fires from temporary services with incandescent bulbs. This recommendation is being implemented at BAE Systems and National Steel and Ship Building Company.
- Damage Control (DC) lockers provided to the ship in availabilities are not adequately equipped with shelving and lights. MARMC's Fire Safety Officers have implemented weekly DC Locker Readiness Locker/Conex inspections to include proper outfitting for shipboard firefighting. MARMC will include modified DC Locker outfitting requirements for contractors to provide in future contracts.
- MARMC's Safety Department has supported the testing of the fire detection system currently deployed at BAE Systems Norfolk Ship Repair.
- MARMC, Southwest Regional Maintenance Center and Southeast Regional Maintenance Center have recently approved and adopted Ship Repair and Alteration Committee #L230 which implements 8010 requirements into the NAVSEA Standard Items.
- Hot work routing processes are critical items and communicated to all stakeholders during each arrival conference. Deck plate leadership and ship's force involvement is crucial to oversight success of the program.
- MARMC's leadership views Safety and Fire Prevention improvements as an on-going endeavor of the utmost importance.

RMC Actions

SWRMC

- Ships in availabilities with a negative safety trend are receiving heightened back shift attention. From January to June 2019, SWRMC Safety personnel consistently conducted second shift and weekend inspections to ensure contractor management and personnel working these periods received the message about expectations for maintaining safe operations.
- Safety met with each prime contractor's Safety Managers between 27 Jun 19 and 8 Jul 19 to discuss fire prevention and High-Risk Program Standards.
- March 2019, Safety coordinated with Waterfront Operations, ship's force and an industry partner to perform weekly "deep dive" inspections in predetermined work zones on a ship with a negative safety trend.
- 12 Apr 2019 conducted a safety operational pause attended by industry, NAVBASESD, NAVFAC Crane, and NAVBASESD Safety representatives to discuss contractor crane safety performance and trends.
- Commanding Officer (CO) engages industry at the Port of San Diego Ship Repair Association (PSDSRA) General Assembly meetings. The CO has quarterly meetings with the president of the PSDSRA.
- CO/Executive Director (ED) routinely conduct visits to prime contractor facilities to discuss industry challenges and share knowledge on stakeholder actions to improve processes.
- CO engaged COs of ship's in availability requesting feedback on safety posture. The comments were mostly positive with respect to SWRMC and highlighted specific concerns to be addressed with contractor performance. Fire Safety Council meetings are utilized to resolve concerns.

RMC Actions

SERMC

- **21 June 2019**: Held a meeting with approximately 50 representatives from BAE, GD NASSCO, NFSY, ECR&F, Colonna's, SERCO, QED, Epsilon, Sunbelt Scaffolding, American Scaffolding, SPAWAR, VRT, LCSRON2, and the local area Marine Chemist. There was an open discussion on recent fire mishaps and reviewed fire prevention and other high-risk programs standards (i.e. electrical, fall protection, confined space, and hazardous energy control).

- **16 July 2019**: SERMC Commanding Officer, Executive Director, and Safety Director will meet with management representatives from each of our prime contractors and the Executive Director of the Jacksonville Ship repair Association (JASRA).

- Assess the execution of our NAVSEA standards during maintenance availabilities to identify any significant gaps.

- Outline mitigation strategies to address the gaps, if any.

RMC Actions

FDRMC

- Detachment Rota met with the Navantia contracting office, safety personnel, and leadership on 9 July 2019. During this meeting, FDRMC leadership confirmed Navantia's understanding and stressed the importance of safety programs while also acknowledging their effort to date. The detachment maintains open and frequent communications with Navantia to ensure they have a clear understanding of Safety Requirements. Safety walkthroughs are conducted twice-a-day with a Discrepancy and Corrective Action report provided after each walkthrough. Navantia includes a photo of the discrepancy in the report for clarity of the discrepancy and tracks the discrepancy through completion. Since the fire aboard the USS OSCAR AUSTIN (DDG 79), the report focuses inspectors on conducting inspections of hot-work sites. To encourage better communication, Detachment Officer in Charge (OIC) and Deputy OIC have a monthly breakfast with the Navantia Project Manager to provide an opportunity to address any concerns.
- Detachment Bahrain met with leadership from ASRY 14 July 2019 and BASREC 30 June 2019 to discuss safety issues such as the USS OSCAR AUSTIN (DDG 79) and USS MIAMI (SSN 755) fires as well as recent local fires on USS DEXTROUS (MCM 6) and USS SQUALL (PC 7). Detachment Bahrain conducts Fire Safety Council Meetings monthly during maintenance availabilities and a semi-annual evaluation of the Fire Safety Program to identify trends and deficiencies in accordance with reference (c), taking corrective actions as necessary. Project Team members ensure contractors review and update Fire Safety and Response Plans. Per reference (c), Safety Specialists provide required monthly training to contractors, Ship's Force, and Project Team members. FDRMC will continue to invoke reference (c) in all contracts and Project Team members will enforce the requirements. Safety Specialists lead daily safety walk through and document deficiencies for trend analysis and correction while ensuring contractors review and update Fire Safety and Response Plans.

Industry Concerns San Diego

(1) The availability of experienced ship repair personnel to support port loading requirements

(2) The availability and use of “in house” fire watches to support work

(3) Financial pressure to use subcontractor and temporary labor for fire watches

(4) Quality of training received by trades, subcontractors and temporary labor force

(5) Fire watches distracted by use of mobile personal electronic devices during work

(6) Culture of workers not reporting problems

(7) Decreased diligence by workers preparing hot work site controls due to shared responsibility with management’s Permit Authorizing Individual who bears ultimate responsibility and assumed to provide proper oversight

(8) Perceived lack of oversight for Alteration Installation Teams performing an increased amount of hot work at private shipyards in San Diego

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