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Turnaround/shutdown best practice of centralized dispatch, distribution and QA/QC of safety services
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Abstract
This poster demonstrates the development of a system and process to manage on site safety services and shares a case study where this system helped achieve safety goals as well as schedule productivity goals. This system and process can benefit both the owner/operator companies as well as the general contractors as either can use it. It will review an electronic method of tracking, reporting and data capture of the distribution and management of site safety services. This system can manage daily needs as well as provide data for future planning. In addition, the poster covers the case study and results of this system used in a large, major IOC turnaround; how the data benefited the operator and the mechanical contracting group as well as saved time and money through service quality and inventory management.

Introduction
In shutdowns and turnarounds there are three main groups interacting during the event:

- Owners get equipment ready
- Mechanical Maintenance Team
- Various contractors perform work

One of the shared services is Safety which includes breathing air delivery, gas detection/testing, confined space entry monitoring and management & distribution of these services. Solutions for managing safety during a turnaround/shutdown includes: Quality Control Systems for Safety Equipment & Centralized Dispatch/Delivery of Safety Services.

Issues
- When services are managed independently or in isolation, there can be a redundancy and duplication of efforts.
- Pre-job requirements are increasingly effecting job start times.
- Not managing these services efficiently can cause delays in tasks and result in a poor perception of safety.
- As industries and geographic territories get busier, manpower availability gets tighter, eventually forcing a “do more with less” environment.
- Maximising “Tool Time” is increasingly difficult.

Solution 1: Safety Equipment QC

On-site QA/QC facilities

QCycle™

Data can be trended in any customizable format to reveal areas within the project that may need investigation. Left is an example of trending by job number to indicate what duration of time each job is taken to start the work.

With centralized dispatch, the resource is delivered to the work location and picked up then re-deployed.

A common practice is to have contractors go to a site location to pick up the required safety equipment for the job.

Safety services can be planned and allocated through 12/24 hour schedule look aheads. Contractors and owners are trained on the system prior to turnaround. This allows for real time reporting of the status and allocation of resources on the project. It is also able to be sorted by many data points including what unit, contractor, equipment number or shift.

Case Study
Project
A Major Maintenance turnaround of a Heavy Oil Upgrading Facility with 60 days in duration and over 3500 contractors on location and an additional 8 capital projects being executed simultaneously.

Challenges
- Plan and management of Shared Safety Services
- Reduce the overall requirements
- Maximize localization of personnel
- Support contractor readiness
- 336 safety personnel deployed
- 100% compliant with 6:1 rotation of personnel
- 1200 units of specialized safety equipment
- 3900 jobs dispatched from “central dispatch”

Effective Solution
- Needs Assessment
- Continuous review of planning and requirements QA/QC and Centralized Dispatch and Distribution

Results
- No delayed planned work
- Approx. 1M dollars saved by managing equipment ramp down
- Removed coordination burden from owner

Conclusion
The benefits to the project of developing and utilizing a centralized QA/QC and dispatch system:

1. Daily inventory control and monitoring:
   - No lost equipment charges to the owner.
   - No back end billing of missing items.

2. Skilled and craft labor is made more efficient by eliminating lines at trailers waiting for equipment and time spent retiring equipment:
   - Proven track record reducing costs.
   - Craft labor can focus on work.

3. Safety requirements are no longer a bottleneck, but an efficiency driver:
   - More efficient use of safety watch personnel.
   - Communicated directly to stakeholders.
   - Dispatch provides the owner with reporting tools.

Stewardship reports can highlight specific examples of cost savings, positive processes and opportunities for improvement which can be transferred to the next outage or turnaround.

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