

The Cost of Navy Coatings QA/QC

February 3, 2011 Project Update
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BAE SYSTEMS

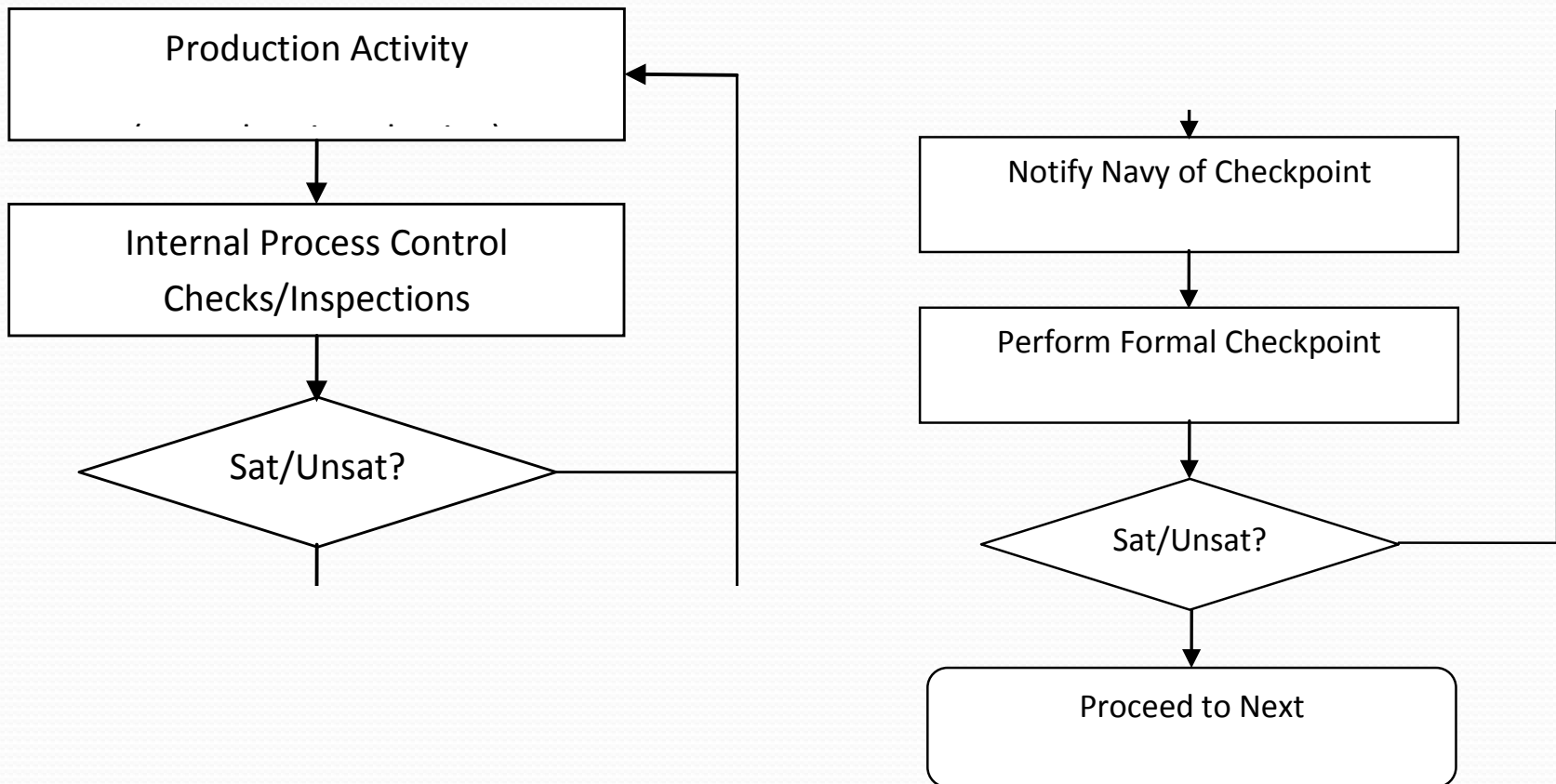
Project Goals and Objectives

- Define the costs of individual QA/QC steps averaged across the fleet
 - Determine value added versus cost
- Develop potential SSRAC proposals
 - Graduated QA
 - QA reduction

Activities

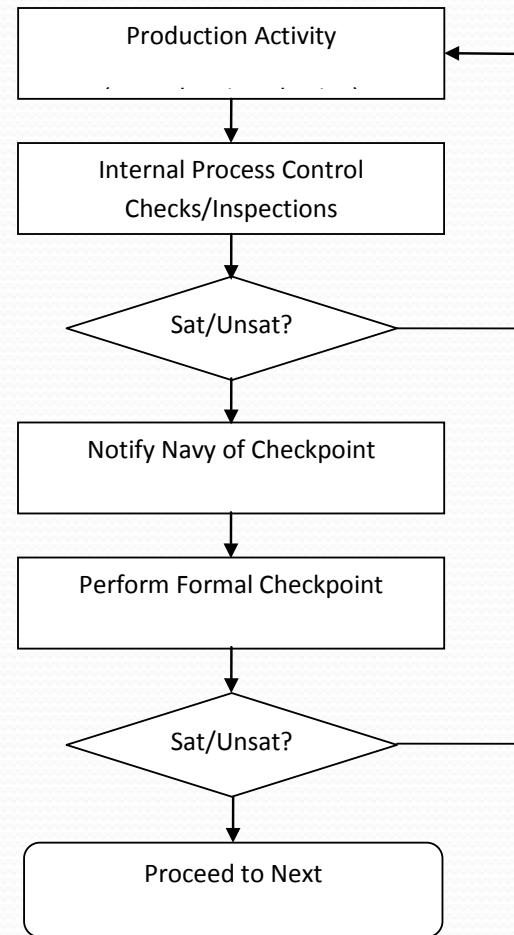
- Value Stream Analysis
- Historical Cost Analysis
- Surveys
 - Shipyard management
 - NBPI Inspectors
- CQATK Information Download
- 009-32 vs IMO PSpC

Value Stream Analysis



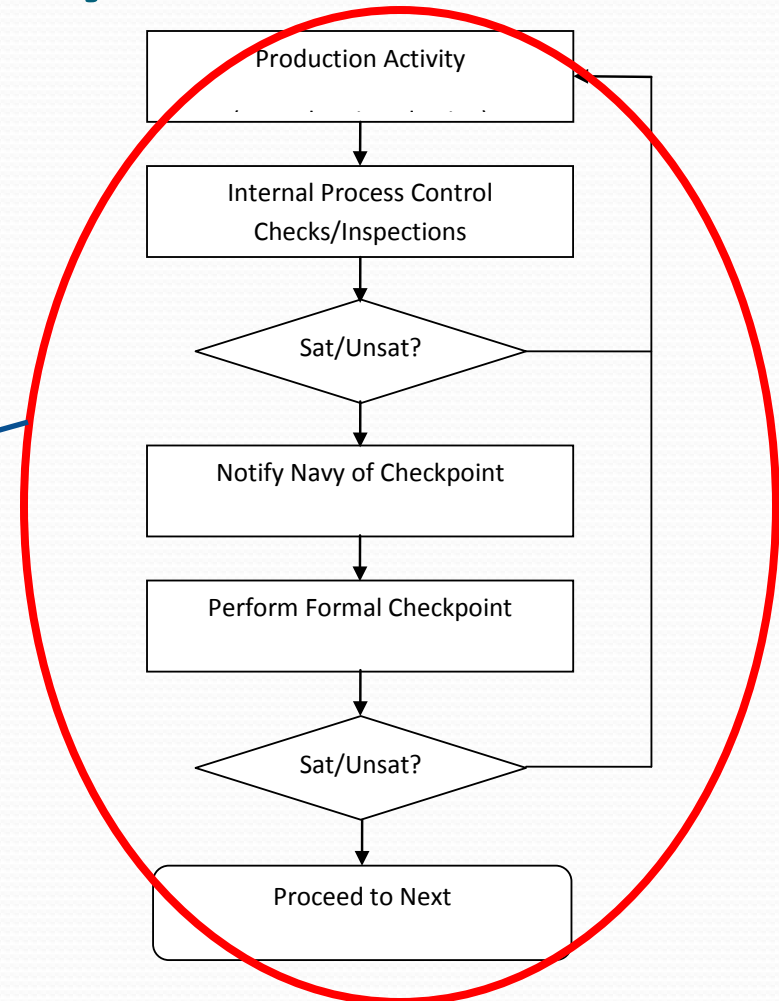
Value Stream Analysis

- Eliminating or reducing any particular measurement will not necessarily provide the most significant savings



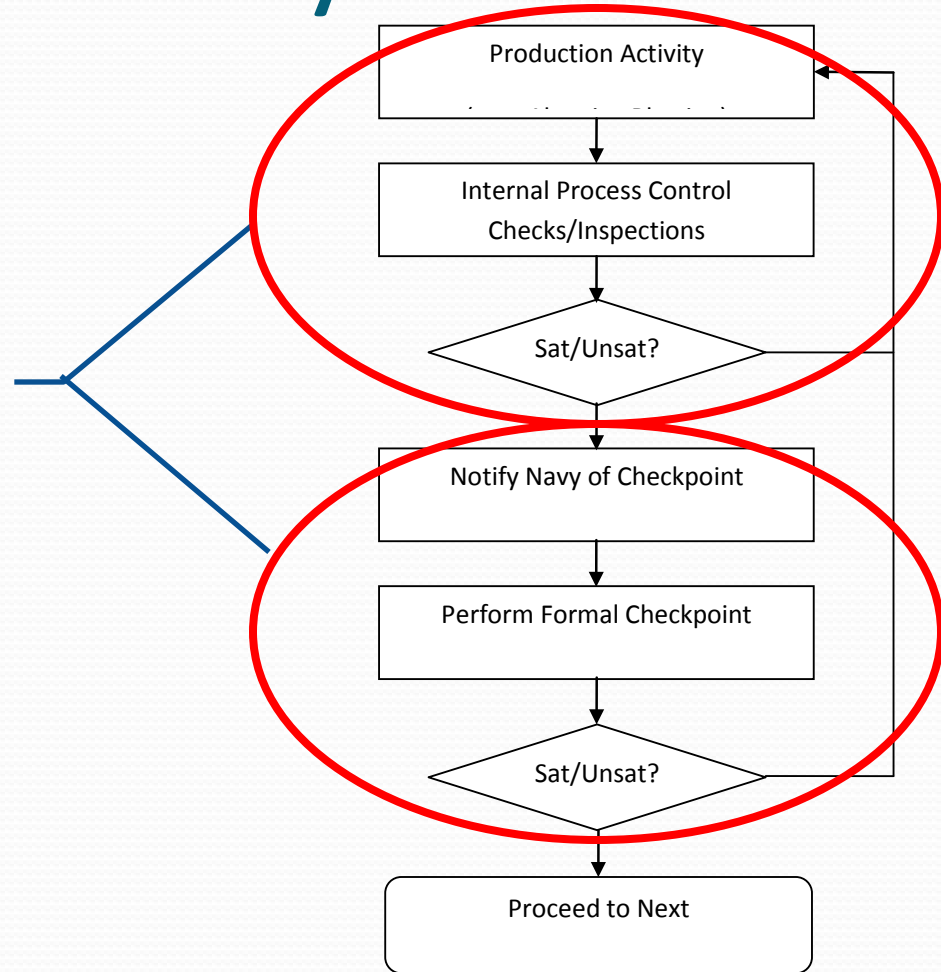
Value Stream Analysis

How do we minimize the number of times we repeat this loop?



Value Stream Analysis

How do we minimize or eliminate redundancies between these processes?

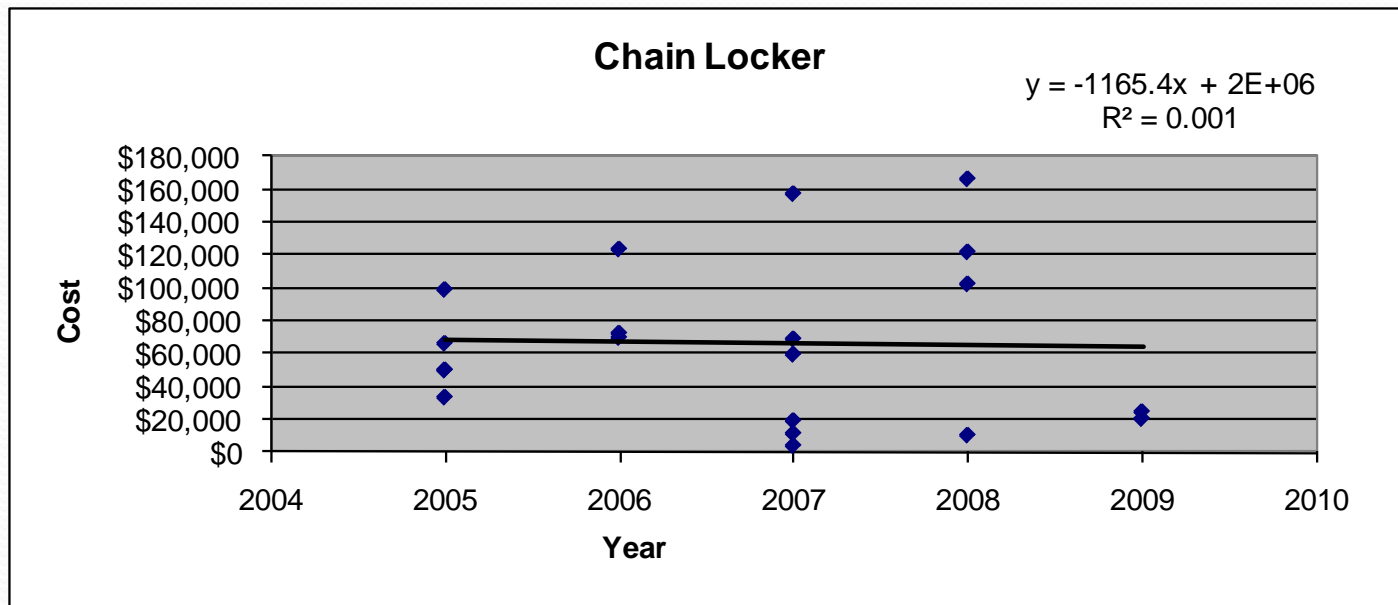


Has historical (G) point elimination generated cost reduction?

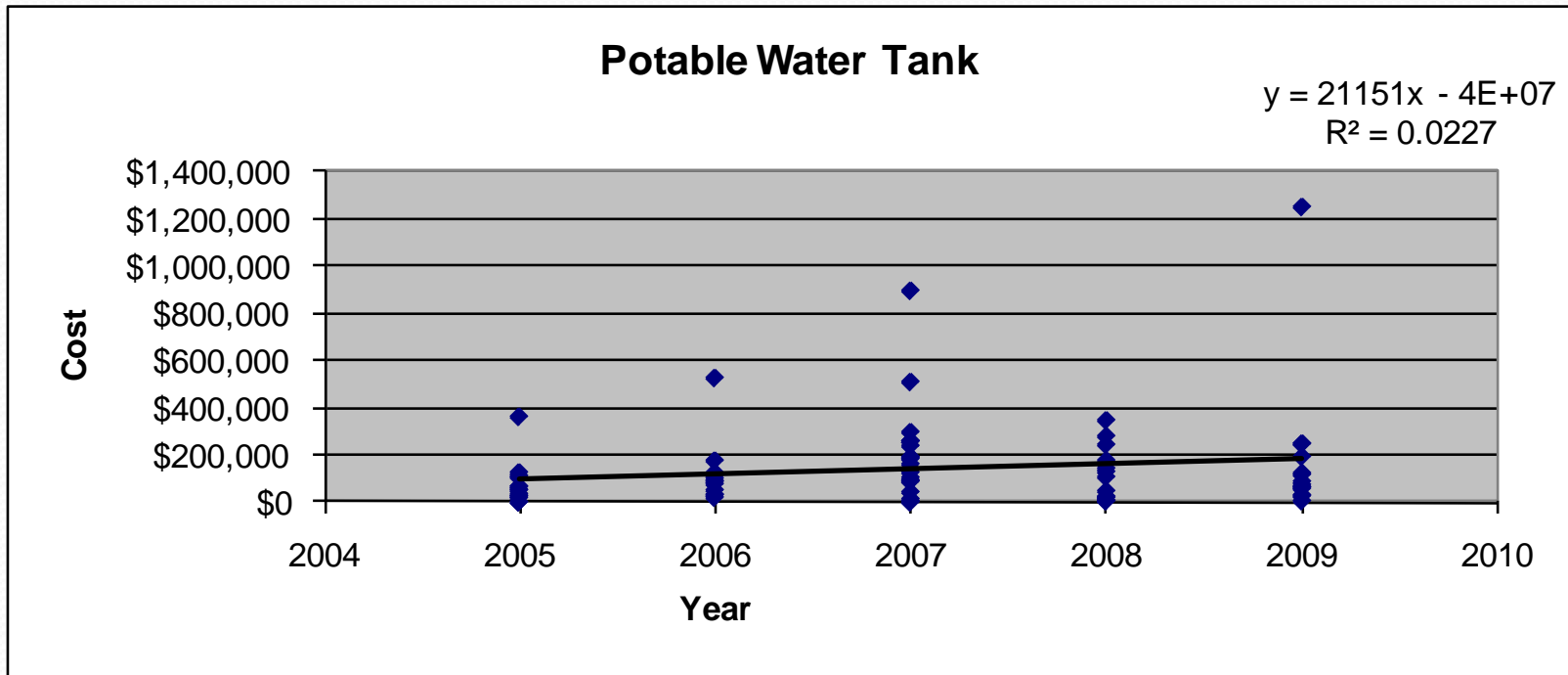
- (G) points solely related to critical coated areas and critical coated areas are constantly updated to reflect fleet customer demand for verified, high-quality paint job.
 - After February, 2005 Topside, Chain Lockers, and AFFF Station Decks and Coaming were no longer considered critical coated areas
 - After February, 2009 small areas (individual areas <2 sq.ft. or less totaling less than 0.03 percent of the total surface area were no longer considered critical coated areas
 - After February, 2011, aluminum plenums were removed from critical coated area list
- (G) points are constantly tested and refined as part of annual SSRAC update process.
 - Environmental Readings were reduced for non-critical areas to an (I) in FY-06 (2004)
 - Reduced ISO Dust test to only Underwater Hull and Nonskid in FY-07 Change 1 (2006)
 - Elimination of stripe coat. Stripe coat QA checkpoint waived if additional DFT measurements confirm adequate edge thickness in FY-10 (2008)
 - Single coat coating systems removed the primer coat checkpoint in FY-10 (2008)
 - High-solids coating option added to Potable Water Tanks ... in FY-10 Change 1 (2009)
 - Fuel oil storage, fuel oil service, and diesel service tanks shall not be painted. FY-11 (2009)

Has historical (G) point elimination generated cost reduction?

- Began to look at historical costs
 - Good data hard to find before 2005 (when many changes took place)
 - Many other variables obscure result



Has historical (G) point elimination generated cost reduction?



On-going Efforts

- Three sources of data being pursued
 - Sanitized shipyard reporting (BAE, NASSCO, NORFOLK, BIW & TODD)
 - Initiated participation, present the survey in the Feb meeting.
 - On-line survey of NBPI inspectors
 - Survey invitations being sent this week or next
 - Query CQATK files, sanitized count of documented inspections preformed
 - Data query initiated

Sanitized shipyard reporting

- BAE, NASSCO, NORFOLK, BIW & TODD, Public yard(s)
 - Data collected from four Regional Maintenance Centers and a Sup Ship location: BIW, South East, Norfolk, South West & Seattle.
 - Data collection contains proprietary information on actual tact times for each step of each inspection process.
 - Times are based on proximity to the inspection site, duration of each inspection performed in relation to the regulatory body.

On-line Survey of NBPI Inspectors

- Collect estimates of time required to perform various tasks
 - Preparation and access work area
 - Perform specific measurements
 - Paperwork and reporting
- Space available for open-ended answers
- Survey invitations being sent to individuals with NBPI certification this week or next
 - Will allow 30 days for completion

Query CQATK files

- Collect statistics from 300 or so “inspections” in the existing database
 - Descriptive project data
 - Square footage preserved
 - Appendices completed
 - Number of signatures
 - Count of inspection data points
 - DFT spot measurements (any coat)
 - Environmental Readings
 - Surface Profiles (Avg readings)
 - Dust test readings
 - Conductivity/Chloride Readings
- Data query initiated
- Example: 1,000 Square foot Potable Water tank
 - Signatures, Sub Ktr: 179
 - Signatures, Ktr: 0
 - Signatures, Gov: 0
 - DFT spot measurements: 30
 - Environmental Readings: 169
 - Surface Profile, Averages: 5
 - Dust Test: 0
 - Conductivity/Chloride: 5

Summary

- Project on track
- Expect to complete data collection in early March, 2011
- Expect to deliver report on time in April, 2011
 - Outbrief at June, 2011 NSRP SPC Meeting