



Lean 6-Sigma Program



Department of Toxic Substances Control

Abdalin Asinas
Environmental Scientist
(Project Greenbelt)

Denise Tsuji
Branch Chief, SERSEB
(Project Champion)

Keith Kihara
Division Chief, EERD
(Executive Sponsor)

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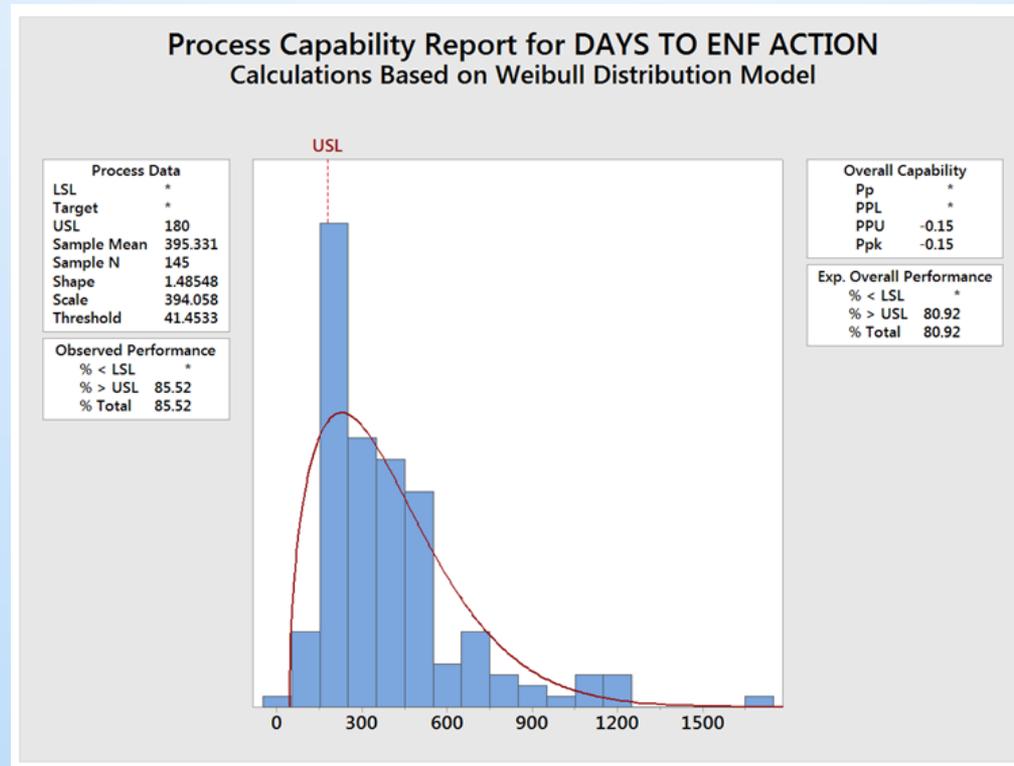


Enforcement Response Improvement Project

- ❖ **Problem Statement:** *The time to complete administrative enforcement actions for cases with calculated penalties of up to \$75K is 395 days, which creates dissatisfaction for stakeholders and difficulty in workload planning*
- ❖ **Objective:** *To reduce the time to complete enforcement actions for administrative cases with calculated penalties of up to \$75K so that 90% of cases are completed within 180 days.*
- ❖ **Project Team:**
 - ❖ *Maria Durand, Sr. E.S.*
 - ❖ *Alfredo Rios, Sr. E.S. (Sup.)*
 - ❖ *Brennan Ko-Madden, E.S.*
 - ❖ *Christopher Cho, OLC attorney*
 - ❖ *Extended members:*
 - ❖ *Samuel Coe, E.S.*
 - ❖ *Swai (Bruce) Rathsamythong, data manager*

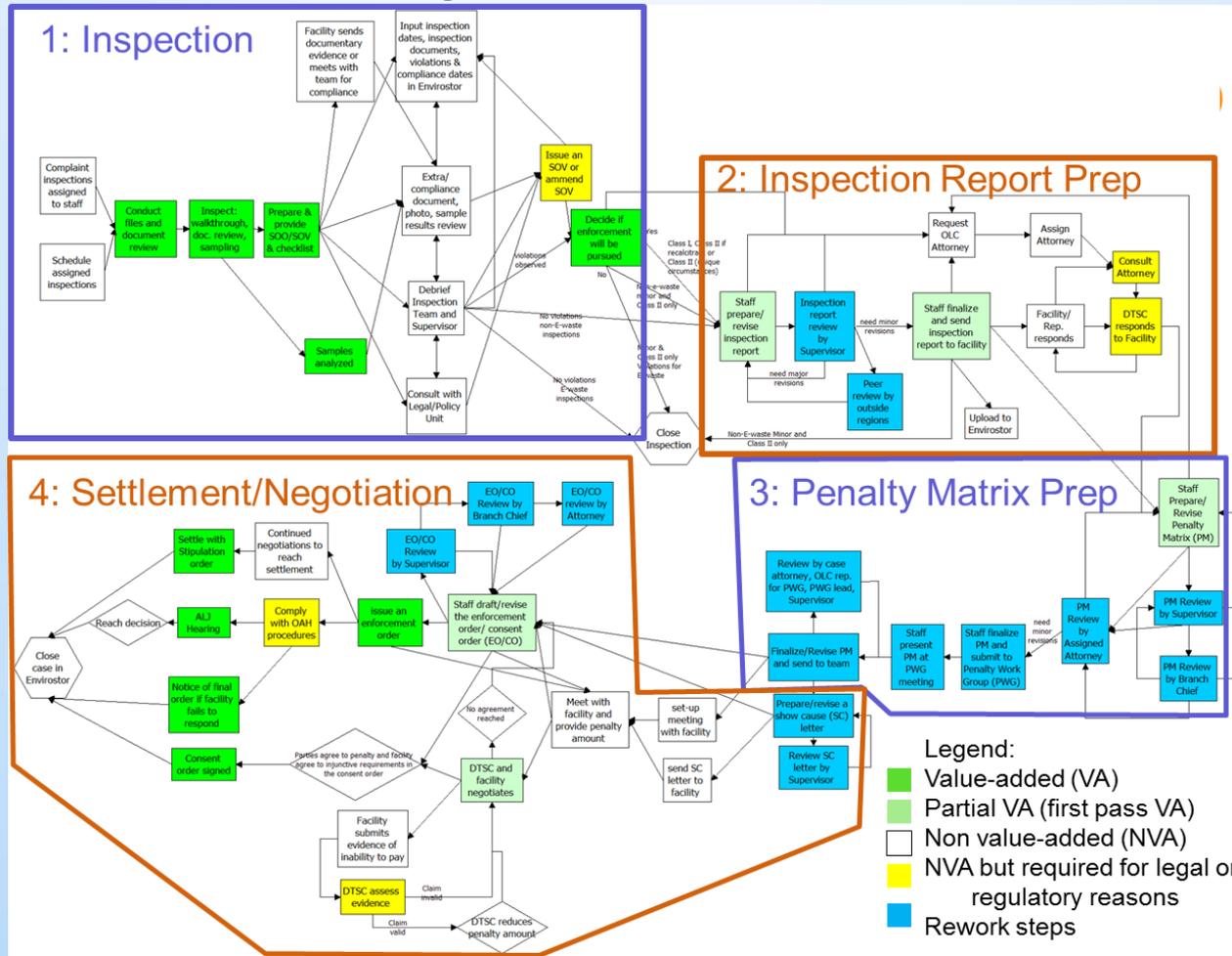


Baseline Capability



- ❖ Current average is 395 days, 14.5% within the 180 days upper spec limit.

Initial Process Map



❖ Several NVA steps (white, blue and yellow)

❖ Several review steps (blue)

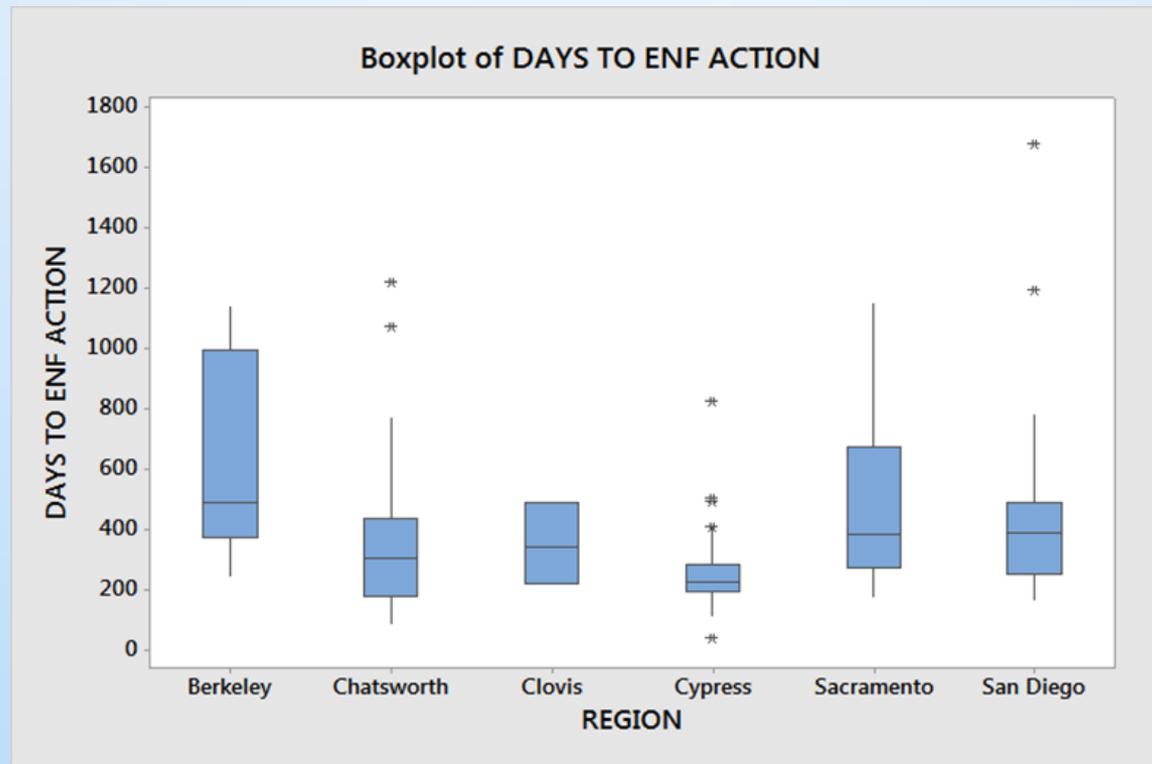


Analysis Tools

- ❖ Process Map
- ❖ Fishbone Diagram
- ❖ FMEA
- ❖ Work In Process Analysis
- ❖ Process Time Analysis
- ❖ Time Value Chart Analysis
- ❖ Pareto Charts
- ❖ Various hypothesis testing methods
- ❖ Capability Analysis
- ❖ Correlation Regression

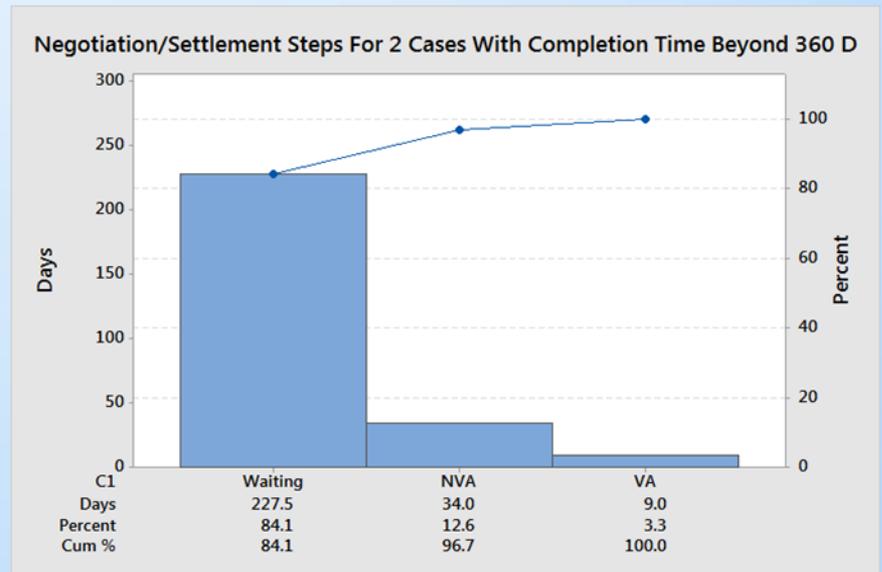
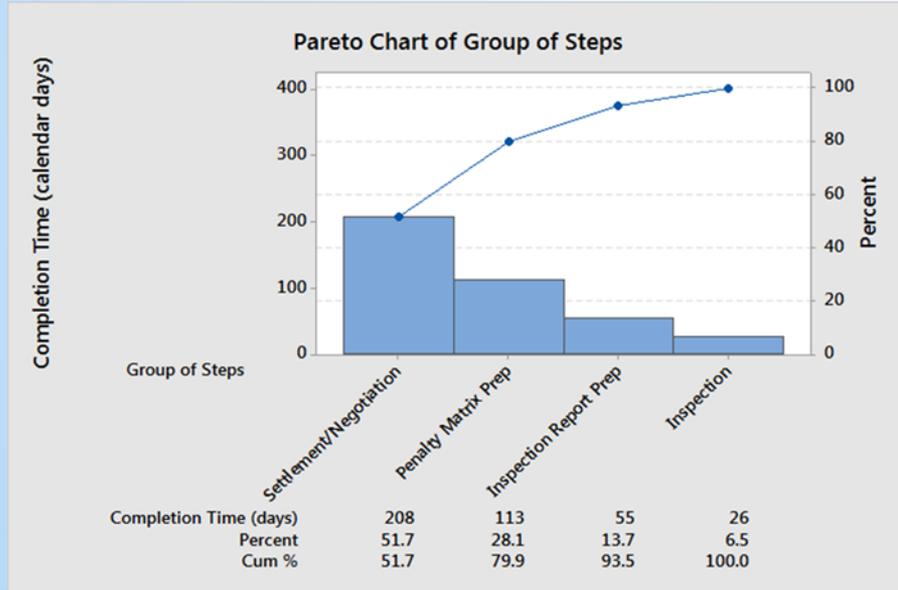


Completion Time Among Regional Offices



❖ Variations in the enforcement process among regional offices

Process Map Time and Time Value Analyses



- ❖ Bottlenecks: settlement/negotiation steps, followed by the penalty matrix preparation steps.
- ❖ Delays correlated with increased waiting times.

Critical X's (root causes of problems)

- ❖ Lack of standards
- ❖ Facility reps are not cooperative, causing excessive wait times
- ❖ Workload and deficiencies in time management
- ❖ Deficiencies in training/mentoring
- ❖ The penalty work group (PWG) review contributes to delays



Improvement Strategies

- ❖ Created a new process map incorporating lean improvement strategies.
- ❖ Created standard work and standard work checklist
- ❖ Created an inspection report evaluation checklist
- ❖ Recommended guidelines on offers and final offers for negotiations



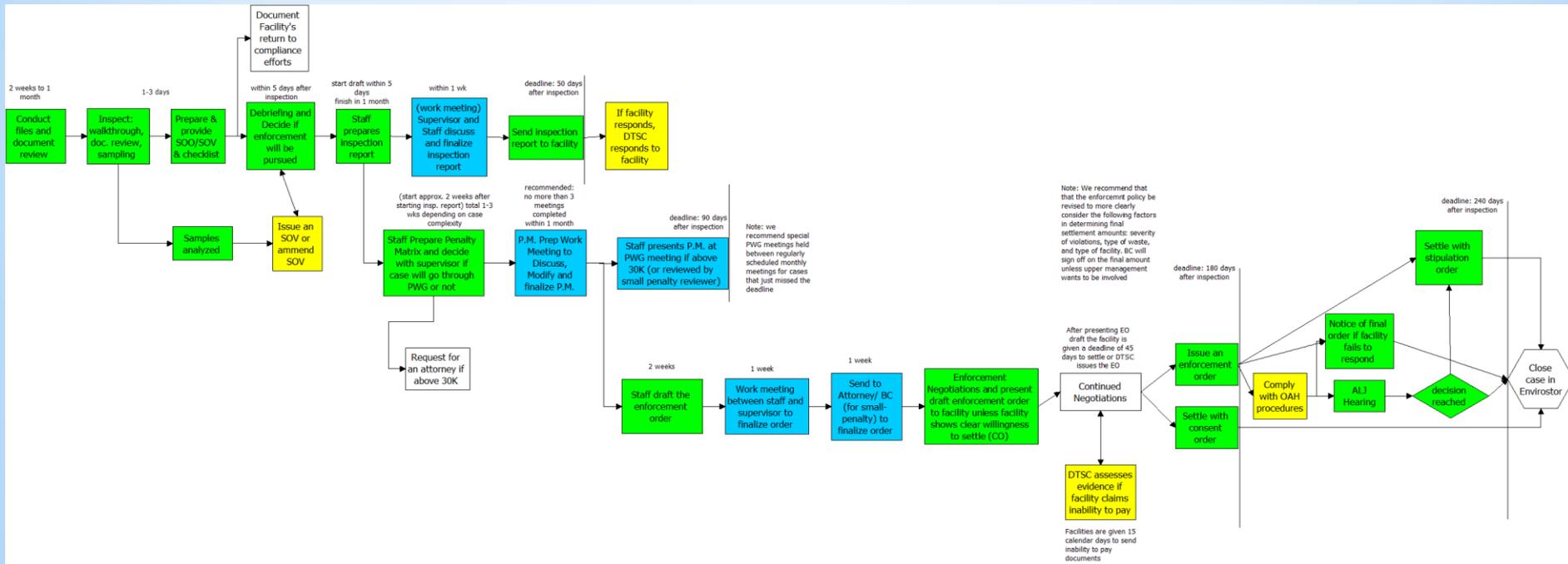
Improvement Strategies continued...

❖ Created a case tracker for visual project management.

1	A	B	C	D	E	F	G
1	Facility Name		EPA ID/E'Stor ID			Office	
2	Address		Work plan Type				
3	Milestone Date	Activity	Days to Complete	Due Date	Actual Complete Date	New Target Complete Date	Staff Hours Expended
4		Inspection Phase: Inspection, Inspection Report and SOO/SOV	0	7/6/2016			
5		*Debrief *Staff and management decide if enforcement will be pursued *Update EnviroStor (Inspection date, Violations section, SOO/SOV date)	5	7/11/2016			
6		*Draft Inspection Report (initial draft)	15	7/26/2016			
7		Enforcement Phase: Begin Penalty Matrix	0	7/26/2016			
8		*Initiate Enforcement (Draft Penalty Matrix/Request Enforcement Site Code) *Continue drafting Inspection Report *Supervisor review of Inspection Report *Work Meeting for Inspection Report *Request attorney if penalty is >\$30K	10	8/5/2016			
9		*Continue drafting Penalty Matrix *Finalize Inspection Report and send out	10	8/15/2016			
10	Day 50	*Continue drafting Penalty Matrix *Update EnviroStor and upload documents	10	8/25/2016			
11	8/25/2016	*Code for file room and file original hardcopies	0	8/25/2016			
12		Enforcement Phase: Penalty Matrix *Penalty Matrix Review	0	8/25/2016			
13	Day 90	*Work Meetings to finalize Penalty Matrix *Present to Penalty Work Group OR Review by Small Penalty Case Reviewer (≤\$30k)	25	9/19/2016			
14	10/4/2016	*Draft Enforcement Order	15	10/4/2016			
15		Enforcement Phase: Settlement Amount	0	10/4/2016			
16		*Review and finalize Enforcement Order or Consent Order *Start Negotiations	15	10/19/2016			
17		*Present Finalized Enforcement Order Draft	15	11/3/2016			
18		*Negotiations and Settlement Meetings	45	12/18/2016			
19	Day 180	*Issue Enforcement Order or Settle With Consent Order	15	1/2/2017			
20	1/2/2017	Settlement with Consent Order and update EnviroStor OR	0	1/2/2017			
21		Enforcement Phase: Administrative Case *Comply with Office of Administrative Hearings procedure *Hearings with Stipulation and Order *Settle	0	1/2/2017			
22	Day 240	*Notice of Final Order	60	3/3/2017			
23	3/3/2017	Settlement and update EnviroStor	0	3/3/2017			
24		Did you use the inspection report evaluation checklist?	(Y/N)				
25		(1) Calculated penalty on PM draft >\$30K?	(Y/N)	If answer is no proceed to answer (2) and (3)			
26		(2a) If answer is no on (1), is an attorney requested?	(Y/N)				

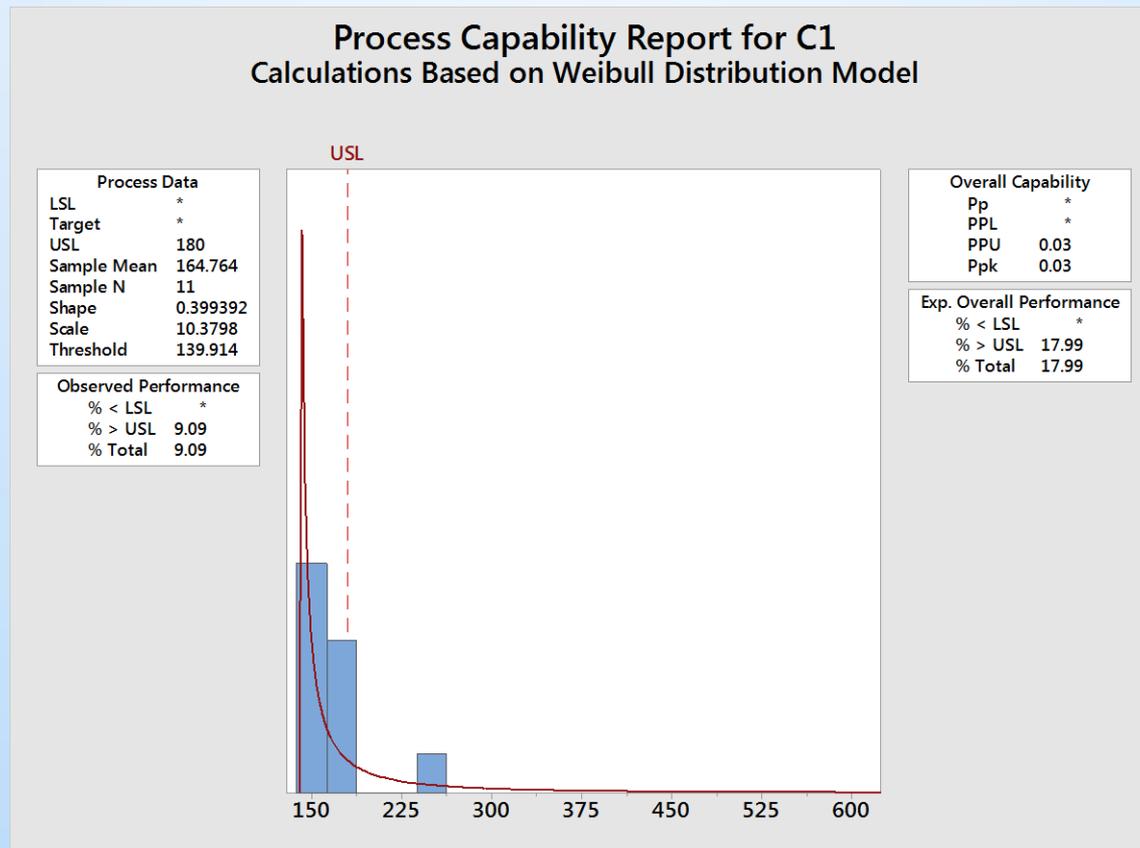


New Process Map



- ❖ Introduced parallel processing
- ❖ reducing NVAs, centralized processing, & batches
- ❖ Standard work: deadlines are put in place

Projected Capability Analysis



- ❖ Using 11 sampled cases with a projected best-scenario average of 110 days from sending inspection report to completion.
- ❖ Sample Mean: 165 days, 91% within spec limit.

Control Plan

- ❖ Case tracker will show expected completion dates of steps and will be used to monitor compliance with new SOPs
- ❖ Change management and training in is essential.
- ❖ The recommended period for pilot stage is 1 year.
- ❖ Statistical process control charts will be monitored for completion times and compliance to new standard work protocols.
- ❖ Quarterly internal audits will be completed by process owner.



Additional Benefits

- ❖ Affected community will have better confidence on DTSC's ability in monitoring the regulated community.
- ❖ DTSC staff will be able to better manage and predict workload.
- ❖ Will improve staff morale by being able to complete enforcement cases efficiently.
- ❖ Analysis of data provides an objective basis for improvements.

Thank you.



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Green Belt Contact Information

- ❖ **Name: Abdalin Asinas**
- ❖ **Phone: 916-255-6567**
- ❖ **Email: abdalin.asinas@dtsc.ca.gov**

