

LEAN IV Project Team - Re-Evaluation of the Title V Major Source Inspection Process

Project Period: May 2009 – May 2010

Final Report, August 2011

Project / Bureau: Re-Evaluation of the Title V Major Source Inspection Process / Bureau of Air Management Engineering & Enforcement Division

Team: Total number of team members = 8 (All staff within Division)

Team Sponsor: Robert Girard, Assistant Director

Team Leader: Rickey Bouffard - coordinating the LEAN tasks, formerly Dennis Demchak

Team Members: Mark Potash, Supervising Air Pollution Control Engineer; Debbie Tedford, Environmental Engineer 3; Jared Millay, Environmental Analyst 2; Lori Jackson, Environmental Analyst 1; Kiernan Wholean, Supervising Air Pollution Control Engineer.

Team Champion: Liz McAuliffe, Environmental Analyst 3

Opportunity Statement: The recent adoption of numerous highly complex federal MACT regulations necessitates a re-evaluation of existing Title V Major Source compliance determination methods and procedures to ensure that all non-compliance is detected and properly documented in the most efficient manner possible.

Objective: Enhance the Title V Major Source compliance evaluation process through an analysis of staff training needs, inspection methods, tools and forms, inspection report quality and format, coordination with office staff and Title V permit drafting and issuance. (Better support field staff and change the field inspection product being created).

Goals/Key Performance Indicators:

Pre-Kaizen Event Goals –May 2009	Post Kaizen Event Results/Key Performance Indicators – August 2011*
Clerical and Administrative Support: Increase the amount of time taken (in number of hours) to assemble binder with old PIQ, new PIQ, orders, compliance history, emission statements, MACT/NESHAP/NSPS checklists, internal communications. There was <i>no time</i> officially allocated to this task prior to this Kaizen.	An average of <i>one hour</i> is now spent obtaining these documents from electronic, and hard copy files where necessary. The time now ranges from 20 minutes to 3 hours. The mode was also one hour. Coincidentally, document management efforts outside of this project have made this process electronic in many instances. <i>This hour of prep time allows the field engineer as a customer to have this information when it is most helpful, upfront.</i>
Field Engineer Preparation Time: Increase the amount of time allotted to the Engineer to review the source related materials. Also allows for internal coordination with permit and enforcement staff. There was <i>no time</i> officially allocated to this task prior to this Kaizen.	An average of <i>three hours and ten minutes</i> are now spent reviewing the materials in the binder and preparing for the inspection. Internal staff are now instructed to make field staff discussions a priority when field staff are in the office. However, we do not know how much time is actual internal meeting time. The time now ranges from two hours to six and ½ hours for field engineer preparation. <i>This pre-inspection time now provided allows the field engineer as a customer to have review time when it is most helpful.</i>
Field Engineers Violation Identification: Reduce the length of Time each federal violation went undiscovered in number of years. <i>The group did not have a baseline</i> for this metric but we expect that this metric average should improve overtime if the inspections do become qualitatively more detailed as is intended.	For those cases where violations were identified they were either <i>two or three years old</i> . In 2012 and beyond this time period should never be greater than one year because of the thoroughness of the inspection built in by way of the checklist. This is a long term metric.
Improving report quality. The goal is to improve the identification of federal requirements fully and verify compliance with each element in Title V inspections.	By including the checklist in the formal inspection package identification of all federal requirement citations has become automatic and is now <i>occurring 100% of the time</i> . Verification of compliance with each element is being verified by the field supervisor.

(*Note: Total number of Majors = 80 with about 40 inspections in each FFY, often multi-day events including research)

Value Stream Mapping: The activities and steps, both value and non-value added, as shown in the Pre-Kaizen state versus Post-Kaizen desired state.

Type of Process	Pre-Kaizen – # of Processes	Post Kaizen – # of Processes
Valued Added	14	5
No Value Added	24	10
No Value Added but necessary	4	0
Waiting	2	1
Transport	16	3
Total	60	19
Percent Reduction in the Number of Total Steps = 67% Reduction		

The Post-Kaizen desired state has resulted in a number of improved program efficiencies, and include the following:

- Reduce # steps by eliminating “do loops”
- Assigned inspection reports are placed on the pit crew white board
- E-mail communication internally has been formalized to get details for inspectors from office staff ahead of time
- Binders of relevant documents are assembled before the inspection by in office staff to allow the inspector to have prior to inspection for review and study.
- E-mail communication internally has been formalized to get details from inspectors to office staff after the inspection
- More thorough understanding of obligations of, and process at, facility **before** the inspection date.
- Field engineers have a chance to review and comment on permits that are up for renewal.

Highlights of the Implementation Project Plan (2, 6 and 12 month deadlines)

- **One-two month goals** – Set up visual board, E-mail internal team for pre- inspection coordination, Determine applicable federal standards for each source, Submit changes to EMIT database to allow PIQ tie in with proposed Emission Statement, Field staff access to CADIS, Provide field staff updated documents TVCC, SO’s, NOV’s, MACTS’s, NSPS,ect via binder, CD or other means; Provide Links to existing resources i.e. MACT
Status: All goals completed.
- **Six month goals** - Assignment targeting; Revise database CADIS/ASSIGN to reduce targeting and procurement time; Standardize federal citation format; Finalize SOP’s for inspection process and reports; Team Inspections (if needed).
Status: All goals completed.
- **One year goals** – PIT Crew process in full swing with Binders prepared for field staff, field staff have schedule pre inspection PIT Crew review days, TV permit renewals being reviewed by field staff; New fillable forms for inspection reports.
Status: All goals completed.

Comments as of August 2011:

- **Project completed. No further progress updates required.**
- **Open internal communication between all groups in the Air Bureau is standard work**
- **White board visual of why or who are not communicating is continuing to be updated and used**
- **Revisit time frames in November 2011, once full cycle of inspections is completed.**
- **New Title V permit format is being rolled out that includes ability to convert to compliance certification for the regulated community and into a check list for the field engineers’ TV inspection process.**
- **KPIs being tracked by binder include: 1)amount of time to assemble binder; 2) engineer prep time; 3) all applicable federal requirements identified on the first report page; 4) all applicable requirements and attachments are clearly identified 5) TV permit evaluation has been completed; 6) # of federal violations discovered; 7) length of time each federal violation went undiscovered; 8) # of NOV’s issued in response to federal violations; 9) # of inspection report corrections needed; 10) # of issues requiring communication to other sections; 11) were field engineer’s recommendations followed-up on; 12) compliance report cycle time from inspection to supervisor sign off.**