



**Marathon
Petroleum Company LP**

**Marathon Petroleum Company
Owner-User Program**

10/4/18

● Refining Organization

– 6 refineries

- Robinson, IL
- Texas City, TX
- Garyville, LA
- Catlettsburg, KY
- Detroit, MI
- Canton, OH

– 1.881MM bpd refining capacity

● Illinois Refining Division

– Robinson, IL

– 265,000 bpd

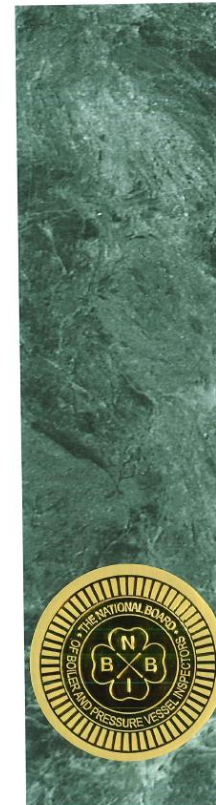
– Approximately 690 MPC employees



History of Owner-User Program



- Prior to 2000's
 - Certified Owner User through State of Illinois
 - Annual audit from State Inspector
- National Board Owner-User Accreditation
 - Late 90's
 - Began process NBIC accreditation
 - Review of QC manual and QC process
 - Inspection and test plans
 - Inspection documentation
 - Inspection personnel certification
 - Repair plans
 - Steve Lindbeck – State Inspector
 - NBIC Accreditation attained 2/3/00



THE NATIONAL BOARD
OF
BOILER & PRESSURE VESSEL INSPECTORS

Certificate of Accreditation

This is to certify that
Marathon Petroleum Company, LP
Illinois Refining Division
400 S. Marathon Ave.
Robinson, Illinois 62454
United States

is accredited as an Owner-User Inspection Organization in accordance with the provisions of NB-371, Accreditation of Owner-User Inspection Organizations (OUIO).

The scope of this accreditation is limited to:

Inservice Inspections for Jurisdictional Compliance and Repair/Alteration Inspections for National Board Inspection Code (NBIC) Compliance

Certification Number: 86

Issue Date: February 27, 2018

Expiration Date: February 2, 2021

Executive Director

A handwritten signature in black ink, appearing to be 'D. Lindbeck'.

Benefits of Owner-User Program



- Mutually beneficial to State of Illinois and MPC
- MPC manages equipment inspections
 - State invoices MPC annually for each all inspections
 - Ownership of planning and executing inspections
- Inspection personnel
 - Knowledgeable with refining process on each process unit
 - Trained and certified to inspect very specific and unique types of equipment
 - Backgrounds lead to being familiar with the facility and industry
- Creates safe and reliable atmosphere

Benefits of Owner-User Program



- Reduces work load for state/insurance inspectors
- Empowers MPC to take ownership of mechanical integrity
 - Detailed understanding of health of operating equipment
 - Proactively repairing/replacement of equipment
- Detailed inspection plans
 - Expected damage mechanisms
 - Types of inspection/NDE
- Continuous monitoring
 - Areas of concern
 - Quick Availability
- Repair oversight

Operating Units



- Crude/Vacuum
- 2 Coker Units
- Fluid Catalytic Cracking Unit
- 2 Reforming Units
- Hydroflouric Alkylation
- Hydrocracker
- 2 Saturated Gas Plants
- 2 Sulfur Recovery Trains
- 2 Amine Treating Units
- Benzene Extraction Unit



Breakdown of Equipment



- 1005 Pressure vessels
 - Towers
 - Drums
- 790 Heat Exchangers
 - Shell and Tube Exchangers
 - Air Coolers
- 4 High Pressure Steam Boilers
- 2370 Pressure Relief Devices
 - Pressure Safety Valves
 - Rupture Discs
 - Pressure Vacuum Breakers
- 2997 Piping Circuits





- Resides in Maintenance Department
- Works in Area team concept
 - Engineering
 - Tech Service
 - Operations
- Make up of Group
 - 5 Area Inspectors
 - Project QA Inspector
 - Corrosion Engineer
 - Metallurgist
 - Technician
 - Corrosion Monitoring Group
 - Coordinator
 - Technician
 - Contract API 570 – 6 employees
 - Contract NDE – 23 employees

● Background

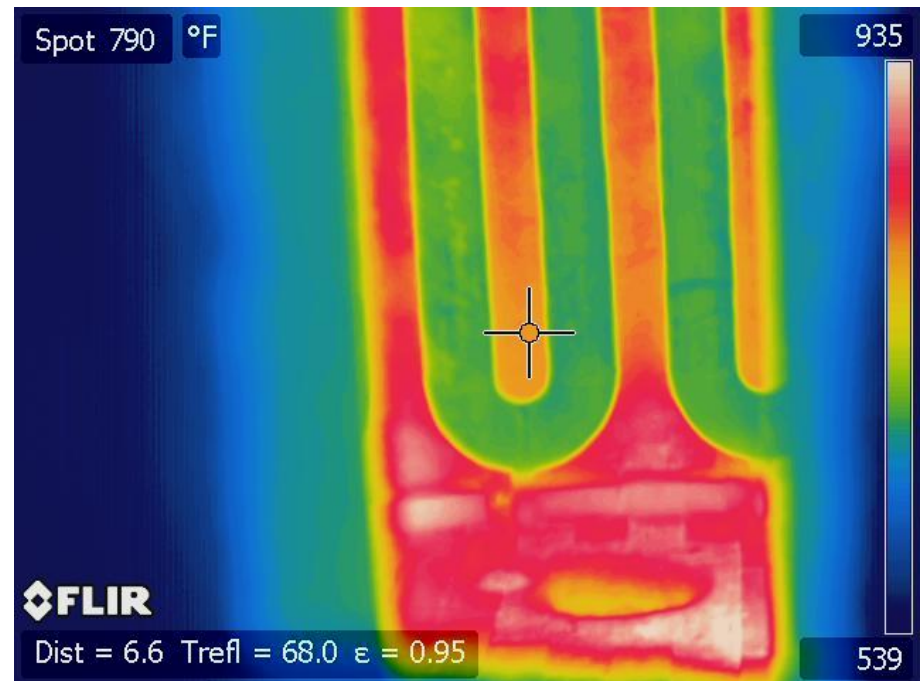
- Welders
- NDE technicians
- Engineers
- Pipefitting and Boilermaker Unions
- Refining General Maintenance

● Certifications

- NBIC
 - IS Commission
 - R Endorsement
- API 510 – Pressure Vessel Inspector
- API 570 – Piping Inspector
- AWS Certified Welding Inspector (CWI)
- API 653 – Aboveground Storage Tank Inspector
- API 936 – Refractory Personnel
- API 580 – Risk Based Inspection
- API 571 – Corrosion and Materials
- Level 2 NDE certifications

● Training

- Safety Leadership
- Continuing Education courses from NBIC
- Preparatory courses for certifications
- MPC developed courses
 - Fundamentals of Inspection
 - Unit Specific Inspection and Corrosion
 - Damage Mechanisms
 - Equipment Specific
 - Refractory Fundamentals
- Infrared Survey



Interaction with Chief Inspector



- Triannual NBIC Owner-User Assessment
 - QC manual
 - Repair packages
 - Inspection reports
- Annual State of Illinois Owner-User Assessment
- Triannual PSV Repair Facility Assessment
 - PSV QC manual
 - Tour of valve shop
 - PSV Repair documentation
- Equipment reported annually
- Inspections reported annually
 - 235 inspections in 2017
 - 316 inspection in 2016



Mechanical Integrity Program



- Defines Inspection and Maintenance
 - Inspection interval
 - Inspection type
- Compliant with:
 - National Board Inspection Code
 - Illinois Boiler and Pressure Vessel Safety Act
 - API 510 – Pressure Vessel Inspection Code
 - Corporate MPC Refining MI Specification
- Mechanical Equipment Deficiencies
 - Documents any noncompliance
 - Reported up through Division Manager
- Meridium
 - Inspection documentation
 - Inspection plans

Marathon Petroleum Company LP			
Quality Control Manual	Document No. IGC-001	Page Page 2 of 27	Revision No. 3
Owner-User Quality Control Manual for Boilers & Pressure Vessels	Effective Date 12/17/1999	Revision Date 01/28/2016	Next Revision Date 01/28/2019
Document Custodian: Inspection Supervisor	Records Retention Subclass: Refining – P&M – Operating Procedures, REF.08.04 Records Retention Period: 6 years after revised, superseded or no longer required.		

OWNER-USER QUALITY CONTROL MANUAL

for
INSERVICE INSPECTION & REPAIR/ALTERATION
of
SECTION VIII DIV I & SECTION I ASME
BOILERS & PRESSURE VESSELS

in accordance with the
NATIONAL BOARD INSPECTION CODE
&
ILLINOIS BOILER & PRESSURE VESSEL SAFETY ACT

MARATHON PETROLEUM COMPANY LP
ILLINOIS REFINING DIVISION
400 S. MARATHON AVE.
ROBINSON, IL 62454

MAILING ADDRESS: P.O. Box 1200
Robinson, Illinois 62454

National Board OU-86

CONTROLLED MANUAL NO. _____
ISSUE DATE: 12-17-1999
REVISION: 8 REV. DATE: 1-2016

- Key Performance Indicators
 - Monthly report
 - Overdue inspections
 - Visual inspections
 - Condition Monitoring Locations (CMLs)
 - 32415 Equipment CMLs
 - 69839 Piping CMLs
 - Currently 0 overdue inspections
- Fixed Equipment Advisory Group
 - Corporate Specialists
 - Inspection Supervisors from 6 refineries
 - Industry issues

Oversite of Fabrication and Repairs



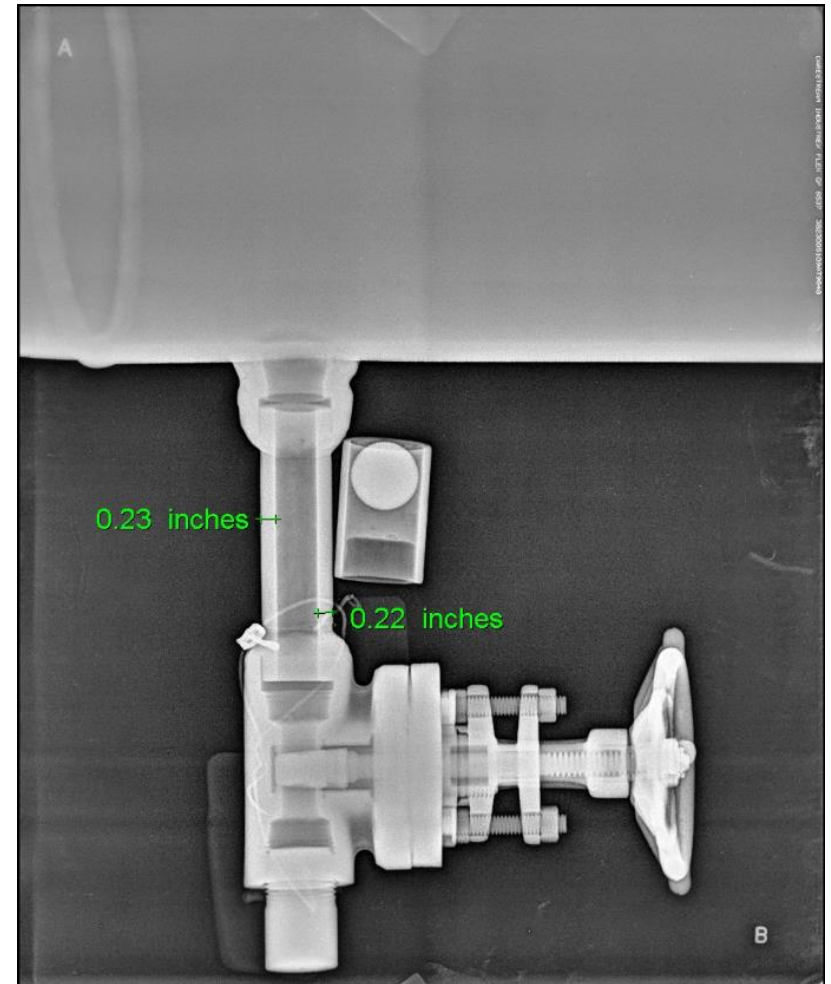
- QC on all repairs made by MPC
- QA on contract repairs
 - Review of repair plans
 - Welder qualification
- QA of fabrication
 - Fab shop prequalification
 - Preconstruction drawing reviews
 - Pre-inspection meetings
 - Regular shop visits



Special Emphasis Programs



- Over and above compliance
- Sulfidation Inspection
- Small Bore Threaded Piping
- Low Residual Element Inspection
- Retroactive Positive Material Identification
- Corrosion Under Insulation
- Back to Basics Program



Summary of Owner-User Program



- Great working relationship with Chief Inspector and Jurisdiction
- Creates safe and reliable atmosphere
- Knowledgeable well trained Inspectors
- Compliant with applicable codes and standards
- Closely monitor repairs and fabrication
- Over and above Compliance

