

# Cambridge Center for Behavioral Studies Safety Accreditation Site Visit Report

**To:**  
**Eric Biernbaum**  
**Safety Manager Lytle Electric**

**Marathon Petroleum Co. LLC**  
**Illinois Refining Division**  
**Robinson, IL**



**From:**  
**Accreditation Commission**  
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**Cambridge Center for Behavioral Studies  
Safety Accreditation Site Visit Report  
Lytle Electric Company, Inc.**

Site: Marathon Petroleum Company, Illinois Refining Division  
100 Marathon Avenue  
Robinson, IL 62454

Date of Visit: July 28, 2015

Reviewers: Dwight Harshbarger, PhD (Chairperson of Team) & Don Kernan  
Commission on Behavioral Safety, Cambridge Center for Behavioral  
Studies

Overview: Lytle Electric, along with Marathon Petroleum Company, Illinois Refining Division, (hereafter IRD) uses a behavioral safety process as part of a comprehensive safety program at the Robinson IL refinery. The Marathon IRD workforce initiated this process in 1996 and it has earned accreditation and re-accreditation by the CCBS since 2005. The IRD program also extends to multiple contractors who have adopted the PBBS process with their workforces operating in the refinery. Lytle Electric is one of those contractors. During the week of 7/27/15 to 8/1/15 the CCBS review team examined eleven (11) PBBS processes within the IRD. These included the Marathon refinery PBBS system and Lytle Electric.

A critical feature of the IRD / contractors PBBS process is shared elements of the system used by all parties: all participating units seeking CCBS accreditation during this review use the same observation card format which flows into IRD reporting system. All observers are encouraged to make observations on any workers within the refinery (not just employees in their business unit), and all data stream to a central data-base allowing examination of interlocking elements of the IRD workforce and contractors. The CCBS review team interviewed managers and workers from units applying for re-accreditation or accreditation, including Lytle Electric.

The review team critically assessed the elements of the PBBS system and its coordination during six (6) days on site. The review team scheduled focused interviews with managers of each unit's PBBS team and randomly selected workers to assess implementation of the PBBS system. The CCBS team examined outcomes achieved by each unit applying for accreditation as presented in their application to the CCBS. In many cases additional analyses were generated during the site review and these are added to the applications. Since all units' behavioral observation data are streamed through a central data-base, Tim Meier, CAP Coordinator (CAP = Contractor Advisory Panel) was present during portions of all the interviews to query the data-base and provide reports as requested by the CCBS reviewers. These queries often revealed how the various contractors, such as Lytle Electric, and Marathon IRD personnel observed each other within the refinery operations. Thus input on each company seeking accreditation was gathered both during the focused interviews of each applicant's personnel and in the review of other applicant's observation data.

It is noteworthy that our reviews revealed the effective operation of the PBBS CAP (contractor advisory panel) that coordinates the PBBS program elements across 13 contractors (ten of which applied for CCBS accreditation during this review). The IRD system is essential for the continued development of the contractor workforce. Also noted was IRD's utilization of PEC Premier, a third-party safety auditor exclusive to the gas and petroleum industry. PEC reviews all current and potential contractors in order to maintain required quality standards.

### **Schedule of Events**

Day/Date/Time	Meeting group	Location
Monday 7/27/2015 7:00 - Noon	Marathon IRD PBBS system. Interview PBBS Coordinator Eric Nickless	Safety Building Conference room
Monday 7/27/2015 1:00 - 4:30	SESCO Construction Co PBBS system. Interview PBBS Coordinator Nick Martin Safety Manager & Co-Owner Michele Brown	Safety Building Conference room
Tuesday 7/28/2015 7:00 am-Noon	Lytle Electric Co. PBBS system. Interview John Marts, Safety Manager	Safety Building Conference room
Tuesday 7/28/2015 1:00 - 4:30	Brand Energy & Infrastructure Services, Inc. PBBS system. Interview Aaron Ikemire, Safety Manager	Safety Building Conference room
Wednesday 7/29/2015 7:00am – Noon	SDR Coatings, Co. PBBS program. Interview Tanner Holt Safety Mgr	Safety Building Conference room
Wednesday 7/29/2015 1:00- 4:30	Lytle Electric PBBS program. Interview John Marts Safety Manager	Safety Building Conference room
Thursday 7/29/2015 7:00am – Noon	Bay Industrial Safety Services PBBS System. Interview Monica Piper, BBS Coordinator, Lisa McCord Office	Safety Building Conference room
Thursday 7/29/2015 1:00 – 4:30	Morris Construction Company PBBS System Chad Tislow Safety Manager	Safety Building Conference room
Friday 7/30/2015 7:00am – Noon	Stewart Security Patrol Inc PBBS system. Interview Debbie Parker Coordinator	Safety Building Conference room
Friday 7/30/2015 1:00 – 4:30	Mistras Inspection Company PBBS System Eric Martinovich Coordinator	Safety Building Conference room
Saturday 7am to Noon	Lytle Electric PBBS Program Eric Biernbaum Safety Manager	Safety Building Conference room

## Summary

Lytle Electric Company, Inc.  
Marathon Petroleum Company, Illinois Refinery Division Reaccreditation

The CCBS review team reviewed on-site operations to validate data and confirm that program descriptions as reported in the application are accurate. We find that the program operates as described. Further, the program meets the 3 basic criteria of the Commission on Behavioral Applications for PBBS Accreditation: 1) it is a behavioral program, 2) the PBBS program has had a visible impact on safety performance, and 3) the program has produced sustained positive performance over 3 or more years.

History: In 2005 the Marathon IRD earned accreditation from the CCBS for their PBBS process. One of the CCBS recommendations from that accreditation was to involve the contractor workforce in PBBS at the refinery. IRD invited their contractor community to participate in their process.

Lytle Electric Company, Inc. is a commercial and industrial electrical contractor that installs electrical raceways of all varieties, switchboards, panel boards, overcurrent protection devices, feeders and all conductors of distribution. All components are installed using modular style hangers and fasteners (strut, straps, all thread etc.) or assembled utilizing welding for field fabrication. The conductors are installed in raceways in accordance with NFPA70 using mechanical means for larger conductors or manually for smaller conductors. The types of work locations include refineries, petrochemical pipelines, and powerhouses in addition to commercial sites.

Lytle began its PBBS program in 2006 and was the first contractor at IRD to become CCBS accredited, achieving this recognition in 2009, then again in 2012. Lytle's safety program at IRD has received multiple national, Marathon corporate, and IRD awards.

Lytle is a member of the Marathon IRD Behavioral Based Safety Contractor Advisory Panel (CAP), which actively coordinates its PBBS process with that of the Marathon refinery workers and 14 contractors (ten applied for CCBS accreditation in 2015). The PBBS process found in the Marathon IRD PBBS program (e.g., the observation protocol, training materials, reports, etc.) is used by Lytle.

Observations by reviewers during the 2015 re-accreditation Lytle visit confirms that Lytle is continuing to execute the procedures described in their application for re-accreditation. Outcome data are accurate, verifiable and current and indicate a safety process that has resulted in sustained control of at risk behaviors and a low rate of incidents. The management systems (e.g., data collection, data entry, analysis, reporting) and training are responsive to the safety needs of the workforce and employees have input into the system. The PBBS process is part of a comprehensive safety program that manages the safety of refinery employees and integrates well with the operations by other contractor workforces in the Robinson refinery.

In addition to Eric Biernbaum, we spoke with a Lytle long-term worker and IRD personnel about the PBBS system in order to gauge the reach of the Lytle PBBS program.

The following were notable:

- Employees are familiar with the PBBS system of observation and feedback and how it is implemented.
- The recruitment and training systems appear adequate to sustain worker participation in the PBBS system as turnover occurs within the workforce.
- The PBBS operations are coordinated in an effective manner via CAP.
  - Clear communications among the managers of Marathon's IRD safety program and contractors, including Lytle, are evident as they share data and refinements during formal (PBBS CAP meetings) and informal channels.

The PBBS program is well supported by management systems and integrated with routine and turnaround operations. The program is a coherent and coordinated effort to sustain critical safety practices across a diverse workforce. IRD has an effective observation system tailored to track important behaviors.

Lytle has developed an important innovation in safety observations with the "Don't ask, just shoot me" visible sticker on the hard hats of workers who have volunteered for a PBBS observation at any time. "...just shoot me" refers to the SHORT SHOTS observation form and program used by Lytle. The "Don't ask just shoot me" program has been highly successful in generating an uninterrupted flow of quality observations.

Completed observations and timely feedback are delivered to those observed; at-risk behaviors are identified and actions taken to identify barriers to safety; safe behaviors are reinforced; the data are entered in a timely way into an excellent data-base, and generate useful and timely reports; summary feedback is provided to the workforce, including a weekly webcast by the IRD Division Manager.

At Lytle, incidence rates of critical safety events indicate a safety system that demonstrates sustained effectiveness.

#### Strengths:

- Lytle uses a well-established behavioral observation protocol to monitor safety practices, augmented by the "Don't ask just shoot me" program. Observers consistently enter their data into the IRD data-base. Lytle observers turn in their data cards for data entry. These data provide feedback to maintain safety and as needed correct at-risk behaviors. Observations focus on important risks in the refinery environment. Observations and feedback meetings are conducted. Lytle employees are knowledgeable about the observation cards and their use.

- Observation data are examined systematically. Reports are distributed to key audiences.
- Employees are well-versed in conducting the process. Participation in the observation process is tracked. Meals, contingently awarded, are used as a way to recognize employees for making observations. We saw no evidence of incentives used in a way that might suppress reporting.
- Employees offer suggestions for improvements and control of hazards during feedback interactions. These suggestions are communicated to supervisors and management for corrective action.
- The observation data are entered in an excellent data-base for tracking progress. Data are entered in a timely fashion enabling rapid analysis and reporting.

#### Concerns:

##### LIFE CRITICAL SAFETY RULES

- Life Critical Safety Rules were instituted 8 years ago from a corporate initiative and focused on behaviors that could result in a fatality. We were pleased to learn that PBBS observations were exempt from the policy and today this is no longer a concern.

##### INCENTIVES

- In 2012 incentives appeared as a concern in the IRD accreditation report. In 2015 incidental prizes and/or gift cards at IRD are appropriately used as rewards for high frequency observers and excellent observations.
- Such incentives are no longer a concern at IRD or Lytle.

##### OBSERVATION RATES OF 'AT-RISK' BEHAVIORS

- Observations are appropriate and at satisfactory levels at Lytle.

##### SIGNIFICANT CHANGES SINCE 2012

- The PBBS observation checklist has been modified by IRD and some contractors in order to create more focused pinpoints. As observers discovered more potential at-risk behaviors, more detailed descriptions of safety practices have been added to the back of the card. Observation pinpoints of practices scored as 'safe' and thus no longer needed have been retired.
- On the observation cards, one barrier was listed as "personal choice" under "causes" on the checklist. This barrier has been removed.
- Economic challenges (5% pay reduction for all contractors in 2012) have impacted contractor morale.
- The 2012 CCBS recommendations re Lytle mentioned the general response definitions for at-risk behaviors. While the present categories of Lytle's at-risk behaviors may seem to outsiders to be broad or general, in Lytle's PBBS program each at-risk observation prompts a conversation about the observation and behavior in question.

### Specific Concerns for Lytle Electric

- The reviewers have no concerns about the Lytle PBBS program. We commend Eric Biernbaum's current leadership in Lytle's PBBS program and his successful past efforts in Lytle's becoming the first IRD contractor to be CCBS Accredited.

### General Recommendations:

- The PBBS program is a properly designed, well-run behavior-based safety system. Impressive improvements in safety behavior and corresponding decrease in injuries and illnesses are noted in comparison to pre-PBBS data. **It is highly recommended that the current operations be supported so that they continue. The contractor PBBS processes are integrated with the Marathon Petroleum Company IRD safety program and these linkages should continue.**
- Continue employee leadership of safety teams (e.g., Area Safety Coordinators) by having them routinely summarize and report PBBS observations and comments from their work team at tool-box meetings or other on-the-job meetings. **Develop at least one front-line PBBS champion. The champion(s) would assist CAP PBBS coordinator with increasing quality observations from within the work group and present data during toolbox and safety meetings.** This will further emphasize and reinforce employee ownership of the program and will help generate higher quality (more detail and constructive suggestions) during implementation of the PBBS process.
  - **The PBBS program at LYTLE has a champion in Eric Biernbaum. Lytle could benefit from a back up for Eric to help him manage the program.**
- **Alterations to the Contractor PBBS systems (new target behaviors, extension to craft work) should continue to be done in consultation with the PBBS CAP team so that integration does not complicate existing behavioral data systems at the refinery.** Contractor employees can and do provide valuable input to the Marathon safety program and contribute in important ways to sustaining the safety of the entire Marathon IRD workforce. They serve as a source of innovation improving the current system.
  - **This is working well at Lytle.**
- Recognized metrics now guide the Contractor PBBS systems. These include measures of workers' implementation (% of workers trained, % of workers observing, density of observation across work hours, etc.) and effectiveness (incidence rates, counts of recommendations for improvements, etc.). **In preparation for 2018 re-accreditation, insure that the following data are kept on a monthly basis and are included for the years 2015-2018:**
  - **Incident rates: onsite TRIR and DART for contractor-IRD and BLS**
  - **Observations: percent of employees making observations, number of observations**

- **Number of employees**
- **At-risk behaviors: number of ARBs identified by category**
- **Use small incentive programs to encourage individuals to conduct observations. Highlight the safety improvements prompted by the observations and feedback so that workers see the utility of their observations beyond their personal behavior change.**
- **Reduce the use of “right – wrong” terminology regarding behavioral observations, and replace those terms with “safe – unsafe” or “safe – at-risk” as used in observation forms.**
  - **The right-wrong terms are not used judgmentally; rather they refer to correct or incorrect, safe or unsafe behavior. Language is important and needs to be consistent with and grounded in a behavioral orientation.**
- The Lytle team showed that PBBS observations may offer an additional organized method to detect variation in the refinery related to process safety management (PSM). Contractor eyes are on various features of the refinery especially during turnarounds. **We recommend consideration of adding a section to the PBBS SHORT SHOT form for employees to record any unusual variations (etc. leaks, spills, corrosion, vibration, etc.) as a way to collect such observations.** We temper this recommendation with the advice that this be done in collaboration of the BBS CAP team and the engineers responsible for PSM as the logistics for collecting and analyzing such data may complicate existent systems.

#### Specific Lytle Electric Recognition

- Lytle Electric has been leader in contractor accreditation. We commend the leadership of the company and Eric Biernbaum.

#### Conclusion:

It was a pleasure to review the performance of the PBBS program at Lytle Electric. Our observations confirm that the PBBS program is managing critical behaviors and helping sustain the outstanding safety record of this refinery. Our recommendation to the CCBS is for re-accreditation of the Lytle Electric PBBS program at the IRD site in Robinson, IL. This accreditation will be for a period of three (3) years, 2015 – 2018.

This recommendation was (approved unanimously on August 21, 2015.

Respectfully Submitted,

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