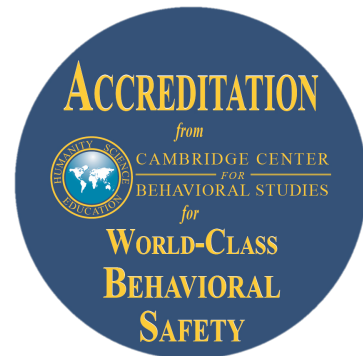


Cambridge Center for Behavioral Studies Accreditation Site Visit Report

To:
CHAD BROWN
OWNER
SENCO CONSTRUCTION, INC.
1408 S. EATON ST.
ROBINSON, IL 62454

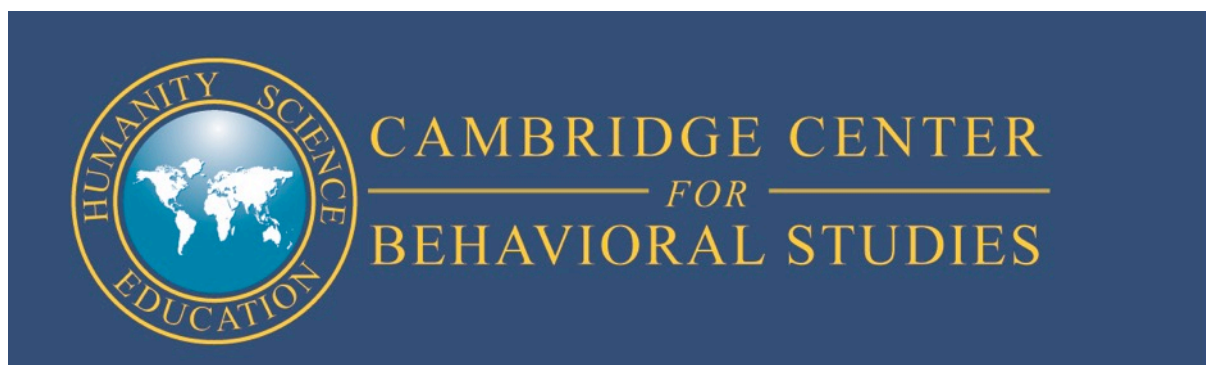


December 16, 2019

Commission on Behavioral Safety Accreditation
Cambridge Center for Behavioral Studies (CCBS)
P.O. Box 7067
Cummings Center Suite 340F
Beverly, MA 01915

Review team: Sigurdur Oli Sigurdsson, Ph.D. (Review Chairperson)
Don Kernan (Commissioner)

Cambridge Center for Behavioral Studies (CCBS) Mission
To advance the scientific study of behavior and its humane application to the solution of practical problems, including the prevention and relief of human suffering.



Accreditation Decision

The Cambridge Center for Behavioral Studies' Commission on Behavioral Safety Accreditation reviewed the Senco Construction' application for Re-Accreditation and performed a site visit on October 09, 2019. Based on data reflecting exemplary safety performance of Senco Construction, and supported by observations and interviews during our visit, Dr. Sigurdsson and Mr. Kernan found that Senco Construction's B.E.E.S. (Behaviors Encouraging Employee Safety) behavioral safety program meets the three basic accreditation criteria of the Commission on Behavioral Applications for Behavioral Safety Accreditation:

- 1) it is a behavioral process,
- 2) the process has had a visible positive impact on safety performance,
- 3) the process has produced sustained positive performance over 3 or more years.

The Commission site visitors recommended to the Commission that the B.E.E.S. Behavioral Safety Process (as integrated into the Marathon Petroleum Company FUELS Behavioral Safety Process) be Re-Accredited at the Gold Level for a period of three years. This recommendation was unanimously approved on December 16, 2019. Recommendations for possible enhancements to the program are contained in the section on Standards, which starts on page 10.

The Cambridge Center for Behavioral Studies accredits the Senco Construction Company Behavioral Safety program for 3 years (November 2019 to December 2022).

Sampling Methodology of Senco Construction Company Behavioral Safety Program Review

Senco Construction Company's behavioral safety process is part of the FUELS behavioral safety process in the Illinois Refining Division (IRD) of Marathon Petroleum Company LP, but uses its own checklist. This review is therefore based on the fact that Senco's Behavioral Safety program is integrated into the FUELS process, which was reviewed in the same visit (see report [here](#)). In the site visit, the Accreditation review team worked with Senco Construction's Health & Safety Director and the FUELS Team in order to evaluate the behavioral integrity and ongoing impact of the Behavioral Safety program on safe performance and the reduction of injuries. This was accomplished through: a) review of the written application for accreditation, b) safety performance data review, c) interviews with accountable parties, and d) witnessing behavioral safety processes in action. The Application for Accreditation renewal was submitted to the CCBS on September 3, 2019 for purposes of reviewing the Senco Construction behavioral safety program. The current application updated safety performance data and provided examples of more recent behavioral safety implementations. The site visit itinerary allowed the reviewers to interview the Senco health & safety director, front-line supervisors and employees, and to review B.E.E.S.'s integration into the FUELS process.

Site Review Itinerary

October 09

6:30 am - 7:30 am: Interview with Health & Safety Director

7:30 am - 8:30 am: Interview with a small sample of employees

8:30 am - 9:30 am: Interview with a small sample of front-line supervisors

BEHAVIORAL SAFETY REVIEW AND RECOMMENDATIONS

Safety Performance

The visit supports the data and information in the Senco Construction application, including behavioral data, leading indicators and injury outcome data. Senco's OSHA Recordable Incident Rates continue below industry standards. In the three years since the Re-Accreditation of Senco, OSHA has released incident data for the following years: 2015-2017. For these three years, Senco has been well under the industry average. OSHA data have not been released for 2018, but Senco's data continue to be low in 2018 and 2019 YTD.

The graph below shows the OSHA Recordable rates for Senco workers (in blue), and comparable industry (red). Comparable industry is "Electrical Contractors and Other Wiring Installation Contractors" (NAICS code 238210).

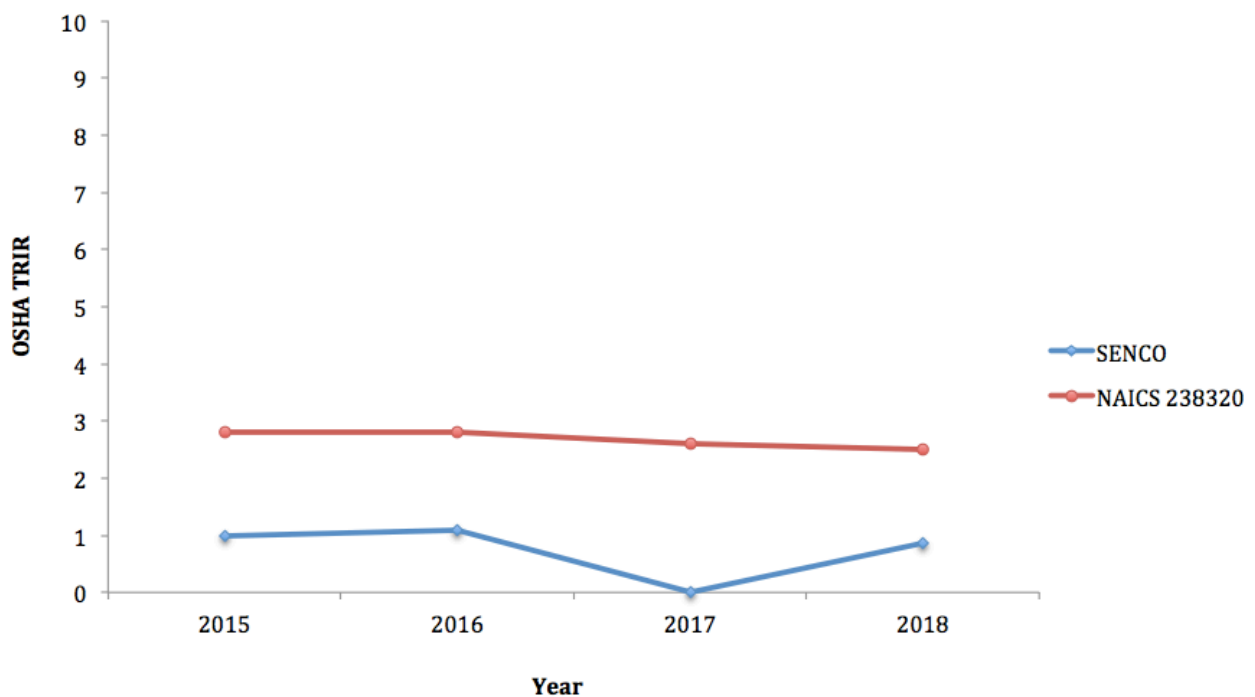


Figure 1. Senco Construction incident data and comparators

About Senco Construction, Inc.

SENCO Construction offers a broad line of equipment rental and services for new construction and plant maintenance. Over 30 years of experience includes site work, concrete installation, structural steel, rigging rental, critical lift planning and crane services of all types. As a union contractor signatory with eight different crafts SENC0 offers a wide variety of manpower options as well as a large inventory of heavy construction equipment. A maintenance shop is on-site with a full time staff of experienced mechanics for equipment service.

SENC0 Construction is a signatory with 8 union crafts, those crafts include: Equipment Operators, Ironworkers, Carpenters, Laborers, Pipefitters, Cement Masons, Teamsters and Brick Layers.

SENCO Constructions number of employees vary throughout the year with as few as 50 employees, or could expand to 360 employees. SENCO has a 3 year average of 181 employees onsite with 30 of those employees considered full time.

Safety Performance Achievements and Awards

Senco was re-accredited in 2017 as STAR status in the Voluntary Protection Program (VPP) by the Occupational Safety and Health Administration (OSHA).

Senco won the IRD Contractor Excellence Award for 2017 and was a finalist in 2018.

The B.E.E.S. Process

Employees from SENCO Construction utilize the BBS program (F.U.E.L.S.) as a tool to help identify and assess safety risks. Every SENCO employee has the right and responsibility to stop and unsafe condition or work practice. Behavioral pinpoints are targeted through the MPC observation data base. SENCO is given access to data generated in the BBS Process and is able to run multiple reports to determine/identify at risk behaviors, or specific barriers in the workplace. These reports are typically ran through the work area in the plant to look at specific job. Pinpoints were developed by the BBS Steering Committee and have not been changed. Specific guidelines are followed in the observation process.

Steps to perform a BBS observation:

1. Observers must first gain permission from the employee(s) being observed.
2. Observer utilizes a check list to help guide them through the observation.
3. Observer marks both "safe" and "at-risk" behaviors identified during the observation.
4. Observer discusses positive items found during the observation and items that were found to be "at-risk". This discussion is always kept positive and the observer must always finish with positive feedback.
5. The observer turns the observation into an observation drop box where it will be collected and entered into the database.

The SENCO Construction BBS training covers how to complete a quality observation. A portion of the course gives examples of what a quality observation looks like. Once employees complete the course they go with the instructor to the field where they practice what they were taught in the class room. SENCO also utilizes its coaching guide as mentioned in C1.9 of the application.

SENCO Construction trains on these key points to assure quality observations:

How to write an effective comment

Comments are ALWAYS helpful in understanding the event beyond just a data point. They give us the story behind the observation.

1. What the observed was doing (action verb)? Welding, cutting, carrying, opening a valve, grinding etc.
2. What was safe or at risk? The cords created a trip hazard, the person was out of the line of fire, the lifter had a straight back and lifted with their legs etc.
3. What was done after the observation? We had a conversation and decided it would be best to pick up the cords, the employee was coached and corrected, I told them I appreciated them working safely etc.

Another tool that SENCO employees utilize on a daily basis is their Safe Work Permit. The Safe Work Permit is a communication tool used between MPC and Contractors to talk about the job scope and hazards of the job. The hazards could range from being process related to the potential for personal injury.

After the Safe Work Permit Process is complete employees must fill out a SENCO Pre-Task Hazard Analysis (PTHA). The PTHA breaks down each job task, associated hazards with the job steps and mitigation procedures that have been put into place to prevent employee injury and property damage.

SENCO also utilizes daily audits, weekly audits, monthly audits, near misses and injury rates to identify and assess safety risks.

The Senco behavioral safety process has a history spanning 10 years. The process is called B.E.E.S. which stands for *Behaviors Encouraging Employee Safety*. Senco's Behavioral safety processes at IRD has been accredited by the *CCBS Commission on Behavioral Safety Accreditation* since 2012, and was successfully re-accredited in 2015.

The B.E.E.S. process is currently overseen by a committee comprised of 3 hourly full-time and 4 hourly part-time workers. Supervisors and senior managers also attend meetings regularly. The committee meets once a month to review data, assess the process, discuss follow-up of fix-it items and discuss action plans and goals.

Observer training consists of 5 hours of in-class instruction, followed by practice and mastery sessions in the field with a trainer. There is also a 30-minute annual ABC Analysis course for observers as well as a 1 hour course on how to complete an observation. The effectiveness of the training has not been evaluated to date.

Currently the process has 122 of 141 employees (87%) that are trained as observers. It should be noted that the process is entirely voluntary. The total number of B.E.E.S. observations per month has ranged between 250-58 since the 2015 re-accreditation. It is noteworthy that observations and participation vary due to the effect of turn-around activities in the refinery and to a change in 2015 to “Quality Observations” rather than a numeric goal. In interviews, Senco Construction workers, as with other contractors at IRD, said that more observations with safety feedback are likely occurring, but that they do not get recorded. Observations conducted on Senco workers by F.U.E.L.S. observers are not included in the chart below as they are reported separately by IRD.

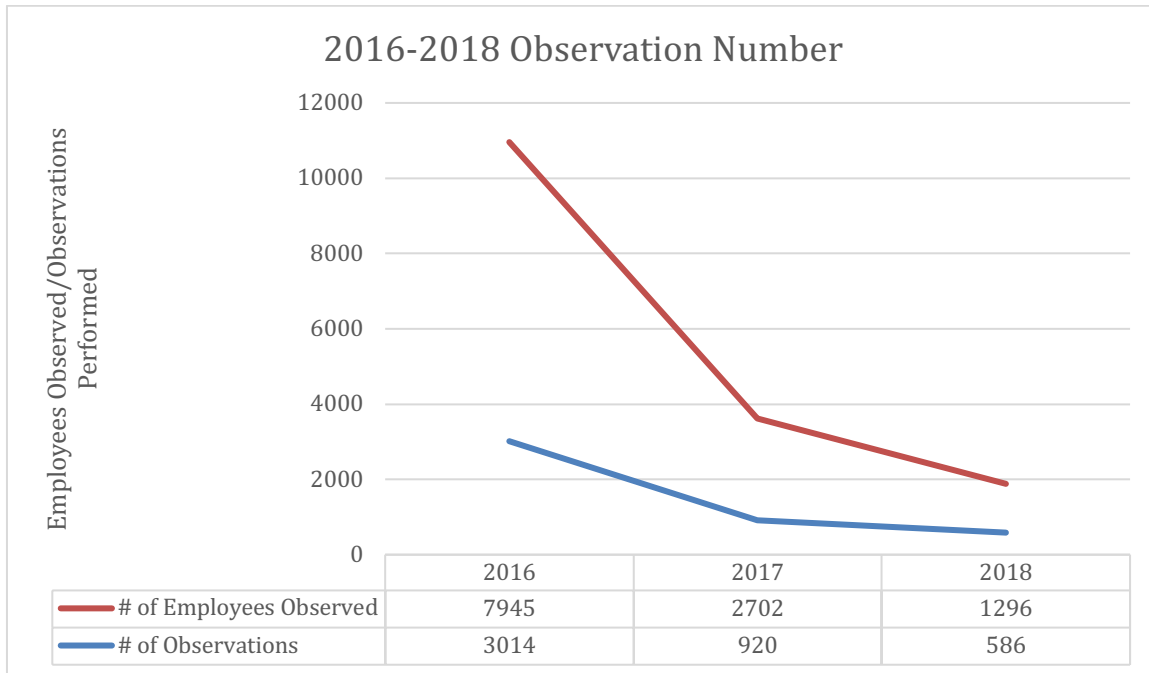


Figure 2. Number of workforce observed and number of observations (2016 - 2018)

Senco also developed a coaching guide in order to produce quality observations (see Figure 4).

Name of Coach _____ Date _____

In an effort to improve the overall quality of observations this guide was developed to help the various BBSCAP facilitators critique their trained observers. This in turn will:

- Help increase the quality of the observations being performed.
- Drive more communication and proper specific feed back.
- Positively motivate observers.
- More facilitator and observer interface
- One on one coaching.
- Show the facilitator what they need to improve on or stress in their training programs.
- Help improve the skills of the observers.

The coach should only take notes during the evaluation. Let the observer do the talking.

Introduction		
	Yes	No
1. Observer asked permission to do observation.		
2. Observer Explained the process.		
3. Observer explained the feedback process		
Feed Back		
4. Observer discussed specific safe behaviors first.		
5. Observer avoided using loaded words		
6. Observer discussed specific At-risks seen.		
7. Observer asked for commitment to working safe.		
8. Observer kept discussion positive		
9. Observer promoted discussion by asking questions.		
10. Observer checked only the parts of the form that applied to the task.		
11. Observer listened to answers, made sure employee understood.		
12. Observer explained Is follow up needed		
General		
13. Observer legibly filled out all applicable portions of the form		
14. Observer filled out comment section of form		
15. Observer treated worker like the worker wanted to be treated. (Platinum)		
16. Upon completion observer showed employee finished form		
Comment		

Figure 4. Senco Observer Coaching Guide

The FUELS facilitator will review observations as they come in from contractors every day, including Senco Construction observers. These data are fed to the work force through multiple communication channels (see the FUELS accreditation report [here](#)), but weekly safety meetings are the primary venue for communicating safety and health information and providing feedback based on data from the behavioral safety process. There are sometimes special occasions that

require a “stand-down” to voice concerns over recent safety findings . There are also times when conditions warrant a celebration and/or positive feedback. There is currently no evaluation of the quality of the feedback provided as part of the behavioral safety process.

Senco eliminated its incentive plan in May of 2016 however, management support for B.E.E.S. is evident and conversations with Senco workers confirmed that B.E.E.S. receives financial support if needed. However, there is no continuous improvement plan in operation and no formal succession plan. Currently the SENCO B.E.E.S. Steering Committee is comprised of volunteer craft employees. When a member is laid off because of lack of work the Steering Committee will discuss candidates that are potential replacements. Ultimately it is the Health and Safety Director and Management who decides who sits on the Steering Committee. The Health and Safety Director is the Chair of the Committee, in the event he is no longer with the company his replacement would assume that responsibility.

Ten Accreditation Standards Applied to the Site’s Accreditation Review

The CCBS Commission on Behavioral Safety has ten standards that serve as criteria for accreditation reviews and decisions. The review team assesses and reports evidence of progress using each of these standards. It is important to note that the B.E.E.S. program is incorporated into the FUELS behavioral safety process. The review outcomes of the ten accreditation standards applied to the FUELS process are relevant to the review of the B.E.E.S. program, but are not reproduced in full below (full accreditation report available [here](#)). Notes and recommendations that are specific to the B.E.E.S. program are listed below.

1 Safety Team

- a. Learning opportunities in behavioral sciences and behavioral safety
 - The B.E.E.S. facilitator actively seeks opportunities in behavioral sciences.
- b. Facilitator functions transferable to other team members
 - The B.E.E.S. facilitator does engage with the FUELS steering committee.
- c. Team members serve as trainers and educators in behavioral safety
 - The B.E.E.S. facilitator and steering team have advised other organizations (i.e. Victor Dana and Hanning Construction) on matters related to behavioral safety.

Standard 1 Performance: The review team finds Senco Construction’s performance on this criterion to be consistent with the GOLD Level standard.

Standard 1 Recommendations: Progress can be demonstrated by:

- The B.E.E.S. facilitator can help both Victor Dana and Hanning Construction in understanding the value of using ABC analysis to problem solve.

2 Management Support and Engagement

- a. Documented management support and engagement
 - The B.E.E.S. program is well-supported by supervisors and the owner of the company.
- b. Key leaders are held accountable for features of the program
 - Key leaders at Senco Construction are not held accountable for features of the program
- c. Key leaders across the site have acquired education in behavioral sciences
 - Key leaders at Senco Construction have not acquired education in behavioral sciences

Standard 2 Performance: The review team finds Senco Construction’s performance on this criterion to be consistent with the standard of SILVER Level.

Standard 2 Recommendations: Progress can be demonstrated by:

- Key leaders at Senco Construction gaining basic education in behavioral sciences or behavioral safety.
- Key leaders at Senco Construction tracking their support behaviors of the B.E.E.S. program.

3 Worker Knowledge, Skills, and Involvement

- Widespread demonstration of working knowledge of the behavioral safety program
 - Senco Construction workers interviewed were very familiar with the program.
- Employees are engaged and willing to participate in the BBS program
 - The number of observations per month done by Senco Construction workers is fairly low since the emphasis was given to focus on quality observations.
- Employees suggestions are implemented
 - Senco Construction could give a clear example of an investment in new equipment that improved the safety of a certain work behavior. See C3.3 in the application.

Standard 3 Performance: The review team finds Senco Construction's performance on this criterion to be consistent with the standard of SILVER Level.

Standard 3 Recommendations: Progress can be demonstrated by:

- Engaging with IRD's FUELS Steering Team to explore ways to increase the number of observations conducted by Senco employees.

4 Risk Analysis, Pinpointing, and Behavioral Observations

- Observation targets are re-assessed and prioritized
 - No changes have been made since the check list inception. Activities and risks remain a constant.
- Data are checked for accuracy and quality
 - The B.E.E.S. observations are checked both by the FUELS coordinator and the B.E.E.S. facilitator.
- Data compiled and analyzed frequently
 - B.E.E.S. observations are compiled at least monthly by the FUELS coordinator and the B.E.E.S. facilitator.

Standard 4 Performance: The review team finds Senco Construction's performance on this criterion to be consistent with the standard of GOLD Level.

Standard 4 Recommendations: Progress can be demonstrated by:

- Increasing the number of quality observations monthly.
- Looking for ways to capture observations that are occurring, but not recorded. The mobile checklist option should help with that issue.

5 Goal Setting and Incentives

- Goals are set for safety process behaviors.
 - B.E.E.S. goals are around outcomes of behavioral observations, as well as conducting observations and coaching.
- Goals are set for quality observations yielding at-risk behavior and comments
 - There are no B.E.E.S. goals and incentives related to the quality of the observations.
- Any incentives are evaluated and refined
 - Incentives were dropped following Senco's 2015 accreditation.

Standard 5 Performance: The review team finds Senco Construction's performance in this criterion to be consistent with the standard of GOLD Level.

Standard 5 Recommendations: Progress can be demonstrated by:

- Continuing to evaluate the goals that lead to a higher rate of high-quality observations by Senco Construction workers.

6 Effective Communication and Performance Feedback

a. Performance results are communicated with employees

- Senco Construction workers receive performance feedback regularly through both FUELS and B.E.E.S.

b. Follow-up on safety concerns are communicated and documented

- Senco Construction developed a safety team called Craft Safety Improvements (CSI). Please refer to application section C3.3

Standard 6 Performance: The review team finds Senco Construction's performance on this criterion to be consistent with the standard of GOLD Level.

Standard 6 Recommendations: Progress can be demonstrated by:

- Creating pertinent B.E.E.S. process charts/graphs and post them in the work areas. These should be updated weekly, and at least monthly. These data should be part of B.E.E.S. discussions, especially at toolbox and safety meetings. These graphs should have trends over time in percentage safe, number of observations, % participation and closed items from fix-it lists.

7 Evidence of Program Effectiveness

a. Sustained impact on lagging indicators of injuries and other metrics is demonstrated for 3 or more years below industry standard

- Senco Construction has consistently demonstrated incident rates for the past three years that are below industry averages.

Standard 7 Performance: The review team finds Senco Construction's performance on this criterion to be consistent with the standard of GOLD Level.

Standard 7 Recommendations: Progress can be demonstrated by:

- Continued reduction in injury rates below industry standard.

8 Continuous Improvement (CI) and Succession Plans

a. CI plan is operational, examples of corrective actions are well documented, including succession planning for key program leaders and champions.

- "SESCO Construction has no continuous improvement or succession plans, and there are no plans to develop these.

Standard 8 Performance: The review team finds IRD performance on this criterion to be consistent with the standard of BRONZE level.

Standard 8 Recommendations: Progress can be demonstrated by:

- Develop a succession plan for B.E.E.S. This is particularly important as so much of the operation and success of the behavioral safety program depends on one person (B.E.E.S. facilitator)

9 Extended Applications of Behavioral Technologies

a. Evidence of behavior technologies applied to other organizational processes (e.g., process safety, quality, production, leadership)

- There is no evidence at Senco Construction of extended applications of behavioral technologies, and no indication of developing these.
- Senco participates in IRD's BBS activities

Standard 9 Performance: The review team finds Senco Construction's performance on this criterion to be consistent with the standard of SILVER Level.

Standard 9 Recommendations: Progress can be demonstrated by:

- Creating a plan for extending behavioral technologies, ABC analysis, to other departments or operations of Senco Construction.

10 Corporate Responsibility and Outreach

a. BBS lessons learned and behavioral education is shared with company partners and contractors

- The B.E.E.S. facilitator and steering team have advised other organizations on matters related to behavioral safety.
- SENCO purchased Turning Technologies which is an audience polling program that you can incorporate into PowerPoint trainings. SENCO purchased this program to give employees an alternative route to participate, some employees are not inclined to speak up in front of a crowd.
- SENCO has worked with Victor Dana and Hanning Construction to promote safety and BBS within their industry. SENCO acts as a BBS safety mentor via frequent phone calls, i.e. the new Silica Standard which was rolled out this year. SENCO has performed atmospheric monitoring for Hanning at no cost.

b. Program supports or collaborates with safety researchers to help advance the science.

- Senco Construction has collaborated and shared experiences with the National Safety Council and through the VPP.

Standard 10 Performance: The review team finds Senco Construction's performance on this criterion to be consistent with the standard of GOLD Level.

Standard 10 Recommendations: Progress can be demonstrated by:

- Continuing to disseminate behavioral safety with peers, professional partners, and the local community.