# Commission on Behavioral Accreditation, The Cambridge Center for Behavioral Studies™

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The Cambridge Center for Behavioral Studies

Thank you for your interest in The Cambridge Center for Behavioral Studies and our initiative to strengthen safety in the workplace through standards and accreditation.

The Cambridge Center for Behavioral Studies (CCBS) is a science-based organization whose mission is 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. The Center is a problem-solving, not-for-profit, 501 (c) 3 organization.

Through its web site, www.behavior.org, the Cambridge Center provides the most accessible source of information and education on behavioral research and applications. It creates, disseminates, and supports humane and effective applications of behavioral research to important problems in the workplace, home and school. We set and expect others to meet high standards in the applications of behavioral research to problems.

Much of the work of the Cambridge Center is accomplished through volunteer efforts of people who believe in the importance of the work of the Center. Contributions from members and organizations, fees from conferences and on-line courses, as well as the sales of books and related products, provide financial support for the Center.

Purpose of Accrediting Safety Programs Based on the Principles of Behavior

The Cambridge Center is dedicated to applications of behavior-analytic research to human performance in the workplace. Workplace applications based on the principles of behavior and designed to improve safety performance are often currently referred to as behavior-based safety (B-BS) programs. In this document we will refer to B-BS programs and other evidence-based programs as principles of behavior based safety (PBBS) programs. The more inclusive term PBBS is used to emphasize that all programs, including B-BS programs, that are based on the principles of behavior are important to the Cambridge Center.

To further the mission of the Cambridge Center, and to achieve its initiative to aid in the reduction of injuries and illnesses of workers through applications of behavior analytic research to human performance in the workplace, CCBS has established a program of accreditation and a registry of accredited PBBS programs.

A separate Application Kit contains procedures and forms for your use in applying for accreditation. The kit also contains a summary of Accreditation Standards and Methods.
1. **A Program of Accreditation for Principles of Behavior Based Safety (PBBS) Programs**

- To encourage the adoption of evidence-based PBBS programs.
- To recognize PBBS programs whose safety performance meets high standards for program operations, the reporting of program performance and accuracy of important safety data.
- To recognize PBBS programs in ways that acknowledge them as exemplary and help them serve as models for organizations seeking to improve their safety efforts.
- To promote evidence-based decisions in safety initiatives and insurance practices.

2. **The development of a Principles of Behavior Based Safety Program Registry**

- To improve the effectiveness of PBBS and related programs.
- To specify what forms of PBBS and related programs are best suited to various industries and conditions.
- To disseminate to all interested parties detailed information about effective PBBS programs so that they can, if they so choose, establish similar programs.

**Benefits of Cambridge Center PBBS Accreditation**

1. To independently validate the effectiveness of your Principles of Behavior Based Safety program.
2. To demonstrate safe practices to employees, shareholders, investors and customers.
3. To contribute to:
   a. A growing body of knowledge about what is effective in improving workplace safety,
   b. Exemplary practices that other organizations may wish to emulate,
   c. Evidence based decision-making in evaluations of methods, procedures and programs in workplace safety.
4. To gain learning and improvement through a third-party assessment of the strengths and needs of your PBBS programs.
5. To increase pride among your employees and safety professionals by providing the knowledge that you are doing PBBS effectively.
6. To make safe performance a part of the everyday life of your organization.

**Background**

There is a growing body of applied research on the effectiveness of PBBS programs. This evidence led the Cambridge Center in the early 1990’s to begin a series of Forums on Behavior-Based Safety. The success of these forums led to the first Behavioral Safety Now! conference in 1996. These conferences have become annual events attracting current and prospective PBBS user companies, program specialists, trainers and vendors of various PBBS methods.

At the 2001 Behavioral Safety Now! conference there was widespread interest in 1) A CCBS-initiated accreditation process for PBBS programs, and 2) The development of a database and registry to monitor and help build the effectiveness of PBBS programs. A Steering Committee was appointed by CCBS to help lead these efforts, and the present accreditation program is a result of their efforts.
Evidence from applied research on PBBS initiative effectiveness in well-managed programs demonstrates a consistent reduction of workplace injuries and incidence rates as well as attractive cost-benefit ratios. If your company meets accreditation standards it will apply core principles and procedures based on behavioral research in its PBBS programs.

Behavior-based safety (PBBS) programs are currently the most common example of PBBS programs. The Cambridge Center also seeks to encourage innovation in behavior-based safety programs.

**Purpose of Registration of Principles of Behavior-Based Safety Programs**

Documentation of the methods and effectiveness of a wide-range of PBBS programs is necessary to helpfully guide the development and use of PBBS programs. To do this we will develop a database and registry to monitor PBBS program effectiveness. Such a database / registry will help participants estimate the relative effectiveness of different programs operating under different conditions and in different industries.

The methods, procedures and results of all PBBS programs that are accredited will be entered into the registry. Confidentiality of CCBS-Accredited organizations’ identity will be maintained through assignment of an identifying code for each accredited organization, unless an organization requests that their name be used. This registry will be publicly accessible through the CCBS web site. If your PBBS program is included on the registry or if your organization is considering adopting a PBBS program or is even slightly interested in PBBS applications, you should visit the web site.

**Benefits of Registration**

Programs listed on the registry will serve as models for organizations seeking to identify programs that might work for them. In addition, they may help to identify methods and procedures that are relatively more effective for particular industries or conditions.

**Accreditation and Registration Methods and Standards**

This section discusses standards for judging the evidence for the effectiveness of specific PBBS programs and methods for calculating the effectiveness.

**Definitions**

Specific instances of human behavior occur in three-event sequences. First, there are the conditions or circumstances which occur before the behavior. These are technically called antecedents. Second, there are instances of behavior. Third, there are the consequences that follow the instances of behavior.

These Principles of Behavior include:

*The Principle of Reinforcement* – Reinforcement occurs when a consequence follows an instance of behavior with the result that the behavior becomes more likely to occur. Consequences that result in the increased likelihood of the behavior are called reinforcers.

*The Principle of Punishment* – Punishment occurs when a consequence follows an instance of behavior with the result that the behavior becomes less likely to occur. Consequences that result in the decreased likelihood of the behavior are called punishers.

*The Principle of Extinction* – Extinction occurs when reinforcement for behavior ceases, with the result that the behavior becomes less likely to occur. Extinction also occurs when punishment for behavior ceases with the result that the behavior becomes more likely.
The relationship among antecedents, behavior and consequences is often called the three-term contingency because of the interdependent relationships among the three events.

The use of these principles in a behavior-based safety program requires that the target behaviors be precisely defined and accurately observed and measured. The principles of reinforcement and punishment often, but not always, imply feedback as that term is commonly used. However, not all feedback involves either reinforcement or punishment.

The principles of behavior appear deceptively simple. In practice, instances of behavior interact with antecedents and with consequences in many ways. Behaviors themselves can take on all the forms that are seen in everyday life. Antecedents and consequences can be virtually anything with which a person can interact. The result is an ever-changing and enormously complex pattern of interactions.

There is a large body of both basic and applied science attesting to the generality of the principles and the relative effectiveness of many applications of the principles. The reader who is interested in a more thorough treatment of the principles of behavior and their applications in workplace safety might read the following books, Working Safe: How to Help People Actively Care for Health and Safety, by E. Scott Geller, The Behavior-Based Safety Process: Managing Involvement for an Injury-Free Culture by Thomas R. Krause, The Values Based Safety Process by Terry E. McSween. Those who are interested in how PBBS could occur in a fictitious situation might enjoy Who Killed My Daddy? A Behavioral Safety Fable, by Beth Sulzer-Azaroff, published by CCBS. Readers also may wish to refer to the periodicals, Journal of the Experimental Analysis of Behavior, Journal of Applied Behavior Analysis, and Journal of Organizational Behavior Management.

Effectiveness

Principles of Behavior Based Safety Programs will be judged effective if and only if:

1. Data that are important to safety in the indicated sites have been recorded,
2. The recording of data has been accurate,
3. The data demonstrate either -
   - An improvement in performance following the beginning of the program that would not have been expected had the program not been implemented, or
   - An improvement over what would otherwise have been expected had the program not been implemented.

Inclusion/Exclusion

CCBS does not have the resources and expertise to review and examine the effectiveness of all safety programs and, because of its mission and expertise in behavioral applications, chooses to focus on those programs that are clearly derived from the principles of behavior, Principles of Behavior-Based Safety programs. These include behavior based safety (PBBS) programs and other programs such as training programs and hazard identification and elimination programs that are based on the principles of behavior.

In practice, PBBS programs involve various methods, but currently typically have at their core methods for:

1. The identification and explicit definition of safe behaviors,
2. Observation and recording of those behaviors and
3. Reinforcement and/or feedback based on the recorded behavioral data.
Period of Accreditation

Initial accreditation of an organization’s PBBS program will be based on evidence of the historical effectiveness of the program. This accreditation will ordinarily be extended for two years of ongoing accreditation.

Renewal of Accreditation

Every organization that has an accredited PBBS program will be invited to apply for the renewal of its program at the end of the two-year period of accreditation.

Conditions of Ongoing Accreditation

During the two years of ongoing accreditation, the organization will regularly update its safety data and provide information on any major changes in the PBBS program or the background conditions at the site indicated by accreditation. An Ongoing Accreditation Review Committee will review the data as it is submitted and, assuming the data are consistent with what would be expected as normal variation, will update the organization’s data in the registry if the organization has elected to participate in the registry. If data are worse than would be expected as a part of normal variation and the worsening cannot reasonably be attributed to changes in background conditions, the organization will be notified of CBA concerns that the PBBS program may be failing to meet accreditation performance standards. A note to this effect will be entered into the program description in the Registry and removed if performance improves.

The Written Application

All of the indicated information will be required in written form for programs that seek accreditation.

Sections A through H are described in detail following the brief summaries, below.

A. Identifying information.
   • Name of the organization
   • Location of corporate office
   • Name of company representative in charge of the application
   • Phone number(s) of the company representative
   • Address of the representative
   • E-mail address of the representative

B. The background conditions in the organization. Include the divisions of the company involved in the PBBS program, their geographic locations, goods/services provided at each site, kinds of jobs in which workers are involved, recent non-safety initiatives and company changes, recent non-PBBS safety initiatives, etc.

C. The workers and the work they do. Include ages, experience, training, safety training education, health, safety records, etc. Do not identify individual workers by name. See Appendix A for recommended worker information.

D. Safety concerns. What conditions or events caused you to consider beginning a PBBS program?

E. The data. What safety data are particularly important at your work sites? Why are these data important? How do you collect each of the kinds of data? How do you ensure that the data are accurate? Methods of collecting data and ensuring the accuracy should be described in
enough detail that an experienced safety person could use your description to set up a similar data collection and verification program.

F. **Description of your PBBS program.** This should also be provided in enough detail that an experienced safety person could use your description to set up a similar safety program.

G. **Graphic displays of the data.** These will be simple graphs, one for each kind of safety data considered important, plotted since well before the PBBS program began and continuing to date. See the following graph for an example of how this can be done. Do not identify any data with any individual worker.

H. **Analysis of the data.** The data must be analyzed in straightforward ways and this analysis must yield evidence that important safety data are better when the PBBS program is in force than would be expected if it had not been implemented.

Each of these required forms of information will be discussed in detail to help a reader appreciate their importance and anticipate ways in which the information could be adapted to meet the needs of different organizations.

**Discussions of the Required Information, B - H, above.**

Note that the following discussion of the information required for applications for accreditation is intentionally detailed. We do this to help you decide what kinds of information are important for your application. Any particular detail may or may not be important to a particular organization. Use your discretion and good judgment in making decisions about what to include. Remember that your reader will not be familiar with your organization or your workplace safety programs.

**B. The Background Conditions in the Organization**

The conditions that exist before a PBBS safety program is begun must be described in considerable detail so that we can know exactly under what condition the program eventually has its effects. A PBBS program that is effective for some settings and conditions may not always be best for others. Generally, a company seeking a PBBS program for its circumstances will be most interested in a PBBS program that has been proven effective under conditions and operations similar to its own. Providing thorough information on background conditions will allow us to learn under what conditions a particular PBBS program is useful for and will provide guidance for companies that are seeking PBBS programs that will be effective for the particular settings and conditions in which their people work.

The kinds of details given in a description of background conditions may vary from one organization to another and even for different divisions within one organization. The following list and discussion should be considered a minimum and should be elaborated to suit the particular circumstances in an organization.

1. **Geographic and Physical Conditions** – Where was the site at which the PBBS program was implemented? Was it indoors or out? If it was outdoors, what climatic conditions were present at various times of the year? If it was indoors, was there heating and air conditioning or other climate controls? Is the workplace busy? Noisy?
2. **Physical and Machinery Hazards** – What physical hazards were present? What hazardous equipment was in use at the site? How and how often were workers exposed to this equipment?
3. **Recent Safety Initiatives** - All safety initiatives that have been undertaken during at least the last two years should be reported. This is important because how well a PBBS program works could depend partly on such non-PBBS safety initiatives. For example, in jobs in which the use of personal protective equipment can help to keep people from being injured, a recent training program on selection, use and maintenance of such equipment could greatly affect just how effective a PBBS program is. Just to help you
start thinking about safety initiatives you should report, the following are some examples of possibilities:

- Machine guarding initiatives
- All safety training programs
- Provision of safety equipment
- Non-PBBS safety programs
- Safety-incentive programs
- Safety contests
- All insurance company safety-targeted initiatives
- Any changes in record keeping
- Any changes in employee participation in safety programs.

Changes in record keeping are emphasized because such changes can influence the appearance of safety regardless of what is actually going on in the safety area.

For each safety initiative note the period of the initiative, when it began and whether the initiative continues to be in operation. List its date of termination if it is no longer operational.

Do: Ask your workers to think of any changes in safety programs that have occurred during the last two years, then use their responses to prompt your description of recent initiatives.

Do: Err on the side of including every change that has been made in safety. Even if you think the year-old safety initiative was not effective, its existence could contribute to the effectiveness of a PBBS program.

Tip: If you have a safety committee, ask each member to list each physical hazard they know of and compile a composite list.

4. Recent Non-Safety Initiatives and Organizational Changes

Changes in a host of conditions, other than safety-targeted initiatives, can affect safety. If these are not considered, they could make it appear that a PBBS initiative is effective when it really isn’t. Or, they could make a program appear ineffective when it is actually working well. Therefore, it is important to document changes in background conditions. It is not possible to suggest all conditions you should document. Consider the following possibilities as examples of the kinds of changes you should pay attention to:

- Changes occur in the control and reporting of the organization, e.g., the plant is sold to a different company; there is a reorganization that now has the plant reporting to a sales division rather than a manufacturing division.

- Changes in manufacturing methods, e.g., a manufacturing operation switches from metal stamping to plastics injection molding.

- Changes in equipment, e.g., the company replaces an aging fleet of forklifts with new ones.

- Changes in the size or characteristics of the workforce, e.g., numbers of people are laid off or unusual numbers of new employees are hired. Or, there are substantial changes in the ages, experience, gender or training of the workers.

- Major change initiatives, e.g., the organization begins a six sigma or a reengineering program.
For each change that occurs, note the period of the change (when it began and when it ended) and the duration of the change. Is it still in place, or has change replaced it?

**Note:** The reporting of changes and initiatives should be extended back in time to present any events that might affect the workings of the PBBS program. There is no certain way to say how far this backwards look should extend but two years prior to the beginning of the PBBS program should be considered a minimum.

**Don’t:** It would be a mistake to limit your reporting of changes and initiatives to the kinds listed above. They are provided only to give you ideas of what to report.

**Do:** Think about and report everything that has changed in the organization that might affect how well the PBBS program functions and go beyond the above list as appropriate.

**Tip:** Convene some workers who will participate in the PBBS program and ask them to think about the safety of their work and whether there have been any changes in what they do and how they do it that have affected that safety. Be sure to ask them to mention anything that may have worsened safety performance as well as things that may have improved it. This will help you get information to be reported under this section and information for the section immediately below.

C. The Workers and the Work They Do

1. The Workers - Describe relevant characteristics of the workers who will be involved in the PBBS program; characteristics that might influence or have an effect on the operations and success of the PBBS program.

Some worker details that are likely to be relevant are age, type of work experience, number of years worked in various settings, years of education, safety training and other considerations.

**Note:** It is important to respect the identity of individual workers. Therefore, workers should never be identified by name and all reporting about workers should be reviewed to ensure that individual workers can not be identified from the information provided.

These kinds of information are important because we know that, in general, younger workers are more likely to be injured at work than older workers and that less experienced workers are more likely to be injured than those who are more experienced. Similarly, education and training sometimes correlate with the incidence of workplace injuries. We want to know that you have taken these factors into account, to the extent that they are relevant to you program. Also, these factors should be considered by an organization that might be interested in reproducing a PBBS program that is effective with workers who have certain characteristics.

**TIP:** Rather than writing a long and detailed narrative providing the above kinds of information about workers it may be easier to present the information in a table. The table then can be simply summarized in a written narrative.

**Don’t:** Don’t be shy about providing detail. That detail can help us learn more about the effects of various PBBS programs and help guide other organizations that are looking for a PBBS program that might be particularly effective for their workers. If someone isn’t interested in the detail you provide, they can simply skip it.

2. The Work – List principal job titles and describe the kinds of work done by workers involved in the PBBS program.

The likelihood of injuries varies greatly by kinds of work being done. We want to know that you have taken these factors into account in the development of your program. Also, this information
will be useful to an organization considering whether PBBS program might be appropriate to their workplace.

Do: **Break the listed jobs into more specific kinds of jobs whenever possible if these jobs vary in terms of the hazards involved.** For example, one machine operator might operate a relatively safe semi-automatic injection molding machine while another operates a much more dangerous large stamping machine that requires hand loading of heavy sheet metal blanks.

Do: **Be sure to note any jobs that occur at one site that are different than those at other sites.**

**D. Safety Concerns**

A person trying to understand your safety initiative(s) needs to know what particular safety concerns lead to consideration and development of all safety initiatives. What problems or opportunities are being addressed? Why are you deciding to work further on safety?

Some examples of concerns might be:

- Recent injury incidents that caused you to realize that safety needs to be readdressed
- You became aware that your safety records are poor in comparison to industry standards
- Your safety data consistently reflect poor performance, or your once good performance has declined
- You believe that your company could reduce harm to workers and save money with a PBBS program
- You know of another company or site within your company that adopted a PBBS program with good results

Do: **List multiple reasons for considering a PBBS program. There is likely to be more than one. This information will help us understand your program.**

**E. The Data**

Applied behavioral research has led to the development of effective PBBS practices. To say that these practices are effective implies that there is evidence based on measurement and data. Data are essential to the objective evaluation of the effectiveness of all safety programs. Four different aspects of data collection must be considered:

1. The kinds or types of data you collect for evaluation purposes
2. The accuracy of the data
3. The time periods for which you report the data
4. The way you present the data

Each of these will be discussed to help you report a good data collection plan.

1. The kinds or types of data you collect –
2. Note: **There may be some overlap among the data you collect for the purposes of the ongoing management of your PBBS or related program and the data you will use to evaluate the effectiveness of the program.** For example, the ongoing management of a standard PBBS program often involves the collection of data on the safe behaviors of workers. These data may be important in evaluating whether the program achieved its immediate objective, getting workers to behave more safely. However, the purpose of getting workers to behave in safer ways is to reduce how often people are injured, how serious those injuries are, perhaps how many people are disabled from work-related injuries, and the costs of injuries. The evaluation of
the program is likely to include data on how well these purposes are accomplished as well as data on whether the workers behaved safely.

It is absolutely essential to have the right data to evaluate the effectiveness of any safety program. It is easy to attend to the wrong data for your company. For example, in a company in which there are many injuries that rarely involve time lost from work, focusing primarily on a severity measure would likely fail to represent the extent of safety problems. Similarly, a company in an industry that has a relatively low incidence rate might fail to address its most important problems if it failed to address mortality data. Some organizations have policies of asking injured workers to report to work for light duty assignments rather than remaining at home. Such industries have relatively few days lost from work because of injuries and should report days on light-duty assignments because of injuries.

The data that are tracked to reflect safety should be tailored to fit your company. Different data will be important in most organizations and you should carefully review your situation and data to ensure that they best reflect the safety of your workers.

A good practice is to ask yourself if your data reflect the hazards in the workplace? Do they reflect the pain, suffering and loss for your workers and their families and friends?

The data you consider must also reflect the problems and opportunities you are trying to address with a PBBS program. If some safety events or problems were instrumental in your deciding to adopt a PBBS program ask yourself if your data reflect those events or problems.

Do: Review the list of concerns you identified and ensure that your data reflect your concerns.

The following kinds of data are likely to be important in many companies:

- The number of OSHA-recordable injuries per time period
- The number of days lost from work per time period
- The number of days workers are reassigned to alternative work
- Safety behavior data; e.g., frequency of specified safe behaviors for workgroups and locations
- The direct costs of safety per time period, including insurance costs
- Estimates of indirect costs related to workplace injuries
- The costs of the PBBS program per time period

Because the cost of safety initiatives, including PBBS initiatives, are important to organizations adopting them and because PBBS programs often yield attractive cost-benefit ratios, most organizations should track the costs of accidents and injuries and the costs of their PBBS program. Therefore, the ratio of cost reductions to the cost of the PBBS program, or the return on investment or net dollars saved, should be reported if possible.

There is considerable variation in practice in defining various safety measures. The following discussion is provided to give readers considerations for their definitions.

Days lost from work because of an injury do not always occur during a time period being concerned. For example, if you are tracking data on a monthly basis and a worker had a severe back injury during the last day of a month, most of the days lost from work are likely to occur in subsequent months.

However, all of the days lost from work should be charged to the month in which the injury originally occurs. Therefore, your data should track lost time according to the time period in which the injury originally occurs.
In contrast, in some industries, for example, inland waterway shipping, work is scheduled in very long cycles. If a boat hand is injured on the job, that person may be sent home for medical care and convalescence at the next opportunity and may remain at home until the tow passes the person's home port even though recovery is complete weeks before the person returns to work. In such a case, to capture a complete picture, the lost-time data might be reported in two ways: 1) total days lost from work and 2) total days unavailable for work.

**Direct costs** refer to actual verifiable costs that can be identified and do not include subjectively estimated costs.

**Indirect costs** are costs other than direct costs that are incurred because of workplace injury or illness incidents. Indirect costs are likely to be many times greater than direct costs. They include many subjectively estimated costs such as lost productivity when taking care of an injured fellow employee.

**PBBS program costs** will probably not be distributed evenly over time. Many costs are likely to be incurred during the first weeks or months as the program is being started. Once the program has been started, costs of the program may diminish to include only such as the labor costs involved in making observations of safe and/or unsafe behaviors. You should record all of these costs and they can be factored into the evaluation of your PBBS program as appropriate.

**Return on investment**, ROI, or the ratio of saved costs of safety to the cost of the PBBS program, reflects dollars saved in relationship to the costs of saving them. They may not be fundamental in evaluating the effectiveness of a safety program; there is no way to satisfactorily put a dollar figure on pain, an amputation or a life. However, many PBBS programs are inexpensive in comparison to the safety savings they produce. Having these data may put you in a relatively strong position in justifying the costs of the PBBS program or even the overall costs of all of your safety initiatives.

*Do: Track the costs of all of your safety efforts over years. This will give you the best opportunity to estimate the dollar values of your various safety initiatives.*

*Do: Consider the possibility that it may be important to break these data down according to types of injuries or jobs.*

For example, if your PBBS effort is aimed primarily at reducing cumulative trauma disorders such as carpal tunnel syndrome or tennis elbow, you may want to keep data on these kinds of injuries in addition to overall incidence-rate data. If most of your injuries are occurring among assembly workers, you may want to keep independent data on injuries for such workers.

*Note: The particular kind of PBBS program you use may require that you collect and keep data on various kinds of behavior or hazards. If this is the case, you should include them in your evaluation data collection.*

*Tip: Once you think you have a thorough data collection plan, share that plan with one or more independent professionals and ask them to examine it critically and make suggestions, if any, to you. In order to do this for you, the person(s) you ask to review your plan will need to understand your organizations and your safety concerns. Therefore, it will help if you have that portion of your report already worked up before you ask for the review of your data collection plan.*

*Note: You can use definitions of safety measures that are different than what most organizations use if you thoroughly explain what you mean by the name of a particular measure.*

2. The Accuracy of the Data
Accurate data are necessary for evidence-based decisions about the effectiveness of safety programs. Only accurate data allow for judgments that a PBBS program is effective.

Achieving accurate and appropriate data can be a challenge. The accuracy of safety data is often suspect because workers and companies can influence the data independent of the true incidence of injuries.

What you are trying to achieve are data so good that, if a panel of independent and objective third-party experts came into your company and collected your data, they would obtain exactly the same data you obtain. Achieving this is no simple matter.

First, it will usually enhance the usefulness of data if you distinguish between injuries and accidents that are independently verifiable from those that are subjective or can't be verified. For example a laceration leaves enduring visible proof that it has occurred. Lower-back pain usually depends on a not perfectly verifiable report of subjective pain. A wrecked dozer is enduring visible proof of an accident. A trip over a misplaced pallet may leave no visible proof of the accident. This doesn't suggest that you do not believe the subjective or unverifiable report. Rather that you track and report the verifiable injuries and accidents separately from those that can't be verified. The accuracy of the verifiable incidents will be unquestioned. Everyone will be in a position to treat the unverifiable injuries and accidents as just that and can take that into account in their evaluations of your program.

Second, it is good policy to have a person independently verify some if not all of the incidents you record as a part of your data.

The bottom line is that even under the best of conditions, subjectivity can creep into any report. Data on safe and unsafe behavior are examples of data that can be subject to drifts in definition. This can lead to changes in what is and isn't being recorded as safe or unsafe over time. If one person is regularly recording your data, get a second person to simultaneously collect the same data and compare their records to see if they agree. In doing this, it is important to ensure that the two observers do not see each other’s data or recording of behaviors while the data are being collected. And, that they do not collaborate to iron out differences after doing their data collection.

This method of using two independent data collectors can also be especially useful in accident and injury investigation. If two people or groups, working independently, investigate an injury-causing accident and obtain similar reports, this helps ensure that the data yielded by the investigation are accurate.

Tip: Employees, including union leaders, often are concerned about the accuracy of accident and injury investigations. If your company is unionized, consider inviting the union to establish a small safety committee with a member of that committee conducting independent investigations. Or, invite a member of the union to sit on the company investigation panel. Mutual education on methods of investigation will be helpful to everyone and build objectivity.

3. Time Periods for Reporting Data

There is no one rule about the time base for reporting safety data that will hold for all companies. What you want to do is report your safety data over periods of time that will allow you the best opportunity to see whether the data are changing in an important way and precisely what effects your PBBS program is having.

A daily or weekly update of your safety data could allow you a maximum exposure to your data and provide you a basis for taking necessary actions. However, such frequent data reviews will usually not be that useful for getting a handle on safety in your company. There will simply be
so much day-to-day or week-to-week variability in the data that it will be difficult to see what is going on. Safety data, especially when considered in short time frames, are notoriously up and down.

Generally, the longer the reporting periods the more stable the data appear. This might lead you in the direction of reporting only once per year. The problem in doing this is that you may miss important trends in the data that you should respond to but won’t see until after two or more years. For example, what if your data in some area are worsening so that you need to take emergency measures? You don’t want to wait for two years to see this worsening trend.

We recommend, as a minimum, monthly reporting and calculations of incident rates, direct and indirect costs and other measures.

What you need to do is come up with some mid point between too infrequent examination of the data and such frequent examination that you will be blinded by the variability of the data. This satisfactory medium will often be monthly or quarterly data reviews.

Tip: A good way to decide how often you will update your safety data for reporting purposes is to take the data you have during the last two years before the PBBS program begins and try plotting it on a graph. Try different ways of organizing your data, for example by weeks, by months, by quarters, etc. You will probably want to plot data by the shortest periods of time for which the primary data, measures that reflect injuries, are stable enough that you can see what is going on despite the likely variability of the data.

Tip: If you are undecided about whether to plot your data for shorter, say monthly, periods of time or longer, say quarterly, periods of time, start with the shorter periods. It will be easy to later combine monthly data into quarterly data if that proves necessary.

Reminder: The number of people in your workforce will affect how often you want to update your safety data. Generally, the smaller the workforce, the greater the variability in frequent data plots and the longer periods of time you should use for data updates.

F. Description of Your PBBS Program

You must describe your PBBS program thoroughly enough that an experienced safety person can use your description to set up a similar program. To facilitate the adaptability of programs for use by other organizations, the application for accreditation should describe, in detail, the procedures and methods involved in the PBBS and related safety programs. The application should also describe any other safety programs which were changed or implemented during or after installing the PBBS program.

The formula to follow in this reporting is to tell in detail what was done, how it was done, when it was done, and where it was done.

What was done – List every PBBS and related methods that might affect safety performance during and following the initiative.

How it was done – The goal here is to describe in enough detail what was done that another interested person could duplicate your PBBS or related initiative and hopefully obtain similar results.

PBBS programs typically have at least three components,

- Identification and definition of target safe behaviors,
- Observation of workers to determine whether they are engaging in the targeted behaviors,
• Feedback and reinforcement of improving or high levels of the targeted behaviors. Consider each of these components.

Most PBBS programs focus on the behaviors that workers should engage in to work safely. Such behaviors may be identified in a number of ways. Don’t consider the following an exhaustive list but examples of methods that an organization might use in identifying safe behaviors.

• An industrial engineer might conduct job safety analyses, breaking the work tasks down into small steps to identify how the work is done and concentrating particularly on how work can be done safely.
• Workers might be encouraged to suggest critical incidents, events that, if they are executed correctly, will keep the worker safe or, if they are executed incorrectly, will likely cause injury.
• Workers might be encouraged to report near misses, instances in which someone came close to being injured. These might then be analyzed to identify what behaviors would avoid the near miss.
• An ergonomics expert might be asked to examine how work is currently being done to identify ways in which cumulative trauma disorders are likely to occur.
• Groups of workers might suggest safe ways to do specific jobs.
• Groups of workers might identify unsafe ways to do specific jobs and then develop safe ways to do each of the same jobs.
• Injury/accident reports might be analyzed for ways in which specific behaviors may have contributed to injuries. Then, safe behaviors would be developed to replace each of the previously identified unsafe behaviors.

Recognize that several of these methods and also others might be used in a single PBBS program.

Once safe behaviors have been identified, many practitioners will define each of them in some detail. The definitions are important for several reasons. First, workers must be informed about or trained in the behaviors that will allow them to do their work safely. The definitions will allow precise specification of what workers should do.

The most frequently used way of defining safe behaviors is to write definitions for each behavior. These are sometimes referred to as behavioral pinpoints. If these are to be used to communicate to workers how they should behave on the job, they must be written in a language that is suitable for the reading level of the workers. One test of the suitability of the language and the usefulness of the definitions is whether workers who are not behaving safely can state how to work safely after reading the definitions. You will need to make certain that levels of motivation among workers are appropriate, to eliminate that as a cause of the poor understanding of definitions.

The most common test of the adequacy of definitions of safe behaviors centers around the notion of accurate reproduction of observations. One way this notion of reproducibility plays out is called inter-observer agreement. Can two people, working from the definitions, observe the same workers and produce essentially similar data records of whether or not the defined behaviors are occurring? If they can, then the definitions and the observing methods are adequate. If the two observers’ records are greatly different, the definitions and/or the observation methods are inadequate in some way.

Applications for accreditation of PBBS programs that involve specification of safe behaviors should include written definitions of the behaviors and data from tests of inter-observer agreement.
Second, a part of the PBBS methods is observation of whether the workers are behaving as prescribed. The definitions are necessary to support accurate observations. How, when and where these observations are conducted should be reported so another person could duplicate them. Who conducts the observations is also important because there is considerable variation in existing PBBS programs. Did workers know in advance when observations would occur? Were the observers identifiable as such?

Third, feedback and reinforcement will be given to the workers based on the behavioral observations. Effective feedback and reinforcement demands accurate data on safe behavior. Accurate data require precise definition of the safe behaviors.

How and when is feedback provided? What is included in the feedback?

If there is reinforcement in addition to feedback, what is it? How often does it occur? On what is it based? Remember that your goal is to allow someone to adapt a program utilizing your methods of reinforcement where appropriate.

Finally, the organization that is applying for accreditation of its PBBS program will likely submit records of its data on safe behaviors as a part of the application. The accreditation standards require accurate data and this, in turn, requires precise definition.

**When it was done** – Describe precisely when each method was begun and how long it was maintained. Readers of your work will want to examine your reported data and look for correlations between changes in safety performance and the use of various methods.

*Do:* List all procedures and methods that were used and describe, in detail, how each was carried out. There should be enough detail that another safety professional could read your work and, based on your description, write and develop a program that would function like yours.

*Do:* Develop timelines showing when various PBBS and non-PBBS methods were introduced.

**Where it was done** – Describe in detail the parts of the company in which the initiative was carried out. What were the names of the locations? What kinds of work went on there? What were the jobs the workers carried out in each location?

For practical reasons it is likely that not all locations will begin the PBBS or related initiatives at exactly the same time. This can help us understand how effective the PBBS initiative is. We may see safety performance improvements occurring as the initiative is begun at different times in different parts of an organization.

*Do:* Note on the timelines when an initiative began in each part of the organization.

**G. Graphic Displays of the Data**

In deciding how to present your safety data, remember your reader. Data must make sense to the average reader and to a person trained in data analysis. Graphic plots of data are usually the best ways to achieve this objective. Most of us can much more accurately and quickly see what is going on in a collection of data if they are presented in a graph rather than in a table. You can see detail much easier in graphs than in tables and they allow you to spot trends in the data much quicker.

Generally what you want to do is have a graph for each of your major safety measures. This graph should show the data for a safety measure for a period of time, say one to two years, before you begin your PBBS program and continue tracking that measure after the PBBS
program is begun. This one to two-year measurement obviously can not be applied to data on safe behaviors that were not regularly collected until about the beginning of the PBBS program.

Each graph will have time scaled out on the horizontal (X) axis and the measure scaled on the vertical (Y) axis. If you decide to plot your data each month (see below), you will then enter a point reflecting the data for a given month. Connect the data points for successive months with straight lines between points to help you better see trends in the data.

Note on each graph with an arrow and label the times when safety initiatives and major non-safety organizational changes occurred. This will help you and people who look at your data decide just what might be responsible for changes in the data.

Draw a vertical straight line on the graph to indicate when the PBBS initiative began. If the PBBS initiative involves distinct different phases, note with an arrow and label when each phase begins and is completed. For example, if you begin training workers safe and unsafe behaviors in September, 2002, and complete this training in November, 2002, note that with arrows and labels on each graph. A finished graph might look like the one shown in Figure 1.

Recognize that you will need one graph for each of the measures of safety you have decided are important to your organization. For example, suppose you decided that all of the following are important to your safety effort:

- Incidence rates (Figure 1)
- Percentage of safe behaviors observed (Figure 2)
- Days lost from work due to work-related injuries
- Safe behaviors for different work locations
- All direct costs of safety
- Costs of the PBBS initiative
- Numbers of workers trained in safe and unsafe behaviors
- Numbers of hazards reported
- Numbers of preventable hazards eliminated
- Numbers of hazards observed

![Figure 1. Injury incident rate before and after PBBS program.](image)
If all of the above nine measures were important to your safety effort, you would have nine graphs with one graph for to each of the listed measures (as in Fig. 2).

**Exemplary performance.** It is likely that an organization applying for Accreditation will have a record of sustained high level performance in workplace safety - very low to zero incident rates and very high achievement of safety behavior targets. Be sure to demonstrate “routine excellence” in the graphs of your data. In addition to displaying performance data as shown in Figures 1 and 2, you should show sustained exemplary performance. You can do this in two ways. First, by extending over a longer period of time the kinds of data shown in Figures 1 and 2. Or, second, you can change the measures on the Y axis to display smaller changes within a high and exemplary level of performance, as in Figures 3 and 4.

![Figure 2. Percent of safe behavior observed, before and after PBBS program.](image)

![Figure 3. Injury rate, 2003 - 2004, exemplary performance.](image)
H. Analysis of the Data

1. Methods for Calculating Effectiveness - The methods for calculating effectiveness first involve estimating, for each of your safety-related measures, the level of the data before the PBBS program was begun. This is simple and straightforward if you observe a few precautions. Consider Figures 1 and 2, above, as easy-to-interpret examples of what you may find.

2. Estimating any Trends in Pre-PBBS Data - You want to see if your safety data worsened or improved before you began the PBBS initiative. The reason for doing this is to make it easier to decide if any improvements that occurred after the PBBS program began were attributable to that program or may have already been occurring before the program began. Some other safety or organizational changes may have set in motion improvements in safety that simply continued after the PBBS initiative began.

If the data were clearly not improving or were becoming worse during the last several months before the beginning of the PBBS program then improvements following the beginning of the program may be attributable to the program.

Consider the incidence rate at the beginning of the PBBS initiative in Figure 1. Are the data improving or worsening before beginning the PBBS initiative? Inspection of the figure suggests that there is no clear trend toward a lowering of the incidence rates.

You can sharpen the picture you see by drawing a straight line that best fits the entire first half of the data points before the PBBS program begins and similarly drawing the straight line that best fits the entire last half of the data points.

Is the line for the last half of the data points sloping down at least as much as the line for the first half of the points? If so, then you do not have an improving trend.

You can make a quantitative calculation of any trends by averaging the first half of the data points before the PBBS program begins and compare that to the average of the last half of the data points. In the example, The first half includes the data points, 6, 5.5, 8, 7, 9, 8, 9. If you add these and divide by the number of points, you get 7.1, the average of the first half of the data points. If you conduct the same operations for the last half of the points, you get an average of 4.2.

If the average of the last half of the data points before the PBBS program began is less than or equal to the average of the first half, there is probably no trend in the data.
In the data for Figure 1, the average of the last half of the data points before the PBBS program begins is 4.2, and the average for the first half of the data points is 7.1. The average of the last half is lower than the average of the first half and there is a sharply improving trend. You can apply this kind of trend analysis over quarters of the year or other time periods important to your organization.

*Note:* Examining data for possible trends can use, if necessary, mathematical methods that are much more complex than those described above. These are usually not necessary but it is a good idea to consult with the Leader of your Accreditation Advisory Team about whether or not there are trends in your pre-PBBS-program data just in case you may need to use some of these advanced methods.

*Note:* Even if there are improving trends in your safety data prior to your beginning a PBBS program, it may still be possible to see clear improvements that are probably attributable to the PBBS program. Sorting out effects of programs when there are improving trends prior to the beginning of a program can also be tricky. Consult with the Leader of your Accreditation Advisory Team about such possibilities.

3. Comparing Pre-Program Data to Post-Program Data - Once you know whether or not there are pre-program trends in your safety data, the next step is to see if there are improvements in the data on safe performance following the beginning of the PBBS program. You do this by comparing the level of the data following the beginning of the program to the level prior to program, as in Figure 2.

First, inspect the data in your graphs. Draw the straight line that best fits the data after the program begins. Is this line sloping down? If it is, there is a real possibility that the program is not sufficiently effective or could perhaps even be harmful in some unanticipated way.

If the line is sloping up, it means there are improvements in the data that may be attributable to the PBBS program. If the data are improving, it probably makes sense to draw a second straight line that best fits the data after they begin to level out. This is a line that represents how well your safety program is functioning after the PBBS program was begun.

If your safety data do not level out but continue improving over a long period of time, your workers are very fortunate. Perhaps you have set in motion a process that leads to continuing improvements. This happy result can occur. However, it makes estimating the extent of improvements difficult because you don’t yet know just what that extent will be. Consult with the Leader of your Accreditation Advisory Team about how to report your improvements.

It is possible that your data will improve for a time, then level out for a time, and then decline. This might occur if the PBBS program produced improvements that were not sustained. A lot of safety initiatives produce improvements that are not sustained. This can happen for many reasons. Changes in working conditions, new equipment, new work methods and new employees frequently lead to declines in safety performance. Consult with the Chair of your Accreditation Advisory Team about this. You may need to revise your PBBS program in some way. If you have been using a consultant group to help you design your program, you may want to talk further with the consultants to evaluate your decision about what to do next.

If your data are simple enough that they are stable prior to the beginning of your PBBS program, improve quickly following the beginning of the program and then level out again some time after the beginning of the program, estimating improvements that may be reasonably attributed to the program is straightforward. It is simply the difference between the level of the straight line that best fits the preprogram data and the level of the straight line that best fits the data after they levels out following the beginning of the program.
Some quantitative precision can be achieved by comparing the average of the stable pre-program data points to the average of the leveled-out data points after the program begins. The best estimate of the effect of the PBBS program is then the difference between the pre-program and program averages.

**Note:** The above operations and calculations should be carried out for all of the measures that were identified as important to safety in your company.

**Reporting for Different Kinds of PBBS and Related Safety Initiatives**

It is likely that most of the safety initiatives achieving Accreditation, particularly in the early stages of the Accreditation program, will be PBBS programs that include the identification of safe behaviors, observations of those behaviors, and feedback and reinforcement for workers based on the data from the observations. However, the CCBS accreditation methods will be broad enough to accommodate PBBS and related programs that do not perfectly fit the currently typical B-BS mold. You should note that the mission and expertise of the Cambridge Center restricts it to considering for accreditation only those programs based on the principles of behavior.

By broadening the scope of practices that will meet standards for accreditation beyond a typical B-BS program, CCBS seeks to encourage innovations that are effective. The Center wishes to give recognition and support to programs that do not fit the mold of a traditional B-BS program and are demonstrably effective. Thus, a program that simply involves training for over-the-road truck drivers or one that focuses on identification and elimination of safety hazards will be considered for accreditation if the program methods are derived from the principles of behavior.

The standards for procedures and methods are based on the thorough and accurate reporting of the features of the PBBS or related programs, not on the nature of the workplace. The standards should be broad enough to cover a wide range of organizations, workplaces, kinds of work, whether workers are members of teams or work in isolation, etc.

**A. Reporting on a PBBS Training Program**

1. Describe the process for selecting and defining target behaviors - Use the same methods described above for a standard PBBS program.

2. Describe the training methods - For example:
   - How and where were training sessions conducted?
   - How were targeted behaviors presented to the workers?
   - Were workers trained to actually engage in the target behaviors, or were the target behaviors simply described or demonstrated to them?
   - Was the training conducted in seminar rooms, simulations or on the job?
   - Were there tests of whether or not workers were learning the targeted behaviors?
   - What forms of tests were used, paper and pencil tests or performance tests?
   - Were the workers observed on the job following training to see whether or not they engaged in the targeted behaviors?
   - Was there reinforcement for participating in training, engaging in the behaviors during training and/or demonstrating the targeted behaviors following training?
   - If there was reinforcement, exactly what did the trainees have to do to be reinforced?

The following examples are not exhaustive of all of the kinds of safety programs that might be derived from the principles of behavior. They are simply a few examples.

Example A: An over-the-road trucking company conducts three-tiered training for new truck drivers by playing company-made videotapes that show safe and unsafe ways to drive large
rigs. Driver trainees watch the videotapes and then discuss with each other and a trainer the driving methods they have seen. Next, all drivers are taken to a highway simulation track where a trainer observes their driving behaviors and coaches them in engaging in the targeted behaviors. Finally, a trainer accompanies the drivers on a fifty-mile trip during which the trained behaviors are again observed and the drivers are given feedback and reinforcement on their driving behaviors by a trainer. The application for accreditation describes in detail how each tier of training was conducted.

Example B: A trainer for a warehousing operation collects stock pickers in small groups and demonstrates safe and unsafe ways of lifting. Each picker is required to demonstrate safe lifts in a selected variety of situations. Again, the application describes the details of how training was conducted.

Do: Provide a timeline showing when each training method was introduced.

Do: Include on the timeline when the training was conducted in different sites if there were multiple sites.

3. Training support methods - Once training has been completed, there may be additional methods aimed at maintaining the trained behaviors. This might include many methods that would be a part of a standard PBBS program, including conducting observations to see if workers engage in the targeted trained behaviors, feedback and reinforcement based on the observational data, etc. If these are a part of the overall training effort, they should be described as explained in the examples above for standard PBBS programs.

Note: All of the other elements of reporting, data collection, ensuring the accuracy of the data, etc. should be reported as described above.

B. Reporting for a Hazard-Identification and Elimination Program

Again, you should report what was done, how it was done, when it was done and where it was done.

1. Hazard-identification methods - How was the decision made to focus on particular work areas? Who identified the hazards? How were hazards identified? If decisions were made that some hazards were more important than others, what was the basis for those decisions and what were their results? If there were methods for ongoing identification and reporting of hazards, how did they function?

2. Hazard-elimination methods - How was action initiated and taken to eliminate hazards? Who was responsible for elimination of hazards? How were hazards prioritized for elimination?

Do: Construct a timeline showing when the components of the hazard identification and elimination program were begun.

Do: On the timeline, note when the hazard identification and elimination program was initiated in different parts of the organization

Registration Methods and Standards

Registration of Accredited Programs

Reports of all accredited programs and the associated data will be entered into the CCBS-maintained registry. Accredited companies will maintain anonymity through the assignment of an identification code, unless otherwise requested. The Registry will be open for public review and will serve as sources of information about exemplary PBBS programs for other
organizations who may wish to develop a PBBS program similar to one or more listed in the registry. The program, including reports and data, may be published on the website or in other publications of the Cambridge Center for Behavioral Studies.

The reports and data will be identified as belonging to an Accredited program in order that materials submitted as a part of the accreditation application may be used by other individuals or organizations in modeling principles of behavior based safety programs. Organizations using these data and materials should remember that variation in performance is likely to occur within the Accredited organization. Similarly, the adoption of an Accredited organization’s methods is no guarantee of exemplary safety performance in the adopting organization.

**Updating Registered Programs**

All organizations with Accredited PBBS programs will be required to periodically update their reported data and describe all changes that occur in the PBBS program or changes in the background conditions or the organization that might affect the safety data. This updating of reporting will provide both important ongoing information about program effectiveness and a basis for on-going accreditation review.

Periodic updating of all information from previously accredited programs will be done with a simple electronic link. This information will be included in the organization’s registry listing.

**Limitations and Procedures**

The Cambridge Center for Behavioral Studies will make reasonable efforts to use experienced people from non-competing organizations as members of Accreditation Advisory Teams. Further, CCBS will orient Accreditation Advisory Team members in the standards for accreditation and their use, and will emphasize the importance of objectivity and fairness in the accreditation processes. Applicant organizations recognize and agree to the use of professional judgment by the members of the Accreditation Advisory Team(s) during their site visit(s) and report(s). At the conclusion of the site visit, you will be asked to complete a questionnaire regarding the conduct of the site visit. Any issues or concerns regarding the conduct of the site visit should be identified at this time.

During the accreditation application process and prior to the close of the site visit, if you believe the accreditation standards have been unfairly applied to your application, you may request the appointment of an Advisory Team Reviewer to oversee the review of your application. The Advisory Team Reviewer will only review the issues or matters disputed by you. The appointment of an Advisory Team Reviewer is offered as a means to appeal any matter disputed by you.

The Advisory Team Reviewer will be selected by the Commission on Behavioral Accreditation based on his/her expertise in evaluating principles of behavior based programs and may be a member of the Commission or of the Cambridge Center for Behavioral Studies. The Commission will assess the Reviewer’s recommendations and render a final decision. This final decision may not be further appealed. Note: The activities of an Advisory Team Reviewer will result in additional costs to your organization for the Reviewer’s time, possible travel and CCBS management.
Disclaimer and Hold Harmless

The Cambridge Center for Behavioral Studies (its officers, directors, employees, agents, committee members, volunteers and assigns, referred to herein as the “Cambridge Center” and/or “Cambridge Center, et al.”) agrees to review and process your organization’s accreditation application, subject to (and conditional upon) you and your organization’s agreement to the following:

1. Only provide information in your organization’s accreditation application that is true and correct to the best of your knowledge;
2. Indemnify and hold the Cambridge Center, et al, harmless, from and against any liability that may arise out of the Cambridge Center’s processing of this accreditation application, including the grant or denial of accreditation. In addition, the Cambridge Center will be entitled to recovery of any legal fees incurred in this process.
3. That the terms of accreditation, if granted, shall be for the period for which the program and data were reviewed, subject to ongoing review and compliance with any rules of the Cambridge Center for continuing accreditation.
4. The Cambridge Center, in its sole discretion, may or may not publish or post on its website information regarding your program, including information submitted in this accreditation application.

The undersigned, as a designated representative authorized to enter into this Agreement on behalf of ____________________________, an applicant organization, hereby, agrees to the terms and conditions identified above.

____________________________
(Representative)  ___________________
(Date)

____________________________
____________________________
____________________________
(Representative)  (Date)  (Date)
Qualifications of Members of the Accreditation Advisory Review Teams and Members of the Ongoing Accreditation Review Committee

The Commission on Behavioral Accreditation will assign a Team Leader of an Accreditation Advisory Team (AAT) to you. The Leader of the AAT will:

- Be knowledgeable about behavior-based safety programs
- Be from an organization that is not competitive with your organization
- Be charged with helping you understand the accreditation procedures.
- Be charged with ensuring that the review of the application for accreditation and site visit(s) are objective and fair and that they adhere to CCBS standards.

The Leader of the AAT will appoint, with the advice and consent of the Commission on Behavioral Accreditation, two additional AAT Members. These two additional members will:

- Be knowledgeable about behavior-based safety programs
- Be from an organization that is not competitive with your organization
- Be charged to be objective and fair in their work and to adhere to CCBS standards.

The Accreditation Advisory Team will visit your site to review your program.

The Commission on Behavioral Accreditation will appoint members of the Accreditation Review Team. These members will:

- Be knowledgeable about behavior-based safety programs
- Be from an organization that is not competitive with your organization
- Be charged to objectively review all data and information necessary for ongoing accreditation and to enter such into the registry after review
- Be charged to notify the representative of an Accredited organization if the ongoing accreditation data and information indicate a systematic decline in the effectiveness of the PBBS program and post a similar notice on the organization's entry in the registry.

Site Visit Requirement

The members of the CCBS Accreditation Advisory Team will visit the site(s) at which your PBBS program is operating. This visit will be aimed at verifying that your written proposal and program description accurately reflects program methods and operations, and that the data on program performance are accurately reported.
Statement of Accreditation

The Cambridge Center for Behavioral Studies (CCBS) through the Commission on Behavioral Accreditation (CBA) accredits _____________________(name of the safety program / location/organization).

CBA accreditation signifies that _____________________(name / location/organization) has implemented a well-described safety program that is based upon the principles of behavior and that was found to be effective during the period __________ through __________ (the period of time for which accurate data have been examined and the program was in effect).

The program was assessed for purposes of accreditation on _______ (date). This accreditation is ongoing for a period of two years, beginning _________, and is conditional, requiring the organization’s regular update of their safety data, including descriptions of changes in conditions at the sites in which the accredited PBBS program operates.

CCBS-CBA accreditation is not a warranty or guarantee that safety programs in other parts of __________________________ (name of an organization) will be effective, or that the accredited program will be effective beyond the indicated dates. Further, the nature of individual safety is such that there can be no warranty or guarantee of individual safety even if a person is working under conditions that are, in general, relatively safe.

The CCBS PBBS Accreditation process may include publication about accredited programs on the CCBS website or elsewhere. The CCBS does not warrant or guarantee that other programs relying on information provided from an accredited program will achieve the same or similar results.
Appeals of Accreditation Recommendations

If an Accreditation Advisory Team (AAT) recommends that an organization’s PBBS program not be accredited and this recommendation is supported by the Commission on Behavioral Accreditation (CBA), the reasons for the decision not to accredit will be provided to the applicant organization. If the applicant organization disagrees with the decision not to accredit, an appeal process will be available.

Appeals of decisions not to accredit a program might be based on: 1) the applicant organization’s belief that the AAT did not follow the standards for accreditation as herein set forth; or 2) the applicant organization’s belief that the members of the AAT did not understand some aspect(s) of the application or the workings of the PBBS program.

If the applicant organization believes that the AAT did not follow the standards for accreditation as herein set forth or that the decision not to accredit the PBBS program resulted from a failure of the members of the AAT to completely understand the application and program, the organization, through its representative in the accreditation process, should appeal, in writing, the decision not to accredit to the CBA.

The CBA will then appoint an Advisory Team Reviewer to again review the organization’s application. The Advisory Team Reviewer will be selected by the Commission on Behavioral Accreditation based on his/her expertise in evaluating principles of behavior based programs and may be a member of the Commission or of the Cambridge Center for Behavioral Studies.

The Advisory Team Reviewer will only review the issues or matters disputed by the representative of the organization. After review, the Advisory Team Reviewer will make a recommendation to the CBA and the CBA will again vote on accreditation for the applicant organization’s program. The recommendations of the Advisory Team Reviewer and the decisions of the CBA shall be final and may not be further appealed. This second review will entail a further cost to the applicant organization because of the necessity of paying for the time of the Advisory Team Reviewer and any additional travel that is needed.

PBBS Accreditation Fees and Costs

Single Location Accreditation Fees. There will be an initial Accreditation Application Fee of $1200. The fee will partially cover the Cambridge Center’s administrative costs, including setting up an Accreditation Advisory Team, as well as the initial review of your application by the Team. Upon receipt of the application fee an Accreditation Advisory Team Leader will be assigned to your company and application. This person will advise you in the preparation of your Accreditation Application.

Internal Accreditation Fees

Multi-site fees will vary with the variety of workplaces to be considered and the number of locations to be included in the accreditation review. Every effort will be made to build an economy of scale, not a simple multiple of single location fees.

Other Costs

Further costs will be based on the number of days of labor and travel expenses required to process your application or submission. We currently charge $1650 per day per person for pre-site review, site visits, report writing, commission reviews, and administrative fees. Travel time from a team members’ residence to your primary site and back to the residence will be billed at up to one-half of the daily rate (i.e., up to $825.00 per person). Travel time between sites during
a site visit will be billed at the full rate. Therefore, costs of considering an application for accreditation will vary, depending on the complexity of the organization, where the program is, and the program to be reviewed.

Here is an example to help you better estimate your costs. Suppose you are seeking accreditation of a straightforward PBBS program at one site. Further, assume that your proposal is relatively complete when it is first submitted. Your costs would be about $11,000, plus travel costs and expenses and would include the following:

Application fee, Team Leader’s consultation, Team members’ pre-site visit review of application, Team site visit, Preparation of report, reviews by the Commission, administrative costs, and further consultation with Team Leader.

If you need more help from the Team Leader, the Team, the Commission, and/or a preliminary site visit is required, there would be additional costs. For example, this might cost an additional $1,650 per person per day, plus travel costs and expenses.

Generally, the Chair of the Accreditation Advisory Team should be able to help you estimate your costs after talking with you and considering the complexity of your program and organization.